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Sussex County

DELAWARE
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COUNTY ADMINISTRATIVE OFFICES
2 THE CIRCLE | PO BOX 417
GEORGETOWN, DELAWARE

PLANNING & ZONING COMMISSION

ROBERT C. WHEATLEY, CHAIRMAN
KIM HOEY STEVENSON, VICE-CHAIRMAN
R. KELLER HOPKINS
J. BRUCE MEARS
HOLLY J. WINGATE



Sussex County

DELAWARE
sussexcountyde.gov
302-855-7878 T
302-854-5079 F
JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: July 14th, 2022

Application: Deer Creek (2021-29)

Applicant: Cromer Management, LLC (C/O Wes Cromer)
6103 S. Rehoboth Boulevard
Milford, DE 19963

Owner: Cromer Management, LLC (C/O Wes Cromer)
6103 S. Rehoboth Boulevard
Milford, DE 19963

Site Location: The site is on the north side of Staytonville Road (S.C.R. 224), at the northwest corner of the intersection of Staytonville Road (S.C.R. 224 and DuPont Boulevard (Rt. 113)

Current Zoning: Agricultural Residential (AR-1)

Proposed Use: 79 single family lots

Comprehensive Land Use Plan Reference: Low Density

Councilmanic District: Mrs. Green

School District: Milford School District

Fire District: Ellendale Fire Company

Sewer: On-Site Septic

Water: On-Site Well

TID: Not Applicable

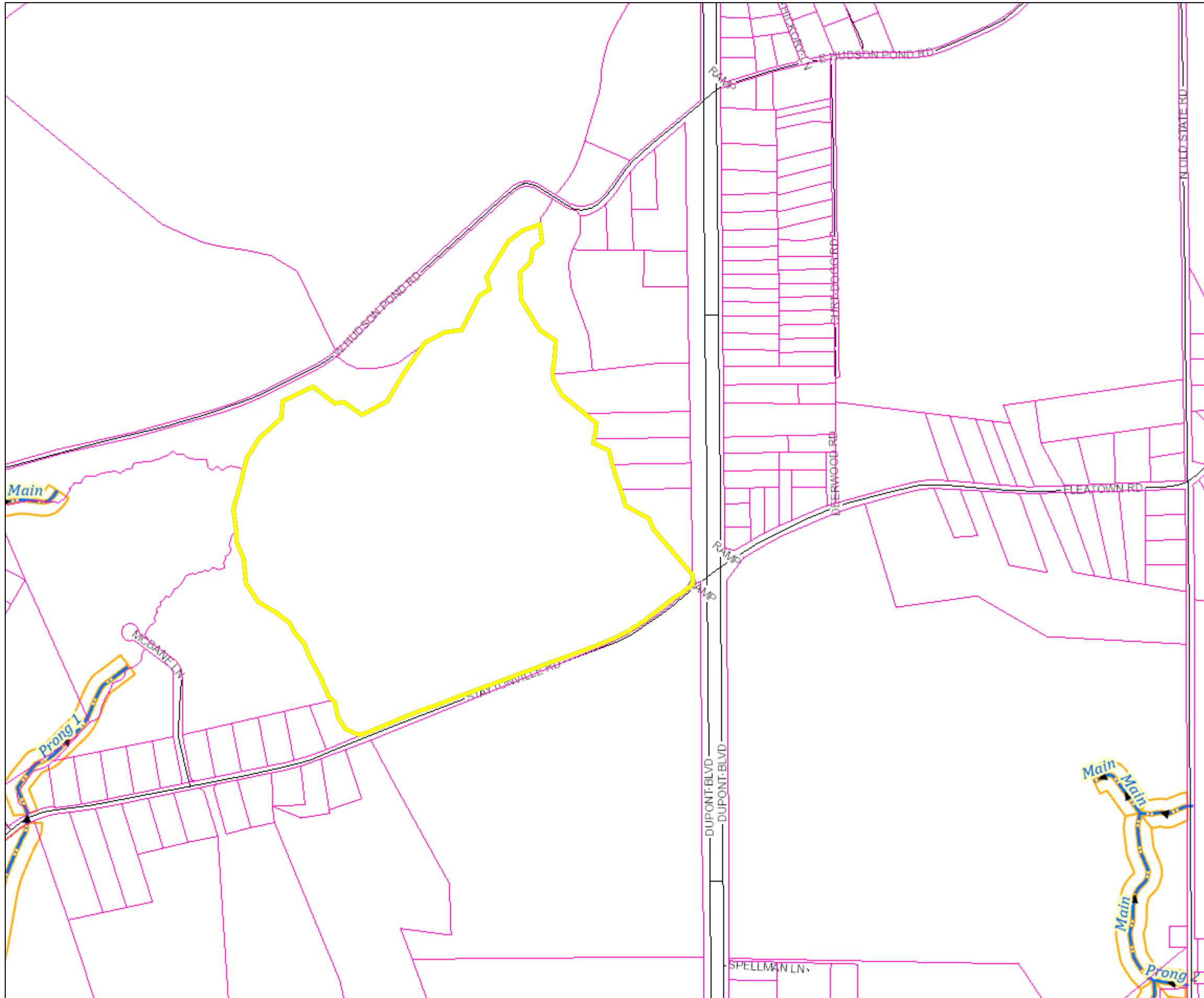
Site Area: 93.582 acres +/-

Tax Map ID: 230-19.00-27.00





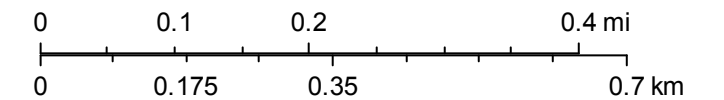
Sussex County



PIN:	230-19.00-27.00
Owner Name	CROMER MANAGEMENT LLC
Book	5552
Mailing Address	6103 S REHOBOTH BLVD
City	MILFORD
State	DE
Description	DEER CREEK
Description 2	ALL OPEN AND S W M AND
Description 3	N/A
Land Code	

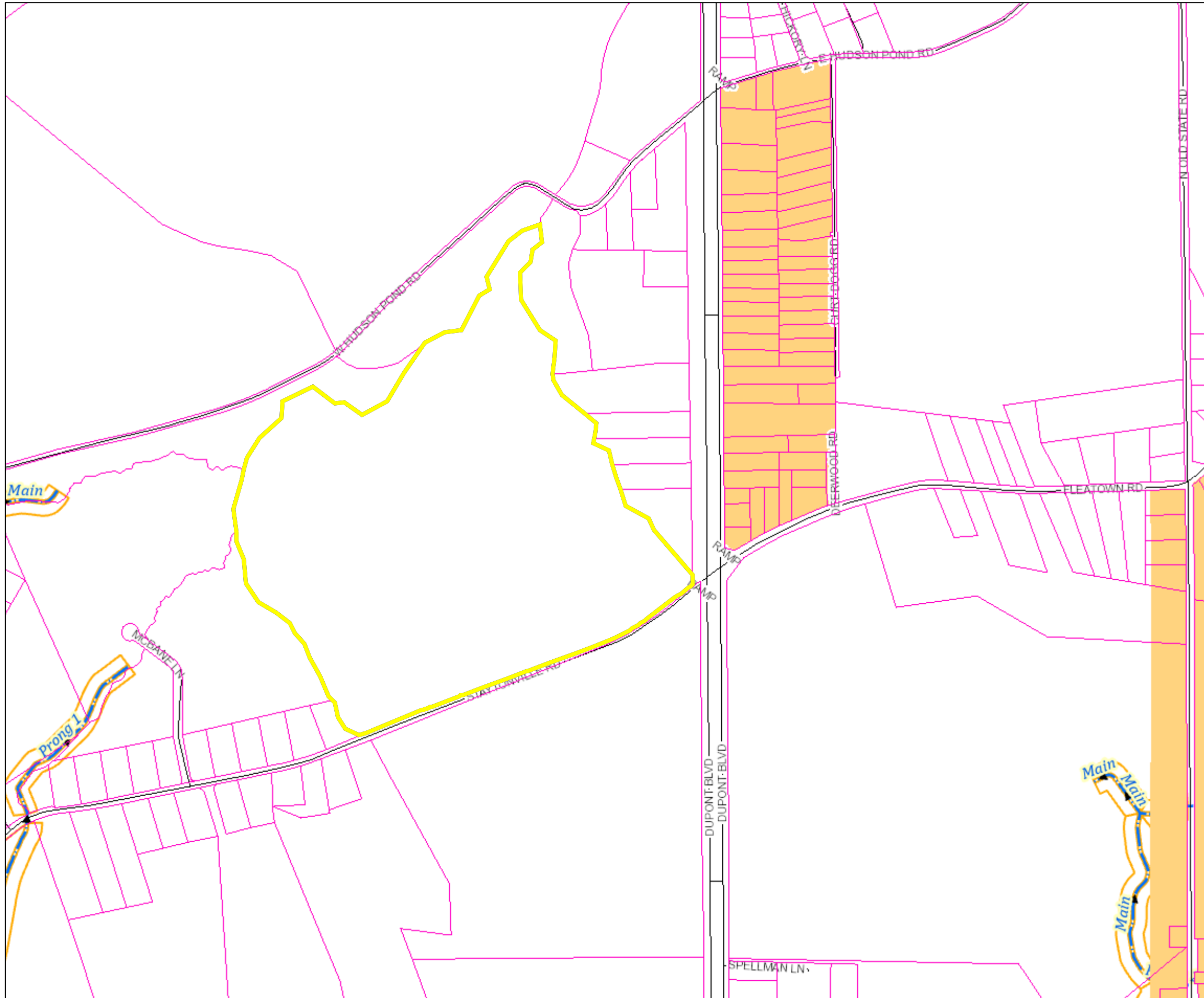
- polygonLayer**
- Override 1
- HOA Maintained
- Pipe - DeIDOT
- Pipe - Tax Ditch
- Pipe - Private
- Pond Feature
- Special Access ROW
- Extent of Right-of-Way
- Municipal Boundaries
- TID
- Tax Ditch Segments**
- Tax Ditch Channel
- DeIDOT Maintained

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Sussex County



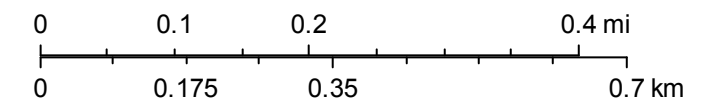
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- polygonLayer**

 - Override 1
- polygonLayer**

 - Override 1
- Tax Parcels
- Streets

1:9,028





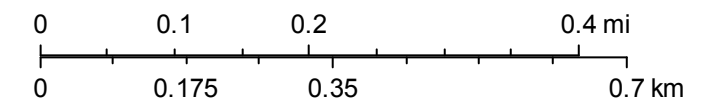
Sussex County



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Owner Name	CROMER MANAGEMENT LLC
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Description 2	ALL OPEN AND S W M AND
Description 3	N/A
Land Code	

- polygonLayer**
Override 1
- polygonLayer**
Override 1
- Tax Parcels
- Streets

1:9,028



File #: 2021-29
Pre-App Date: 9/15/21
202114069

Sussex County Major Subdivision Application

Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

Type of Application: (please check applicable)

Standard:
Cluster:
Coastal Area:

RECEIVED

SEP 22 2021

SUSSEX COUNTY
PLANNING & ZONING

Location of Subdivision:

N. side of Staytonville Rd (SCR224) and 80' west of US RT 113, South of Lincoln

Proposed Name of Subdivision:

Deer Creek

Tax Map #: 230-19.00-27.00 **Total Acreage:** 93.582

Zoning: AR-1 **Density:** 0.844 **Minimum Lot Size:** 32,670 **Number of Lots:** 79

Open Space Acres: 23.364 Ac

Water Provider: Private On-site Wells **Sewer Provider:** Private On-site Sewer

Applicant Information

Applicant Name: Cromer Management, LLC (C/O Wes Cromer)
Applicant Address: 6103 S. Rehoboth Blvd
City: Milford **State:** DE **Zip Code:** 19963
Phone #: (302) 448-1032 **E-mail:** wcromer@mastenrealty.com

Owner Information

Owner Name: Same as above
Owner Address:
City: **State:** **Zip Code:**
Phone #: **E-mail:**

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: The Kercher Group, Inc., a Mott MacDonald Co. (C/O Kevin Smith)
Agent/Attorney/Engineer Address: 37385 Rehoboth Ave. Ext., Unit 11
City: Rehoboth Beach **State:** DE **Zip Code:** 19971
Phone #: (302) 542-7080 **E-mail:** kevin.t.smith@mottmac.com



Check List for Sussex County Major Subdivision Applications

The following shall be submitted with the application

- ✓ **Completed Application**
- ✓ **Provide ten (10) copies of the Site Plan or Survey of the property and a PDF (via e-mail)**
 - Plan shall show the existing conditions, setbacks, roads, floodplain, wetlands, topography, proposed lots, landscape plan, etc. **Per Subdivision Code 99-22, 99-23 & 99-24**
 - Provide compliance with Section 99-9.
 - Deed or Legal description, copy of proposed deed restrictions, soil feasibility study
- ✓ **Provide Fee \$500.00**
- ___ **Optional - Additional information for the Commission to consider** (ex. photos, exhibit books, etc.) If provided submit seven (7) copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.
- ✓ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**
- ✓ **PLUS Response Letter** (if required) **Environmental Assessment & Public Facility Evaluation Report** (if within Coastal Area)
- ___ **51% of property owners consent if applicable**

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

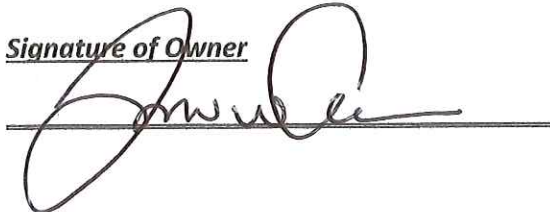
I also certify that I or an agent on my behalf shall attend all public hearing before the Planning and Zoning Commission and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

Signature of Applicant/Agent/Attorney



Date: 9/21/21

Signature of Owner



Date: 9/21/21

For office use only:

Date Submitted: 9/23/21

Fee: \$500.00 Check #: 2607

Staff accepting application: ces

Application & Case #: 202114069

Location of property: _____

Date of PC Hearing: _____

Recommendation of PC Commission: _____

CHAPTER 99-9(C) COMPLIANCE

1. **Integration of the proposed subdivision into existing terrain and surrounding landscape** – *The preliminary design of Deer Creek incorporates the natural grade change throughout the property, which would aid in directing surface runoff to planned treatment areas. Based on the original approved design, it can be assumed safely that additional materials will not have to be imported to the property to achieve a safe development design. The proposed density yield for Deer Creek is in character with the existing subdivisions and other residential communities within the vicinity.*
2. **Minimal use of wetlands and floodplains** – *While non-tidal wetlands were delineated within the bounds of the subject parcel, none of those wetlands would be located within the proposed lots or areas planned for development. The project is located within an area identified on flood maps as a Zone X (unshaded), which is an area described as being outside of the 0.2% annual chance floodplain.*
3. **Preservation of natural and historical features** – *There are no known historical features on the site but the developer is willing to allow the state to investigate the site for any historical features. Natural features will not be altered as a result of the establishment of the community.*
4. **Preservation of open space and scenic views** – *The preliminary design of Deer Creek calls for the establishment of 5.64 acres of open space which will be used for stormwater management/passive/active recreation. An additional 17.72 acres of wooded wetlands/open space would also be permanently protected.*
5. **Minimization of tree, vegetation and soil removal and grade change** – *The pre-development nature of the existing property consists a cleared agricultural field and both wooded uplands and wetlands. While the proposed tree clearing (10.37 acres) has been presented as if the entirety of lots containing woods will be clear-cut, it is the intention of the developer to only clear woods necessary for the placement of the subdivision's infrastructure. Some grade change will be necessary to provide positive drainage for the project but any alteration would be minimal.*
6. **Screening of objectionable features from neighboring properties and roadways** – *Forested buffers are to be preserved around the perimeter of the subdivision to screen property owners within Deer Creek from adjacent properties and to be in character with neighboring properties.*
7. **Provision of water supply** – *Dwellings within Deer Creek would be served by on-site wells for potable water.*
8. **Provision of sewer disposal** – *Dwellings within Deer Creek would be served by on-site septic systems for sanitary sewer.*
9. **Prevention of pollution of surface and groundwater** – *If granted preliminary approval, detailed erosion & sediment control and grading plans shall be submitted to the Sussex Conservation District for review. The original approved*

plans for the subdivision included bioswales for stormwater management. It is the applicant's intention to utilize the original plans and layout if granted preliminary approval.

- 10. Minimization of erosion and sedimentation, minimization of changes in groundwater levels, minimization of increased rates of runoff, minimization of potential for flooding and design of drainage so that groundwater recharge is maximized** – *If granted preliminary approval, detailed sediment and stormwater management plans will be prepared and submitted to DNREC for a detailed review. Per regulations established by DNREC, the post-development runoff rate shall not exceed those rates experienced in the pre-development condition. Best management practices (BMP's) will be incorporated into the drainage design, where applicable, to provide an increased rate of groundwater recharge. The original approved plans included biofiltration swales for stormwater management. It is the applicant's intention to use the original plans and layout if granted preliminary approval.*
- 11. Provision for safe vehicular and pedestrian movement within the site and adjacent ways** – *If preliminary approval is granted, detailed entrance and roadway plans will be submitted to the Delaware Department of Transportation and Sussex County Engineering department, respectively, for review and approval. All roadways shall be designed to meet or exceed those standards established by the SCED. The original approved plans provided the necessary components for safe pedestrian movement and it is the applicant's intention to use the original plans and layout if granted preliminary approval.*
- 12. Effect on area property values** – *The establishment of 79 new residential lots shall not have an adverse affect on adjacent property values. It is anticipated that the property values would increase due to the improvement to existing infrastructure. Deer Creek would be in character with several other residential communities located within close proximity of the proposed community.*
- 13. Preservation and conservation of farmland** – *Buffers shall be established adjacent to proposed lots to act as a screen between Deer Creek and adjacent properties. Also, the required agricultural preservation notice has been provided on the preliminary plan and, if approved, the same note shall be shown on the final record plan and shall be placed within the deeds of individual properties associated with Deer Creek.*
- 14. Effect on schools, public buildings and community facilities** – *The proposed development is located within the Milford School District. The establishment of Deer Creek would create an additional tax base that could be used to improve upon facilities within the school district. The proposed development is situated near the Ellendale and Milford and, as such, it is anticipated that residents within the community would patronize public buildings and community facilities in those municipalities.*
- 15. Effect on area roadways and public transportation** – *DELDOT has reviewed and approved this development previously. If granted preliminary approval, updated plans shall be submitted to DELDOT for their reapproval. If preliminary*

approval is granted, the developers understand that it will be their responsibility to make what roadway improvements the DeIDOT would see fit.

16. Compatibility with other land uses – *Deer Creek would be situated in an area with other existing or planned developments and is planned to have a community density of 0.844 units per acre. Also, the proposed development is located within close proximity to several other residential communities, being:*

- **Magnolia Subdivision**
- **Hudson Mill**
- **Holly Hill**
- **Sussex Woods**

17. Effect on area waterways – *The establishment of Deer Creek would not have an adverse impact on area waterways because green technology best management practices (BMP) shall be utilized throughout the subdivision to manage surface runoff. If approved, detailed stormwater and erosion control plans will be submitted to the DNREC for review and the design of stormwater treatment systems within the proposed community would be required to meet or exceed those requirements established by the DNREC for water quality and quantity.*



September 21, 2021

Mr. Jamie Whitehouse, Director
Sussex County Planning and Zoning Department
P.O. Box 417
Georgetown, DE 19947

RECEIVED
SEP 22 2021
SUSSEX COUNTY
PLANNING & ZONING

RE: Deer Creek, Standard Subdivision

Dear Mr. Whitehouse:

Per the Pre-submittal Meeting on September 15, 2021, it was discussed that per Chapter 99 "A twenty-foot forested buffer is required around the entire perimeter of the subdivision and a 30-foot buffer that is required from lands primarily used for agriculture. If this is unable to be achieved while maintaining lot dimension/area requirements, a request to be waived from this requirement could be submitted to the Commission."

This letter serves as the formal waiver request regarding Chapter 99-5 "Definitions" "Forested and/or Landscaped Buffer Strip" A-K. This project had been previously approved in April 2010 using the layout as shown on the submitted Preliminary Plan. We ask that this layout be approved as submitted, and that the forested wetlands be sufficient for the required forested buffers. There are only two lots that do not meet the landscape buffer requirement of 30 feet. Lot 6 average is greater than 40 feet, however, the smallest buffer area is only 8 feet (for about 60 feet of the total 400 feet). Lot 8 average is greater than 100 feet, however, the smallest buffer area is only 22 feet (for about 40 feet of the total 350 feet). Although Lot 8 meets the 20 foot buffer requirement, it may be considered adjacent to agricultural lands, therefore, would be required to have a 30 foot buffer. The lots along the State road (Lots 1-6, 35-40) do not provide a buffer, however, there is a permanent easement to be dedicated to the State for a multi-use path.

If you should have any questions regarding a statement made within this document please do not hesitate to contact our office at your earliest convenience.

Thank you for your attention and consideration.

Sincerely,

Kevin Smith

The Kercher Group, Inc.
Kevin Smith, Project Manager

THE KERCHER GROUP, INC.



25092 Oak Road
Seaford, DE 19973

Phone & Text: (302) 629-2989
Email: jayduke@comcast.net

October 30, 2021

Cromer Management, LLC
6103 S. Rehoboth Blvd.
Milford, DE 19963

Re: TM #2-30-19-27

Dear Wes:

After conducting numerous random soil borings on the above referenced parcel, it's my opinion that the evaluated soils on this property are similar to the soils described during the subdivision feasibility study conducted in 2005. The majority of the soils on the parcel meet the current regulatory requirements for siting individual on-site wastewater treatment and disposal systems.

If you have any further questions, don't hesitate to call.

Sincerely,
Coastal Soil Consultants, Inc.

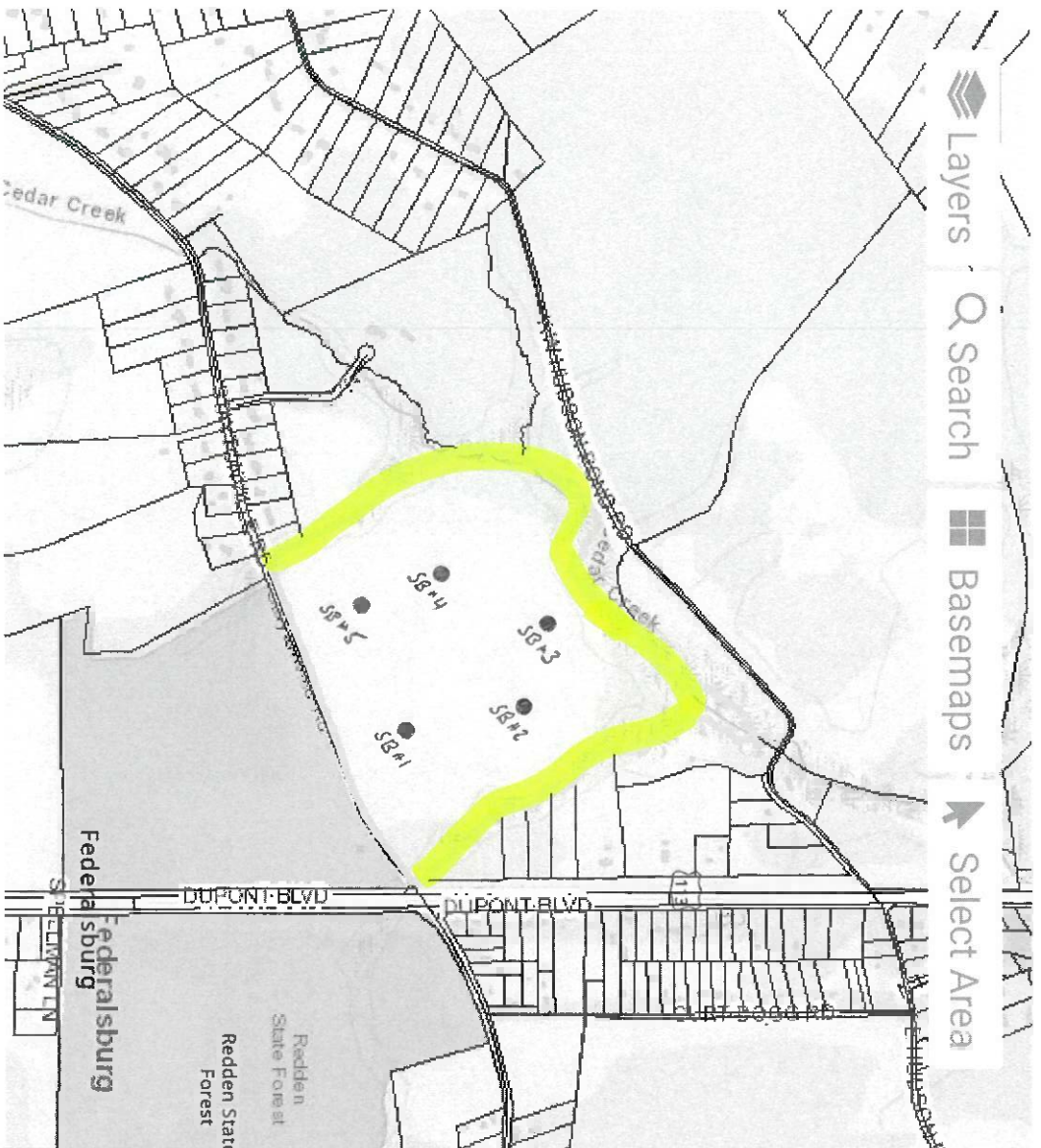
A handwritten signature in black ink, appearing to read "J.C. Duke Jr.", is written over a horizontal line.

Joseph C. Duke Jr., CPSS
Class D lic. #4048

JCD/bad

SUSSEX COUNTY

D E L A W A R E



- Layers
- Search
- Basemaps
- Select Area



Print



Help

Hide search results »

Search results

Clear Selected

Selected Features:

Parcels (1)



1) 230-19.00-27.00

Zoom

Book	5552
Page	118
Owner Name	CROMER MANAGEMENT LLC
Second Owner Name	
Mailing Address	6103 S REHOBOTH BLVD
City	MILLFORD
State	DE
Sewer Account	

Selected Features (1)



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES &
ENVIRONMENTAL CONTROL
DIVISION OF WATER RESOURCES
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

June 20, 2005

Richard & Kathryn Carlisle
3583 Buck Fever Road
Bridgeville, DE 19933

RE: Preliminary Subdivision Feasibility Study
Lands of Jim Lee Subdivision
Tax Map #: 2-30-19.00-27.00

Dear Mr. & Mrs. Carlisle,

The Ground Water Discharges Section has received a submittal requesting a statement of preliminary subdivision feasibility consisting of the following:

1. A letter of transmittal from Coastal Soil Consultants, Inc., submitted June 6, 2005, requesting the issuance of septic feasibility approval.
2. A soils map, legend and report furnished by Coastal Soil Consultants, Inc., which describes the soils, topography, hydrologic conditions and percolation test results on the parcel. The topographic map is at a scale of 1 inch equals 150 feet.
3. A topographic survey of the proposed project prepared by Miller-Lewis, Inc., showing topography at contour intervals of one foot. The plan is at a scale of 1 inch equals 150 feet.

Background Information

The developer proposes to subdivide approximately ninety four (94.58) acres into seventy nine (79) lots which range in size from .75 to > 1.0 acre. The lots are proposed to be served by individual on-site wells and on-site wastewater treatment and disposal systems (OWTDS).

Delaware's good nature depends on you!

Soils Investigations

The mapping units designated as Typic Hapludult/Dystrudept (TyH/D) appear to pose slight limitations for wastewater treatment and disposal and the use of full depth and capping fill gravity fed treatment and disposal systems. There are a few lots which have very limited area for siting a gravity fed system and these are lots 4, 19, 35, 42, 63 & 78. Individual site evaluations will more clearly define the extent of area suitable for each system type. With the inclusions of wetter soils dispersed throughout the site some lots may need pressurized systems. Attention must be paid to road construction, lot clearing and site development so as not to render any soils unsuitable for wastewater treatment and disposal.

The mapping units designated as Oxyaquic Hapludult/Dystrudept (OxH/D) appear to pose slight to moderate limitations for wastewater treatment and disposal and the use of low pressure pipe and elevated sand mound treatment and disposal systems. There appears to be approximately twenty two lots which are almost entirely engulfed within this map unit. Other lots may need to utilize these types of systems as well depending on the results of the individual site evaluations and provided enough area exists to site gravity fed systems as outlined above.

Site Preparation

Removal, disturbance or compaction of the soil during any portion of the construction and building phase other than that necessary for system installation will result in the rescission of the site evaluation approval. Soil material from road cuts and other excavated sources should not be placed on any portion of the proposed treatment and disposal areas. It is best to keep all areas proposed for on-site wastewater treatment and disposal free from any form of disturbance by methods such as staking, flagging or fencing. The Ground Water Discharges Section reserves the right to inspect the construction site at any time to ensure compliance with the above. **With the wooded areas within the project extreme caution and care must be undertaken when clearing these lots for development.**

A fifty foot setback will be required from all catch basins and all stormwater management ditches/ponds which are designed to carry or hold surface waters.

Future Requirements

Prior to obtaining individual on-site wastewater treatment and disposal (septic) system construction permits, **site evaluations** will be required for all lots in accordance with the Regulations. The Ground Water Discharges Section will need one copy of the **Stormwater Management and Erosion Control Plan** and one copy of the **Record Plat** following final subdivision approval by the Planning and Zoning Commission of Sussex County before processing and approving any site evaluations. The Ground Water Discharges Section recommends that the developer provide approved site evaluations prior to the transfer of any lot.

Due to location of this proposed subdivision within the environmentally sensitive Cedar Creek Watershed and proposed nutrient loading reductions in the near future the developer may want to consider the use of a community on-site wastewater treatment and disposal system in lieu of retrofitting each individual on-site wastewater treatment and disposal system with an advanced treatment unit.

This project represents a major land development that will result in 79 residential units in an Investment Level 4 area according to the *2004 Strategies for State Policies and Spending*. This project is also located "outside a development district". Investment Level 4 indicates where State investments will support agricultural preservation, natural resource protection, and the continuation of the rural nature of these areas. New development activities and suburban development are not supported in Investment Level 4. These areas are comprised of prime agricultural lands and environmentally sensitive wetlands and wildlife habitats, which should be, and in many cases have been preserved.

From a fiscal responsibility perspective, development of this site is likewise inappropriate. The cost of providing services to development in rural areas is an inefficient and wasteful use of the State's fiscal resources. Over the longer term, the unseen negative ramifications of this development will become even more evident as the community matures and the cost of maintaining infrastructure increases.

Because the development is inconsistent with the *Strategies for State Policies and Spending*, the Department is opposed to this proposed subdivision. However, the Statement of Feasibility is as follows:

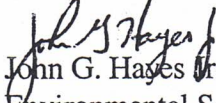
Statement of Feasibility

Lands of Jim Lee Subdivision
Page Four

Based on the findings to date, the Department believes the proposed Lands of Jim Lee Subdivision would be feasible under the current criteria cited in the Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems, dated January 4, 1985, as revised on April 11, 2005.

The comments in this letter are technical, and are not intended to suggest that DNREC supports this development proposal. This letter does not in any way suggest or imply that you may receive or may be entitled to permits or other approvals necessary to construct the development you indicate or any subdivision thereof on these lands.

Sincerely,


John G. Hayes Jr.
Environmental Scientist
Large Systems Branch

pc: file



25092 Oak Road
Seaford, DE 19973
(302) 629-2989
Fax 629-3212

SUBDIVISION FEASIBILITY STUDY

Owners:

Richard R. & Kathryn B. Carlisle
3583 Buck Fever Road
Bridgeville, DE 19933

Developer:

James W. Lee
Dream Builders Construction, Inc.
13610 Wolf Road
Greenwood, DE 19950

Project Site:

Location:	North side of Staytonville Road (CR 224), West of Dupont Blvd. (Rt. 113)
City:	Ellendale
County:	Sussex
State:	Delaware
Tax Map #:	2-30-19-27
Field work began	October 2004
Report Completed:	May 2005

INTRODUCTION:

James W. Lee, of Greenwood, DE contracted Coastal Soil Consultants, Inc. of Seaford, DE to conduct a subdivision feasibility study on parcel-tax map # 2-30-19-27. This study was conducted in accordance with section 9.00000 –PRELIMINARY WATEWER TREATMENT & DISPOSAL REVIEW of the Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems (OWTDS) (Amended 4/11/2005).

This subdivision feasibility study was started in February of 2005. A total of 82 soil borings were conducted in the project area. Soil borings were conducted on a 200-foot centerline grid pattern established by Miller-Lewis, Inc. Logged soil profiles, classified to subgroup taxon, are enclosed. Mapping units were given to the predominant soil subgroup in a specific area. Some mapping units contain small inclusions of minor subgroups within them. Miller-Lewis, Inc. also provided the lot layout and a topographic map with one-foot contours.

SITE LOCATION:

This (AR1) zoned parcel is located on the north side of Staytonville Road (CR 224), west of Dupont Boulevard (U.S. Rt. 113). This proposed subdivision is bounded on all sides by numerous (AR1) zoned parcels.

PROJECT PROPOSAL:

This 93.58 acre parcel is to be subdivided into a 79-lot interior road subdivision with a minimum $\frac{3}{4}$ acre lot size. All proposed lots are to be served by OWTDS and on-site wells.

STUDY SUMMARY:

The majority of the parcel consists of a gently to undulating eroded terrace with eolian dunes. Elevation contours on this parcel range between 47' to 37'± along the delineated wetlands that surround the parcel on the western, northern & eastern property lines. The *Soil Survey of Sussex County* mapped this area as predominately Evesboro A (EvA) with a small inclusion of Woodstown (Wo).

The soils encountered on this parcel, as mapped by Coastal Soil Consultants, Inc., consist of moderately permeable, well-drained Typic Hapludults (TyH) and moderately rapidly permeable, well-drained Typic Dystrudepts (TyD). The TyH are characterized by a course sandy loam epipedon over a well-developed course sandy clay loam substratum over a course loamy parent material that extends below 60 inches. The TyD are characterized by a course sandy loam epipedon over a weakly-developed course sandy loam substratum over a course loamy parent material that extends below 60 inches. There are only slight limitations associated with siting an OWTDS for these soil types.

The soils in this vicinity meet the current regulatory requirements for siting gravity fed and low-pressure pipe (LPP) OWTDSs.

The area along the perimeter adjacent to the delineated wetlands and the two isolated closed depressional areas in the interior of the parcel are delineated as Oxyaquic Hapludults (**OxH**) and Oxyaquic Dystrudepts (**OxD**). The soils delineated as **OxP** are characterized by a course sandy loam epipedon over a well-developed course sandy clay loam substratum over a course sandy clay loam parent material that extends below 60 inches. These soils are moderately permeable and somewhat poorly drained. There are moderate limitations associated with siting an OWTDS for this soil type. The soils in this vicinity meet the current regulatory requirements for siting LPP & elevated sand mound (ESM) OWTDSs.

The majority of the lots, as proposed, meet the current regulatory requirements for gravity-fed wastewater treatment and disposal systems.

Below is a list of soil types and characteristics:

Code on Soils Map	Taxonomic Classification	Limiting Zone (Inches)	Estimated Permeability Rate (MPI)	Wastewater Treatment & Disposal System
TyD	Typic Dystrudept	40 - >60	20 - 40	Gravity-fed & LPP
TyH	Typic Hapludult	40 - >60	20 - 40	Gravity-fed & LPP
OxP	Oxyaquic Paleudult	25 - 39	20 - 60	LPP & ESM
OxD	Oxyaquic Paleudult	25 - 39	20 - 60	LPP & ESM

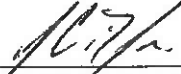
Coastal Soil Consultants, Inc. conducted standard Percolation tests on March 4, 2005. Test depths were based on the most hydraulically limited horizon with 60 inches of the soil surface as determined by soil auger borings. Soil texture, structure and depth to redoximorphic features (if present) were used in determining these limiting horizons.

Below is a list of percolation test results:

Percolation Test #	Average Depth of Test (Inches)	Taxonomic Classification	Average Percolation Rate (MPI)
B-7	29	Oxyaquic Hapludult	6.6
E-8	33	Typic Hapludult	21.1

Standard percolation test results indicate that the course textured soils on this parcel are rapidly to moderately rapidly permeable. These soils should allow for adequate dispersion of wastewater provided the wastewater disposal systems are sized

appropriately. Averages were calculated for the last hour of recorded data.



Joseph C. Duke, Jr.
Class "D" & "A" License #4048
Certified Professional Soil Scientist #6049



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: A-2 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: nearly level (wooded)

Estimated Permeability: 20mp^h

Depth to and Type of Limiting Zone: 44" to redox depletion & concentration

Subgroup Taxonomic Classification: Typic Dystrudert

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>A_p</u>	<u>0 to 4</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>2mg</u>	<u>f</u>
<u>B_v</u>	<u>4 to 44</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>1-2 s blr</u>	<u>f</u>
<u>C</u>	<u>44 to 60</u>	<u>10YR 4/2</u>	<u>10YR 4/6</u>	<u>C.D</u>	<u>cosl</u>	<u>m</u>	<u>f</u>
	to						
	to						
	to						
	to						
	to						

Comments: _____ Free water = 56"

J.C. Duke, Jr.
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SOIL PROFILE NOTE PAGE

Profile #: A-3 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20mp
 Depth to and Type of Limiting Zone: 36" to redox depletion & conc.
 Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10K 4/4	/	/	cosl	2mp	fv
E	8 to 18	2.5Y 5/4	/	/	cosl	1msbl	fv
EB	18 to 36	2.5Y 5/4	7/6 /	/	cosl	1msbl	fv
C	36 to 68	2.5Y 4/3	10YR 4/6 2.5Y 5/2	C2P C2v	cosl	r	fv
	to						
	to						
	to						
	to						

Comments: _____ Free water = 42"

J.C. Duke, Jr.
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SOIL PROFILE NOTE PAGE

Profile #: A-4 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 54" to redox depletions & concentration.
 Subgroup Taxonomic Classification: Typic Dystrudapt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>f</u>
<u>B_w</u>	<u>8 to 18</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1mb/c</u>	<u>vfr</u>
<u>C¹</u>	<u>18 to 54</u>	<u>2.5Y 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>m</u>	<u>f</u>
<u>C²</u>	<u>54 to</u>	<u>2.5Y 5/4</u>	<u>10YR 4/6 10YR 4/2</u>	<u>ccp ccp</u>	<u>sl</u>	<u>m</u>	<u>f</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 59"

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SOIL PROFILE NOTE PAGE

Profile #: A-5 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: >60"
 Subgroup Taxonomic Classification: Typic Dystrudert

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>—</u>	<u>—</u>	<u>cosl</u>	<u>2mg.</u>	<u>fr</u>
<u>Bw</u>	<u>8 to 18</u>	<u>10YR 6/4</u>	<u>—</u>	<u>—</u>	<u>cosl -</u>	<u>1m3k</u>	<u>fr</u>
<u>C¹</u>	<u>18 to 40</u>	<u>2.5Y 6/4</u>	<u>—</u>	<u>—</u>	<u>ls</u>	<u>m</u>	<u>vfr</u>
<u>C²</u>	<u>40 to 60</u>	<u>2.5Y 7/3</u>	<u>—</u>	<u>—</u>	<u>lcs</u>	<u>m</u>	<u>vfr</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = >60"

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SOIL PROFILE NOTE PAGE

Profile #: A-6 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 52" to redox depletions & concretions
 Subgroup Taxonomic Classification: Lamelllic Dystrudapt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mg	fv
Bw	8 to 30	10YR 4/4	/	/	sl-	1msbk	fv
C	30 to 36	2.5Y 4/4	10YR 5/6	lamella (sl)	ls	r	fv
C	36 to 52	2.5Y 7/3	10YR 7/6	lamella (sl)	ls	m	vfv
C	52 to 60	2.5Y 4/3	2.5Y 4/2	c20	loos	m	vfv
	to						
	to						
	to						

Comments: _____ Free water = >60%

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SOIL PROFILE NOTE PAGE

Profile #: A-7 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: nearly level

Estimated Permeability: 30mp

Depth to and Type of Limiting Zone: 50" to redox depletions & concentration

Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>2mp</u>	<u>fr</u>
<u>E</u>	<u>8 to 26</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>Bt</u>	<u>26 to 40</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>slt</u>	<u>1msbk</u>	<u>fr</u>
<u>C'</u>	<u>40 to 50</u>	<u>2.5Y 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>C^L</u>	<u>50 to 60</u>	<u>2.5Y 4/3</u>	<u>10YR 4/6 2.5Y 5/2</u>	<u>C1D C2D</u>	<u>sl</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 57"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: A-8 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 2.0 mpi
 Depth to and Type of Limiting Zone: 52" to redox deplet
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/4	/	/	coar	2mg	fr
EB	8 to 36	10YR 5/4 5/6	/	/	coar	1mgbk	fr
Bt	36 to 52	10YR 5/6	/	/	coar	1mgbk	fr
C	52 to 60	2.5Y 4/3	10YR 4/8 10YR 4/2	C2P C2V	loos	m	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 58"

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 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: A-9 Soil Boring: or Test Pit: Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: nearly level

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 36" to redox depletions

Subgroup Taxonomic Classification: Oxyaquic Dystrudapt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 10</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl-</u>	<u>2mg</u>	<u>f</u>
	<u>10 to 36</u>	<u>2.5Y 6/4</u>	<u>/</u>	<u>/</u>	<u>sl-</u>	<u>1m, blk</u>	<u>f</u>
	<u>36 to 60</u>	<u>2.5Y 6/3</u>	<u>2.5Y 6/2</u>	<u>C2F</u>	<u>sl-</u>	<u>m</u>	<u>f</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 55"

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SOIL PROFILE NOTE PAGE

Profile #: A-10 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: nearly level (wooded)

Estimated Permeability: 30 mpi

Depth to and Type of Limiting Zone: >60"

Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>A⁰¹</u>	<u>0 to 6</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mp</u>	<u>fr</u>
<u>EB</u>	<u>6 to 28</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbl</u>	<u>fr</u>
<u>Bt</u>	<u>28 to 38</u>	<u>10YR 7/2 7/6</u>	<u>/</u>	<u>/</u>	<u>scl</u>	<u>2msbl</u>	<u>fr</u>
<u>C¹</u>	<u>38 to 54</u>	<u>2.5Y 7/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>1msbl</u>	<u>fr</u>
<u>C²</u>	<u>54 to 60</u>	<u>2.5Y 7/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>ms</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = >60"

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SOIL PROFILE NOTE PAGE

Profile #: A-11 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: _____
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: >60"
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>A^o</u>	<u>0 to 4</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mp</u>	<u>fr</u>
<u>E</u>	<u>4 to 26</u>	<u>10YR 6/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1m, blk</u>	<u>fr</u>
<u>B₂C</u>	<u>26 to 36</u>	<u>10YR 6/4 s</u>	<u>10YR 7/6</u>	<u>/</u>	<u>cos, /cos</u>	<u>1m, blk</u>	<u>fr</u>
<u>C</u>	<u>36 to 60</u>	<u>2.5Y 4/3 4/6</u>	<u>/</u>	<u>/</u>	<u>cos</u>	<u>n</u>	<u>vt</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = >60

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SOIL PROFILE NOTE PAGE

Profile #: B-2 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 32" to redox depletions & concentration

Subgroup Taxonomic Classification: Oxyaquic Psytroduct

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>2 mpi</u>	<u>f</u>
<u>Bw</u>	<u>8 to 32</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>1 mpi</u>	<u>f</u>
<u>C</u>	<u>32 to 60</u>	<u>2.5Y 4/3</u>	<u>10YR 4/8 2.5Y 5/2</u>	<u>c2p c2v</u>	<u>cosl</u>	<u>n</u>	<u>f</u>
	to						
	to						
	to						
	to						
	to						

Comments: _____ Free water = 36"

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 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: B-3 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: nearly level

Estimated Permeability: 30 mpi

Depth to and Type of Limiting Zone: 36" to redox depletions & concentration

Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 10</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>2mg</u>	<u>fr</u>
<u>Bw</u>	<u>10 to 36</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>1msbk</u>	<u>fr</u>
<u>C</u>	<u>36 to 60</u>	<u>2.5Y 5/4</u>	<u>10YR 6/8 2.5Y 6/2</u>	<u>CLP CLW</u>	<u>cosl</u>	<u>n</u>	<u>f</u>
	to						
	to						
	to						
	to						
	to						

Comments: _____ Free water = 58'

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: B-4 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 30 mpi

Depth to and Type of Limiting Zone: 34" to redox depletions & concentration

Subgroup Taxonomic Classification: Oxyaquic Dystrudept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>crumb</u>	<u>fr</u>
<u>Iw</u>	<u>9 to 22</u>	<u>10YR 7/4</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>lumpy</u>	<u>fr</u>
<u>Bw</u>	<u>22 to 34</u>	<u>10YR 5/4</u>	<u>10YR 5/8</u>	<u>CIP</u>	<u>coarse</u>	<u>crumb</u>	<u>fr</u>
<u>C</u>	<u>34 to 54</u>	<u>2.5Y 4/4</u>	<u>10YR 4/8 4/9</u> <u>2.5Y 5/2</u>	<u>220</u> <u>220</u>	<u>coarse</u>	<u>n</u>	<u>fr</u>
<u>Cg</u>	<u>54 to 60</u>	<u>2.5Y 5/2</u>	<u>/</u>	<u>/</u>	<u>loose</u>	<u>n</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 48"

J.C. Duke, Jr.
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SOIL PROFILE NOTE PAGE

Profile #: B-5 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% SW Relief: nearly level

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 40" to redox depletions

Subgroup Taxonomic Classification: Oxyaquic Dystrudept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 6	10YR 4/4	/	/	coars	2mgv	fr
Bw	6 to 26	10YR 6/4	/	/	coars	1msble	fr
C	26 to 36	2.5Y 4/4	/	/	ls	m	vfr
C	36 to 40	10YR 6/6	/	/	leas	m	vfr
C	40 to 60	2.5Y 4/3	2.5Y 4/2	cro	ls	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 54"

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 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: B-6 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 40 mpi
 Depth to and Type of Limiting Zone: 40" to redox depletions, & conc.
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 6	10YR 4/4	/	/	sl	2mp	fr
E	6 to 18	10YR 5/4	/	/	sl	1psbk	fr
Bt	18 to 30	10YR 5/6	/	/	sd	2psbk	fr
C ¹	30 to 40	2.5Y 4/4	/	/	sl	m	fr
C ²	40 to 60	2.5Y 6/3	10YR 4/6 2.5Y 4/2	C1P C2P	loas	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 54"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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Seaford, DE 19973

(302) 629-2989
Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: B-7 Soil Boring: or Test Pit: Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 30_{mp}
 Depth to and Type of Limiting Zone: 36" to redox depletion & concentration
 Subgroup Taxonomic Classification: Oxyaquic Haplo-dult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mg	fr
E	8 to 16	10YR 4/4	/	/	sl	1msbl	fr
Bt	16 to 24	10YR 5/6	/	/	scl	2msbl	fv
C ¹	26 to 36	2.5Y 4/4-5/6	/	/	sl	m	fr
C ²	36 to 60	2.5Y 4/3	10YR 4/2 2.5Y 4/2	C1P C2P	ls	n	vt
	to						
	to						
	to						

Comments: _____ Free water = 52%

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SOIL PROFILE NOTE PAGE

Profile #: B-8 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 52" for redox depletions
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mp1	fr
EB	8 to 22	10YR 5/4 5/6	/	/	sl	2ms3h	fr
BE	22 to 52	10YR 5/6 5/7	/	/	sl	2ms5h	fr
C	52 to 60	2.5Y 4/3	2.5Y 5/2	12V	loas	m	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 58'

J.C. Duke
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: B-9 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: nearly level

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: > 60"

Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 6	10YR 4/3	/	/	sl	1m gr	fr
E ¹	6 to 18	10YR 5/4	/	/	ls	1m sbl	fr
Bt ¹	18 to 24	10YR 5/6	/	/	sl	1m sbl	fr
2E ²	24 to 50	2.5Y 6/4	/	/	ls	1m sbl	fr
2Bt ²	50 to 60	10YR 5/6	/	/	sl	2m sbl	fr
	to						
	to						
	to						

Comments: _____ Free water = > 60

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SOIL PROFILE NOTE PAGE

Profile #: B-10 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 60" to redox depletions & concentration
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 6	10YR 4/3	/	/	sl	zmg	fr
E	6 to 24	10YR 5/4	/	/	sl	1m/bk	fr
EB	24 to 30	10YR 5/4 5/6	/	/	sl, scl	2m/bk	fr
Bt	30 to 44	10YR 5/6	/	/	scl	2m/bk	fr
CB	44 to 60	2.5Y 4/4 5/6	/	/	sl	1m/bk	fr
C	60 to 66	2.5Y 5/2	10YR 4/1 2.5Y 5/2	CIP C2P	ls	m	fr
	to						
	to						

Comments: _____ Free water = >66"
B-11 0" to redox, hydric
C-11 0" to redox, hydric

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SOIL PROFILE NOTE PAGE

Profile #: C2 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 20mpj
 Depth to and Type of Limiting Zone: 38" to redox concentrations & depletion
 Subgroup Taxonomic Classification: Oxyaquic Dystrudcept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	emp	fr
Bw	8 to 38	10YR 5/4	/	/	sl	lnsblk	fv
C	38 to 60	10YR 5/8	10YR 4/3 5YR 5/8	C1D C2P	sl	n	fr
	to						
	to						
	to						
	to						
	to						

Comments: _____ Free water = 40

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SOIL PROFILE NOTE PAGE

Profile #: C3 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: gently sloping

Estimated Permeability: 20mpa

Depth to and Type of Limiting Zone: 50" to redox depletion & concretions

Subgroup Taxonomic Classification: Type Dystrudcept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>18YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mpa</u>	<u>f</u>
<u>Bw¹</u>	<u>8 to 40</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1/2 sbh</u>	<u>f</u>
<u>Bw²</u>	<u>40 to 50</u>	<u>10YR 4/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1/2 sbh</u>	<u>f</u>
<u>C</u>	<u>50 to 60</u>	<u>2.5Y 4/4</u>	<u>2.5Y 6/2 10YR 5/6</u>	<u>215 C10</u>	<u>ls</u>	<u>m</u>	<u>f</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = 55"

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SOIL PROFILE NOTE PAGE

Profile #: C4 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 48" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Dystrudept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10K 4/2</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>loose</u>	<u>fr</u>
<u>Bv¹</u>	<u>9 to 26</u>	<u>2.5Y 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>inshk</u>	<u>fr</u>
<u>Bv²</u>	<u>26 to 48</u>	<u>10K 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>inshk</u>	<u>fr</u>
<u>C¹</u>	<u>48 to 54</u>	<u>2.5Y 4/4</u>	<u>10K 4/8 2.5Y 5/2</u>	<u>22P 22A</u>	<u>sl</u>	<u>m</u>	<u>fr</u>
<u>C²</u>	<u>54 to 60</u>	<u>2.5Y 5/2</u>	<u>2.5Y 4/3</u>	<u>22P</u>	<u>sl</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = 59"

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SOIL PROFILE NOTE PAGE

Profile #: C5 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: gently sloping

Estimated Permeability: 20 in

Depth to and Type of Limiting Zone: 42" to redox depletion & concentration

Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	—	—	sl	2mgv	fr
E	8 to 24	10YR 5/4	—	—	sl	1msbk	fr
Bt	24 to 42	10YR 5/6	—	—	sl	1msbk	fr
C ¹	42 to 56	10YR 4/3	10YR 6/8 10YR 5/2	c1p c2p	sil	m	fr
C ²	56 to 60	10YR 5/8	10YR 6/2	c2p	lws	n	fr
	to						
	to						
	to						

Comments: _____ Free water = >60"

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SOIL PROFILE NOTE PAGE

Profile #: C6 Soil Boring: or Test Pit: Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-10% Relief: nearly level
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 42" to redox depletions
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10 YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>fr</u>
<u>E</u>	<u>9 to 18</u>	<u>2.5 Y 9/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1mbk</u>	<u>fr</u>
<u>Bt</u>	<u>18 to 20</u>	<u>10 YR 5/6</u>	<u>/</u>	<u>/</u>	<u>scl</u>	<u>2msh</u>	<u>fr</u>
<u>C¹</u>	<u>30 to 42</u>	<u>10 YR 6/4 7/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>n</u>	<u>fr</u>
<u>C²</u>	<u>42 to 52</u>	<u>2.5 Y 5/3</u>	<u>10 YR 4/6 5/8 2.5 Y 5/2</u>	<u>c</u>	<u>sl</u>	<u>n</u>	<u>fr</u>
<u>C³</u>	<u>52 to 65</u>	<u>10 YR 5/2</u>	<u>10 YR 6/6 6/8</u>	<u>c2p</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 55"

J.C.D.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: C-7 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 50" to redox depletion & concentration

Subgroup Taxonomic Classification: Typic Dystrudpt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>2mg</u>	<u>fr</u>
<u>Bw</u>	<u>8 to 50</u>	<u>2.5Y 5/4</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>Cg</u>	<u>50 to 60</u>	<u>2.5Y 5/2</u>	<u>10YR 5/6</u>	<u>CLP</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						
	to						
	to						

Comments: _____ Free water = 59"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: C8 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 38" to redox depletions
 Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mp</u>	<u>fr</u>
<u>E</u>	<u>8 to 38</u>	<u>10YR 6/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msble</u>	<u>fr</u>
<u>EB</u>	<u>30 to 38</u>	<u>10YR 6/4 10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sl/scl</u>	<u>2msble</u>	<u>fr</u>
<u>C</u>	<u>38 to 60</u>	<u>2.5Y 4/4</u>	<u>10YR 4/8 2.5Y 6/2</u>	<u>C1P C2P</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = 58"

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SOIL PROFILE NOTE PAGE

Profile #: C-9 Soil Boring: or Test Pit: Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 55" to redox depletion & cnc.
 Subgroup Taxonomic Classification: Typic Dystrudapt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>co/s</u>	<u>2 mpi</u>	<u>fr</u>
<u>Bw</u>	<u>9 to 30</u>	<u>10YR 6/4</u>	<u>/</u>	<u>/</u>	<u>co/s</u>	<u>1 mpi</u>	<u>fr</u>
<u>C</u>	<u>30 to 55</u>	<u>2.5Y 6/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>vtr</u>
<u>Cg</u>	<u>55 to 60</u>	<u>2.5Y 6/3</u>	<u>10YR 5R 2.5Y 5R</u>	<u>CIP CZF</u>	<u>lo/s</u>	<u>m</u>	<u>vtr</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = >60"

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SOIL PROFILE NOTE PAGE

Profile #: C-10 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: mostly level
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 55" to redox depletions & concentration
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 9	10YR 4/4	/	/	sl	2p g1	fv
Bt ¹	9 to 24	10YR 5/6	/	/	sl	1m sblc	fr
Bt ²	24 to 34	10YR 4/6	/	/	scl	2m sblc	fv
Bc	34 to 55	10YR 4/4	/	/	sl	m	fr
C	55 to 60	2.5Y 4/4	10YR 4/8 2.5Y 4/2	210 210	l	n	fr
	to						
	to						
	to						

Comments: _____ Free water = 59"

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SOIL PROFILE NOTE PAGE

Profile #: D-2 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 38" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Oxyaquic Psycrodept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>—</u>	<u>—</u>	<u>s</u>	<u>2mg</u>	<u>fr</u>
<u>Bt</u>	<u>8 to 18</u>	<u>10YR 5/6</u>	<u>—</u>	<u>—</u>	<u>s</u>	<u>1msbk</u>	<u>fr</u>
<u>C¹</u>	<u>18 to 38</u>	<u>2.5Y 5/4</u>	<u>—</u>	<u>—</u>	<u>ls</u>	<u>m</u>	<u>vfr</u>
<u>C²</u>	<u>38 to 50</u>	<u>2.5Y 5/5</u>	<u>5YR 7/0 2.5Y 5/2</u>	<u>C1P C2P</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
<u>C³</u>	<u>50 to 60</u>	<u>2.5Y 4/2</u>	<u>10YR 5/6</u>	<u>C1P</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 45"

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SOIL PROFILE NOTE PAGE

Profile #: D-3 Soil Boring: or Test Pit: _____ Date of Test: 1/10/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 36" to redox depletion & concentration
 Subgroup Taxonomic Classification: Oxyaquic Dystrudept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>engl</u>	<u>fr</u>
<u>B_w¹</u>	<u>8 to 30</u>	<u>2.5Y 5/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>lmsbk</u>	<u>fr</u>
<u>B_w²</u>	<u>30 to 36</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>lmsbk</u>	<u>fr</u>
<u>C¹</u>	<u>36 to 49</u>	<u>2.5Y 6/3</u>	<u>10YR 5/8 2.5Y 5/2</u>	<u>c2p c2r</u>	<u>cos</u>	<u>n</u>	<u>fr</u>
<u>C_g²</u>	<u>49 to 60</u>	<u>2.5Y 5/2</u>	<u>10YR 4/6 4/8</u>	<u>c1p</u>	<u>cos</u>	<u>n</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = 43

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SOIL PROFILE NOTE PAGE

Profile #: D4 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: _____
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 42" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/4	/	/	sl	2mg	fr
E	8 to 18	10YR 4/4	/	/	sl	imble	fr
Bt	18 to 32	10YR 5/6	/	/	sl	imble	fr
CB	32 to 42	10YR 5/6 4/4	/	/	sl	imble	fr
C	42 to 60	10YR 6/4	10YR 5/8 10YR 7/2	220 220	loos	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 48"

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SOIL PROFILE NOTE PAGE

Profile #: D-5 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 40 mp.
 Depth to and Type of Limiting Zone: 36" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/4	—	—	cosl	2mp	fr
E	8 to 18	10YR 4/4	—	—	cosl	1msbl	fr
Bt	18 to 36	10YR 5/6	—	—	cosl	3msbl	fr
C1	36 to 50	10YR 5/4	10YR 5R	22p	cosl	m	fr
C2 Cg	50 to 60	10YR 7/2	10YR 7B	cc-	cosl	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 50"

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SOIL PROFILE NOTE PAGE

Profile #: D-6 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 36" to redox depletions & concentrations

Subgroup Taxonomic Classification: Oxyaquic Dystrudert

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 7/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>fr</u>
<u>Bw¹</u>	<u>8 to 30</u>	<u>2.5Y 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1m/ble</u>	<u>fr</u>
<u>Bw²</u>	<u>30 to 36</u>	<u>2.5Y 5/4</u>	<u>10M 5/8</u>	<u>FIP</u>	<u>sl</u>	<u>1m/ble</u>	<u>fr</u>
<u>C¹</u>	<u>36 to 48</u>	<u>2.5Y 4/3</u>	<u>2.5Y 4/2</u>	<u>CID</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
<u>C²</u>	<u>48 to 60</u>	<u>2.5Y 7/2</u>	<u>10YR 4/8</u>	<u>CCV</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 39"

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SOIL PROFILE NOTE PAGE

Profile #: D-7 Soil Boring: or Test Pit: Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: gently sloping
 Estimated Permeability: 20cp.
 Depth to and Type of Limiting Zone: 48" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10MR 3/3</u>	<u>/</u>	<u>/</u>	<u>s</u>	<u>2mpv</u>	<u>fr</u>
<u>E</u>	<u>9 to 26</u>	<u>2.5Y 6/4</u>	<u>/</u>	<u>/</u>	<u>s</u>	<u>1msblk</u>	<u>fr</u>
<u>EB</u>	<u>26 to 36</u>	<u>2.5Y 6/4</u>	<u>1/2 10MR 5/6</u>	<u>/</u>	<u>s, scf</u>	<u>2msblk</u>	<u>fr</u>
<u>C</u>	<u>36 to 48</u>	<u>2.5Y 6/3</u>	<u>10MR 4/6</u>	<u>cid</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
<u>Cg</u>	<u>48 to 60</u>	<u>2.5Y 6/2 1/3</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 58"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 0-8 Soil Boring: or Test Pit: Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpy
 Depth to and Type of Limiting Zone: 55" to redox depletion
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 4</u>	<u>10YR 7/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>fr</u>
<u>E¹</u>	<u>9 to 24</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>E²</u>	<u>24 to 34</u>	<u>2.5Y 5/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>1msbk</u>	<u>ufr</u>
<u>E³</u>	<u>34 to 55</u>	<u>2.5Y 5/4 & 10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>ls, scl</u>	<u>2msbk</u>	<u>fr</u>
<u>C_g</u>	<u>55 to 60</u>	<u>2.5Y 4/2 & 4/3</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = >60"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 0-9 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 64" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 5/3	/	/	sl	2mg	fr
Bt ¹	8 to 30	10YR 5/6	/	/	sl	1msbk	fr
C	30 to 50	2.5Y 7/4	/	/	lr	n	stfr
2Bt ²	50 to 55	2.5Y 6/4	2 10YR 7/2	/	ls, sl	1msbk	fr
C	55 to 64	2.5Y 6/4	/	/	ls	n	stfr
C	64 to	2.5Y 6/4	2.5Y 4/2 10YR 6/6	C10 C10	l	n	fr
	to						
	to						

Comments: _____ Free water = 67"

J.C. Duke, Jr.
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SOIL PROFILE NOTE PAGE

Profile #: D-10 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05

Property Owner: LCC

Property Location: N/CR 224, W of RT. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 4-6% Relief: gently sloping

Estimated Permeability: 40 msi

Depth to and Type of Limiting Zone: 42" to redox depletions

Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mgr	fr
Bt ¹	8 to 16	10YR 5/6	/	/	sl	1m blk	fr
Bt ²	16 to 42	10YR 4/6	/	/	scl-	2m blk	fr
C	42 to 60	2.5Y 4/9	2.5Y 4/2	FIP	lcoj	m	f
	to						
	to						
	to						
	to						

Comments: _____ Free water = 48"

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SOIL PROFILE NOTE PAGE

Profile #: E2 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: greatly sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 42" to redox depletion & concentrations
 Subgroup Taxonomic Classification: Typic Hapludalf

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 11	10YR 3/3	/	/	col	2mg	f
E	11 to 24	10YR 5/4	/	/	col	1mblk	fr
Bt	24 to 38	10YR 5/6 7/4	/	/	col-	2mblk	fr
Ct	38 to 42	2.5Y 4/4	/	/	col-	m	f
C	42 to 50	2.5Y 4/4	10YR 4/6 4/6 2.5Y 7/2	c2p c2n	lws	n	f
Cg	50 to 60	2.5Y 7/2	2.5Y 4/6	c2n	hws	m	fr
	to						
	to						

Comments: _____ Free water = 43"
E-1 < 20"

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SOIL PROFILE NOTE PAGE

Profile #: E3 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 42" to redox depletions & concentration
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/4	/	/	sl	2mg	fr
E	8 to 36	10YR 5/4	/	/	sl	1m, 3/4	fv
Bt	36 to 42	10YR 5/6	/	/	sl	1m, 3/4	fr
C ¹	42 to 54	2.5Y 6/4	10YR 6/6 2.5Y 7/2	C2P C2V	sl	r	fr
C ² _g	54 to 60	2.5Y 6/2	2.5Y 5/8	C2V	sl	r	fr
	to						
	to						
	to						

Comments: _____ Free water = 54"

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SOIL PROFILE NOTE PAGE

Profile #: E4 Soil Boring: or Test Pit: Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 42" to redox depletions & concentration
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>f</u>
<u>Bt</u>	<u>8 to 42</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1m sbl</u>	<u>f</u>
<u>C</u>	<u>42 to 60</u>	<u>2.5Y 4/4</u>	<u>10YR 4/2 2.5Y 5/2</u>	<u>22P 22V</u>	<u>sl</u>	<u>m</u>	<u>f</u>
	to						
	to						
	to						
	to						
	to						

Comments: _____ Free water = 53"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: E5 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 50" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mp	f
E	8 to 26	10YR 5/4 + 4/4	/	/	sl	1m, blk	f
BE	26 to 34	10YR 5/2	/	/	sl	1m, blk	f
BC	34 to 50	10YR 4/4 5/6	/	/	sl, scl	2m, blk	f
C	50 to 60	2.5Y 5/4	10YR 5/8 2.5Y 4/2	2.5Y 2.5Y	sl	m	f
	to						
	to						
	to						

