

JAMIE WHITEHOUSE, AICP
DIRECTOR OF PLANNING & ZONING
(302) 855-7878 T
(302) 854-5079 F
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Sussex County

DELAWARE
sussexcountyde.gov

PLEASE NOTE

This paperless packet is published on the County's website for convenience purposes, and only includes information received up to the close of business on the day before a public hearing. Documents received after this, or documents submitted during the public hearing are not uploaded to the Paperless Packet. The legal record is the paper record maintained in the Offices of the Planning & Zoning Department.



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

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JAMIE WHITEHOUSE, MRTPI, AICP
DIRECTOR OF PLANNING & ZONING

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: February 17th, 2022

Application: 2021-27 Lands of Borders

Applicant: Matthew Borders
21767 Herons Crossing
Seaford, DE 19973

Owner: Delores Borders
32993 Herons Crossing
Seaford, DE 19973

Site Location: Lying on the east side of Herons Crossing approximately 270-feet north of Hearn's Pond Road (S.C.R. 544)

Current Zoning: Medium Residential (MR) Zoning District

Proposed Zoning: Medium Residential (MR) Zoning District

Comprehensive Land Use Plan Reference: Existing Development Area

Councilmanic District: Mr. Vincent

School District: Seaford School District

Fire District: Seaford Volunteer Fire Department

Sewer: Septic

Water: Well

Site Area: 9.283 acres +/-

Tax Map ID.: 531-7.00-1.00





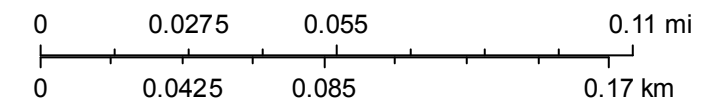
Sussex County



PIN:	531-7.00-1.00
Owner Name	BORDERS JACOB E
Book	807
Mailing Address	21882 HERONS CROSSING
City	SEAFORD
State	DE
Description	N/RD 544
Description 2	1180'E/RD 561
Description 3	LOT 3 REMAINING LAND
Land Code	

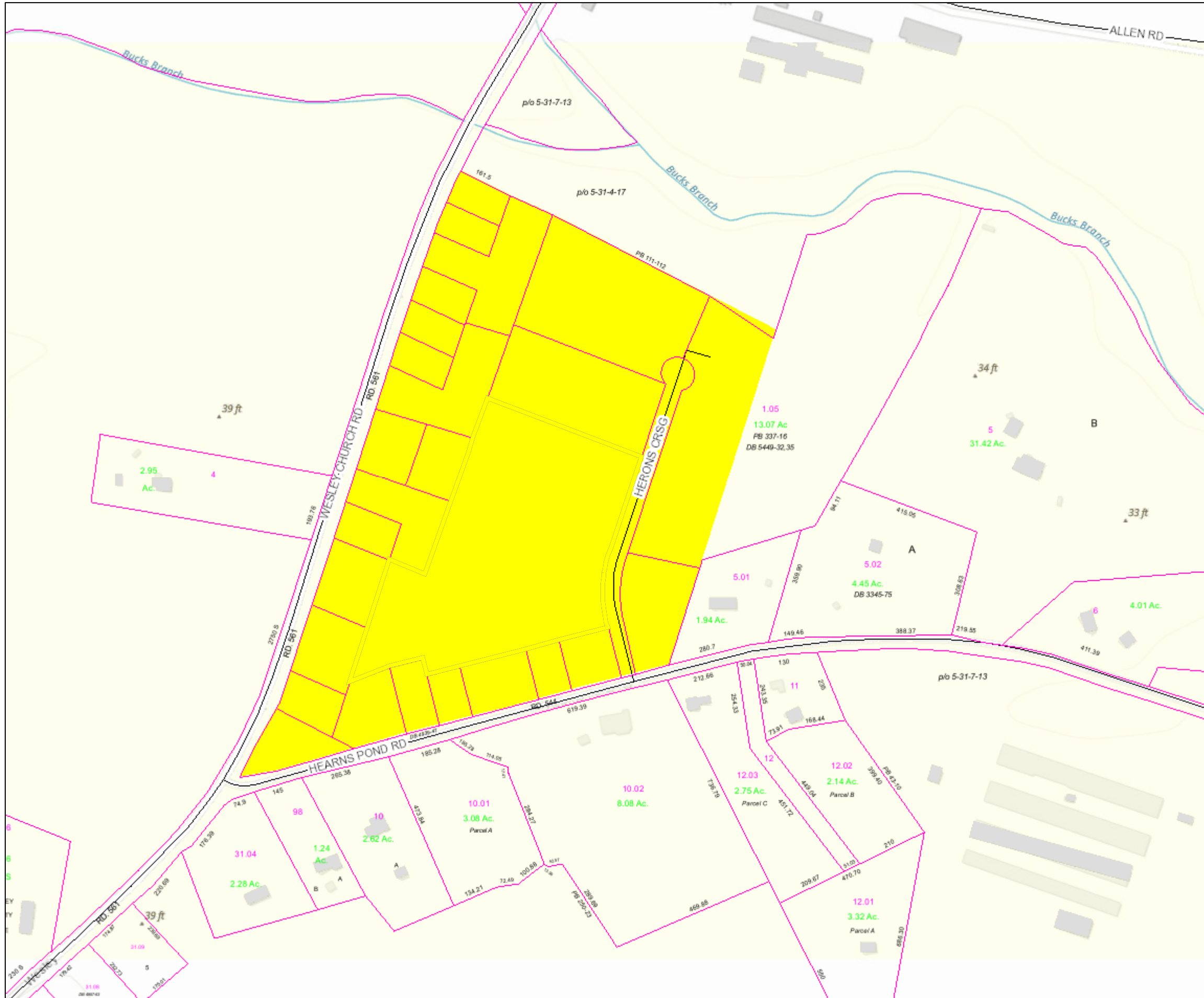
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- Override 1
- polygonLayer**
- Override 1
- ⋮ Tax Parcels
- 911 Address
- Streets
- County Boundaries

1:2,257





Sussex County



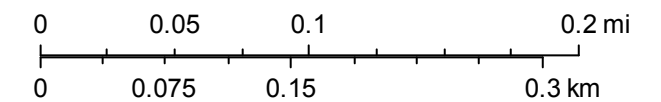
PIN:	531-7.00-1.00
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- polygonLayer**

 - Override 1
- polygonLayer**

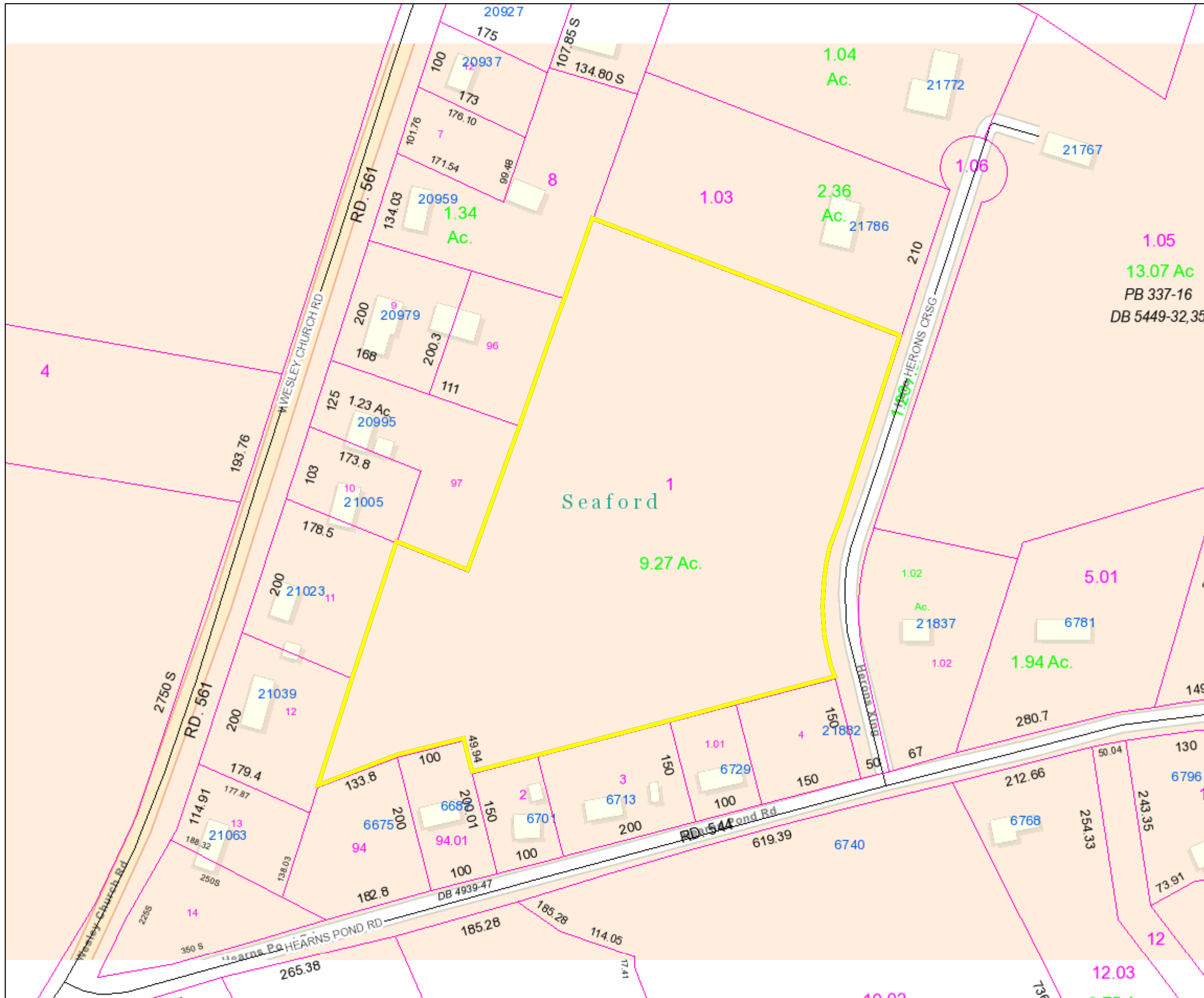
 - Override 1
- Tax Parcels
- Streets

1:4,514





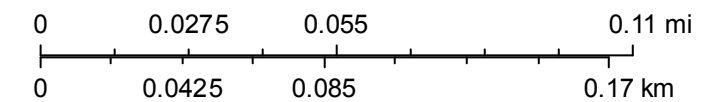
Sussex County



PIN:	531-7.00-1.00
Owner Name	BORDERS JACOB E
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Mailing Address	21882 HERONS CROSSING
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State	DE
Description	N/RD 544
Description 2	1180'E/RD 561
Description 3	LOT 3 REMAINING LAND
Land Code	