Comments: _____ Free water = >60

J.C. Duke
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: E6 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2 % Relief: grassy slope
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 45" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mg	fr
E	8 to 24	10YR 5/4	/	/	sl	1msbk	fr
Bt	24 to 30	10YR 5/6	/	/	sd-	cmblk	fr
B	30 to 45	10YR 4/4: 5/6	/	/	sl	1msbk	fr
C	45 to 60	2.5Y 4/3	10YR 5/6 2.5Y 4/2	ccp cc	ls	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 58"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: E-7 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20mp
 Depth to and Type of Limiting Zone: 66" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mgp</u>	<u>fr</u>
<u>E</u>	<u>8 to 46</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1m sbl</u>	<u>fr</u>
<u>Bt</u>	<u>40 to 56</u>	<u>7.5YR 7/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1m sbl</u>	<u>fr</u>
<u>C1</u>	<u>56 to 66</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>m</u>	<u>fr</u>
<u>C2</u>	<u>66 to 72</u>	<u>2.5Y 4/4</u>	<u>2.5Y 7/2</u>	<u>< 10</u>	<u>loos</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 68"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: E-8 Soil Boring: or Test Pit: Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 62" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mgv	fr
E	8 to 25	10YR 4/4	/	/	sl	1msbk	fr
Bt	25 to 36	10YR 7/6	/	/	scl	2msbk	fr
C1	36 to 62	10YR 4/4	/	/	sl	m	fr
C2	62 to 66	2.5Y 4/4	10YR 4/8 2.5Y 5/2	22P 22P	lcos	m	vfr
	to						
	to						
	to						

Comments: _____ Free water = 64"

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 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: E-9 Soil Boring: or Test Pit: Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 60" to redox depletions
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>f</u>
<u>Bt</u>	<u>8 to 22</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbk</u>	<u>f</u>
<u>C¹</u>	<u>22 to 34</u>	<u>10YR 9/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>1msbk</u>	<u>vfr</u>
<u>C²</u>	<u>34 to 60</u>	<u>10YR 7/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>vfr</u>
<u>C³</u>	<u>60 to 66</u>	<u>2.5Y 9/4</u>	<u>2.5Y 7/2</u>	<u>crp</u>	<u>ls</u>	<u>n</u>	<u>f</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 65"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: E-10 Soil Boring: or Test Pit: Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 40 mpi
 Depth to and Type of Limiting Zone: Typic Hapludult
 Subgroup Taxonomic Classification: 60" to redox depletions

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 6	10YR 4/3	/	/	sl	2mg	fr
E	6 to 18	10YR 4/4	/	/	sl	1msbk	fr
Bt ¹	18 to 34	10YR 5/6	/	/	scl	2msbk	fr
Bt ²	34 to 56	10YR 7/2	/	/	sl	1msbk	fr
C ¹	56 to 60	2.5Y 4/4 & 10YR 7/2	/	/	ls, sl	n	fr
C ²	60 to 66	2.5Y 7/2	/	/	lcs	n	fr
	to						
	to						

Comments: _____ Free water = 64"

Joseph C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: F-2 Soil Boring: or Test Pit: _____ Date of Test: 1/10/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 36" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Oxyaquic Haplosudult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 7/2	/	/	sl	2mp	fr
E	8 to 18	10YR 5/4	/	/	ls	1mb	fr
Bt	18 to 36	10YR 7/2 7/4	/	/	sl, ls	1mb/1	fr
C	36 to 60	2.5Y 9/3	2.5Y 7/2	ccr	lcc	m	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 47"
F-1 420"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: F-3 Soil Boring: or Test Pit: Date of Test: 2/21/05

Property Owner: LCC

Property Location: N/CR 224, W of RT. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 30" to redox depletions & cementation

Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 9	10YR 4/2	/	/	sl	2mg	fr
E	9 to 16	2.5Y 5/4	/	/	sl	1msbk	fr
Bt	16 to 22	10YR 5/6	/	/	co sl	1msbk	fr
C1	22 to 30	2.5Y 7/6	/	/	co sl	m	fr
Cy ²	30 to 60	2.5Y 4/2	10YR 5/8	co	lo	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 41"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: FJ Soil Boring: or Test Pit: _____ Date of Test: 9/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 55"
 Subgroup Taxonomic Classification: Typic Dystrudent

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10 YR 4/2</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>1 mpr</u>	<u>fr</u>
<u>Bw</u>	<u>8 to 20</u>	<u>10 YR 5/4</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>1 mbk</u>	<u>fr</u>
<u>C'</u>	<u>20 to 55</u>	<u>2.5 Y 6/4</u>	<u>/</u>	<u>/</u>	<u>loose</u>	<u>m</u>	<u>fr</u>
<u>C²</u>	<u>55 to 60</u>	<u>2.5 Y 6/3</u>	<u>2.5 Y 4/2</u>	<u>620</u>	<u>loose</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = >60"

Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: F-4 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 20 m/s
 Depth to and Type of Limiting Zone: 30" to redox depletion & concretions
 Subgroup Taxonomic Classification: Oxyaquic Dystrudust

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>2mp</u>	<u>f</u>
<u>Aw</u>	<u>8 to 25</u>	<u>2.5Y 6/4</u>	<u>/</u>	<u>/</u>	<u>loos</u>	<u>im. s/bk</u>	<u>f</u>
<u>C¹</u>	<u>25 to 30</u>	<u>2.5Y 6/3</u>	<u>/</u>	<u>/</u>	<u>loos</u>	<u>n</u>	<u>f</u>
<u>C²</u>	<u>30 to 40</u>	<u>2.5Y 6/3</u>	<u>2.5Y 6/2</u>	<u>c27</u>	<u>loos</u>	<u>n</u>	<u>f</u>
<u>C³</u>	<u>40 to 60</u>	<u>2.5Y 7/2</u>	<u>10YR 6/5</u>	<u>c10</u>	<u>loos</u>	<u>n</u>	<u>f</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 58"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: F6 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 in
 Depth to and Type of Limiting Zone: 64" to redox depletion & concentration.
 Subgroup Taxonomic Classification: Typic Dystrudept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>impr</u>	<u>f</u>
<u>E</u>	<u>8 to 24</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>impr</u>	<u>f</u>
<u>Bw</u>	<u>24 to 49</u>	<u>10YR 7/4 5/6</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>impr</u>	<u>f</u>
<u>C1</u>	<u>49 to 64</u>	<u>2.5Y 7/6 5/4</u>	<u>/</u>	<u>/</u>	<u>slty</u>	<u>m</u>	<u>f</u>
<u>C2</u>	<u>64 to 78</u>	<u>2.5Y 7/2</u>	<u>10YR 7/8</u>	<u>ced</u>	<u>ls</u>	<u>m</u>	<u>f</u>
	to						
	to						
	to						

Comments: _____ Free water = >70

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SOIL PROFILE NOTE PAGE

Profile #: F7 Soil Boring: or Test Pit: Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 52" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 9	10YR 4/2	/	/	cosl	2mg1	fs
E	9 to 34	10YR 6/4	/	/	cosl	1mb/c	fs
Bt	34 to 44	10YR 7/6	/	/	cosl	2ms/bh	fs
C	44 to 55	2.5Y 6/4 P4	/	/	ls	m	fr
C	55 to 60	2.5Y 6/2	10YR 6/6	OLP	ls	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 76.5

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SOIL PROFILE NOTE PAGE

Profile #: F8 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 30 mpi

Depth to and Type of Limiting Zone: 58" to relax depletion & concentration

Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 7	10PR 4/2	/	/	col	2mgi	fr
E	7 to 28	10PR 9/4	/	/	col	1msbl	fr
BE	28 to 38	10PR 5/6 9/4	/	/	col, col	2msbl	fr
CB	38 to 58	2.57 9/4 3/2	/	/	col, less	m	fr
C	58 to 64	2.54 4/3	10PR 9/8 2.54 5/2	C1D C2D	ls	A	fr
	to						
	to						
	to						

Comments: _____ Free water = >64'

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SOIL PROFILE NOTE PAGE

Profile #: F9 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 imp.'
 Depth to and Type of Limiting Zone: 68" to redox depletions & concentration
 Subgroup Taxonomic Classification: Typic Dystrudust

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>engr</u>	<u>f</u>
<u>Bw</u>	<u>8 to 30</u>	<u>10YR 6/4</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>imble</u>	<u>f</u>
<u>C</u>	<u>30 to 68</u>	<u>2.5Y 6/4</u>	<u>/</u>	<u>/</u>	<u>lws</u>	<u>m</u>	<u>f</u>
<u>C</u>	<u>68 to 72</u>	<u>10YR 5/4</u>	<u>2.5Y 4/2 10YR 6/8</u>	<u>CIP CIP</u>	<u>lws</u>	<u>m</u>	<u>f</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 78"

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SOIL PROFILE NOTE PAGE

Profile #: F-10 Soil Boring: or Test Pit: Date of Test: 2/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 in pi
 Depth to and Type of Limiting Zone: 54" to redox depletion & concentrations
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>s</u>	<u>2ng</u>	<u>f</u>
<u>E</u>	<u>9 to 18</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>s</u>	<u>1m, sb</u>	<u>f</u>
<u>Bt</u>	<u>18 to 36</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>scl</u>	<u>2m, sb</u>	<u>f</u>
<u>C¹</u>	<u>36 to 54</u>	<u>2.5Y 9/4</u>	<u>/</u>	<u>/</u>	<u>s</u>	<u>1m, sb</u>	<u>f</u>
<u>C²</u>	<u>54 to 64</u>	<u>2.5Y 7/2</u>	<u>10YR 4/8</u>	<u>CIP</u>	<u>l₁</u>	<u>r</u>	<u>f</u>
	to						
	to						
	to						

Comments: _____ Free water = 57"

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SOIL PROFILE NOTE PAGE

Profile #: G-1 Soil Boring: or Test Pit: Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: wooded gently sloping

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 48" to redox depletions

Subgroup Taxonomic Classification: Typic Dystrudrat

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>A_p</u>	<u>0 to 5</u>	<u>10% 4/3</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>lgs</u>	<u>f</u>
<u>B_w</u>	<u>5 to 32</u>	<u>10% 4/4</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>lm, blk</u>	<u>f</u>
<u>C</u>	<u>32 to 48</u>	<u>25% 6/4</u>	<u>—</u>	<u>—</u>	<u>ls</u>	<u>m</u>	<u>f</u>
<u>C</u>	<u>48 to 60</u>	<u>25% 4/2</u>	<u>—</u>	<u>—</u>	<u>ls</u>	<u>m</u>	<u>f</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = 48"

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SOIL PROFILE NOTE PAGE

Profile #: 62 Soil Boring: or Test Pit: Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 50" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 9	10YR 4/2	/	/	sl	2mg	fr
Ea	9 to 30	10YR 6/4	/	/	sl	1msbk	fr
C	30 to 50	2.5Y 4/4	/	/	ls	n	fr
C	50 to 60	2.5Y 4/3	10YR 4/6 4/8 2.5Y 5/2	ccr crl	sl	m	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 56"

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SOIL PROFILE NOTE PAGE

Profile #: G3 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 50" to redox depletion & cementation
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2ng1</u>	<u>f</u>
<u>E</u>	<u>8 to 32</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>o sl</u>	<u>1msbh</u>	<u>f</u>
<u>Bt</u>	<u>32 to 42</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>cosl+</u>	<u>2msbh</u>	<u>f</u>
<u>C'</u>	<u>42 to 50</u>	<u>10YR 6/3</u>	<u>/</u>	<u>/</u>	<u>cos</u>	<u>1wg1</u>	<u>f</u>
<u>C²</u>	<u>50 to 66</u>	<u>2.5Y 4/3</u>	<u>10YR 5/8 2.5Y 4/2</u>	<u>C1P C2D</u>	<u>cos</u>	<u>m</u>	<u>f</u>
	to						
	to						
	to						

Comments: _____ Free water = 62'

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SOIL PROFILE NOTE PAGE

Profile #: G 4 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of RT. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 30 mpi

Depth to and Type of Limiting Zone: 30" to redox depletions & concentration

Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 10</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>2mgs</u>	<u>fr</u>
<u>E</u>	<u>10 to 24</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>1n sblc</u>	<u>fr</u>
<u>EB</u>	<u>24 to 30</u>	<u>10YR 5/4</u>	<u>& 10YR 5/2</u>	<u>/</u>	<u>col, wcol</u>	<u>2mgsbl</u>	<u>fr</u>
<u>C1</u>	<u>30 to 44</u>	<u>2.5Y 6/4</u>	<u>10YR 4/8 2.5Y 6/2</u>	<u>ccc ccc</u>	<u>lcs</u>	<u>m</u>	<u>fr</u>
<u>C2 C4</u>	<u>44 to 68</u>	<u>2.5Y 7/2</u>	<u>10YR 6/2 7/2</u>	<u>civ</u>	<u>lcs</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 36"

J.C.D.
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SOIL PROFILE NOTE PAGE

Profile #: 65 Soil Boring: or Test Pit: Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 2-3% Relief: gently sloping

Estimated Permeability: 30 mp.

Depth to and Type of Limiting Zone: 36" to redox depletions & concentration

Subgroup Taxonomic Classification: Oxyaquic Paleudult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2ngs	f
E	8 to 24	10YR 7/4	/	/	cosl	1m, blk	f
B _w	24 to 36	10YR 4/4	/	/	cosl	1m, blk	f
C ¹	36 to 49	10YR 4/3	7.5YR 7/8 10YR 7/2	C2P C2P	cosl	1m, blk	f
2C ²	49 to 60	10YR 4/2	7.5YR 4/6 10YR 7/2	C2P C1P	sl-	m	f
	to						
	to						
	to						

Comments: _____ Free water = 40'

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: G-6 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 60" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	—	—	col	2mg	f
E	8 to 24	10YR 4/4	—	—	col	1mg	f
EB	24 to 30	10YR 4/4 & 10YR 5/6	—	—	col	1mg	f
Bt	30 to 34	10YR 4/2	—	—	col	2mg	f
C1	34 to 42	2.5Y 7/4	—	—	lvs	sg	lo
C2	42 to 68	1.5Y 7/3	10YR 5/3	C2P	sl	n	f
C3	68 to 72	10YR 5/2	10YR 5/5	C2P	sl	n	f
	to						

Comments: _____ Free water = > 72"

Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 6-7 Soil Boring: or Test Pit: Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 30 mpi

2. Depth to and Type of Limiting Zone: 34" to redox depletion & concentrations

Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mgr	fr
E	8 to 24	2.5Y 5/4	/	/	cosl	1msbk	fr
BE	24 to 34	10YR 5/6 5/4	/	/	sl, scl	2msbk	fr
Dt	34 to 41	2.5Y 5/4	10YR 5/6 2.5Y 5/2	C1P C2P	scl	2msbk	fr
C	41 to 60	2.5Y 5/4	10YR 4/6 4/3 2.5Y 5/2	C2P C2H	lcos	-	fr
	to						
	to						
	to						

Comments: _____ Free water = 58"

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 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: G-8 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 30 rpi

2. Depth to and Type of Limiting Zone: 38" to redox depletions & concentrations

Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mgk	fr
E	8 to 22	10YR 4/4	/	/	sl	1m-bk	fr
EB	22 to 38	10YR 4/4	< 10YR 5/6	/	sl, scl	1m-bk	fr
C ¹	38 to 48	2.5Y 4/4	10YR 4/8 2.5Y 7/2	C1P C2P	cast	m	fr
C ²	48 to 68	10YR 4/4	10YR 5/8	C1	ls	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 56"

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SOIL PROFILE NOTE PAGE

Profile #: G-9 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: _____
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 48" to redox depletion & cementation
 Subgroup Taxonomic Classification: Typic Hapludalf

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	—	—	sl	2mp	fr
E	8 to 28	10YR 5/4	—	—	sl	1mbl	fr
EB	28 to 48	10YR 7/6 7/4	—	—	sl/sc	1mbl	fr
C	48 to 60	10YR 7/4	10YR 4/2 10YR 5/8	c2p c2a	lcs	rs	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 52"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 610 Soil Boring: or Test Pit: Date of Test: 9/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 3-4 Relief: gently sloping
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 36"
 Subgroup Taxonomic Classification: Oxyaquic Petrodult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mg	fr
E	8 to 24	2.5Y 5/4	/	/	co-sl	1m, blk	fr
EB	24 to 36	10YR 5/4	/	/	co-sl	1m, blk	fr
Bt	36 to 60	10YR 5/6 5/4	10YR 5/8	c2p	co-sd, co-sl	2m, blk	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 36"

Joseph C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 142 Soil Boring: or Test Pit: Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30mpi
 Depth to and Type of Limiting Zone: 62 to redox depletions i concentrations
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 10	10YR 4/2	—	—	sl	2ng	fr
E	10 to 18	10YR 5/6	—	—	sl-	1mble	fr
Bt	18 to 28	10YR 4/6	—	—	sl+	2mble	fr
BC	28 to 40	10YR 4/4	—	—	cast-	1mble	fr
C1	40 to 62	2.5Y 6/4	—	—	loas	sq	lo
C2	62 to 72	2.5Y 7/3	10YR 5/8 2.5Y 4/2	C20 C20	loas	sq	lo
	to						
	to						

Comments: _____ Free water = 66"

Joseph C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: H3 Soil Boring: or Test Pit: _____ Date of Test: 9/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30mpi
 Depth to and Type of Limiting Zone: 40" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mg1	fr
E	8 to 22	10YR 4/4	/	/	sl	2msbk	fr
Bt	22 to 40	10YR 5/6	/	/	sl+	2msbk	fr
C1	40 to 50	2.5Y 4/4	10YR 5/6 2.5Y 4/3	C1D C1D	loos	1msbk	fr
C2	50 to 60	2.5Y 4/3	5YR 5/6 2.5Y 5/2	C2R C2D	loos	r	fr
	to						
	to						
	to						

Comments: _____ Free water = 43"

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SOIL PROFILE NOTE PAGE

Profile #: H4 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 2-3% Relief: gently sloping

Estimated Permeability: 40 mpi

Depth to and Type of Limiting Zone: 22" to redox depletion & concentration

Subgroup Taxonomic Classification: Aquic Paleudult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 10	10YR 4/3	/	/	sl	2mp	f
E1	10 to 22	2.5Y 4/3	/	/	co sl	2mbk	f
E2	22 to 29	10YR 4/4	10YR 1/6 4/4 10YR 4/3	210 220	sl	2mbk	f
Bt	29 to 60	2.5Y 4/3	18YR 5/8 2.5Y 5/2	220 22P	sl	m	f
	to						
	to						
	to						
	to						

Comments: _____ Free water = 26

J.C. Duke
 Joseph C. Duke, Jr., CPSS



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: H5 Soil Boring: or Test Pit: Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 30_{app}'
 Depth to and Type of Limiting Zone: 32" to redox depletions & concentration
 Subgroup Taxonomic Classification: Oxyaquic Dystrudyp^v

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 6</u>	<u>10YR 4/2</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>2mgv</u>	<u>fr</u>
<u>B_w¹</u>	<u>6 to 24</u>	<u>10YR 4/4</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>B_w²</u>	<u>24 to 32</u>	<u>2.5Y 4/4</u>	<u>—</u>	<u>—</u>	<u>msl</u>	<u>1msbk</u>	<u>fr</u>
<u>C¹</u>	<u>32 to 56</u>	<u>2.5Y 4/2</u>	<u>2.5Y 4/2 2.5Y 7/2</u>	<u>C10 C2P</u>	<u>loas</u>	<u>m</u>	<u>fr</u>
<u>2C²</u>	<u>56 to 60</u>	<u>2.5Y 4/2</u>	<u>10YR 4/8 2.5Y 5/6</u>	<u>C2P C1P</u>	<u>scl</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = 36"

JCD
 Joseph C. Duke, Jr., CPSS



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 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: H-6 Soil Boring: or Test Pit: Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 2-3% Relief: gently sloping

Estimated Permeability: 30 npi

Depth to and Type of Limiting Zone: 56" to redox depletions & concentration

Subgroup Taxonomic Classification: Typic Paludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mg	fr
Bw ¹	8 to 28	10YR 4/4	/	/	sl	1/4 blk	fr
Bw ²	28 to 36	2.5Y 4/4	/	/	sl	1/4 blk	f
C ¹	36 to 50	2.5Y 4/3	/	/	ls	m	fr
C ²	50 to 56	10YR 5/6 4/4	/	/	sl	1/4 blk	fr
C ³	56 to 66	2.5Y 5/6	10YR 4/2	crv	scf	2 msh	fr
	to						
	to						

Comments: _____ Free water = 760

JCD
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: H-7 Soil Boring: or Test Pit: Date of Test: 3/3/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpy
 Depth to and Type of Limiting Zone: 44" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10YR 7/2</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mp</u>	<u>fr</u>
<u>E</u>	<u>9 to 24</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>Bt</u>	<u>24 to 44</u>	<u>10YR 5/2</u>	<u>/</u>	<u>/</u>	<u>coad</u>	<u>2msbk</u>	<u>fr</u>
<u>C¹</u>	<u>44 to 50</u>	<u>2.5Y 7/4 4/2</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
<u>C²</u>	<u>50 to 60</u>	<u>2.5Y 7/4 3/2</u>	<u>10YR 5/6 3/2</u>	<u>C1D</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = 48"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: H8 Soil Boring: or Test Pit: _____ Date of Test: 3/3/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 54"
 Subgroup Taxonomic Classification: Typic Hardudult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 9	10YR 4/4	—	—	sl	2m cr	f
E	9 to 30	10YR 4/4	—	—	sl	1m blk	f
EB	30 to 36	10YR 4/4 s 5/4	—	—	sl, scl	2m sh	f
Bt ¹	36 to 54	10YR 4/4	—	—	scl	2m sh	f
Bt ²	54 to 60	2.5Y 4/2	10YR 4/4	CIP	fscl	m	f
	to						
	to						
	to						

Comments: _____ Free water = 260

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: H-9 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mp.
 Depth to and Type of Limiting Zone: 52" to redox depletions
 Subgroup Taxonomic Classification: Typic Paleudult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mg	fr
E	8 to 30	10YR 4/4	/	/	sl	1msbk	fr
Bt	30 to 48	10YR 5/2	/	/	scf	2msbk	fr
C ¹	48 to 52	2.5Y 4/4 5/6	/	/	sl	m	fr
C ²	52 to 60	2.5Y 4/3	10YR 4/8 2.5Y 4/2	C2P C2V	sl	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 55"

Joseph C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: J7 Soil Boring: or Test Pit: _____ Date of Test: 3/3/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 22" to redox concentrations
 Subgroup Taxonomic Classification: Aquic Psypsidpt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>fv</u>
<u>E</u>	<u>8 to 14</u>	<u>2.5Y 4/4</u>	<u>/</u>	<u>/</u>	<u>loas</u>	<u>sq</u>	<u>l.</u>
<u>B_v</u>	<u>14 to 22</u>	<u>10YR 4/6</u>	<u>/</u>	<u>/</u>	<u>loas</u>	<u>sq</u>	<u>l.</u>
<u>C</u>	<u>22 to 60</u>	<u>2.5Y 4/3</u>	<u>10YR 4/3</u>	<u>c2p</u>	<u>lws</u>	<u>n</u>	<u>fv</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = 30
J-6 Filled wetlands
I-5 wetlands

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS

28



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SOIL PROFILE NOTE PAGE

Profile #: J8 Soil Boring: or Test Pit: _____ Date of Test: 1/1/05

Property Owner: LCC

Property Location: N/CR 224, W of RT. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: _____ Relief: _____

Estimated Permeability: _____

Depth to and Type of Limiting Zone: _____

Subgroup Taxonomic Classification: _____

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 6	10YR 4/2	/	/	s	2m	f
E	6 to 18	10YR 4/3 4/4	/	/	sl	1m sbl	f
Bt ¹	18 to 24	10YR 5/6	/	/	sd	2m sbl	f
Bt ²	24 to 30	10YR 5/6	5YR 5/8 10YR 4/6	CIP C2P	sd	2m sbl	f
C ¹	30 to 34	2.5Y 4/4 4/5	/	/	ls	m	f
C ²	34 to 50	2.5Y 4/3	/	/	l	m	f
C ³	50 to 55	7.5YR 4/3 4/4	/	/	lcs	m	f
C ⁴	55 to 60	10YR 4/4	/	/	lcos	m	f

Comments: _____ Free water = 48"

J.C.D.
 Joseph C. Duke, Jr., CPSS



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 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: J9 Soil Boring: or Test Pit: Date of Test: 3/3/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping (wooded)

Estimated Permeability: 30mp

Depth to and Type of Limiting Zone: SB to redox depletion & concentration

Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>A⁰</u>	<u>0 to 4</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>sl-</u>	<u>2mp</u>	<u>f</u>
<u>E</u>	<u>4 to 26</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl-</u>	<u>1msh</u>	<u>f</u>
<u>EB</u>	<u>26 to 34</u>	<u>10YR 4/4 5/6</u>	<u>/</u>	<u>/</u>	<u>sl, scl</u>	<u>1-2msh</u>	<u>f</u>
<u>EB¹</u>	<u>34 to 46</u>	<u>10YR 7/2</u>	<u>/</u>	<u>/</u>	<u>scl</u>	<u>2msh</u>	<u>f</u>
<u>E</u>	<u>46 to 50</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>n</u>	<u>f</u>
<u>2Bt²</u>	<u>50 to 58</u>	<u>2.5Y 7/2 10YR 7/6</u>		<u>/</u>	<u>slod</u>	<u>n</u>	<u>f</u>
<u>2Bt³</u>	<u>58 to 64</u>	<u>2.5Y 5/6</u>	<u>7.5YR 7/8 10YR 5/2</u>	<u>CCP C2</u>	<u>scl</u>	<u>n</u>	<u>f</u>
	<u>to</u>						

Comments: _____ Free water = 764"

JCD
 Joseph C. Duke, Jr., CPSS

#2

STAYTONVILLE ROAD

TEST RESULTS

Test No: E-8-A
 Date of Test: 03-04-05
 Depth of Test: 30"

Hole Saturated for 4 hrs

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
7:00	<u>4 hours</u>	<u>12</u>	<u>9</u>
11:00	<u>30</u>	<u>16</u>	<u>8</u>
11:30	<u>40</u>	<u>45</u>	<u>1.5</u>
50	<u>10</u>	<u>4.5</u>	<u>1.5</u>
12:00	<u>10</u>	<u>4.5</u>	<u>1.5</u>
10	<u>10</u>	<u>4.5</u>	<u>1.5</u>
20	<u>10</u>	<u>4.5</u>	<u>1.5</u>
30	<u>10</u>	<u>4.5</u>	<u>1.5</u>
9:30	<u>30</u>	<u>12</u>	<u>9</u>
10:00	<u>30</u>	<u>3</u>	<u>9</u>
10:30	<u>30</u>	<u>3.5</u>	<u>8.5</u>
11:00	<u>30</u>	<u>3.5</u>	

Rate of Fall: 10 minutes per inch ft 6 minutes

Test No: E-8-B
 Date of Test: 03-04-05
 Depth of Test: 30"

Hole Saturated for 4 hrs

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
7:00	<u>4 hours</u>	<u>12</u>	<u>2.5</u>
11:00	<u>30</u>	<u>16</u>	<u>2.5</u>
11:30	<u>40</u>	<u>6.5</u>	<u>1.75</u>
50	<u>10</u>	<u>5.25</u>	<u>1.5</u>
12:00	<u>10</u>	<u>5.50</u>	<u>1.5</u>
10	<u>10</u>	<u>6.75</u>	<u>1.25</u>
20	<u>10</u>	<u>5.75</u>	<u>1.25</u>
30	<u>10</u>	<u>6.75</u>	<u>1.25</u>
9:30	<u>30</u>	<u>11.2</u>	<u>2.25</u>
10:00	<u>30</u>	<u>9</u>	
10:30	<u>30</u>	<u>9.5</u>	<u>2.5</u>
11:00	<u>30</u>	<u>9.5</u>	<u>2.5</u>

Rate of Fall: 26.7 minutes per inch ft 7 minutes

Test No: E-8-C
 Date of Test: 03-04-05
 Depth of Test: 28"

Hole Saturated for 4 hrs

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
7:00	<u>4 hours</u>	<u>12</u>	<u>2</u>
11:00	<u>30</u>	<u>16</u>	<u>2</u>
11:30	<u>40</u>	<u>5.50</u>	<u>1.50</u>
50	<u>10</u>	<u>5.50</u>	<u>1.50</u>
12:00	<u>10</u>	<u>5.75</u>	<u>1.25</u>
10	<u>10</u>	<u>5.75</u>	<u>1.25</u>
20	<u>10</u>	<u>5.75</u>	<u>1.25</u>
30	<u>10</u>	<u>5.75</u>	<u>1.25</u>
9:30	<u>30</u>	<u>12</u>	<u>2.100</u>
10:00	<u>30</u>	<u>10</u>	
10:30	<u>30</u>	<u>10</u>	<u>2</u>
11:00	<u>30</u>	<u>10</u>	<u>2</u>

Rate of Fall: 30 minutes per inch ft 30 minutes

#1

STAYBOWVILLE ROAD

TEST RESULTS

Test No: B-7-A
 Date of Test: 03-04-05
 Depth of Test: 29"

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
6:45	4 hours		
10:45	30	12	6
11:15	10	(6) 6	6
11:25	10	5	1
11:35	10	3	1
11:45	10	3	1
11:55	10	3	1
12:05	10	5	1
12:15	10	5	1
9:15	30	12	
9:45	30	7.5	4.5
10:15	30	7.5	4.5
10:45	30	8	4

Rate of fall: 10 minutes per inch 1"

Test No: B-7-B
 Date of Test: 03-04-05
 Depth of Test: 30"

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
6:45	4 hours		
10:45	30	12	8.5
11:15	10	(6) 2.5	3
11:25	10	3	3
11:35	10	3	3
11:45	10	5	1
11:55	10	4	2
12:05	10	4	2
12:15	10	4	2
9:15	30	12	
9:45	30	4.5	7.5
10:15	30	4.5	7.5
10:45	30	5	7

Rate of fall: 46 minutes per inch 1"

Test No: B-7-C
 Date of Test: 03-04-05
 Depth of Test: 28"

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
6:45	4 hours		
10:45	30	12	9
11:15	10	(6) 3	2
11:25	10	4	2
11:35	10	4	2
11:45	10	4.5	1.5
11:55	10	4	2
12:05	10	4	2
12:15	10	4	2
9:15	30	12	
9:45	30	4	8
10:15	30	4	8
10:45	30	4	8

Rate of fall: 5.22 minutes per inch 1"



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION

August 23, 2021

Response: August 30, 2021

Kevin Smith
The Kercher Group, Inc.
37385 Rehoboth Ave. Ext. Unit 11
Rehoboth Beach, DE 19971

RE: PLUS review 2021-07-03; Deer Creek

Dear Mr. Smith:

Thank you for meeting with State agency planners on July 28, 2021 to discuss the Deer Creek project. According to the information received you are seeking review of a proposed 79 unit subdivision on 93.58 acres at the intersection of Staytonville Road and Rt. 113 in Level 4 in Sussex County.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State, and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

Strategies for State Policies and Spending

This project represents a major land development that will result in approximately 79 residential units in an Investment Level 4 area according to the *2020 Strategies for State Policies and Spending*. This project is also located within a low density area according to the Sussex County certified plan. Investment Level 4 indicates where State investments will support agricultural preservation, natural resource protection, and the continuation of the rural nature of these areas. New development activities and suburban development are not supported in Investment Level 4. These areas are comprised of prime agricultural lands and environmentally sensitive wetlands and wildlife habitats, which should be, and in many cases have been preserved.

From a fiscal responsibility perspective, development of this site is likewise inappropriate. The cost of providing services to development in rural areas is an inefficient and wasteful use of the State's fiscal resources. Over the longer term, the unseen negative ramifications of this

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development will become even more evident as the community matures and the cost of maintaining infrastructure and providing services increases.

In addition, the development of this site may be environmentally inappropriate due to the following:

- Cedar Creek and its associated non-tidal wetlands surround the project parcel on three sides. With no proposed vegetated buffer, the water and habitat quality of the wetlands is likely to suffer, potentially impacting the two state-listed and one federally-listed species found in or around the project area that rely on these wetlands. **Noted**
- The project applicant proposes the removal of 10.4 acres of forest, which provide important ecosystem services such as water quality protection, wildlife habitat, and stormwater infiltration, among others. The loss of habitat quality may extend outside of the project boundary as Cedar Creek Natural Area and Redden State Forest are both located in the near vicinity. Forest loss and habitat degradation occurring within the project site may also impact the sensitive habitat found within these protected areas. **Noted, however, the removal of trees indicated is a worst case scenario. There is a reasonable expectation that the property owners will want to keep as much wooded area on the property as possible for a personal buffer.**
- An Excellent Groundwater Recharge Area is located over much of the southcentral portion of the site. These areas have soils that are conducive to water infiltrating downward from surface water into groundwater. **Noted. Since these lots are larger in size (3/4 ac), there should be a decent amount of pervious area on each lot for infiltration.**
- The proposed project is adjacent to a property protected through the State's Agricultural Lands Preservation Program (Cedar Branch District S-04-06-236-2, Parcel 230-19.00-22.00). **Noted**
- A review of the DNREC database indicates that the federally threatened Swamp Pink (*Helonias bullata*) occurs upstream and downstream of the project site and likely occurs within the project boundaries. This plant is protected under the Federal Endangered Species Act. **Noted**
- In addition to the federally threatened Swamp Pink (*Helonias bullata*), the following animals are listed as State of Delaware rare, threatened, or endangered species, and have been documented within the project area. The Ground Skink (*Scincella lateralis*) is a reptile listed under State Rank S1 and SGCN Tier 2 and the Eastern Tiger Salamander (*Ambystoma tigrinum*) is an amphibian listed under State Rank S1, State Status Endangered, and SGCN Tier 1. **Noted**

Because the development is inconsistent with the Strategies for State Policies and Spending, the Office of State Planning is opposed to this proposed subdivision **Noted.**

With that said, the comments in this letter are technical, and are not intended to suggest that the State supports this development. This letter does not in any way suggest or imply that you may receive or may be entitled to permits or other approvals necessary to build on this property.

Department of Transportation - Contact Bill Brockenbrough 760-2109

- The site access on Staytonville Road (Sussex Road 224) must be designed in accordance with DelDOT's Development Coordination Manual, which is available at <http://www.delDOT.gov/Business/subdivisions/index.shtml?dc=changes>. **Noted**
- Pursuant to Section 1.3 of the Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at <https://www.delDOT.gov/Business/subdivisions/pdfs/MeetingRequestForm.pdf?08022017>. **Noted**
- Section 1.7 of the Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review. **Noted**
- Per Section 2.2.2.1 of the Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends per hour in any hour of the day. From the PLUS application, the total daily trips are estimated at 754 vehicle trip ends per day. Using the 10th edition of the Institute of Transportation Engineers' Trip Generation Manual, DelDOT calculates a value of 837 for this number and estimates the weekday morning and evening peak hour trip ends at 61 and 81, respectively. Therefore, a TIS would normally be required. **Noted**

Section 2.2.2.2 of the Development Coordination Manual provides that for developments generating less than 2,000 vehicle trip ends per day and less than 200 vehicle trip ends per hour in any hour of the day, DelDOT may accept an Area Wide Study (AWS) Fee in lieu of the TIS if the local government does not require a TIS. The AWS Fee is calculated as \$10 per daily trip or, in this case, \$8,370. AWS Fees are used to fund traffic studies, not to build improvements. **Noted. An AWS Fee shall be submitted for the project.**

DelDOT anticipates requiring the developer to improve Staytonville Road, from the west limit of their projected frontage to US Route 113, to meet DelDOT's Local Road standards, which include 11-foot lanes and 5-foot shoulders. Per the definition in Section 1.8 of the Manual, that limit is about 500 feet west of the actual frontage. **Noted**

DelDOT may require a Traffic Operational Analysis (TOA), in accordance with Section 2.3.2 of the Manual if they find it necessary in determining the specific improvements

needed either at the intersection or on the frontage. Because left turns are not permitted in or out of Staytonville Road on US Route 113, the TOA could extend to the next crossovers north and south of the development. Preliminarily DelDOT does not see a need for a TOA but the need may be revisited in the Pre-Submittal Meeting. **Noted**

Questions regarding the site's trip generation and TOA should be directed to the County Coordinator, Mr. T. William Brockenbrough. Mr. Brockenbrough may be reached at Thomas.Brockenbrough@delaware.gov or (302) 760-2109. Questions regarding the requirement to improve the site frontage should be directed to the Sussex County Review Coordinator, Mr. R. Stephen McCabe. Mr. McCabe may be reached at Richard.Mcabe@delaware.gov or (302) 760-2276. **Noted**

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Manual, DelDOT will require dedication of right-of-way along the site's frontage on Staytonville Road. By this regulation, this dedication is to provide a minimum of 30 feet of right-of-way from the physical centerline. The following right-of-way dedication note is required, **"An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat."** **The dedication note shall be updated as per this comment.**
- In accordance with Section 3.2.5.1.2 of the Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on Staytonville Road. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, **"A 15-foot wide permanent easement is hereby established for the State of Delaware, as per this plat."** **A 15' PE has been shown on the preliminary plan.**
- Referring to Section 3.4.2.1 of the Manual, the following items, among other things, are required on the Record Plan:
 - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content. **A TGD has been provided in the required format and content on the preliminary plan.**
 - Depiction of all existing entrances within 450 feet of the entrance on Staytonville Road. **Noted**
 - Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted. **Noted**
- Section 3.5 of the Manual provides DelDOT's requirements with regard to connectivity. The requirements in Sections 3.5.1 through 3.5.3 shall be followed for all development projects having access to state roads or proposing DelDOT-maintained public streets for subdivisions. Preliminarily, DelDOT finds that the property boundaries coincide with streams for which it would be difficult to obtain the permits need to build

interconnections, and for that reason DelDOT does not anticipate recommending that stub streets be required. This subject may be revisited in the Pre-Submittal Meeting. **Noted, however, due to being surround by wooded wetlands, it would be impractical to have interconnections to adjacent properties.**

- Section 3.5.4.2 of the Manual addresses requirements for Shared Use Paths (SUP) and sidewalks. For projects in Level 3 and 4 Investment Areas, installation of paths or sidewalks along the frontage on State-maintained roads is required where there is an existing path with which to connect. There is no existing path near this development and DelDOT does not anticipate requiring an SUP along this development's road frontage. **Noted**
- In accordance with Section 3.8 of the Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 20 feet from the ultimate State right-of-way along Staytonville Road. **Noted**
- In accordance with Section 5.2.9 of the Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrances and how long those lanes should be. The worksheet can be found at <http://www.delDOT.gov/Business/subdivisions/index.shtml>. **Noted**
- In accordance with Section 5.14 of the Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated. **Noted**

Department of Natural Resources and Environmental Control - Beth Krumrine 735-3480

Development in this manner is inconsistent with the priorities for Level 4 lands of the Delaware Strategies for State Policies and Spending. Development on this site threatens the natural features that exist on the site. Cedar Creek and its associated non-tidal wetlands surround the project parcel on three sides. With no proposed vegetated buffer, the water and habitat quality of the wetlands is likely to suffer, potentially impacting the two state-listed and one federally-listed species found in or around the project area that rely on these wetlands. The project applicant proposes the removal of 10.4 acres of forest, which provide important ecosystem services such as water quality protection, wildlife habitat, and stormwater infiltration, among others. The loss of habitat quality may extend outside of the project boundary as Cedar Creek Natural Area and Redden State Forest are both located in the near vicinity. Forest loss and habitat degradation occurring within the project site may also impact the sensitive habitat found within these protected areas. **Noted**

Wetlands

Cedar Creek runs along the entire northern border of the site, and tributaries to this creek border both the east and west sides of the parcel. Maps from the Statewide Wetlands Mapping Project indicate the presence of non-tidal wetlands along the western, northern, and eastern edges of the project site. The application indicates that wetlands have been delineated. According to the

project application, the U.S. Army Corps of Engineers sign-off is completed. The application states that wetlands will not be directly impacted. **Correct**

- If the site design changes and dredge or fill of wetlands or subaqueous lands becomes necessary, permitting and/or authorization requirements will apply. **Unlikely that the design will include wetland disturbance, but noted.**
- Federal permits from the U.S. Army Corps of Engineers may be necessary if dredge or fill is proposed in non-tidal wetlands or streams. A delineation of waterways and wetlands must be completed by a qualified professional hired by the landowner. Permits or authorizations from the U.S. Army Corps of Engineers are required for fill of non-tidal wetlands. In certain cases, permits from the US Army Corps of Engineers triggers additional certifications from DNREC (Coastal Zone Federal Consistency Certification and 401 Water Quality Certification). Work with the U.S. Army Corps of Engineers to determine the appropriate permitting requirements. **Unlikely that the design will include wetland disturbance, but noted.**

Federal Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.
Website: <https://www.nap.uace.army.mil/Missions/Regulatory/Contacts/> **Noted**

State Contact: DNREC Wetlands and Subaqueous Lands Section at (302) 739-9943.
Website: <https://dnrec.alpha.delaware.gov/water/wetlands-subaqueous/> **Noted**

Vegetated Buffer Zones

Site plans do not show a buffer along non-tidal wetlands. Vegetated buffer zones placed adjacent to waterways and wetlands help improve water quality by reducing sediment and pollutants loads. They also provide valuable habitat and can help prevent encroachment of human activities into ecologically sensitive areas. Vegetated buffers are not equivalent to setbacks, as residential lots, walkways, and stormwater management facilities should not be contained within the vegetated buffer zone. **The plan has yet to be reviewed by Sussex County Planning & Zoning. They may require additional wooded buffers and/or wetland buffers for the project. A wetland buffer may be possible so long as the County allows it as an easement and would not affect property lot size.**

The applicant must comply with minimum vegetated buffer widths as identified within county and municipal codes. **The plan has yet to be reviewed by Sussex County Planning & Zoning. They may require additional wooded buffers and/or wetland buffers for the project. A wetland buffer may be possible so long as the County allows it as an easement and would not affect property lot size.**

Contact: DNREC Wildlife Species Conservation & Research Program at (302) 735-3600.
Website: <https://dnrec.alpha.delaware.gov/wildlife/contact-information/> **Noted**

Stormwater Management

This application proposes greater than 5000 square feet of land disturbing activities, therefore, this project will be subject to Delaware's *Sediment and Stormwater Regulations*. **Noted**

PLUS review 2021-07-03

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- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency prior to any land disturbing activity taking place on the site. For this project, the plan review agency is Sussex Conservation District. **If the project receives Preliminary approval, plans shall be developed in accordance to the SCD/DNREC.**
- Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically (<https://apps.dnrec.de.laware.gov/enoi/>, select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the \$195 fee. **If the project receives Preliminary approval, an NOI shall be submitted.**
- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study. **If the project receives Preliminary approval, a presubmittal meeting shall be made with the SCD.**

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: <https://www.usxconservation.org/> **Noted**

General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921.

E-mail: DNREC_stormwater@de.laware.gov.

Website: <https://dnrec.alpha.de.laware.gov/watershed-stewardship/sediment-stormwater/> **Noted**

Hydrologic Soils Group

Hydrologic Soil Group *A/D* (somewhat poorly drained) soils have been identified on the northcentral portion of the site. These soil types are typically not conducive to utilizing infiltration stormwater Best Management Practices such as bioretention and infiltration basins, which must meet minimum infiltration requirements. **Noted**

- Any stormwater Best Management Practices that propose the use of infiltration or natural recharge shall include a soils investigation. **If the project receives Preliminary approval, plans shall be developed in accordance to the SCD/DNREC Best Management Practices. The original approved BMP's were bioretention swales.**

Contact: DNREC Sediment and Stormwater Program at (302) 739-9921.

E-mail: DNREC_stormwater@de.laware.gov. **Noted**

Website: <https://dnrec.alpha.de.laware.gov/watershed-stewardship/sediment-stormwater/>

Water Quality (Pollution Control Strategies)

This site lies within the Mispillion Watershed. Surface water quality in this watershed does not meet State Water Quality Standards and a Pollution Control Strategy is in place for this watershed. **Noted**

- Consult with the appropriate plan review agency (Sussex Conservation District) to determine if stricter stormwater management standards may apply for development projects due to the Pollution Control Strategy. More information about Pollution Control Strategies can be found at the following website:
<https://dnrec.alpha.delaware.gov/watershed-stewardship/assessment/tri-butyl-action->

[teams/](#) **Noted**

Contact: DNREC Division of Watershed Stewardship's Watershed Assessment Section at (302) 739-9939. <http://dmec.alpha.delaware.gov/watershed-tewardship/> **Noted**

Excellent Groundwater Recharge Area

- An Excellent Groundwater Recharge Area is located over much of the southcentral portion of the site. These areas have soils that are conducive to water infiltrating downward from surface water into groundwater. Preservation of these areas is important for replenishing groundwater supplies and ensuring drinking water for future generations. **Noted. Since these lots are larger in size (3/4 ac), there should be a decent amount of pervious area on each lot for infiltration.**
- The applicant must comply with all county and municipal requirements for construction and uses in Excellent Groundwater Recharge Areas. **Noted**

Contact: DNREC Source Water Assessment and Protection Program at (302) 739-9945.

Website: <https://dnrec.alpha.delaware.gov/water/supply/ground-water-protect ion/> **Noted**

Federally-listed Threatened and Endangered Species

A review of our database indicates that the federally threatened Swamp Pink (*Helonias bullata*) occurs upstream and downstream of the project site and likely occurs within the project boundaries. This plant is protected under the Federal Endangered Species Act. **Noted**

- Consult with the U.S. Fish & Wildlife Service to determine what permits or surveys may be required under the Endangered Species Act. **If granted preliminary approval, consultation shall be done.**

Contact: U.S. Fish & Wildlife Service at (202) 208-5634. **Noted**

Wastewater Disposal Systems

The applicant must follow current regulations to apply for a permit. The On Site Regulations are listed within the Regulations Governing the Design, Installation and Operation of the On-site Wastewater Treatment and Disposal Systems at:

<http://www.dnrec.delaware.gov/wr/information/GWDinfo/Documents/delaware-on-site-regulations-with-exhibits.Pdf> **Noted**

- A Site Evaluation must be performed by a Delaware licensed Class D Soil Scientist to determine the type of disposal system allowed under current regulations and site conditions. **Noted**
- A list of licensed Class D soil scientists can be found at the following website: <https://data.delaware.gov/Energy-and-Environment/Class-D-Site-Evaluator-Licensees-Based-on-Licensed/6-jg-34rp> **Noted**

Contact: DNREC Groundwater Discharges Section for projects proposed in Sussex County at (302) 856-4561.

Website: <http://dnrec.alpha.delaware.gov/water/growldwater/sptic-systems/> **Noted**

State Historic Preservation Office - Contact Carlton Hall 736-7400

- The Delaware SHPO does not recommend development in Level 4 areas. There is an archaeological site S07979 located on the southeastern part of the parcel. **Noted**
- Prehistoric archaeological potential is high throughout almost the entire parcel. About half of the parcel is well-drained soil, and most of the parcel is within favorable distance to a freshwater source. There is an archaeological site located in the southeastern corner of the parcel; boundaries are unknown and should be verified. The Delaware SHPO recommends a Phase I archaeological survey based on favorable conditions, where well-drained soils intersect favorable distance. **If granted preliminary approval, the developer has no objection to a Phase I archaeological survey being performed by the State.**
- Historic archaeological potential is high towards the middle of the southern border of the parcel. Beers shows "SH" which may be interpreted as a schoolhouse. The rest of the parcel potential is low, as there are no structures on the parcel seen in historic topos or maps. Our office also recommends a Phase I survey to investigate the potential for historic archaeological remains **If granted preliminary approval, the developer has no objection to a Phase I archaeological survey being performed by the State.**
- If any project or development proceeds, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law (Del. C. Title 7, Ch. 54). **Noted**
- If there is federal involvement, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential cultural or historic resources. For further information on the Section 106 process please review the Advisory Council on Historic Preservation's website at: www.achp.gov **Noted**

Delaware State Fire Marshall's Office - Contact John Rudd 323-5365

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation:

Fire Protection Water Requirements:

- Since the dwellings of the subdivision are proposed to be served by individual on-site wells (No Central or Public Water System within 1000' of property), set back and separation requirements will apply. **Noted**

Accessibility:

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Staytonville Road

must be constructed so fire department apparatus may negotiate it. If a "center island" is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision. **Noted**

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door. **Noted**
- Any dead-end road more than 300 feet in length shall be provided with a tum-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or tum-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around. **Noted**
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements. **Noted**
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property. **No gates are proposed for this project, however, if they are proposed in the future, it shall be relayed to the developer.**

Gas Piping and System Information:

- Provide type of fuel proposed and show locations of bulk containers on plan. **None are proposed, however, if they are proposed in the future, it shall be relayed to the developer.**

Required Notes:

- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations" **To be noted**
- Proposed Use **To be noted**
- National Fire Protection Association (NFPA) Construction Type **To be noted**
- Maximum Height of Buildings (including number of stories) **To be noted**
- Provide Road Names, even for County Roads **To be shown**

Department of Agriculture - Contact: Milton Melendez 698-4534

- The proposed project is adjacent to a property protected through the State's Agricultural Lands Preservation Program (Cedar Branch District S-04-06-236-2, Parcel 230-19.00-22.00). Therefore, the activities conducted on this preserved property are protected by the agricultural use protections outlined in Title 3, Del. C., Chapter 9. These protections effect adjoining developing properties. The 300 foot notification requirement affects all new deeds in a subdivision located in whole or part within 300 feet of an Agricultural District/Easement. Please take note of these restrictions as follows:

§ 910. Agricultural use protections. **Noted**

(a) Normal agricultural uses and activities conducted in a lawful manner are preferred and priority uses and activities in Agricultural Preservation Districts. In

order to establish and maintain a preference and priority for such normal agricultural uses and activities and avert and negate complaints arising from normal noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations, land use adjacent to Agricultural Preservation Districts shall be subject to the following restrictions: **Noted**

(1) For any new subdivision development located in whole or in part within 300 feet of the boundary of an Agricultural Preservation District, the owner of the development shall provide in the deed restrictions and any leases or agreements of sale for any residential lot or dwelling unit the following notice: **Noted**

This property is located in the vicinity of an established Agricultural Preservation District in which normal agricultural uses and activities have been afforded the highest priority use status. It can be anticipated that such agricultural uses and activities may now or in the future involve noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations. The use and enjoyment of this property is expressly conditioned on acceptance of any annoyance or inconvenience which may result from such normal agricultural uses and activities." **Note to be added**

(2) For any new subdivision development located in whole or in part within 50 feet of the boundary of an Agricultural Preservation District, no improvement requiring an occupancy approval shall be constructed within 50 feet of the boundary of the Agricultural Preservation District. **Note to be added**

(b) Normal agricultural uses and activities conducted in accordance with good husbandry and best management practices in Agricultural Preservation Districts shall be deemed protected actions and not subject to any claim or complaint of nuisance, including any such claims under any existing or future county or municipal code or ordinance. In the event a formal complaint alleging nuisance related to normal agricultural uses and activities is filed against an owner of lands located in an Agricultural Preservation District, such owner, upon prevailing in any such action, shall be entitled to recover reasonably incurred costs and expenses related to the defense of any such action, including reasonable attorney's fees (68 Del. Laws, c. 118, § 2.). **To be noted**

- In addition, if any wells are to be installed, Section 4.01(A)(2) of the Delaware Regulations Governing the Construction and Use of Wells will apply. This regulation states:

(2) For any parcel, lot, or subdivision created or recorded within fifty (50) feet of, or within the boundaries of, an Agricultural Lands Preservation District (as defined in Title 3, Del. C., Chapter 9); all wells constructed on such parcels shall be located a minimum of fifty (50) feet from any boundary of the Agricultural Lands Preservation District. This requirement does not apply to parcels recorded

prior to the implementation date of these Regulations. However, it is recommended that all wells be placed the maximum distance possible from lands which are or have been used for the production of crops which have been subjected to the application of land applied federally regulated chemicals. **Noted**

Sussex County Housing-Contact: Brandy Nauman 855-7779

- Sussex County endeavors to promote non-discrimination and affordable housing whenever possible throughout the County. In this regard, the developer and associated financial institutions are encouraged to provide and finance affordable housing opportunities to Sussex County residents in all new developments, and affirmatively market those affordable housing units to diverse populations. **Noted**
- For questions about opportunities available for affordable housing projects within Sussex County, please consult Sussex County's "Affordable Housing Support Policy". The policy along with other resources are available on the County's Affordable & Fair Housing Resource Center website: www.sussexcountyde.gov/affordable-and-fair-housing-resource-center. The County's Community Development & Housing Department can advise about existing affordable housing opportunities in Sussex County and the appropriate County Department to contact regarding specific development issues concerning future affordable housing projects within Sussex County. **Noted**
- The Community Development & Housing Department can also explain and assist with any financial support or incentives that may be available to a project from federal, state and county sources, as well as private funding sources that also promote affordable housing in Sussex County. **Noted**
- Please understand that all residential projects, including Affordable Housing Projects are subject to the applicable provisions of the Sussex County Subdivision and Zoning Codes, and the approval processes set forth in those Codes. **Noted**
- On behalf of Sussex County, we look forward to cooperating with you and your project as it moves forward. **Noted**

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

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Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

David L. Edgell, AICP
Director, Office of State Planning Coordination

CC: Sussex County

**SUSSEX COUNTY ENGINEERING DEPARTMENT
UTILITY PLANNING & DESIGN REVIEW DIVISION
C/U & C/Z COMMENTS**

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **6/22/2022**

APPLICATION: **2021-29 (Deer Creek)**

APPLICANT: **Cromer Management, LLC (c/o Wes Cromer)**

FILE NO: **WSPA-5.02**

TAX MAP &
PARCEL(S): **230-19.00-27.00**

LOCATION: **Lying on the north side of Staytonville Road (SCR 224), at the northwest corner of the intersection of Stayoneville Road (SCR 224) and DuPont Boulevard (Rt. 113).**

NO. OF UNITS: **79 single-family lots**

GROSS
ACREAGE: **93.582**

SYSTEM DESIGN ASSUMPTION, MAXIMUM NO. OF UNITS/ACRE: **2**

SEWER:

(1). Is the project in a County operated and maintained sanitary sewer and/or water district?

Yes

No

a. If yes, see question (2).

b. If no, see question (7).

(2). Which County Tier Area is project in? **Tier 3**

(3). Is wastewater capacity available for the project? **N/A** If not, what capacity is available? **N/A**.

(4). Is a Construction Agreement required? **No** If yes, contact Utility Engineering at (302) 855-7717.

(5). Are there any System Connection Charge (SCC) credits for the project? **No** If yes, how many? **N/A**. Is it likely that additional SCCs will be required? **N/A** If yes, the current System Connection Charge Rate is **Unified \$6,600.00** per EDU. Please contact **Choose an item.** at **302-855-7719** for additional information on charges.

- (6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **No**
- Attached is a copy of the Policy for Extending District Boundaries in a Sussex County Water and/or Sanitary Sewer District.
- (7). Is project adjacent to the Unified Sewer District? **No**
- (8). Comments: **The proposed Subdivision is not in an area where the Sussex County Engineering Department has a schedule to provide sanitary sewer service.**
- (9). Is a Sewer System Concept Evaluation required? **Not at this time**
- (10). Is a Use of Existing Infrastructure Agreement Required? **Not at this time**
- (11). **All residential roads must meet or exceed Sussex County minimum design standards.**

UTILITY PLANNING & DESIGN REVIEW APPROVAL:



John J. Ashman
Sr. Manager of Utility Planning & Design Review

Xc: Hans M. Medlarz, P.E.
Lisa Walls
Choose an item.



DELAWARE DEPARTMENT OF
AGRICULTURE

2320 SOUTH DUPONT HIGHWAY
DOVER, DELAWARE 19901
AGRICULTURE.DELAWARE.GOV

TELEPHONE: (302) 698-4500
TOLL FREE: (800) 282-8685
FAX: (302) 697-6287

January 21, 2022

Christin Scott, Planner I
Planning & Zoning Commission
P.O. Box 417
Georgetown, Delaware 19947

Subject: **Preliminary Plans for Deer Creek**

Dear Christin Scott,

Thank you for providing preliminary plans for Deer Creek submitted by The Kercher Group, Inc. The plans submitted to our section dated June 22, 2021 are sufficient to meet the Sussex County Planning and Zoning Forested Buffer Ordinance.

The Delaware Forest Service recommends the plans reflect tree planting specifications and that the ISA ANSI A300 best management practices are followed for newly installed trees. DFS recommends planting a 70/30 mix of hardwood and evergreen tree species. There are several tree species that are not recommended for planting in the state due to their invasive nature or the susceptibility to pests and diseases. These species are listed on our department website.

The Delaware Forest Service has no further comment to Deer Creek preliminary subdivision plans dated June 22, 2021 at this time.

If you have any questions please feel free to contact me at taryn.davidson@delaware.gov.

Sincerely,

Taryn Davidson
Urban Forestry Program
Delaware Forest Service



United States Department of Agriculture

Natural Resources
Conservation Service

December 22, 2021

Georgetown
Service Center

Jamie Whitehouse, Director
Sussex County Planning & Zoning
Sussex County Courthouse
Georgetown, DE 19947

21315 Berlin Road
Unit 3
Georgetown, DE
19947

Voice 302.856.3990
Fax 855.306.8272

**RE: Deer Creek
Cedar Creek Hundred
79 single family lots**

Dear Mr. Whitehouse:

Soils within the delineated area on the enclosed map are:

FmA Fort Mott loamy sand, 0 to 2 percent slopes
KgB Klej-Galloway complex, 0 to 5 percent slopes
LO Longmarsh and Indiantown soils, frequently flooded

Soil Interpretation Guide

Soil Limitation Class

Buildings

Map Symbol	Urbanizing Subclass	With Basement	Without Basement	Septic Filter Fields
FmA	G1	Not limited	Not limited	Somewhat limited
KgB	R2	Very limited	Very limited/Some what limited	Very limited
LO	R3	Very limited	Very limited	Very limited

Definition of soil limitation ratings classes:

Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development.

"**Not limited**" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.

"**Somewhat limited**" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.

"**Very limited**" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

G1:

These soils are on nearly level to strongly sloping (0-10% slopes), well drained, mostly permeable soils. As sites for large commercial, industrial, institutional, and residential developments, these soils have fewer limitations than any other soils in the state. Slopes are favorable, and grading can be done without difficulty. Foundation conditions are generally good. Grasses, trees, and do well. Principal soil limitations: No apparent soil limitations for conventional uses.

R2:

The soils in this classification are nearly or gently sloping, very poorly, poorly, and somewhat poorly drained. Seasonal high water tables, local ponding, and high potential frost action severely limit these soils for residential developments. The principal soil limitations are: 1) soil is highly susceptible to frost action, 2) excavations are likely to fill with water in late winter or early spring, 3) wet foundations or basements probable, and 4) hazard of temporary ponding of water in areas lacking outlets. Loose running sand commonly encountered in deep excavations.

R3:

These soils are alluvial soils that have a history of flooding. The hazard of potential flood damage and seasonal or fluctuating high water tables severely limits these soils for building use. The soil limitations are 1) soil is highly susceptible to frost action, 2) excavations are likely to fill with water in late winter or early spring, 3) delayed construction in spring - slow to dry out, 4) wet foundations or basements probable, and 5) potential flood damage.

The soil interpretations above do not eliminate the need for detailed investigations at each proposed construction site. However, the interpretations can serve as a guide to planning more detailed investigations. No consideration was given in these interpretations regarding the size and shape of the soil area; nor to the pattern they form with other soils in the landscape. Also, because of the scale of the maps used, small areas of other kinds of soils may be included within some delineations of the soil map. Thus, an individual lot or building site could occupy a small area that would not fit the interpretations given for the soils symbol representing the entire delineation of the map. Interpretations apply to the soils in their natural state and not for areas that may have been altered through grading, compacting, and the like.

Sincerely,

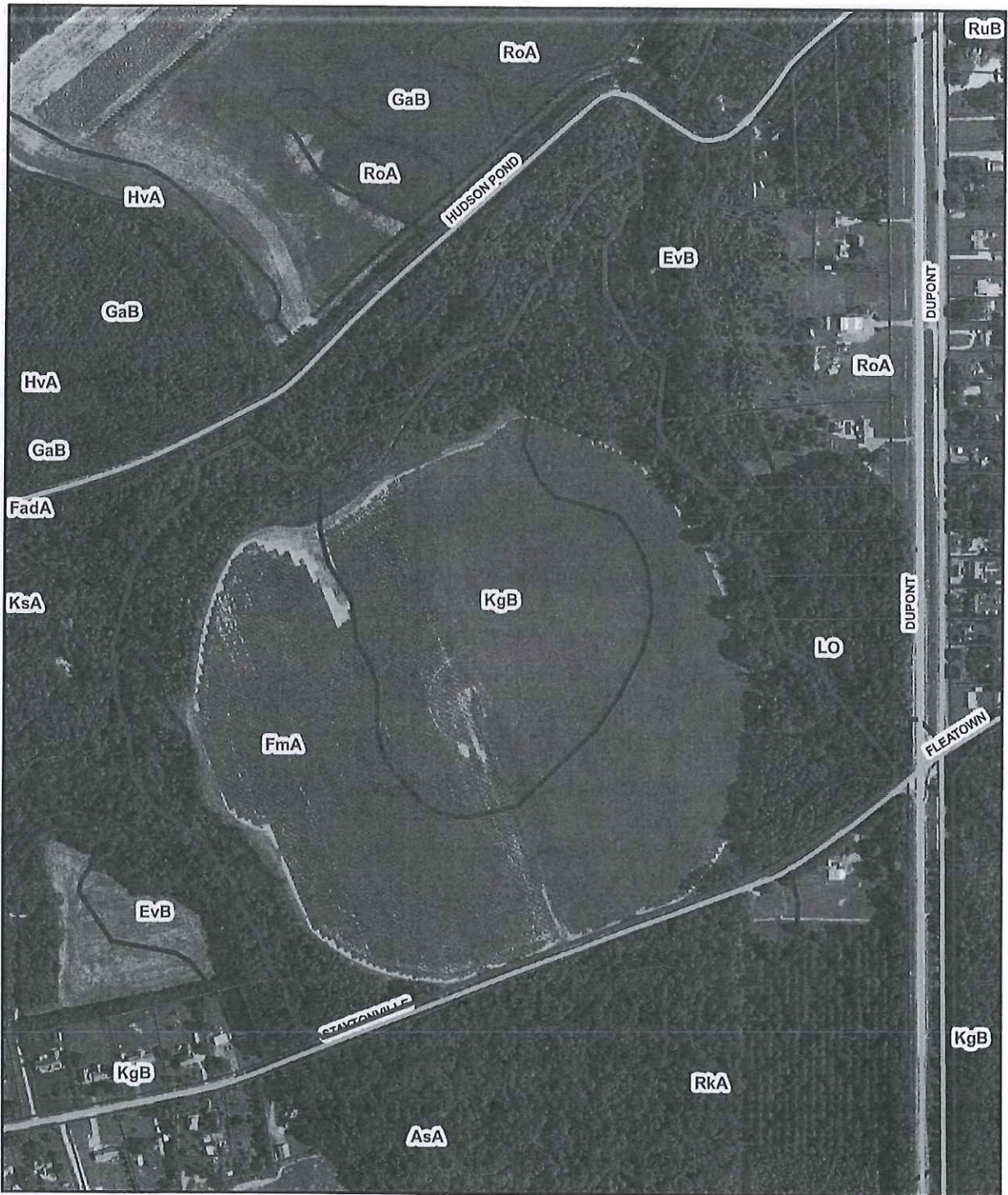


Thelton D. Savage
District Conservationist
USDA, Natural Resources Conservation Service

TDS/bh



2021-29
TM #230-19.00-27.00
Deer Creek



2021-29
TM #230-19.00-27.00
Deer Creek

Jesse Lindenberg

From: Planning and Zoning
Sent: Friday, December 17, 2021 1:18 PM
To: Jesse Lindenberg
Subject: FW: TAC Review 2021-29 Deer Creek
Attachments: TAC Memo Deer Creek (2021-29) Revised.pdf; Deer Creek-Prelim-Record_2021-06-23.pdf

From: Anthony, Mindy (DNREC) <Mindy.Anthony@delaware.gov>
Sent: Friday, December 10, 2021 2:11 PM
To: Planning and Zoning <pandz@sussexcountyde.gov>
Subject: FW: TAC Review 2021-29 Deer Creek

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Hello,

DNREC's Division of Waste and Hazardous Substances has no comments for this project.

Have a great weekend!

Mindy



Mindy Anthony

Planner IV

Phone: 302-739-9466 • Mobile: 302-242-9780

Email: mindy.anthony@delaware.gov

89 Kings Highway, Dover, DE 19901

dnrec.delaware.gov



From: Christin Scott <christin.scott@sussexcountyde.gov>

Sent: Tuesday, November 02, 2021 10:29 AM

To: Krumrine, Beth (DNREC) <Beth.Krumrine@delaware.gov>; Brad Hawkes <bhawkes@sussexcountyde.gov>; Chris Calio <ccalio@sussexcountyde.gov>; Dave Detrick <ddetrick@chpk.com>; dholden@chpk.com; C. Daniel Parsons <dparsons@sussexcountyde.gov>; Fox, Duane T. (FireMarshal) <Duane.Fox@delaware.gov>; Sullivan, James C. (DNREC) <James.Sullivan@delaware.gov>; Jennifer Vandervort <jvandervort@chpk.com>; Cinelli, Jennifer (DelDOT) <jennifer.cinelli@delaware.gov>; jessica.watson@sussexconservation.org; John J. Ashman <jashman@sussexcountyde.gov>; John.Hayes@delaware.gov; John.kennel@delaware.gov; John.Martin@delaware.gov; Jordan T. Dickerson <jordan.dickerson@sussexcountyde.gov>; Kate.Flemming@Delaware.gov; kgabbard@chpk.com; McCabe, R. Stephen (DelDOT) <Richard.McCabe@delaware.gov>; meghan.crystall@delaware.gov; Tholstrup, Michael S.



November 1, 2021

Ms. Christin Scott
Sussex County Planning & Zoning Commission
PO Box 417
Georgetown, DE 19947

Re: Sussex County Technical Advisory Committee

Dear Ms. Scott:

The Division of Public Health Office of Engineering is in receipt of the following application:

1. **Application:** *2021-29 Deer Creek*

This application indicates that individual wells will supply water. No review is needed by the Office of Engineering.

Routine plumbing permits will be required.

Please do not hesitate to contact me at 302-741-8646 with questions or comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "William J. Milliken, Jr.", written over the word "Sincerely,".

William J. Milliken, Jr.
Engineer III
Office of Engineering

Sussex County, Delaware
Technical Advisory Committee

Comment Sheet



DATE OF REVIEW: November 3, 2021

REVIEWING AGENCY: Delaware State Fire Marshals Office, Sussex Office

INDIVIDUAL REVIEWERS: Duane T. Fox, CFPS, CFPE, CFI, Asst. Chief Technical Services
Dennett E. Pridgeon, CFPS, CFPE, CFI, Sr. Fire Protection Specialist
Jefferson L. Cerri, CFI, Sr. Fire Protection Specialist
Desiree B. McCall, CFI, Sr. Fire Protection Specialist
John A. Colpo, Fire Protection Specialist

AGENCY PHONE NUMBERS: 302-856-5298, Fax: 302-856-5800

RE: DEER CREEK (2021-29)

The reasons and conditions applied to this project and their sources are itemized below:

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation:

a. **Fire Protection Water Requirements:**

- Since the dwellings of the subdivision are proposed to be served by individual on-site wells (No Central or Public Water System within 1000' of property), set back and separation requirements will apply. 15' setback to property lines and 10' setback from other structures on same property.

b. **Fire Protection Features:**



c. **Accessibility:**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road (entrance) to the subdivision from Staytonsville Road must be constructed so all fire department apparatus may negotiate it. If a median or boulevard is to be used it must be designed so that fire apparatus can make left and right hand turns into the subdivision.

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**

- Provide type of fuel proposed and show locations of bulk containers on plan.

e. **Required Notes:**

- Provide a note on the final plans submitted for review to read “All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website:

www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

THIS DOCUMENT IS INFORMATIONAL ONLY, AND DOES NOT CONSTITUTE ANY TYPE OF APPROVAL FROM THE DELAWARE STATE FIRE MARSHAL'S OFFICE



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL
DIVISION OF WATERSHED STEWARDSHIP
21309 BERLIN RD
UNIT #6
GEORGETOWN, DE 19947

PHONE: (302) 855-1930
FAX: (302) 670-7059

DRAINAGE PROGRAM

November 10,2021

Christin Scott
Sussex County
Planning and Zoning Office
2 The Circle
Georgetown, DE 19947

RE: Parcel # 230-19.00-27.00; Deer Creek

The Delaware Department of Natural Resources and Environmental Control (DNREC), Drainage Program has reviewed the preliminary plans submitted by The Kercher Group for the above noted property.

My office has no objection to the works of improvement to this parcel and offer the following comments:

- The proposed project site is not located near or within a Tax Ditch watershed.
- There are no reported drainage concerns near the proposed project site.
- All existing ditches on the property should be evaluated for function and cleaned, if needed, prior to the construction of the project.
- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site storm water.
- Any area designated as a drainage/utility easement should be open space and not owned by the individual landowners.

- Any drainage/utility easement owned by an individual landowner should not possess structures such as decks, buildings, sheds, kennels, or fences within the drainage

If you have any questions or concerns, please contact the Drainage Program at (302) 855-1930.

Sincerely,

Jordan Watson

Jordan Watson

EPS Tech

cc: Brittany L. Haywood, Tax Ditch Program Manager I

From: [Dickerson, Troy](#)
Sent: Tuesday, November 2, 2021 3:01 PM
To: [Christin Scott](#)
Subject: RE: TAC Review 2021-29 Deer Creek

Categories: TAC Comments

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or reply unless you recognize the sender and know the content is safe. Contact the IT Helpdesk if you need assistance.

Christin,

This lot is located within DEC's service territory and we have the ability to serve the proposed development.

Thanks!

Troy W. Dickerson, P.E.
Vice President of Engineering
Voice: (302) 349-3125
Cell: (302) 535-9048
Fax: (302) 349-5891
tdickerson@delaware.coop



This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, copy, use, disclosure, or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message.

From: Christin Scott <christin.scott@sussexcountyde.gov>
Sent: Tuesday, November 2, 2021 10:29 AM
To: Beth Krumrine <beth.krumrine@delaware.gov>; Brad Hawkes <bhawkes@sussexcountyde.gov>; Chris Calio <ccalio@sussexcountyde.gov>; Dave Detrick <ddetrick@chpk.com>; dholden@chpk.com; C. Daniel Parsons <dparsons@sussexcountyde.gov>; Duane.Fox@delaware.gov; James Sullivan <James.Sullivan@delaware.gov>; Jennifer Vandervort <jvandervort@chpk.com>; jennifer.cinelli@delaware.gov; jessica.watson@sussexconservation.org; John J. Ashman <jashman@sussexcountyde.gov>; John.Hayes@delaware.gov; John.kennel@delaware.gov; John.Martin@delaware.gov; Jordan T. Dickerson <jordan.dickerson@sussexcountyde.gov>; Kate.Flemming@Delaware.gov; kgabbard@chpk.com; McCabe, Richard (DelDOT) <Richard.McCabe@delaware.gov>; meghan.crystall@delaware.gov; michael.tholstrup@delaware.gov; Milton.melendez@delaware.gov; mindy.Anthony@delaware.gov; subdivision@delaware.gov; Susan Isaacs <sisaacs@sussexcountyde.gov>; Dickerson, Troy <TDickerson@delaware.coop>; Terri Dukes <tdukes@sussexcountyde.gov>; tgiroux@chpk.com; Vince Robertson <vrobertson@pgslegal.com>
Subject: TAC Review 2021-29 Deer Creek

All,

Sussex County Planning Office has received one (1) applications that require TAC review. Attached is a memo regarding the application and a PDF of the plan submitted.

Please provide comments on or before Tuesday, January 4, 2022.

Please send all comments to pandz@sussexcountyde.gov

Thank you,

Christin Scott

Christin Scott
Planner I
Department of Planning & Zoning
2 the Circle
Georgetown, DE 19947
(302) 855-7878
8:30AM – 4:30PM

Much of the County's Planning and Zoning Information can be found online at:

<https://sussexcountyde.gov/sussex-county-mapping-applications>

ENGINEERING DEPARTMENT

JOHN J. ASHMAN
SR. MANAGER OF UTILITY PLANNING
& DESIGN REVIEW

(302) 855-7370 T
(302) 854-5391 F
jashman@sussexcountyde.gov



Sussex County

DELAWARE
sussexcountyde.gov

Date: **November 2, 2021**

REF: **T. A. C. COMMENTS**
DEER CREEK
SUSSEX COUNTY ENGINEERING DEPARTMENT
SUSSEX COUNTY TAX MAP NUMBER
230-19.00-27.00
AGREEMENT NO.636-1

The following comments are the result of the Sussex County Engineering Department's review of the preliminary site plan for the above referenced project:

DESIGN REVIEW COMMENTS

1. Proposed developments with private roads or projects required to meet or exceed the County street design requirements shall be regulated by and conform to Sussex County Code and the comments here listed.
2. This project **is not** located within the limits of a Ground Water Management Zone (GMZ). Projects located within a GMZ must be forwarded to the County Engineer for review and comment.
3. Project Construction Drawings shall show, in detail, the proposed improvements. The work required includes preparation and delivery of an AutoCAD 2012 digitized plan showing existing and proposed lines, grades, topography, and features in a given area, which was utilized in preparing plans for construction. The individual sheet types will be in a separate design to show plan views on sheets separate from profile views. In addition, each sheet of the plans shall be submitted in a PDF format.
4. All work shall be geo-referenced to the Delaware State Grid System NAD-83 (HARN) and provided in an AutoCAD 2012 format. North Arrow required to identify northern direction and viewport should be best fit for the project.
5. Topographic contours at one-foot intervals shall be shown and referenced to United States Geological Survey Mean Sea Level Datum NAVD 1988 Datum.
6. The plans shall be provided on 24" x 36" drawing sheets at a scale of 1" = 50' or less.

The plans shall show and address the following items at minimum:

7. The project requires professional land surveying services to accurately delineate, and show the following items but is not limited to the following: all property and right-of-



way lines, established at a minimum, survey monuments, easements, existing and proposed topographic contours at 1-foot vertical intervals and spot elevations as necessary to establish grades, the locations of all existing structures, highway and roadway pavements, shoulders, curbs, driveways, sidewalks, lighting structures, traffic control signs, and all public and private utilities, including, but not limited to, electric power and telephone lines, poles and boxes, underground electric, telephone, and communication lines, potable water lines, fire hydrants and valve boxes, gas lines, wells, sanitary sewers including septic systems, rim and invert elevations of manholes and cleanouts, and the rims and invert elevations and type of storm water structures, drainage ditches, ponds, streams and waterways, flood zones and flood zone boundaries and elevations, and State and Federal wetlands, trees, cemeteries and historic features, and the finished floor elevations of buildings.

8. Plans shall show the seal and signature of a registered Delaware land surveyor or registered Delaware professional engineer.
9. The plan requires a Certification Signature and/or a Certification Block for the following:
 - a. Delaware Professional Engineer or Delaware Land Surveyor.
 - b. Owner or Representative of the Owner.
 - c. Professional Wetlands Delineator.
10. The name, address, phone number and contact person's name of the Owner of Record, the Developer and the Engineer or Surveyor preparing the plan.
11. Indicate the location of all wetlands, both state and federal, in order to facilitate compliance with County, State and Federal requirements.
12. Define the courses and distances of the property perimeter and the approximate acreage contained therein. Establish and set in the field two (2) CONCRETE MONUMENT project benchmarks, preferably at property perimeter corners, georeferenced to the Delaware State Plane Coordinate system NAD 83 and show the location including the North and East coordinates of the marks on the plans.
13. Indicate the development construction phases proposed showing the boundaries of each phase. Phasing boundaries shall include buildings, residential units, amenities, roads, storm water management facilities, wastewater systems and all other improvements and utilities required to service each phase and shall be recorded prior to being issued a notice to proceed.
14. Show the layout, width and names of all streets, alleys, crosswalks and easements proposed to be dedicated for private or public use. Street names shall not duplicate nor closely resemble existing street names in the same hundred or postal district, except for extensions of existing streets. Sussex County Mapping & Addressing will have final say on proposed street names.
15. When on site individual septic tank systems are to be used and the lot topography is to be modified by cuts and fills it is required that the Design Engineer contact the Delaware Department of Natural Resources and Environmental Control, Division of Groundwater Water Discharge Section, 21305 Berlin Rd., Suite 2, Georgetown, DE 19947 phone number 302-856-4561 subject to mass grading operations for documented approval.

16. Provide the limits and elevations of the 100-year flood. This may require the design engineer to complete an analysis and provide a report including the depiction of the subject watershed(s), calculations and other technical data necessary to determine the limits and elevations of the base flood.
17. False berms shall not be utilized to create roadside drainage swale back slopes.
18. For parking lots and drives, provide spot elevations at the edge of pavement, right-of-way, or travel way centerline, at changes in grade, and high points and low points, to the nearest drainage facilities. Show the limits of the various surface materials and provide construction sections.
19. Provide and show the locations and details of all ADA pedestrian connections.
20. If the site has a cemetery located on it the Developer shall contact the Delaware State Historic Preservation Office and satisfy the requirements of that Office prior to beginning any construction activity. This area shall not be disturbed by this project. Adequate access to the site and buffers to protect the site, shall be provided.
21. Private rights-of-way adjacent to and abutting parcels not part of the project shall be located and designed to provide adequate buffer so that construction activities do not encroach onto adjacent properties.
22. Provide statements explaining how and when the developer proposes to provide and install the required water supply, sewers or other means of sewage disposal, street pavement, drainage structures and any other required improvements.
23. Provide statements concerning any proposed deed restrictions to be imposed by the owner.
24. Where special physical conditions exist, which may act as constraints on normal development or may preclude development, the developer may be required to submit special technical data, studies or investigations. This information must be prepared by individuals technically qualified to perform such work. Additional information may include but is not limited to the following: on-site sanitary sewage disposal feasibility, water supply surveys, such as test well drilling, storm water runoff computations and identification of areas subject to periodic flooding.
25. If special conditions are found to exist, the Engineering Department may elect to withhold approval of a construction plan until it is determined that it is technically feasible to overcome such conditions. The Engineering Department may then require the developer to incorporate specific improvement design criteria into the plat as a condition to its approval.
26. When special studies or investigations pertain to a regulatory program of another public agency, the developer shall submit the results of these studies or investigations to said public agencies for technical review and approval. Approvals and/or written comments from these agencies shall be supplied to Sussex County by the developer.

SEWER SPECIFIC COMMENTS

LOCATION: **North of CR 224, 80 feet west of Rt. 113**

NO. OF UNITS:79

GROSS ACREAGE: 93.58

- (1). Is the project in a County operated and maintained sanitary sewer and/or water district?
Yes No

- (2). Which County Tier Area is project in? Tier 3

- (3). Is wastewater capacity available for the project? N/A If not, what capacity is available? **Click or tap here to enter text..**

- (4). Is a Construction Agreement required? Yes If yes, contact Utility Engineering at (302) 855-7370 / option 2.

- (5). Are there any System Connection Charge (SCC) credits for the project? No If yes, how many? **Click or tap here to enter text..** Is it likely that additional SCCs will be required? **Choose an item.**

If yes, the current System Connection Charge Rate is **Choose an item.** per EDU. Please contact **Choose an item.** at **302-855-7719** for additional information on charges.

- (6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **N/A**

 Attached is a copy of the Policy for Extending District Boundaries in a Sussex County Water and/or Sanitary Sewer District.

- (7). Is project adjacent to the Unified Sewer District? **No**

- (8). Comments: **The proposed subdivision is not in an area where the Sussex County Engineering Department has a schedule to provide sanitary sewer service.**

- (9). Is a Sewer System Concept Evaluation required? **No**

- (10). Is a Use of Existing Infrastructure Agreement Required? **N/A**

If the above items, as applicable, are incorporated into the development plans, then preliminary approval is recommended. However, final plan approval should be withheld pending the approval of the construction plans by the Sussex County Engineering Department.

PLAN LEGEND

Table listing symbols for property boundaries, existing adjacencies, open space areas, wetland limits, buildings, and proposed features like roads and easements.

PROPERTY AREA and PHASING tables. Property area includes lot area (62.201 Ac), right-of-way (7.772 Ac), and open space (5.642 Ac). Phasing includes 18 lots for Phase I, 21 for Phase II, 19 for Phase III, and 21 for Phase IV.

SITE DATA and ZONING SCHEDULE

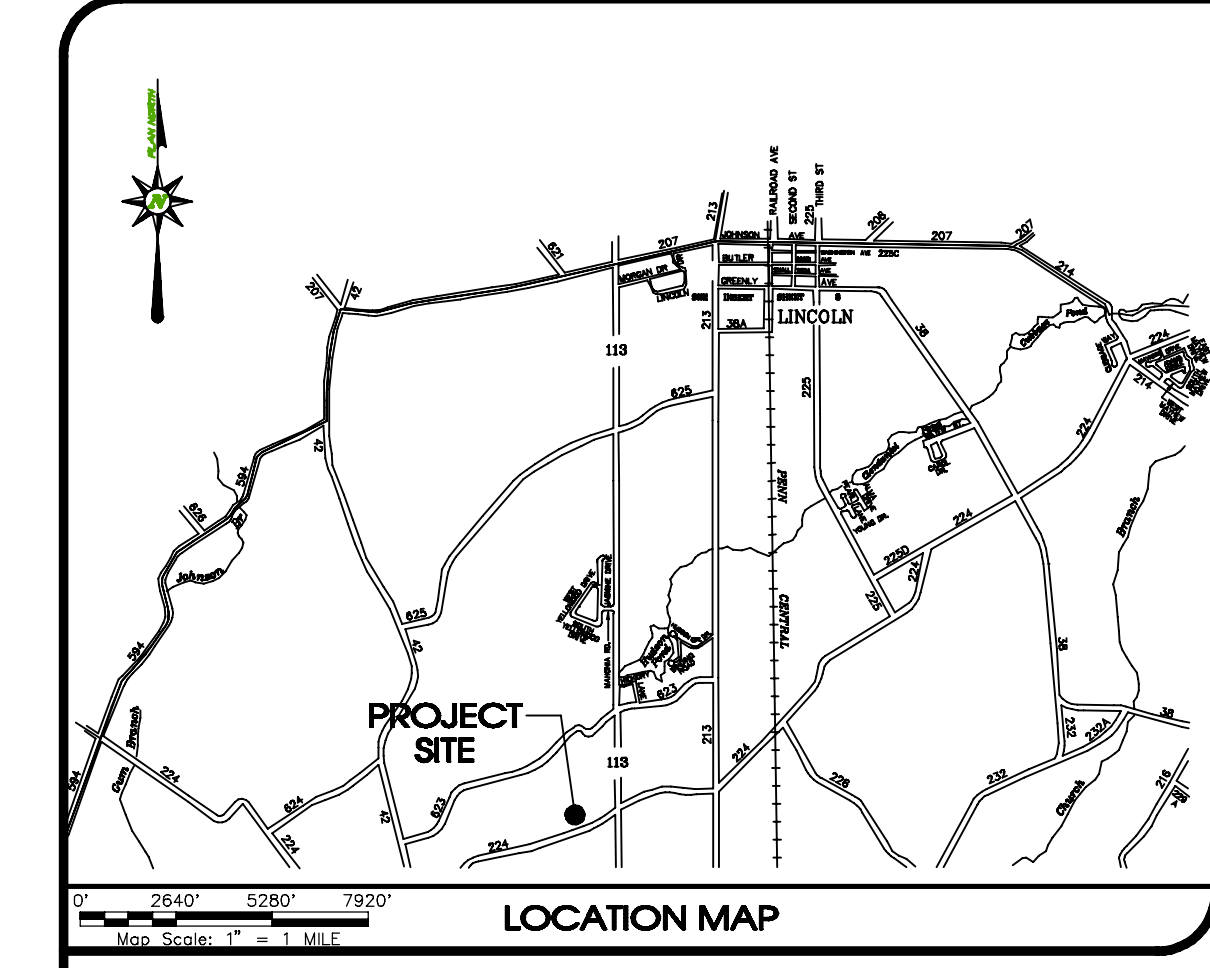
Site data table listing county reference, tax parcel number, property address, net development area, existing number of lots, and proposed site use.

PROPERTY LINE & STREAM CENTERLINE

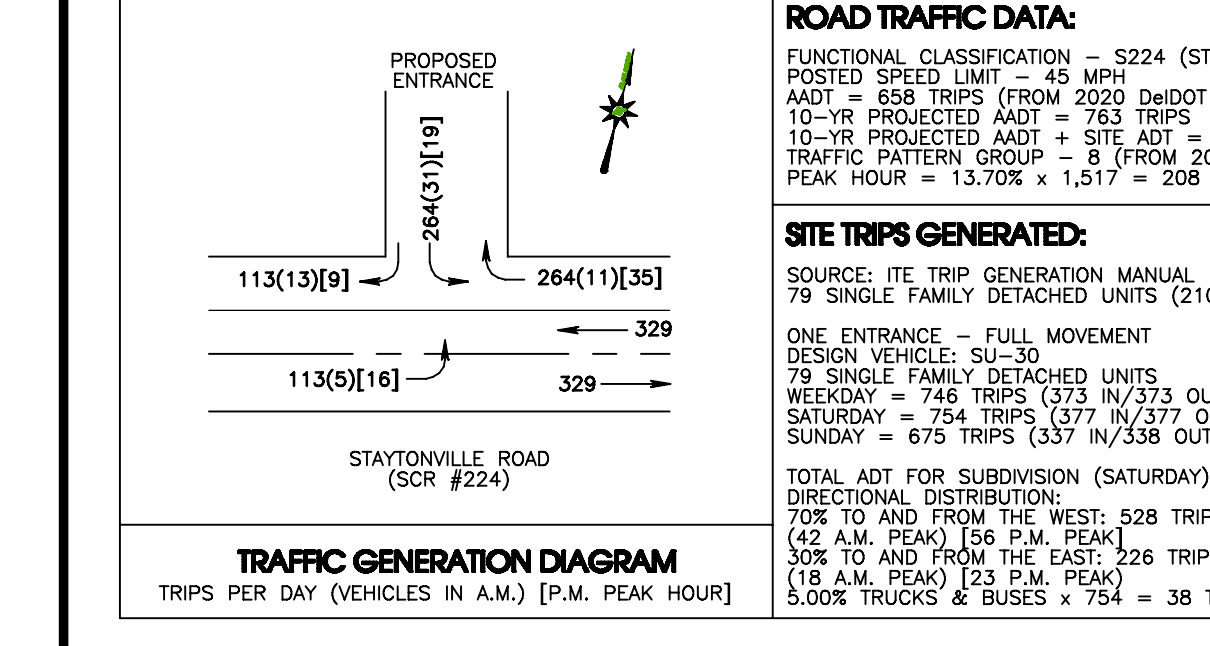
Table of property line bearings and distances, ranging from L1 to L91, with bearings and distances in feet.

WETLAND LINE & WATER

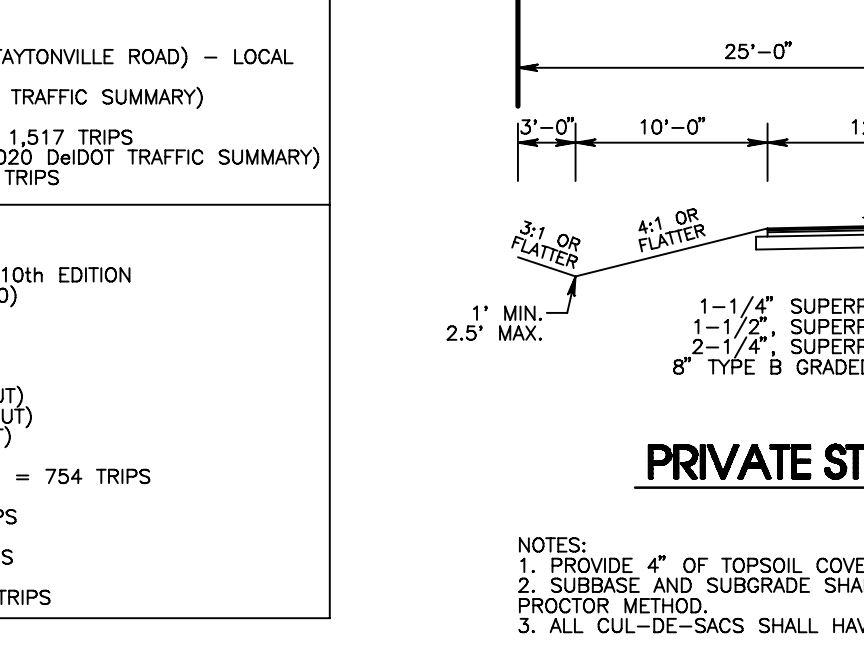
Table of wetland line bearings and distances, ranging from L1 to L91, with bearings and distances in feet.



TRIP GENERATION - STAYTONVILLE ROAD (SCR #224)



ROAD TRAFFIC DATA table showing functional classification (S224), posted speed limit (45 mph), ADIT (658), and peak hour volumes.

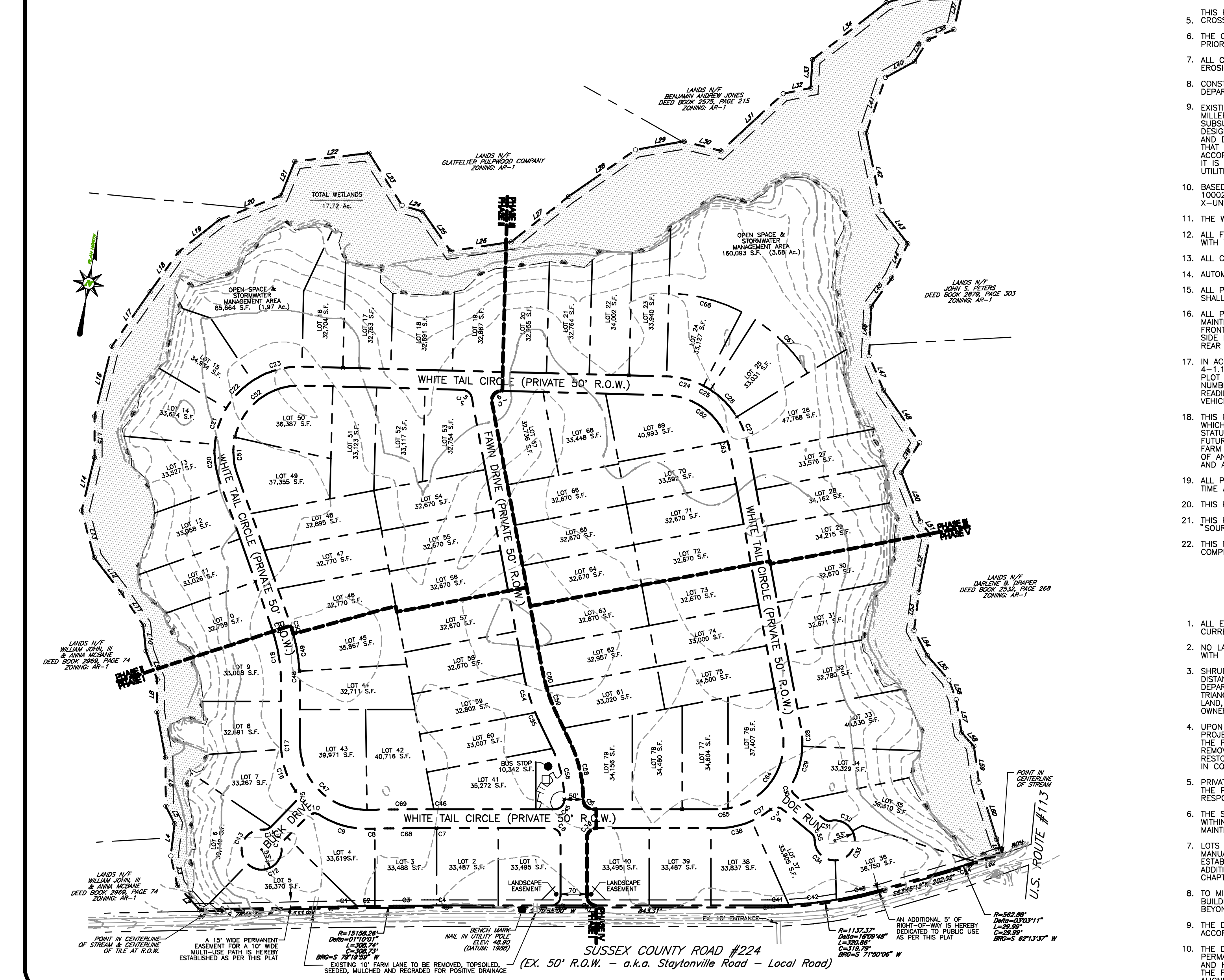


GENERAL NOTES

- List of 22 general notes detailing project requirements, including site location, topography, stormwater management, wetland boundaries, and construction standards.

CURVE DATA

Table of curve data with columns for CURVE, RADII, ARC, and DELTA, listing various curve parameters.



SUSSEX CONSERVATION DISTRICT CERTIFICATE

Certificate text from the Sussex Conservation District regarding the project's impact on wetlands and water resources.

PLANNING COMMISSION CERTIFICATE

Certificate text from the Planning Commission regarding the project's compliance with local ordinances.

OWNER CERTIFICATE

Owner certificate text from the property owner affirming the accuracy of the plan.

WETLANDS CERTIFICATION

Wetlands certification text from Atlantic Hydrologic, Inc. regarding the project's wetland boundaries.

REVISIONS table with columns for DATE, REVISIONS PER PAR, and DESCRIPTION.

DESIGN PROFESSIONAL information, including name, license number, and signature line.

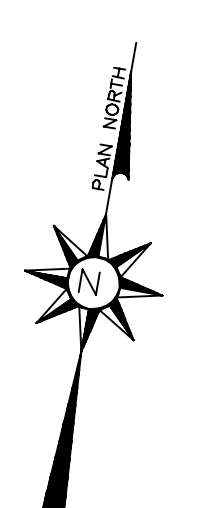
OWNER/APPLICANT information, including name and contact details for Cromer Management, LLC.

PARCEL INFORMATION section with project reference number and address.

PLANNING COMMISSION CERTIFICATE section with approval date and signature.

OWNER CERTIFICATE section with approval date and signature.

WETLANDS CERTIFICATION section with approval date and signature.



NO.	DATE	DESCRIPTION
1	07/31/22	REVISIONS PER PARZ DEPARTMENT LETTER DATED 07/31/22

DESIGN PROFESSIONAL DATE

OWNER/APPLICANT: CROMER MANAGEMENT, LLC
 6111 Parkside Dr, Newark, DE 19702
 Tel: 302.854.9064 (Voice) 302.854.9064 (Fax) www.kerchergroup.com

PARCEL INFORMATION:
 T.P.: 230-19-00-27-00
 DEED REF: 4660/227

APPROVED BY: J.H.L. K.T.S. J.H.L. K.T.S. J.H.L. K.T.S.
 SCALE: IN FEET (1" = 50')

COUNTY PROJECT REFERENCE No.: 2021-29
RECORD PLAN - SOUTHEAST DEER CREEK
 CEDAR CREEK HUNDRED - SUSSEX COUNTY - DELAWARE

THE KERCHER GROUP, INC.
 CONSULTING • SYSTEMS • ENGINEERING
 37385 REHOBOTH AVE., UNIT 11 - REHOBOTH BEACH, DELAWARE 19971
 302.854.9062 (Voice) 302.854.9064 (Fax) www.kerchergroup.com

JOB No: 21-0506
 PLAN DATE: June 22, 2021
 SHEET No.: **R2**

MATCH LINE - SHEET R3

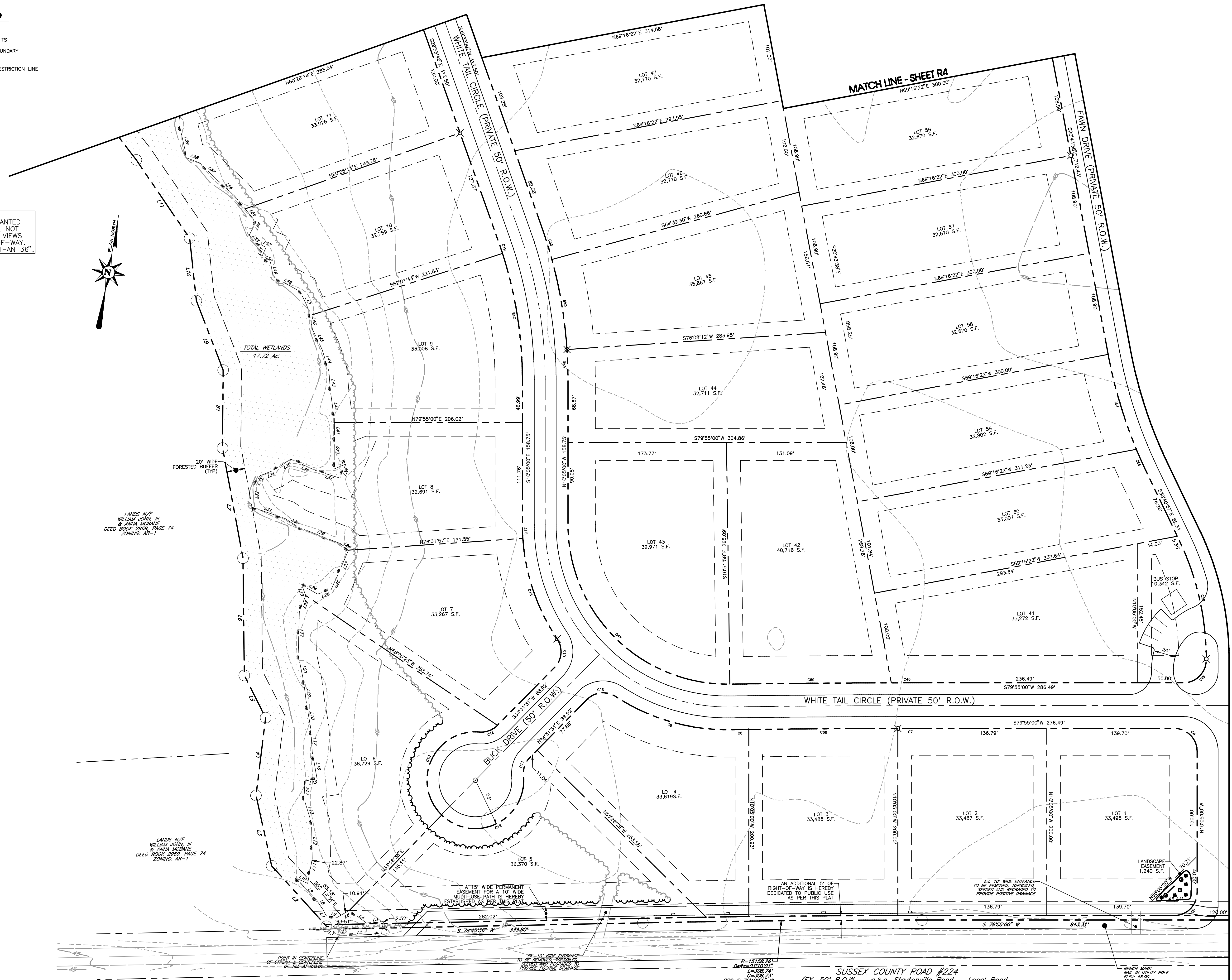
MATCH LINE - SHEET R5

SUSSEX COUNTY ROAD #224
 (EX. 50' R.O.W. - a.k.a. Staytonville Road - Local Road)

PLAN LEGEND

- EXISTING TREE LINE
- EXISTING WETLANDS LIMITS
- EXISTING PROPERTY BOUNDARY
- PROPOSED LOT LINE
- PROPOSED BUILDING RESTRICTION LINE
- POINT
- EXISTING ENTRANCE
- PROPOSED LIGHT POST

NOTE: SHRUBS, BUSHES, AND FLOWERS PLANTED IN THE LANDSCAPE EASEMENT SHALL NOT HAVE HEIGHTS THAT WILL OBSTRUCT VIEWS TO AND FROM THE DELDOT RIGHT-OF-WAY. PLANTING HEIGHTS SHALL BE LESS THAN 36".



LANDS N/F WILLIAM JOHN, III & ANNA MCBANE DEED BOOK 2962, PAGE 74 ZONING: AR-1

LANDS N/F WILLIAM JOHN, III & ANNA MCBANE DEED BOOK 2962, PAGE 74 ZONING: AR-1

A 15' WIDE PERMANENT EASEMENT FOR A 10' WIDE MULTI-USE PATH IS HEREBY ESTABLISHED AS PER THIS PLAN.

AN ADDITIONAL 5' OF RIGHT-OF-WAY IS HEREBY DEDICATED TO PUBLIC USE AS PER THIS PLAN.

EX 10' WIDE ENTRANCE TO BE REMOVED, REPOSELLED, SEEDED AND REGRADED TO PROVIDE POSITIVE DRAINAGE.

EX 10' WIDE ENTRANCE TO BE REMOVED, REPOSELLED, SEEDED AND REGRADED TO PROVIDE POSITIVE DRAINAGE.

R=12138.36'
Delta=0.11001°
L=308.74'
P=308.74'
BPC=S 79°19'58" W

SUSSEX COUNTY ROAD #224
(EX. 50' R.O.W. - a.k.a. Staytonville Road - Local Road)

BENCH MARK
NAE IN UTILITY POLE
ELEV: 48.99
(GAYLOR, 1988)

NO.	DATE	DESCRIPTION
1	07/31/22	REVISIONS PER PAZ2 DEPARTMENT LETTER DATED 07/31/22

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLES WITH THE APPLICABLE ORDINANCES OF SUSSEX COUNTY AND THE LAWS OF THE STATE OF DELAWARE.

DESIGN PROFESSIONAL: _____ DATE: _____

APPROVED BY: _____ DATE: _____
 J.H.L. K.T.B. K.T.S.
 SCALE: IN FEET (1" = 50')

ONLY PLANS SUBMITTED BY A REGISTERED PROFESSIONAL ENGINEER ARE CONSIDERED TO BE OFFICIAL AND BOUND BY THE DEPT. OF TRANSPORTATION. ANY UNAUTHORIZED REVISIONS, ALTERATIONS, OR DUPLICATIONS OF THIS PLAN, WITHOUT THE WRITTEN PERMISSION OF THE REGISTERED PROFESSIONAL ENGINEER, IS PROHIBITED BY LAW.
 © COMMONWEALTH ENGINEERING GROUP, INC.

OWNER/APPLICANT: CROMER MANAGEMENT, LLC
 611 Park Dr. Newark, DE 19711
 Fax: 302.854.9062



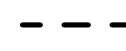
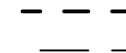



PARCEL INFORMATION:
 T.P.: 230-19-00-27-00
 DEED REF: 4680/227

COUNTY PROJECT REFERENCE No.: 2021-29
RECORD PLAN - SOUTHWEST DEER CREEK
 CEDAR CREEK HUNDRED - SUSSEX COUNTY - DELAWARE

THE KERCHER GROUP, INC.
 CONSULTING • SYSTEMS • ENGINEERING
 37385 REHOBOTH AVE., UNIT 11 - REHOBOTH BEACH, DELAWARE 19971
 302.854.9062 (Voice) 302.854.9064 (Fax) www.kerchergroup.com

JOB No: 21-0506
 PLAN DATE: June 22, 2021
 SHEET No.: **R3**

PLAN LEGEND

-  EXISTING TREE LINE
-  EXISTING WETLANDS LIMITS
-  EXISTING PROPERTY BOUNDARY
-  PROPOSED LOT LINE
-  PROPOSED BUILDING RESTRICTION LINE
-  POINT
-  PROPOSED LIGHT POST



LANDS N/T
GLATTELER PULPWOOD COMPANY
ZONING: AR-1

LANDS N/T
WILLIAM JOHN, III
& ANNA MOSENFELDER
DEED BOOK 2069, PAGE 74
ZONING: AR-1

NO.	DATE	DESCRIPTION
1	07/31/22	REVISIONS PER PAZ DEPARTMENT LETTER DATED 07/31/22

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE ORDINANCES OF SUSSEX COUNTY AND THE LAWS OF THE STATE OF DELAWARE.

DESIGN PROFESSIONAL: _____ DATE: _____

APPROVED BY: _____ DATE: _____
 J.H.L. K.T.S. K.T.S. K.T.S.
 SCALE: 1" = 50'
 0' 50' 100'
 ONLY PLANS SUBMITTED BY A REGISTERED PROFESSIONAL ENGINEER ARE CONSIDERED TO BE OFFICIAL AND BOUND BY THE ENGINEER'S SEAL. THIS PROJECT IS A PRELIMINARY DESIGN. ANY MODIFICATIONS, REVISIONS, AND DUPLICATIONS WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER OR ARCHITECT IS PROHIBITED BY LAW.
 © COMMONWEALTH ENGINEERING GROUP, INC.

OWNER/APPLICANT: CROMER MANAGEMENT, LLC
 611 FAWN DRIVE, SUITE 100
 DEER CREEK, DE 19830
 TEL: 302.854.9062 (Voice)
 FAX: 302.854.9062 (Fax)

PARCEL INFORMATION:
 T.P.: 230-19-00-27-00
 DEED REF: 4660/327

COUNTY PROJECT REFERENCE NO.: 2021-29
RECORD PLAN-NORTHWEST
DEER CREEK
 CEDAR CREEK HUNDRED - SUSSEX COUNTY - DELAWARE

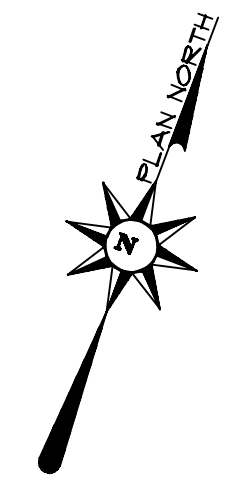
THE KERCHER GROUP, INC.
 CONSULTING • SYSTEMS • ENGINEERING
 37385 REHOBOTH AVE., UNIT 11 - REHOBOTH BEACH, DELAWARE 19971
 302.854.9062 (Voice) 302.854.9064 (Fax) www.kerchergroup.com

JOB No: 21-0506
 PLAN DATE: June 22, 2021
SHEET No.:
R4

DEER CREEK, Map, Jan 31, 2022 (1-4-4)

PLAN LEGEND

- EXISTING TREE LINE
- EXISTING WETLANDS LIMITS
- EXISTING PROPERTY BOUNDARY
- PROPOSED LOT LINE
- PROPOSED BUILDING RESTRICTION LINE
- POINT
- PROPOSED LIGHT POST



No.	DATE	DESCRIPTION
1	07/31/22	REVISIONS PER PAZ DEPARTMENT LETTER DATED 07/31/22

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE ORDINANCES OF SUSSEX COUNTY AND THE LAWS OF THE STATE OF DELAWARE.

DESIGN PROFESSIONAL DATE

APPROVED BY: [Signature] DATE: []/ []/ []

SCALE IN FEET (1" = 50')

ONLY PLANS SUBMITTED BY A REGISTERED PROFESSIONAL ENGINEER ARE CONSIDERED TO BE OFFICIAL. ANY REVISIONS TO THIS PLAN MUST BE MADE IN WRITING AND APPROVED BY THE REGISTERED PROFESSIONAL ENGINEER. ANY UNAUTHORIZED REVISION OR DUPLICATION OF THIS PLAN IS PROHIBITED BY LAW.

© copyright 2022 THE KERCHER GROUP, INC.

OWNER/APPLICANT: CROMER MANAGEMENT, LLC
 611 Fawn Drive, Newark, DE 19711
 Tel: 302.854.9064 (Voice) 302.854.9064 (Fax) www.kerchergroup.com

PARCEL INFORMATION:
 T.P. 2, 230-19-00-27-00
 DEED REF: 4680/327

COUNTY PROJECT REFERENCE No.: 2021-29
RECORD PLAN - NORTH EAST
DEER-CREEK
 CEDAR CREEK HUNDRED - SUSSEX COUNTY - DELAWARE

THE KERCHER GROUP, INC.
CONSULTING • SYSTEMS • ENGINEERING
 37389 REHOBOTH AVE., UNIT 11 - REHOBOTH BEACH, DELAWARE 19971
 302.854.9064 (Voice) 302.854.9064 (Fax) www.kerchergroup.com

JOB No: 21-0506
 PLAN DATE: June 22, 2021
 SHEET No.: **R5**

DEER CREEK MAP, JAN. 31, 2022 (1-653)

Cromer Management, LLC

Deer Creek 2021-29

CROMER MANAGEMENT, LLC
6103 S. Rehoboth Blvd.
Milford, DE 19963
SCTP: 230-19.00-27.00

David C. Hutt, Esquire
Morris James LLP

Public Hearing:

Planning Commision 07/14/2022

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12. Proposed Form/Sample of Restrictive Covenants

TAB “1”

EXECUTIVE SUMMARY
DEER CREEK
Subdivision No. 2021-29

1. Land Use & Zoning

- A. Deer Creek, a standard subdivision.
- B. The property is located on the North side of Staytonville Road (Sussex County Road 224) approximately 80' West of DuPont Highway (U.S. Route 113)
- C. The owner of the property is Cromer Management, LLC.
- D. The property is zoned Agricultural Residential (AR-1).
- E. The proposed application is a request for a Standard Subdivision.
- F. The property is located in a Level 4 Area on the 2020 State Strategies Map.
- G. The property is located within the Low-Density Area on the 2019 Comprehensive Plan.

2. Land Utilization

- A. The total acreage of the property is 93.582± acres of land.
- B. The proposed community is designed for 79 single-family lots on 62.201± acres with 5.642± acres of stormwater management/open space, 7.772± acres of right-of-way and 17.722± acres of non-tidal wetlands.
- C. The applicant requests a Standard Subdivision.
- D. The number of units proposed is 79 single family lots with a site density of 0.844 units/acre.
- E. The access for the proposed community is off Staytonville Road (SCR 224).
- F. The property has 17.722± acres of non-tidal wetlands located on site. No lots are located within the wetlands and the wetlands will remain undisturbed.
- G. The project was presented to PLUS on July 28, 2021 and written comments were received from the Office of State Planning on August 23, 2021. A response was filed to those comments on August 30, 2021.

3. Environmental

- A. The property contains 17.722± acres of non-tidal wetlands.
- B. The property contains 28.097± acres of existing woods. As proposed on the preliminary plan, up to 10.375± acres will be removed.
- C. The property is not located within a Wellhead Protection Area.
- D. The property contains both Excellent and Good Groundwater Recharge Areas.
- E. It is anticipated that the impervious cover within the Excellent Recharge Area will not exceed 35% and, thus, no special limitations are imposed by Chapter 89 of the Sussex County Code. Should the impervious cover exceed 35%, the project will comply with the requirements of Chapter 89.

4. Traffic

- A. The developer will make the off-site improvements outlined in the PLUS report and discussed in the Pre-Submittal Meeting.
- B. The developer will work closely with DeIDOT regarding the entrance on Staytonville Road and will meet DeIDOT road design standards for the entrance and DeIDOT required improvements.

5. Civil Engineering

- A. The internal roads will be privately maintained and will meet Sussex County Design Standards.
- B. Drinking water will be provided by on-site wells.
- C. Sanitary Sewer service will be provided by On-Site Wastewater Treatment and Disposal Systems.
- D. The stormwater management system will meet all State, County and Conservation District requirements through a combination of Best Management Practice (BMP) and Best Available Technologies (BAT).
- E. The project is within the Milford School District.
- F. Fire Protection will be provided by the Ellendale Fire Company.

6. County Code Compliance

- A. Preliminary Land Use Service Response Letter with Developer's Response (August 30, 2021).
- B. Sussex County Code, Chapter 115, Article IV (Agricultural Residential Districts): Sussex County Code, Chapter 99-9C Summary Response.
- C. Sussex County Code, Chapter 89, (Source Water Protection).

TAB “2”

File #: 2021-29
Pre-App Date: 9/15/21
202114069

Sussex County Major Subdivision Application

Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
302-855-7878 ph. 302-854-5079 fax

Type of Application: (please check applicable)

Standard:
Cluster:
Coastal Area:

RECEIVED

SEP 22 2021

SUSSEX COUNTY
PLANNING & ZONING

Location of Subdivision:

N. side of Staytonville Rd (SCR224) and 80' west of US RT 113, South of Lincoln

Proposed Name of Subdivision:

Deer Creek

Tax Map #: 230-19.00-27.00 **Total Acreage:** 93.582

Zoning: AR-1 **Density:** 0.844 **Minimum Lot Size:** 32,670 **Number of Lots:** 79

Open Space Acres: 23.364 Ac

Water Provider: Private On-site Wells **Sewer Provider:** Private On-site Sewer

Applicant Information

Applicant Name: Cromer Management, LLC (C/O Wes Cromer)
Applicant Address: 6103 S. Rehoboth Blvd
City: Milford **State:** DE **Zip Code:** 19963
Phone #: (302) 448-1032 **E-mail:** wcromer@mastenrealty.com

Owner Information

Owner Name: Same as above
Owner Address: _____
City: _____ **State:** _____ **Zip Code:** _____
Phone #: _____ **E-mail:** _____

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: The Kercher Group, Inc., a Mott MacDonald Co. (C/O Kevin Smith)
Agent/Attorney/Engineer Address: 37385 Rehoboth Ave. Ext., Unit 11
City: Rehoboth Beach **State:** DE **Zip Code:** 19971
Phone #: (302) 542-7080 **E-mail:** kevin.t.smith@mottmac.com



Check List for Sussex County Major Subdivision Applications

The following shall be submitted with the application

- ✓ **Completed Application**
- ✓ **Provide ten (10) copies of the Site Plan or Survey of the property and a PDF (via e-mail)**
 - Plan shall show the existing conditions, setbacks, roads, floodplain, wetlands, topography, proposed lots, landscape plan, etc. **Per Subdivision Code 99-22, 99-23 & 99-24**
 - Provide compliance with Section 99-9.
 - Deed or Legal description, copy of proposed deed restrictions, soil feasibility study
- ✓ **Provide Fee \$500.00**
- ___ **Optional - Additional information for the Commission to consider** (ex. photos, exhibit books, etc.) If provided submit seven (7) copies and they shall be submitted a minimum of ten (10) days prior to the Planning Commission meeting.
- ✓ **Please be aware that Public Notice will be sent to property owners within 200 feet of the subject site and County staff will come out to the subject site, take photos and place a sign on the site stating the date and time of the Public Hearings for the application.**
- ✓ **PLUS Response Letter** (if required) **Environmental Assessment & Public Facility Evaluation Report** (if within Coastal Area)
- ___ **51% of property owners consent if applicable**

The undersigned hereby certifies that the forms, exhibits, and statements contained in any papers or plans submitted as a part of this application are true and correct.

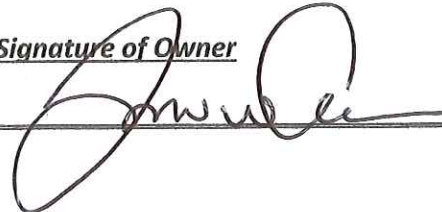
I also certify that I or an agent on my behalf shall attend all public hearing before the Planning and Zoning Commission and any other hearing necessary for this application and that I will answer any questions to the best of my ability to respond to the present and future needs, the health, safety, morals, convenience, order, prosperity, and general welfare of the inhabitants of Sussex County, Delaware.

Signature of Applicant/Agent/Attorney



Date: 9/21/21

Signature of Owner



Date: 9/21/21

For office use only:

Date Submitted: 9/23/21

Fee: \$500.00 Check #: 2607

Staff accepting application: ces

Application & Case #: 202114069

Location of property: _____

Date of PC Hearing: _____

Recommendation of PC Commission: _____



September 21, 2021

Mr. Jamie Whitehouse, Director
Sussex County Planning and Zoning Department
P.O. Box 417
Georgetown, DE 19947

RE: Deer Creek, Standard Subdivision

Dear Mr. Whitehouse:

Per the Pre-submittal Meeting on September 15, 2021, it was discussed that per Chapter 99 “A twenty-foot forested buffer is required around the entire perimeter of the subdivision and a 30-foot buffer that is required from lands primarily used for agriculture. If this is unable to be achieved while maintaining lot dimension/area requirements, a request to be waived from this requirement could be submitted to the Commission.”

This letter serves as the formal waiver request regarding Chapter 99-5 “Definitions” “Forested and/or Landscaped Buffer Strip” A-K. This project had been previously approved in April 2010 using the layout as shown on the submitted Preliminary Plan. We ask that this layout be approved as submitted, and that the forested wetlands be sufficient for the required forested buffers. There are only two lots that do not meet the landscape buffer requirement of 30 feet. Lot 6 average is greater than 40 feet, however, the smallest buffer area is only 8 feet (for about 60 feet of the total 400 feet). Lot 8 average is greater than 100 feet, however, the smallest buffer area is only 22 feet (for about 40 feet of the total 350 feet). Although Lot 8 meets the 20 foot buffer requirement, it may be considered adjacent to agricultural lands, therefore, would be required to have a 30 foot buffer. The lots along the State road (Lots 1-6, 35-40) do not provide a buffer, however, there is a permanent easement to be dedicated to the State for a multi-use path.

If you should have any questions regarding a statement made within this document please do not hesitate to contact our office at your earliest convenience.

Thank you for your attention and consideration.

Sincerely,

Kevin Smith

The Kercher Group, Inc.
Kevin Smith, Project Manager

THE KERCHER GROUP, INC.

TAB “3”

TM #2-30-19.00-27.00
PREPARED BY & RETURN TO:
The Smith Firm, LLC
8866 Riverside Dr.
Seaford, DE 19973
File No. C21-47/

This Deed, made this 13th day of September, 2021,

- BETWEEN -

RICHARD R. CARLISLE a/k/a RICHARD F. CARLISLE and KATHRYN B. CARLISLE, parties of the first part,

- AND -

CROMER MANAGEMENT, LLC, a Delaware limited liability company, of 6103 S. Rehoboth Boulevard, Milford, DE 19963, party of the second part.

WITNESSETH: That the said parties of the first part, for and in consideration of the sum of **One and 00/100 Dollars (\$1.00)**, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grant and convey unto the party of the second part, and its heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

ALL that certain lot, piece or parcel of land situate, lying and being in Cedar Creek Hundred, Sussex County and State of Delaware, and being more particularly described as follows, to wit:

BEGINNING at a pipe located in the centerline of a stream on the northerly right of way line of Sussex County Road #224, said pipe being 25 feet from the centerline of the said Sussex County Road #224 and being 180 feet more or less from the centerline of Route 113 and also being a corner for this land and lands now or formerly of Clyde Clark, et al; thence along the said Sussex County Road

#224, South $60^{\circ}42'02''$ West 92.78 feet to a point; thence with the curve of the said Sussex County Road #224, whose radius is 562.88 feet, an arc distance of 29.99 feet (chord – South $62^{\circ}13'37''$ West 29.99 feet) and a tangent of 15.00 feet to a point; thence continuing with the said Sussex County Road #224, South $63^{\circ}45'12''$ West 202.92 feet to a point; thence continuing along the said Sussex County Road #224, whose radius is 1,137.37 feet, an arc distance of 320.86 feet (chord – South $71^{\circ}50'06''$ West 319.79 feet) and a tangent of 161.50 feet to a point; thence continuing with the said Sussex County Road #224, South $79^{\circ}55'00''$ West 843.31 feet to a point; thence continuing with the curve of the said Sussex County Road #224, whose radius is 15,158.26 feet, an arc distance of 305.99 feet (chord – South $79^{\circ}20'18''$ West 305.98 feet) and a tangent of 153.00 feet to a point; thence continuing along the said Sussex County Road #224, South $78^{\circ}45'36''$ West 333.90 feet to a point in centerline of stream and centerline of tile at right of way; thence turning and running with centerline of stream the following sixty-one (61) courses and distances: (1) North $86^{\circ}48'40''$ West 13.35 feet to a point; thence (2) North $52^{\circ}14'34''$ West 89.35 feet to a point; thence (3) North $22^{\circ}38'14''$ West 78.99 feet to a point; thence (4) North $03^{\circ}02'07''$ West 85.79 feet to a point; thence (5) North $36^{\circ}46'34''$ West 51.95 feet to a point; thence (6) North $10^{\circ}45'05''$ West 128.46 feet to a point; thence (7) North $20^{\circ}35'17''$ West 122.70 feet to a point; thence (8) North $09^{\circ}38'39''$ West 85.54 feet to a point; thence (9) North $31^{\circ}13'55''$ West 81.46 feet to a point; thence (10) North $16^{\circ}13'51''$ West 68.87 feet to a point; thence (11) North $44^{\circ}22'04''$ West 103.84 feet to a point; thence (12) North $47^{\circ}29'06''$ West 117.23 feet to a point; thence (13) North $25^{\circ}01'03''$ West 128.80 feet to a point; thence (14) North $03^{\circ}31'35''$ East 144.45 feet to a point; thence (15) North $10^{\circ}06'22''$ West 109.39 feet to a point; thence (16) North $03^{\circ}51'44''$ East 190.98 feet to a point; thence (17) North $24^{\circ}58'19''$ East 175.78 feet to a point; thence (18) North $25^{\circ}23'30''$ East 128.90 feet to a point; thence (19) North $41^{\circ}41'54''$ East 137.47 feet to a point; thence (20) North $58^{\circ}26'39''$ East 175.44 feet to a point; thence (21) North $12^{\circ}16'12''$ East 97.80 feet to a point; thence (22) North $73^{\circ}26'11''$ East 197.41 feet to a point; thence (23) South $42^{\circ}22'20''$ East 163.64 feet to a point; thence (24) South $83^{\circ}17'26''$ East 57.29 feet to a point; thence (25) South $45^{\circ}07'17''$ East 127.67 feet to a point; thence (26) North $71^{\circ}19'09''$ East 162.25 feet to a point; thence (27) North $41^{\circ}36'55''$ East 194.27 feet to a point; thence (28) North $44^{\circ}59'19''$ East 215.47 feet to a point; thence (29) North $70^{\circ}03'42''$ East 131.04 feet to a point; thence (30) South $85^{\circ}32'49''$ East 100.90 feet to a point; thence (31) North $37^{\circ}15'26''$ East 223.82 feet to a point; thence (32) North $68^{\circ}26'20''$ East 74.14 feet to a point; thence (33) North $06^{\circ}27'38''$ West 75.63 feet to a point; thence (34) North $42^{\circ}16'18''$ East 246.49 feet to a point; thence (35) North $64^{\circ}13'20''$ East 95.76 feet to a point; thence (36) North $78^{\circ}06'28''$ East 110.04 feet to a point; thence (37) South $02^{\circ}54'30''$ West 103.29 feet to a point; thence (38) South $58^{\circ}35'53''$ West 72.41 feet to a point; thence (39) South $22^{\circ}00'51''$ West 69.26 feet to a point; thence (40) South $51^{\circ}32'51''$ West 87.25 feet to a point; thence (41) South $09^{\circ}05'21''$ West 157.11 feet to a point; (42) thence South $21^{\circ}51'21''$ East 208.07 feet to a point; thence (43) South $47^{\circ}50'43''$ East 111.48 feet to a point; thence (44) South $15^{\circ}04'34''$ West 100.58 feet to a point; thence

(45) South 25°50'18" West 92.17 feet to a point; thence (46) South 07°31'16" East 130.95 feet to a point; thence (47) South 32°54'14" East 98.63 feet to a point; thence (48) South 44°28'10" East 169.29 feet to a point; thence (49) South 21°38'54" West 91.85 feet to a point; thence (50) South 31°24'09" East 138.53 feet to a point; thence (51) South 46°39'44" East 43.54 feet to a point; thence (52) South 00°55'07" West 156.09 feet to a point; thence (53) South 02°41'47" East 101.60 feet to a point; thence (54) South 37°52'50" East 76.14 feet to a point; thence (55) South 51°31'32" East 86.00 feet to a point; thence (56) South 30°45'28" East 54.85 feet to a point; thence (57) South 19°12'04" East 89.19 feet to a point; thence (58) South 52°24'17" East 47.96 feet to a point; thence (59) South 18°10'55" East 97.18 feet to a point; thence (60) South 27°24'45" East 156.87 feet to a point; thence (61) South 30°56'52" East 42.64 feet back to the place of beginning, said to contain 93.58 acres of land, be the same more or less, as surveyed by Miller-Lewis, Inc., Registered Surveyors, on November 4, 1976 and of record in the Office of the Recorder of Deeds, in and for Sussex County, Delaware in Plot Book 11, page 89.

BEING a portion of the same lands conveyed to Richard R. Carlisle and Kathryn B. Carlisle from Naoma F. Carlisle, by Deed dated May 30, 1999, recorded in the Office of the Recorder of Deeds in and for Sussex County, Delaware, on June 9, 1999, in Deed Book 2395, Page 1.

SUBJECT TO ALL covenants, conditions, restrictions and easements of record, this reference to which shall not be construed to reimpose the same.

IN WITNESS WHEREOF, the parties of the first part have hereunto set their hands and seals the day and year first above written.

Signed, Sealed and Delivered
in the presence of:

Richard Carlisle (SEAL)
Richard R. Carlisle

Kathryn B. Carlisle (SEAL)
Kathryn B. Carlisle

Richard F. Carlisle (SEAL)
Richard F. Carlisle

STATE OF DELAWARE, COUNTY OF SUSSEX: to-wit

BE IT REMEMBERED, that on September 13, 2021, personally came before me, the subscriber, Richard R. Carlisle and Kathryn B. Carlisle, parties of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be their act and deed.

**AKA RICHARD F. CARLISLE*

GIVEN under my Hand and Seal of Office the day and year aforesaid.

BLAKE W. CAREY
Attorney - Bar #5145
Admitted to Delaware Bar: 12/11/2008
Notary
Uniform Law on Notarial Acts
Pursuant to 29 Del. C., Sec 4323(3)

[Signature]
Notary Public

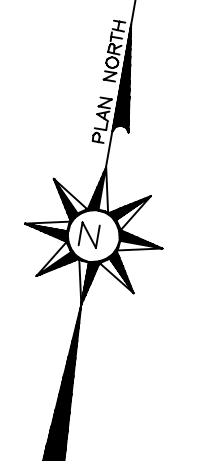
My Commission Expires: _____

TAB “4”



- PLAN LEGEND**
- EXISTING TREE LINE
 - EXISTING WETLANDS LIMITS
 - EXISTING PROPERTY BOUNDARY
 - PROPOSED LOT LINE
 - PROPOSED BUILDING RESTRICTION LINE
 - POINT
 - EXISTING ENTRANCE
 - PROPOSED LIGHT POST

NOTE:
SHRUBS, BUSHES, AND FLOWERS PLANTED
IN THE LANDSCAPE EASEMENT SHALL NOT
HAVE HEIGHTS THAT WILL OBSTRUCT VIEWS
TO AND FROM THE DELTID RIGHT-OF-WAY.
PLANTING HEIGHTS SHALL BE LESS THAN 36".



LANDS N/F
DARLENE B. DRAPER
DEED BOOK 2532, PAGE 268
ZONING: AR-1

TOTAL WETLANDS
17.72 Ac.

20' WIDE FORESTED BUFFER (TFP)

NO.	DATE	DESCRIPTION
1	07/31/22	REVISIONS PER PAZ2 DEPARTMENT LETTER DATED 07/31/22

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLES WITH THE APPLICABLE ORDINANCES OF SUSSEX COUNTY AND THE LAWS OF THE STATE OF DELAWARE.

DESIGN PROFESSIONAL: _____ DATE: _____

APPROVED BY: _____ DATE: _____
 J.H.L. K.T.S. K.T.S.
 SCALE IN FEET (1" = 50')
 50' 100'
 ONLY PLANS PREPARED BY A REGISTERED PROFESSIONAL ENGINEER ARE CONSIDERED TO BE OFFICIAL. ANY OTHER PLANS OR SPECIFICATIONS THAT ARE NOT CONSIDERED TO BE OFFICIAL ARE VOID. ANY REVISIONS TO THIS PLAN MUST BE SUBMITTED TO THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE ORIGINAL PLAN. ANY REVISIONS TO THIS PLAN MUST BE SUBMITTED TO THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE ORIGINAL PLAN. ANY REVISIONS TO THIS PLAN MUST BE SUBMITTED TO THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE ORIGINAL PLAN.