- polygonLayer
Override 1
- polygonLayer
Override 1
- ⋯ Tax Parcels
- 911 Address
- Streets
- ⋯ Hundred Boundaries
- ⋯ County Boundaries

1:2,257



File #: 2021-27

Pre-App Date: _____

Sussex County Major Subdivision Application 202112878

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:

Location of Subdivision:

Hérons Crossing (Private Drive), Seaford, DE

Proposed Name of Subdivision:

Lands of Borders

Tax Map #: 531-7.00-1.00

Total Acreage: 9.283

Zoning: MR

Density: 0.214

Minimum Lot Size: 3.733

Number of Lots: 2

Open Space Acres: n/a

Water Provider: On-Site Well

Sewer Provider: On-Site Septic

Applicant Information

Applicant Name: Matthew Borders

Applicant Address: 21767 Herons Crossing, Rd

City: Seaford

State: DE

Zip Code: 19973

Phone #: (302) 841-5002

E-mail: mattborders10@gmail.com

Owner Information

Owner Name: Delores S. Borders

Owner Address: 32993 Herons Crossing

City: Seaford

State: DE

Zip Code: 19973

Phone #: (302) 841-5002

E-mail: mattborders10@gmail.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: David Heatwole

Agent/Attorney/Engineer Address: PO Box 2, 19 Commerce Street

City: Harrington

State: DE

Zip Code: 19952

Phone #: (302) 841-7901

E-mail: dave.heatwole@siteworkseng.com



Check List for Sussex County Major Subdivision Applications

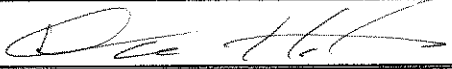
The following shall be submitted with the application

- ✓ **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.**
- n/a **PLUS Response Letter** (if required) n/a **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: 8/30/21

Signature of Owner



Date: 8-30-21

For office use only:

Date Submitted: 8/30/21

Fee: \$500.00 Check #: 2108

Staff accepting application: NT

Application & Case #: 202112878 2021-27

Location of property: _____

Date of PC Hearing: _____

Recommendation of PC Commission: _____

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

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **2/1/2022**

APPLICATION: **2021-27 Lands of Borders**

APPLICANT: **Matthew Borders**

FILE NO: **WS-4.06**

TAX MAP &
PARCEL(S): **531-7.00-1.00**

LOCATION: **Lying on the east side of Herons Crossing, approximately 270 feet north of Hearn's Pond Road (SCR 544)**

NO. OF UNITS: **2**

GROSS
ACREAGE: **9.283**

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? **Municipal Growth & annexation Area**
- (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 **N/A** 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 within the boundaries of the City of Seaford's Growth and Annexation Area. Contact the City of Seaford concerning the availability of Sewer and Water 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
No Permit Tech Assigned

TM: 5-31-7.00-1.03;
5-31-7.00-1.04;
5-31-7.00-1.05;
5-31-7.00-1.06; and,
5-31-7.00-4.00

Prepared by and Return to:
The Smith Firm, LLC
8866 Riverside Dr.
Seaford, DE 19973

**DECLARATION OF EASEMENT AND
SHARED MAINTENANCE AGREEMENT**

THIS DECLARATION OF EASEMENT AND SHARED MAINTENANCE AGREEMENT (the "Agreement") is made and entered into this ____ day of _____, 2020, by **VINCENT BORDERS** and **RACHEL BORDERS**, having an address for purposes of this Agreement of 21786 Herons Crossing, Seaford, Delaware 19973,

AND

RAYMOND S. BORDERS, having an address for purposes of this Agreement of 21772 Herons Crossing, Seaford, Delaware 19973,

COPY

AND

JACOB E. BORDERS and **DOLORES S. BORDERS**, having an address for purposes of this Agreement of 21882 Herons Crossing, Seaford, Delaware 19973;

AND

MATHEW S. BORDERS and **CHELSEA L. BORDERS**, having an address for purposes of this Agreement of 21767 Herons Crossing, Seaford, Delaware 19973.

RECITALS

WHEREAS, as of the date of this Agreement, Vincent and Rachel Borders are the record owners of Sussex County tax district, map and parcel identification number 5-31-7.00-1.03; otherwise known as 21786 Herons Crossing, Seaford, Delaware 19973 (hereinafter "Lot 1");

WHEREAS, as of the date of this Agreement, Raymond S. Borders is the record owner of Sussex County tax district, map and parcel identification number 5-31-7.00-1.04; otherwise known as 21772 Herons Crossing, Seaford, Delaware 19973 (hereinafter "Lot 2");

WHEREAS, as of the date of this Agreement, Jacob E. Borders and Dolores S. Borders are the record owners of Sussex County tax district, map and parcel identification number 5-31-7.00-4.00; otherwise known as 21882 Herons Crossing, Seaford, Delaware 19973 (hereinafter "Lot 3");

WHEREAS, as of the date of this Agreement, Mathew S. Borders and Chelsea L. Borders are the record owners of Sussex County tax district, map and parcel identification number 5-31-7.00-1.05; otherwise known as 21767 Herons Crossing, Seaford, Delaware 19973 (hereinafter "Lot 4");

WHEREAS, as of the date of this Agreement, there is a 50' private right-of-way identified as Sussex County tax district, map and parcel identification number 5-31-7.00-1.06, and more fully shown on a plat placed of record in the Office of the Recorder of Deeds at Plat Book 111, Page 112 (the "ROW"); with the said ROW providing a means of ingress and egress to and from Lots 1, 2, 3 and 4 (collectively the "Properties").

WHEREAS, as of the date of this Agreement, the ROW is improved with an asphalt surface; and,

WHEREAS, as of the date of this Agreement, the ROW is owned by Jacob E. Borders and Dolores S. Borders; however, it is the intention of the said parties to convey the ROW, subject to the terms set forth herein, to Raymond S. Borders either simultaneous with the recordation of this Agreement, or shortly thereafter.

WITNESSETH

NOW THEREFORE, in consideration of the covenants and easements herein contained, and as a material condition to the conveyance to any third-party of any or all of the Properties subject hereto, as well as for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is agreed as follows:

1. *Grant of Easement.* The parties hereto, inclusive of the record owner of the ROW at the time this Agreement is signed and recorded, do hereby agree in their respective names and as a covenant that will run by and with the Properties hereinabove described, to forever allow the owners of the Properties, and their successors in title to enjoy a right of ingress and egress over the ROW. The easement rights herein described are appurtenant to the lands at issue, and are not in gross to any individuals named herein.

2. *Obstructions.* No owners of the Properties hereinabove described shall obstruct, impede, or otherwise interfere with each other in the reasonable use of the ROW.

3. *Maintenance.* It is hereby agreed that the owners of the Properties, along with their respective successors in title, shall share, as detailed below, in the responsibility of maintaining the ROW in a usable, neat, and uniform manner, so that the overall appearance of said ROW is in keeping with its intended use. Maintenance of the ROW shall include, at a

minimum, biennial seal coating. Upon the affirmative vote of a majority of the Properties subject hereto (each Property having a single vote), maintenance of the ROW shall also include resurfacing and other more major repairs. Notwithstanding anything contained herein or elsewhere to the contrary, maintenance of the ROW, as aforesaid, shall be paid for as follows:

(A) For so long as either Jacob E. Borders or Dolores S. Borders hold an ownership interest in Lot 3:

(i) Owners of Lot 1 - 22%

(ii) Owners of Lot 2 - 39%

(iii) Owners of Lot 3 - 0%

(iv) Owners of Lot 4 - 39%

(B) Once Jacob E. Borders and Dolores S. Borders no longer hold an ownership interest in Lot 3:

(i) Owners of Lot 1 - 20%

(ii) Owners of Lot 2 - 37%

(iii) Owners of Lot 3 - 6%

(iv) Owners of Lot 4 - 37%

4. *Claim of Contribution for Damages.* Notwithstanding the foregoing, the owners of the Properties reserve any and all legal rights to pursue all claims related to damage to the ROW or any improvement thereon, normal wear and tear excepted, due to the negligence or intentional acts of any owner or third person.

5. *Binding effect.* This Agreement shall be binding upon the owners of the Properties, as well as their respective successors, heirs, executors, administrators, and assigns. This Agreement shall be a covenant that binds and runs with the land.

6. *No Public Use.* The easement herein described is not intended for public use, nor is any such right of public use created by this Agreement.

The Lot 1 owners have set their hands and SEALS on this Agreement as of the day and year set forth below

Signed, Sealed and Delivered
in the presence of:

_____ (SEAL)
Vincent Borders

_____ (SEAL)
Rachel Borders

STATE OF _____, COUNTY OF _____: to-wit

BE IT REMEMBERED, that on _____, 2020, personally came before me, the subscriber, VINCENT BORDERS and RACHEL BORDERS, parties to this Indenture, known to me personally to be such, and they acknowledged this Indenture to be their act and deed.

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

Notary Public
My Commission Expires:

The Lot 2 owner has set his hand and SEAL on this Agreement as of the day and year set forth below

Signed, Sealed and Delivered
in the presence of:

_____ (SEAL)
Raymond S. Borders

STATE OF _____, COUNTY OF _____: to-wit

BE IT REMEMBERED, that on _____, 2020, personally came before me, the subscriber, RAYMOND S. BORDERS, party to this Indenture, known to me personally to be such, and he acknowledged this Indenture to be his act and deed.