OWNER/APPLICANT: CROMER MANAGEMENT, LLC
 611 Parkside Dr. Newark, DE 19711
 Parcel Information: T.P.# 230-19-00-27-00
 DEED REF: 4660/227

COUNTY PROJECT REFERENCE No.: 2021-29
RECORD PLAN - SOUTHEAST DEER CREEK
 CEDAR CREEK HUNDRED - SUSSEX COUNTY - DELAWARE
THE KERCHER GROUP, INC.
 CONSULTING • SYSTEMS • ENGINEERING
 37385 REHOBOTH AVE., UNIT 11 - REHOBOTH BEACH, DELAWARE 19971
 302.854.9062 (Voice) 302.854.9064 (Fax) www.kerchergroup.com

JOB No: 21-0506
 PLAN DATE: June 22, 2021
 SHEET No.: **R2**

MATCH LINE - SHEET R3

MATCH LINE - SHEET R5

SUSSEX COUNTY ROAD #224
 (EX. 50' R.O.W. - a.k.a. Staytonville Road - Local Road)

AN ADDITIONAL 5' OF RIGHT-OF-WAY IS HEREBY DEDICATED TO PUBLIC USE AS PER THIS PLAN

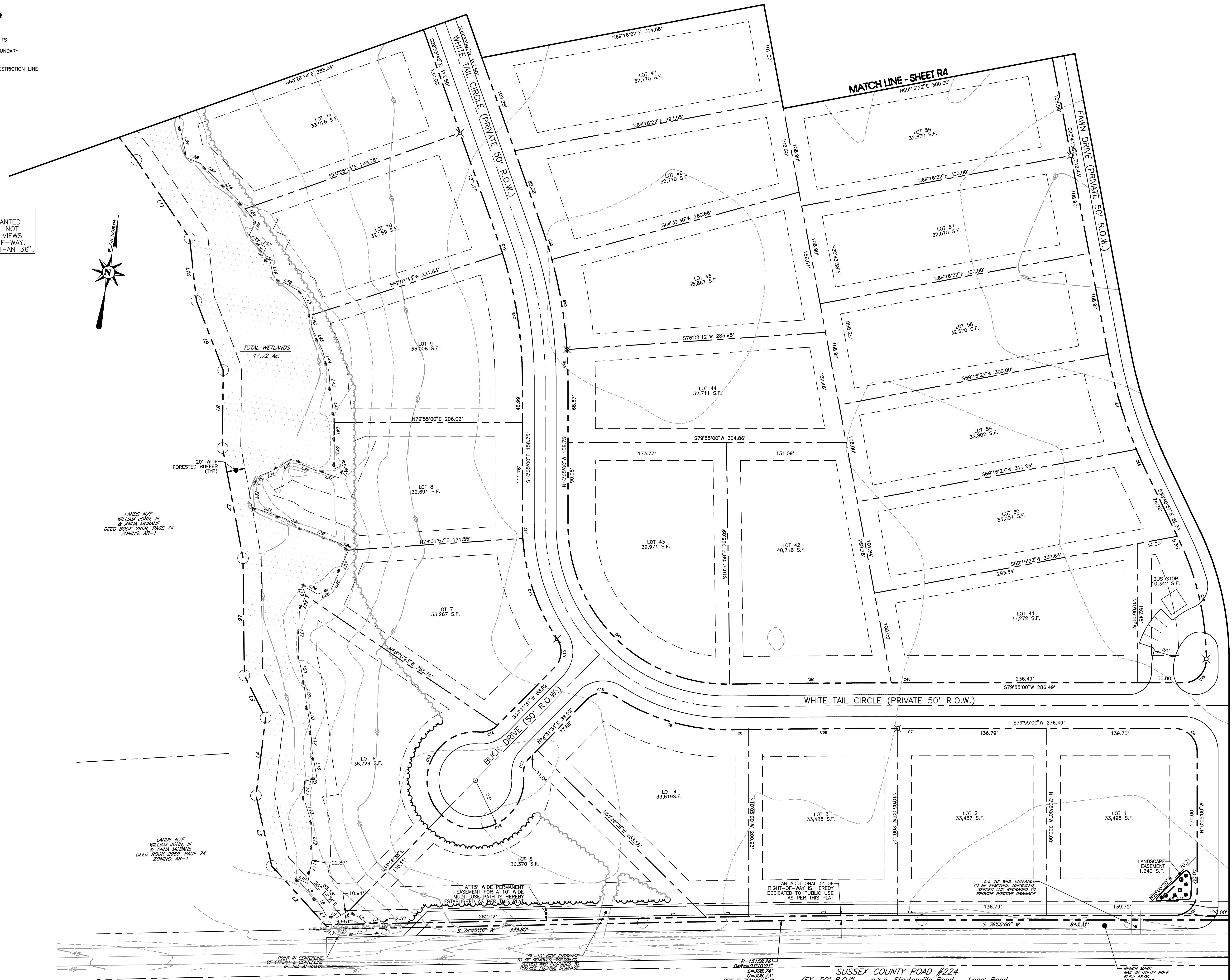
A 15' WIDE PERMANENT EASEMENT FOR A 10' WIDE MULTI-USE PATH IS HEREBY ESTABLISHED AS PER THIS PLAN

LANDSCAPE EASEMENT 1,240 S.F.

PLAN LEGEND

- EXISTING TREE LINE
- EXISTING WETLANDS LIMITS
- EXISTING PROPERTY BOUNDARY
- PROPOSED LOT LINE
- PROPOSED BUILDING RESTRICTION LINE
- POINT
- EXISTING ENTRANCE
- PROPOSED LIGHT POST

NOTE: SHRUBS, BUSHES, AND FLOWERS PLANTED IN THE LANDSCAPE EASEMENT SHALL NOT HAVE HEIGHTS THAT WILL OBSTRUCT VIEWS TO AND FROM THE DELDOT RIGHT-OF-WAY. PLANTING HEIGHTS SHALL BE LESS THAN 36".



LANDS N/F WILLIAM JOHN, III & ANNA MCBANE DEED BOOK 2962, PAGE 74 ZONING: AR-1

LANDS N/F WILLIAM JOHN, III & ANNA MCBANE DEED BOOK 2962, PAGE 74 ZONING: AR-1

A 15' WIDE PERMANENT EASEMENT FOR A 10' WIDE MULTI-USE PATH IS HEREBY ESTABLISHED AS PER THIS PLAN.

AN ADDITIONAL 5' OF RIGHT-OF-WAY IS HEREBY DEDICATED TO PUBLIC USE AS PER THIS PLAN.

EX 10' WIDE ENTRANCE TO BE REMOVED, REPOSELLED, SEEDED AND REGRADED TO PROVIDE POSITIVE DRAINAGE.

EX 10' WIDE ENTRANCE TO BE REMOVED, REPOSELLED, SEEDED AND REGRADED TO PROVIDE POSITIVE DRAINAGE.

R=12138.36'
Delta=0.1101°
L=308.74'
P=308.74'
BPC=S 79°19'58" W

SUSSEX COUNTY ROAD #224
(EX. 50' R.O.W. - a.k.a. Staytonville Road - Local Road)

BENCH MARK
NAI IN UTILITY POLE
ELEV: 48.99
(GAYLOR, 1988)

No.	DATE	DESCRIPTION
1	07/31/22	REVISIONS PER PAZ2 DEPARTMENT LETTER DATED 07/31/22

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLES WITH THE APPLICABLE ORDINANCES OF SUSSEX COUNTY AND THE LAWS OF THE STATE OF DELAWARE.

DESIGN PROFESSIONAL: _____ DATE: _____

APPROVED BY: **DEER CREEK** (K.T.S.)
 J.H.L. K.T.S.
 SCALE: IN FEET (1" = 50')

ONLY PLANS DRAWN BY A REGISTERED PROFESSIONAL ENGINEER ARE TO BE CONSIDERED FOR THE OFFICIAL AND BIDDING PURPOSES OF THE STATE OF DELAWARE. ANY UNLAWFUL REVISION, ALTERATION, OR DUPLICATION OF THIS PLAN WITHOUT THE WRITTEN PERMISSION OF THE REGISTERED PROFESSIONAL ENGINEER IS PROHIBITED BY LAW.
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OWNER/APPLICANT: CROMER MANAGEMENT, LLC
 611 Park Dr, Newark, DE 19711
 Fax: 302.854.9062

PARCEL INFORMATION:
 T.P.: 230-19-00-27-00
 DEED REF: 4680/227

COUNTY PROJECT REFERENCE No.: 2021-29
RECORD PLAN - SOUTHWEST DEER CREEK
 CEDAR CREEK HUNDRED - SUSSEX COUNTY - DELAWARE

THE KERCHER GROUP, INC.
 CONSULTING • SYSTEMS • ENGINEERING
 37385 REHOBOTH AVE., UNIT 11 - REHOBOTH BEACH, DELAWARE 19971
 302.854.9062 (Voice) 302.854.9064 (Fax) www.kerchergroup.com

JOB No: 21-0506
 PLAN DATE: June 22, 2021
 SHEET No.: **R3**

PLAN LEGEND

- EXISTING TREE LINE
- EXISTING WETLANDS LIMITS
- EXISTING PROPERTY BOUNDARY
- PROPOSED LOT LINE
- PROPOSED BUILDING RESTRICTION LINE
- POINT
- PROPOSED LIGHT POST



LANDS N/T
GLATTELER PULPWOOD COMPANY
ZONING: AR-1

LANDS N/T
WILLIAM JOHN, III
& ANNA MOSENFELDER
DEED BOOK 2069, PAGE 74
ZONING: AR-1

NO.	DATE	DESCRIPTION
1	07/31/22	REVISIONS PER PAZ DEPARTMENT LETTER DATED 07/31/22

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE ORDINANCES OF SUSSEX COUNTY AND THE LAWS OF THE STATE OF DELAWARE.

DESIGN PROFESSIONAL: _____ DATE: _____

APPROVED BY: _____ DATE: _____

SCALE: 1" = 50'

© COMMONWEALTH ENGINEERING GROUP, INC.

OWNER/APPLICANT: CROMER MANAGEMENT, LLC
611 FAWN DRIVE, SUITE 100
DELRAND, DE 19830
Tel: 302.854.9064 (Voice)
Fax: 302.854.9062 (Fax)

PARCEL INFORMATION:
T.P.: 230-19-00-27.00
DEED REF: 4660/227

COUNTY PROJECT REFERENCE NO.: 2021-29
RECORD PLAN-NORTHWEST
DEER-CREEK

CEDAR CREEK HUNDRED - SUSSEX COUNTY - DELAWARE

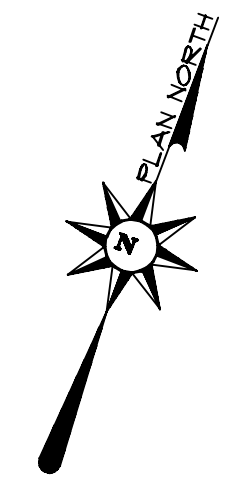
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JOB No: 21-0506
PLAN DATE: June 22, 2021
SHEET No.: **R4**

DEER CREEK, Map, Jan 31, 2022 (1-4-4)

PLAN LEGEND

- EXISTING TREE LINE
- EXISTING WETLANDS LIMITS
- EXISTING PROPERTY BOUNDARY
- PROPOSED LOT LINE
- PROPOSED BUILDING RESTRICTION LINE
- POINT
- PROPOSED LIGHT POST



NO.	DATE	DESCRIPTION
1	07/31/22	REVISIONS PER PAZ DEPARTMENT LETTER DATED 07/31/22

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE ORDINANCES OF SUSSEX COUNTY AND THE LAWS OF THE STATE OF DELAWARE.

DESIGN PROFESSIONAL: _____ DATE: _____

APPROVED BY: _____ DATE: _____
 J.H.L. K.T.S. U.P.S. 10/10/21
 SCALE IN FEET (1" = 50')

OWNER/APPLICANT: CROMER MANAGEMENT, LLC
 614 FAWN DRIVE, SUITE 200
 DEER CREEK, DE 19830
 TEL: 302.854.9064 (Voice) 302.854.9062 (Fax) www.kerchergroup.com

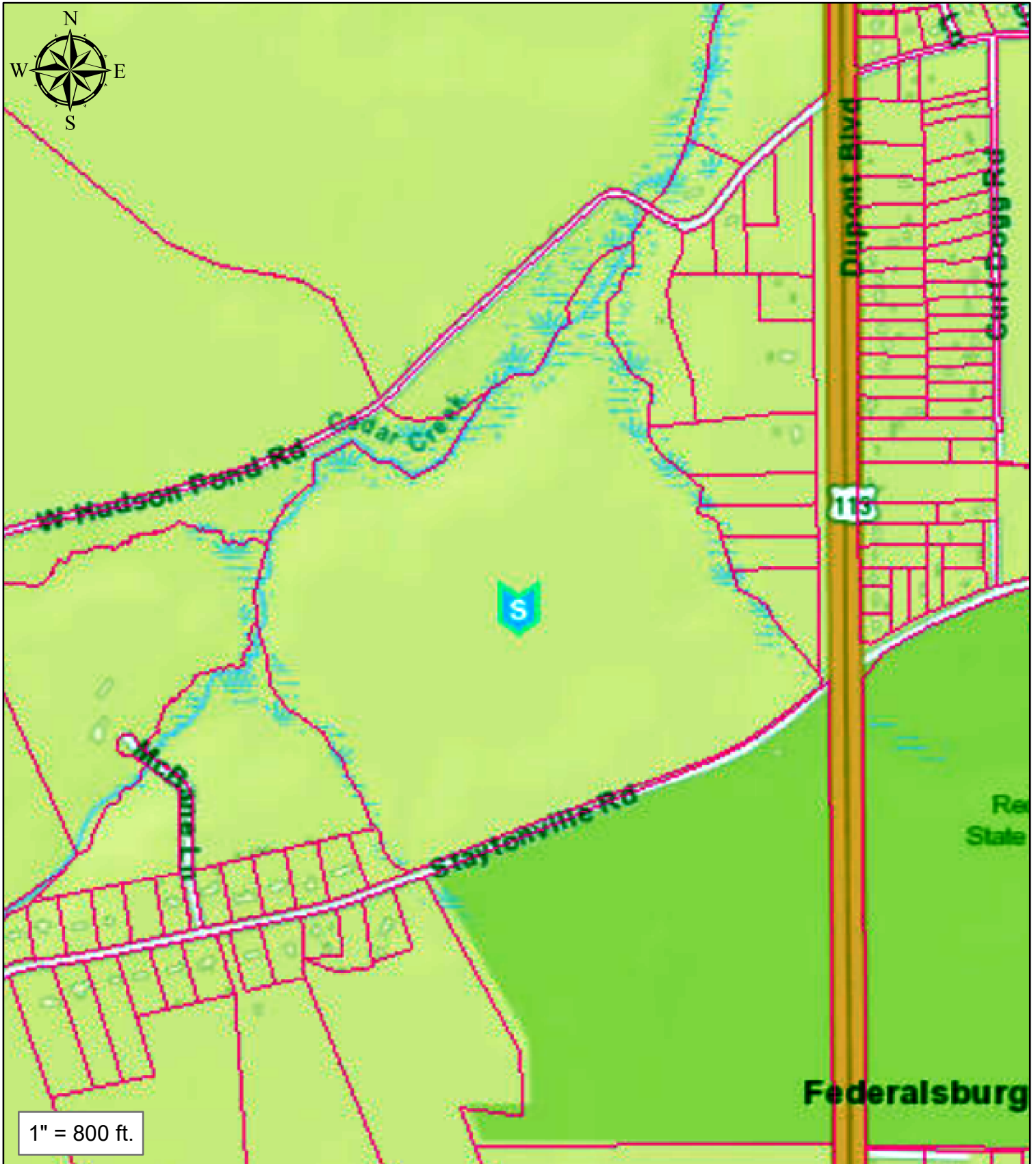
COUNTY PROJECT REFERENCE NO.: 2021-29
 RECORD PLAN - NORTH EAST
 DEER CREEK HUNDRED - SUSSEX COUNTY - DELAWARE

THE KERCHER GROUP, INC.
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 37389 REHOBOTH AVE., UNIT 11 - REHOBOTH BEACH, DELAWARE 19871
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JOB No: 21-0506
 PLAN DATE: June 22, 2021
 SHEET No.: **R5**

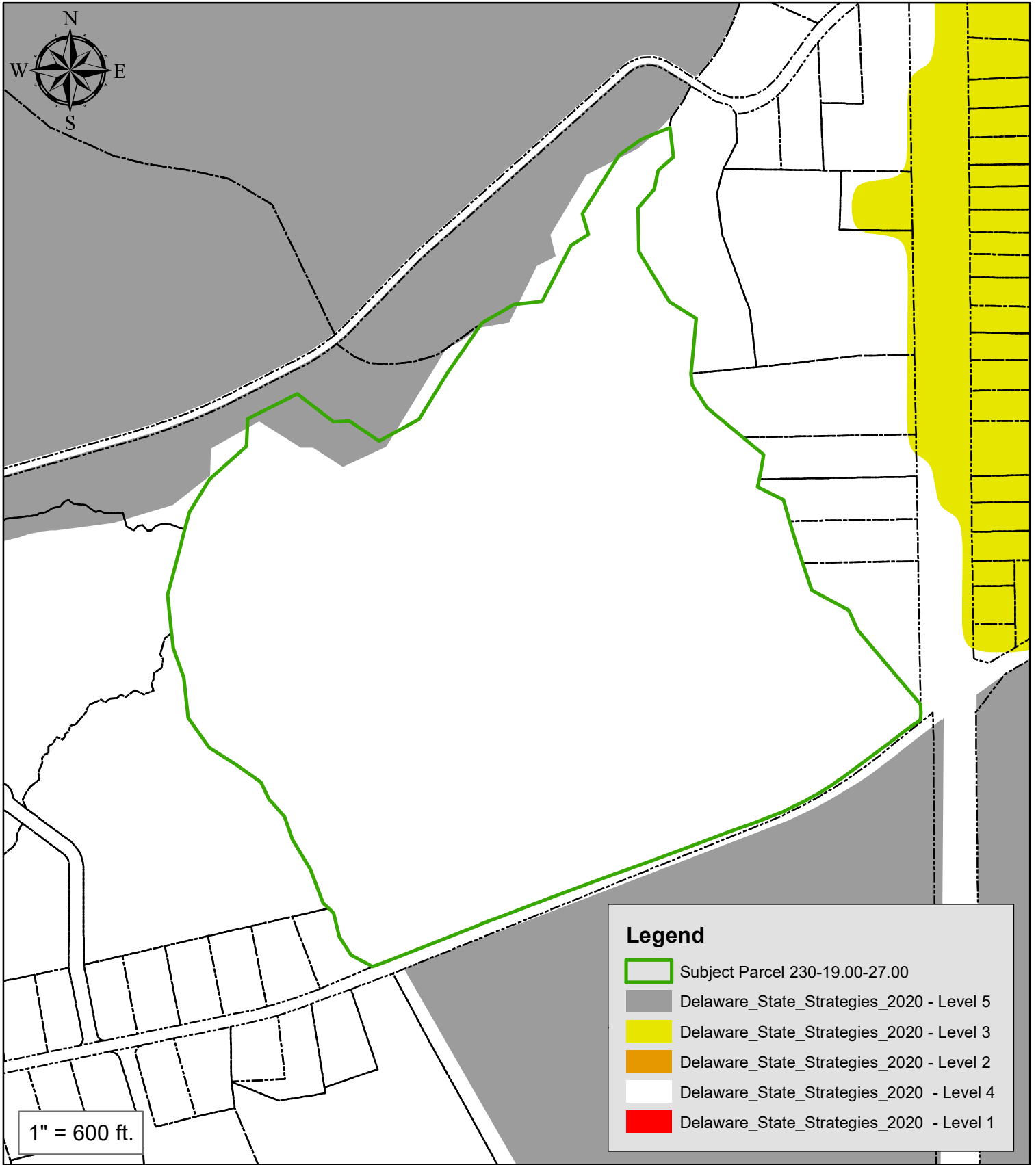
DEER CREEK MAP, JAN. 31, 2022 (1-653)

TAB “5”



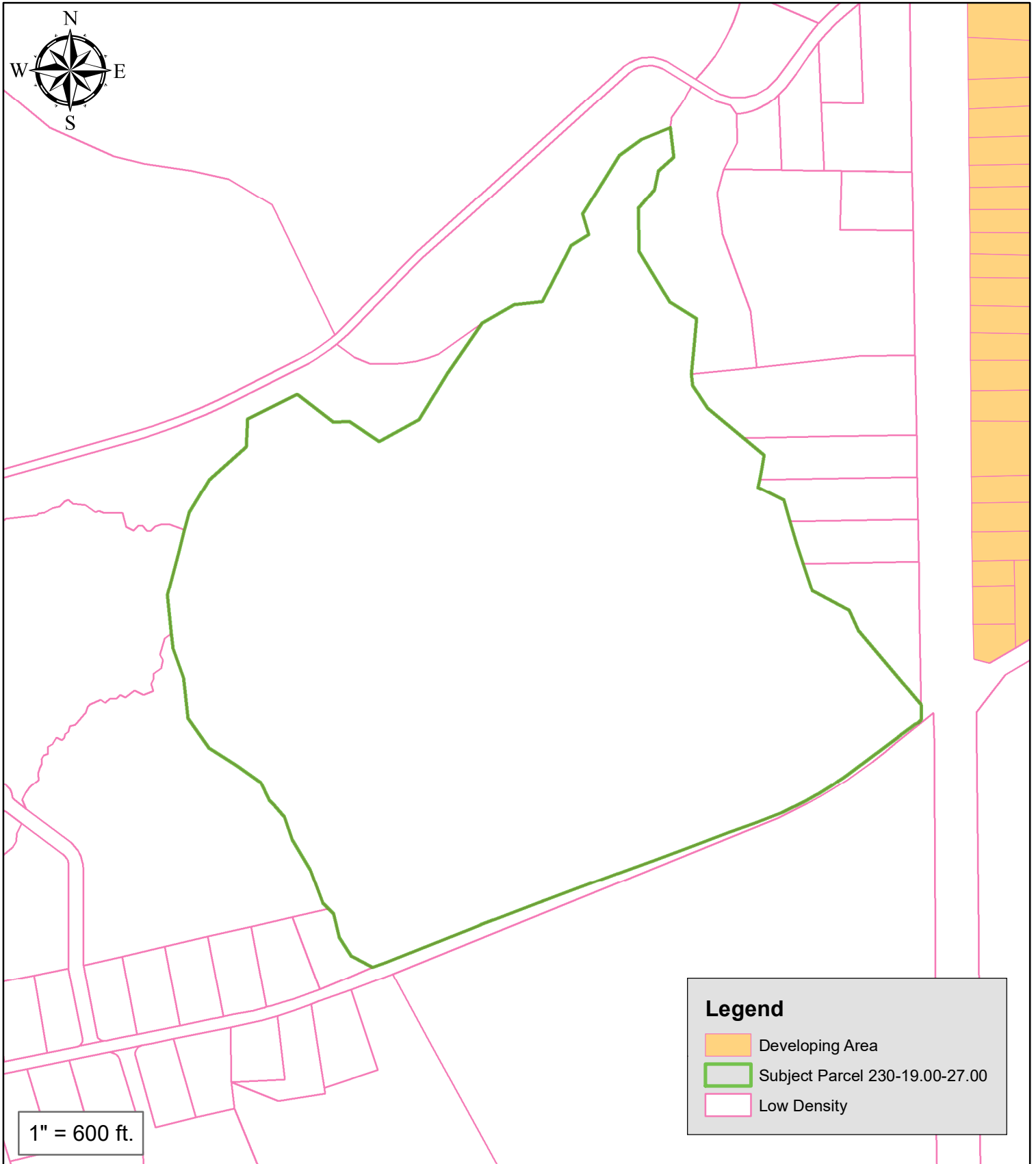
PRELIMINARY SUBDIVISION PLAN
 FOR
DEER CREEK
 LOCATION MAP
 6/30/22

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 MOTT
 MACDONALD



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MACDONALD

PRELIMINARY SUBDIVISION PLAN
 FOR
DEER CREEK
 STATE STRATEGIES EXHIBIT
 6/30/22

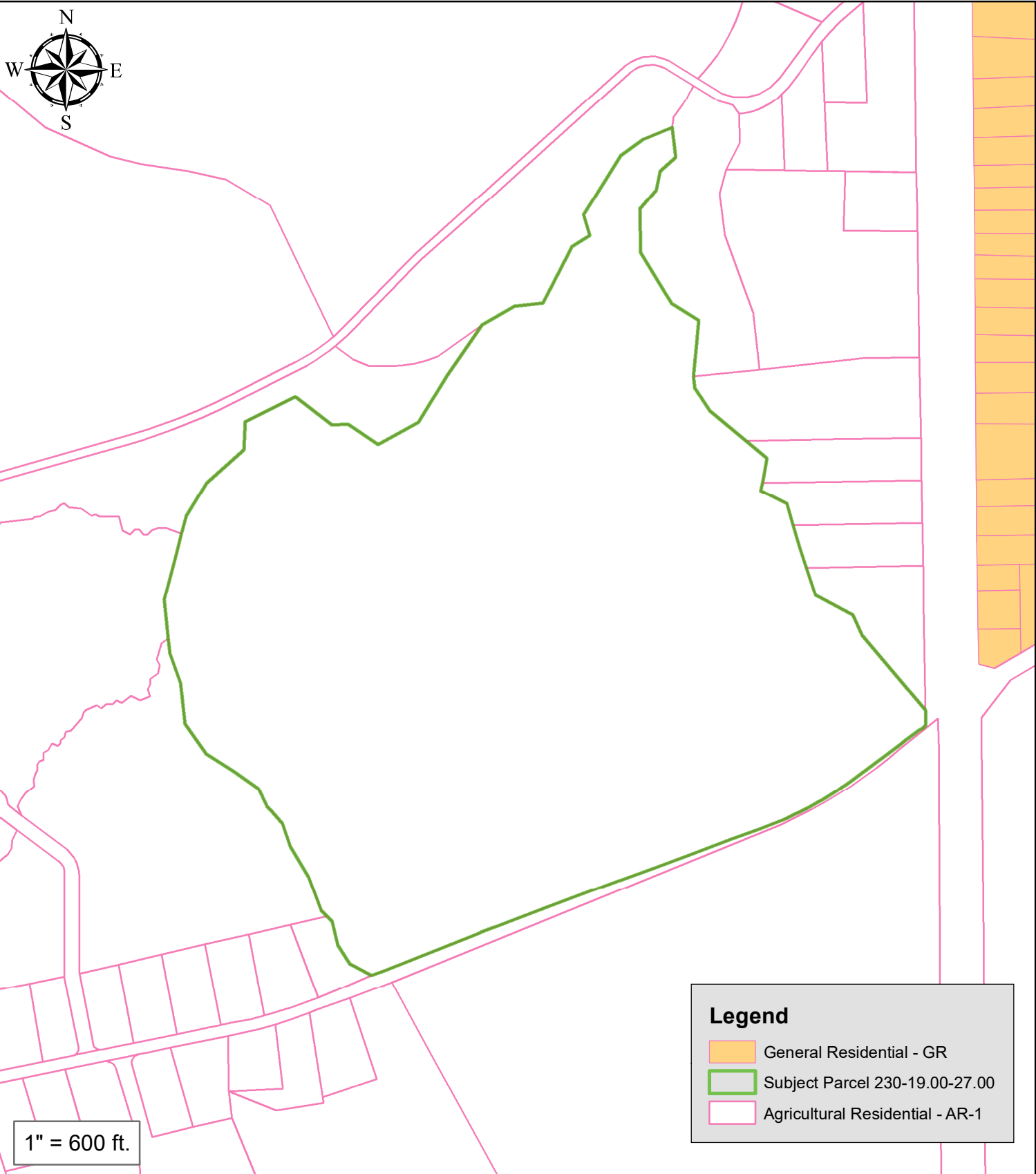


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MACDONALD**

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PRELIMINARY SUBDIVISION PLAN
FOR
DEER CREEK
2045 FUTURE LAND USE EXHIBIT
6/30/22



1" = 600 ft.

Legend

- General Residential - GR
- Subject Parcel 230-19.00-27.00
- Agricultural Residential - AR-1

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 MACDONALD

PRELIMINARY SUBDIVISION PLAN
 FOR
DEER CREEK
 SUSSEX COUNTY ZONING EXHIBIT
 6/30/22



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MACDONALD**

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PRELIMINARY SUBDIVISION PLAN
FOR

DEER CREEK

1997 AERIAL

6/30/22



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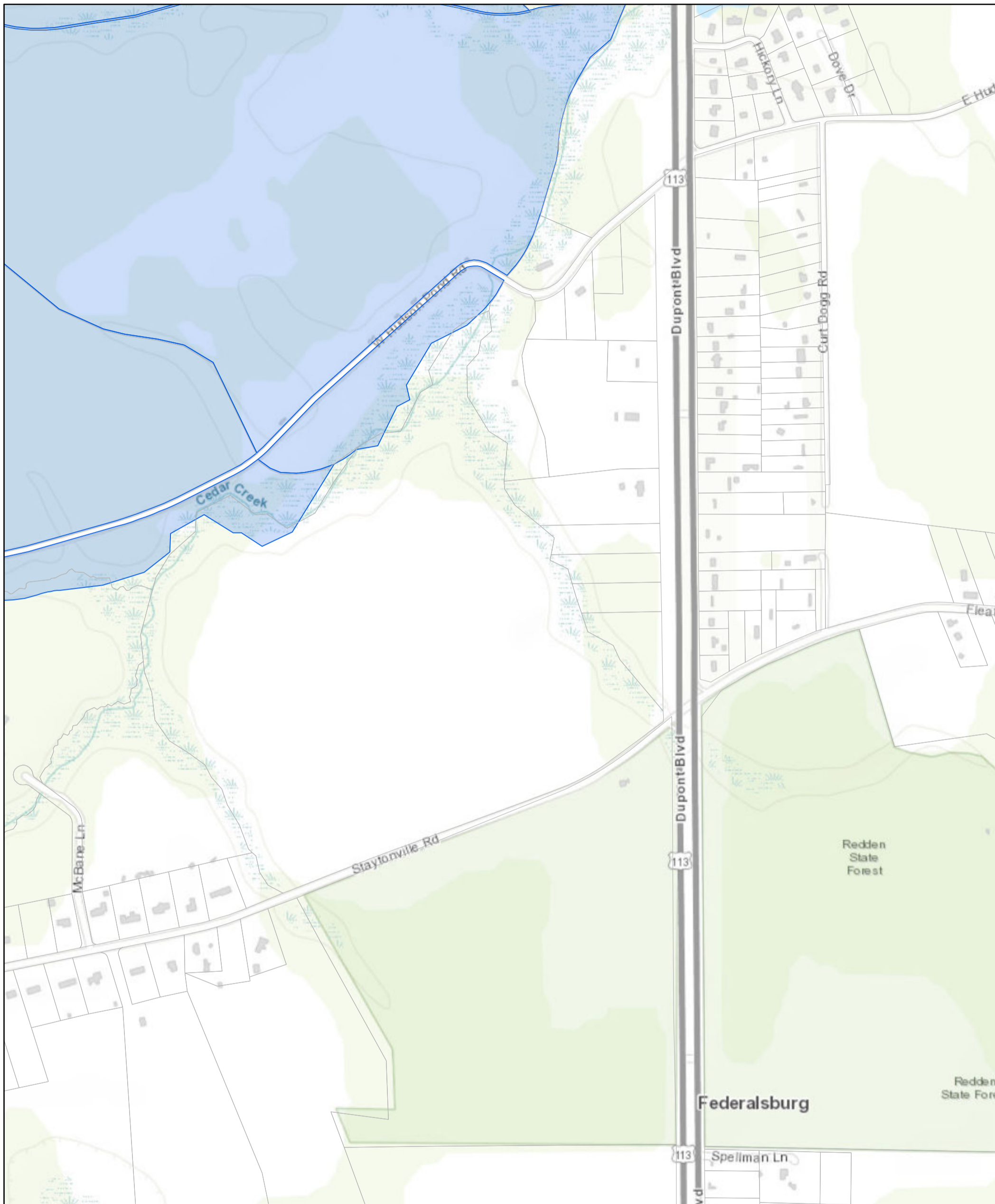
PRELIMINARY SUBDIVISION PLAN
FOR

DEER CREEK




2017 AERIAL

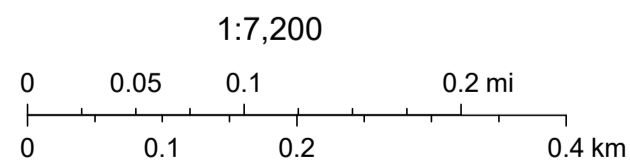
6/30/22

Delaware Agricultural Land Preservation & Forest Conservation Easements

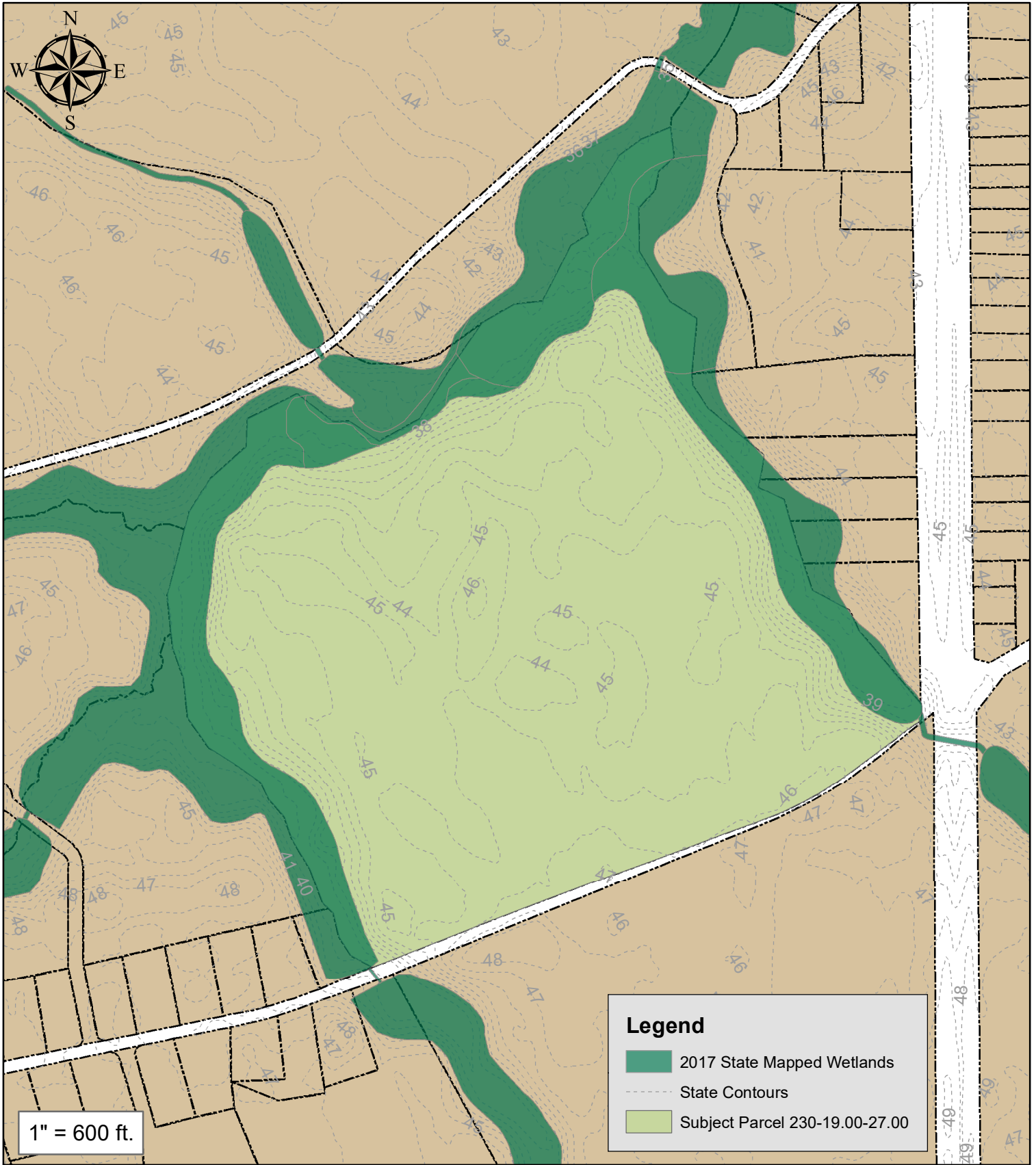


01/07/2022, 12:29:57

-  State Parcels
-  Aglands Preservation Districts
-  Ag Easement

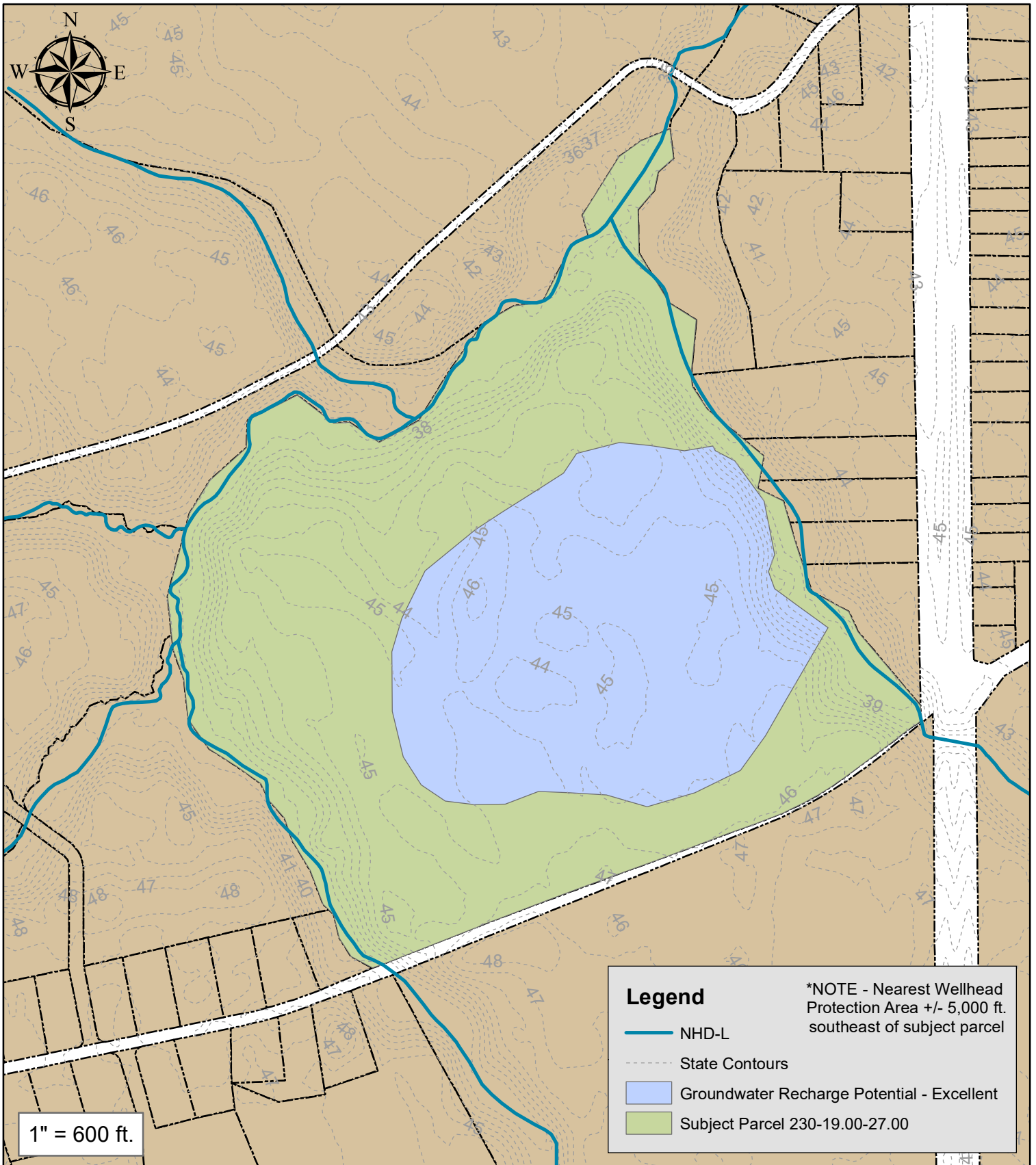


County of Sussex, DE, Delaware FirstMap, VITA, Esri, HERE, Garmin, GeoTechnologies, Inc., Intermap, USGS, METI/NASA, EPA, USDA



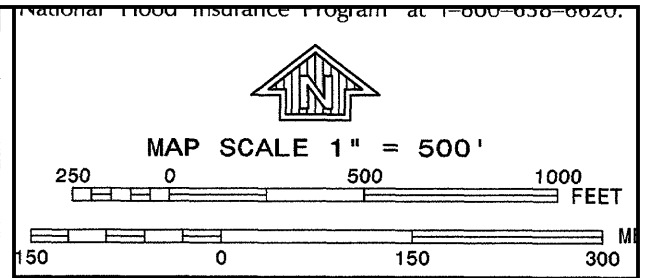
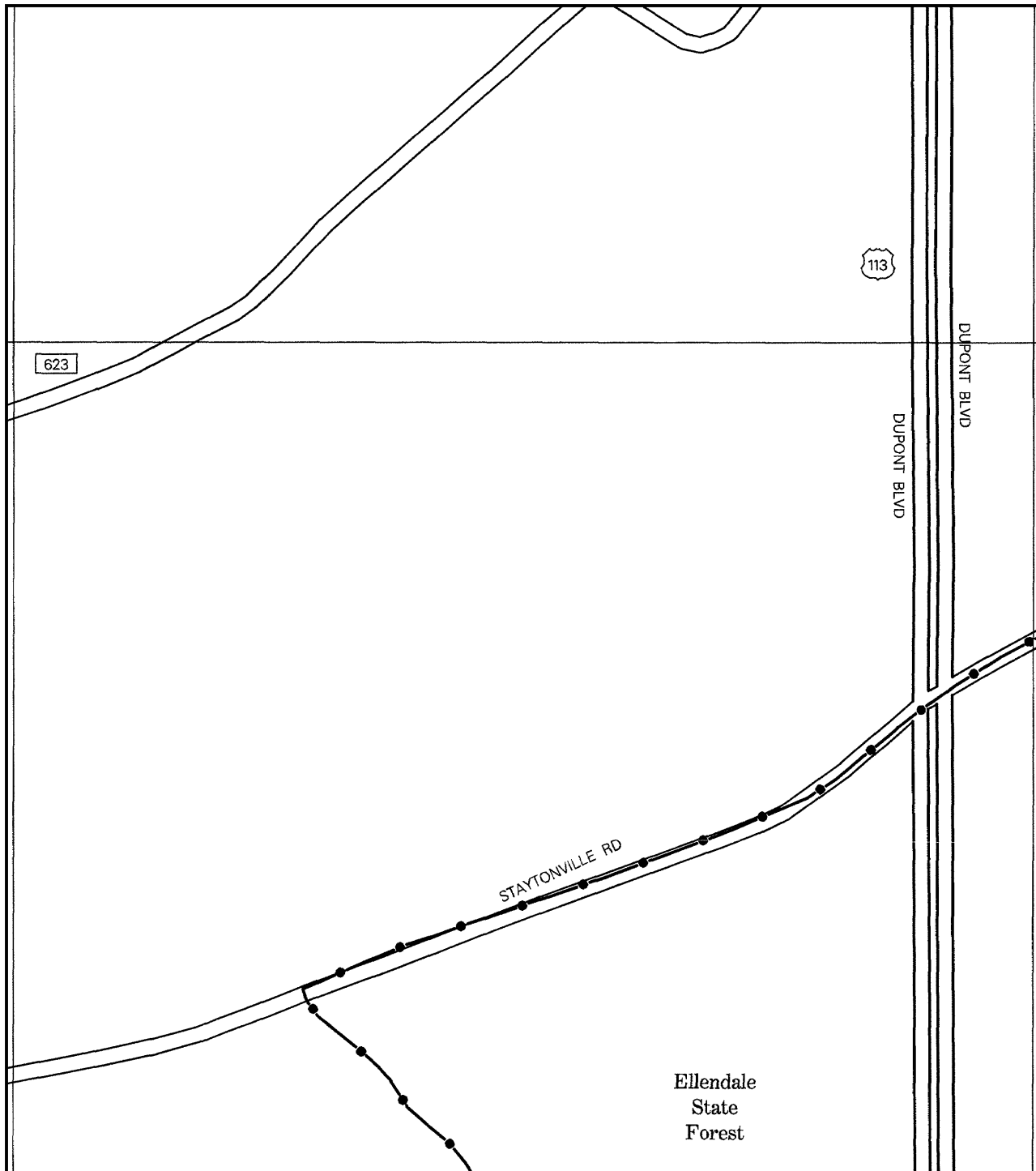
PRELIMINARY SUBDIVISION PLAN
 FOR
DEER CREEK
 WETLAND EXHIBIT
 6/30/22

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 MACDONALD



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MACDONALD

PRELIMINARY SUBDIVISION PLAN
 FOR
DEER CREEK
 SOURCE WATER PROTECTION EXHIBIT
 6/30/22



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0129J

FIRM
FLOOD INSURANCE RATE MAP
 SUSSEX COUNTY,
 DELAWARE
 AND INCORPORATED AREAS

PANEL 129 OF 660

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SUSSEX COUNTY	10029	0129	J

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
10005C0129J

MAP REVISED
JANUARY 6, 2005

Federal Emergency Management Agency

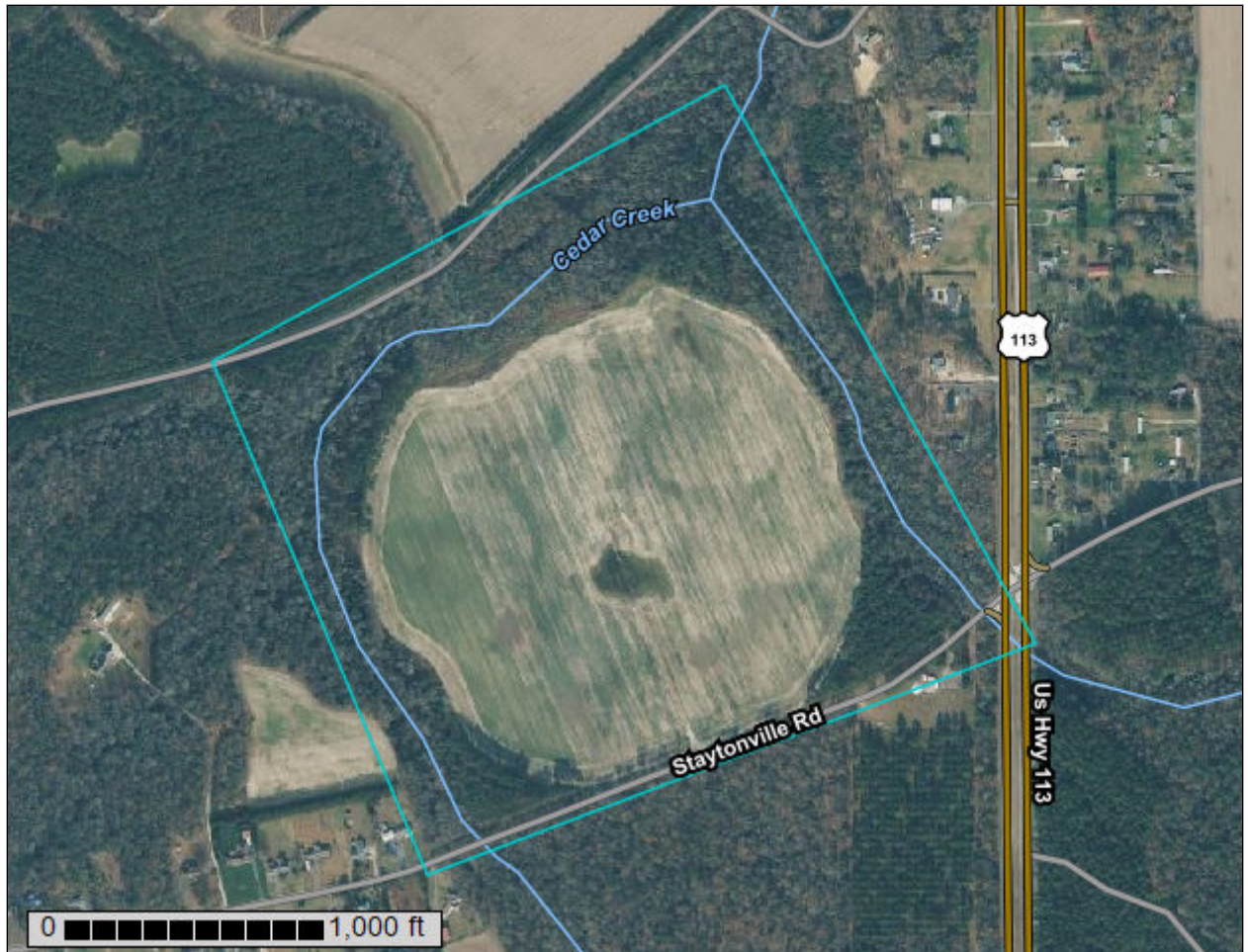
Ellendale
 State
 Forest

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at <https://msc.fema.gov>.

TAB “6”

Custom Soil Resource Report for **Sussex County, Delaware**

Deer Creek



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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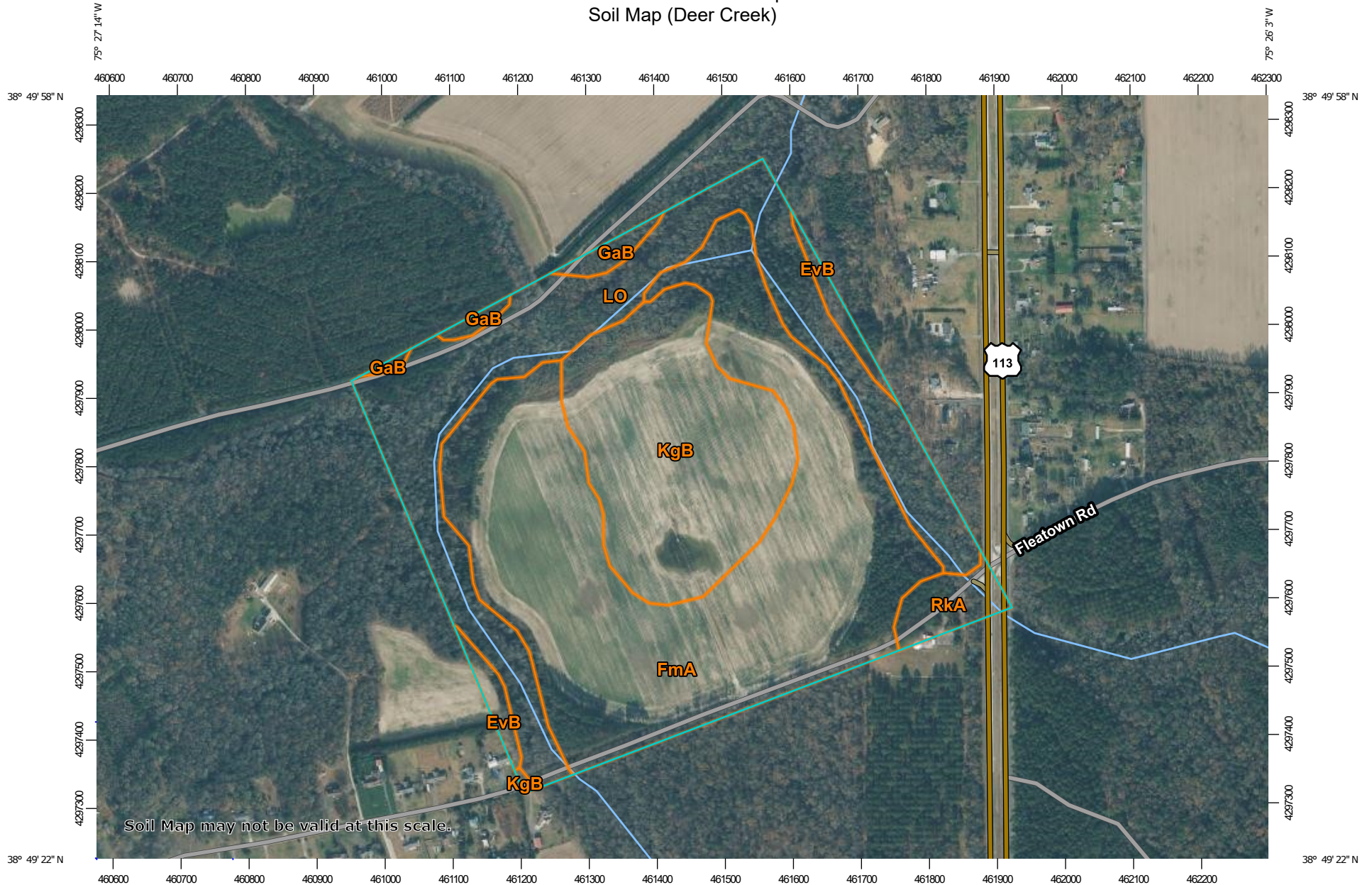
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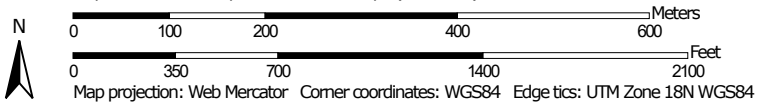
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map (Deer Creek)




Map Scale: 1:7,870 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)




















Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
 Survey Area Data: Version 22, Aug 26, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Deer Creek)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EvB	Evesboro loamy sand, 0 to 5 percent slopes	2.6	2.0%
FmA	Fort Mott loamy sand, 0 to 2 percent slopes	60.0	47.5%
GaB	Galestown loamy sand, 0 to 5 percent slopes	1.9	1.5%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	26.4	20.9%
LO	Longmarsh and Indiantown soils, frequently flooded	32.3	25.6%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	3.1	2.4%
Totals for Area of Interest		126.3	100.0%

Map Unit Descriptions (Deer Creek)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

Custom Soil Resource Report

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Sussex County, Delaware

EvB—Evesboro loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1qtg9
Elevation: 0 to 200 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Evesboro and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Evesboro

Setting

Landform: Flats, knolls, fluviomarine terraces, dunes
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Sandy eolian deposits and/or fluviomarine sediments

Typical profile

Ap - 0 to 4 inches: loamy sand
E - 4 to 16 inches: loamy sand
Bw - 16 to 39 inches: loamy sand
C - 39 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Runclint

Percent of map unit: 10 percent
Landform: Flats, fluviomarine terraces, dunes, knolls
Landform position (three-dimensional): Rise
Down-slope shape: Linear, convex

Custom Soil Resource Report

Across-slope shape: Linear, convex
Hydric soil rating: No

Cedartown

Percent of map unit: 5 percent
Landform: Knolls, dunes, flats
Landform position (three-dimensional): Rise, tal
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Fort mott

Percent of map unit: 5 percent
Landform: Knolls, fluviomarine terraces, flats
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Galloway

Percent of map unit: 5 percent
Landform: Depressions, flats
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

FmA—Fort Mott loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qtgk
Elevation: 10 to 120 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Fort mott and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fort Mott

Setting

Landform: Flats, fluviomarine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits over fluviomarine sediments fluviomarine deposits

Typical profile

Ap - 0 to 10 inches: loamy sand
E - 10 to 24 inches: loamy sand
Bt - 24 to 36 inches: sandy loam
C - 36 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.28 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Ingleside

Percent of map unit: 5 percent
Landform: Flats, depressions, fluviomarine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Downer

Percent of map unit: 5 percent
Landform: Flats, fluviomarine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rosedale

Percent of map unit: 5 percent
Landform: Flats
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Runclint

Percent of map unit: 5 percent
Landform: Flats, fluviomarine terraces
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

GaB—Galestown loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1qtgq

Elevation: 10 to 120 feet

Mean annual precipitation: 42 to 48 inches

Mean annual air temperature: 52 to 58 degrees F

Frost-free period: 180 to 220 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Galestown and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Galestown

Setting

Landform: Knolls, fluvio-marine terraces, flats, dunes

Down-slope shape: Convex, linear

Across-slope shape: Convex, linear

Parent material: Sandy eolian deposits and/or sandy fluvio-marine deposits

Typical profile

Ap - 0 to 11 inches: loamy sand

Bt - 11 to 40 inches: loamy sand

BC - 40 to 51 inches: sand

C - 51 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.90 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): 2s

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Ingleside

Percent of map unit: 5 percent
Landform: Knolls, flats
Hydric soil rating: No

Runclint

Percent of map unit: 5 percent
Landform: Dunes, knolls, flats
Hydric soil rating: No

Fort mott

Percent of map unit: 5 percent
Landform: Flats, knolls
Hydric soil rating: No

Cedartown

Percent of map unit: 5 percent
Landform: Dunes, knolls, flats
Hydric soil rating: No

KgB—Klej-Galloway complex, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1qthr
Elevation: 0 to 200 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Klej and similar soils: 45 percent
Galloway and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Klej

Setting

Landform: Flats, depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy eolian deposits and/or fluviomarine sediments

Typical profile

A - 0 to 7 inches: loamy sand
E - 7 to 14 inches: loamy sand
Bw - 14 to 20 inches: loamy sand
C - 20 to 62 inches: loamy sand

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Cg - 62 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (0.57 to 19.98 in/hr)

Depth to water table: About 10 to 20 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): 3w

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: A/D

Hydric soil rating: No

Description of Galloway

Setting

Landform: Flats, depressions

Down-slope shape: Linear, concave

Across-slope shape: Linear, concave

Parent material: Sandy eolian deposits and/or fluviomarine sediments

Typical profile

Ap - 0 to 12 inches: loamy sand

Bw - 12 to 15 inches: loamy sand

C1 - 15 to 30 inches: loamy sand

C2 - 30 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.38 to 99.90 in/hr)

Depth to water table: About 20 to 40 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Runclint

Percent of map unit: 5 percent

Landform: Flats, fluviomarine terraces

Down-slope shape: Linear

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Across-slope shape: Linear
Hydric soil rating: No

Hurlock, drained

Percent of map unit: 5 percent
Landform: Swales, depressions, flats
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Berryland, drained

Percent of map unit: 5 percent
Landform: Flats, swales, depressions
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Askecksy, drained

Percent of map unit: 5 percent
Landform: Flats, depressions, swales
Landform position (three-dimensional): Talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

LO—Longmarsh and Indiantown soils, frequently flooded

Map Unit Setting

National map unit symbol: 1qtj1
Elevation: 0 to 120 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Longmarsh and similar soils: 43 percent
Indiantown and similar soils: 37 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Longmarsh

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

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Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 19 inches: mucky loam
Cg1 - 19 to 34 inches: sandy loam
Cg2 - 34 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)
Depth to water table: About 0 to 10 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Indiantown

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 25 inches: mucky silt loam
Cg - 25 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)
Depth to water table: About 0 to 10 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Zekiah

Percent of map unit: 10 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Klej

Percent of map unit: 5 percent
Landform: Flats
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Manahawkin

Percent of map unit: 5 percent
Landform: Swamps, flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

RkA—Rockawalkin loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qtjv
Elevation: 10 to 100 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Rockawalkin and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rockawalkin

Setting

Landform: Flats, depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy eolian deposits over fluviomarine sediments

Typical profile

Ap - 0 to 10 inches: loamy sand

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E - 10 to 27 inches: loamy sand
Bt - 27 to 43 inches: sandy loam
BC - 43 to 70 inches: loamy sand
C - 70 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)
Depth to water table: About 20 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Pepperbox

Percent of map unit: 10 percent
Landform: Swales, depressions, flats
Hydric soil rating: No

Klej

Percent of map unit: 5 percent
Landform: Swales, depressions, flats
Hydric soil rating: No

Runclint

Percent of map unit: 5 percent
Landform: Dunes, knolls, flats
Landform position (three-dimensional): Rise
Hydric soil rating: No

Woodstown

Percent of map unit: 5 percent
Landform: Flats, depressions, swales
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Building Site Development

Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

Dwellings With Basements (Deer Creek)

Dwellings are single-family houses of three stories or less. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification of the soil. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the

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specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

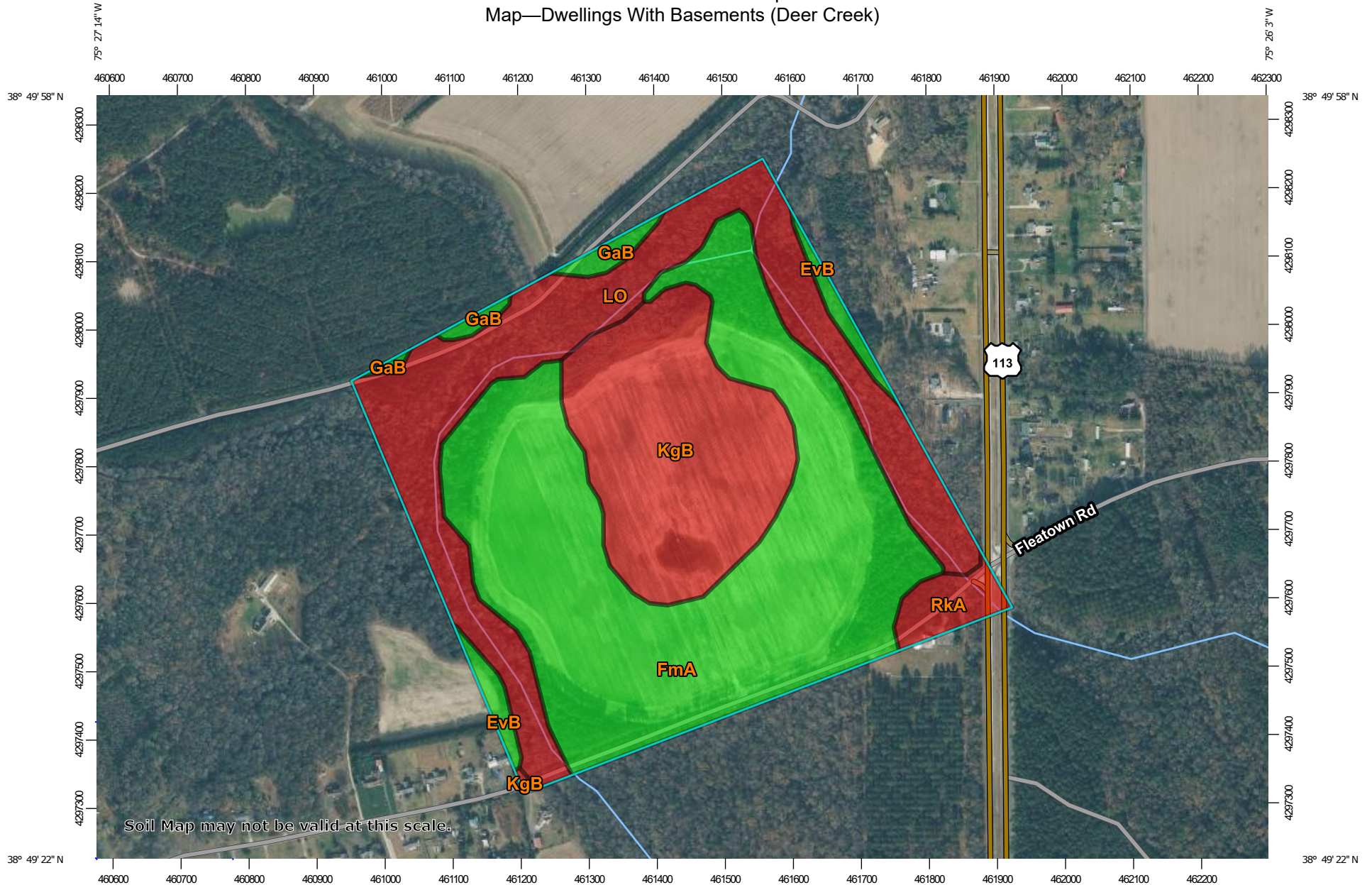
Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

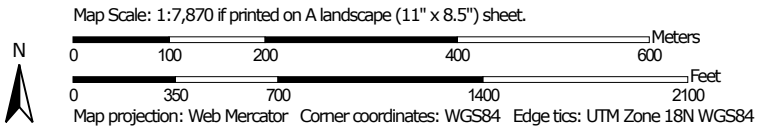
Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

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
















Map—Dwellings With Basements (Deer Creek)



Soil Map may not be valid at this scale.