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

Notary Public
My Commission Expires:

The Lot 3 owners have set their hands and SEALS on this Agreement as of the day and year set forth below

Signed, Sealed and Delivered
in the presence of:

_____ (SEAL)
Jacob E. Borders

_____ (SEAL)
Dolores S. Borders

STATE OF _____, COUNTY OF _____: to-wit

BE IT REMEMBERED, that on _____, 2020, personally came before me, the subscriber, JACOB E. BORDERS and DOLORES S. BORDERS, parties to this Indenture, known to me personally to be such, and they acknowledged this Indenture to be their act and deed.

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

Notary Public
My Commission Expires:

The Lot 4 owners have set their hands and SEALS on this Agreement as of the day and year set forth below

Signed, Sealed and Delivered
in the presence of:

_____ (SEAL)
Mathew S. Borders

_____ (SEAL)
Chelsea L. Borders

STATE OF _____, COUNTY OF _____: to-wit

BE IT REMEMBERED, that on _____, 2020, personally came before me, the subscriber, MATHEW S. BORDERS and CHELSEA L. BORDERS, parties to this Indenture, known to me personally to be such, and they acknowledged this Indenture to be their act and deed.

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

Notary Public
My Commission Expires:

SITWORKS

ENGINEERING

August 30, 2021

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
2 The Circle
Georgetown, DE 19947

**RE: Lands of Borders – Subdivision
Submission Cover Letter
Tax Parcel: 531-7.00-1.00**

Dear Mr. Whitehouse:

I am submitting the Land of Borders Subdivision application for consideration at the next available Planning and Zoning meeting. This parcel was created by the subdivision recorded under plot book 111 and page 112 and fronts a 50-foot wide, privately maintained right of way. It is my understanding that a major subdivision is required based on conversations with Planning and Zoning Staff.

In support of the Lands of Borders Subdivision, I have included the following items:

- Letter of support by the property owners directly impacted by the subdivision
- A copy of the Declaration of Easement and Maintenance Agreement for the private right of way
- A copy of the Soils Evaluation for the existing and proposed lot

The applicant requests a waiver from the County's Forested Buffer and Street Requirements.

Would you please give me a call if you have any questions or concerns, 302-841-7901.



Dave Heatwole, PE | Principal
SITWORKS ENGINEERING

Z:\PROJECTS\2140-BORD - Subdivision\Record Documents\Sussex County P&Z\210811 - Initial Submission\1 Lands of Borders - Cover Letter.docx



Attn: Mr. Jamie Whitehouse, Director
Sussex County Planning and Zoning
2 The Circle
P.O. Box 589
Georgetown, DE 19947



RE: Lands of Borders Subdivision
Tax Map 531-7.00-1.00

Dear Mr. Whitehouse,

We support the proposed Lands of Borders Subdivision for the parcel noted above and are agreeable to the terms of the easement and shared maintenance agreement included with the Lands of Borders Subdivision submission.

 Dolores S. Borders 21822 Herons Crossing Seaford, DE 19973	<u>8/30/21</u> Date	 Raymond S. Borders 21772 Herons Crossing Seaford, DE 19973	<u>8/30/21</u> Date
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 Mathew S. Borders 21767 Herons Crossing Seaford, DE 19973	<u>8-22-21</u> Date	 Chelsea L. Borders 21767 Herons Crossing Seaford, DE 19973	<u>8/22/21</u> Date
--	------------------------	--	------------------------

 Vincent Borders 21786 Herons Crossing Seaford, DE 19973	<u>8-30-21</u> Date	 Rachael Borders 21786 Herons Crossing Seaford, DE 19973	<u>8/30/21</u> Date
--	------------------------	---	------------------------

Reference #:

565846

SITE EVALUATION
Approval Page

08/12/2021

GROUNDWATER

The soils on this site are approved when the following is completed in full and signed by the approving authority. Isolation distance requirements, limited area of suitable soils, placement of fill, removal of soil, or compaction of the evaluated area may preclude construction permit approval or modify the type of system that may be permitted. An approved report must accompany any permit application. This is not a construction permit.

Owner's Name and Address: Jacob E. & Delores S. Borders

21882 Herons Crossing
Seaford, DE 19973

Tax Map #:
5-31-7.00-1.01 P.O.
Lot #: Remaining Lands of Lot 3

Limitations of Soil Investigation for System Design

This soil investigation was conducted for a residential on-site system of up to 600 GPD capacity.

For applications of this report to designs of greater capacity or alternative uses, contact the site evaluator or the Department to determine if additional field investigations are necessary.

Initial Disposal System:

Full-depth low pressure pipe (LPP) or elevated sand mound disposal system. LPP trenches to be 12" wide. The maximum slope allowed for elevated sand mound systems is 6% and 12% for percolation rates slower than 60 MPI and faster than 60 MPI, respectively, as indicated below. The designer should visit the site to verify conditions prior to design. See exhibits O and P in the 1985 regulations (amended 1/11/14).

Location of Initial Disposal System:

In the immediate vicinity of profile(s) 1 & 2 (see plot).

Depth to Limiting Zone:

41"

Replacement Disposal System:

Same as above if space permits. Otherwise, the replacement system may be a sand-lined upgrade.

Location of Replacement Disposal System:

In the immediate vicinity of profile(s) referred to above.

Depth to Limiting Zone:

Same as above.

Design Considerations and Comments or Alternatives to the Initial Disposal System:

*Changes made to property lines or configuration from those included in the attached site evaluation report may negate this approval. A new plot drawing showing the locations of the soil borings in reference to changed property lines, fixed points of reference, etc. may be required in order for the site evaluation to be re-approved.

*Maintain all isolation distances specified in Exhibit "C" in the 1985 regulations (amended 1/11/14). The designated suitable soil area(s) appearing on the plot drawing may, in some cases, be negated or reduced due to required isolation distances.

Soils in the vicinity of SB #3 are suitable for a capping-fill LPP with a 35" limiting zone and a 30MPI estimated percolation rate.

Instructions to Property Owner

- Contact a Licensed Class C System Designer.
- A permeability rate of 30 minutes per inch has been estimated for the soils on this site. These estimated rates are used to determine the required size of the disposal area. They are based on soil texture and are derived from tables developed by the DNREC. You may elect to use the estimated rate to size the disposal system or have the appropriate tests conducted. Contact the Site Evaluator at (302) 856-1853 or the DNREC at (302) 856-4561 in Sussex County, and (302) 739-9947 in Kent and New Castle Counties for testing information.
- Read the attached site evaluation report for additional information.
- Identify where the drainfield will be placed on the site and protect it from any vehicle overtravel or stockpiling of any construction materials. It is your responsibility to prevent soil compaction of the drainfield area!

PAID
\$ 75.00 08/12/2021

This report has been prepared by: _____ 8/12/2021

Bradley J. Cate
Eastern Shore Soil Services

License #: 2052

Field Checked _____

For Office Use Only

DNREC APPROVED

8/13/21

8/13/26

DNREC Reviewing Staff

Approval Date

Expiration Date

Disclaimer: Approval of a site evaluation indicates only that the site evaluation was conducted in compliance with the regulations. It is not an indication of the quality or correctness of the site evaluation.

IF THERE ARE QUESTIONS
REGARDING THIS REPORT
CONTACT CLASS D LICENSEE

THE CLASS D LICENSEE
IS RESPONSIBLE FOR
ERRORS/OMISSIONS

Site Evaluation Report

Eastern Shore Soil Services
P.O. Box 411, Savanna, IL 61074 (815) 273-3550
P.O. Box 411, Georgetown, DE 19947 (302) 856-1853
esss@grics.net www.easternshoresoil.com

12-Aug-21

File #: 5293

Owner's Name and Address: Jacob E. & Delores S. Borders
21882 Herons Crossing
Seaford, DE 19973
Telephone #: () - 0

Tax Map and Parcel #: 5-31-7.00-1.01 P.O. **County:** Sussex
Property Location: NW/S Herons Crossing Rd., ~150' N of CR 544
Name of Development: N/A
Lot # Remaining Lands of Lot 3 **In Tax Ditch District?:** Yes
Central Sewer Available: No **Chesapeake/Inland Bays PSN3 Area?:** No
Central Water Available: No

Date of Investigation: 3/19/21
Evaluated by Test Pits: No **Evaluated by Soil Borings:** Yes

Profile #:	Depth to Limiting Zone:	Limiting Zone Inferred From:	Subgroup Taxon Classification:
1	41"	redoximorphic features	Oxyaquic Paleudult
2	46"	redox accumulations	Humic Hapludult
3	35"	redox accumulations	Oxyaquic Hapludult

Summary of Evaluation:

This site occupies a nearly level cultivated portion of a talf. Differences in depth to redoximorphic features were related to minor differences in topographic elevation. Free water observations should be considered qualitatively due to an insufficient equilibration period.

Evaluated By: Bradley J. Cate
DE License #: 2052


Site Evaluator's Signature

Note:

Information contained in this site evaluation report and shown on the accompanying plot drawing reflects current regulatory policies and procedures at the time the evaluation was conducted. Changes made to the property and to adjacent properties after the evaluation was conducted or changes in regulatory policy may preclude or modify the type or location of the recommended on-site sewage system regardless of site evaluation approval. Data contained in this report may include information obtained from property owners, their agents, residents, adjacent residents, and departmental permits, when readily available. While this information is believed to be accurate it does not guarantee a septic permit and the attached plot should not be construed as a survey. All information should be verified by interested parties prior to the transfer of the property as well as prior to design and installation of the septic system. Interpretations made in this evaluation are intended for siting and design of a septic system only and are not suitable for other uses. Unless approved by the regulatory agency(ies) this report represents only a technical opinion rendered and does not constitute an approval for siting or design of any septic system on this site.