MAP LEGEND

- Area of Interest (AOI)**
 -  Area of Interest (AOI)
- Background**
 -  Aerial Photography
- Soils**
 - Soil Rating Polygons**
 -  Very limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
 - Soil Rating Lines**
 -  Very limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
 - Soil Rating Points**
 -  Very limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
- Water Features**
 -  Streams and Canals
- Transportation**
 -  Rails
 -  Interstate Highways
 -  US Routes
 -  Major Roads
 -  Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
 Survey Area Data: Version 22, Aug 26, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Tables—Dwellings With Basements (Deer Creek)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
EvB	Evesboro loamy sand, 0 to 5 percent slopes	Not limited	Evesboro (75%)		2.6	2.0%
			Fort Mott (5%)			
FmA	Fort Mott loamy sand, 0 to 2 percent slopes	Not limited	Fort Mott (80%)		60.0	47.5%
			Downer (5%)			
GaB	Galestown loamy sand, 0 to 5 percent slopes	Not limited	Galestown (80%)		1.9	1.5%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	Very limited	Klej (45%)	Depth to saturated zone (1.00)	26.4	20.9%
			Galloway (35%)	Depth to saturated zone (1.00)		
			Hurlock, drained (5%)	Depth to saturated zone (1.00)		
			Berryland, drained (5%)	Depth to saturated zone (1.00)		
			Askecksy, drained (5%)	Depth to saturated zone (1.00)		
LO	Longmarsh and Indiantown soils, frequently flooded	Very limited	Longmarsh (43%)	Ponding (1.00)	32.3	25.6%
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
			Indiantown (37%)	Ponding (1.00)		
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
			Zekiah (10%)	Ponding (1.00)		
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
			Klej (5%)	Depth to saturated zone (1.00)		
			Manahawkin (5%)	Ponding (1.00)		
				Subsidence (1.00)		

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	Very limited	Rockawalkin (75%)	Depth to saturated zone (1.00)	3.1	2.4%
Totals for Area of Interest					126.3	100.0%

Rating	Acres in AOI	Percent of AOI
Not limited	64.5	51.0%
Very limited	61.9	49.0%
Totals for Area of Interest	126.3	100.0%

Rating Options—Dwellings With Basements (Deer Creek)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Dwellings Without Basements (Deer Creek)

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification of the soil. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately

Custom Soil Resource Report

favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

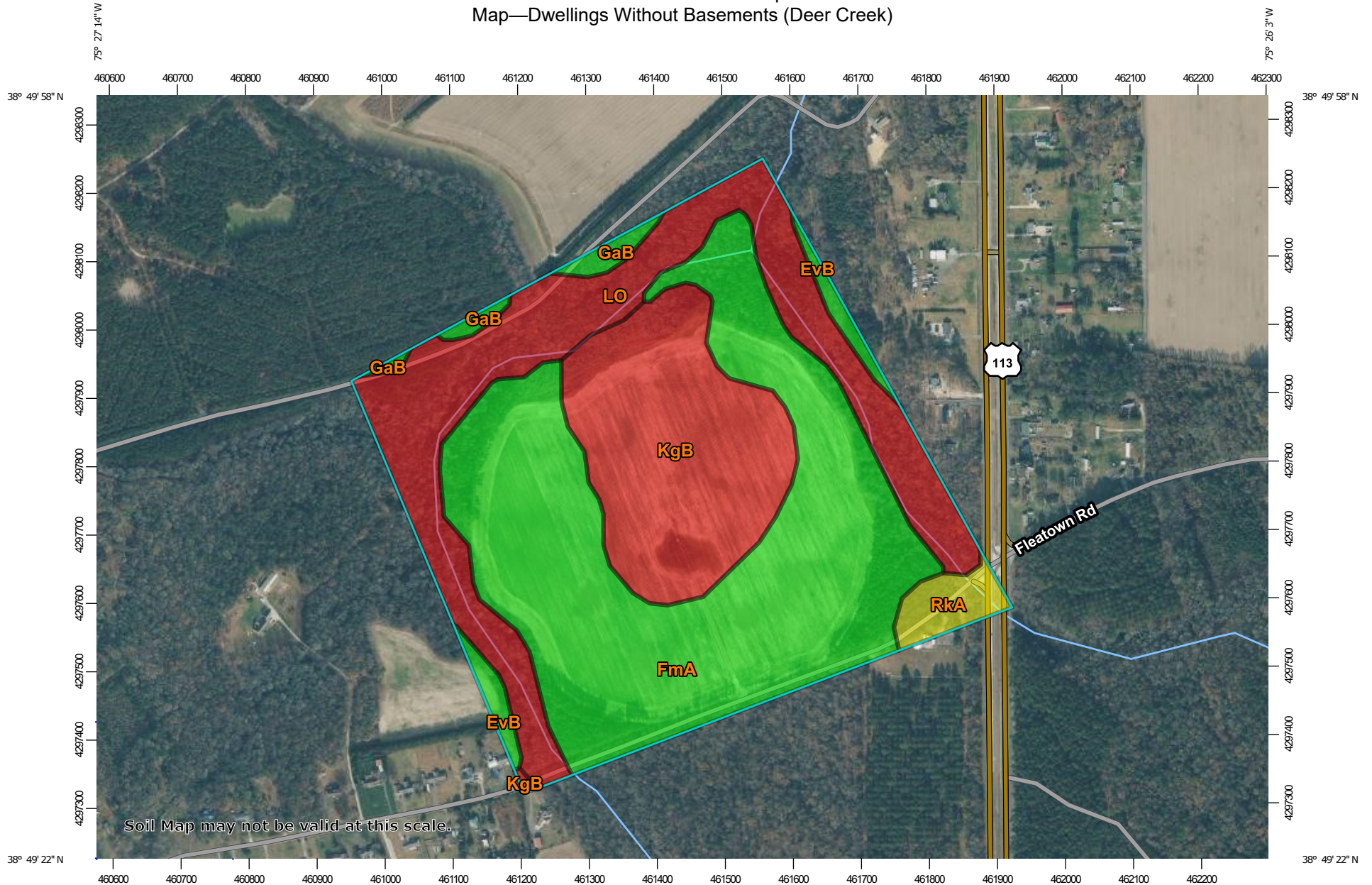
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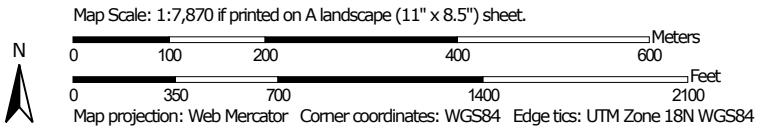
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
















Map—Dwellings Without Basements (Deer Creek)



Soil Map may not be valid at this scale.



MAP LEGEND

- Area of Interest (AOI)**
 -  Area of Interest (AOI)
- Background**
 -  Aerial Photography
- Soils**
 - Soil Rating Polygons**
 -  Very limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
 - Soil Rating Lines**
 -  Very limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
 - Soil Rating Points**
 -  Very limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
- Water Features**
 -  Streams and Canals
- Transportation**
 -  Rails
 -  Interstate Highways
 -  US Routes
 -  Major Roads
 -  Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Sussex County, Delaware
 Survey Area Data: Version 22, Aug 26, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

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Custom Soil Resource Report

Tables—Dwellings Without Basements (Deer Creek)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
EvB	Evesboro loamy sand, 0 to 5 percent slopes	Not limited	Evesboro (75%)		2.6	2.0%
			Runclint (10%)			
			Cedartown (5%)			
			Fort Mott (5%)			
FmA	Fort Mott loamy sand, 0 to 2 percent slopes	Not limited	Fort Mott (80%)		60.0	47.5%
			Ingleside (5%)			
			Downer (5%)			
			Rosedale (5%)			
			Runclint (5%)			
GaB	Galestown loamy sand, 0 to 5 percent slopes	Not limited	Galestown (80%)		1.9	1.5%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	Very limited	Klej (45%)	Depth to saturated zone (1.00)	26.4	20.9%
			Hurlock, drained (5%)	Depth to saturated zone (1.00)		
			Berryland, drained (5%)	Depth to saturated zone (1.00)		
			Askecksy, drained (5%)	Depth to saturated zone (1.00)		
LO	Longmarsh and Indiantown soils, frequently flooded	Very limited	Longmarsh (43%)	Ponding (1.00)	32.3	25.6%
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
			Indiantown (37%)	Ponding (1.00)		
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
			Zekiah (10%)	Organic matter content (1.00)		
				Ponding (1.00)		
				Flooding (1.00)		
				Depth to saturated zone (1.00)		

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Klej (5%)	Depth to saturated zone (1.00)		
			Manahawkin (5%)	Ponding (1.00)		
				Subsidence (1.00)		
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
				Organic matter content (1.00)		
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	Somewhat limited	Rockawalkin (75%)	Depth to saturated zone (0.39)	3.1	2.4%
Totals for Area of Interest					126.3	100.0%

Rating	Acres in AOI	Percent of AOI
Not limited	64.5	51.0%
Very limited	58.8	46.5%
Somewhat limited	3.1	2.4%
Totals for Area of Interest	126.3	100.0%

Rating Options—Dwellings Without Basements (Deer Creek)

Aggregation Method: Dominant Condition
Component Percent Cutoff: None Specified
Tie-break Rule: Higher

Gravity Full Depth Septic System (DE) (Deer Creek)

Gravity Full Depth Gravity Septic System (DE)

This rule is designed for local (State) interpretations for wastewater disposal systems in Delaware. It is based on the regulations found in "The Regulations Governing the Design, Installation, and Operation of On-Site Wastewater Treatment and Disposal Systems," State of Delaware, Department of Natural Resources and Environmental Control, Document No. 40-08-05/04/07/01, adopted January 1985 and amended April 2005.

The regulations can be found at the following Web site:

Custom Soil Resource Report

<http://www.dnrec.delaware.gov/wr/INFORMATION/GWDINFO/Pages/Regulations%20Governing%20On-Site%20Wastewater%20Treatment%20And%20Disposal%20Systems.aspx>

Summary:

This soil interpretation evaluates a soil's limitation(s) for a "Gravity Full Depth Gravity Septic System (DE)." A gravity full depth gravity septic system is a gravity-fed onsite wastewater treatment and disposal system. This system maintains 36 inches of suitable soil above the limiting zone. The trench or bed is installed 24 inches into the natural soil. The ratings are for soils in their natural condition. Present land use is not considered in the ratings.

The degree of limitation is expressed as a numeric index between 0 (nonlimiting condition) and 1.0 (most limiting condition). If a soil's property within 150 centimeters (60 inches) of the soil surface has a degree of limitation greater than zero, then that soil property is limiting and the soil restrictive feature is identified. The overall interpretive rating assigned to each interpretive criterion of the interpretive rule is the one with the highest degree of limitation. Lesser restrictive soil features are those that have a degree of limitation less than the maximum and are identified to provide the user with additional information about the soil's capability to support the interpretation. These lesser restrictive features could be important factors where the major restrictive features are overcome through practice, design, and/or application modifications.

Soils are assigned interpretive rating classes on the basis of their degree of limitation. These classes are "not limited" (rating index is 0), "moderately limited" (rating index is between 0 and 0.75), and "very limited" (rating index is 0.75 to 1.0).

Description:

The soil properties and qualities that are important in the design and management of onsite wastewater treatment and disposal systems are soil depth, permeability, depth to seasonal high water table, slope, and flooding.

Scope:

Farm and ranch homesteads, outbuildings, and recreational facilities require a means to safely dispose of effluent. Interpretations for onsite wastewater treatment and disposal are a tool for guiding the user in site selection for safe disposal of household effluent. The interpretations are applicable to both heavily populated and sparsely populated areas. While some general observations may be made, onsite evaluation is required before the final site is selected. Improper site selection, design, or installation may cause contamination of ground water, seepage to the soil surface, and contamination of stream systems from surface drainage or flood water. Potential contamination may be reduced or eliminated by installing systems designed to overcome or reduce the effects of the limiting soil property.

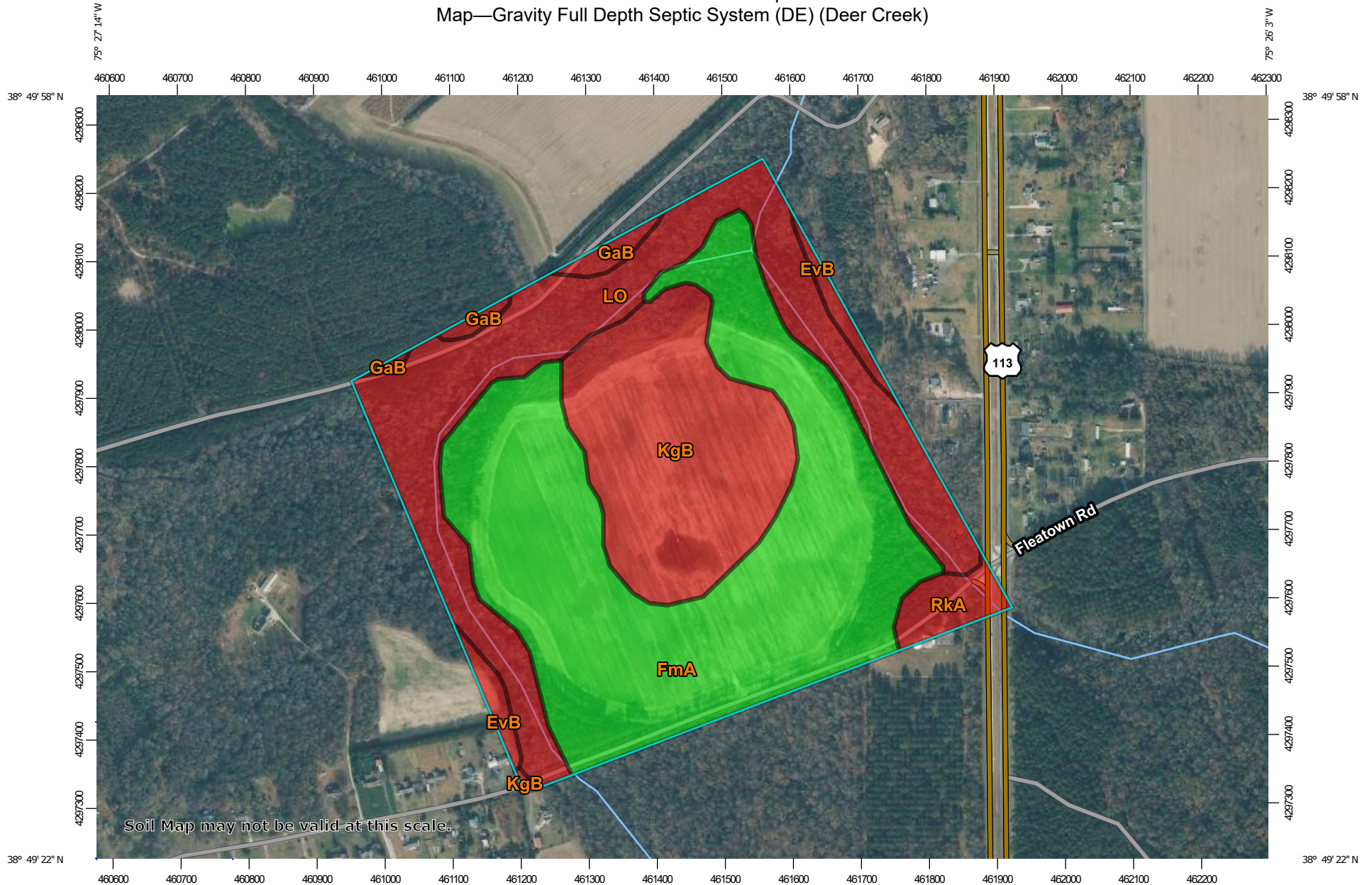
References:

1/ U.S. Department of Health, Education, and Welfare, Public Health Service. 1969. Manual of septic tanks. PHS Publication No. 526, p. 8.

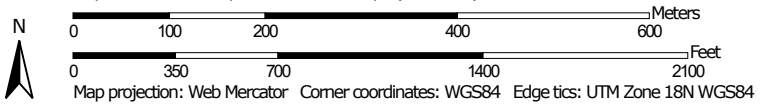
Custom Soil Resource Report

2/ Bouma, J. 1974. New concepts in soil survey interpretations for onsite disposal of septic tank effluent.

Custom Soil Resource Report
 Map—Gravity Full Depth Septic System (DE) (Deer Creek)




Map Scale: 1:7,870 if printed on A landscape (11" x 8.5") sheet.




MAP LEGEND

Area of Interest (AOI)





 Area of Interest (AOI)

Background





 Aerial Photography

Soils





Soil Rating Polygons

-  Very limited
-  Moderately limited
-  Not limited
-  Not rated or not available


Soil Rating Lines

-  Very limited
-  Moderately limited
-  Not limited
-  Not rated or not available






Soil Rating Points

-  Very limited
-  Moderately limited
-  Not limited
-  Not rated or not available

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
 Survey Area Data: Version 22, Aug 26, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Tables—Gravity Full Depth Septic System (DE) (Deer Creek)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
EvB	Evesboro loamy sand, 0 to 5 percent slopes	Very limited	Evesboro (75%)	Fast percolation <60 inches (1.00)	2.6	2.0%
			Runclint (10%)	Seasonal high water table (1.00)		
				Fast percolation <60 inches (1.00)		
			Cedartown (5%)	Seasonal high water table (1.00)		
			Galloway (5%)	Seasonal high water table (1.00)		
Fast percolation <60 inches (1.00)						
FmA	Fort Mott loamy sand, 0 to 2 percent slopes	Not limited	Fort Mott (80%)		60.0	47.5%
			Downer (5%)			
GaB	Galestown loamy sand, 0 to 5 percent slopes	Very limited	Galestown (80%)	Fast percolation <60 inches (1.00)	1.9	1.5%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	Very limited	Klej (45%)	Seasonal high water table (1.00)	26.4	20.9%
				Fast percolation <60 inches (1.00)		
			Galloway (35%)	Seasonal high water table (1.00)		
				Fast percolation <60 inches (1.00)		
			Runclint (5%)	Seasonal high water table (1.00)		
				Fast percolation <60 inches (1.00)		
			Hurlock, drained (5%)	Seasonal high water table (1.00)		
Slow percolation <60 inches (1.00)						

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Berryland, drained (5%)	Seasonal high water table (1.00) Fast percolation <60 inches (1.00)		
			Askecksy, drained (5%)	Seasonal high water table (1.00) Fast percolation <60 inches (1.00)		
LO	Longmarsh and Indiantown soils, frequently flooded	Very limited	Longmarsh (43%)	Seasonal high water table (1.00) Flooding (1.00)	32.3	25.6%
			Indiantown (37%)	Seasonal high water table (1.00) Flooding (1.00)		
			Zekiah (10%)	Seasonal high water table (1.00) Flooding (1.00)		
			Klej (5%)	Seasonal high water table (1.00)		
			Manahawkin (5%)	Seasonal high water table (1.00) Flooding (1.00)		
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	Very limited	Rockawalkin (75%)	Seasonal high water table (1.00)	3.1	2.4%
Totals for Area of Interest					126.3	100.0%

Rating	Acres in AOI	Percent of AOI
Very limited	66.3	52.5%
Not limited	60.0	47.5%
Totals for Area of Interest	126.3	100.0%

Rating Options—Gravity Full Depth Septic System (DE) (Deer Creek)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Lawns, Landscaping, and Golf Fairways (Deer Creek)

This interpretation rates soils for their use in establishing and maintaining turf for lawns and golf fairways and ornamental trees and shrubs for residential or commercial landscaping. Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required.

The ratings are based on the use of soil material at the site, which may have been altered by some land smoothing. Irrigation may or may not be needed and is not a criterion in rating. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. Soils that are subject to flooding are limited by the duration and intensity of flooding and the season when flooding occurs. In planning for lawns, landscaping, or golf fairways, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer

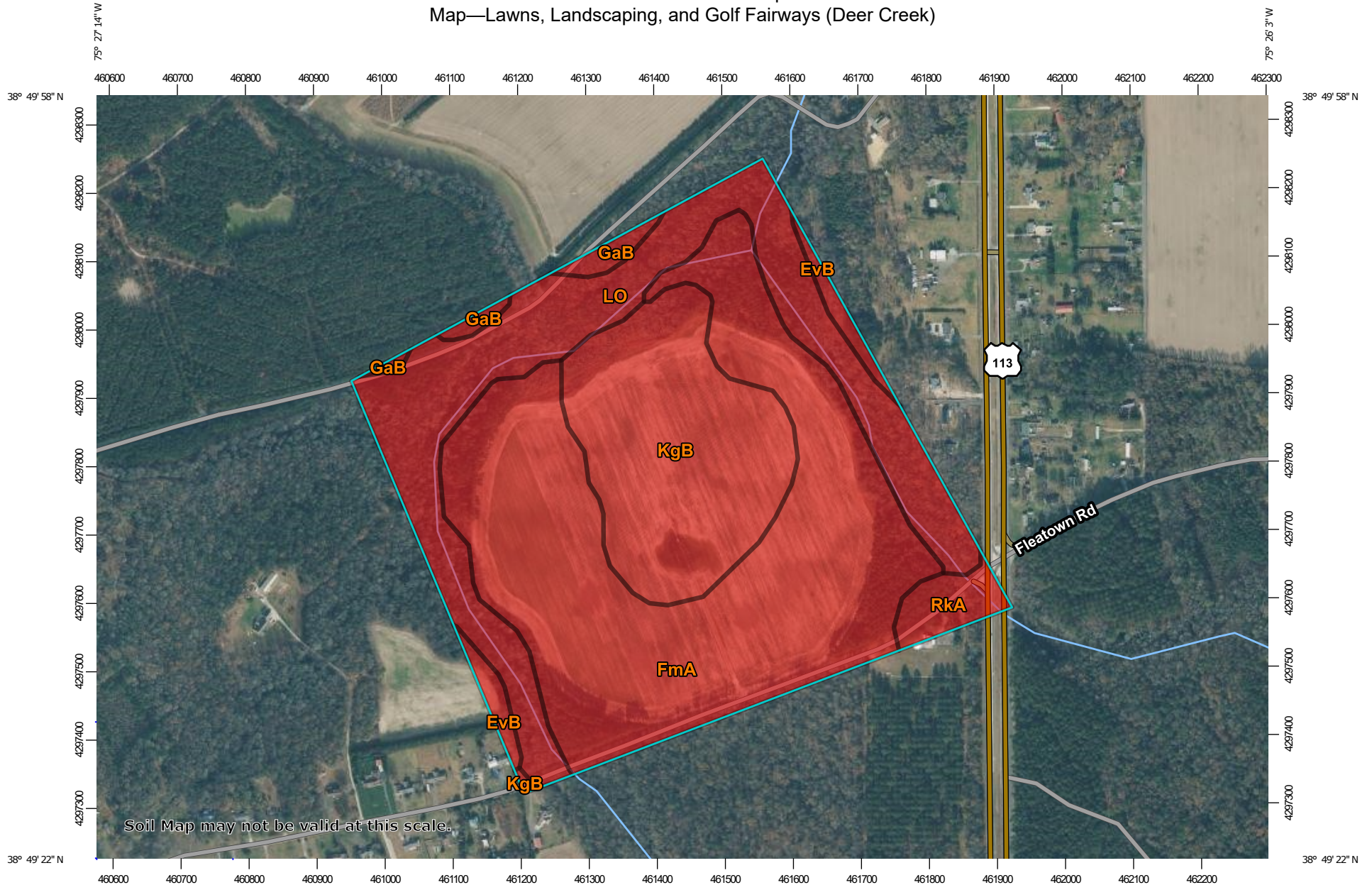
Custom Soil Resource Report

are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

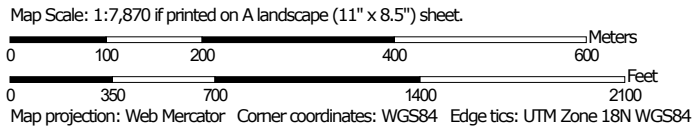
Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report

Map—Lawns, Landscaping, and Golf Fairways (Deer Creek)

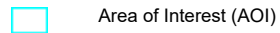


Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)



Area of Interest (AOI)

Background



Aerial Photography

Soils

Soil Rating Polygons



Very limited



Somewhat limited



Not limited



Not rated or not available

Soil Rating Lines



Very limited



Somewhat limited



Not limited



Not rated or not available

Soil Rating Points



Very limited



Somewhat limited



Not limited



Not rated or not available

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
 Survey Area Data: Version 22, Aug 26, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Tables—Lawns, Landscaping, and Golf Fairways (Deer Creek)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
EvB	Evesboro loamy sand, 0 to 5 percent slopes	Very limited	Evesboro (75%)	Low exchange capacity (1.00)	2.6	2.0%
				Droughty (0.60)		
				Aluminum saturation (0.16)		
			Runclint (10%)	Low exchange capacity (1.00)		
				Droughty (0.90)		
				Aluminum saturation (0.29)		
			Cedartown (5%)	Low exchange capacity (1.00)		
				Droughty (0.68)		
				Aluminum saturation (0.15)		
			Fort Mott (5%)	Low exchange capacity (1.00)		
				Aluminum saturation (1.00)		
				Droughty (0.01)		
Galloway (5%)	Low exchange capacity (1.00)					
	Droughty (0.55)					
	Aluminum saturation (0.26)					
	Depth to saturated zone (0.19)					
FmA	Fort Mott loamy sand, 0 to 2 percent slopes	Very limited	Fort Mott (80%)	Low exchange capacity (1.00)	60.0	47.5%
				Aluminum saturation (1.00)		
				Droughty (0.01)		
			Ingleside (5%)	Low exchange capacity (1.00)		
				Aluminum saturation (1.00)		

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Dusty (0.00)		
			Downer (5%)	Low exchange capacity (1.00)		
				Aluminum saturation (0.37)		
			Rosedale (5%)	Low exchange capacity (1.00)		
				Aluminum saturation (1.00)		
				Droughty (0.01)		
			Runclint (5%)	Low exchange capacity (1.00)		
				Droughty (0.90)		
				Aluminum saturation (0.29)		
GaB	Galestown loamy sand, 0 to 5 percent slopes	Very limited	Galestown (80%)	Low exchange capacity (1.00)	1.9	1.5%
				Droughty (0.39)		
				Aluminum saturation (0.17)		
KgB	Klej-Galloway complex, 0 to 5 percent slopes	Very limited	Klej (45%)	Depth to saturated zone (1.00)	26.4	20.9%
				Low exchange capacity (1.00)		
				Droughty (0.50)		
			Galloway (35%)	Low exchange capacity (1.00)		
				Droughty (0.55)		
				Aluminum saturation (0.26)		
				Depth to saturated zone (0.19)		
			Runclint (5%)	Low exchange capacity (1.00)		
				Droughty (0.98)		
				Too sandy (0.50)		
				Aluminum saturation (0.21)		

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Berryland, drained (5%)	Depth to saturated zone (1.00)		
				Low exchange capacity (0.75)		
				Droughty (0.18)		
			Askecksy, drained (5%)	Low exchange capacity (1.00)		
				Droughty (1.00)		
				Depth to saturated zone (0.96)		
LO	Longmarsh and Indiantown soils, frequently flooded	Very limited	Longmarsh (43%)	Ponding (1.00)	32.3	25.6%
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
				Dusty (0.04)		
			Indiantown (37%)	Ponding (1.00)		
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
				Dusty (0.08)		
			Zekiah (10%)	Ponding (1.00)		
				Flooding (1.00)		
				Depth to saturated zone (1.00)		
				Low exchange capacity (1.00)		
				Dusty (0.07)		
			Klej (5%)	Depth to saturated zone (1.00)		
				Low exchange capacity (1.00)		
				Droughty (0.50)		
			Manahawkin (5%)	Ponding (1.00)		
				Flooding (1.00)		
				Organic matter content (1.00)		
				Depth to saturated zone (1.00)		
				Dusty (0.08)		

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	Very limited	Rockawalkin (75%)	Low exchange capacity (1.00)	3.1	2.4%
				Aluminum saturation (1.00)		
				Depth to saturated zone (0.19)		
				Droughty (0.18)		
Totals for Area of Interest					126.3	100.0%

Rating	Acres in AOI	Percent of AOI
Very limited	126.3	100.0%
Totals for Area of Interest	126.3	100.0%

Rating Options—Lawns, Landscaping, and Golf Fairways (Deer Creek)

Aggregation Method: Dominant Condition
Component Percent Cutoff: None Specified
Tie-break Rule: Higher

Local Roads and Streets (Deer Creek)

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate

Custom Soil Resource Report

maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

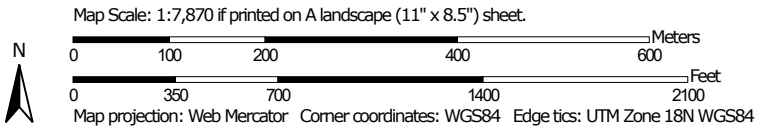
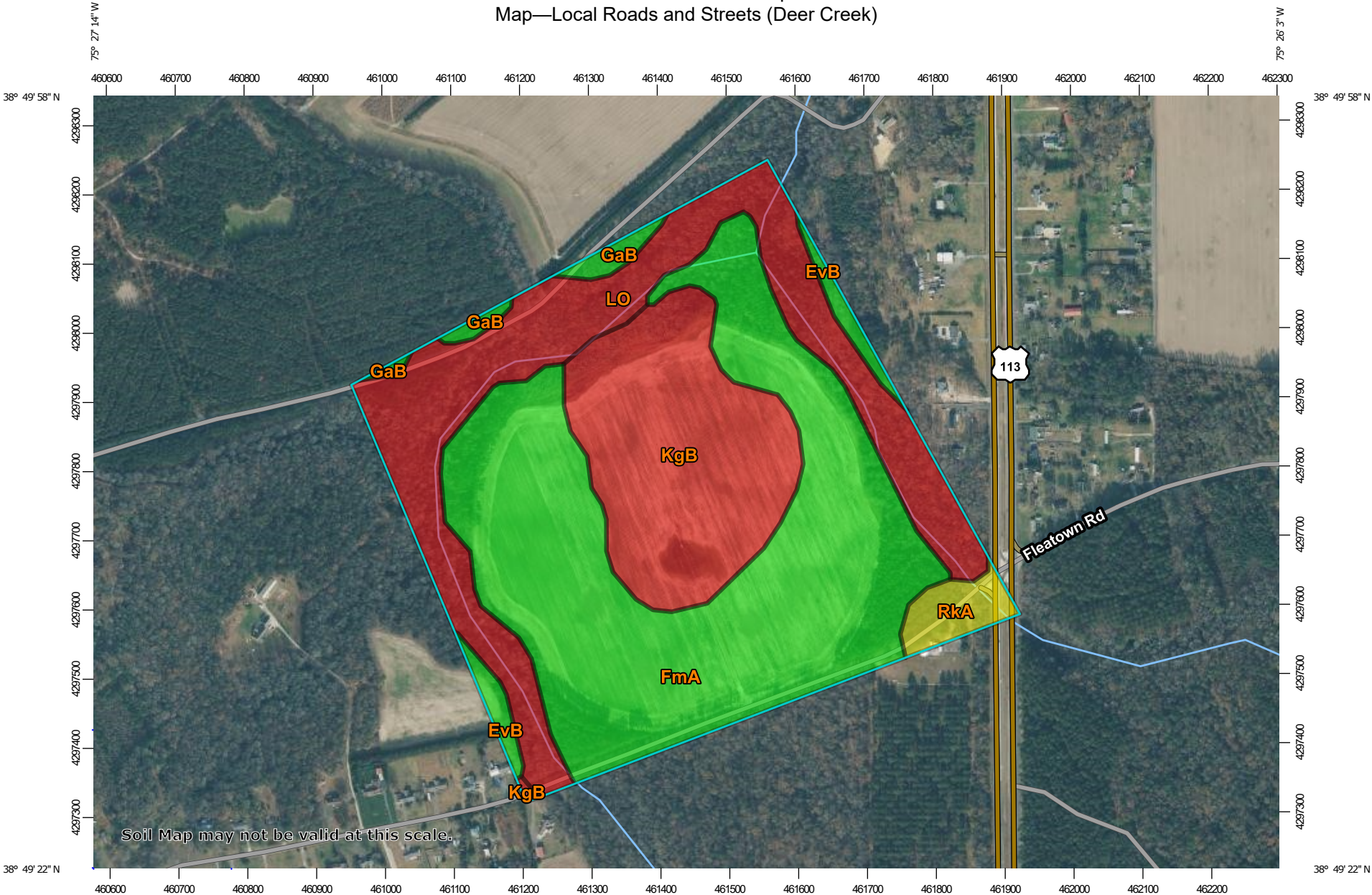
Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.





















Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report

Map—Local Roads and Streets (Deer Creek)



MAP LEGEND

- Area of Interest (AOI)**
 -  Area of Interest (AOI)
- Background**
 -  Aerial Photography
- Soils**
 - Soil Rating Polygons**
 -  Very limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
 - Soil Rating Lines**
 -  Very limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
 - Soil Rating Points**
 -  Very limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
- Water Features**
 -  Streams and Canals
- Transportation**
 -  Rails
 -  Interstate Highways
 -  US Routes
 -  Major Roads
 -  Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
 Survey Area Data: Version 22, Aug 26, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Tables—Local Roads and Streets (Deer Creek)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
EvB	Evesboro loamy sand, 0 to 5 percent slopes	Not limited	Evesboro (75%)		2.6	2.0%
			Runclint (10%)			
			Cedartown (5%)			
			Fort Mott (5%)			
FmA	Fort Mott loamy sand, 0 to 2 percent slopes	Not limited	Fort Mott (80%)		60.0	47.5%
			Ingleside (5%)			
			Downer (5%)			
			Rosedale (5%)			
			Runclint (5%)			
GaB	Galestown loamy sand, 0 to 5 percent slopes	Not limited	Galestown (80%)		1.9	1.5%
KgB	Klej-Galloway complex, 0 to 5 percent slopes	Very limited	Klej (45%)	Depth to saturated zone (1.00)	26.4	20.9%
			Berryland, drained (5%)	Depth to saturated zone (1.00)		
LO	Longmarsh and Indiantown soils, frequently flooded	Very limited	Longmarsh (43%)	Ponding (1.00)	32.3	25.6%
				Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Frost action (0.50)		
			Indiantown (37%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Frost action (0.50)		
			Zekiah (10%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Flooding (1.00)		
				Frost action (0.50)		
			Klej (5%)	Depth to saturated zone (1.00)		

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Manahawkin (5%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Subsidence (1.00)		
				Flooding (1.00)		
				Low strength (1.00)		
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	Somewhat limited	Rockawalkin (75%)	Depth to saturated zone (0.19)	3.1	2.4%
Totals for Area of Interest					126.3	100.0%

Rating	Acres in AOI	Percent of AOI
Not limited	64.5	51.0%
Very limited	58.8	46.5%
Somewhat limited	3.1	2.4%
Totals for Area of Interest	126.3	100.0%

Rating Options—Local Roads and Streets (Deer Creek)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Water Management

Water Management interpretations are tools for evaluating the potential of the soil in the application of various water management practices. Example interpretations include pond reservoir area, embankments, dikes, levees, and excavated ponds.

Infiltration Systems, Deep (Deer Creek)

Deep infiltration systems are stormwater management practices that are placed 3 to 5 feet in the ground, depending on the application. These systems include rain gardens, bioretention basins, and infiltration basins. They slow the movement of stormwater to surface waters and also filter a significant portion of pollutants from the stormwater. The fundamental function of these systems is to hold the runoff generated from the first 1 inch of rainfall during a 24-hour storm preceded by 48 hours of no measurable precipitation. There should be little or no ponding at the

Custom Soil Resource Report

surface. The water should infiltrate into the surrounding soil in 24 to 48 hours. Only that part of the soil between depths of 24 and 80 inches is evaluated.

The ratings are based on the soil properties that affect infiltration of the stormwater, construction and maintenance of the system, and public safety and health. Saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect the transmission of rainwater. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the water in downslope areas. Some slopes may become unstable and move upon addition of water.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the bottom of the system. In these soils the deep infiltration system may not adequately filter the stormwater, particularly if the adsorptive capacity of the soil below the system is low. As a result, the ground water may become contaminated. In areas underlain by limestone, solution channels and subsequent subsidence may damage adjacent infrastructure. Also, areas underlain by limestone may be subject to ground-water contamination.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified infiltration system. "Not limited" indicates that the soil has features that are very favorable for the specified system. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified system.

The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified system. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified system (1.00) and the point at which the soil feature is not a limitation (0.00).

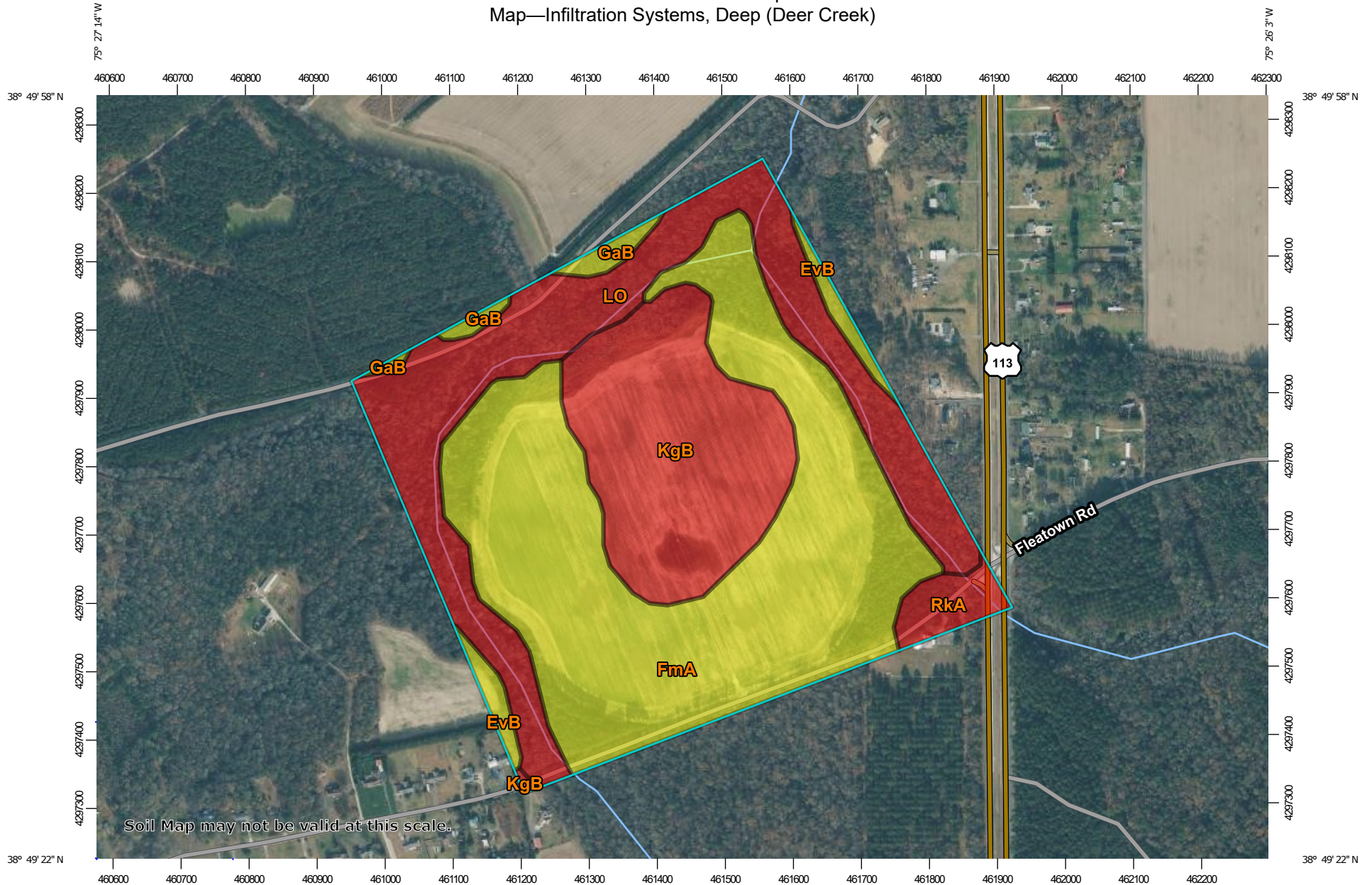
The accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer lists the map unit components. These components are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as the one indicated for the map unit. The percent composition of each component in a particular map unit is shown to help the user better understand the percentage of each map unit that has the rating indicated. Other components with different ratings may occur in each map unit. The complete ratings list for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be

Custom Soil Resource Report

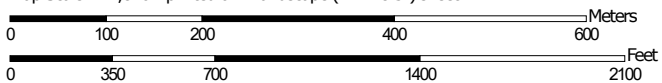
needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report

Map—Infiltration Systems, Deep (Deer Creek)




Map Scale: 1:7,870 if printed on A landscape (11" x 8.5") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)





 Area of Interest (AOI)

Background





 Aerial Photography

Soils





Soil Rating Polygons

-  Severely limited
-  Somewhat limited
-  Not limited
-  Not rated or not available


Soil Rating Lines

-  Severely limited
-  Somewhat limited
-  Not limited
-  Not rated or not available






Soil Rating Points

-  Severely limited
-  Somewhat limited
-  Not limited
-  Not rated or not available

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
 Survey Area Data: Version 22, Aug 26, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Tables—Infiltration Systems, Deep (Deer Creek)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
EvB	Evesboro loamy sand, 0 to 5 percent slopes	Somewhat limited	Evesboro (75%)	Vegetation establishment (0.50)	2.6	2.0%
				Adsorptive capacity (0.25)		
			Fort Mott (5%)	Vegetation establishment (0.50)		
				Adsorptive capacity (0.24)		
FmA	Fort Mott loamy sand, 0 to 2 percent slopes	Somewhat limited	Fort Mott (80%)	Vegetation establishment (0.50)	60.0	47.5%
				Adsorptive capacity (0.24)		
			Downer (5%)	Vegetation establishment (0.50)		
				Adsorptive capacity (0.25)		
GaB	Galestown loamy sand, 0 to 5 percent slopes	Somewhat limited	Galestown (80%)	Vegetation establishment (0.50)	1.9	1.5%
				Adsorptive capacity (0.25)		
KgB	Klej-Galloway complex, 0 to 5 percent slopes	Severely limited	Klej (45%)	Wetness (1.00)	26.4	20.9%
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.24)		
			Galloway (35%)	Wetness (1.00)		
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.25)		
			Runclint (5%)	Wetness (1.00)		
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.24)		
			Hurlock, drained (5%)	Wetness (1.00)		

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Water movement (1.00)		
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.05)		
			Berryland, drained (5%)	Wetness (1.00)		
				Water movement (1.00)		
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.24)		
			Askecksy, drained (5%)	Wetness (1.00)		
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.25)		
LO	Longmarsh and Indiantown soils, frequently flooded	Severely limited	Longmarsh (43%)	Wetness (1.00)	32.3	25.6%
				Flooding (1.00)		
				Vegetation establishment (0.25)		
				Adsorptive capacity (0.05)		
			Indiantown (37%)	Wetness (1.00)		
				Flooding (1.00)		
				Vegetation establishment (0.25)		
				Adsorptive capacity (0.22)		
			Zekiah (10%)	Wetness (1.00)		
				Flooding (1.00)		
				Water movement (0.45)		
				Vegetation establishment (0.32)		
				Adsorptive capacity (0.25)		
			Klej (5%)	Wetness (1.00)		

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.24)		
			Manahawkin (5%)	Wetness (1.00)		
				Flooding (1.00)		
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.25)		
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	Severely limited	Rockawalkin (75%)	Wetness (1.00)	3.1	2.4%
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.21)		
Totals for Area of Interest					126.3	100.0%

Rating	Acres in AOI	Percent of AOI
Somewhat limited	64.5	51.0%
Severely limited	61.9	49.0%
Totals for Area of Interest	126.3	100.0%

Rating Options—Infiltration Systems, Deep (Deer Creek)

Aggregation Method: Dominant Condition
Component Percent Cutoff: None Specified
Tie-break Rule: Higher

Infiltration Systems, Shallow (Deer Creek)

Shallow infiltration systems are stormwater management practices that are placed 1 to 3 feet in the ground, depending on the application. These systems include pervious pavement, buffer strips, filter strips, and vegetated swales. They slow the movement of stormwater to surface waters and also filter a significant portion of pollutants from the stormwater. The fundamental function of these systems is to hold the runoff generated by an area, such as a parking lot, from the first 1 inch of rainfall during a 24-hour storm preceded by 48 hours of no measurable precipitation. There should be little or no ponding at the surface. The water should infiltrate into the surrounding soil in 24 to 48 hours. Only that part of the soil between depths of 24 and 80 inches is evaluated.

Custom Soil Resource Report

The ratings are based on the soil properties that affect infiltration of the stormwater, construction and maintenance of the system, and public safety and health. Saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect the transmission of rainwater. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the water in downslope areas. Some slopes may become unstable and move upon addition of water.

Soils underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the bottom of the system may adversely affect water quality and public health. In these soils the shallow infiltration system may not adequately filter the stormwater, particularly if the adsorptive capacity of the soil below the system is low. As a result, the ground water may become contaminated. In areas underlain by limestone, solution channels and subsequent subsidence may damage adjacent infrastructure. Also, areas underlain by limestone may be subject to ground-water contamination.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified infiltration system. "Not limited" indicates that the soil has features that are very favorable for the specified system. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified system. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified system. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

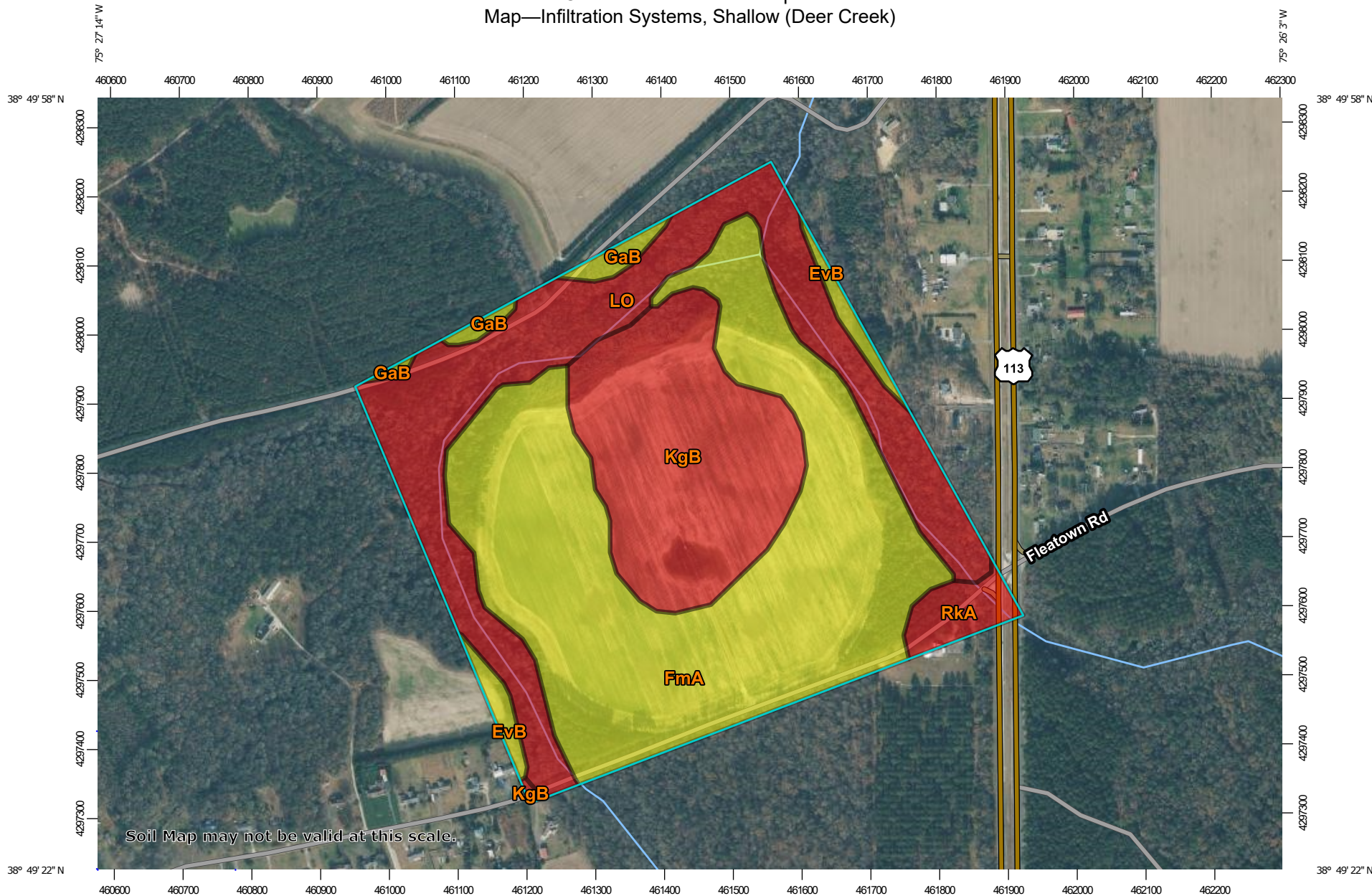
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The accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer lists the map unit components. These components are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as the one listed for the map unit. The percent composition of each component in a particular map unit is shown to help the user better understand the percentage of each map unit that has the rating indicated. Other components with different ratings may occur in each map unit.

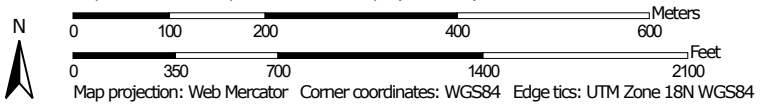
The complete ratings list for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report





















Map—Infiltration Systems, Shallow (Deer Creek)



Map Scale: 1:7,870 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND

- Area of Interest (AOI)**
 -  Area of Interest (AOI)
- Background**
 -  Aerial Photography
- Soils**
 - Soil Rating Polygons**
 -  Severely limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
 - Soil Rating Lines**
 -  Severely limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
 - Soil Rating Points**
 -  Severely limited
 -  Somewhat limited
 -  Not limited
 -  Not rated or not available
- Water Features**
 -  Streams and Canals
- Transportation**
 -  Rails
 -  Interstate Highways
 -  US Routes
 -  Major Roads
 -  Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

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This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sussex County, Delaware
 Survey Area Data: Version 22, Aug 26, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2020—Oct 1, 2020

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Custom Soil Resource Report

Tables—Infiltration Systems, Shallow (Deer Creek)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI					
EvB	Evesboro loamy sand, 0 to 5 percent slopes	Somewhat limited	Evesboro (75%)	Vegetation establishment (0.50)	2.6	2.0%					
				Adsorptive capacity (0.25)							
			Runclint (10%)	Wetness (0.84)							
				Vegetation establishment (0.50)							
				Adsorptive capacity (0.25)							
			Cedartown (5%)	Wetness (0.84)							
				Vegetation establishment (0.50)							
				Adsorptive capacity (0.25)							
			Fort Mott (5%)	Vegetation establishment (0.50)							
				Adsorptive capacity (0.24)							
			FmA	Fort Mott loamy sand, 0 to 2 percent slopes			Somewhat limited	Fort Mott (80%)	Vegetation establishment (0.50)	60.0	47.5%
									Adsorptive capacity (0.24)		
Downer (5%)	Vegetation establishment (0.50)										
	Adsorptive capacity (0.25)										
Rosedale (5%)	Wetness (0.84)										
	Vegetation establishment (0.50)										
	Water movement (0.45)										
	Adsorptive capacity (0.24)										
Runclint (5%)	Wetness (0.84)										
	Vegetation establishment (0.50)										

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Adsorptive capacity (0.25)		
GaB	Galestown loamy sand, 0 to 5 percent slopes	Somewhat limited	Galestown (80%)	Vegetation establishment (0.50)	1.9	1.5%
				Adsorptive capacity (0.25)		
KgB	Klej-Galloway complex, 0 to 5 percent slopes	Severely limited	Klej (45%)	Wetness (1.00)	26.4	20.9%
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.24)		
			Galloway (35%)	Wetness (1.00)		
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.25)		
			Hurlock, drained (5%)	Wetness (1.00)		
				Water movement (1.00)		
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.18)		
			Berryland, drained (5%)	Wetness (1.00)		
				Water movement (1.00)		
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.25)		
Askecksy, drained (5%)	Wetness (1.00)					
	Vegetation establishment (0.50)					
	Adsorptive capacity (0.25)					
LO	Longmarsh and Indiantown soils, frequently flooded	Severely limited	Longmarsh (43%)	Wetness (1.00)	32.3	25.6%
				Flooding (1.00)		
				Vegetation establishment (0.25)		
				Adsorptive capacity (0.04)		

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Indiantown (37%)	Wetness (1.00)	3.1	2.4%
				Flooding (1.00)		
				Vegetation establishment (0.25)		
				Adsorptive capacity (0.22)		
			Zekiah (10%)	Wetness (1.00)		
				Flooding (1.00)		
				Water movement (0.45)		
				Vegetation establishment (0.32)		
				Adsorptive capacity (0.25)		
			Klej (5%)	Wetness (1.00)		
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.24)		
			Manahawkin (5%)	Wetness (1.00)		
				Flooding (1.00)		
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.25)		
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	Severely limited	Rockawalkin (75%)	Wetness (1.00)	3.1	2.4%
				Vegetation establishment (0.50)		
				Adsorptive capacity (0.18)		
Totals for Area of Interest					126.3	100.0%

Rating	Acres in AOI	Percent of AOI
Somewhat limited	64.5	51.0%
Severely limited	61.9	49.0%
Totals for Area of Interest	126.3	100.0%

Rating Options—Infiltration Systems, Shallow (Deer Creek)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

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TAB “7”

PLANNING & ZONING COMMISSION

ROBERT C. WHEATLEY, CHAIRMAN
KIM HOEY STEVENSON, VICE-CHAIRMAN
R. KELLER HOPKINS
J. BRUCE MEARS
HOLLY J. WINGATE



Sussex County

DELAWARE
sussexcountyde.gov
302-855-7878 T
302-854-5079 F
JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR OF PLANNING AND
ZONING

January 31, 2022

By email to: john.o.murray@mottmac.com

Mr. John O. Murray
The Kercher Group, Inc.
37385 Rehoboth Avenue Ext., Unit 11
Rehoboth Beach, DE 19971

RE: Staff Review of the Check Print for Deer Creek (2021-29) for a major subdivision to consist of seventy-nine (79) single-family lots with access off Staytonville Road (S.C.R. 224) and associated site improvements to include open space areas, storm water management and other improvements. Tax Parcel: 230-19.00-27.00

Dear Mr. Murray,

Further to your submission of September 22, 2021, the Planning and Zoning Department has reviewed the Check Print for Deer Creek (2021-29) for a major subdivision to consist of seventy-nine (79) single-family lots with access off Staytonville Road (S.C.R. 224) and associated site improvements to include open space areas, storm water management and other improvements. The parcel is zoned Agricultural Residential (AR-1) and lies within the Low-Density Area. Staff have reviewed the submitted plan for compliance with the Sussex County Zoning and Subdivision Code and have the following comments:

Check Print Review

1. **Please provide the department with the responses to the criteria in §99-9(C).**
2. **Please provide the department with soil feasibility studies for all 79 lots. The application will not be scheduled for a public hearing until soil feasibility studies are received.**
3. **Please note, lots 36-40 and 1-5 are considered “through lots”. Please notate on the plans that there is a 40-ft setback from Staytonville Road.**
4. Staff notes the opportunity to provide the project with amenities. If there is an intention to provide amenities to this project, please show a placeholder for the amenities on the record plan.
5. While staff notes that the minimum open space requirements are met as part of §99-21(D), staff encourages increasing the percentage of open space.
6. Please include the County Project Reference Number for the project on the Cover Sheet. The County Project Reference Number for this project is 2021-29.
7. In the Site Data Column, please add the corner front setback requirement.
8. Staff encourages notating the setback lines or building restriction lines on the individual lots.



COUNTY ADMINISTRATIVE OFFICES
2 THE CIRCLE | PO BOX 417
GEORGETOWN, DELAWARE 19947

9. Please include the number of forested acres to remain and to be removed within the Site Data Column in percentages as well. Please note that the removal of healthy, mature trees shall be limited and that scenic views that can be seen from within the tract should be preserved to the greatest extent possible.
10. Please add a general note that this project is not located within any Transportation Improvement District.
11. Please include in the Site Data Column that this parcel is not located in a Wellhead Protection Area to comply with Chapter 89 “Source Water Protection” of the Sussex County Code (§89-6).
12. Please include in the General Data Column that this parcel is located in an area of “excellent/good” Groundwater Recharge potential in order to comply with Chapter 89 “Source Water Protection” of the Sussex County Code (§89-7).
13. Staff notes that there is only one-way-in, one-way-out access into the proposed subdivision. Please note that the Planning and Zoning Commission do desire to see interconnectivity where feasible. The proposed subdivision does not appear to have an opportunity for interconnectivity. However, if interconnectivity cannot be achieved, it is recommended that an easement be established and provided for purposes of emergency access to the subdivision. The easement should be established with the intent to improve it to Sussex County Engineering standards in the future.
14. Please provide the lot dimensions and the square footage of each lot.
15. Please show the location, size, and material of all subdivision signage.
16. Please provide the location of a mail kiosk, if one will be provided.
17. Please clearly label the sidewalks provided.
18. Please provide the width of the street and street right-of-way.

For Final Plan

19. Any Final Subdivision Plan will require a Landscaping Plan to be included.
20. Please show the location of any proposed lighting within the subdivision.
21. On any Final Subdivision Plan, please include and additional notes from DelDOT.
22. On any Final Subdivision Plan, please include existing topography and a proposed grading plan.
23. Please add the names of all streets as approved by the Sussex County Mapping and Addressing Department (§99-26(A)(7)).
24. Please add a General Note to the plans which clarifies that any additional signage will require the issuance of a separate permit from the County.
25. **Prior to approval of any Final Subdivision Plan**, approval letters or ‘no-objection’ letters from the following agencies shall be submitted to the Sussex County Planning and Zoning Department (All items in which a check mark appear have been received by the Department. All bolded items still require submittal to the Department before consideration for final approval can be received):
 - a. **Sussex Conservation District**
 - b. **Office of the State Fire Marshal**
 - c. **Sussex County Engineering Department**
 - d. **Sussex County Mapping and Addressing Department – Approval for the Subdivision name and all street names.**

- e. **Delaware Department of Transportation**
- f. **Office of Drinking Water (Public Health)**
- g. **Department of Natural Resources**
- h. **The local school district regarding bus stop provisions.**
- i. **Copies of all HOA documents/restrictive covenants.**

Once all comments regarding the preliminary subdivision plan have been addressed, please submit **one (1) electronic PDF copy** of the plans and **one (1) full-sized (24" x 36") hard copy** of the plans to the Planning and Zoning Department at your earliest convenience. Deer Creek (2021-29) does not currently have a tentative date.

Please feel free to contact me with any questions during business hours 8:30 AM – 4:30 PM, Monday through Friday at 302-855-7878.

Sincerely,

A handwritten signature in cursive script that reads "Christin Scott".

Mrs. Christin Scott
Planner I

Enclosure: TAC Comments



Strategic Infrastructure and
Transportation Asset Management
Consulting | Systems | Engineering

January 31, 2022

Mrs. Christin Scott, Planner I
Sussex County Planning & Zoning Department
2 The Circle
Georgetown, DE 19947

RE: Deer Creek (2021-29)

Mrs. Scott,

Attached to this correspondence is an updated Preliminary Subdivision Plan for the Deer Creek (2021-29) project. The plan has been revised as per your letter, dated January 31, 2022, in the following manner:

1. A copy of the 99-9C responses have been included with this submission. Additional supporting documents will be provided to the Planning and Zoning Department prior to the project's public hearing.
2. The soil feasibility documents were transmitted via email on Friday, January 28.
3. The Site Data Table on sheet R1 has been updated to reference the rear yard setbacks for the lots along Staytonville Road and the building restriction lines in those lots have been amended accordingly.
4. At this time, there are no plans to provide amenities within the subdivision.
5. At this time, additional open space has not been added to the plan.
6. The County Project Reference Number has been added on sheet R1 in the Site Data Table and it has also been added in the title block of each sheet just above the plan name.
7. The corner front setback has been added as a reference in the Site Data Table on sheet R1.
8. On sheets R2-R5, the building restriction lines in each lot have been depicted.
9. On sheet R1, the summary table has been updated to include the acreage of woods on the parcel and the wooded area to remain. Note that the amount of woods to remain is conservative and assumes that each property owner would clear-cut their lot. The applicant only proposes to clear trees as necessary for the placement of required infrastructure.
10. General Note #20 has been added on sheet R1 referencing the Transportation Improvement District.
11. General Note #21 has been added on sheet R1 referencing the Wellhead Protection Area.
12. General Note #22 has been added on sheet R1 referencing the Groundwater Recharge potential.
13. Prior to any plan recordation, a blanket easement will be established over all proposed road rights-of-way to Sussex County for ingress/egress.

THE KERCHER GROUP, INC.

www.kerchergroup.com | 37385 Rehoboth Ave., Unit #11, Rehoboth Beach, De 19971 | 302-854-9062

Sussex County P&Z Department
Mrs. Christin Scott

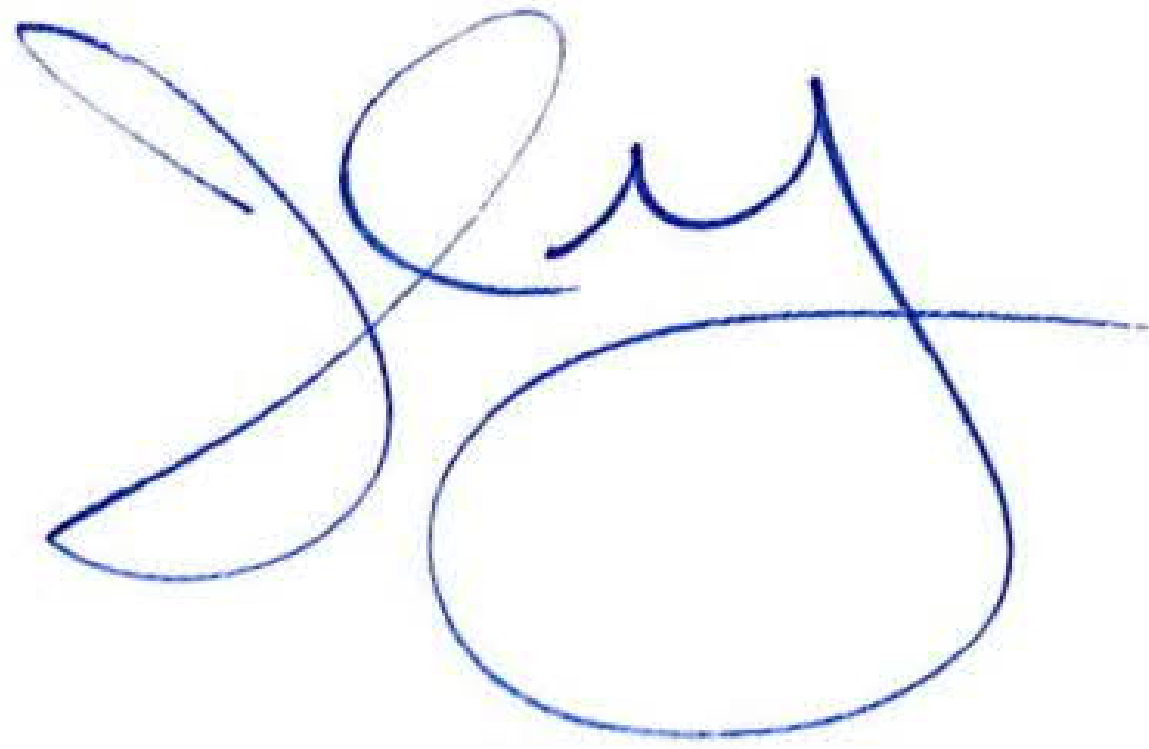
Deer Creek (2021-29)
January 31, 2022

14. The lot dimensions and areas have been added to all lots on sheets R2-R5.
15. At this time, the applicant is undecided as to what type of signage will be provided for the subdivision.
16. The applicant has decided that, with the size of the proposed lots in the subdivision, mailboxes will be provided for each lot.
17. No sidewalks are proposed within the subdivision at this time.
18. The right-of-way width has been labeled under the road name on all plans and the typical roadway section has been provided on sheet R1 for the paved roadway widths.

It is noted that comments 19-25 pertain to the Final Subdivision Plan and must be addressed prior to any final approval issuance.

Thank you for your continued assistance with this project and please do not hesitate to contact our office at your earliest convenience with any questions that you may have.

Sincerely,
THE KERCHER GROUP, INC.

A handwritten signature in blue ink, appearing to read 'John Murray', with a large, stylized initial 'J' and 'M'.

John Murray
Project Manager

CHAPTER 99-9(C) COMPLIANCE

1. **Integration of the proposed subdivision into existing terrain and surrounding landscape** – *The preliminary design of Deer Creek incorporates the natural grade change throughout the property, which would aide in directing surface runoff to planned treatment areas. Based on the original approved design, it can be assumed safely that additional materials will not have to be imported to the property to achieve a safe development design. The proposed density yield for Deer Creek is in character with the existing subdivisions and other residential communities within the vicinity.*
2. **Minimal use of wetlands and floodplains** – *While non-tidal wetlands were delineated within the bounds of the subject parcel, none of those wetlands would be located within the proposed lots or areas planned for development. The project is located within an area identified on flood maps as a Zone X (unshaded), which is an area described as being outside of the 0.2% annual chance floodplain.*
3. **Preservation of natural and historical features** – *There are no known historical features on the site but the developer is willing to allow the state to investigate the site for any historical features. Natural features will not be altered as a result of the establishment of the community.*
4. **Preservation of open space and scenic views** – *The preliminary design of Deer Creek calls for the establishment of 5.64 acres of open space which will be used for stormwater management/passive/active recreation. An additional 17.72 acres of wooded wetlands/open space would also be permanently protected.*
5. **Minimization of tree, vegetation and soil removal and grade change** – *The pre-development nature of the existing property consists a cleared agricultural field and both wooded uplands and wetlands. While the proposed tree clearing (10.37 acres) has been presented as if the entirety of lots containing woods will be clear-cut, it is the intention of the developer to only clear woods necessary for the placement of the subdivision's infrastructure. Some grade change will be necessary to provide positive drainage for the project but any alteration would be minimal.*
6. **Screening of objectionable features from neighboring properties and roadways** – *Forested buffers are to be preserved around the perimeter of the subdivision to screen property owners within Deer Creek from adjacent properties and to be in character with neighboring properties.*
7. **Provision of water supply** – *Dwellings within Deer Creek would be served by on-site wells for potable water.*
8. **Provision of sewer disposal** – *Dwellings within Deer Creek would be served by on-site septic systems for sanitary sewer.*
9. **Prevention of pollution of surface and groundwater** – *If granted preliminary approval, detailed erosion & sediment control and grading plans shall be submitted to the Sussex Conservation District for review. The original approved*

plans for the subdivision included bioswales for stormwater management. It is the applicant's intention to utilize the original plans and layout if granted preliminary approval.