SOIL PROFILE NOTES

Eastern Shore Soil Services

Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: esss@grica.net

Profile #: 1
 Date of Test: 3/15/21 Soil Boring or Test Pit (1)
 Property Owner: B. J. Cate
 Property Location: Heron's Crossing Rd Remainder of Lot 3
 Site Evaluator: **Bradley J. Cate, CPSS/SC** License No.: 2052

Slope: See Topo Relief: _____
 Estimated Permeability: mod Rapid
 Depth to Limiting Zone: 41" to redoximorphic features
 Soil Series Identified: Oxyaquic Paleudult

Horizon	Depth	Colors		Mottles Desc			Texture	Structure	Boundary(2) Consistence
		Matrix	Mottles	Ab.	S.	Con.			
<u>Ap</u>	<u>0 to 10</u>	<u>10YR 3/3</u>	<u>/</u>				<u>LS^s</u>	<u>mg</u>	<u>/uf</u>
<u>E</u>	<u>10 to 21</u>	<u>10YR 5/4</u>	<u>/</u>				<u>LS^s</u>	<u>m</u>	<u>/uf</u>
<u>Bt1</u>	<u>21 to 41</u>	<u>10YR 5/6</u>	<u>/</u>				<u>SL</u>	<u>msbk</u>	<u>/uf</u>
<u>Bt2</u>	<u>41 to 51</u>	<u>10YR 5/4</u>	<u>10YR 5/2 10YR 5/6</u>	<u>12d</u>			<u>SL</u>	<u>msbk</u>	<u>/uf</u>
<u>Bt3</u>	<u>51 to 62</u>	<u>10YR 5/4</u>	<u>10YR 5/2 7.5YR 5/3</u>	<u>12d</u>			<u>SL</u>	<u>-</u>	<u>/uf</u>
	<u>to</u>								<u>/</u>
	<u>to</u>								<u>/</u>
	<u>to</u>								<u>/</u>

Current Hydrology: "± to upper boundary of capillary fringe (or)
43"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
 (2) Boundary if described from a pit.


 Site Evaluator's Signature

SOIL PROFILE NOTES

Eastern Shore Soil Services

Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: esss@grics.net


Profile #: 2
 Date of Test: 3/16/21 Soil Boring or Test Pit (1)
 Property Owner: Bocoris
 Property Location: Heavens Crossing Rd Remindor of Lot 3
 Site Evaluator: **Bradley J. Cate, CPSS/SC** License No.: 2052

Slope: See Topo Relief: _____
 Estimated Permeability: moderate
 Depth to Limiting Zone: 46" to relax accumulations
 Soil Series Identified: Hemic Hapludalf

Horizon	Depth	Colors		Mottles Desc			Texture	Structure	Boundary(2) Consistence
		Matrix	Mottles	Ab.	S.	Con.			
A	0 to 9	10YR5/3	/				SL	1mjt	/uf
BH1	9 to 24	10YR4/4	/				SCC	1mshk	/fr
BH2	24 to 40	7.5YR5/6	/				SL	1cshk	/uf
E ₁ B ₁ B ₂	40 to 46.8	10YR5/4	90%				LS	~	/uf
		7.5YR5/6	20%				SL	~	/uf
C1	46 to 50	10YR5/4	7.5YR5/3	14p			LS	~	/uf
C2	50 to 60	10YR6/4	10YR5/3	22p			LS	~	/uf
	to								/
	to								/

Current Hydrology: "± to upper boundary of capillary fringe (or)
 44"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
 (2) Boundary if described from a pit.


 Site Evaluator's Signature

SOIL PROFILE NOTES

Eastern Shore Soil Services

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Site Evaluations, Environmental Permits
P.O. Box 411, Georgetown, DE 19947
Phone: (302) 356-1853
P.O. Box 411, Savanna, IL 61074
Phone: (815) 273-3550
Email: css@grics.net

Profile #: 3
Date of Test: 3/15/21 Soil Boring or Test Pit (1)
Property Owner: Barbers
Property Location: Herons Crossing At Remainder of 6043
Site Evaluator: **Bradley J. Cate, CPSS/SC** License No.: 2052

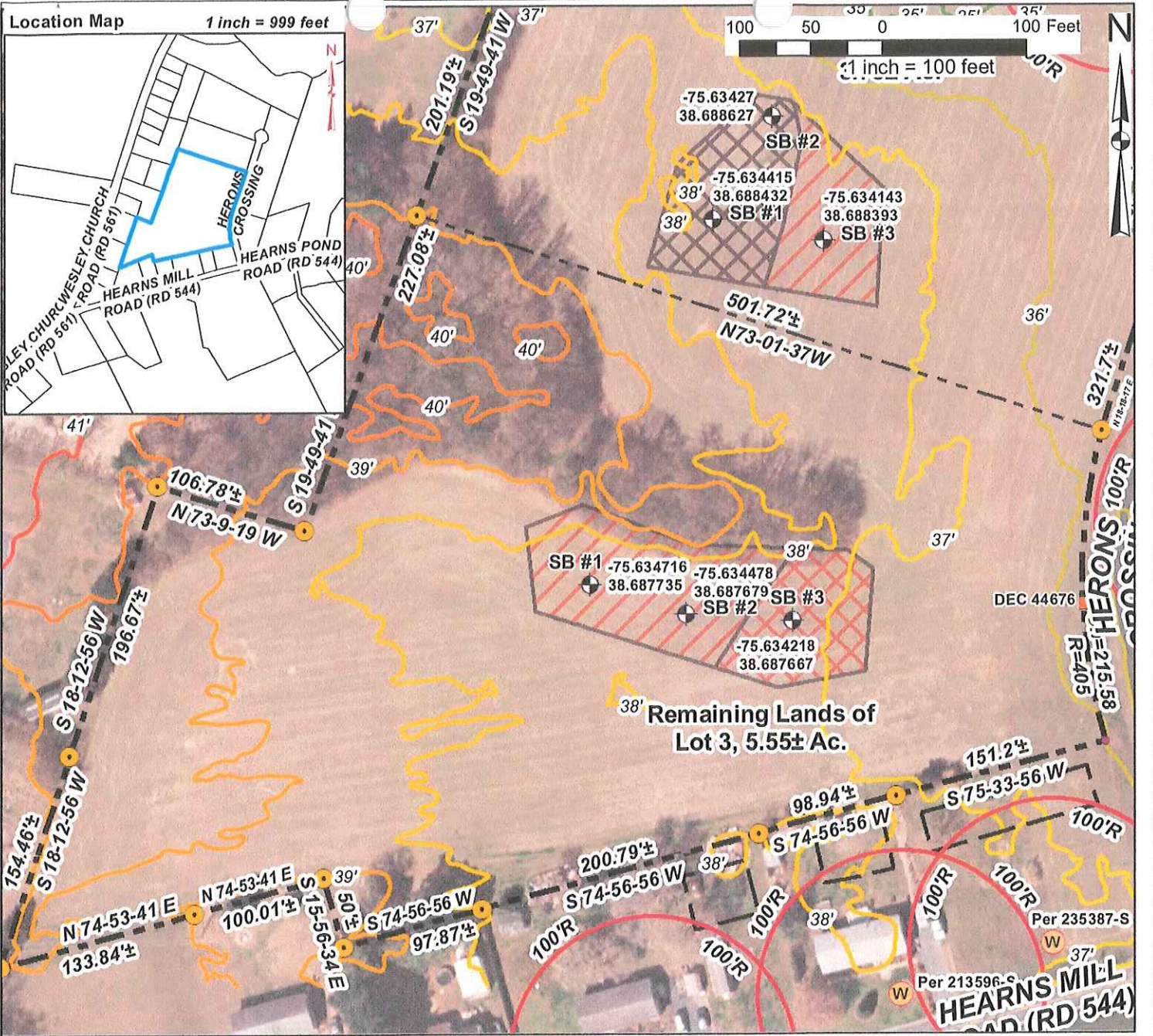
Slope: See Topo Relief: _____
Estimated Permeability: moderate
Depth to Limiting Zone: 35" to redox discontinuity
Soil Series Identified: Dry aquic Hapludult

Horizon	Depth	Colors		Mottles Desc			Texture	Structure	Boundary(2) Consistence
		Matrix	Mottles	Ab.	S.	Con.			
Ap	0 to 11	10YR 3/3	/				SL	large	/ ufr
Bt1	11 to 15	10YR 4/4	/				SCL	med	/ fr
Bt2	15 to 20	10YR 4/6	/				SCL	med	/ fr
Bt3	20 to 27	7.5YR 4/6	/				SCL	med	/ fr
Bt4	27 to 35	7.5YR 5/6	/				SL	~	/ ufr
C	35 to 46	10YR 5/6	5YR 5/8 10YR 5/8 10YR 5/8	C2p C3d			LS	~	/ ufr
Cg	46 to 60	2.5Y 5/2	2.5Y 5/4	C3p C5d			Stratified LS/SL	~	/ ufr
	to								

Current Hydrology: "± to upper boundary of capillary fringe (or)
35" ± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
(2) Boundary if described from a pit.


Site Evaluator's Signature



Legend

- Well Location from Records
- Misc. Point
- Soil Boring Location
- Utility Enclosure/Pede...
- Rebar
- Property Line
- Proposed Property Line
- Approx. System Extents
- Well Arc & Radius
- Capping-Fill LPP System
- Full-depth LPP System
- Capping-Fill Gravity-fed System

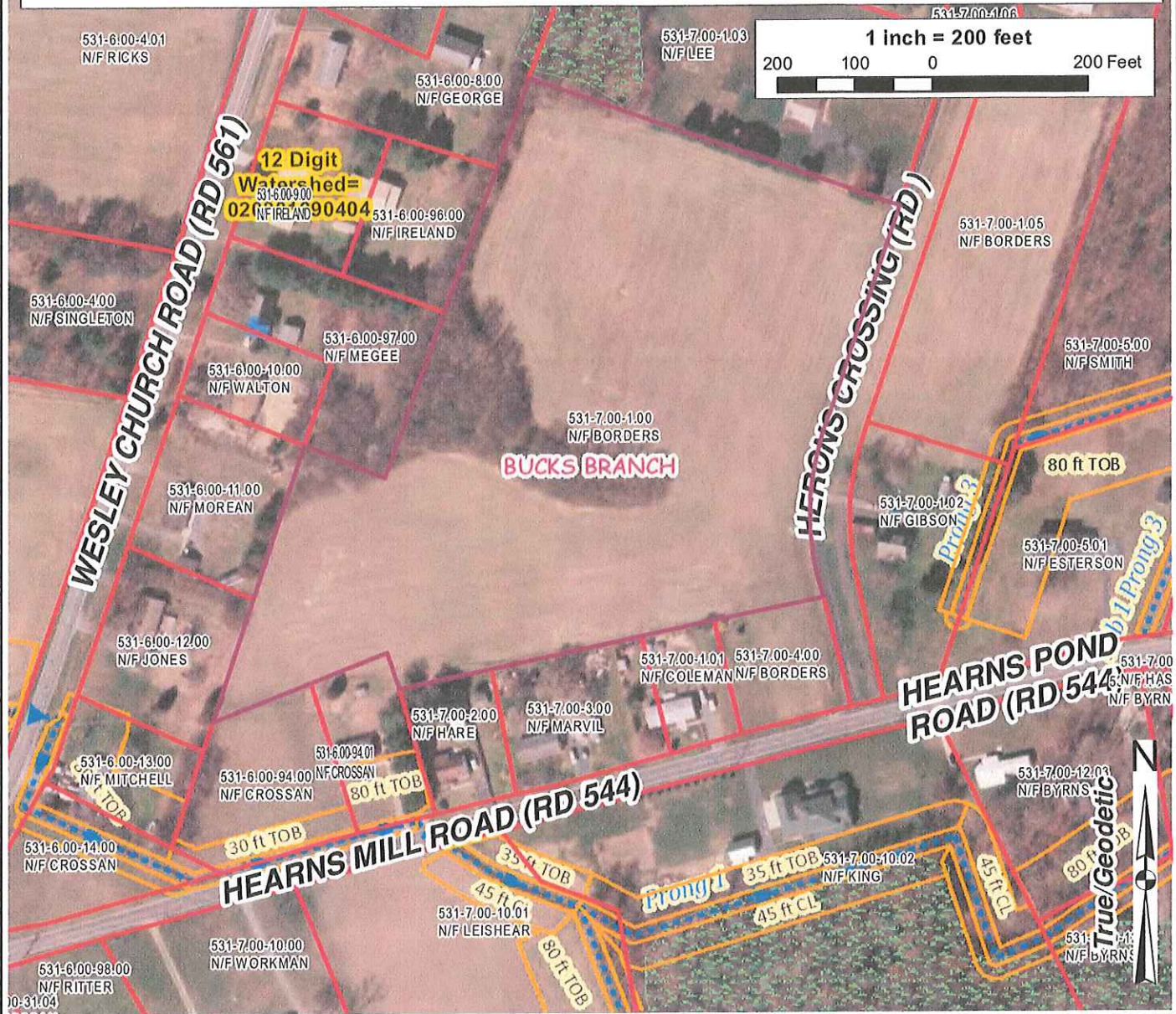
Site Evaluation Plot
N/F Jacob E. & Delores S. Borders
TM# 5-31-7.00-1.00, P.O.
Remaining Lands of Lot 3
Per Plan by Siteworks Eng.

Note: Unless otherwise shown, adjacent wells >100' from evaluated area (public wells >150'). Any ditch or swale present is ephemeral unless depicted as a watercourse. If this plot is not in color or there are any problems with the legibility or scale, contact the evaluator for a clean, scaled, color copy.

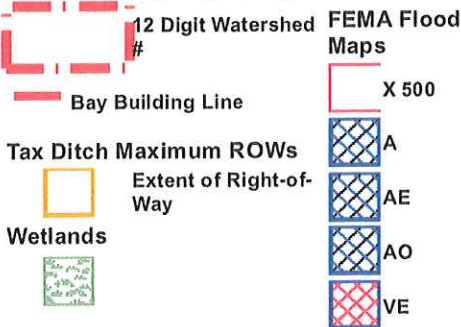
Disclaimer: This plot drawing is not represented as a survey. Boundary information has been compiled from any of the following sources: county GIS, tax map, deed, survey, recorded plot, or field located property corners. Locations of wells and septic systems are by direct observation where possible but, as with boundary information above, may include anecdotal information supplied by property owners, adjacent residents, and/or, other interested parties. This plot represents site conditions at the time of evaluation. Subsequent alteration of the site or adjacent properties may negate the validity or usefulness of the information. Elevation contours, if provided, are derived from public domain LIDAR or GIS and should be confirmed. All information should be re-verified prior to purchase or use. In some cases, features such as property lines, utility poles, transformers, etc. may be slightly at odds with aerial photography due to minor errors in GPS data collection or due to horizontal biases inherited from the aerial photography source used.

Eastern Shore Soil Services
 Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
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 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: esss@griac.net

Additional Information Required by DNREC for Site Evaluation Reports per Section 5.0 and Subsections under "REGULATIONS GOVERNING THE DESIGN, INSTALLATION AND OPERATION OF ON-SITE WASTEWATER TREATMENT AND DISPOSAL SYSTEMS", amended 1/11/2014.*



Legend (if not shown on map above, does not apply to subject parcel)



*Information Source: DNREC <http://mapservices.dnrec.delaware.gov/arcgis/services>
 Eastern Shore Soil Services does not warrant the validity or necessarily concur with this information, particularly as it relates to any wetlands depicted. Questions regarding wetlands shown (or not shown) should be directed to the DNREC Wetlands and Subaqueous Lands Section @ (302) 739-9943. These wetland maps were prepared by 3rd parties and are included solely as a regulatory requirement for site evaluations. Do not call the site evaluator.

Site Evaluation Map of Additional Published Properties

(This information has NOT been developed by Eastern Shore Soil Services). Property lines from tax maps and subject to locational errors.

Eastern Shore Soil Services
 Environmental Consulting:
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 Site Evaluations, Environmental Permits
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 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: esss@grica.net



PARID: 531-7.00-1.00
BORDERS JACOB E

Property Information

Property Location:

Unit:
City:
State:
Zip:

Class: AGR-Agriculture
Use Code (LUC): AG-AG
Town: 00-None
Tax District: 531 – SEAFORD
School District: 3 - SEAFORD
Council District: 1-Vincent
Fire District: 87-Seaford
Deeded Acres:
Frontage: 0
Depth: .000
Irr Lot:
Zoning 1: MR-MEDIUM RESIDENTIAL
Zoning 2: -
Plot Book Page: 112 336/PB

100% Land Value: \$2,000
100% Improvement Value
100% Total Value

Legal

Legal Description N/RD 544
1180'E/RD 561
LOT 3 REMAINING LAND

Owners

Owner	Co-owner	Address	City	State	Zip
BORDERS JACOB E	DOLORES S BORDERS	21882 HERONS CROSSING	SEAFORD	DE	19973

Reference #:

565845

SITE EVALUATION
Approval Page

The soils on this site are approved when the following is completed in full and signed by the approving authority. Isolation distance requirements, limited area of suitable soils, placement of fill, removal of soil, or compaction of the evaluated area may preclude construction permit approval or modify the type of system that may be permitted. An approved report must accompany any permit application. This is not a construction permit.

Owner's Name and Address: Jacob E. & Delores S. Borders

21882 Herons Crossing
Seaford, DE 19973

Tax Map #: 5-31-7.00-1.01 P.O.
Lot #: Proposed Parcel 3A

RECEIVED
08/12/2021
GROUNDWATER

Limitations of Soil Investigation for System Design

This soil investigation was conducted for a residential on-site system of up to 600 GPD capacity.

For applications of this report to designs of greater capacity or alternative uses, contact the site evaluator or the Department to determine if additional field investigations are necessary.

Initial Disposal System:

Capping-fill gravity-fed seepage bed or trench disposal system. Experience has shown that seepage trenches can have greater functional longevity under a variety of soil and site conditions. While regulation allows the use of seepage bed designs, trenches are nevertheless recommended if space permits. Trench installations are limited to slopes of 15% or less (unless designed by a professional engineer) and bed installations are limited to slopes of 2% or less. The designer should visit the site to verify conditions prior to design. See exhibits M and N in the 1985 regulations (amended 1/11/14).

Location of Initial Disposal System:

In the immediate vicinity of profile(s) 1 & 2 (see plot).

Depth to Limiting Zone:

48"

Replacement Disposal System:

Same as above if space permits. Otherwise, the replacement system may be a sand-lined upgrade.

Location of Replacement Disposal System:

In the immediate vicinity of profile(s) referred to above.

Depth to Limiting Zone:

Same as above.

Design Considerations and Comments or Alternatives to the Initial Disposal System:

*Changes made to property lines or configuration from those included in the attached site evaluation report may negate this approval. A new plot drawing showing the locations of the soil borings in reference to changed property lines, fixed points of reference, etc. may be required in order for the site evaluation to be re-approved.

*Maintain all isolation distances specified in Exhibit "C" in the 1985 regulations (amended 1/11/14). The designated suitable soil area(s) appearing on the plot drawing may, in some cases, be negated or reduced due to required isolation distances.

Soils in the vicinity of SB #3 are suitable for a full-depth LPP disposal system with a limiting zone of 44" and an estimated percolation rate of 30MPI.

Instructions to Property Owner

- 1. Contact a Licensed Class B System Designer.
2. A permeability rate of 30 minutes per inch has been estimated for the soils on this site. These estimated rates are used to determine the required size of the disposal area. They are based on soil texture and are derived from tables developed by the DNREC. You may elect to use the estimated rate to size the disposal system or have the appropriate tests conducted. Contact the Site Evaluator at (302) 856-1853 or the DNREC at (302) 856-4561 in Sussex County, and (302) 739-9947 in Kent and New Castle Counties for testing information.
3. Read the attached site evaluation report for additional information.
4. Identify where the drainfield will be placed on the site and protect it from any vehicle overtravel or stockpiling of any construction materials. It is your responsibility to prevent soil compaction of the drainfield area!