- 10. Minimization of erosion and sedimentation, minimization of changes in groundwater levels, minimization of increased rates of runoff, minimization of potential for flooding and design of drainage so that groundwater recharge is maximized** – *If granted preliminary approval, detailed sediment and stormwater management plans will be prepared and submitted to DNREC for a detailed review. Per regulations established by DNREC, the post-development runoff rate shall not exceed those rates experienced in the pre-development condition. Best management practices (BMP's) will be incorporated into the drainage design, where applicable, to provide an increased rate of groundwater recharge. The original approved plans included biofiltration swales for stormwater management. It is the applicant's intention to use the original plans and layout if granted preliminary approval.*
- 11. Provision for safe vehicular and pedestrian movement within the site and adjacent ways** – *If preliminary approval is granted, detailed entrance and roadway plans will be submitted to the Delaware Department of Transportation and Sussex County Engineering department, respectively, for review and approval. All roadways shall be designed to meet or exceed those standards established by the SCED. The original approved plans provided the necessary components for safe pedestrian movement and it is the applicant's intention to use the original plans and layout if granted preliminary approval.*
- 12. Effect on area property values** – *The establishment of 79 new residential lots shall not have an adverse affect on adjacent property values. It is anticipated that the property values would increase due to the improvement to existing infrastructure. Deer Creek would be in character with several other residential communities located within close proximity of the proposed community.*
- 13. Preservation and conservation of farmland** – *Buffers shall be established adjacent to proposed lots to act as a screen between Deer Creek and adjacent properties. Also, the required agricultural preservation notice has been provided on the preliminary plan and, if approved, the same note shall be shown on the final record plan and shall be placed within the deeds of individual properties associated with Deer Creek.*
- 14. Effect on schools, public buildings and community facilities** – *The proposed development is located within the Milford School District. The establishment of Deer Creek would create an additional tax base that could be used to improve upon facilities within the school district. The proposed development is situated near the Ellendale and Milford and, as such, it is anticipated that residents within the community would patronize public buildings and community facilities in those municipalities.*
- 15. Effect on area roadways and public transportation** – *DELDOT has reviewed and approved this development previously. If granted preliminary approval, updated plans shall be submitted to DELDOT for their reapproval. If preliminary*

approval is granted, the developers understand that it will be their responsibility to make what roadway improvements the DelDOT would see fit.

16. Compatibility with other land uses – *Deer Creek would be situated in an area with other existing or planned developments and is planned to have a community density of 0.844 units per acre. Also, the proposed development is located within close proximity to several other residential communities, being:*

- **Magnolia Subdivision**
- **Hudson Mill**
- **Holly Hill**
- **Sussex Woods**

17. Effect on area waterways – *The establishment of Deer Creek would not have an adverse impact on area waterways because green technology best management practices (BMP) shall be utilized throughout the subdivision to manage surface runoff. If approved, detailed stormwater and erosion control plans will be submitted to the DNREC for review and the design of stormwater treatment systems within the proposed community would be required to meet or exceed those requirements established by the DNREC for water quality and quantity.*

TAB “8”



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION

August 23, 2021

Response: August 30, 2021

Kevin Smith
The Kercher Group, Inc.
37385 Rehoboth Ave. Ext. Unit 11
Rehoboth Beach, DE 19971

RE: PLUS review 2021-07-03; Deer Creek

Dear Mr. Smith:

Thank you for meeting with State agency planners on July 28, 2021 to discuss the Deer Creek project. According to the information received you are seeking review of a proposed 79 unit subdivision on 93.58 acres at the intersection of Staytonville Road and Rt. 113 in Level 4 in Sussex County.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State, and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

Strategies for State Policies and Spending

This project represents a major land development that will result in approximately 79 residential units in an Investment Level 4 area according to the *2020 Strategies for State Policies and Spending*. This project is also located within a low density area according to the Sussex County certified plan. Investment Level 4 indicates where State investments will support agricultural preservation, natural resource protection, and the continuation of the rural nature of these areas. New development activities and suburban development are not supported in Investment Level 4. These areas are comprised of prime agricultural lands and environmentally sensitive wetlands and wildlife habitats, which should be, and in many cases have been preserved.

From a fiscal responsibility perspective, development of this site is likewise inappropriate. The cost of providing services to development in rural areas is an inefficient and wasteful use of the State's fiscal resources. Over the longer term, the unseen negative ramifications of this

development will become even more evident as the community matures and the cost of maintaining infrastructure and providing services increases.

In addition, the development of this site may be environmentally inappropriate due to the following:

- Cedar Creek and its associated non-tidal wetlands surround the project parcel on three sides. With no proposed vegetated buffer, the water and habitat quality of the wetlands is likely to suffer, potentially impacting the two state-listed and one federally-listed species found in or around the project area that rely on these wetlands. **Noted**
- The project applicant proposes the removal of 10.4 acres of forest, which provide important ecosystem services such as water quality protection, wildlife habitat, and stormwater infiltration, among others. The loss of habitat quality may extend outside of the project boundary as Cedar Creek Natural Area and Redden State Forest are both located in the near vicinity. Forest loss and habitat degradation occurring within the project site may also impact the sensitive habitat found within these protected areas. **Noted, however, the removal of trees indicated is a worst case scenario. There is a reasonable expectation that the property owners will want to keep as much wooded area on the property as possible for a personal buffer.**
- An Excellent Groundwater Recharge Area is located over much of the southcentral portion of the site. These areas have soils that are conducive to water infiltrating downward from surface water into groundwater. **Noted. Since these lots are larger in size (3/4 ac), there should be a decent amount of pervious area on each lot for infiltration.**
- The proposed project is adjacent to a property protected through the State's Agricultural Lands Preservation Program (Cedar Branch District S-04-06-236-2, Parcel 230-19.00-22.00). **Noted**
- A review of the DNREC database indicates that the federally threatened Swamp Pink (*Helonias bullata*) occurs upstream and downstream of the project site and likely occurs within the project boundaries. This plant is protected under the Federal Endangered Species Act. **Noted**
- In addition to the federally threatened Swamp Pink (*Helonias bullata*), the following animals are listed as State of Delaware rare, threatened, or endangered species, and have been documented within the project area. The Ground Skink (*Scincella lateralis*) is a reptile listed under State Rank S1 and SGCN Tier 2 and the Eastern Tiger Salamander (*Ambystoma tigrinum*) is an amphibian listed under State Rank S1, State Status Endangered, and SGCN Tier 1. **Noted**

Because the development is inconsistent with the Strategies for State Policies and Spending, the Office of State Planning is opposed to this proposed subdivision **Noted**.

With that said, the comments in this letter are technical, and are not intended to suggest that the State supports this development. This letter does not in any way suggest or imply that you may receive or may be entitled to permits or other approvals necessary to build on this property.

Department of Transportation - Contact Bill Brockenbrough 760-2109

- The site access on Staytonville Road (Sussex Road 224) must be designed in accordance with DelDOT's Development Coordination Manual, which is available at <http://www.delDOT.gov/Business/subdivisions/index.shtml?dc=changes>. **Noted**
- Pursuant to Section 1.3 of the Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at <https://www.delDOT.gov/Business/subdivisions/pdfs/MeetingRequestForm.pdf?080220>. **Noted**
- Section 1.7 of the Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review. **Noted**
- Per Section 2.2.2.1 of the Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends per hour in any hour of the day. From the PLUS application, the total daily trips are estimated at 754 vehicle trip ends per day. Using the 10th edition of the Institute of Transportation Engineers' Trip Generation Manual, DelDOT calculates a value of 837 for this number and estimates the weekday morning and evening peak hour trip ends at 61 and 81, respectively. Therefore, a TIS would normally be required. **Noted**

Section 2.2.2.2 of the Development Coordination Manual provides that for developments generating less than 2,000 vehicle trip ends per day and less than 200 vehicle trip ends per hour in any hour of the day, DelDOT may accept an Area Wide Study (AWS) Fee in lieu of the TIS if the local government does not require a TIS. The AWS Fee is calculated as \$10 per daily trip or, in this case, \$8,370. AWS Fees are used to fund traffic studies, not to build improvements. **Noted. An AWS Fee shall be submitted for the project.**

DelDOT anticipates requiring the developer to improve Staytonville Road, from the west limit of their projected frontage to US Route 113, to meet DelDOT's Local Road standards, which include 11-foot lanes and 5-foot shoulders. Per the definition in Section 1.8 of the Manual, that limit is about 500 feet west of the actual frontage. **Noted**

DelDOT may require a Traffic Operational Analysis (TOA), in accordance with Section 2.3.2 of the Manual if they find it necessary in determining the specific improvements

needed either at the intersection or on the frontage. Because left turns are not permitted in or out of Staytonville Road on US Route 113, the TOA could extend to the next crossovers north and south of the development. Preliminarily DelDOT does not see a need for a TOA but the need may be revisited in the Pre-Submittal Meeting. **Noted**

Questions regarding the site's trip generation and TOA should be directed to the County Coordinator, Mr. T. William Brockenbrough. Mr. Brockenbrough may be reached at Thomas.Brockenbrough@delaware.gov or (302) 760-2109. Questions regarding the requirement to improve the site frontage should be directed to the Sussex County Review Coordinator, Mr. R. Stephen McCabe. Mr. McCabe may be reached at Richard.McCabe@delaware.gov or (302) 760-2276. **Noted**

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Manual, DelDOT will require dedication of right-of-way along the site's frontage on Staytonville Road. By this regulation, this dedication is to provide a minimum of 30 feet of right-of-way from the physical centerline. The following right-of-way dedication note is required, **"An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat."** **The dedication note shall be updated as per this comment.**
- In accordance with Section 3.2.5.1.2 of the Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on Staytonville Road. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, **"A 15-foot wide permanent easement is hereby established for the State of Delaware, as per this plat."** **A 15' PE has been shown on the preliminary plan.**
- Referring to Section 3.4.2.1 of the Manual, the following items, among other things, are required on the Record Plan:
 - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content. **A TGD has been provided in the required format and content on the preliminary plan.**
 - Depiction of all existing entrances within 450 feet of the entrance on Staytonville Road. **Noted**
 - Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted. **Noted**
- Section 3.5 of the Manual provides DelDOT's requirements with regard to connectivity. The requirements in Sections 3.5.1 through 3.5.3 shall be followed for all development projects having access to state roads or proposing DelDOT-maintained public streets for subdivisions. Preliminarily, DelDOT finds that the property boundaries coincide with streams for which it would be difficult to obtain the permits need to build

interconnections, and for that reason DelDOT does not anticipate recommending that stub streets be required. This subject may be revisited in the Pre-Submittal Meeting. **Noted, however, due to being surround by wooded wetlands, it would be impractical to have interconnections to adjacent properties.**

- Section 3.5.4.2 of the Manual addresses requirements for Shared Use Paths (SUP) and sidewalks. For projects in Level 3 and 4 Investment Areas, installation of paths or sidewalks along the frontage on State-maintained roads is required where there is an existing path with which to connect. There is no existing path near this development and DelDOT does not anticipate requiring an SUP along this development's road frontage. **Noted**
- In accordance with Section 3.8 of the Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 20 feet from the ultimate State right-of-way along Staytonville Road. **Noted**
- In accordance with Section 5.2.9 of the Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrances and how long those lanes should be. The worksheet can be found at <http://www.delDOT.gov/Business/subdivisions/index.shtml>. **Noted**
- In accordance with Section 5.14 of the Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated. **Noted**

Department of Natural Resources and Environmental Control - Beth Krumrine 735-3480

Development in this manner is inconsistent with the priorities for Level 4 lands of the Delaware Strategies for State Policies and Spending. Development on this site threatens the natural features that exist on the site. Cedar Creek and its associated non-tidal wetlands surround the project parcel on three sides. With no proposed vegetated buffer, the water and habitat quality of the wetlands is likely to suffer, potentially impacting the two state-listed and one federally-listed species found in or around the project area that rely on these wetlands. The project applicant proposes the removal of 10.4 acres of forest, which provide important ecosystem services such as water quality protection, wildlife habitat, and stormwater infiltration, among others. The loss of habitat quality may extend outside of the project boundary as Cedar Creek Natural Area and Redden State Forest are both located in the near vicinity. Forest loss and habitat degradation occurring within the project site may also impact the sensitive habitat found within these protected areas. **Noted**

Wetlands

Cedar Creek runs along the entire northern border of the site, and tributaries to this creek border both the east and west sides of the parcel. Maps from the Statewide Wetlands Mapping Project indicate the presence of non-tidal wetlands along the western, northern, and eastern edges of the project site. The application indicates that wetlands have been delineated. According to the

project application, the U.S. Army Corps of Engineers sign-off is completed. The application states that wetlands will not be directly impacted. **Correct**

- If the site design changes and dredge or fill of wetlands or subaqueous lands becomes necessary, permitting and/or authorization requirements will apply. **Unlikely that the design will include wetland disturbance, but noted.**
- Federal permits from the U.S. Army Corps of Engineers may be necessary if dredge or fill is proposed in non-tidal wetlands or streams. A delineation of waterways and wetlands must be completed by a qualified professional hired by the landowner. Permits or authorizations from the U.S. Army Corps of Engineers are required for fill of non-tidal wetlands. In certain cases, permits from the US Army Corps of Engineers triggers additional certifications from DNREC (Coastal Zone Federal Consistency Certification and 401 Water Quality Certification). Work with the U.S. Army Corps of Engineers to determine the appropriate permitting requirements. **Unlikely that the design will include wetland disturbance, but noted.**

Federal Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.
Website: <https://www.nap.usace.army.mil/missions/regulatory/contacts/> **Noted**

State Contact: DNREC Wetlands and Subaqueous Lands Section at (302) 739-9943.
Website: <https://dnrec.alpha.delaware.gov/water/wetlands-subaqueous/> **Noted**

Vegetated Buffer Zones

Site plans do not show a buffer along non-tidal wetlands. Vegetated buffer zones placed adjacent to waterways and wetlands help improve water quality by reducing sediment and pollutants loads. They also provide valuable habitat and can help prevent encroachment of human activities into ecologically sensitive areas. Vegetated buffers are not equivalent to setbacks, as residential lots, walkways, and stormwater management facilities should not be contained within the vegetated buffer zone. **The plan has yet to be reviewed by Sussex County Planning & Zoning. They may require additional wooded buffers and/or wetland buffers for the project. A wetland buffer may be possible so long as the County allows it as an easement and would not affect property lot size.**

The applicant must comply with minimum vegetated buffer widths as identified within county and municipal codes. **The plan has yet to be reviewed by Sussex County Planning & Zoning. They may require additional wooded buffers and/or wetland buffers for the project. A wetland buffer may be possible so long as the County allows it as an easement and would not affect property lot size.**

Contact: DNREC Wildlife Species Conservation & Research Program at (302) 735-3600.
Website: <https://dnrec.alpha.delaware.gov/wildlife/contact-information/> **Noted**

Stormwater Management

This application proposes greater than 5000 square feet of land disturbing activities, therefore, this project will be subject to Delaware's *Sediment and Stormwater Regulations*. **Noted**

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency prior to any land disturbing activity taking place on the site. For this project, the plan review agency is Sussex Conservation District. **If the project receives Preliminary approval, plans shall be developed in accordance to the SCD/DNREC.**
- Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically (<https://apps.dnrec.deJaware.gov/enoi/>, select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the \$195 fee. **If the project receives Preliminary approval, an NOI shall be submitted.**
- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study. **If the project receives Preliminary approval, a presubmittal meeting shall be made with the SCD.**

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219. Website: <https://www.usxconservation.org/> **Noted**

General stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.stormwater@delaware.gov.

Website: <https://dnrec.alpha.delaware.gov/watershed-stewardship/sediment-stormwater/> **Noted**

Hydrologic Soils Group

Hydrologic Soil Group *A/D* (somewhat poorly drained) soils have been identified on the northcentral portion of the site. These soil types are typically not conducive to utilizing infiltration stormwater Best Management Practices such as bioretention and infiltration basins, which must meet minimum infiltration requirements. **Noted**

- Any stormwater Best Management Practices that propose the use of infiltration or natural recharge shall include a soils investigation. **If the project receives Preliminary approval, plans shall be developed in accordance to the SCD/DNREC Best Management Practices. The original approved BMP's were bioretention swales.**

Contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.stormwater@delaware.gov. **Noted**

Website: <https://dnrec.alpha.delaware.gov/watershed-stewardship/sediment-stormwater/>

Water Quality (Pollution Control Strategies)

This site lies within the Mispillion Watershed. Surface water quality in this watershed does not meet State Water Quality Standards and a Pollution Control Strategy is in place for this watershed. **Noted**

- Consult with the appropriate plan review agency (Sussex Conservation District) to determine if stricter stormwater management standards may apply for development projects due to the Pollution Control Strategy. More information about Pollution Control Strategies can be found at the following website: <https://dmec.alpha.delaware.gov/watershed-stewardship/assessment/tributary-action->

[teams/](#) **Noted**

Contact: DNREC Division of Watershed Stewardship's Watershed Assessment Section at (302) 739-9939. <http://dmec.alpha.delaware.gov/watershed-tewardship/> **Noted**

Excellent Groundwater Recharge Area

- An Excellent Groundwater Recharge Area is located over much of the southcentral portion of the site. These areas have soils that are conducive to water infiltrating downward from surface water into groundwater. Preservation of these areas is important for replenishing groundwater supplies and ensuring drinking water for future generations. **Noted. Since these lots are larger in size (3/4 ac), there should be a decent amount of pervious area on each lot for infiltration.**
- The applicant must comply with all county and municipal requirements for construction and uses in Excellent Groundwater Recharge Areas. **Noted**

Contact: DNREC Source Water Assessment and Protection Program at (302) 739-9945.

Website: <https://dnrec.alpha.delaware.gov/water/supply/ground-water-protection/> **Noted**

Federally-listed Threatened and Endangered Species

A review of our database indicates that the federally threatened Swamp Pink (*Helonias bullata*) occurs upstream and downstream of the project site and likely occurs within the project boundaries. This plant is protected under the Federal Endangered Species Act. **Noted**

- Consult with the U.S. Fish & Wildlife Service to determine what permits or surveys may be required under the Endangered Species Act. **If granted preliminary approval, consultation shall be done.**

Contact: U.S. Fish & Wildlife Service at (202) 208-5634. **Noted**

Wastewater Disposal Systems

The applicant must follow current regulations to apply for a permit. The On Site Regulations are listed within the Regulations Governing the Design, Installation and Operation of the On-site Wastewater Treatment and Disposal Systems at:

<http://www.dnrec.delaware.gov/wr/information/GWDinfo/Documents/delaware-on-site-regulations-with-exhibits.Pdf> **Noted**

- A Site Evaluation must be performed by a Delaware licensed Class D Soil Scientist to determine the type of disposal system allowed under current regulations and site conditions. **Noted**
- A list of licensed Class D soil scientists can be found at the following website: <https://data.delaware.gov/Energy-and-Environment/Class-D-Site-Evaluator-Licensees-Based-on-Licensed/6-jg-34rp> **Noted**

Contact: DNREC Groundwater Discharges Section for projects proposed in Sussex County at (302) 856-4561.

Website: <http://dnrec.alpha.delaware.gov/water/grow/dwater/sptic-systems/> **Noted**

State Historic Preservation Office - Contact Carlton Hall 736-7400

- The Delaware SHPO does not recommend development in Level 4 areas. There is an archaeological site S07979 located on the southeastern part of the parcel. **Noted**
- Prehistoric archaeological potential is high throughout almost the entire parcel. About half of the parcel is well-drained soil, and most of the parcel is within favorable distance to a freshwater source. There is an archaeological site located in the southeastern corner of the parcel; boundaries are unknown and should be verified. The Delaware SHPO recommends a Phase I archaeological survey based on favorable conditions, where well-drained soils intersect favorable distance. **If granted preliminary approval, the developer has no objection to a Phase I archaeological survey being performed by the State.**
- Historic archaeological potential is high towards the middle of the southern border of the parcel. Beers shows "SH" which may be interpreted as a schoolhouse. The rest of the parcel potential is low, as there are no structures on the parcel seen in historic topos or maps. Our office also recommends a Phase I survey to investigate the potential for historic archaeological remains **If granted preliminary approval, the developer has no objection to a Phase I archaeological survey being performed by the State.**
- If any project or development proceeds, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law (Del. C. Title 7, Ch. 54). **Noted**
- If there is federal involvement, in the form of licenses, permits, or funds, the federal agency, often through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential cultural or historic resources. For further information on the Section 106 process please review the Advisory Council on Historic Preservation's website at: www.achp.gov **Noted**

Delaware State Fire Marshall's Office - Contact John Rudd 323-5365

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation:

Fire Protection Water Requirements:

- Since the dwellings of the subdivision are proposed to be served by individual on-site wells (No Central or Public Water System within 1000' of property), set back and separation requirements will apply. **Noted**

Accessibility:

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Staytonville Road

must be constructed so fire department apparatus may negotiate it. If a "center island" is placed at an entrance into the subdivision, it shall be arranged in such a manner that it will not adversely affect quick and unimpeded travel of fire apparatus into the subdivision. **Noted**

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door. **Noted**
- Any dead-end road more than 300 feet in length shall be provided with a tum-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver . The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or tum-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around. **Noted**
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements. **Noted**
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property. **No gates are proposed for this project, however, if they are proposed in the future, it shall be relayed to the developer.**

Gas Piping and System Information:

- Provide type of fuel proposed and show locations of bulk containers on plan. **None are proposed, however, if they are proposed in the future, it shall be relayed to the developer.**

Required Notes:

- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations" **To be noted**
- Proposed Use **To be noted**
- National Fire Protection Association (NFPA) Construction Type **To be noted**
- Maximum Height of Buildings (including number of stories) **To be noted**
- Provide Road Names, even for County Roads **To be shown**

Department of Agriculture - Contact: Milton Melendez 698-4534

- The proposed project is adjacent to a property protected through the State's Agricultural Lands Preservation Program (Cedar Branch District S-04-06-236-2, Parcel 230-19.00-22.00). Therefore, the activities conducted on this preserved property are protected by the agricultural use protections outlined in Title 3, Del. C., Chapter 9. These protections effect adjoining developing properties. The 300 foot notification requirement affects all new deeds in a subdivision located in whole or part within 300 feet of an Agricultural District/Easement. Please take note of these restrictions as follows:

§ 910. Agricultural use protections. **Noted**

(a) Normal agricultural uses and activities conducted in a lawful manner are preferred and priority uses and activities in Agricultural Preservation Districts. In

order to establish and maintain a preference and priority for such normal agricultural uses and activities and avert and negate complaints arising from normal noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations, land use adjacent to Agricultural Preservation Districts shall be subject to the following restrictions: **Noted**

(1) For any new subdivision development located in whole or in part within 300 feet of the boundary of an Agricultural Preservation District, the owner of the development shall provide in the deed restrictions and any leases or agreements of sale for any residential lot or dwelling unit the following notice: **Noted**

This property is located in the vicinity of an established Agricultural Preservation District in which normal agricultural uses and activities have been afforded the highest priority use status. It can be anticipated that such agricultural uses and activities may now or in the future involve noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations. The use and enjoyment of this property is expressly conditioned on acceptance of any annoyance or inconvenience which may result from such normal agricultural uses and activities." **Note to be added**

(2) For any new subdivision development located in whole or in part within 50 feet of the boundary of an Agricultural Preservation District, no improvement requiring an occupancy approval shall be constructed within 50 feet of the boundary of the Agricultural Preservation District. **Note to be added**

(b) Normal agricultural uses and activities conducted in accordance with good husbandry and best management practices in Agricultural Preservation Districts shall be deemed protected actions and not subject to any claim or complaint of nuisance, including any such claims under any existing or future county or municipal code or ordinance. In the event a formal complaint alleging nuisance related to normal agricultural uses and activities is filed against an owner of lands located in an Agricultural Preservation District, such owner, upon prevailing in any such action, shall be entitled to recover reasonably incurred costs and expenses related to the defense of any such action, including reasonable attorney's fees (68 Del. Laws, c. 118, § 2.). **To be noted**

- In addition, if any wells are to be installed, Section 4.01(A)(2) of the Delaware Regulations Governing the Construction and Use of Wells will apply. This regulation states:

(2) For any parcel, lot, or subdivision created or recorded within fifty (50) feet of, or within the boundaries of, an Agricultural Lands Preservation District (as defined in Title 3, Del. C., Chapter 9); all wells constructed on such parcels shall be located a minimum of fifty (50) feet from any boundary of the Agricultural Lands Preservation District. This requirement does not apply to parcels recorded

prior to the implementation date of these Regulations. However, it is recommended that all wells be placed the maximum distance possible from lands which are or have been used for the production of crops which have been subjected to the application of land applied federally regulated chemicals. **Noted**

Sussex County Housing-Contact: Brandy Nauman 855-7779

- Sussex County endeavors to promote non-discrimination and affordable housing whenever possible throughout the County. In this regard, the developer and associated financial institutions are encouraged to provide and finance affordable housing opportunities to Sussex County residents in all new developments, and affirmatively market those affordable housing units to diverse populations. **Noted**
- For questions about opportunities available for affordable housing projects within Sussex County, please consult Sussex County's "Affordable Housing Support Policy". The policy along with other resources are available on the County's Affordable & Fair Housing Resource Center website: www.sussexcountype.gov/affordable-and-fair-housing-resource-center. The County's Community Development & Housing Department can advise about existing affordable housing opportunities in Sussex County and the appropriate County Department to contact regarding specific development issues concerning future affordable housing projects within Sussex County. **Noted**
- The Community Development & Housing Department can also explain and assist with any financial support or incentives that may be available to a project from federal, state and county sources, as well as private funding sources that also promote affordable housing in Sussex County. **Noted**
- Please understand that all residential projects, including Affordable Housing Projects are subject to the applicable provisions of the Sussex County Subdivision and Zoning Codes, and the approval processes set forth in those Codes. **Noted**
- On behalf of Sussex County, we look forward to cooperating with you and your project as it moves forward. **Noted**

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

PLUS review 2021-07-03

Page 13 of 13

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

David L. Edgell, AICP
Director, Office of State Planning Coordination

CC: Sussex County

TAB “9”



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

MEMORANDUM

TO: Steve McCabe, Sussex County Review Coordinator

FROM: Claudy Joinville, Project Engineer *C.J.*

DATE: April 1, 2022

**SUBJECT: Deer Creek
(Protocol Tax Parcel # 230-19.00-214.00)
Area Wide Study Fee (AWSF) and Off-site Improvements**

The subject development meets DelDOT's volume warrants to pay the Area Wide Study Fee in lieu of doing a Traffic Impact Study (TIS). This memorandum is to address the amount of that fee and the off-site improvements that should be required of the developer in the absence of a TIS. The fee and improvements presented below are an alternative to the developer doing a TIS and the improvements identified through DelDOT's review of that study.

1. The proposed development consists of 79 single-family detached houses. Per the 10th edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual, the proposed development would generate 831 average daily trips and 81 vehicle trips during the p.m. peak hour. The fee is calculated at ten dollars per daily trip. For the proposed development, the fee would be \$8,310.00.
2. The developer shall improve the State-maintained road(s) on which they front, within the limits of their frontage, to meet DelDOT's standards for their Functional Classification as found in Section 1.1 of the Development Coordination Manual and elsewhere therein. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road. Frontage is defined in Section 1 of the Development Coordination Manual, which states "This length includes the length of roadway perpendicular to lines created by the projection of the outside parcel corners to the roadway." Questions on or appeals of this requirement should be directed to the DelDOT Subdivision Review Coordinator in whose area the development is located.

Mr. Steve McCabe

April 1, 2022

Page 2 of 2

If you have any additional questions or comments, please let me know.

CJ:km

cc: Wes Cromer, Cromer Management, LLC
Jefferey C. Williams, The Kercher Group
Michael Simmons, Chief of Project Development South, DOTS
Todd Sammons, Assistant Director, Development Coordination
Wendy Polasko, Subdivision Engineer, Development Coordination
T. William Brockenbrough, Jr., County Coordinator, Development Coordination
Wendy Carpenter, Traffic Calming & Subdivision Relations Manager, DelDOT Traffic
Mark Galipo, Traffic Engineer, DelDOT Traffic, DOTS
James Argo, Sussex County Plan Reviewer, South District
Derek Sapp, Subdivision Manager, Development Coordination
Annamaria Fumato, Project Engineer, Development Coordination

TAB “10”



25092 Oak Road
Seaford, DE 19973

Phone & Text: (302) 629-2989
Email: jayduke@comcast.net

October 30, 2021

Cromer Management, LLC
6103 S. Rehoboth Blvd.
Milford, DE 19963

Re: TM #2-30-19-27

Dear Wes:

After conducting numerous random soil borings on the above referenced parcel, it's my opinion that the evaluated soils on this property are similar to the soils described during the subdivision feasibility study conducted in 2005. The majority of the soils on the parcel meet the current regulatory requirements for siting individual on-site wastewater treatment and disposal systems.

If you have any further questions, don't hesitate to call.

Sincerely,
Coastal Soil Consultants, Inc.

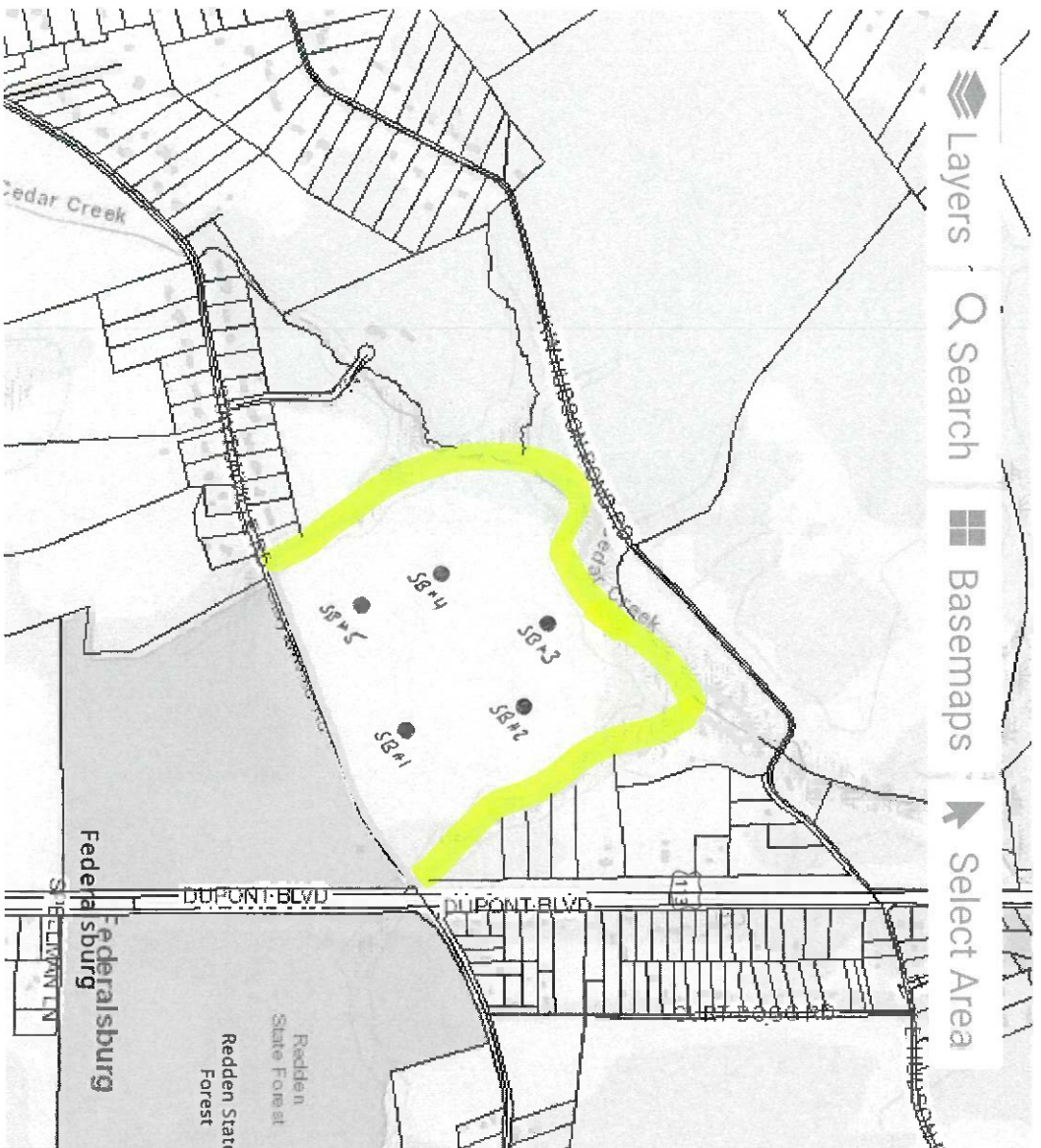
A handwritten signature in black ink, appearing to read "J.C. Duke Jr.", is written over a horizontal line.

Joseph C. Duke Jr., CPSS
Class D lic. #4048

JCD/bad

SUSSEX COUNTY

D E L A W A R E



Layers Search Basemaps Select Area



Print



Help

Hide search results »

Search results

Clear Selected

Selected Features:

Parcels (1)



1) 230-19.00-27.00

Zoom

Book	5552
Page	118
Owner Name	CROMER MANAGEMENT LLC
Second Owner Name	
Mailing Address	6103 S REHOBOTH BLVD
City	MILLFORD
State	DE
Sewer Account	

Selected Features (1)



25092 Oak Road
Seaford, DE 19973
(302) 629-2989
Fax 629-3212

SUBDIVISION FEASIBILITY STUDY

Owners:

Richard R. & Kathryn B. Carlisle
3583 Buck Fever Road
Bridgeville, DE 19933

Developer:

James W. Lee
Dream Builders Construction, Inc.
13610 Wolf Road
Greenwood, DE 19950

Project Site:

Location:	North side of Staytonville Road (CR 224), West of Dupont Blvd. (Rt. 113)
City:	Ellendale
County:	Sussex
State:	Delaware
Tax Map #:	2-30-19-27
Field work began	October 2004
Report Completed:	May 2005

INTRODUCTION:

James W. Lee, of Greenwood, DE contracted Coastal Soil Consultants, Inc. of Seaford, DE to conduct a subdivision feasibility study on parcel-tax map # 2-30-19-27. This study was conducted in accordance with section 9.00000 –PRELIMINARY WATEWATER TREATMENT & DISPOSAL REVIEW of the Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems (OWTDS) (Amended 4/11/2005).

This subdivision feasibility study was started in February of 2005. A total of 82 soil borings were conducted in the project area. Soil borings were conducted on a 200-foot centerline grid pattern established by Miller-Lewis, Inc. Logged soil profiles, classified to subgroup taxon, are enclosed. Mapping units were given to the predominant soil subgroup in a specific area. Some mapping units contain small inclusions of minor subgroups within them. Miller-Lewis, Inc. also provided the lot layout and a topographic map with one-foot contours.

SITE LOCATION:

This (AR1) zoned parcel is located on the north side of Staytonville Road (CR 224), west of Dupont Boulevard (U.S. Rt. 113). This proposed subdivision is bounded on all sides by numerous (AR1) zoned parcels.

PROJECT PROPOSAL:

This 93.58 acre parcel is to be subdivided into a 79-lot interior road subdivision with a minimum $\frac{3}{4}$ acre lot size. All proposed lots are to be served by OWTDS and on-site wells.

STUDY SUMMARY:

The majority of the parcel consists of a gently to undulating eroded terrace with eolian dunes. Elevation contours on this parcel range between 47' to 37'± along the delineated wetlands that surround the parcel on the western, northern & eastern property lines. The *Soil Survey of Sussex County* mapped this area as predominately Evesboro A (EvA) with a small inclusion of Woodstown (Wo).

The soils encountered on this parcel, as mapped by Coastal Soil Consultants, Inc., consist of moderately permeable, well-drained Typic Hapludults (TyH) and moderately rapidly permeable, well-drained Typic Dystrudepts (TyD). The TyH are characterized by a course sandy loam epipedon over a well-developed course sandy clay loam substratum over a course loamy parent material that extends below 60 inches. The TyD are characterized by a course sandy loam epipedon over a weakly-developed course sandy loam substratum over a course loamy parent material that extends below 60 inches. There are only slight limitations associated with siting an OWTDS for these soil types.

The soils in this vicinity meet the current regulatory requirements for siting gravity fed and low-pressure pipe (LPP) OWTDSs.

The area along the perimeter adjacent to the delineated wetlands and the two isolated closed depressional areas in the interior of the parcel are delineated as Oxyaquic Hapludults (**OxH**) and Oxyaquic Dystrudepts (**OxD**). The soils delineated as **OxP** are characterized by a course sandy loam epipedon over a well-developed course sandy clay loam substratum over a course sandy clay loam parent material that extends below 60 inches. These soils are moderately permeable and somewhat poorly drained. There are moderate limitations associated with siting an OWTDS for this soil type. The soils in this vicinity meet the current regulatory requirements for siting LPP & elevated sand mound (ESM) OWTDSs.

The majority of the lots, as proposed, meet the current regulatory requirements for gravity-fed wastewater treatment and disposal systems.

Below is a list of soil types and characteristics:

Code on Soils Map	Taxonomic Classification	Limiting Zone (Inches)	Estimated Permeability Rate (MPI)	Wastewater Treatment & Disposal System
TyD	Typic Dystrudept	40 - >60	20 - 40	Gravity-fed & LPP
TyH	Typic Hapludult	40 - >60	20 - 40	Gravity-fed & LPP
OxP	Oxyaquic Paleudult	25 - 39	20 - 60	LPP & ESM
OxD	Oxyaquic Paleudult	25 - 39	20 - 60	LPP & ESM

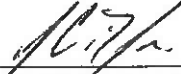
Coastal Soil Consultants, Inc. conducted standard Percolation tests on March 4, 2005. Test depths were based on the most hydraulically limited horizon with 60 inches of the soil surface as determined by soil auger borings. Soil texture, structure and depth to redoximorphic features (if present) were used in determining these limiting horizons.

Below is a list of percolation test results:

Percolation Test #	Average Depth of Test (Inches)	Taxonomic Classification	Average Percolation Rate (MPI)
B-7	29	Oxyaquic Hapludult	6.6
E-8	33	Typic Hapludult	21.1

Standard percolation test results indicate that the course textured soils on this parcel are rapidly to moderately rapidly permeable. These soils should allow for adequate dispersion of wastewater provided the wastewater disposal systems are sized

appropriately. Averages were calculated for the last hour of recorded data.



Joseph C. Duke, Jr.

Class "D" & "A" License #4048

Certified Professional Soil Scientist #6049



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: A-2 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: nearly level (wooded)

Estimated Permeability: 20mp^h

Depth to and Type of Limiting Zone: 44" to redox depletion & concentration

Subgroup Taxonomic Classification: Typic Dystrudert

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>A_p</u>	<u>0 to 4</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>2mg</u>	<u>f</u>
<u>B_v</u>	<u>4 to 44</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>1.5 blr</u>	<u>f</u>
<u>C</u>	<u>44 to 60</u>	<u>10YR 4/2</u>	<u>10YR 4/6</u>	<u>C.D</u>	<u>cosl</u>	<u>m</u>	<u>f</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 56"

J.C. Duke
 Joseph C. Duke, Jr., CPSS



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: A-3 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of RT. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 20mp

Depth to and Type of Limiting Zone: 36" to redox depletion & conc.

Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10K 4/4	/	/	cosl	2mp	fv
E	8 to 18	2.5Y 5/4	/	/	cosl	1msbl	fv
EB	18 to 36	2.5Y 5/4	7/6	/	cosl	1msbl	fv
C	36 to 68	2.5Y 4/3	10YR 4/6 2.5Y 5/2	C2P C2v	cosl	r	fv
	to						
	to						
	to						
	to						

Comments: _____ Free water = 42"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: A-4 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 54" to redox depletions & concentration.
 Subgroup Taxonomic Classification: Typic Dystrudapt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>f</u>
<u>B_w</u>	<u>8 to 18</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1mb/c</u>	<u>vfr</u>
<u>C¹</u>	<u>18 to 54</u>	<u>2.5Y 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>m</u>	<u>fv</u>
<u>C²</u>	<u>54 to</u>	<u>2.5Y 5/4</u>	<u>10YR 4/6 10YR 4/2</u>	<u>ccp ccp</u>	<u>sl</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 59"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: A-5 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: >60"
 Subgroup Taxonomic Classification: Typic Dystrudert

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>2mg.</u>	<u>fr</u>
<u>Bw</u>	<u>8 to 18</u>	<u>10YR 6/4</u>	<u>/</u>	<u>/</u>	<u>cosl -</u>	<u>1mg bk</u>	<u>fr</u>
<u>C¹</u>	<u>18 to 40</u>	<u>2.5Y 6/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>vfr</u>
<u>C²</u>	<u>40 to 60</u>	<u>2.5Y 7/3</u>	<u>/</u>	<u>/</u>	<u>lcs</u>	<u>m</u>	<u>vfr</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = >60"

Joseph C. Duke, Jr., CPSS



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: A-6 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 20mp
 Depth to and Type of Limiting Zone: 52" to redox depletions & concretions
 Subgroup Taxonomic Classification: Lamelllic Dystrudapt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mg	fv
Bw	8 to 30	10YR 4/4	/	/	sl-	1mbk	fv
C	30 to 36	2.5Y 4/4	10YR 5/6	lamella (d)	L	r	fv
C	36 to 52	2.5Y 7/3	10YR 7/6	lamella (d)	ls	m	vfv
C	52 to 60	2.5Y 4/3	2.5Y 4/2	c20	loos	m	vfv
	to						
	to						
	to						

Comments: _____ Free water = >60%

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: A-7 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: nearly level

Estimated Permeability: 30mp

Depth to and Type of Limiting Zone: 50" to redox depletions & concentration

Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>2mp</u>	<u>fr</u>
<u>E</u>	<u>8 to 26</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>Bt</u>	<u>26 to 40</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>slt</u>	<u>1msbk</u>	<u>fr</u>
<u>C'</u>	<u>40 to 50</u>	<u>2.5Y 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>C^L</u>	<u>50 to 60</u>	<u>2.5Y 4/3</u>	<u>10YR 4/6 2.5Y 5/2</u>	<u>C1D C2D</u>	<u>sl</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 57"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: A-8 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 2.0 mpi
 Depth to and Type of Limiting Zone: 52" to redox deplet
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/4	/	/	coar	2mg	fr
EB	8 to 36	10YR 5/4 5/6	/	/	coar	1mgbk	fr
Bt	36 to 52	10YR 5/6	/	/	coar	1mgbk	fr
C	52 to 60	2.5Y 4/3	10YR 4/8 10YR 4/2	C2P C2V	1 co	m	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 58"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: A-9 Soil Boring: or Test Pit: Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: nearly level

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 36" to redox depletions

Subgroup Taxonomic Classification: Oxyaquic Dystrudapt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 10</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl-</u>	<u>2mg</u>	<u>f</u>
	<u>10 to 36</u>	<u>2.5Y 6/4</u>	<u>/</u>	<u>/</u>	<u>sl-</u>	<u>1m, blk</u>	<u>f</u>
	<u>36 to 60</u>	<u>2.5Y 6/3</u>	<u>2.5Y 6/2</u>	<u>C2F</u>	<u>sl-</u>	<u>m</u>	<u>f</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 55"

Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: A-10 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: nearly level (wooded)

Estimated Permeability: 30 mpi

Depth to and Type of Limiting Zone: >60"

Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>A⁰¹</u>	<u>0 to 6</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mp</u>	<u>fr</u>
<u>EB</u>	<u>6 to 28</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbl</u>	<u>fr</u>
<u>Bt</u>	<u>28 to 38</u>	<u>10YR 7.5/6</u>	<u>/</u>	<u>/</u>	<u>scl</u>	<u>2msbl</u>	<u>fr</u>
<u>C¹</u>	<u>38 to 54</u>	<u>2.5Y 7/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>1msbl</u>	<u>fr</u>
<u>C²</u>	<u>54 to 60</u>	<u>2.5Y 7/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>ms</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = >60"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: A-11 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: _____

Estimated Permeability: 30mp

Depth to and Type of Limiting Zone: >60"

Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>A^o</u>	<u>0 to 4</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mp</u>	<u>fr</u>
<u>E</u>	<u>4 to 26</u>	<u>10YR 6/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1m sbl</u>	<u>fr</u>
<u>B₂C</u>	<u>26 to 36</u>	<u>10YR 6/4 s</u>	<u>10YR 7/6</u>	<u>/</u>	<u>cos/lea</u>	<u>1m sbl</u>	<u>fr</u>
<u>C</u>	<u>36 to 60</u>	<u>2.5Y 4/3 4/6</u>	<u>/</u>	<u>/</u>	<u>lea</u>	<u>n</u>	<u>vfr</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = >60

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SOIL PROFILE NOTE PAGE

Profile #: B-2 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 32" to redox depletions & concentration

Subgroup Taxonomic Classification: Oxyaquic Psytroduct

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>2 mpi</u>	<u>f</u>
<u>Bw</u>	<u>8 to 32</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>1 mpi</u>	<u>f</u>
<u>C</u>	<u>32 to 60</u>	<u>2.5Y 4/3</u>	<u>10YR 4/8 2.5Y 5/2</u>	<u>c2p c2v</u>	<u>cosl</u>	<u>n</u>	<u>f</u>
	to						
	to						
	to						
	to						
	to						

Comments: _____ Free water = 36"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: B-3 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: nearly level

Estimated Permeability: 30 mpi

Depth to and Type of Limiting Zone: 36" to redox depletions & concentration

Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 10</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>2mg</u>	<u>fr</u>
<u>Bw</u>	<u>10 to 36</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>1msbk</u>	<u>fr</u>
<u>C</u>	<u>36 to 60</u>	<u>2.5Y 5/4</u>	<u>10YR 6/8 2.5Y 6/2</u>	<u>CLP CLP</u>	<u>cosl</u>	<u>n</u>	<u>fr</u>
	to						
	to						
	to						
	to						
	to						

Comments: _____ Free water = 58'

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: B-4 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 34" to redox depletions & concentration
 Subgroup Taxonomic Classification: Oxyaquic Dystrudept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>crumbly</u>	<u>fr</u>
<u>Iw</u>	<u>9 to 22</u>	<u>10YR 7/4</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>lumpy</u>	<u>fr</u>
<u>Bw</u>	<u>22 to 34</u>	<u>10YR 5/4</u>	<u>10YR 5/8</u>	<u>CIP</u>	<u>coarse</u>	<u>crumbly</u>	<u>fr</u>
<u>C</u>	<u>34 to 54</u>	<u>2.5Y 4/4</u>	<u>10YR 4/8 4/9</u> <u>2.5Y 5/2</u>	<u>220</u> <u>220</u>	<u>coarse</u>	<u>n</u>	<u>fr</u>
<u>Cg</u>	<u>54 to 60</u>	<u>2.5Y 5/2</u>	<u>/</u>	<u>/</u>	<u>loose</u>	<u>n</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 48"

J.C. Duke, Jr.
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SOIL PROFILE NOTE PAGE

Profile #: B-5 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% SW Relief: nearly level

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 40" to redox depletions

Subgroup Taxonomic Classification: Oxyaquic Dystrudept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 6	10YR 4/4	/	/	co sl	2 mg v	fr
Bw	6 to 26	10YR 6/4	/	/	co sl	1 ms ble	fr
C	26 to 36	2.5Y 4/4	/	/	ls	m	v fr
C	36 to 40	10YR 6/6	/	/	lo co s	m	v fr
C	40 to 60	2.5Y 4/3	2.5Y 4/2	cro	ls	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 54"

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 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: B-6 Soil Boring: or Test Pit: _____ Date of Test: 2/16/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 40 mpi
 Depth to and Type of Limiting Zone: 40" to redox depletions, & conc.
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 6</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mp</u>	<u>fr</u>
<u>E</u>	<u>6 to 18</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1psbk</u>	<u>fr</u>
<u>Bt</u>	<u>18 to 30</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sd</u>	<u>2psbk</u>	<u>fr</u>
<u>C¹</u>	<u>30 to 40</u>	<u>2.5Y 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>m</u>	<u>fr</u>
<u>C²</u>	<u>40 to 60</u>	<u>2.5Y 6/3</u>	<u>10YR 6/6 2.5Y 6/2</u>	<u>C1P C2P</u>	<u>loas</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 54"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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Seaford, DE 19973

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SOIL PROFILE NOTE PAGE

Profile #: B-7 Soil Boring: or Test Pit: Date of Test: 2/17/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: nearly level

Estimated Permeability: 30_{mp}i

Depth to and Type of Limiting Zone: 36" to redox depletion & concentration

Subgroup Taxonomic Classification: Oxyaquic Haplo-dult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mg	fr
E	8 to 16	10YR 4/4	/	/	sl	1msblc	fr
Bt	16 to 24	10YR 5/6	/	/	scl	2msblc	fv
C ¹	26 to 36	2.5Y 4/4-5/6	/	/	sl	m	fr
C ²	36 to 60	2.5Y 4/3	10YR 4/2 2.5Y 4/2	C1P C2P	ls	n	vt
	to						
	to						
	to						

Comments: _____ Free water = 52%

Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: B-8 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 52" for redox depletions
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mpc	fr
EB	8 to 22	10YR 5/4 5/6	/	/	sl	2msbk	fr
BE	22 to 52	10YR 5/6 5/7	/	/	sl	2msbk	fr
C	52 to 60	2.5Y 4/3	2.5Y 5/2	12V	loas	m	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 58'

J.C. Duke
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: B-9 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: nearly level

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: > 60"

Subgroup Taxonomic Classification: Typic Haplodult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 6</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1mgr</u>	<u>fr</u>
<u>E¹</u>	<u>6 to 18</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>1msblc</u>	<u>fr</u>
<u>Bt¹</u>	<u>18 to 24</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msblc</u>	<u>fr</u>
<u>2E²</u>	<u>24 to 50</u>	<u>2.5Y 6/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>1msblc</u>	<u>fr</u>
<u>2Bt²</u>	<u>50 to 60</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2msblc</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = > 60

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: B-10 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 60" to redox depletions & concentration
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 6	10YR 4/3	/	/	sl	zmg	fr
E	6 to 24	10YR 5/4	/	/	sl	1m, bk	fr
EB	24 to 30	10YR 5/4 5/6	/	/	sl, scl	2m, bk	fr
Bt	30 to 44	10YR 5/6	/	/	scl	2m, bk	fr
CB	44 to 60	2.5Y 4/4 5/6	/	/	sl	1m, bk	fr
C	60 to 66	2.5Y 5/2	10YR 4/1 2.5Y 5/2	CIP C2P	ls	m	fr
	to						
	to						

Comments: _____ Free water = >66"

B-11 0" to redox, hydric
C-11 0" to redox, hydric

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: C2 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 20mpj
 Depth to and Type of Limiting Zone: 38" to redox concentrations & depletion
 Subgroup Taxonomic Classification: Oxyaquic Dystrudcept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mpj	fr
Bw	8 to 38	10YR 5/4	/	/	sl	1nsbk	fv
C	38 to 60	10YR 5/8	10YR 4/3 5YR 5/8	C1D C2P	sl	n	fr
	to						
	to						
	to						
	to						
	to						

Comments: _____ Free water = 40

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: C3 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: gently sloping

Estimated Permeability: 20mpa

Depth to and Type of Limiting Zone: 50" to redox depletion & concretions

Subgroup Taxonomic Classification: Type Dystrudcept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>18YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mpa</u>	<u>f</u>
<u>Bw¹</u>	<u>8 to 40</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1/2 sbh</u>	<u>f</u>
<u>Bw²</u>	<u>40 to 50</u>	<u>10YR 4/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1/2 sbh</u>	<u>f</u>
<u>C</u>	<u>50 to 60</u>	<u>2.5Y 4/4</u>	<u>2.5Y 6/2 10YR 5/6</u>	<u>215 C10</u>	<u>ls</u>	<u>n</u>	<u>f</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = 55"

J.C. Duke
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: C4 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 48" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Dystrudept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10K 4/2</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>loose</u>	<u>fr</u>
<u>Bv¹</u>	<u>9 to 26</u>	<u>2.5Y 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>in sbk</u>	<u>fr</u>
<u>Bv²</u>	<u>26 to 48</u>	<u>10K 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>in sbk</u>	<u>fr</u>
<u>C¹</u>	<u>48 to 54</u>	<u>2.5Y 4/4</u>	<u>10K 4/8 2.5Y 5/2</u>	<u>22P 22A</u>	<u>sl</u>	<u>m</u>	<u>fr</u>
<u>C²</u>	<u>54 to 60</u>	<u>2.5Y 5/2</u>	<u>2.5Y 4/3</u>	<u>22P</u>	<u>sl</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = 59"

Joseph C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: C5 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 0-1% Relief: gently sloping

Estimated Permeability: 20 in

Depth to and Type of Limiting Zone: 42" to redox depletion & concentration

Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	—	—	sl	2mgv	fr
E	8 to 24	10YR 5/4	—	—	sl	1msbk	fr
Bt	24 to 42	10YR 5/6	—	—	sl	1msbk	fr
C ¹	42 to 56	10YR 4/3	10YR 6/8 10YR 5/2	c1p c2p	col	m	fr
C ²	56 to 60	10YR 5/8	10YR 6/2	c2p	lws	n	fr
	to						
	to						
	to						

Comments: _____ Free water = >60"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: C6 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-10% Relief: nearly level
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 42" to redox depletions
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>fr</u>
<u>E</u>	<u>9 to 18</u>	<u>2.5Y 9/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1mrbk</u>	<u>fr</u>
<u>Bt</u>	<u>18 to 20</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>scl</u>	<u>2msh</u>	<u>fr</u>
<u>C¹</u>	<u>30 to 42</u>	<u>10YR 6/4 7/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>n</u>	<u>fr</u>
<u>C²</u>	<u>42 to 52</u>	<u>2.5Y 5/3</u>	<u>10YR 4/6 5/8 2.5Y 5/2</u>	<u>c</u>	<u>sl</u>	<u>n</u>	<u>fr</u>
<u>C³</u>	<u>52 to 65</u>	<u>10YR 5/2</u>	<u>10YR 6/6 6/8</u>	<u>c2p</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 55"

J.C.D.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: C-7 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 50" to redox depletion & concentration

Subgroup Taxonomic Classification: Typic Dystrudpt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>2mg</u>	<u>fr</u>
<u>Bw</u>	<u>8 to 50</u>	<u>2.5Y 5/4</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>Cg</u>	<u>50 to 60</u>	<u>2.5Y 5/2</u>	<u>10YR 5/6</u>	<u>CLP</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						
	to						
	to						

Comments: _____ Free water = 59"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: C8 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 38" to redox depletions
 Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mp</u>	<u>fr</u>
<u>E</u>	<u>8 to 38</u>	<u>10YR 6/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msble</u>	<u>fr</u>
<u>EB</u>	<u>30 to 38</u>	<u>10YR 6/4 10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sl/scl</u>	<u>2msble</u>	<u>fr</u>
<u>C</u>	<u>38 to 60</u>	<u>2.5Y 4/4</u>	<u>10YR 4/8 2.5Y 6/2</u>	<u>C1P C2P</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 58"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: C-9 Soil Boring: or Test Pit: Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: nearly level
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 55" to redox depletion & cnc.
 Subgroup Taxonomic Classification: Typic Dystrudapt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>co/s</u>	<u>2 mpi</u>	<u>fr</u>
<u>Bw</u>	<u>9 to 30</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>co/s</u>	<u>1 mpi</u>	<u>fr</u>
<u>C</u>	<u>30 to 55</u>	<u>2.5Y 4/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>vfr</u>
<u>Cg</u>	<u>55 to 60</u>	<u>2.5Y 4/3</u>	<u>10YR 5/8 2.5Y 5/2</u>	<u>CIP CZF</u>	<u>lo/s</u>	<u>m</u>	<u>vfr</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = >60"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: C-10 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: mostly level
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 55" to redox depletions & concentration
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 9	10YR 4/4	/	/	sl	2p g	fv
Bt ¹	9 to 24	10YR 5/6	/	/	sl	1m sblc	fr
Bt ²	24 to 34	10YR 4/6	/	/	scl	2m sblc	fv
Bc	34 to 55	10YR 4/4	/	/	sl	m	fr
C	55 to 60	2.5Y 4/4	10YR 4/8 2.5Y 4/2	210 210	l	n	fr
	to						
	to						
	to						

Comments: _____ Free water = 59"

J.C. Duke
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: D-2 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 38" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Oxyaquic Psycrodept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>—</u>	<u>—</u>	<u>s</u>	<u>2mg</u>	<u>fr</u>
<u>Bt</u>	<u>8 to 18</u>	<u>10YR 5/6</u>	<u>—</u>	<u>—</u>	<u>s</u>	<u>1msbk</u>	<u>fr</u>
<u>C¹</u>	<u>18 to 38</u>	<u>2.5Y 5/4</u>	<u>—</u>	<u>—</u>	<u>ls</u>	<u>m</u>	<u>vfr</u>
<u>C²</u>	<u>38 to 50</u>	<u>2.5Y 5/5</u>	<u>5YR 7/0 2.5Y 5/2</u>	<u>C1P C2P</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
<u>C³</u>	<u>50 to 60</u>	<u>2.5Y 4/2</u>	<u>10YR 5/6</u>	<u>C1P</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 45"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: D-3 Soil Boring: or Test Pit: _____ Date of Test: 1/10/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 36" to redox depletion & concentration

Subgroup Taxonomic Classification: Oxyaquic Dystrudept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>engl</u>	<u>fr</u>
<u>B_w¹</u>	<u>8 to 30</u>	<u>2.5Y 5/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>insbk</u>	<u>fr</u>
<u>B_w²</u>	<u>30 to 36</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>cosl</u>	<u>insbk</u>	<u>fr</u>
<u>C¹</u>	<u>36 to 49</u>	<u>2.5Y 6/3</u>	<u>10YR 5/8 2.5Y 5/2</u>	<u>c2p c2r</u>	<u>cos</u>	<u>n</u>	<u>fr</u>
<u>C_g²</u>	<u>49 to 60</u>	<u>2.5Y 5/2</u>	<u>10YR 4/6 4/8</u>	<u>c1p</u>	<u>cos</u>	<u>n</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = 43

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: D4 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: _____
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 42" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/4	/	/	sl	2mg	fr
E	8 to 18	10YR 4/4	/	/	sl	imble	fr
Bt	18 to 32	10YR 5/6	/	/	sl	imble	fr
CB	32 to 42	10YR 5/6 4/4	/	/	sl	imble	fr
C	42 to 60	10YR 6/4	10YR 5/8 10YR 7/2	220 220	loos	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 48"

Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: D-5 Soil Boring: or Test Pit: _____ Date of Test: 2/17/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 40 mp.
 Depth to and Type of Limiting Zone: 36" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/4	/	/	cosl	2mp	fr
E	8 to 18	10YR 4/4	/	/	cosl	1msbl	fr
Bt	18 to 36	10YR 5/6	/	/	cosl	3msbl	fr
C1	36 to 50	10YR 5/4	10YR 5R	22p	cosl	m	fr
C2 Cg	50 to 60	10YR 7/2	10YR 7B	cc-	cosl	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 50"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: D-6 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 36" to redox depletions & concentrations

Subgroup Taxonomic Classification: Oxyaquic Dystrudert

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 7/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>fr</u>
<u>Bw¹</u>	<u>8 to 30</u>	<u>2.5Y 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1m/ble</u>	<u>fr</u>
<u>Bw²</u>	<u>30 to 36</u>	<u>2.5Y 5/4</u>	<u>10M 5/8</u>	<u>FIP</u>	<u>sl</u>	<u>1m/ble</u>	<u>fr</u>
<u>C¹</u>	<u>36 to 48</u>	<u>2.5Y 4/3</u>	<u>2.5Y 4/2</u>	<u>CIP</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
<u>C²</u>	<u>48 to 60</u>	<u>2.5Y 7/2</u>	<u>10YR 7/8</u>	<u>CCP</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 39"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: D-7 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 0-1% Relief: gently sloping
 Estimated Permeability: 20cp.
 Depth to and Type of Limiting Zone: 48" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10MR 7/3</u>	<u>/</u>	<u>/</u>	<u>s</u>	<u>2mpv</u>	<u>fr</u>
<u>E</u>	<u>9 to 26</u>	<u>2.5Y 6/4</u>	<u>/</u>	<u>/</u>	<u>s</u>	<u>1msblk</u>	<u>fr</u>
<u>EB</u>	<u>26 to 36</u>	<u>2.5Y 6/4</u>	<u>1/2 10MR 5/6</u>	<u>/</u>	<u>s, scf</u>	<u>2msblk</u>	<u>fr</u>
<u>C</u>	<u>36 to 48</u>	<u>2.5Y 6/3</u>	<u>10MR 4/6</u>	<u>C10</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
<u>Cg</u>	<u>48 to 60</u>	<u>2.5Y 6/2 1/3</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 58"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 0-8 Soil Boring: or Test Pit: Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpy
 Depth to and Type of Limiting Zone: 55" to redox depletion
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 4</u>	<u>10YR 7/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>fr</u>
<u>E¹</u>	<u>9 to 24</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>E²</u>	<u>24 to 34</u>	<u>2.5Y 5/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>1msbk</u>	<u>ufr</u>
<u>E³</u>	<u>34 to 55</u>	<u>2.5Y 5/4 & 10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>ls, scl</u>	<u>2msbk</u>	<u>fr</u>
<u>C_g</u>	<u>55 to 60</u>	<u>2.5Y 4/2 & 4/3</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = >60"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 0-9 Soil Boring: or Test Pit: Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 64" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 5/3	/	/	sl	2mg	fr
Bt ¹	8 to 30	10YR 5/6	/	/	sl	1msbk	fr
C	30 to 50	2.5Y 7/4	/	/	lr	n	stfr
2Bt ²	50 to 55	2.5Y 6/4	2 10YR 7/2	/	ls, sl	1msbk	fr
C	55 to 64	2.5Y 6/4	/	/	ls	n	stfr
C	64 to	2.5Y 6/4	2.5Y 4/2 10YR 6/6	C10 C10	l	n	fr
	to						
	to						

Comments: _____ Free water = 67"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: D-10 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 4-6% Relief: gently sloping

Estimated Permeability: 40 msi

Depth to and Type of Limiting Zone: 42" to redox depletions

Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mgr	fr
Bt ¹	8 to 16	10YR 5/6	/	/	sl	1m blk	fr
Bt ²	16 to 42	10YR 4/6	/	/	scl-	2m blk	fr
C	42 to 60	2.5Y 4/9	2.5Y 4/2	FIP	lcoj	m	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 48"

J.C. Duke, Jr.
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SOIL PROFILE NOTE PAGE

Profile #: E2 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: greatly sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 42" to redox depletion & concentrations
 Subgroup Taxonomic Classification: Typic Hapludalf

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 11	10YR 3/3	/	/	col	2mg	f
E	11 to 24	10YR 5/4	/	/	col	1mblk	fr
Bt	24 to 38	10YR 5/6 7/4	/	/	col-	2mblk	fr
Cb	38 to 42	2.5Y 4/4	/	/	col-	m	f
C	42 to 50	2.5Y 4/4	10YR 4/6 4/6 2.5Y 7/2	c2p c2n	lws	n	f
Cg	50 to 60	2.5Y 7/2	2.5Y 4/6	c2n	hws	m	fr
	to						
	to						

Comments: _____ Free water = 43"
E-1 < 20"

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SOIL PROFILE NOTE PAGE

Profile #: E3 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 42" to redox depletions & concentration
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/4	/	/	sl	2mg	fr
E	8 to 36	10YR 5/4	/	/	sl	1m, 3/4	fv
Bt	36 to 42	10YR 5/6	/	/	sl	1m, 3/4	fr
C ¹	42 to 54	2.5Y 6/4	10YR 6/6 2.5Y 7/2	C2P C2V	sl	r	fr
C ² _g	54 to 60	2.5Y 6/2	2.5Y 5/8	C2V	sl	r	fr
	to						
	to						
	to						

Comments: _____ Free water = 54"

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SOIL PROFILE NOTE PAGE

Profile #: E4 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 42" to redox depletions & concentration
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>f</u>
<u>Bt</u>	<u>8 to 42</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1m sbl</u>	<u>f</u>
<u>C</u>	<u>42 to 60</u>	<u>2.5Y 4/4</u>	<u>10YR 4/2 2.5Y 5/2</u>	<u>22P 22V</u>	<u>sl</u>	<u>m</u>	<u>f</u>
	to						
	to						
	to						
	to						
	to						

Comments: _____ Free water = 53"

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SOIL PROFILE NOTE PAGE

Profile #: E5 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 50" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mp	f
E	8 to 26	10YR 5/4 + 5/4	/	/	sl	1m, blk	f
BE	26 to 34	10YR 5/2	/	/	sl	1m, blk	f
BC	34 to 50	10YR 5/4 5/6	/	/	sl, scl	2m, blk	f
C	50 to 60	2.5Y 5/4	10YR 5/8 2.5Y 4/2	2.5Y 2.5Y	sl	m	f
	to						
	to						
	to						

Comments: _____ Free water = >60

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SOIL PROFILE NOTE PAGE

Profile #: E6 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2 % Relief: grassy slope
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 45" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mg	fr
E	8 to 24	10YR 5/4	/	/	sl	1msbk	fr
Bt	24 to 30	10YR 5/6	/	/	sd-	cmblk	fr
B	30 to 45	10YR 4/4: 5/6	/	/	sl	1msbk	fr
C	45 to 60	2.5Y 4/3	10YR 5/6 2.5Y 4/2	ccp cc	ls	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 58"

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SOIL PROFILE NOTE PAGE

Profile #: E-7 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20mp
 Depth to and Type of Limiting Zone: 66" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mgp</u>	<u>fr</u>
<u>E</u>	<u>8 to 46</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1m sbl</u>	<u>fr</u>
<u>Bt</u>	<u>40 to 56</u>	<u>7.5YR 7/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1m sbl</u>	<u>fr</u>
<u>C¹</u>	<u>56 to 66</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>m</u>	<u>fr</u>
<u>C²</u>	<u>66 to 72</u>	<u>2.5Y 4/4</u>	<u>2.5Y 7/2</u>	<u>< 10</u>	<u>loos</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 68"

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SOIL PROFILE NOTE PAGE

Profile #: E-8 Soil Boring: or Test Pit: Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 62" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mgv	fr
E	8 to 25	10YR 4/4	/	/	sl	1msbk	fr
Bt	25 to 36	10YR 7/6	/	/	scl	2msbk	fr
C1	36 to 62	10YR 4/4	/	/	sl	m	fr
C2	62 to 66	2.5Y 4/4	10YR 4/8 2.5Y 5/2	22P 22P	lcos	m	vfr
	to						
	to						
	to						

Comments: _____ Free water = 64"

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SOIL PROFILE NOTE PAGE

Profile #: E-9 Soil Boring: or Test Pit: Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 60" to redox depletions
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>fv</u>
<u>Bt</u>	<u>8 to 22</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>msble</u>	<u>fv</u>
<u>C¹</u>	<u>22 to 34</u>	<u>10YR 9/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>msble</u>	<u>vfr</u>
<u>C²</u>	<u>34 to 60</u>	<u>10YR 7/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>vfr</u>
<u>C³</u>	<u>60 to 66</u>	<u>2.5Y 9/4</u>	<u>2.5Y 7/2</u>	<u>crp</u>	<u>ls</u>	<u>n</u>	<u>fv</u>
	to						
	to						
	to						

Comments: _____ Free water = 65"

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SOIL PROFILE NOTE PAGE

Profile #: E-10 Soil Boring: or Test Pit: Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 40 mpi
 Depth to and Type of Limiting Zone: Typic Hapludult
 Subgroup Taxonomic Classification: 60" to redox depletions

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 6	10YR 4/3	/	/	sl	2mg	fr
E	6 to 18	10YR 4/4	/	/	sl	1msbk	fr
Bt ¹	18 to 34	10YR 5/6	/	/	scl	2msbk	fr
Bt ²	34 to 56	10YR 7/2	/	/	sl	1msbk	fr
C ¹	56 to 60	2.5Y 4/4 & 10YR 7/2	/	/	ls, sl	n	fr
C ²	60 to 66	2.5Y 7/2	/	/	lcs	n	fr
	to						
	to						

Comments: _____ Free water = 64"

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SOIL PROFILE NOTE PAGE

Profile #: F-2 Soil Boring: or Test Pit: _____ Date of Test: 1/10/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 36" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Oxyaquic Haplosudult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 7/2	/	/	sl	2mp	fr
E	8 to 18	10YR 5/4	/	/	ls	1mb	fr
Bt	18 to 36	10YR 7/2 7/4	/	/	sl, ls	1mb/1	fr
C	36 to 60	2.5Y 9/3	2.5Y 7/2	ccr	loc	m	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 47"
F-1 420"

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SOIL PROFILE NOTE PAGE

Profile #: F-3 Soil Boring: or Test Pit: Date of Test: 2/21/05

Property Owner: LCC

Property Location: N/CR 224, W of RT. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 30" to redox depletions & cementation

Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 9	10YR 4/2	/	/	sl	2mg	fr
E	9 to 16	2.5Y 5/4	/	/	sl	1nsbk	fr
Bt	16 to 22	10YR 5/6	/	/	co sl	1nsbk	fr
C1	22 to 30	2.5Y 7/6	/	/	co sl	m	fr
Cy ²	30 to 60	2.5Y 4/2	10YR 5/8	co	low	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 41"

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SOIL PROFILE NOTE PAGE

Profile #: FJ Soil Boring: or Test Pit: _____ Date of Test: 9/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 55"
 Subgroup Taxonomic Classification: Typic Dystrudent

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10 YR 4/2</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>1 mpr</u>	<u>fr</u>
<u>Bw</u>	<u>8 to 20</u>	<u>10 YR 5/4</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>1 mbk</u>	<u>fr</u>
<u>C'</u>	<u>20 to 55</u>	<u>2.5 Y 6/4</u>	<u>/</u>	<u>/</u>	<u>loose</u>	<u>m</u>	<u>fr</u>
<u>C²</u>	<u>55 to 60</u>	<u>2.5 Y 6/3</u>	<u>2.5 Y 4/2</u>	<u>620</u>	<u>loose</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = > 60"

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SOIL PROFILE NOTE PAGE

Profile #: F-4 Soil Boring: or Test Pit: _____ Date of Test: 2/21/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 20 m/s
 Depth to and Type of Limiting Zone: 30" to redox depletion & concretions
 Subgroup Taxonomic Classification: Oxyaquic Dystrudust

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>2mp</u>	<u>f</u>
<u>Aw</u>	<u>8 to 25</u>	<u>2.5Y 6/4</u>	<u>/</u>	<u>/</u>	<u>loos</u>	<u>im. s/bk</u>	<u>f</u>
<u>C¹</u>	<u>25 to 30</u>	<u>2.5Y 6/3</u>	<u>/</u>	<u>/</u>	<u>loos</u>	<u>n</u>	<u>f</u>
<u>C²</u>	<u>30 to 40</u>	<u>2.5Y 6/3</u>	<u>2.5Y 6/2</u>	<u>c20</u>	<u>loos</u>	<u>n</u>	<u>f</u>
<u>C³</u>	<u>40 to 60</u>	<u>2.5Y 7/2</u>	<u>10YR 6/5</u>	<u>c10</u>	<u>loos</u>	<u>n</u>	<u>f</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 58"

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SOIL PROFILE NOTE PAGE

Profile #: F6 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 20 in
 Depth to and Type of Limiting Zone: 64" to redox depletion & concentration.
 Subgroup Taxonomic Classification: Typic Dystrudept

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>impr</u>	<u>f</u>
<u>E</u>	<u>8 to 24</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>impr</u>	<u>f</u>
<u>Bw</u>	<u>24 to 49</u>	<u>10YR 7/4 5/6</u>	<u>/</u>	<u>/</u>	<u>coarse</u>	<u>impr</u>	<u>f</u>
<u>C1</u>	<u>49 to 64</u>	<u>2.5Y 7/6 5/4</u>	<u>/</u>	<u>/</u>	<u>slty</u>	<u>m</u>	<u>f</u>
<u>C2</u>	<u>64 to 78</u>	<u>2.5Y 7/2</u>	<u>10YR 7/8</u>	<u>ced</u>	<u>ls</u>	<u>m</u>	<u>f</u>
	to						
	to						
	to						

Comments: _____ Free water = >70

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SOIL PROFILE NOTE PAGE

Profile #: F7 Soil Boring: or Test Pit: Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 52" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 9	10YR 4/2	/	/	cosl	2mg1	f
E	9 to 34	10YR 6/4	/	/	cosl	1mb/c	f
Bt	34 to 44	10YR 7/6	/	/	cosl	2ms/b1	f
C	44 to 55	2.5Y 6/4 P4	/	/	ls	m	f
C	55 to 60	2.5Y 6/2	10YR 6/6	OLP	ls	m	f
	to						
	to						
	to						

Comments: _____ Free water = 76.5

J.C. Duke, Jr.
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SOIL PROFILE NOTE PAGE

Profile #: F8 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 30 mpi

Depth to and Type of Limiting Zone: 58" to relax depletion & concentration

Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 7	10PR 4/2	/	/	col	2mgi	fr
E	7 to 28	10PR 9/4	/	/	col	1msbl	fr
BE	28 to 38	10PR 5/6 9/4	/	/	col, col	2msbl	fr
CB	38 to 58	2.57 9/4 3/2	/	/	col, less	m	fr
C	58 to 64	2.54 4/3	10PR 9/8 2.54 5/2	C1D C2D	ls	A	fr
	to						
	to						
	to						

Comments: _____ Free water = >64'

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Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: F9 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 20 imp.'