PAID
\$ 75.00 08/12/2021

This report has been prepared by: [Signature] 8/12/2021

License #: 2052

Bradley J. Cate
Eastern Shore Soil Services

Field Checked _____

For Office Use Only

DNREC APPROVED

8/13/21

8/13/26

DNREC Reviewing Staff

Approval Date

Expiration Date

Disclaimer: Approval of a site evaluation indicates only that the site evaluation was conducted in compliance with the regulations. It is not an indication of the quality or correctness of the site evaluation.

IF THERE ARE QUESTIONS REGARDING THIS REPORT CONTACT CLASS D LICENSEE

THE CLASS D LICENSEE IS RESPONSIBLE FOR ERRORS/OMISSIONS

Site Evaluation Report

Eastern Shore Soil Services
P.O. Box 411, Savanna, IL 61074 (815) 273-3550
P.O. Box 411, Georgetown, DE 19947 (302) 856-1853
esss@grics.net www.easternshoresoil.com

12-Aug-21

File #: 5294

Owner's Name and Address: Jacob E. & Delores S. Borders
21882 Herons Crossing
Seaford, DE 19973
Telephone #: () - 0

Tax Map and Parcel #: 5-31-7.00-1.01 P.O. **County:** Sussex
Property Location: NW/S Herons Crossing Rd., ~365' N of CR 544
Name of Development: N/A
Lot # Proposed Parcel 3A **In Tax Ditch District?:** Yes
Central Sewer Available: No **Chesapeake/Inland Bays PSN3 Area?:** No
Central Water Available: No

Date of Investigation: 3/19/21
Evaluated by Test Pits: No **Evaluated by Soil Borings:** Yes

Profile #:	Depth to Limiting Zone:	Limiting Zone Inferred From:	Subgroup Taxon Classification:
1	49"	redox accumulations	Typic Hapludult
2	48"	redoximorphic features	Typic Hapludult
3	44"	redox accumulations	Humic Hapludult

Summary of Evaluation:

This site occupies a nearly level cultivated portion of a talf. Differences in depth to redoximorphic features were related to minor differences in topographic elevation. Free water observations should be considered qualitatively due to an insufficient equilibration period. Regional wet season hydrology was at or above normal at the time of the site visit.

Evaluated By: Bradley J. Cate
DE License #: 2052


Site Evaluator's Signature

Note:

Information contained in this site evaluation report and shown on the accompanying plot drawing reflects current regulatory policies and procedures at the time the evaluation was conducted. Changes made to the property and to adjacent properties after the evaluation was conducted or changes in regulatory policy may preclude or modify the type or location of the recommended on-site sewage system regardless of site evaluation approval. Data contained in this report may include information obtained from property owners, their agents, residents, adjacent residents, and departmental permits, when readily available. While this information is believed to be accurate it does not guarantee a septic permit and the attached plot should not be construed as a survey. All information should be verified by interested parties prior to the transfer of the property as well as prior to design and installation of the septic system. Interpretations made in this evaluation are intended for siting and design of a septic system only and are not suitable for other uses. Unless approved by the regulatory agency(ies) this report represents only a technical opinion rendered and does not constitute an approval for siting or design of any septic system on this site.

SOIL PROFILE NOTES

Eastern Shore Soil Services

Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1833
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: ccss@grics.net

Profile #: 1
 Date of Test: 3/19/21 Soil Boring or Test Pit (1)
 Property Owner: Borders
 Property Location: Parcel 3A Herons Crossing Rd
 Site Evaluator: Bradley J. Cate, CPSS/SC License No.: 2052

Slope: Sec Top Relief: _____
 Estimated Permeability: mod Rapid
 Depth to Limiting Zone: 49" to relax recommendations
 Soil Series Identified: Typic Hap Luult

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
<u>A_p</u>	<u>0 to 3</u>	<u>10YR 2/4</u>	<u>/</u>				<u>LS</u>	<u>mgc</u>	<u>/ ybr</u>
<u>B₁₁</u>	<u>3 to 31</u>	<u>7.5YR 4/6</u>	<u>/</u>				<u>SL+</u>	<u>"</u>	<u>/ ybr</u>
<u>B₁₂</u>	<u>31 to 37</u>	<u>7.5YR 5/6</u>	<u>/</u>				<u>SL+</u>	<u>"</u>	<u>/ ybr</u>
<u>B₁₃</u>	<u>37 to 49</u>	<u>7.5YR 5/6</u>	<u>/</u>				<u>LS+</u>	<u>"</u>	<u>/ ybr</u>
<u>BC</u>	<u>49 to 53</u>	<u>7.5YR 5/6</u>	<u>7.5YR 5/3</u>	<u>c2d</u>			<u>LS</u>	<u>"</u>	<u>/ ybr</u>
<u>C</u>	<u>53 to 60</u>	<u>7.5YR 6/6</u>	<u>10YR 5/3</u> <u>7.5YR 5/3</u>	<u>c2d</u> <u>c3d</u>			<u>Stratified</u> <u>LS/SL</u>	<u>"</u>	<u>/ ybr</u>
	<u>to</u>								<u>/</u>
	<u>to</u>								<u>/</u>

Current Hydrology: "± to upper boundary of capillary fringe (or)
1/2"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
 (2) Boundary if described from a pit.



Site Evaluator's Signature

**SOIL PROFILE
NOTES**

E S S S
Eastern Shore Soil Services

Environmental Consulting:
Soil Mapping, Land Use Planning, Wetland Studies,
Site Evaluations, Environmental Permits
P.O. Box 411, Georgetown, DE 19947
Phone: (302) 856-1853
P.O. Box 411, Savannah, IL 61074
Phone: (815) 273-3550
Email: esss@grice.net

Profile #: 2
Date of Test: 3/19/21 Soil Boring or Test Pit (1)
Property Owner: Borders
Property Location: Herons Crossing Rd Parcel 3A
Site Evaluator: **Bradley J. Cate, CPSS/SC** License No.: 2052

Slope: See Top Relief: _____
Estimated Permeability: moderately Rapid
Depth to Limiting Zone: 48" to redoximorphic features
Soil Series Identified: Typic Dyshelut

Horizon	Depth	Colors		Mottles Desc			Texture	Structure	Boundary(2) Consistence
		Matrix	Mottles	Ab.	S.	Con.			
<u>Ap</u>	<u>0 to 14</u>	<u>10YR 4/3</u>	<u>/</u>				<u>LS</u>	<u>single</u>	<u>/ ufr</u>
<u>B11</u>	<u>14 to 19</u>	<u>10YR 4/6</u>	<u>/</u>				<u>SL</u>	<u>~</u>	<u>/ ufr</u>
<u>B12</u>	<u>19 to 40</u>	<u>7.5YR 5/6</u>	<u>/</u>				<u>SLT</u>	<u>10S br</u>	<u>/ ufr</u>
<u>Bc</u>	<u>40 to 40</u>	<u>7.5YR 5/6</u>	<u>/</u>				<u>LS</u>	<u>~</u>	<u>/ ufr</u>
<u>C</u>	<u>40 to 60</u>	<u>10YR 5/6</u>	<u>10YR 6/2</u> <u>10YR 5/8</u>	<u>c 2 p</u>			<u>Stratified</u> <u>SLS:SL</u>	<u>~</u>	<u>/ ufr</u>
	<u>to</u>								<u>/</u>
	<u>to</u>								<u>/</u>
	<u>to</u>								<u>/</u>

Current Hydrology: **"± to upper boundary of capillary fringe (or)**
41"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
(2) Boundary if described from a pit.


Sue Evaluator's Signature

SOIL PROFILE NOTES

Eastern Shore Soil Services

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 P.O. Box 411, Savannah, IL 61074
 Phone: (815) 273-3550
 Email: cess@grica.net

Profile #: 3

Date of Test: 3/15/21 Soil Boring or Test Pit (1)

Property Owner: Bardis

Property Location: Heron's Crossing Rd Parcel 3A

Site Evaluator: Bradley J. Cate, CPSS/SC

License No.: 2052

Slope: See Topo Relief: _____

Estimated Permeability: moderate

Depth to Limiting Zone: 44" to redox accumulations

Soil Series Identified: Humic Hapludalf

Horizon	Depth	Colors		Mottles Desc			Texture	Structure	Boundary(2) Consistence
		Matrix	Mottles	Ab.	S.	Con.			
Ap	0 to 9	10YR 3/3	/				SL	loose	/ vfr
B11	9 to 24	10YR 4/4	/				SL	loose	/ vfr
B17	24 to 32	7.5YR 4/6	/				SL	loose	/ vfr
B13	32 to 36	7.5YR 5/6	/				SL	loose	/ vfr
BC	36 to 44	7.5YR 5/6	/				LS	~	/ vfr
C1	44 to 55	10YR 5/6	7.5YR 5/6			C2d	LS	~	/ vfr
C2	55 to 60	10YR 5/6	10YR 5/4 7.5YR 5/6			C2d C2d	LS	~	/ vfr
	to								/

Current Hydrology: "± to upper boundary of capillary fringe (or)

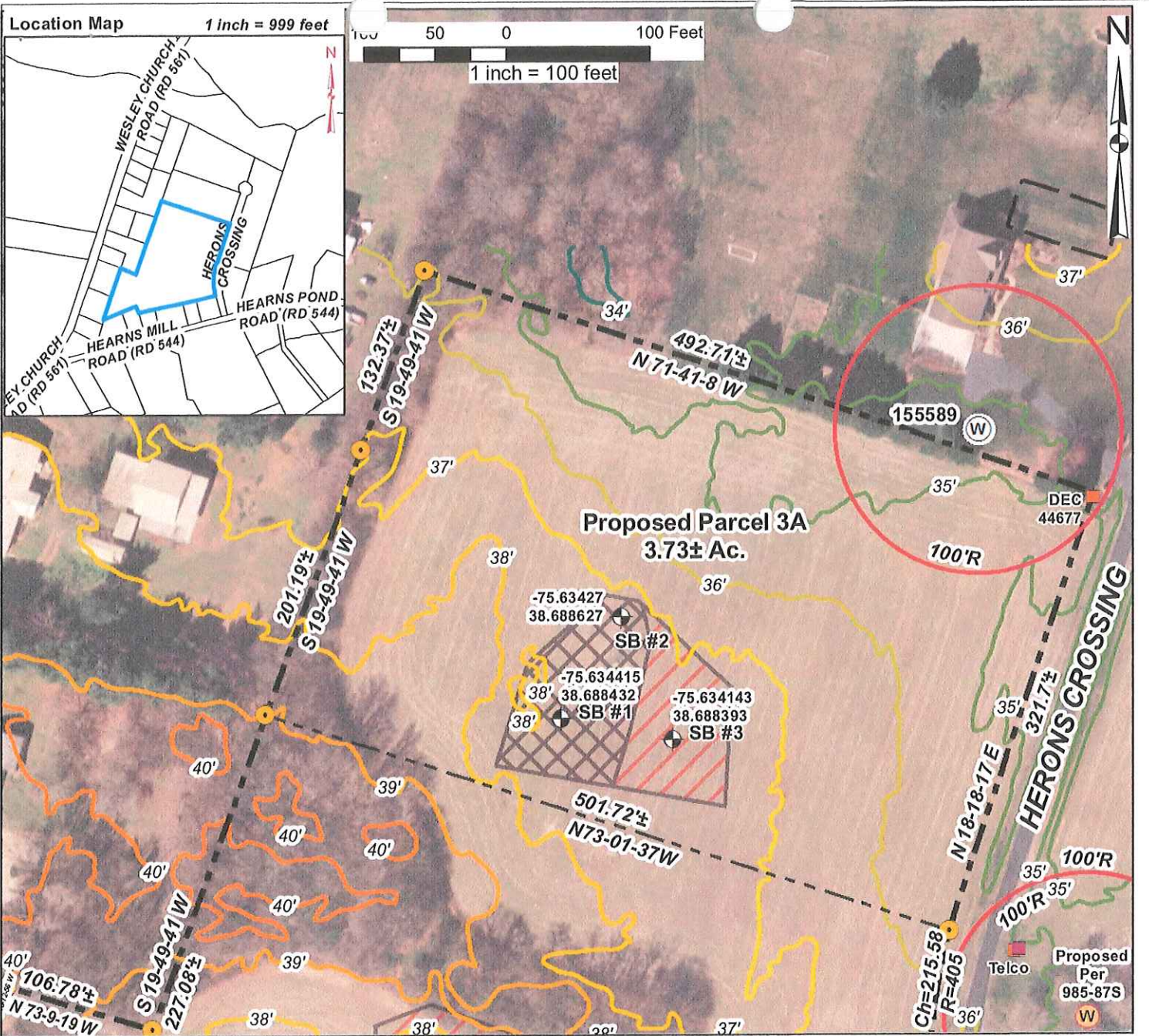
44"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)

(2) Boundary if described from a pit.



Site Evaluator's Signature



Legend

- W Well Location from Records
- W Well-Verified
- Misc. Point
- Concrete Monument
- Soil Boring Location
- Utility Enclosure/Pede...
- Property Line
- Proposed Property Line
- Approx. System Extents
- Well Arc & Radius
- ▨ Capping-Fill Gravity-fed System
- ▨ Full-depth LPP System

Note: Unless otherwise shown, adjacent wells >100' from evaluated area (public wells >150'). Any ditch or swale present is ephemeral unless depicted as a watercourse. If this plot is not in color or there are any problems with the legibility or scale, contact the evaluator for a clean, scaled, color copy.

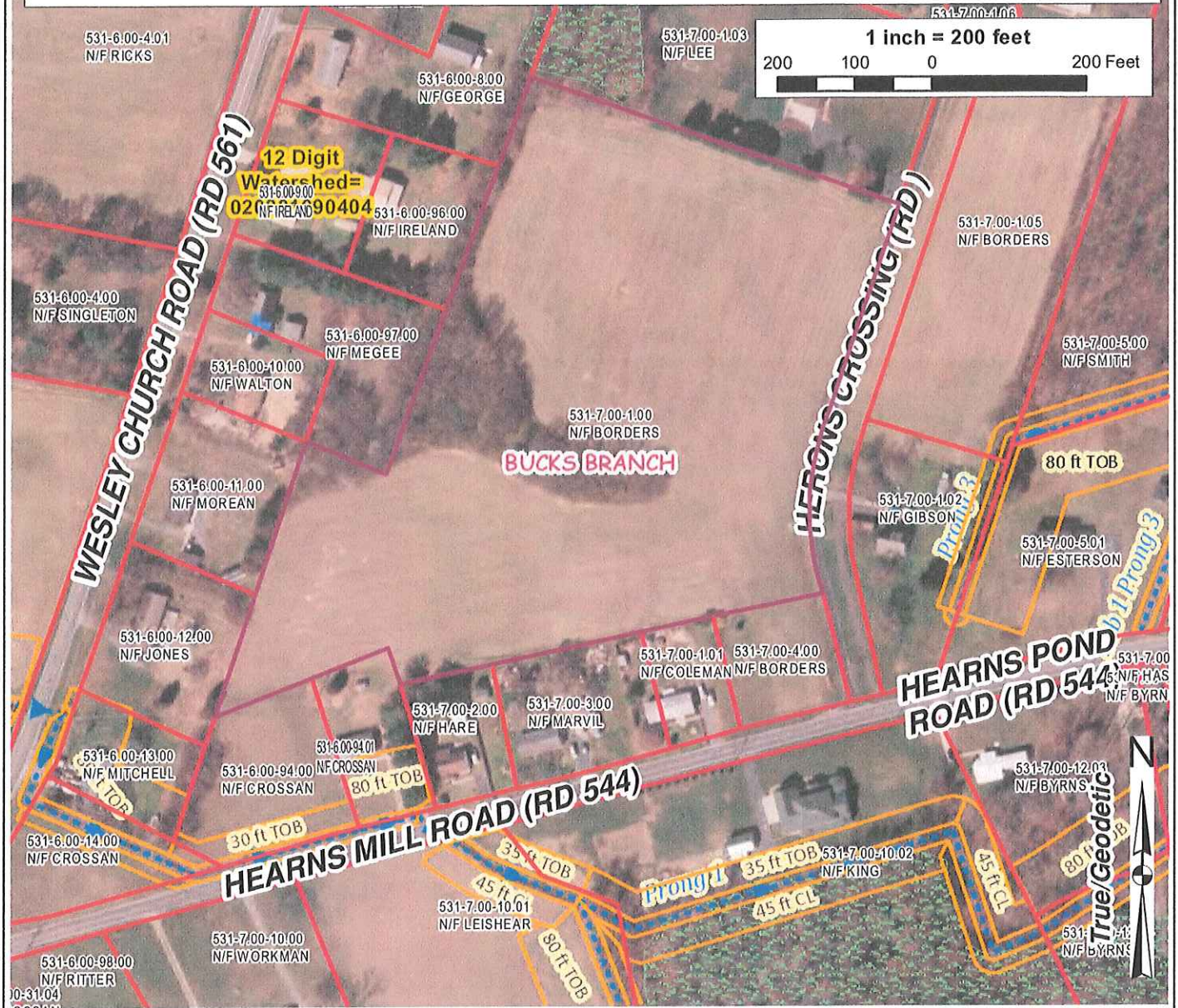
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Site Evaluation Plot
N/F Jacob E. & Delores S. Borders
TM# 5-31-7.00-1.00
Proposed Parcel 3A
Per Plan by Siteworks Eng.

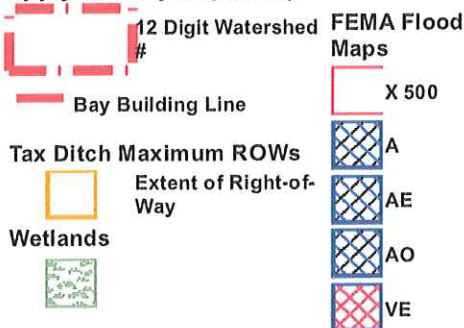
Eastern Shore Soil Services
Environmental Consulting:
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Legend (if not shown on map above, does not apply to subject parcel)



*Information Source: DNREC <http://mapservices.dnrec.delaware.gov/arcgis/services>
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(This information has NOT been developed by Eastern Shore Soil Services). Property lines from tax maps and subject to locational errors.