Depth to and Type of Limiting Zone: 68" to redox depletions & concentration

Subgroup Taxonomic Classification: Typic Dystrudust

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>engr</u>	<u>f</u>
<u>Bw</u>	<u>8 to 30</u>	<u>10YR 6/4</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>imble</u>	<u>f</u>
<u>C</u>	<u>30 to 68</u>	<u>2.5Y 6/4</u>	<u>/</u>	<u>/</u>	<u>lws</u>	<u>m</u>	<u>f</u>
<u>C</u>	<u>68 to 72</u>	<u>10YR 5/4</u>	<u>2.5Y 4/2 10YR 6/8</u>	<u>CIP CIP</u>	<u>lcos</u>	<u>m</u>	<u>f</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 78"

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 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: F-10 Soil Boring: or Test Pit: Date of Test: 2/2/05

Property Owner: LCC

Property Location: N/CR 224, W of RT. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 30 in pi

Depth to and Type of Limiting Zone: 54" to redox depletion & concentrations

Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>s</u>	<u>2ng</u>	<u>f</u>
<u>E</u>	<u>9 to 18</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>s</u>	<u>1m, sb</u>	<u>f</u>
<u>Bt</u>	<u>18 to 36</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>scl</u>	<u>2m, sb</u>	<u>f</u>
<u>C¹</u>	<u>36 to 54</u>	<u>2.5Y 9/4</u>	<u>/</u>	<u>/</u>	<u>s</u>	<u>1m, sb</u>	<u>f</u>
<u>C²</u>	<u>54 to 64</u>	<u>2.5Y 7/2</u>	<u>10YR 4/8</u>	<u>CIP</u>	<u>l₁</u>	<u>r</u>	<u>f</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 57"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: G-1 Soil Boring: or Test Pit: Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: wooded gently sloping

Estimated Permeability: 20 mpi

Depth to and Type of Limiting Zone: 48" to redox depletions

Subgroup Taxonomic Classification: Typic Dystrudox

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>A_p</u>	<u>0 to 5</u>	<u>10% 4/3</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>lgs</u>	<u>f</u>
<u>B_w</u>	<u>5 to 32</u>	<u>10% 4/4</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>lm, blk</u>	<u>f</u>
<u>C</u>	<u>32 to 48</u>	<u>25% 6/4</u>	<u>—</u>	<u>—</u>	<u>ls</u>	<u>m</u>	<u>f</u>
<u>C</u>	<u>48 to 60</u>	<u>25% 4/2</u>	<u>—</u>	<u>—</u>	<u>ls</u>	<u>m</u>	<u>f</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = 48"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 62 Soil Boring: or Test Pit: Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 50" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Haploudult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>fr</u>
<u>EP</u>	<u>9 to 30</u>	<u>10YR 6/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>C</u>	<u>30 to 50</u>	<u>2.5Y 4/4</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>n</u>	<u>fr</u>
<u>C</u>	<u>50 to 60</u>	<u>2.5Y 4/3</u>	<u>10YR 4/6 4/8 2.5Y 5/2</u>	<u>ccr crl</u>	<u>sl</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 56"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: G3 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 50" to redox depletion & cementation
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2ng1</u>	<u>f</u>
<u>E</u>	<u>8 to 32</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>o sl</u>	<u>1msbh</u>	<u>f</u>
<u>Bt</u>	<u>32 to 42</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>cosl+</u>	<u>2msbh</u>	<u>f</u>
<u>C'</u>	<u>42 to 50</u>	<u>10YR 6/3</u>	<u>/</u>	<u>/</u>	<u>cos</u>	<u>1wg1</u>	<u>f</u>
<u>C²</u>	<u>50 to 66</u>	<u>2.5Y 4/3</u>	<u>10YR 5/8 2.5Y 4/2</u>	<u>C1P C2D</u>	<u>cos</u>	<u>m</u>	<u>f</u>
	to						
	to						
	to						

Comments: _____ Free water = 62'

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: G 4 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 30" to redox depletions & concentration
 Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 10</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>2mgs</u>	<u>fr</u>
<u>E</u>	<u>10 to 24</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>col</u>	<u>1n sble</u>	<u>fr</u>
<u>EB</u>	<u>24 to 30</u>	<u>10YR 5/4</u>	<u>& 10YR 5/2</u>	<u>/</u>	<u>col, wcol</u>	<u>2mgsbl</u>	<u>fr</u>
<u>C1</u>	<u>30 to 44</u>	<u>2.5Y 6/4</u>	<u>10YR 4/8 2.5Y 6/2</u>	<u>22r 22o</u>	<u>lcs</u>	<u>m</u>	<u>fr</u>
<u>C2 C4</u>	<u>44 to 68</u>	<u>2.5Y 7/2</u>	<u>10YR 6/2 7/2</u>	<u>21r</u>	<u>lcs</u>	<u>m</u>	<u>fr</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 36"

J.C.D.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 65 Soil Boring: or Test Pit: Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 2-3% Relief: gently sloping

Estimated Permeability: 30 mp.

Depth to and Type of Limiting Zone: 36" to redox depletions & concentration

Subgroup Taxonomic Classification: Oxyaquic Paleudult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2ngs	f
E	8 to 24	10YR 7/4	/	/	cosl	1m, blk	f
B _w	24 to 36	10YR 4/4	/	/	cosl	1m, blk	f
C ¹	36 to 49	10YR 4/3	7.5YR 7/8 10YR 7/2	C2P C2P	cosl	1m, blk	f
2C ²	49 to 60	10YR 4/2	7.5YR 4/6 10YR 7/2	C2P C1P	sel-	m	f
	to						
	to						
	to						

Comments: _____ Free water = 40'

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: G-6 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 60" to redox depletions & concentrations
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	—	—	col	2mg	f
E	8 to 24	10YR 4/4	—	—	col	1mg	f
EB	24 to 30	10YR 4/4 & 10YR 5/6	—	—	col	1mg	f
Bt	30 to 34	10YR 4/2	—	—	col	2mg	f
C1	34 to 42	2.5Y 7/4	—	—	lvs	sg	lo
C2	42 to 68	1.5Y 7/3	10YR 5/3	C2P	sl	n	f
C3	68 to 72	10YR 5/2	10YR 5/3	C2P	sl	n	f
	to						

Comments: _____ Free water = > 72"

Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 6-7 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of RT. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 30 mpi

2 Depth to and Type of Limiting Zone: 34" to redox depletion & concentrations

Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mgr	fr
E	8 to 24	2.5Y 5/4	/	/	cosl	1m, 5blc	fr
BE	24 to 34	10YR 5/6 5/4	/	/	sl, scl	2m, 5bl	fr
Dt	34 to 41	2.5Y 5/4	10YR 5/6 2.5Y 5/2	C1P C2P	scl	2m, 5bl	fr
C	41 to 60	2.5Y 5/4	10YR 4/6 4/3 2.5Y 5/2	C2P C2H	lcos	-	fr
	to						
	to						
	to						

Comments: _____ Free water = 58"

Joseph C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: G-8 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping

Estimated Permeability: 30 rpi

2. Depth to and Type of Limiting Zone: 38" to redox depletions & concentrations

Subgroup Taxonomic Classification: Oxyaquic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mgk	fr
E	8 to 22	10YR 4/4	/	/	sl	1m-bk	fr
EB	22 to 38	10YR 4/4	< 10YR 5/6	/	sl, scl	1m-bk	fr
C ¹	38 to 48	2.5Y 4/4	10YR 4/8 2.5Y 7/2	C1P C2P	cast	m	fr
C ²	48 to 68	10YR 4/4	10YR 5/8	C1	ls	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 56"

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SOIL PROFILE NOTE PAGE

Profile #: G-9 Soil Boring: or Test Pit: Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: _____
 Estimated Permeability: 30 mpi
 Depth to and Type of Limiting Zone: 48" to redox depletion & cementation
 Subgroup Taxonomic Classification: Typic Hapludalf

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	—	—	sl	2mp	fr
E	8 to 28	10YR 5/4	—	—	sl	1mblc	fr
EB	28 to 48	10YR 7.5/4	—	—	sl/sc	1mblc	fr
C	48 to 60	10YR 7/4	10YR 4/2 10YR 5/8	c2p c2a	lcs	rs	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 52"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 610 Soil Boring: or Test Pit: Date of Test: 9/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 3-4 Relief: gently sloping
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 36"
 Subgroup Taxonomic Classification: Oxyaquic Petrodult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	s-l	2mg	fr
E	8 to 24	2.5Y 5/4	/	/	co-s-l	1m, blk	fr
EB	24 to 36	10YR 5/4	/	/	co-s-l	1m, blk	fr
Bt	36 to 60	10YR 5/6 5/4	10YR 5/8	c2p	co-s-d, co-l	2m, blk	fr
	to						
	to						
	to						
	to						

Comments: _____ Free water = 36"

Joseph C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: 142 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30mpi
 Depth to and Type of Limiting Zone: 62 to redox depletions i concentrations
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 10	10YR 4/2	—	—	sl	2ng	fr
E	10 to 18	10YR 5/6	—	—	sl-	1mble	fr
Bt	18 to 28	10YR 4/6	—	—	sl+	2mble	fr
BC	28 to 40	10YR 4/4	—	—	cast-	1mble	fr
C1	40 to 62	2.5Y 6/4	—	—	loas	sq	lo
C2	62 to 72	2.5Y 7/3	10YR 5/8 2.5Y 4/2	C20 C20	loas	sq	lo
	to						
	to						

Comments: _____ Free water = 66"

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 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: H3 Soil Boring: or Test Pit: _____ Date of Test: 9/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30mpi
 Depth to and Type of Limiting Zone: 40" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/3	/	/	sl	2mg1	fr
E	8 to 22	10YR 4/4	/	/	sl	2msbl	fr
Bt	22 to 40	10YR 5/6	/	/	sl+	2msbl	fr
C1	40 to 50	2.5Y 4/4	10YR 5/6 2.5Y 4/3	C1D C1D	loos	1msbl	fr
C2	50 to 60	2.5Y 4/3	5YR 5/6 2.5Y 5/2	C2R C2D	loos	r	fr
	to						
	to						
	to						

Comments: _____ Free water = 43"

Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: H4 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 2-3% Relief: gently sloping

Estimated Permeability: 40 mpi

Depth to and Type of Limiting Zone: 22" to redox depletion & concentration

Subgroup Taxonomic Classification: Aquic Paleudult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 10</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mp</u>	<u>f</u>
<u>E1</u>	<u>10 to 22</u>	<u>2.5Y 4/3</u>	<u>/</u>	<u>/</u>	<u>co sl</u>	<u>2mbk</u>	<u>f</u>
<u>E2</u>	<u>22 to 29</u>	<u>10YR 4/4</u>	<u>10YR 1/6 4/4</u> <u>10YR 4/3</u>	<u>210</u> <u>220</u>	<u>sl</u>	<u>2mbk</u>	<u>f</u>
<u>Bt</u>	<u>29 to 60</u>	<u>2.5Y 4/3</u>	<u>18YR 5/8</u> <u>2.5Y 5/2</u>	<u>220</u> <u>22P</u>	<u>sl</u>	<u>m</u>	<u>f</u>
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						
	<u>to</u>						

Comments: _____ Free water = 26

J.C. Duke
 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: H5 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 30_{app}'
 Depth to and Type of Limiting Zone: 32" to redox depletions & concentration
 Subgroup Taxonomic Classification: Oxyaquic Dystrudys

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 6</u>	<u>10YR 4/2</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>2mgv</u>	<u>fr</u>
<u>B_w¹</u>	<u>6 to 24</u>	<u>10YR 4/4</u>	<u>—</u>	<u>—</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>B_w²</u>	<u>24 to 32</u>	<u>2.5Y 4/4</u>	<u>—</u>	<u>—</u>	<u>msl</u>	<u>1msbk</u>	<u>fr</u>
<u>C¹</u>	<u>32 to 56</u>	<u>2.5Y 4/2</u>	<u>2.5Y 4/2 2.5Y 7/2</u>	<u>C10 C2P</u>	<u>loas</u>	<u>m</u>	<u>fr</u>
<u>2C²</u>	<u>56 to 60</u>	<u>2.5Y 4/2</u>	<u>10YR 4/8 2.5Y 5/6</u>	<u>C2P C1P</u>	<u>scl</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = 36"

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 Joseph C. Duke, Jr., CPSS



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SOIL PROFILE NOTE PAGE

Profile #: H-6 Soil Boring: or Test Pit: Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 30 npi
 Depth to and Type of Limiting Zone: 56" to redox depletions & concentration
 Subgroup Taxonomic Classification: Typic Paludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mg	fr
Bw ¹	8 to 28	10YR 4/4	/	/	sl	1/4 blk	fr
Bw ²	28 to 36	2.5Y 4/4	/	/	sl	1/4 blk	fr
C ¹	36 to 50	2.5Y 4/3	/	/	ls	m	fr
C ²	50 to 56	10YR 5/6 4/4	/	/	sl	1/4 blk	fr
C ³	56 to 66	2.5Y 5/6	10YR 4/2	crv	scf	2 msh	fr
	to						
	to						

Comments: _____ Free water = 760

JCD
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SOIL PROFILE NOTE PAGE

Profile #: H-7 Soil Boring: or Test Pit: Date of Test: 3/3/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mpy
 Depth to and Type of Limiting Zone: 44" to redox depletion & concentration
 Subgroup Taxonomic Classification: Typic Hapludult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 9</u>	<u>10YR 7/2</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mp</u>	<u>fr</u>
<u>E</u>	<u>9 to 24</u>	<u>10YR 5/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1msbk</u>	<u>fr</u>
<u>Bt</u>	<u>24 to 44</u>	<u>10YR 5/2</u>	<u>/</u>	<u>/</u>	<u>coad</u>	<u>2msbk</u>	<u>fr</u>
<u>C¹</u>	<u>44 to 50</u>	<u>2.5Y 7/4 4/2</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
<u>C²</u>	<u>50 to 60</u>	<u>2.5Y 7/4 3/2</u>	<u>10YR 5/6 3/4</u>	<u>C1D</u>	<u>ls</u>	<u>m</u>	<u>fr</u>
	to						
	to						
	to						

Comments: _____ Free water = 48"

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: H8 Soil Boring: or Test Pit: _____ Date of Test: 3/3/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30mp
 Depth to and Type of Limiting Zone: 54"
 Subgroup Taxonomic Classification: Typic Hardudult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 9	10YR 4/4	/	/	sl	2m cr	f
E	9 to 30	10YR 4/4	/	/	sl	1m blk	f
EB	30 to 36	10YR 4/4 & 5/4	/	/	sl, scl	2m sh	f
Bt ¹	36 to 54	10YR 4/4	/	/	scl	2m sh	f
Bt ²	54 to 60	2.5Y 4/2	10YR 4/4	CIP	fscl	m	f
	to						
	to						
	to						

Comments: _____ Free water = 260

J.C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: H-9 Soil Boring: or Test Pit: _____ Date of Test: 3/2/05
 Property Owner: LCC
 Property Location: N/CR 224, W of RT. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 1-2% Relief: gently sloping
 Estimated Permeability: 30 mp.
 Depth to and Type of Limiting Zone: 52" to redox depletions
 Subgroup Taxonomic Classification: Typic Paleudult

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
Ap	0 to 8	10YR 4/2	/	/	sl	2mg	fr
E	8 to 30	10YR 4/4	/	/	sl	1msbk	fr
Bt	30 to 48	10YR 5/2	/	/	scf	2msbk	fr
C ¹	48 to 52	2.5Y 4/4 5/6	/	/	sl	m	fr
C ²	52 to 60	2.5Y 4/3	10YR 4/8 2.5Y 4/2	C2P C2V	sl	m	fr
	to						
	to						
	to						

Comments: _____ Free water = 55"

Joseph C. Duke, Jr.
 Joseph C. Duke, Jr., CPSS



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: J7 Soil Boring: or Test Pit: _____ Date of Test: 3/3/05
 Property Owner: LCC
 Property Location: N/CR 224, W of Rt. 113
 Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048
 Slope: 2-3% Relief: gently sloping
 Estimated Permeability: 20 mpi
 Depth to and Type of Limiting Zone: 22" to redox concentrations
 Subgroup Taxonomic Classification: Aquic Psypsidpt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 4/3</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>2mg</u>	<u>fv</u>
<u>E</u>	<u>8 to 14</u>	<u>2.5Y 4/4</u>	<u>/</u>	<u>/</u>	<u>loas</u>	<u>sg</u>	<u>l.</u>
<u>B_v</u>	<u>14 to 22</u>	<u>10YR 4/6</u>	<u>/</u>	<u>/</u>	<u>loas</u>	<u>sg</u>	<u>l.</u>
<u>C</u>	<u>22 to 60</u>	<u>2.5Y 4/3</u>	<u>10YR 4/3</u>	<u>c2p</u>	<u>lws</u>	<u>n</u>	<u>fv</u>
	to						
	to						
	to						
	to						

Comments: _____ Free water = 30
J-6 Filled wetlands
I-5 wetlands

J.C.D.
 Joseph C. Duke, Jr., CPSS

28



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: J8 Soil Boring: or Test Pit: _____ Date of Test: 1/1/05

Property Owner: LCC

Property Location: N/CR 224, W of RT. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: _____ Relief: _____

Estimated Permeability: _____

Depth to and Type of Limiting Zone: _____

Subgroup Taxonomic Classification: _____

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>Ap</u>	<u>0 to 6</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>s</u>	<u>2m</u>	<u>f</u>
<u>E</u>	<u>6 to 18</u>	<u>10YR 4/3 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>1m sbl</u>	<u>f</u>
<u>Bt¹</u>	<u>18 to 24</u>	<u>10YR 5/6</u>	<u>/</u>	<u>/</u>	<u>sd</u>	<u>2m sbl</u>	<u>f</u>
<u>Bt²</u>	<u>24 to 30</u>	<u>10YR 5/6</u>	<u>5YR 5/8 10YR 4/6</u>	<u>CIP C2P</u>	<u>sd</u>	<u>2m sbl</u>	<u>f</u>
<u>C¹</u>	<u>30 to 34</u>	<u>2.5Y 4/4 4/5</u>	<u>/</u>	<u>/</u>	<u>ls</u>	<u>m</u>	<u>f</u>
<u>C²</u>	<u>34 to 50</u>	<u>2.5Y 4/3</u>	<u>/</u>	<u>/</u>	<u>l</u>	<u>m</u>	<u>f</u>
<u>C³</u>	<u>50 to 55</u>	<u>7.5YR 4/3 4/2</u>	<u>/</u>	<u>/</u>	<u>ka</u>	<u>m</u>	<u>f</u>
<u>C⁴</u>	<u>55 to 60</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>lcs</u>	<u>m</u>	<u>f</u>

Comments: _____ Free water = 48"

J.C.D.
 Joseph C. Duke, Jr., CPSS



25092 Oak Road (302) 629-2989
 Seaford, DE 19973 Fax: 629-3212

SOIL PROFILE NOTE PAGE

Profile #: J9 Soil Boring: or Test Pit: Date of Test: 3/3/05

Property Owner: LCC

Property Location: N/CR 224, W of Rt. 113

Site Evaluator: Joseph C. Duke, Jr., CPSS Class "D" License #: 4048

Slope: 1-2% Relief: gently sloping (wooded)

Estimated Permeability: 30mp

Depth to and Type of Limiting Zone: SB to redox depletion & concentration

Subgroup Taxonomic Classification: Typic Hapludolt

Horizon	Depth	Matrix	Mottles	Ab. S. Con	Texture	Structure	Consistence
<u>A⁰</u>	<u>0 to 4</u>	<u>10YR 4/2</u>	<u>/</u>	<u>/</u>	<u>sl-</u>	<u>2mp</u>	<u>f</u>
<u>E</u>	<u>4 to 26</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl-</u>	<u>1msh</u>	<u>f</u>
<u>EB</u>	<u>26 to 34</u>	<u>10YR 4/4 5/6</u>	<u>/</u>	<u>/</u>	<u>sl, scl</u>	<u>1-2msh</u>	<u>f</u>
<u>Bt¹</u>	<u>34 to 46</u>	<u>10YR 7/2</u>	<u>/</u>	<u>/</u>	<u>scl</u>	<u>2msh</u>	<u>f</u>
<u>E</u>	<u>46 to 50</u>	<u>10YR 4/4</u>	<u>/</u>	<u>/</u>	<u>sl</u>	<u>n</u>	<u>f</u>
<u>2Bt²</u>	<u>50 to 58</u>	<u>2.5Y 7/2 10YR 7/6</u>	<u>/</u>	<u>/</u>	<u>slod</u>	<u>n</u>	<u>f</u>
<u>2Bt³</u>	<u>58 to 64</u>	<u>2.5Y 5/6</u>	<u>7.5YR 7/8 10YR 5/2</u>	<u>22P 22s</u>	<u>scl</u>	<u>n</u>	<u>f</u>
	<u>to</u>						

Comments: _____ Free water = 764"

JCD
 Joseph C. Duke, Jr., CPSS

#2

STAYTONVILLE ROAD

TEST RESULTS

Test No: E-8-A
 Date of Test: 03-04-05
 Depth of Test: 30"

Hole Saturated for 4 hrs

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
7:00	4 hours	12	9
11:00	30	4	8
11:30	10	4.5	1.5
40	10	4.5	1.5
50	10	4.5	1.5
12:00	10	4.5	1.5
10	10	4.5	1.5
20	10	4.5	1.5
30	10	4.5	1.5
9:30	30	12	9
10:00	30	3	9
10:30	30	3.5	8.5
11:00	30	3.5	8.5

Rate of fall: 10 ft / 16 minutes

Test No: E-8-B
 Date of Test: 03-04-05
 Depth of Test: 30"

Hole Saturated for 4 hrs

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
7:00	4 hours	12	2.5
11:00	30	(6) 6.5	2.5
11:30	10	6.5	1.75
40	10	5.25	1.5
50	10	5.50	1.5
12:00	10	6.75	1.25
10	10	5.75	1.25
20	10	6.75	1.25
30	10	5.75	1.25
9:30	30	12	2.25
10:00	30	9	2.5
10:30	30	9.5	2.5
11:00	30	9.5	2.5

Rate of fall: 10 ft / 26.7 minutes

Test No: E-8-C
 Date of Test: 03-04-05
 Depth of Test: 28"

Hole Saturated for 4 hrs

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
7:00	4 hours	12	2
11:00	30	(6) 10	2
11:30	10	5.50	1.50
40	10	5.50	1.50
50	10	5.50	1.50
12:00	10	5.75	1.25
10	10	5.75	1.25
20	10	5.75	1.25
30	10	5.75	1.25
9:30	30	12	2.10
10:00	30	10	2
10:30	30	10	2
11:00	30	10	2

Rate of fall: 10 ft / 30 minutes

#1

STAYBOWVILLE ROAD

TEST RESULTS

Test No: B-7-A
 Date of Test: 03-04-05
 Depth of Test: 29"

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
6:45	4 hours		
10:45	30	12	6
11:15	10	(6) 6	6
11:25	10	5	1
11:35	10	3	1
11:45	10	3	1
11:55	10	3	1
12:05	10	5	1
12:15	10	5	1
9:15	30	12	
9:45	30	7.5	4.5
10:15	30	7.5	4.5
10:45	30	8	4

Rate of fall: 10 minutes per inch 1"

Test No: B-7-B
 Date of Test: 03-04-05
 Depth of Test: 30"

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
6:45	4 hours		
10:45	30	12	8.5
11:15	10	(6) 2.5	3
11:25	10	3	3
11:35	10	3	3
11:45	10	5	1
11:55	10	4	2
12:05	10	4	2
12:15	10	4	2
9:15	30	12	
9:45	30	4.5	7.5
10:15	30	4.5	7.5
10:45	30	5	7

Rate of fall: 46 minutes per inch 1"

Test No: B-7-C
 Date of Test: 03-04-05
 Depth of Test: 28"

Starting Time	10 / 30 Minute Interval	Depth to Water	Drop in Inches
6:45	4 hours		
10:45	30	12	9
11:15	10	(6) 3	2
11:25	10	4	2
11:35	10	4	2
11:45	10	4.5	1.5
11:55	10	4	2
12:05	10	4	2
12:15	10	4	2
9:15	30	12	
9:45	30	4	8
10:15	30	4	8
10:45	30	4	8

Rate of fall: 5.22 minutes per inch 1"

TAB “11”

PLAN LEGEND

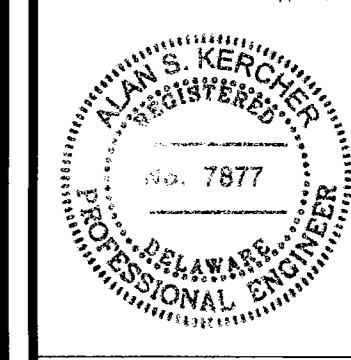
- EXISTING TREE LINE
- EXISTING WETLANDS LIMITS
- EXISTING PROPERTY BOUNDARY
- PROPOSED LOT LINE
- PROPOSED BUILDING RESTRICTION LINE
- POINT
- EXISTING ENTRANCE
- PROPOSED LIGHT POST

NOTE:
SHRUBS, BUSHES, AND FLOWERS PLANTED
IN THE LANDSCAPE EASEMENT SHALL NOT
HAVE HEIGHTS THAT WILL OBSTRUCT VIEWS
TO AND FROM THE DELDOT RIGHT-OF-WAY.
PLANTING HEIGHTS SHALL BE LESS THAN 36'.

REVISIONS

No.	DATE	DESCRIPTION
1	02/17/07	REVISIONS PER SCD COMMENTS (DATED 01/24/07)
2	06/05/09	REVISIONS PER SCD COMMENTS (DATED 01/24/07)

DESIGN PROFESSIONAL DATE 9/1/07

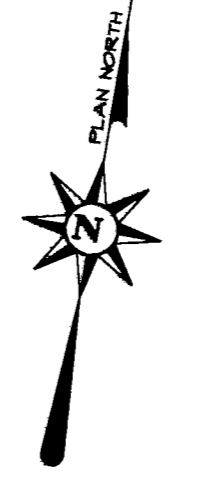


APPROVED BY: [Signature]
DATE: 9/1/07
SCALE: 1" = 40'
THIS PLAN IS AN INSTRUMENT OF SERVICE. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. ANY REUSE, REVISION, OR MODIFICATION OF THIS PLAN WITHOUT THE WRITTEN CONSENT OF KERCHER ENGINEERS, INC. IS PROHIBITED BY LAW. © COPYRIGHT 2007 KERCHER ENGINEERS, INC.

OWNER/APPLICANT: RICHARD CARLSLE
CEDAR CREEK, HUNDRED - SUSSEX COUNTY - DELAWARE
F.P.: 7-30-19, PARCEL 27
GROSS AREA: 93.58 Acres
NET AREA: 93.58 Acres

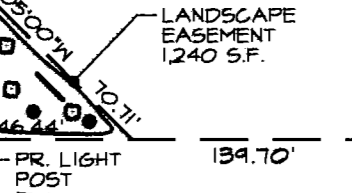
RECORD PLAN - SOUTH-EAST
DEER CREEK
KERCHER ENGINEERS, INC.
ENGINEERS • PLANNERS • SURVEYORS
413 EAST MARKET STREET - GEORGETOWN, DELAWARE 19847
302.854.9062 (Voice) 302.854.9064 (Fax) www.Kercher.com

JOB No: 04-1202EG
PLAN DATE: APRIL 7, 2005
SHEET No.: 2 of 5



LANDS W/ DARLENE B. DRAPER
DEED BOOK 2592, PAGE 268
ZONING: AG-1

TOTAL WETLANDS
17.72 Ac.



A 15' WIDE PERMANENT
EASEMENT FOR A 10' WIDE
MULTI-USE PATH IS HEREBY
ESTABLISHED AS PER THIS PLAT

AN ADDITIONAL 5' OF
RIGHT-OF-WAY IS HEREBY
DEDICATED TO PUBLIC USE
AS PER THIS PLAT

SUSSEX COUNTY ROAD #224
(EX. 50' R.O.W. - a.k.a. Staytonville Road - Local Road)

EX. 10' WIDE
ENTRANCE

PLAN LEGEND

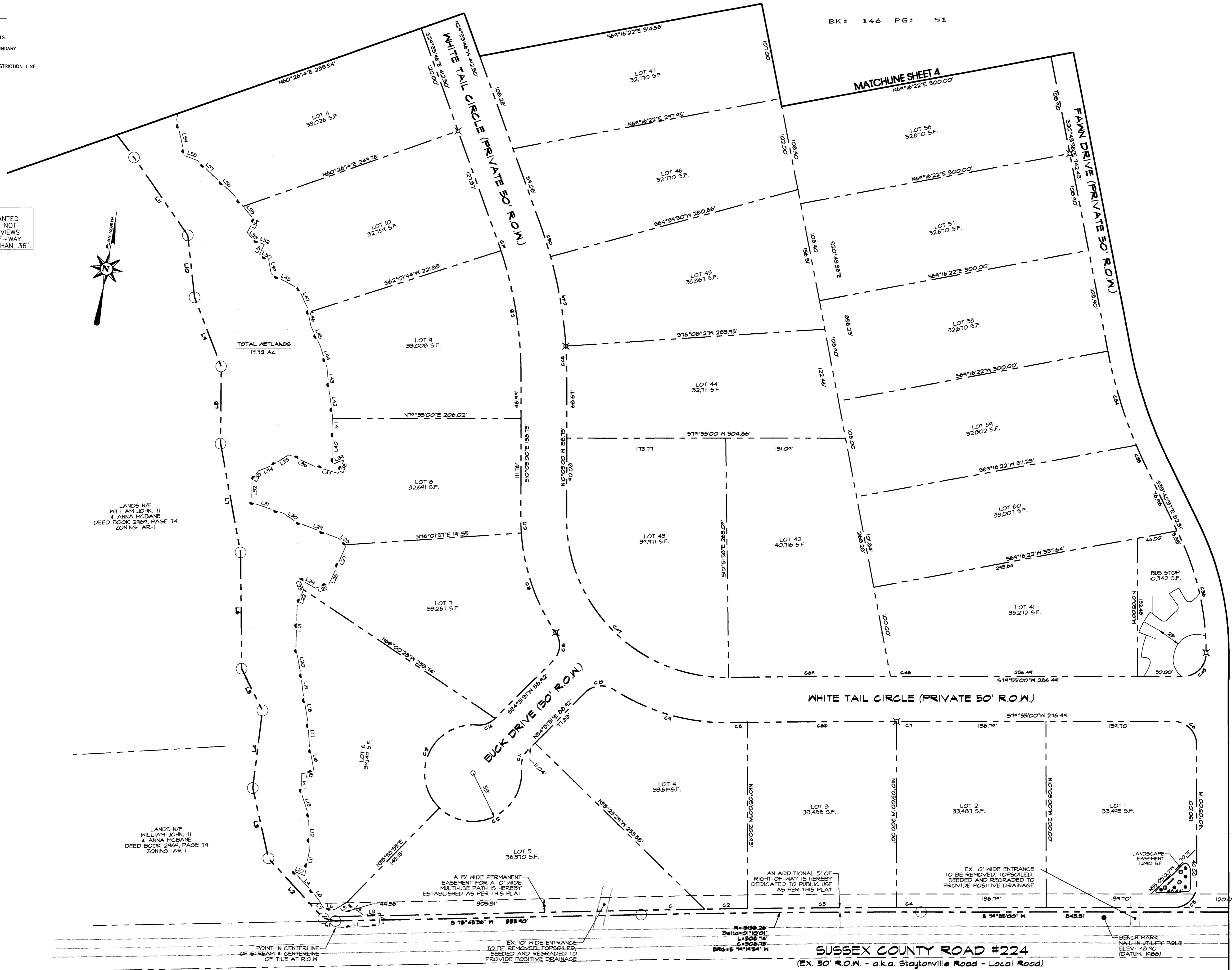
- EXISTING TREE LINE
- EXISTING WETLANDS LIMITS
- EXISTING PROPERTY BOUNDARY
- PROPOSED LOT LINE
- PROPOSED BUILDING RESTRICTION LINE
- POINT
- EXISTING ENTRANCE
- PROPOSED LIGHT POST

NOTE:
SHRUBS, BUSHES, AND FLOWERS PLANTED
IN THE LANDSCAPE EASEMENT SHALL NOT
HAVE HEIGHTS THAT WILL OBSTRUCT VIEWS
TO AND FROM THE DELDOT RIGHT-OF-WAY.
PLANTING HEIGHTS SHALL BE LESS THAN 36".



LANDS NF
WILLIAM JOHN, III
& ANNA MCBANE
DEED BOOK 2164, PAGE 14
ZONING: AR-1

LANDS NF
WILLIAM JOHN, III
& ANNA MCBANE
DEED BOOK 2164, PAGE 14
ZONING: AR-1



BK: 146 PG: 51

MATCHLINE SHEET 4

MATCHLINE SHEET 2

No.	DATE	DESCRIPTION
1	03/05/05	REVISIONS PER D&T COMMENTS
2	03/05/05	REVISIONS PER SECD COMMENTS (DATED 01/29/07)
3	03/05/05	REVISIONS PER SECD COMMENTS
4	03/05/05	REVISIONS PER SECD COMMENTS
5	03/05/05	REVISIONS PER SECD COMMENTS
6	03/05/05	REVISIONS PER SECD COMMENTS
7	03/05/05	REVISIONS PER SECD COMMENTS
8	03/05/05	REVISIONS PER SECD COMMENTS
9	03/05/05	REVISIONS PER SECD COMMENTS
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11	03/05/05	REVISIONS PER SECD COMMENTS
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13	03/05/05	REVISIONS PER SECD COMMENTS
14	03/05/05	REVISIONS PER SECD COMMENTS
15	03/05/05	REVISIONS PER SECD COMMENTS
16	03/05/05	REVISIONS PER SECD COMMENTS
17	03/05/05	REVISIONS PER SECD COMMENTS
18	03/05/05	REVISIONS PER SECD COMMENTS
19	03/05/05	REVISIONS PER SECD COMMENTS
20	03/05/05	REVISIONS PER SECD COMMENTS

DESIGN PROFESSIONAL DATE: 04/11/05

ALEX S. KERCHER
REGISTERED PROFESSIONAL ENGINEER
No. 7877
DELAWARE

APPROVED BY: [Signature] DATE: 04/11/05

DESIGNED BY: [Signature] DATE: 04/11/05

DRAWN BY: [Signature] DATE: 04/11/05

SCALE: 1" = 50'

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OWNER/APPLICANT: RICHARD CARLISLE
ADDRESS: 100 W. MARKET STREET
DEER CREEK, DE 19007-3787

PARCEL INFORMATION:
T.P.: 2-30-19, PARCEL 27
GROSS AREA: 61.58 Acres
NET AREA: 51.35 Acres

RECORD PLAN - SOUTHWEST
DEER CREEK

CEDEAR CREEK HUNDRED - SUSSEX COUNTY - DELAWARE

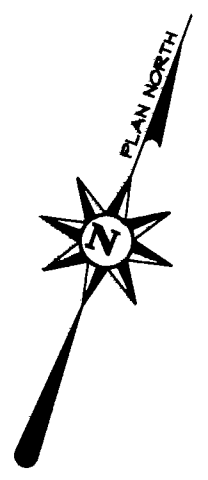
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413 EAST MARKET STREET - GEORGETOWN, DELAWARE 19847
302.854.9062 (Voice) 302.854.9064 (Fax) www.kerchere.com

JOB No: 04-1202EG
PLAN DATE: APRIL 7, 2005
SHEET No.: 3 of 5

DEER CREEK, Inc. No. 27, 2005 (10/0)

PLAN LEGEND

- EXISTING TREE LINE
- EXISTING WETLANDS LIMITS
- EXISTING PROPERTY BOUNDARY
- PROPOSED LOT LINE
- PROPOSED BUILDING RESTRICTION LINE
- POINT
- PROPOSED LIGHT POST



NO.	DATE	DESCRIPTION
1	03/07/05	REVISIONS PER 2005 CONVENTIONS (AMENDED 01/24/05)
2	03/07/05	REVISIONS PER 2005 CONVENTIONS (AMENDED 01/24/05)
3	03/07/05	REVISIONS PER 2005 CONVENTIONS (AMENDED 01/24/05)
4	03/07/05	REVISIONS PER 2005 CONVENTIONS (AMENDED 01/24/05)
5	03/07/05	REVISIONS PER 2005 CONVENTIONS (AMENDED 01/24/05)
6	03/07/05	REVISIONS PER 2005 CONVENTIONS (AMENDED 01/24/05)
7	03/07/05	REVISIONS PER 2005 CONVENTIONS (AMENDED 01/24/05)
8	03/07/05	REVISIONS PER 2005 CONVENTIONS (AMENDED 01/24/05)
9	03/07/05	REVISIONS PER 2005 CONVENTIONS (AMENDED 01/24/05)
10	03/07/05	REVISIONS PER 2005 CONVENTIONS (AMENDED 01/24/05)

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF IT COMPLIES WITH ALL REQUIREMENTS OF THE SUSSEX COUNTY AND THE LAWS OF THE STATE OF DELAWARE.

DESIGN PROFESSIONAL: **KEI** DATE: 9/11/04
 No. 7877
 PROFESSIONAL ENGINEER

APPROVED BY: [Signature] DESIGNER BY: [Signature] TOWER USE: []
 ASK: [] K.T.S. [] ACT. B. [] D-23 []
 SCALE: 1" = 50'
 SCALE IN FEET (1" = 50')

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OWNER/APPLICANT: RICHARD CARLISLE
 1000 W. MARKET STREET
 DEER CREEK, DE 19003
 Phone: (302) 371-8189

PARCEL INFORMATION:
 T.P.: 2-30-18, PARCEL 27
 GROSS AREA: 83.58 Acres
 NET AREA: 83.58 Acres

RECORD PLAN - NORTHWEST
 DEER CREEK
 CEDAR CREEK HUNDRED - SUSSEX COUNTY - DELAWARE

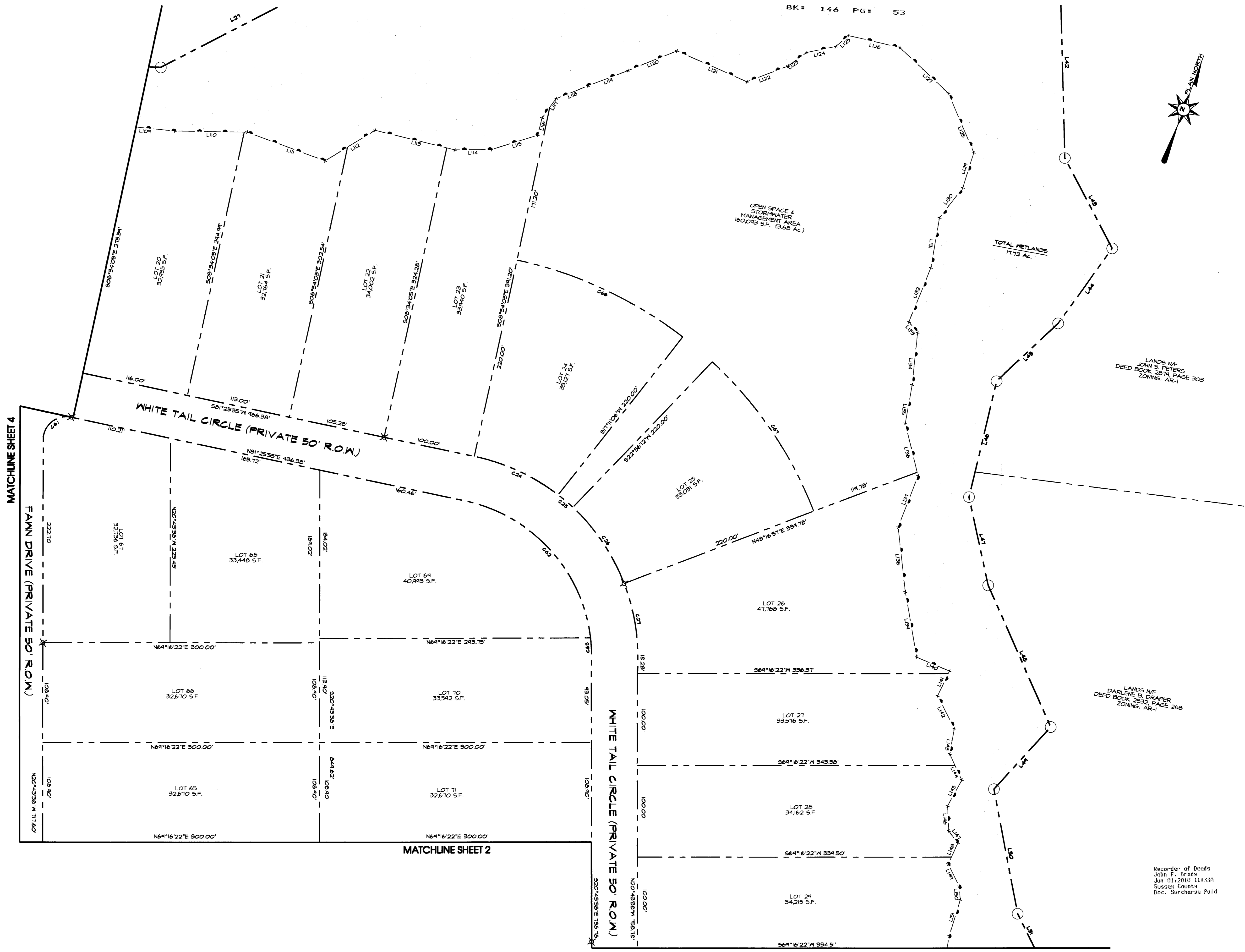
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JOB No: 04-1202EG
 PLAN DATE: APRIL 7, 2005
 SHEET No.: 4 of 5

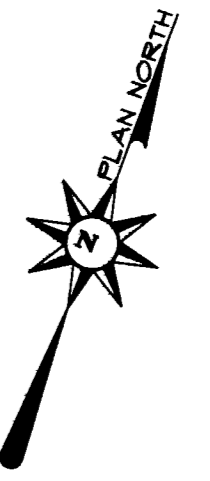
DEER CREEK, Inc., July 27, 2005 (10:50)

PLAN LEGEND

- EXISTING TREE LINE
- EXISTING WETLANDS LIMITS
- EXISTING PROPERTY BOUNDARY
- PROPOSED LOT LINE
- PROPOSED BUILDING RESTRICTION LINE
- POINT
- PROPOSED LIGHT POST



BK: 146 PG: 53



NO.	DATE	DESCRIPTION
1	07/24/07	REVISION PER DEED COMMENTS (DATED 07/24/07)
2	07/24/07	REVISION PER DEED COMMENTS (DATED 07/24/07)

REVISIONS

DESIGN PROFESSIONAL: [Signature] DATE: 9/11/07

NO. 7877

LANDS OF JOHN S. PETERS DEED BOOK 2878 PAGE 303 ZONING: AR-1

LANDS OF DARLENE B. DRAPER DEED BOOK 2532 PAGE 266 ZONING: AR-1

APPROVED BY: [Signature] DESIGNER: [Signature]

SCALE: 1" = 50'

DATE: 07/24/07

OWNER/APPLICANT: RICHARD CARLISLE
 1111 W. MARKET STREET, 2ND FLOOR
 DEWITT, NY 13827-4519
 TEL: (607) 377-4519

PARCEL INFORMATION:
 T.P.: 2-30-18 PARCEL 27
 GROSS AREA: 81.58 Acres
 NET AREA: 81.58 Acres

RECORD PLAN - NORTHEAST DEER CREEK
 CEDAR CREEK HUNDRED - SUSSEX COUNTY - DELAWARE

KERCHER ENGINEERING, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 413 EAST MARKET STREET - GEORGETOWN, DELAWARE 19847
 302.854.9062 (Voice) 302.854.9064 (Fax) www.kerchere.com

JOB No: 04-1202EG
 PLAN DATE: APRIL 7, 2005
 SHEET No.: 5 of 5

Recorder of Deeds
 John F. Grady
 Jun 01 2010 11:13:3A
 Sussex County
 Doc. Surcharge Paid

DEER CREEK No. 407 2005 (10/02)

TAB “12”

Tax Parcel Numbers:

Prepared By and Return To:
David C. Hutt, Esquire
Morris James, LLP
P.O. Box 690
Georgetown, DE 19947

**DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS, AND
RESTRICTIONS FOR DEER CREEK**

This DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS FOR DEER CREEK (the "Declaration") is made effective this day of _____, 2022 (the "Effective Date"), by _____, a _____, of _____ (hereinafter referred to as the "Declarant").

1. Intent of Submission and Description of Property. Declarant, as holder of legal title to the land herein described, hereby submits certain real property located in _____, Sussex County, Delaware, described in Exhibit "A" annexed hereto (hereinafter referred to as the "Land"), to the provisions of the Delaware Uniform Common Interest Unit Ownership Act, 25 *Del. C.* Section 81-101, *et seq.* (hereinafter referred to as the "Act"), in order to create a planned community under the Act with respect to the Land; and to the easements, restrictions, covenants, conditions, liens and charges set forth herein. The Land being submitted with this Declaration is commonly known as _____ consisting at this time of the _____ building lots designated as Lot Nos. ___ through ___ inclusive; the interior streets; and the parcels of real estate identified as Open Space, (open space, stormwater management and amenity area); all as shown and identified on the _____ Major Subdivision Plan, prepared by _____, dated _____, as amended, and recorded in the Office of the Recorder of Deeds in and for Sussex County, Delaware (the "Recorder" or "Recorder's Office") on _____ in Plat Book ___, Page ___, as may hereafter be amended (the "Record Plan").

The Land is approved for _____ building lots, all of which are being submitted to the Act and this Declaration as described above upon recordation of this Declaration with the Recorder's Office.

2. Definitions. The terms used in this Declaration and in the accompanying Bylaws shall have the following meanings:

(a) "Act" means the Delaware Uniform Common Interest Unit Ownership Act, Title 25, *Delaware Code*, Section 81-101, *et seq.*, as amended.

(b) “Architectural Board” or “_____ Architectural Board” means the _____ Architectural Board, which has jurisdiction over design and development guidelines in the Planned Community pursuant this Declaration.

(c) “Association” means all of the Unit Owners acting as a group in accordance with the Bylaws, which shall be incorporated as “_____ HOMEOWNERS ASSOCIATION, INC.”, a Delaware non-profit nonstock corporation.

(d) “Buildings” means the residential structures constructed or to be constructed and intended to be used for residential purposes (including leasing of Units for residential purposes) or for any other lawful purpose or for any combination of such uses.

(e) “Bylaws” means such governing regulations as are adopted pursuant to the Act for the regulation and management of the Planned Community, including such amendments thereof as may be adopted from time to time that are recorded with the Recorder’s Office.

(f) “Common Areas” means and includes the definition thereof as set forth in Section 81-103(8) of the Act and as defined in this Declaration Specifically, it includes, the private streets in the Planned Community, the stormwater management ponds, amenity areas, open space, buffer, and entrance, as shown on the Record Plan, and any other real property owned, leased or maintained by the Association for the common use and enjoyment of the Owners, all improvements, subject to any public utility easements now of record or to be given in the future either by the Declarant or the Board for sanitary and storm sewer use, water line, electric, telephone and cable television transmission lines, fuel oil and gas, and sewage lift/pump stations or other similar necessary or desirable utility functions and subject to any conservation easements now of record or to be given in the future either by the Declarant or the Executive Board.

(g) “Common Expenses” means and includes but is not necessarily limited to the following:

(1) All sums lawfully assessed against the Unit Owners by the Executive Board;

(2) Expenses of administration, maintenance, repair of the private streets or roadways and Common Areas within the Planned Community, including repair and replacement reserves as may be established;

(3) Expenses for maintenance of landscaping and provisions for landscaping the Common Areas, and if approved by the Executive Board, the Lawn Area; including, but not limited to, mowing, as determined by the Executive Board;

(4) Expenses agreed upon as Common Expenses by the Unit Owners;

(5) Expenses declared Common Expenses by the provisions of the Act, this Declaration, or the Bylaws;

(6) Premiums for insurance policies required to be purchased by the Executive Board pursuant to the Bylaws; and

(7) All valid charges against the Planned Community as a whole.

(h) “Common Profits” means and includes all revenues over expenses, gains realized from activities or investments over and above expenditures therefor.

(i) “Dealer” means any party who, in the regular course of business, purchases one or more Unit in the Planned Community solely for the purpose of constructing improvements upon such Unit for resale; and by way of illustration and not limitation, shall initially include

(j) “Declarant” means _____, a _____, of _____

(k) “Declarant Control Period” “Declarant Control Period” shall mean and refer, pursuant to § 81-303 of the Act, to the period beginning on the date of recordation of this Declaration and ending on the date which is the earlier of (a) sixty (60) days after the date on which seventy-five percent (75%) or more of the proposed Units have been conveyed to Unit Owners other than Declarant or Dealer; (b) two (2) years after Declarant has ceased to offer Units for residential purposes for sale in the ordinary course of business; (c) two (2) years after any right to add new Units for residential purposes was last exercised; (d) at such time as may be required by applicable Laws; or (e) the day Declarant, after giving written notice to the Owners, records an instrument voluntarily surrendering all rights to control activities of the Association.

(l) “Declaration” means this document by which the Declarant submits the Planned Community to the provisions of the Act, and all amendments thereof.

(m) “Easement Agreements” mean, individually and collectively, those certain easement agreements described in Exhibit “C” annexed hereto, and any and all amendments to any of the foregoing Easement Agreements.

(n) “Executive Board” means and includes the definition thereof as set forth in Section 81-103(22) of the Act.

(o) “Land” means the real property more particularly described in Exhibit “A” attached hereto, expressly excepting and excluding the Buildings or other improvements thereon.

(p) “Lawn Area” shall mean and refer to, collectively, (i) any portion of the front, side or rear (if applicable) yard areas of any Unit that contains grass, shrubs, bushes, trees or other planted materials and (ii) the land between the back of the curb adjacent to such Unit and any sidewalk adjacent to such Unit.

(q) “Majority” or “Majority of Unit Owners” means the Unit Owners of more than fifty percent (50%) of the aggregated interest of the Units.

(r) “Managing Agent” means a professional managing agent employed by the Declarant or Executive Board to perform such duties and services as the Declarant or Executive Board shall authorize in conformance with this Declaration and the Bylaws.

(s) “Planned Community” means the Land and the Buildings and all other improvements and structures to be constructed thereon owned in fee simple, and all easements, rights and appurtenances belonging thereto which have been or are intended to be submitted to the provisions of the Act.

(t) “Property” means the Land and the Buildings and all other improvements and structures thereon owned in fee simple, and all easements, rights and appurtenances belonging thereto which have been or are intended to be submitted to the provisions of the Act, and all articles of personal property intended for use in connection therewith.

(u) “Recorded” means that an instrument has been duly entered of record in the Office of the Recorder of Deeds, in and for Sussex County, Delaware.

(v) “Recorder” or “Recorder’s Office” means the Office of the Recorder of Deeds, in and for Sussex County, Delaware, located in Georgetown, Delaware.

(w) “Revocation” means an instrument signed by all the Unit Owners and by all holders of liens against the Units by which the Property is removed from the provisions of the Act.

(x) “Rules and Regulations” means such rules and regulations as may be adopted from time to time by the Declarant or Executive Board in accordance with Section 81-320 of the Act that are deemed necessary for the enjoyment of the Planned Community, provided they are not in conflict with the Act, this Declaration, or the Bylaws.

(y) “Unit” means a legally subdivided lot on the Land established pursuant to the Record Plan improved with or to be improved with _____, as further defined by Section 81-103 (48) of the Act.

(z) “Unit Designation” means the number, letter or combination thereof designating a Unit on the Record Plan.

(aa) “Unit Owner” or “Owner” means any natural person, corporation, partnership, association, trust or other legal entity or any combination thereof, which owns title to a Unit including without limitation Declarant or a Dealer, but expressly excluding those having such interest in a Unit merely as security for the performance of an obligation.

3. Name of Planned Community. This Planned Community shall be known as _____, or such other name as Declarant shall determine appropriate, in Declarant’s sole subjective and absolute discretion, and it shall be a Planned Community as defined in Section 81-103(33) of the Act.

4. The Association of Unit Owners.

(a) Authority. The Association shall manage the use, maintenance, repair, replacement and modification of the Common Areas. The Association shall be governed by its Bylaws.

(b) Powers.

(1) The Association shall have all of the powers, authority and duties permitted pursuant to Section 81-302 of the Act, including but not limited to those powers necessary and proper to manage the use, maintenance, repair, replacement and modification of the Common Areas.

(2) Any Common Expenses benefitting fewer than all of the Units, including fees for services provided by the Association to occupants of individual Units, must be assessed exclusively against the Units benefitted based on their use and consumption of services, the costs of insurance must be assessed in proportion to risk and the costs of utilities must be assessed in proportion to usage.

(3) The Association may assign its future income, including its rights to receive Common Expense assessments, only by the affirmative vote of a Majority of Unit Owners, at a meeting called for that purpose.

(4) The Association may regulate the display of American flags or political signs within the Planned Community to the extent permitted under Section 81-320 of the Act.

(5) The Association may delegate to the _____ Architectural Board the power to establish and enforce construction and design criteria and aesthetic standards pursuant to Section 22 of this Declaration in the manner provided in Section 81-320 of the Act, subject to the Special Declarant Rights as defined and reserved herein.

(c) Declarant Control. The Declarant shall have all the powers reserved in Section 81-303(c) of the Act to appoint and remove officers and members of the Executive Board.

(d) Votes and Interests of Unit Owners. The portion of the votes to which each Unit Owner is entitled shall be one (1) vote for each Unit, as further provided in the Bylaws, out of the total number of Units submitted to the Act. Each Unit Owner shall be liable for a fraction of the Common Expenses which fraction is one out of the number of Units submitted to the Act. The maximum number of Units that may be submitted to the Act is _____.

5. Annexation Into Other Jurisdictions. All or any portion of the Property may be annexed, at any time and from time to time, within and into any one or more towns, municipalities, villages, cities and the like by Declarant without the consent of any Unit Owner, the Association, or any other Person for a period of twenty (20) years from the date of recordation of this Declaration; provided, however, that if Declarant is delayed in the improvement and development of the Property on account of a sewer, water, or building permit moratorium, or any other similar moratorium, or any other cause or event beyond Declarant's control, then the aforesaid twenty

(20)-year period shall be extended by a period of time equal to the length of the delays or an additional three (3) years, whichever is greater. All or any portion of the Property which may be annexed as provided above shall be subject to all applicable taxes and other fees or assessments that may be imposed or assessed by any such town, municipality, village, city or the like.

6. Common Areas.

(a) Conveyance. The Declarant upon completion of the Record Plan requirements relative to the Common Areas shall convey title to the same to the Association subject to the provisions of this Section 6.

(b) Changes. For so long as Declarant owns any Unit or any interest in the Property, Declarant shall have the right, but not the obligation, to make the following improvements and changes to the Common Areas and to any or all Units or any other property owned by Declarant: (1) installation and maintenance of any improvements in and to any Common Area, (2) installation and maintenance of the whole or parts of any utility system or facility, and (3) installation of security and/or refuse facilities.

(c) Title. Declarant shall have the right, in its sole discretion, at any time and from time to time, to grant and convey to the Association any Common Areas and any other property owned by the Declarant contained within the Planned Community, which Common Areas and other property shall be subject to the lien of taxes not yet due and payable, all covenants, agreements, easements, restrictions, and other instruments of record, utility easements serving or otherwise encumbering the Planned Community, and any exceptions which would be disclosed by an accurate survey or physical inspection of such Common Areas or other property. The Association shall be obligated to accept from Declarant any such grant and conveyance of any such Common Areas or other property.

7. Utilities and Related Facilities. Declarant, or any affiliate of Declarant, may own all or any part of any water mains, water laterals, valves, meter pits and meters, and appurtenances; stormwater drainage culverts, swales, pipes, and appurtenances, including specifically, any siltation and/or retention ponds as required by any federal, state or local agency; irrigation well, distribution lines, sprinkler heads and appurtenances; television cable and its various attendant services, telephone service to include teletype, computer, telex, news service, or computer or any like instrument used in the transmission, reception or retrieval of messages, facts, or information, gas or other utility lines and wires (individually and collectively, the "Utility Systems"), serving the Planned Community. Notwithstanding the foregoing, Declarant, or any such affiliate, owning the Utility Systems, or any part thereof, shall have the right but not the obligation, to make any part or all of the Utility Systems a part of the Common Areas or, at any time and from time to time, grant and convey any part or all of the Utility Systems to the Association, a club, a municipality, public authority, governmental authority, public service district, or private utility operator, any such conveyance being subject to the reservation of an easement right in the same as provided for in Section 12 of this Declaration. The Association shall be obligated to accept from Declarant any such grant and conveyance of any such Utility Systems.

8. Unit Owners' Easements of Enjoyment. Every Unit Owner shall have a non-

exclusive right and easement of enjoyment, in common with others entitled to the use thereof, in and to the Common Areas and such right and easement shall be appurtenant to, and not separable from, a Unit, and shall pass with the title to every Unit subject to the following provisions:

(a) Suspension of Rights. The right of the Declarant or the Association to suspend a Unit Owner's voting rights and right to use any of the Common Areas for a period in which the Unit Owner is in default in the payment of any assessment, fee, penalty, interest or any other charge outstanding. Additionally, such rights may be suspended by notice from the Executive Board for such a period not to exceed ninety (90) days for any single and nonrecurring infraction of the Association's published rules and regulations or breach of or default under any of the covenants or provisions of the Declaration. If any such infraction, breach or default is continuous or recurring, then such rights may be suspended for a period commencing on the date the Unit Owner is given notice of the cause for such suspension and ending not more than ninety (90) days after the date such infraction, breach or default ceases or is remedied;

(b) Utility Rights Included. The Declarant's rights with respect to the Utility Systems (the "Declarant's Utility Rights"), including, but not limited to, those set forth in Section 7 and in Section 12;

(c) Dedication to Public Authority. The right of the Association, subject to the Declarant's Utility Rights, to dedicate or transfer all or any part of the Common Areas to any public agency, authority, or utility for such purposes and subject to such conditions as may be agreed to by the members of the Association. No such transfer or dedication except for the dedications or transfer of utility easements by the Association or any dedication or transfer made in the exercise of the Declarant's Utility Rights, shall be effective unless approved by more than sixty-seven percent (67%) of the votes entitled to be cast by all of the Unit Owners;

(d) Reservations. The rights and reservations of the parties holding rights under easements.

(e) Other. Other rights of the Declarant set forth in this Declaration.

9. Notice of Agricultural Use. THE PROPERTY IS LOCATED IN THE VICINITY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES ON WHICH NORMAL AGRICULTURAL USES AND ACTIVITIES HAVE BEEN AFFORDED THE HIGHEST PRIORITY USE STATUS. IT CAN BE ANTICIPATED THAT SUCH AGRICULTURAL USES AND ACTIVITIES MAY NOW OR IN THE FUTURE INVOLVE OR PRODUCE NOISE, DUST, MANURE AND OTHER ODORS, THE USE OF AGRICULTURAL CHEMICALS, AND NIGHTTIME FARM OPERATIONS. THE USE AND ENJOYMENT OF THE PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM SUCH NORMAL AGRICULTURAL USES AND ACTIVITIES.

10. Restrictions Upon Unit Owners' Rights. All titles, leaseholds, and other interests in, and all liens upon, the Planned Community shall be held subject to the following:

(a) Outconveyances. The right of the Declarant and of the Association to dedicate, transfer or convey all or any of the Common Areas, with or without consideration, to any successor association of Unit Owners, governmental body, district, agency or authority, or to any public or private utility.

(b) Easements. Easements and rights-of-way for the benefit of the Declarant and Dealer or any applicable governmental body, district, agency or other authority with regulatory control, authority and jurisdiction through, under, over and across the Common Areas, for the installation, maintenance and inspection of lines and appurtenances for the Utility Systems including but not limited to utilities, signage, wastewater collection, treatment and disposal system, public or private water, storm sewer, drainage, electric, fuel oil, gas and other utilities and services, specifically including any telephone, television, irrigation or lawn-sprinkler systems or facility, and the right of the Declarant to grant and reserve easements and right-of-way through, over and upon and across the Units and/or Common Areas for the completion of the Buildings and other improvements, for the operation and maintenance of the Common Areas, and for the benefit of the Unit Owners.

(c) Parking and Ingress. The right of invitees of the Declarant or any Dealer or a Unit Owner to use any parking lots and other necessary portions of the Common Areas for ingress and egress.

(d) Penalties. The right of the Association to provide penalties and suspend the rights of any Unit Owner for any period during which any assessment remains unpaid and for any infraction of this Declaration, the Bylaws or the Rules and Regulations.

(e) Rules and Regulations. The right of the Declarant and the Association, respectively and from time to time, to establish Rules and Regulations, to fix and collect assessments consistent with the Bylaws, and to fix fees, charges and penalties.

(f) Allocation of Common Expenses. The obligation of the Association to assess Common Expenses benefitting fewer than all of the Units, including fees for services provided by the Association to occupants of individual Units, exclusively against the Units benefitted based on their use and consumption of services; to assess the costs of insurance in proportion to risk; and to assess the costs of utilities in proportion to usage.

11. Additional Structures. Neither the Association nor any Unit Owner or any group of Unit Owners shall, without the prior written approval of Declarant and the Architectural Board, allow or cause any structure or other improvement to be placed in or on the Common Areas.

12. Easements for Declarant and Dealers. During the period that Declarant or any Dealer owns any Common Areas, or owns any Unit primarily for the purpose of sale, Declarant and such Dealer shall have an alienable and transferable right and easement on, over, through, under and across the Common Areas for the purpose of constructing or improving Units, any improvements to the Common Areas, and for installing, maintaining, repairing and replacing such other improvements to the Planned Community (including portions of the Common Areas) as are contemplated by this Declaration; or as Declarant or Dealer, in its absolute and sole discretion,

deems in the best interest of the Planned Community, including without limitation any improvements or changes permitted and described in this Declaration, and for the purpose of doing all things reasonably necessary and proper in connection therewith, provided that in no event shall Declarant or any Dealer have the obligation to do any of the foregoing.

13. Easement for Utilities/Utility Systems. There is hereby reserved for the benefit of Declarant, each Dealer, and the Association the power to grant and accept easements to and from any private or public authority, agency, public service district, public or private utility or other person upon, over, under and across (1) all the Common Areas or (2) any area on any Unit intended for improvement as a single-family dwelling ten feet (10') in width along the interior side of the perimeter boundary lines of the subdivision, and five feet (5') in width along the boundary lines of each Unit for a total easement width of at least ten feet (10') along a lot line common to two (2) Units, for the purpose of installing, replacing, repairing, maintaining and using Utility Systems or drainage. For so long as Declarant or any Dealer owns any portion of the Common Areas or owns any Unit primarily for the purpose of sale, the Association may not grant or accept any such easement without the prior written consent of Declarant and any applicable Dealer. To the extent feasible, all systems, utilities and facilities throughout the Planned Community shall be located underground. All of such easements shall be deemed to include permission (1) to erect and maintain pipes, lines, manholes, pumps and other necessary equipment and facilities, (2) to cut and remove any trees, bushes or shrubbery, (3) to grade, excavate or fill, or (4) to take any other similar action reasonably necessary to provide economical and safe installation, maintenance, repair, replacement and use. This easement shall include a right of ingress reasonably necessary to provide economical and safe installation, maintenance, repair, replacement and use of the irrigation system for each Unit. No building, structure or other permanent obstruction of any kind whatsoever shall be placed on or in the easement described above.

14. Delegation of Unit Owner's Rights. A Unit Owner may delegate to the Unit Owner's family members, tenants, and invitees, in accordance with the Bylaws and the Rules and Regulations and not otherwise, the Unit Owner's respective right to enjoyment of the Common Areas.

15. Access. Each Unit Owner, by accepting title to any Unit, waives all rights of uncontrolled and unlimited access, ingress and egress to and from such Unit, and acknowledges and agrees that such access, ingress and egress of such Unit to and from the streets, sidewalks, walkways, and trails, if applicable, located within the Planned Community may be suspended from time to time and at any time, provided that pedestrian and vehicular access to and from such Unit shall be permitted, in such manner and at such place as shall be determined by Declarant and the Association, at all times, subject to the Rules and Regulations and the terms of this Declaration and the Bylaws.

16. Easements for Association. The Association shall have a general right and easement for the benefit of the Association, its directors, officers, agents and employees, including, but not limited to, any Managing Agent and any employees of such Managing Agent, to enter upon and into any Unit or any portion thereof in the performance of their respective duties. Except in the event of emergencies, this right and easement is to be exercised only during normal business hours and then, whenever practicable, only upon advance notice to the Unit Owner.

17. Maintenance Easement. Subject to the other terms of this Declaration, the Declarant, each Dealer, and the Association shall have the right and easement to enter upon any unimproved portions of any Unit, including without limitation each Lawn Area, for the purpose of mowing, removing, clearing, cutting or pruning underbrush, weeds, stumps or other unsightly growth and removing trash, so as to maintain reasonable standards of health, fire safety and appearance within the Planned Community; provided that such rights and easements shall not impose any duty or obligation upon the Declarant, any Dealer, or the Association to perform any such actions. Furthermore, there is hereby reserved for the benefit of the Declarant, each Dealer, and the Association a right and easement, but not an obligation, to enter upon any unimproved portions of Units located within twenty feet (20') from the water's edge of any pond or other body of water within the Planned Community for the purpose of mowing such area and keeping same clear and free from unsightly growth and trash, as well as for the purpose of maintaining such body of water, such maintenance to include, without limitation, dredging and the maintenance of reasonable water quality standards.

18. Environmental Easement. The Declarant, each Dealer, and the Association shall each have an alienable, transferable and perpetual right and easement on, over and across all unimproved portions of the Common Areas and Units for the purposes of taking any action necessary to effect compliance with environmental rules, regulations and procedures from time to time promulgated or instituted by the Executive Board or by any governmental entity, such right and easement to include, without limitation, the right to implement erosion control procedures and practices, the right to drain standing water, and the right to dispense pesticides.

19. Wells and Effluent. The Declarant or the Association shall have an alienable, transferable and perpetual right and easement to (1) pump water from ponds and other bodies of water located within the Planned Community for the purpose of irrigating any portions of the Planned Community, for fire control, and for any other purposes, and (2) drill, install, locate, maintain, and use wells, pumping stations, water towers, siltation basins and tanks, and related water and sewer treatment facilities and systems within the Common Areas.

20. No Partition. There shall be no judicial partition of the Planned Community or any part thereof, nor shall any person acquiring any interest in the Planned Community or any part thereof seek any such judicial partition unless the Planned Community has been removed from the provisions of this Declaration.

21. Jurisdiction. Notice is hereby given of the restriction that as to any portion of any Unit within the Planned Community which may contain submerged land or other critical areas, all activities on or over and all uses of such land or other critical areas are subject to the jurisdiction of the United States of America or the State of Delaware. A Unit Owner is liable for any damages to, any inappropriate or unpermitted uses of, and any duties or responsibilities concerning any portion of the Unit Owner's respective property which is submerged land, wetlands or other critical area.

22. Architectural Control. Except for Units owned by the Declarant or any Dealer, and subject to any rights reserved pursuant to Section 26 of this Declaration, each Unit shall be

occupied and used subject to the following architectural restrictions and controls:

(a) Authority. The Declarant or Executive Board shall have the authority and standing, on behalf of the Association to enforce in courts of competent jurisdiction decisions of the Architectural Board established in Section 22(b) of this Declaration. This Section may not be amended without the Declarant's written consent so long as the Declarant owns any property within the Planned Community. No alteration, modification or construction, which term shall include within its definition, changing the exterior appearance of any building, wall, fence or other structural improvement, staking, clearing, excavation, grading and other site work or removal of plants, trees or shrubs, shall take place except in strict compliance with this Section, until the requirements thereof have been fully met, and until the approval of the Architectural Board has been obtained.

(b) _____ Architectural Board. The Architectural Board shall prepare and shall promulgate design and development guidelines and application and review procedures, all as part of the _____ Design Standards and Guidelines (the "_____ Standards") and may establish reasonable fees for review of such construction, modification, addition, or other alteration requested by any Unit Owner. The _____ Standards shall incorporate all restrictions and guidelines relating to development and construction contained in this Declaration as well as restrictions and guidelines with respect to the location of structures upon property, foundations, size, length, design of structures, driveway and parking requirements and landscaping requirements. Upon request of a Unit Owner, the Architectural Board shall make a copy of the _____ Standards available to such Unit Owner for review. Unless otherwise provided in this Declaration, the guidelines and procedures shall be those of the Declarant or Association and the Architectural Board shall have sole and full authority to prepare and to amend the _____ Standards. The Architectural Board shall initially consist of three (3) members, all appointed by the Declarant, and who shall serve until such time as their successors are designated by the Declarant. At such time as Declarant deems appropriate, the Executive Board of the Association shall have the right to appoint a maximum of two (2) additional members to the Architectural Board. At no time shall the Architectural Board have less than three (3) members nor more than five (5) members. Sixty (60) days after seventy- five percent (75%) of all Units within the Planned Community have been developed, improved and conveyed to purchasers in the normal course of development and sale, the Executive Board shall appoint all members of the Architectural Board. The Declarant may, at its option, delegate to the Executive Board, its right to appoint one (1) or more members of the Architectural Board. The Declarant shall retain an absolute veto over any decision by the Architectural Board so long as Declarant or any Dealer owns any Unit, or Common Area within the Planned Community.

(c) Meeting and Decisions of the Architectural Board. The Architectural Board shall establish times, dates and frequency of meetings. A quorum of a simple majority of the members shall be required to review and take action on applications for approval. The Architectural Board shall appoint a secretary who shall prepare minutes of each Architectural Board meeting including all decisions of the Architectural Board. If the Architectural Board fails to approve or deny an application within thirty (30) days of receipt of the complete application by

and payment of fees to the Architectural Board, the party making the submission for approval shall deliver written notice to the Architectural Board of its failure to act, and, if approval is not granted or denied within fifteen (15) days thereafter, the plans and specifications shall be deemed to be denied. It is further specifically provided that if any proposed application for action will affect drainage of stormwater, such application shall include a certification of non-effect of said plans from a professional engineer licensed in the State of Delaware.

(d) No Waiver of Future Approvals. The approval of the Architectural Board of any proposals or plans and specifications or drawings for any work done or proposed, or in connection with any other matter requiring the approval and consent of such Architectural Board, shall not be deemed to constitute a waiver of any right to withhold approval or consent as to any similar proposals, plans and specification, drawings, or matter subsequently or additionally submitted for approval or consent.

(e) Variance. The Architectural Board may authorize variances from compliance with any of the provisions of the _____ Standards when circumstances such as topography, natural obstructions, hardship or environmental considerations require, but only in accordance with duly adopted rules and regulations. Such variances may only be granted, however, when unique circumstances dictate and no variance shall (a) be effective unless in writing, (b) be contrary to the restrictions set forth in the body of the Declaration, or (c) prevent the Architectural Board from denying a variance in other circumstances. For purposes of this Section, the inability to obtain approval of any governmental agency, the issuance of any permit, or the terms of any financing shall not be considered a hardship warranting a variance.

(f) Review and Control by the _____ Architectural Board. No building outside attached shower, fence, wall, deck, patio, bulkhead, retaining wall, swimming pool, basketball hoop/court, tennis court, septic system, parking area, garage, and/or paving for driveways or garages, or other any other structure of any kind, other than those constructed by Declarant or a Dealer, shall be erected, placed or altered nor shall a building permit from Sussex County for such improvement or construction for such improvement be applied for on any improved or unimproved property in the Planned Community until all fees to the Association have been paid and complete sets of building plans and elevations, specifications, and site plan (showing the proposed location of such building, drives and parking areas, etc.) shall have been reviewed and approved in writing by the Architectural Board. The number of plans required shall be established by the Architectural Board with the intention that there shall be at least one (1) complete set of plans and specification for each member of the Architectural Board and one (1) additional set for the Association's files, although the Architectural Board reserves the right to accept digital plans in lieu of paper sets. In reviewing such materials, the Architectural Board shall consider such things as aesthetic appearance, harmony with surrounding improvements, compliance with this Declaration and any additional criteria adopted by the Architectural Board as part of the _____ Standards. Approval or disapproval of plans, locations or specifications may be based by the Architectural Board upon any ground incorporated within the _____ Standards including purely aesthetic considerations, which in the sole discretion of the Architectural Board, shall be sufficient. No painting, staining, changes in color, finish materials or alteration to the exterior facade of any structure shall be undertaken until approval has been obtained in writing from the Architectural Board. This

provision shall not apply to repainting the same color.

(g) No Liability. Neither Declarant nor any Dealer nor any member of the Architectural Board shall be responsible or liable in any way for any defects in any plans or specifications approved by the Declarant or the Architectural Board, nor for any structural defects in any work done according to such plans and specifications approved by the Declarant or the Architectural Board. Further, neither Declarant nor any member of the Architectural Board shall be liable for damages to anyone submitting plans or specifications for approval under this Section, or to any Unit Owner of property affected by this Declaration by reason of mistake in judgment, negligence, or non-feasance arising out of or in connection with the approval or disapproval of or failure to approve or disapprove of any such plans or specifications. Every person who submits plans or specifications, and every Unit Owner of any Unit agrees, that such Unit Owner will not bring any action or suit against Declarant, any Dealer, or any member of the Architectural Board, to recover for any such damage. No approval of plans, location or specification shall be construed as representing or implying that such plans, specification or standards will, if followed, result in a properly designed residence. Such approvals and standards shall in no event be construed as representing or guaranteeing that any residence or improvement hereto will be built in a good workmanlike manner. The Unit Owner shall have sole responsibility for compliance with approved plans and does hereby hold the Architectural Board and the Declarant harmless for any failure thereof caused by the Unit Owner's architect or builder.

(h) Objectives. Architectural and design review shall be directed towards attaining the following objectives for the Planned Community, and the Declarant or Association may adopt reasonable standards, rules, and regulations deemed necessary or convenient in attaining such objectives:

(1) Preventing excessive or unsightly grading, indiscriminate earth moving or clearing of property, or removal of trees and vegetation which could cause disruption of natural water courses or alter natural or designed land forms.

(2) Ensuring that the location and configuration of structures are visually harmonious with the terrain, with the vegetation of the residential Unit and with surrounding residential Units and structures, and do not unnecessarily block scenic views from existing structures, walks or roads or tend to dominate any general development or natural landscape.

(3) Ensuring that the architectural design of structures and their materials and colors are visually harmonious with the Planned Community's overall appearance, history and cultural heritage, with natural land forms and native vegetation, and with Planned Community plans approved by the Declarant, or by a governmental or public authority, if any, for the areas in which the structures are proposed to be located.

(4) Ensuring that the Planned Community structure, building or landscaping complies with the provisions of this Declaration.

23. Restriction on Alienation of Units. A Unit may not be conveyed pursuant to a time-sharing agreement described in Section 81-103(47) of the Act. A Unit may not be leased or rented for a term of less than fourteen (14) days. Except for Units owned by the Declarant or any Dealer, all leases and rental agreements shall be in writing and subject to the reasonable requirements of the Executive Board.

24. Use Restrictions. In order to protect property values and the community spirit with in _____, and to protect the appearance and beauty of the vegetation, topography, or other natural features within the Planned Community, the following controls are hereby established with respect to each Unit except for Units owned by the Declarant or any Dealer:

(a) Residential Use Only. The Unit Owners in the Planned Community acknowledge and recognize the Planned Community is a community planned to achieve the goals and objectives of providing an environment for families to live and enjoy the peace and quiet of an attractive and distinctive residential community. In order to achieve a neighborhood of serenity and peaceful use, the Unit Owners agree and covenant that the homes in the Planned Community shall only be used for single-family residential purposes exclusively. No business activity of any kind, including by example but not limited to, rooming house, boarding house, gift shop, antique shop, professional office or beauty/barber shop or the like or any trade of any kind whatsoever including yard sales, garage sales or the like shall be carried on upon any Unit or in any structure on a Unit; provided, however, that nothing contained herein shall be construed so as to prohibit home offices so long as no stock in trade is kept or commodities sold, there are no employees, patrons, customers or clients and no signs. Nothing herein shall be construed to prevent the Declarant or any Dealer from constructing dwellings to be sold or leased, from showing Units, dwellings or models for the purpose of selling or leasing a Unit or dwelling shown for another or from placing and maintaining signs, structures, storage places, facilities and offices it deems necessary. Nothing herein shall prohibit the Association from authorizing one or more, not to exceed two, community-wide yard sales per year, consistent with any rules and regulations promulgated by the Association.

(b) Fences, Boundary Walls, Boundary Line Hedges and Shrubberies. Fences, boundary walls, boundary line hedges and shrubberies shall only be permitted if the following requirements are met:

(1) Fences, boundary walls, boundary line hedges and shrubberies shall be prohibited within the front yard area of the Units and, shall not be closer to the Unit's front property line than one-half (1/2) of the length of the side property line of the Unit. The height of any such fence or boundary wall along the side of a unit shall not exceed five feet (5'-0"). Material, color, type and style of fence or boundary wall, shall be limited to those which are viewed by the Architectural Board to be aesthetically pleasing when installed in a residential setting. The Architectural Board shall endeavor to maintain consistency in fence and boundary wall design and appearance within the Planned Community.

(2) Prior written approval shall be obtained from the Architectural Board.

(3) Any fence, boundary wall, boundary line hedge or shrubbery along the side or rear of any Unit shall not extend over any Utility System or easement on said Unit and shall be set outside of any drainage swale(s). Any fence or boundary wall shall not exceed five feet (5') in height. The heights or elevations of any fence or wall shall be measured from the existing elevations of the Unit.

(c) Pools, Hot Tubs. No above-ground swimming pools whatsoever shall be erected or allowed to remain in the Planned Community. "Hot tubs", "jacuzzis", in-ground pools and the like along with their related equipment and fences shall be prohibited except when placed in the area at the rear of a dwelling and within lines measured and running in a parallel line from each rear corner of such dwelling to the rear lot lines and only after obtaining prior written approval of the Architectural Board.

(d) Temporary Structures, Vehicles, Boats and Trailers. Except as may otherwise be provided in this Declaration, no structure of a temporary character shall be placed upon any Unit at any time; provided, however, that this prohibition shall not apply to shelters approved by the Declarant or any Dealer and used by a contractor during construction of a dwelling, it being clearly understood that the latter temporary shelters may not, at any time, be used for residence or remain on the Unit after completion of construction. No trailer, mobile home, double-wide, park model trailer, motor home, tent, barn, camper, bus, or other similar vehicle, out-building, structure, boat or trailer shall be placed, kept or parked on any Unit or on any portion of the Common Areas, except (1) as may be stored within the enclosed garage.

(e) Mining and Drilling Prohibition. No oil or natural gas drilling, refining, quarrying or mining operations of any kind shall be permitted upon or in any Unit, and no derrick or other structure designed for use in boring for oil or natural gas shall be stored, erected, maintained or permitted in the Planned Community.

(f) Use and Height Restrictions. No structure shall be erected, placed or permitted to remain on any Unit in excess of three (3) stories in height, and in no instance shall any structure exceed forty-two feet (42') in height above the first floor finished elevation. There shall be no more than one dwelling per Unit. No dwelling shall be erected or used in any way which is less than One Thousand Five Hundred (1,500) square feet of enclosed floor area exclusive of basements, decks, stairs, porches, breezeways, carports, garages, terraces, and the like.

(g) Setbacks and Building Lines. Each dwelling which shall be erected on any Unit shall be situated on such Unit in accordance with the building and setback lines established by Declarant and authorized by Sussex County zoning regulations and the _____, or such other Municipal Administrative body having jurisdiction over the Planned Community. No structure shall be placed on or over any easement on any Unit, and in no case shall a structure be placed within a drainage swale. The applicable Dealer shall determine, at its sole discretion, placement of all dwellings, garages and accessory uses. The Declarant shall have the power and authority to promulgate and publish setback requirements for each Unit. In certain cases, the Declarant or Association may require a Unit Owner to seek a variance from Sussex County, the _____, or such other municipal administrative body having jurisdiction over the Planned Community, if applicable, and necessary to protect important trees,

vistas or to preserve aesthetic value.

(h) Restriction on Materials.

(1) All structures constructed or placed on any Unit shall be built of good quality and new material, and no used structures or old structures or parts thereof shall be relocated or placed on any such Unit.

(2) No structures constructed or placed on any Unit shall have an exterior finish of cinder block, grooved plywood, T1-11, or plywood above grade.

(3) All roofing shall be made of asphalt shingles a material similar thereto that has been approved by the Architectural Board (except painted metal accent roofing is allowed if approved by the Architectural Board).

(4) All driveways and parking areas shall be made of hot mix asphalt or such other material as may be approved by the Architectural Board.

(i) Mobile Home Restriction. No mobile home, trailer, doublewide, manufactured, or similar type structure shall be permitted, placed or constructed on any Unit in the Planned Community.

(j) Re-Building Requirement. Any dwelling or out-building on any Unit which may be destroyed in whole or in part by fire, windstorm or any other cause or act of God must be rebuilt and the structure restored to the previous condition or better, within nine (9) months or such shorter period of time as may be reasonable; all debris must be removed within fourteen (14) days.

(k) Elevation and Drainage Changes. Except as a result of the construction of any Building by Declarant or a Dealer, no changes in the elevation, topography or drainage characteristics of the Planned Community shall be made so as to materially affect the surface elevation or natural drainage of surrounding Units and without the prior written approval of the Declarant or Architectural Board. Nor shall any fill be used to extend any property into any state or federal wetlands, to increase the size of a Unit by filling in water it abuts, or to fill in any waterway, wetland or storm drainage area of the Planned Community for any purpose whatsoever.

(l) Tree Removal. The removal of trees, shrubs and other plant material shall be limited to removal of those materials essential for house construction and driveway installation only. The Architectural Board shall further have the authority to require any Unit Owner removing a tree in violation of this clause to replace the same with a tree of the same species or a different species with a caliper of two inches (2") or greater at such Unit Owner's cost and expense.

(m) Clothesline. No clothesline or drying yards shall be located upon any Unit in the Planned Community, nor shall towels, blankets or the like be hung or placed on the front or rear porch, decks, railing or fences or any dwelling or Unit, except with the written permission of the Declarant or Architectural Board. Permission may be granted by the Declarant or Architectural

Board when the clothesline, drying yard, or other exposure of clothesline to the air for drying can be effected behind shrubbery, trellis or another type of screen so as not to be seen from another Unit or Common Area, including, but not limited to, streets or roadways in the Planned Community.

(n) Sewer and Water System. No surface toilets or septic tanks shall be permitted in the Planned Community (other than those utilized by the Declarant or any Dealer). A purchaser of a Unit assumes responsibility for attaching water connections, plumbing fixtures, dishwashers, toilets and sewage disposal system to the central sewer and water systems of the Planned Community.

(o) Garbage/Trash Disposal. Each Unit Owner shall provide garbage and trash receptacles or similar facilities in accordance with reasonable standards established by the Declarant or the Association. All garbage, trash and other refuse shall be kept in tight, enclosed trash receptacles with lids and removed from the Units at reasonably frequent intervals. Such trash receptacles shall be kept in clean, sanitary and enclosed areas within the Unit's garage, hidden from view, excepting that such trash receptacles may be placed temporarily at street/curb side on the regular day of collection or after 5:00 p.m. on the day immediately prior to the day of collection; provided that all such trash receptacles must be removed from the street/curb side and once again hidden from view by 5:00 pm on the day of collection. Each Unit Owner shall take all reasonable steps to prevent such Owner's garbage and refuse from omitting odors that would reasonably annoy any other Unit Owner. The Declarant or Association may from time to time adopt rules and regulations for the sorting of garbage and trash into separate receptacles or other handling according to the nature of the materials or otherwise to aid in recycling or other processes with beneficial impact on the environment. No garbage or trash incinerator shall be permitted. No burning, burying or other disposal of garbage or trash on any Unit or within the Planned Community shall be permitted. The Declarant or Association may from time to time adopt rules and regulations, including designation of the persons and methods, for garbage/trash collections and disposal, and all Unit Owners shall be bound thereby. Unit Owners and the Association shall use professional commercial garbage and trash removal services.

(p) Sign Controls. No signs of any character shall be erected on any Unit, placed in the window of any dwelling or structure located on a Unit, or displayed to the public in any manner on any Unit; provided that after the first two (2) years of the Declarant Control Period that one temporary real estate sign not exceeding twelve inches by eighteen inches (12" x 18") in area may be placed and maintained on the lawn of any Unit in the case of any dwelling placed upon the market for sale or rent. Any such temporary real estate sign shall be removed within five (5) days of the settlement of the sale or rental of such dwelling. This restriction shall not apply to signs used by the Declarant or any Dealer to identify and advertise the subdivision as a whole, nor to Declarant or Dealer's respective signs for selling Units and/or houses. In addition, this restriction shall not apply to For Sale signs which shall be permitted as set forth in the Bylaws and pursuant to any Rules and Regulations adopted by the Executive Board.

(q) Natural Buffer Zone and Wetlands. No Unit Owner and no Unit Owner's family, guests, tenants, agents or employees shall disturb any natural buffer zone or wetlands in any manner and/or for any reason. Unit Owners of Units adjoining and/or including a natural

buffer zone or wetlands shall be responsible for advising their contractor or subcontractors of the natural buffer zone or wetlands and will ensure no encroachment or clearing of said area. If a natural buffer zone or wetlands is disturbed, the Unit Owner responsible shall be required to pay all costs incurred by the Declarant and the Association, including reasonable attorney's fees and costs, as a result of its attempt to restore the area to its natural state.

(r) Exclusion of Above Ground Utilities. All electrical service, wires, pipes, lines, telephone, cable television (CATV) lines and utility services of any type shall be placed in appropriate underground as possible and no outside electrical lines shall be placed overhead. No exposed or exterior radio or television transmission or receiving antenna shall be erected, placed or maintained on any part of the Planned Community except as set forth hereinafter in section 24(dd) and those master facilities approved by the Declarant, provided, however, that the normal service pedestals, etc., used in conjunction with such underground utilities shall be permitted within the Planned Community. Overhead utilities shall be permitted during the construction period and until utility companies can place them underground.

(s) Junk or Disabled Vehicles. No stripped, partially wrecked, unlicensed or invalidly licensed, disabled or junk motor vehicle, or part thereof, shall be permitted to be parked or kept in the Planned Community except as may be stored within the enclosed garage. The following activities are prohibited: vehicle repair, bodywork, oil change, engine maintenance and the like except cleaning and washing Unit Owners' own vehicles; no vehicles shall be maintained on jacks or blocks except temporary usage for emergency tire change.

(t) Perimeter Access. There shall be no access to any Unit on the perimeter of the Planned Community except from designated roads within the Planned Community; provided, however, that Declarant reserves the right to construct and operate temporary construction roads during the construction and development period.

(u) Rentals. The Declarant or Association may from time to time adopt rules and regulations pertaining to the rental of dwellings. Unit Owners of rented dwellings shall be personally liable for the failure of a tenant or any invitee of a tenant to abide by rules and regulations pertaining to the use or occupancy of the Planned Community.

(v) Accessory Structures.

(1) No accessory structure shall be constructed upon any Unit, except an exterior attached shower, mailbox, doghouse, birdhouse, garage, swing set or similar play structure, or basketball/hoop attached to the front of a garage or to a free standing pole or individual flagpole of aluminum, steel or other material that has been approved as to nature, size, location and material in writing by the Architectural Board prior to installation or construction.

(2) All mailboxes shall be as designed and installed by the Declarant or applicable Dealer. Mailbox structures may be found acceptable, by special exception, only if they are uniform and after concise plans for same have been submitted to and reviewed by the _____ Architectural Board.

(3) Garages and exterior attached showers shall conform in appearance to the style of the dwelling and shall have the same exterior and roof materials and colors as the dwelling.

(4) No structure except a mailbox and/or flagpole shall be placed closer to the front Unit boundary than the closer of the rear line of the dwelling or of the front line of the garage.

(5) Other than flag pole for the display of the American flag described in Section 4(b), there shall be no more than two (2) flag poles, which shall be no longer than 5' (five feet) in length and must be attached to the front porch or garage.

(6) All accessory structures shall be constructed in accordance with all applicable laws.

(7) The provisions of this Section shall not apply to any accessory structures constructed by Declarant or any Dealer.

(w) Landscaping. Unit Owners are encouraged to provide landscaping for their Units; provided, however, that Declarant reserves the right to reasonably restrict the placement of landscaping, fences or other impediments to the enjoyment of views. No vegetable garden shall be located in the area between the front Unit line and the front of the dwelling. Grasses, lawn growth or weeds shall be limited to a maximum of four inches (4") in height. Declarant reserves the right to enter onto any Unit after notice and an opportunity to maintain landscaping and grass height, and cut any grass, lawn or weeds which continues to exceed four inches (4") in height after said notice, and to assess the cost to the Unit Owner thereof, collected in any manner permitted the by the Declaration or Bylaws for assessments.

(x) Special Hazards. Each Unit Owner accepts and assumes all the risks and hazards of Unit Ownership or occupancy attendant to the Unit Ownership of such Unit Owner's Unit, including but not limited to its proximity to any Common Area or any bodies of water in or near the Planned Community, and agrees hereby to hold the Declarant and each Dealer and the Association harmless and shall indemnify the Declarant or the Association for all losses, costs and expenses, including attorney's fees for all such risks and hazards. Specifically, the Declarant does hereby disclaim any and all liability for any property damage or personal injury resulting from acts, activity or erosion along the bank of all ditches, streams, other bodies of water or watercourses located in the Planned Community.

(y) Traffic Regulations. The Declarant and the Association may from time to time adopt additional rules and regulations pertaining to vehicular and pedestrian traffic in the Planned Community as it or they deem appropriate and necessary.

(z) Alteration of Common Areas. No person shall alter in any way any Common Areas except with the written permission of the Declarant and the Association.

(aa) Easements and Encroachments. No Building or part of a Building,

including porches or projections of any kind, shall be erected so as to extend over or across any of the building lines as hereinafter established. Provided, however, if any portion of any Common Area unintentionally encroaches upon a Unit or any part thereof, whether by settlement or otherwise, a valid easement for the encroachment and for the maintenance of same, so long as it stands, shall and does exist. If any portion of improvements to a Unit or Units unintentionally encroaches upon another Unit or any portion thereof, whether by settlement or otherwise, a valid easement for encroachment and for the maintenance of same, so long as it stands, shall and does exist. In the event any improvement or part thereof is partially or totally destroyed and then rebuilt, any encroachment of any Common Area upon a Unit or Units or encroachment of a Unit or Units upon any Common Area or upon an adjoining Unit or Units resulting because of such rebuilding, shall be permitted, and a valid easement shall exist for the maintenance of such encroachments so long as the same stand. Such encroachments and easements shall not be considered or determined to be encumbrances either on any Common Area or any Unit or Units, and no Unit Owner shall be entitled to damages or injunctive relief because of the construction, re-construction or maintenance thereof.

(bb) Pets. No animals, livestock, birds, or fowl shall be kept or maintained on any part of the Planned Community except animals commonly recognized as domestic pets, such as dogs, cats, pet fish and birds, which may be housed on a Unit in reasonable numbers (not to exceed three) as pets for the pleasure and use of the Unit Owner but not for any commercial use or purpose. All animals must be fenced or shall be kept on a lead or leash when they are off the Unit Owner's Unit and must be under the Unit Owner's control at all times. No animal shall become a nuisance to other resident by barking or other acts and the Unit Owner is responsible for removing his or her animal from the property of another. The Unit Owner of any animal is responsible for and liable for any happenstance or accident which may occur in connection with or arising from a loose, uncontrolled or vicious animal. Non-Unit Owners (e.g. renters or lessees) may not keep any pets without the prior written approval of the Unit Owner and any such approval must be filed with the Association.

(cc) Hazardous Materials. No toxic or hazardous substances as defined by environmental law shall be used, disposed, stored or released on any Unit or in the Planned Community except for use with an outdoor grill in a tank holding thirty (30) pounds or less of natural gas or propane.

(dd) Satellite Dishes. Installation of antennas, including satellite dishes, shall be governed by this Section and such other additional reasonable rules and regulations regarding the location and screening of any such items that the Executive Board shall impose from time to time. The Federal Communications Commission (the "FCC") adopted a rule effective October 14, 1996 (the "FCC Rule"), preempting certain restrictions concerning the installation, maintenance, and use of direct broadcast satellite, television broadcast, and multipoint distribution service antennas (collectively, "Antennas"). The requirements set forth in this Section are generally consistent with the FCC Rule; however, because the FCC Rule is subject to change or modification, the Executive Board reserves the right to amend and modify any requirements governing installation, maintenance, and use of Antennas, which may be more restrictive than as set forth herein and which may, in the discretion of the Executive Board, be applied retroactively. Antennas not covered by the FCC Rule, including satellite dishes in excess of one (1) meter in diameter, shall

not be installed on the exterior portions of any Unit or dwelling without prior written approval as required by Section 22 of this Declaration. Antennas situated entirely within a dwelling, and not visible from the exterior are permitted. Antennas covered by the FCC Rule, including satellite dishes of one (1) meter or less in diameter, are permitted within a Unit, provided such Antennas shall not be visible from the front elevation of the Unit; provided, however, that nothing herein requires installation of such an Antenna in a location from which an acceptable quality signal cannot be received, as certified in writing by a licensed installer or which causes an unreasonable delay or cost increase in such installation.

(ee) Completion of Construction. Once the construction of any building or structure on a Unit by a party other than a Dealer or Declarant has commenced, such construction shall proceed without delay and shall be completed in accordance with the time line established by the Unit Owner and the _____ Architectural Board, except where such completion is impossible or would result in great hardship to the Unit Owner or a Dealer due to strikes, fires or national emergencies or natural calamities. Cessation of work, whether such work be construction or demolition work, once started and before completion thereof for a continuous period of sixty (60) days shall be prima facie evidence of an intent to abandon the work in its partially completed or demolished state and shall be deemed to be a public and private nuisance. The Declarant and Architectural Board shall have the power to seek and demand an injunction from the Court of Chancery of the State of Delaware to compel the completion or demolition of the work within sixty (60) days.

25. Members of the Executive Board. The names of the first members of the Executive Board of the Association, to serve until their successors are chosen and qualified pursuant to the Bylaws, are:

- (a)
- (b)
- (c)

26. Special Declarant Rights.

(a) The Declarant reserves the following rights (individually and collectively, the "Special Declarant Rights"), for Declarant and for Dealers; and for other third parties, including, but not limited to any Unit Owner, pursuant to one or more partial and limited non-exclusive assignments by Declarant of any such right or rights that are executed and acknowledged by Declarant and such third parties and recorded in the Recorder's Office:

(1) The right to complete or make improvements indicated on the Record Plan;

(2) The right to maintain sales offices, management offices, storage sheds/trailers and model homes on Units or the Common Areas, provided that Declarant or Dealer may relocate any such facility located on a Unit to any other Unit in the Planned Community from time-to-time, to the extent described in the following table:

	NUMBER	SIZE	LOCATION
Model Homes	Four per each Dealer	Per home plan prepared by applicable Dealer	On Unit designated by Declarant
Construction Management Offices	One per each Dealer	Trailer of a size determined by Dealer	On Unit or on the portions of the Common Area designated by Declarant
Storage Sheds/ Trailers	Two per each Dealer	Trailer/shed of a size determined by Dealer	On Unit or on the portions of the Common Area designated by Declarant
Sales Offices	One per each Dealer	Determined by Dealer	Within Model Home, or if no Model Home has been constructed by a Dealer, then in a trailer of a size determined by Dealer

(3) The right to maintain signs in the Planned Community to advertise the Planned Community, including marketing signs for each Dealer on Units and Common Areas as determined by each Dealer;

(4) The right to maintain signs on the Property to advertise the sales of homes as follows: (i) a sign in front of each model home with a size of up to 24 inches by 18 inches, a brochure box and sign on each Unit available for sale with a size of up to 24 inches by 18 inches, and (ii) other signs on Units deemed necessary by Declarant;

(5) The right to conduct sales business and construction activities on the Property or in the Planned Community;

(6) The right to use and to permit others to use, easements through the Common Areas as may reasonably be necessary for the purpose of discharging the Declarant's obligations under the Act and this Declaration;

(7) The right of Declarant to grant and convey one or more conservation easements or other similar agreements on or with respect to portions of the Common Areas in favor of the Sussex County Land Trust or similar non-profit entity or organization to protect and/or preserve environmentally sensitive areas or habitats on such portions of the Common Areas;

(8) The right of Declarant to adopt and establish written guidelines for the size, design, materials, location, duration and other criteria for signs or advertising devices of any kind or character from time to time (the "Signage/Advertising Guidelines"), including the right to

prohibit the right of a Unit Owner other than a Dealer from displaying any “for sale” or similar signage during the first two (2) years of the Declarant Control Period pursuant to § 81-320 (c) of the Act;

(9) The right of Declarant and any Dealer to add to, remove, or otherwise modify or alter the landscaping, trees, and any other physical features or characteristics of any portion of the Property owned by Declarant or a Dealer from time to time, including but not limited to any such property that is adjacent to, in the general vicinity of, or otherwise visible from any Unit Owner’s Unit, including but not limited to changing the location, configuration, size, or other features or characteristics of any Units or Common Areas; and Declarant and each Dealer shall not have any liability, duty or obligation to any such Owner or any third parties as a result of such modifications, including but not limited to any alterations in the physical view from such Unit Owner’s Unit, whether resulting from or attributable to the presence, absence or re-configuration of other dwellings, structures, trees, landscape, amenities, or any other improvements or betterments or any modifications thereto (collectively the “Protected Development Rights”);

(10) The right of Declarant to modify the _____ Standards from time to time during the Declarant Control Period. Any such approved modifications shall become effective upon adoption, subject to exceptions and exemptions for existing or pending construction pursuant to the prior _____ Standards then in effect when contracts were entered into between (a) Declarant or a Dealer and its third party homebuyers or (b) an Owner with its construction contractor(s);

(11) The right to appoint or remove any officer of the Association or any members of the Executive Board during the Declarant Control Period;

(12) The right to control any construction, design review, or aesthetic standards committee or process;

(13) The right to attend meetings of the Association and, except to the extent deemed to be an executive session of the Executive Board, pursuant to Section 81-103 (45) of the Act; and

(14) The right of access to the records of the Association to the same extent as a Unit Owner.

(b) Limitations on Special Declarant Rights. Unless sooner terminated by a recorded instrument signed by Declarant, any Special Declarant Rights may be exercised by Declarant or any assignee thereof as evidenced by a written assignment recorded in the Recorder’s Office for the period from the date of this Declaration through the date thirty (30) years thereafter.

27. Units Subject to Declaration, Bylaws, Record Plan, Reservation and Declaration of Easements, Licenses and Agreements, and Rules and Regulations. All present and future Unit Owners, lessees, mortgagees, tenants and occupants of Units shall be subject to and shall comply with the provisions of the following: this Declaration, the Bylaws, the Record Plan, and any Rules and Regulations for the Planned Community (individually and collectively, the “Governing

Documents”). The acceptance of a deed of conveyance or other transfer documents or the entering into of a lease or the entering into occupancy of any Unit shall constitute an agreement that the provisions of the Governing Documents are accepted and ratified by such Unit Owner, tenant or occupant, and all of such provisions shall be deemed and taken to be enforceable equitable servitudes and covenants running with the Land and shall bind any person having at any time any interest or estate in such Unit, as though such provisions were recited at length in each and every such document.

28. Enforcement. The Declarant, the Association, and any Unit Owner shall have the right to enforce, by any proceedings at law or in equity, all of the restrictions, conditions, covenants, easements, reservations, liens and charges now or hereafter imposed by the provisions of this Declaration. Failure of the Declarant, the Association, or any Unit Owner to enforce any covenant or restriction herein contained shall in no event be deemed as a waiver of the right to do so thereafter. The Declarant and the Association shall have the right to adopt reasonable rules and regulations for enforcing the provisions hereof or any other rule or regulation, including the right to set and collect fines which shall be liens against Units.

29. Severability. Invalidation of any covenants or restrictions or any term, phrase or clause of this Declaration by the adjudication of any court or tribunal shall in no way affect the other provisions hereof which are hereby declared to be severable and which shall remain in full force and effect.

30. Assignment and Delegation. The Declarant shall have the right to assign to any one (1) or more persons, firms, corporations, partnerships or associations, any and all rights, powers, titles, easements and estates reserved or given to the Declarant in this Declaration. Further, the Declarant reserves the right to convey, assign or delegate to the Association, and the Association shall accept, any or all of the Declarant’s rights and obligations set forth in this Declaration.

31. Irrevocable Power of Attorney. Notwithstanding any provision to the contrary contained in this Declaration or the Bylaws, Declarant hereby reserves for itself, its successors, transferees and assigns, for a period of twenty (20) years from the date the first Unit is conveyed to an Unit Owner that is not the Declarant, or until it conveys title to all of the Units whichever occurs first, the right to execute on behalf of the Association and all contract purchasers, Unit Owners, mortgage holders, mortgagees, and other lien holders or parties claiming a legal or equitable interest in any portion of the Property, including without limitations, any Unit or the Common Areas, any agreements, documents, amendments or supplements to this Declaration and the Bylaws which may be required by FNMA, FHA, VA, FHLMC, GNMA, Sussex County, Delaware, any governmental or quasi-governmental agency or authority having regulatory jurisdiction over the Association, Common Areas, Property, any Unit, any public or private utility company designated by Declarant, any institutional lender or title insurance company designated by Declarant, or as may be required to comply with the federal Fair Housing Act, or to comply with other applicable laws or to correct any typographical or clerical errors or correct any ambiguity in the text of this Declaration or the Bylaws; together with any and all other documents, instruments or agreements, including by way of illustration and not limitation; deeds, transfer tax affidavits, agreements, closing statements, with respect to any of the rights, title and authorizations,

and acts reserved by or provided to Declarant under this Declaration or the Bylaws; or as otherwise expressly reserved by or granted to Declarant hereunder.

(a) By acceptance of a deed to any Unit or by the acceptance of any other legal or equitable interest in any portion of the Property, including without limitations, the Units or Common Areas, each and every such contract purchaser, Unit Owner, mortgage holder, mortgagee or other lien holder or party having a legal or equitable interest in any portion of the Property, including without limitations, any Unit or the Common Areas does automatically and irrevocably name, constitute, appoint and confirm Declarant, its successors, transferees and assigns, as attorney-in-fact for the purpose of executing any and all such agreement, document, amendment, supplement and other instrument(s) necessary to effect the foregoing rights, duties and obligations subject to the limitations set forth herein.

(b) No such agreement, document, amendment, supplement or other instrument that adversely affects the value of a Unit, or substantially increases the financial obligations of a Unit Owner, or reserves any additional or special privileges for Declarant not previously reserved, shall be made without the prior written consent of the affected Unit Owner(s) and all mortgagees of any mortgage encumbering the Units owned by the affected Unit Owner(s). Any such agreement, document, amendment, supplement or instrument which adversely affects the priority or validity of any mortgage that encumbers any Unit or the Common Areas shall not be made without the prior written consent of all such mortgagees.

(c) The power of attorney aforesaid is expressly declared and acknowledged to be coupled with an interest in the subject matter hereof and the same shall run with the title to the Property, including, without limitations, each Unit and the Common Areas, shall be binding upon the heirs, personal representatives, successors, transferees and assigns of any of the foregoing parties. Further, said power of attorney shall not be affected by the death or disability of any principal and is intended to deliver all right, title and interest of the principal in and to said power of attorney. Said power of attorney shall be vested in Declarant, its successors, transferees and assigns for a period of twenty (20) years from the date the first Unit is conveyed to an Unit Owner that is not Declarant, or until Declarant conveys title to the last Unit, whichever occurs first. Each Unit Owner covenants and agrees to execute and deliver to Declarant an irrevocable power of attorney coupled with an interest in form and content consistent with this Section to be recorded in the Recorder's Office at the Unit Owner's sole cost which shall run with and bind the Unit for a period of twenty (20) years as specified above.

(d) To accomplish the foregoing, each Unit Owner covenants and agrees, by acceptance of a deed to its Unit, to execute, acknowledge and deliver an Irrevocable Power of Attorney Coupled with an Interest substantially in the form and content of Exhibit "B" attached hereto and made a part hereof (the "POA") to supplement (and not in place of) the foregoing POA; provided, however, in the event any Unit Owner neglects or fails to execute and deliver such POA, then by acceptance of, together with the recordation of a deed to its Unit, each Unit Owner has affirmatively acknowledged and granted to Declarant the foregoing POA, which shall be deemed to have been incorporated in and made a part of such deed.

32. Duration and Amendments.

(a) Amendment. The Association or its successors, by and with the vote or written consent of sixty-seven percent (67%) of the then Unit Owners, shall have the power to waive, abandon, terminate, modify, alter, change, amend, eliminate or add to these restrictions and this Declaration at any time hereafter. Any such waiver, abandonment, termination, modification, alteration, change, amendment, elimination, or additions shall take effect when a copy thereof, executed and acknowledged by the Association or its successors in accord with the usual form of execution and acknowledgment of deeds, together with the written consents of the requisite number of Unit Owners or by a certificate by the Association verified under oath by the President thereof, or in the case of his/her absence or inability, by any Vice President thereof, setting forth the time, manner and result of the taking of the vote of the members, have been filed for record with the Recorder, and the same shall thereafter remain in effect in perpetuity unless otherwise provided. Notwithstanding the foregoing, such vote or consent shall not be required for amendments by the Executive Board in accordance with Section 81-217(i) of the Act, or by the Declarant in accordance with sections 81-217(k) and (1) of the Act. Notwithstanding the foregoing, provisions in this Declaration creating Special Declarant Rights which have not expired may not be amended without the consent of the Declarant. Furthermore, during the period that Declarant owns any Common Areas, or any Unit primarily for the purpose of sale, no waiver, abandonment, termination, modification, alteration, change, amendment, elimination, or additions to this Declaration shall take effect without the consent of the Declarant.

(b) Effectiveness of Amendments. Any amendment made pursuant to this Section shall be effective only upon recordation or at such alternate date as shall be specified in the amendment. Every Unit Owner or occupant, by accepting a conveyance or occupancy of a Unit shall be deemed to have agreed to be bound by such amendments as are permitted hereby, and to agree further that, if requested to do so by Declarant, such will consent to the amendment of this Declaration or any other instruments relating to the Planned Community.

(c) Power of Attorney. Declarant is hereby granted an irrevocable power of attorney coupled with an interest to amend this Declaration as provided in this Section and to take all other action convenient or necessary to give effect to any or all of the rights reserved to Declarant in this Declaration. Every party accepting an interest in any part of the Property, whether it be title, a lien, or any other interest, and whether it be transferred by a deed, a mortgage, a judgment, a last will and testament, or otherwise, shall thereby specifically accept the reservation of Declarant's rights as provided in this Declaration, and shall also thereby grant to Declarant this irrevocable power of attorney coupled with an interest. The Declarant may require that a party accepting any such interest in the Property shall execute a separate and written power of attorney coupled with an interest in the form set forth in the attached Exhibit "B" and record it in the Office of the Recorder of Deeds of Sussex County, Delaware. However, the power of attorney coupled with an interest provided by this paragraph shall be deemed fully granted to Declarant when any such interest is acquired, whether or not such separate and written power of attorney coupled with an interest is executed and recorded.

33. Dedication of Common Areas. Except as may otherwise be provided in this Declaration, every road, body of water, Common Area, Utility System, and other amenity within the Planned Community is private, and neither the Declarant's recording of any instrument or plan, or any other act of the Declarant with respect to the Property is, or is intended to be, or shall be

construed to be, a dedication to the public of any part of the Planned Community except as may otherwise be provided herein. The use and enjoyment of every part of the Planned Community is reserved to the Declarant; to those who, from time to time, are a Unit Owner; and to the invitees thereof. Such use shall be subject to such rules and regulations as may be prescribed by the Declarant or the Association, as the case may be.

34. Time is of the Essence. It is agreed that time is of the essence with regard to the provisions of this Declaration.

35. Remedies for Violation of Restrictions. Except as may otherwise be provided in this Declaration, in the event of a violation or breach of any of these restrictions by an Unit Owner or agent of an Unit Owner, by an occupant or agent of an occupant, or by another party, then the Unit Owners of Units in the Planned Community, the Declarant and the Association, or any of them, jointly or severally, shall have the right to proceed at law or in equity to compel compliance therewith, or to prevent the violation or breach thereof. In addition to the foregoing, the Declarant and the Association shall have the right, whenever any improvement or structure is built or placed in violation of this Declaration, to enter upon the property where such violation exists, and summarily abate or remove the same at the expense of the Unit Owner, if after thirty (30) days written notice of such violation, it shall not have been corrected by the Unit Owner. The Association is hereby granted a perpetual easement across each Unit for the purpose of enforcing its right under this Section, and no such entry and abatement or removal shall be deemed a trespass. The Association may also maintain such watchmen and erect, maintain and control, at its discretion, such gate houses, or adopt at its discretion other measures to enforce the rights mentioned in this Declaration, and such watchmen or gate houses shall not constitute the creation or maintenance of a nuisance or obstruction nor constitute any limitation or annulment of the grant of free and uninterrupted use of the Common Areas, including streets and roadways, of Unit Owners. The failure to enforce any rights, reservation, restriction or condition contained in this Declaration, however long continued, shall not be deemed a waiver of the right to do so thereafter as to the same breach or as to a breach occurring prior to or subsequent thereto and shall not bar or affect its enforcement. Should any person employ counsel to enforce any of the foregoing covenants, conditions, reservations or restrictions, because of a breach of the same, all costs incurred in such enforcement, including a reasonable fee for counsel, shall be paid by the Unit Owner of such Unit or Units in breach thereof. The Declarant shall not in any way or manner be liable or responsible for any violation of these restrictions by any person other than itself.

36. Internal Resolution of Complaints. The Association shall follow the procedures outlined in the Bylaws regarding complaints (the "Internal Complaint Procedure"):

(a) An Owner or other interested person may present a common interest community complaint to the Association (a "CIC Complaint"). The Association may present a CIC Complaint to an Owner or other interested person. Whoever presents a CIC Complaint is the "Complainant." Whoever the CIC Complaint seeks a response from is the "Respondent." An Owner shall not be charged a fee to participate in the Internal Complaint Procedure, unless the Association determines the process is being abused.

(b) The CIC Complaint shall be on the CIC Complaint Form attached to this Declaration as Exhibit "D," or be substantially similar to the CIC Complaint Form. The

Association shall provide a copy of the form to the Owner upon request, or otherwise make the form generally available.

(c) The Complainant shall deliver the completed CIC Complaint, including all required supporting information to the Respondent as set forth herein. The Respondent shall mark on the CIC Form the date the CIC Complaint is received, and shall mark the date of receipt on copies of the CIC Form if requested by the Complainant. For the purposes of the Internal Complaint Procedure a party makes “delivery” in one of the following ways:

(1) hand delivery by or to an Owner to the current address, in person, or by services such as FedEx, UPS or other delivery service that creates a record of delivery; or

(2) registered or certified mail, return receipt requested; or USPS “delivery confirmation,” at the address provided by the Association or the Owner.

If an Owner delivers a CIC Complaint to the Association, the Association shall participate in this internal dispute resolution procedure.

(d) The Respondent shall deliver written acknowledgment of receipt of a CIC Complaint within fourteen (14) days of receipt by any of the means described in this Section 36.

(e) Any specific documentation required in support of the CIC Complaint must be delivered with the CIC Complaint, and must be described in the CIC Complaint. This documentation may include:

(1) the Declaration;

(2) the Bylaws;

(3) any Rules and Regulations of the Association;

(4) any other governing document of the Association;

and, if needed for the issue in dispute:

(5) notice letters, correspondence;

(6) bills;

(7) checks;

(8) photographs; and

(9) any other document or evidence that supports the CIC Complaint, or is relevant to the matter complained about.

The Association will make available a copy of the governing documents to an Owner upon request, including the Certificate of Incorporation, Declaration, Bylaws, Rules and Regulations, all as amended from time to time, or any other documents creating or governing the Association and

other relevant books and records of the Association. If the Complainant relies upon any law or regulation applicable to the CIC Complaint, they shall provide that information, and describe the desired action or resolution in the CIC Complaint.

(f) A party to a CIC Complaint may submit a written request to the other party, to meet and confer in an effort to resolve the CIC Complaint. If the Association is the Respondent, the Executive Board shall promptly designate a member of the Executive Board to meet and confer. The parties shall meet promptly at a mutually convenient time and place, informally explain their positions to each other; and confer in good faith in an effort to resolve the CIC Complaint. A resolution of the dispute agreed to by the parties shall be memorialized in writing and signed by the parties, including the Executive Board's designee on behalf of the Association. The agreement binds the parties and is judicially enforceable if it is signed by the parties; is not in conflict with law or the governing documents of the Association; and is either consistent with the authority granted by the Executive Board to its designee or the agreement is ratified by the Executive Board.

(g) If the CIC Complaint is not resolved through the "meet and confer" in Section 36(f) above or requires additional information, the Respondent, if it is the Association, shall review the CIC Complaint at the next Association meeting, and within ten (10) days thereafter, make a reasonable, efficient, and timely request for any additional information that is necessary for the Owner to provide in order to continue processing the CIC Complaint. An Owner who is a Respondent may request additional information within twenty (20) days of receipt of the CIC Complaint.

(h) The Respondent will provide the requested information, if any, within ten (10) days of the request, unless there are unforeseen circumstances. If there are unforeseen circumstances the Respondent must notify the Complainant when the information will be provided.

(i) The Respondent shall respond to and act upon the CIC Complaint within twenty (20) days after the Complainant provides the information requested, or the time expires.

(j) The Association shall notify the Owner a reasonable time before, of the date, time, and location at which the Association will consider the CIC Complaint. For purposes of this paragraph, "reasonable time" means not less than seven (7) days prior to the date for consideration of the CIC Complaint or at a convenient time for both the Association and the Owner. The Association will deliver notice of the date, time, and location for consideration of the CIC Complaint to the Owner by the delivery means described in this Section 36.

(k) The Association shall permit the Owner a full opportunity to explain the Owner's position and evidence, and to question witnesses, Association members, employees or representatives. The Association may ask the Owner questions, and question others.

(l) Each party shall treat the other with dignity, respect and civility. Neither party need tolerate rudeness, name calling, or disrespect. Either party may call a ten (10) minute recess in the meeting for this reason.

(m) No later than fourteen (14) business days after consideration of the CIC Complaint, the Association shall make its final determination of the CIC Complaint in writing. The Association shall deliver written notice of the final determination to the Owner.

(n) The notice of final determination shall be dated with the date of issuance and include:

(1) the written final determination with an explanation of the decision;

(2) specific quotation of the Associations declaration, bylaws, rules or other governing documents, or

(3) a reference to an applicable law or, regulation or rule that led to the final determination of the Association;

(4) any supporting documents, correspondence, and other materials related to the final decision;

that led to the final determination, as well as:

(5) the registration number for the Association, if any; and

(6) the name and license number of the community manager, if any.

(o) The notice of final determination shall inform the Owner of the right to submit the Association's final determination to the Delaware Department of Justice's Office of the Ombudsperson for the Common Interest Community in substantially the following form:

You have the right to file a notice of final adverse determination with the Common Interest Community Ombudsperson in accordance with 29 *Del. C.* §2544 (9), (10).

The notice to the Ombudsperson:

- must be filed within (30) days of the date of the final adverse decision;
- must be in writing on a "Contact/Complaint" form provided by the Office of the Common Interest Community Ombudsperson ("Ombudsperson") (available at the website of the Ombudsperson or by calling the number below);
- must include copies of any Required Information listed in the Contact/Complaint form and supporting documents, correspondence and other materials related to the decision; and

- must be accompanied by a thirty-five dollar (\$35) filing fee (unless waived by the Ombudsperson for good cause).

You may contact the Office of the Ombudsperson at any of the following:

Delaware Department of Justice
Office of the Common Interest Community Ombudsperson
820 N. French Street
Wilmington, DE 19801
Telephone: (302) 577-8400
Email: Common.Interest.Community.Ombudsperson@state.de.us.

37. Rule Against Perpetuities. In the event that any of the provisions hereof are declared void by a court of competent jurisdiction by reason of the period of time herein stated for which the same shall be effective, then in that event such term shall be reduced to a period of time which shall not violate the rule against perpetuities or any other law of the State of Delaware, and such provision shall be fully effective for said reduced period of time.

38. Utility Contracts Notice. The Declarant has or will negotiate and enter into contracts with such utility company, or companies, or governmental agencies, as Declarant may deem appropriate for the purpose of supplying utilities to said subdivision, including, but not necessarily limited to telephone service, water, sewer, cable television, gas and any other utility which is deemed desirable by the Declarant, on behalf of the individual Unit Owners and residents of the Planned Community and the Association. The individual Unit Owners and residents of the Planned Community and the Association shall be bound by such contracts and shall pay all such fees, assessments, charges, rates, or tariffs required by such contracts.

39. Waiver. No provision contained in this Declaration shall be deemed to have been abrogated or waived by reason of any failure to enforce the same, irrespective of the number of violations or breaches which may occur.

40. Gender. The use of the masculine gender in this Declaration shall be deemed to refer to the feminine gender and the neuter gender and the use of the singular shall be deemed to refer to the plural, and vice versa, whenever the context so requires.

41. Run With the Land: Successors and Assigns. This Declaration shall run with the real property submitted to this Declaration and which shall be binding upon all parties having any right, title, lien or other interest in the Land or any part thereof, their heirs, successors, successors-in-title, and assigns, and shall inure to the benefit of each Unit Owner thereof Whenever Declarant is referred to herein, such reference shall also refer to its successors and assigns.

42. Notices. Notices required pursuant to this Declaration shall be given in accordance with Section 81-127 of the Act.

IN WITNESS WHEREOF, _____, a Delaware limited liability company, has caused these presents to be signed this ____ day of _____, 2020.

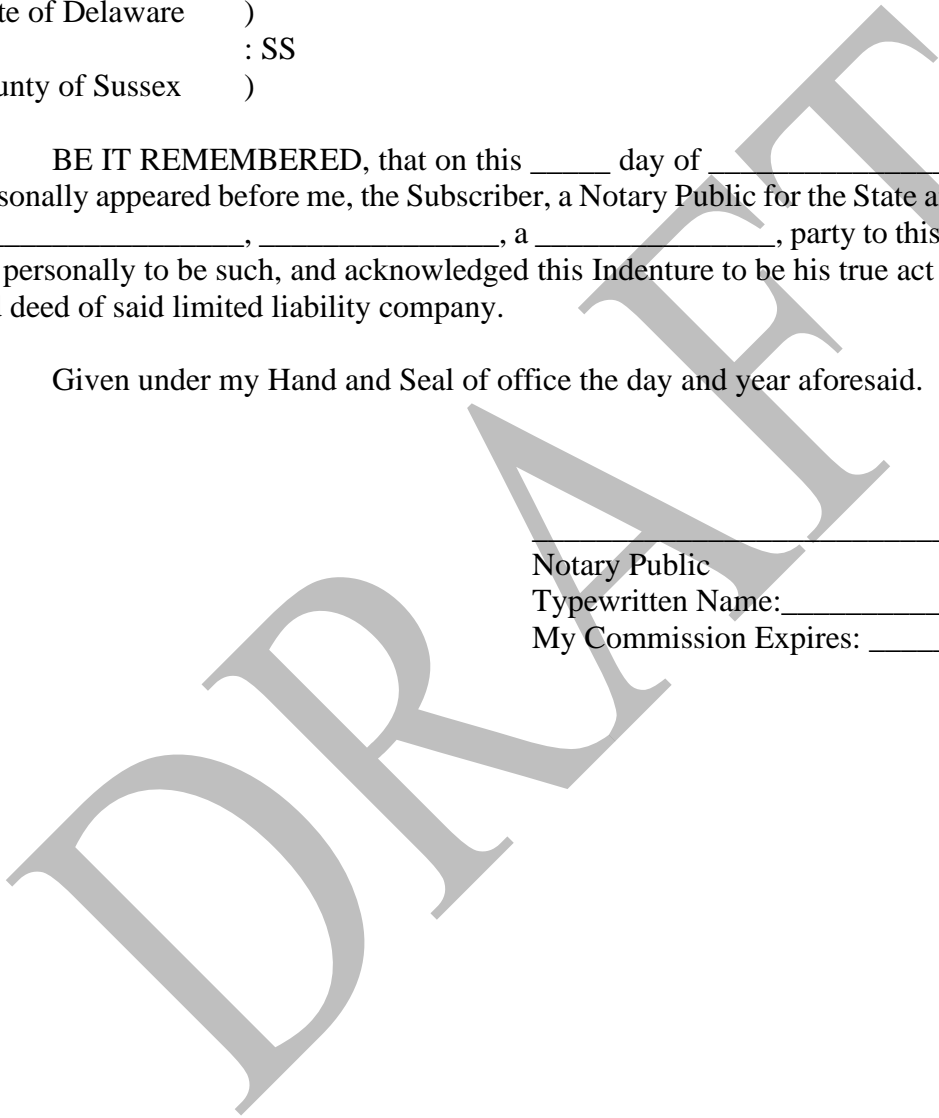
By: _____

State of Delaware)
 : SS
County of Sussex)

BE IT REMEMBERED, that on this _____ day of _____, A.D. 2022, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, _____, _____, a _____, party to this Indenture, known to me personally to be such, and acknowledged this Indenture to be his true act and deed and the act and deed of said limited liability company.

Given under my Hand and Seal of office the day and year aforesaid.

Notary Public
Typewritten Name: _____
My Commission Expires: _____



DRAFT