Eastern Shore Soil Services
 Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: esss@gnics.net

PARID: 531-7.00-1.00
BORDERS JACOB E

Property Information

Property Location:

Unit:
City:
State:
Zip:

Class:	AGR-Agriculture
Use Code (LUC):	AG-AG
Town	00-None
Tax District:	531 – SEAFORD
School District:	3 - SEAFORD
Council District:	1-Vincent
Fire District:	87-Seaford
Deeded Acres:	
Frontage:	0
Depth:	.000
Irr Lot:	
Zoning 1:	MR-MEDIUM RESIDENTIAL
Zoning 2:	-
Plot Book Page:	112 336/PB
100% Land Value:	\$2,000
100% Improvement Value	
100% Total Value	

Legal

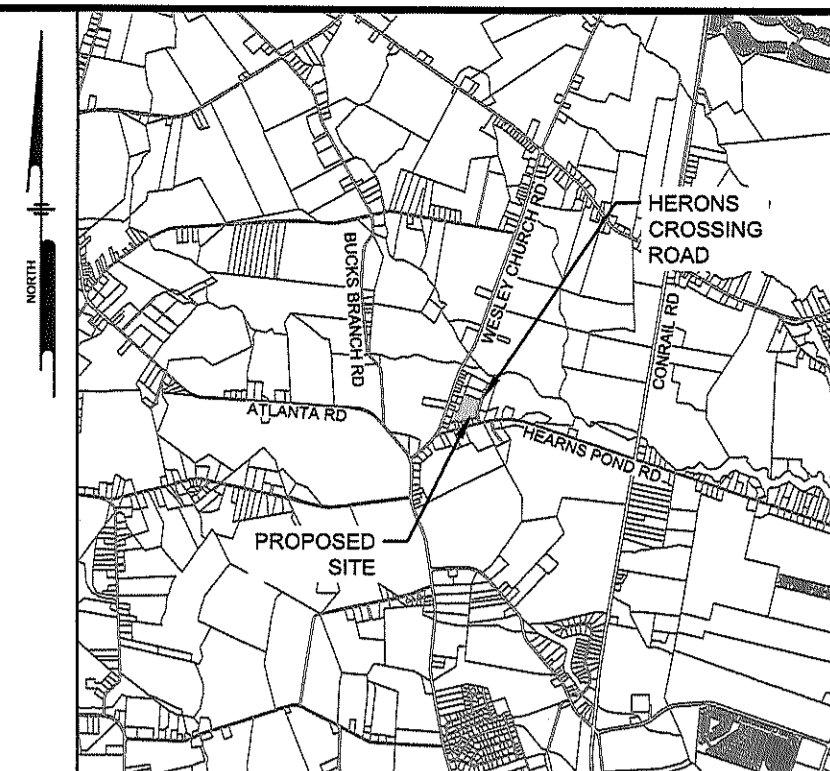
Legal Description	N/RD 544 1180'E/RD 561 LOT 3 REMAINING LAND
-------------------	---

Owners

Owner	Co-owner	Address	City	State	Zip
BORDERS JACOB E	DOLORES S BORDERS	21882 HERONS CROSSING	SEAFORD	DE	19973

LANDS OF BORDERS SUBDIVISION

SUSSEX COUNTY PROJECT REFERENCE # 2021-27



LOCATION MAP
SCALE: 1" = 1 MILE

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	CORD DIST.
C1	218.21'	404.84'	030°53'53"	215.57'

NOTES

- THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE LOT THREE AS SHOWN ON PLOT BOOK 111, PAGE 112 IN THE SUSSEX COUNTY RECORDER OF DEEDS CREATING ONE ADDITIONAL LOT FRONTING HERONS CROSSING ROAD, A PRIVATELY OWNED AND MAINTAINED STREET.
- PROPERTY REFERENCES: PLOT BOOK 111, PAGE 112, AND DEED BOOK 807 PAGE 335
- SURVEY CLASS: SUBURBAN
- HORIZONTAL DATUM: NAD83 - DELAWARE STATE PLANE
- THIS BOUNDARY SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT AND IS SUBJECT TO ANY ENCUMBRANCES, RESTRICTIONS, EASEMENTS AND/OR RIGHTS OR WAY THAT MIGHT BE REVEALED BY A THOROUGH TITLE SEARCH.
- ACCESS TO THE PROPOSED LOT 3A AND THE REMAINING LOT 3 LANDS SHALL BE FROM HERONS CROSSING, A PRIVATELY MAINTAINED 50' WIDE ROW.
- MAINTENANCE OF HERONS CROSSING SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS OF THIS SUBDIVISION, LOTS 1, 2, 3, 3A, AND 4.
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SITE DATA

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- EXISTING / PROPOSED ZONING: MEDIUM RESIDENTIAL (MR)
- EXISTING LOTS: 4
- PROPOSED LOTS: 1 (5 TOTAL)
- BUILDING SETBACKS: FRONT YARD: 40-FEET
SIDE YARD: 10-FEET
REAR YARD: 10-FEET
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- AREA WITHIN PROPOSED STREETS: 0.000 ACRES
- PROPOSED DENSITY: 0.215 LOTS / ACRES OR 4.642 ACRES / LOT
- WETLAND AREA: 0.000 ACRES
- WATER & SEWER SERVICE: PRIVATE - ON-SITE WELL AND SEPTIC
- FLOODPLAIN - THIS SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP PANEL NUMBERS 10005C0250L, EFFECTIVE DATE: JUNE 20, 2018, AND 10005C0245L, EFFECTIVE DATE: JUNE 20, 2018.
- PRESENT USE: AGRICULTURAL
- PROPOSED USE: AGRICULTURAL AND RESIDENTIAL
- OWNER OF RECORD: DOLORES S. BORDERS
21882 HERONS CROSSING RD
SEAFORD, DE 19973
PHONE (302) 841-5002
- PROXIMITY TO IDENTIFIED T.I.D.: NOT WITHIN AN IDENTIFIED T.I.D.
- POSTED SPEED LIMIT HEARNS POND RD: 35 MPH
- PROPERTY ADDRESS: 21800 HERONS CROSSING RD
SEAFORD, DE 19973

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DAVID HEATWOLE, P.E. (DE LICENSE NO. #17760) DATE
19 COMMERCE STREET
HARRINGTON, DE 19952

OWNER(S) CERTIFICATION

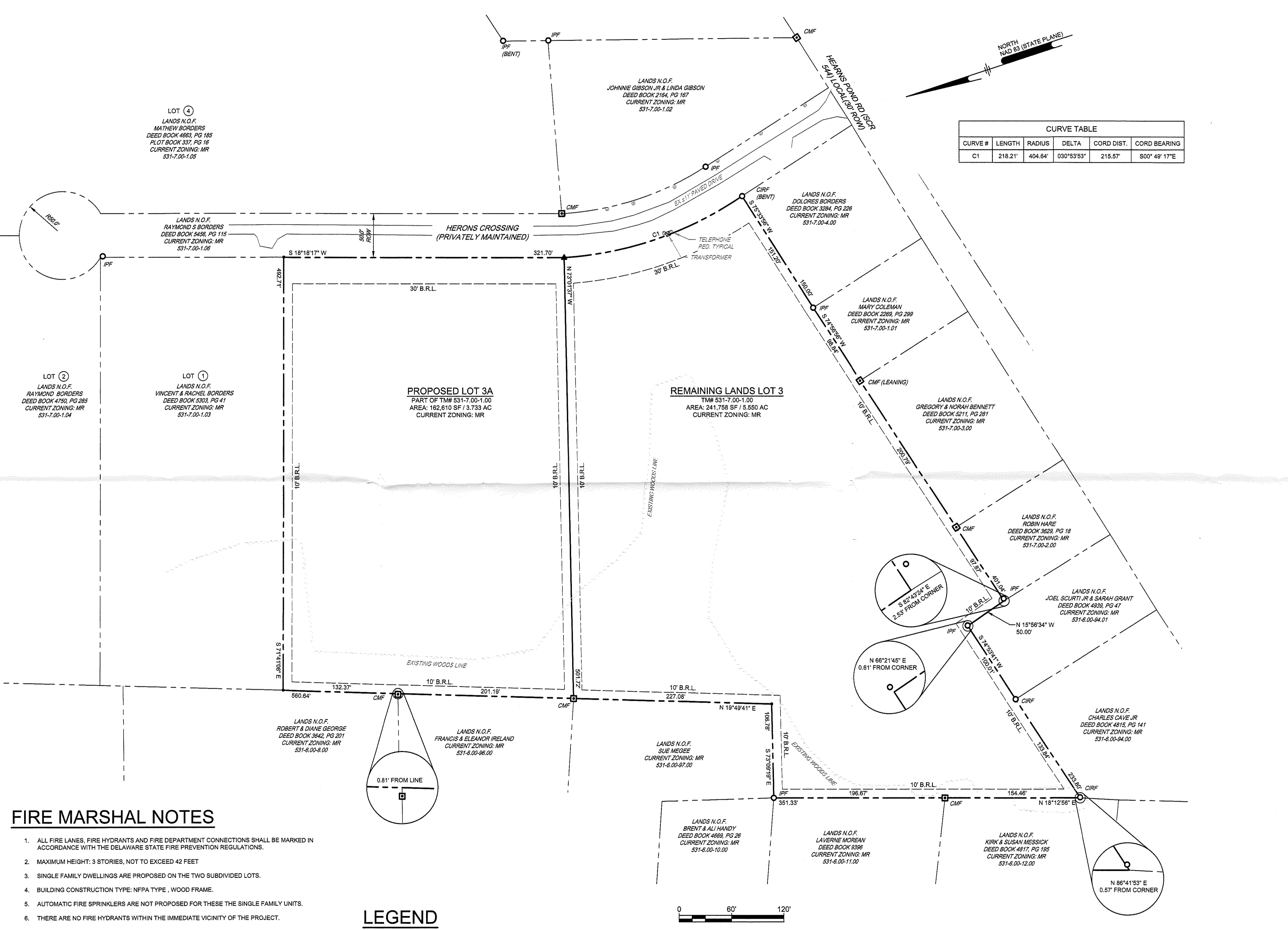
IT IS HEREBY CERTIFIED THAT I AM THE LEGAL OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT, AND DESIRE THE PLAN TO BE RECORDED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

DOLORES S. BORDERS DATE
21882 HERONS CROSSING RD.
SEAFORD, DE 19973
PHONE: (302) 841-5002

WETLANDS STATEMENT

EASTERN SHORE SOIL SERVICES, INC. HAS CONDUCTED A FIELD REVIEW WITHIN THE BOUNDARIES OF THIS PLAN TO EVALUATE THE PRESENCE OR ABSENCE OF POTENTIAL STATE AND FEDERAL JURISDICTIONAL WETLANDS FOR THE PURPOSES OF DELAWARE WETLAND AND SUBAQUEOUS LAND REGULATIONS AND SECTION 404 OF THE CLEAN WATER ACT. EASTERN SHORE SOIL SERVICES' REVIEW WAS CONDUCTED IN GENERAL ACCORDANCE WITH THE TECHNIQUES AND CRITERIA PROVIDED IN THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL: ATLANTIC AND GULF COASTAL PLAN REGION (VERSION 2.0), DATED NOVEMBER 2010. NO WETLANDS OR WATERWAYS WERE OBSERVED WITHIN THE BOUNDARIES OF THIS PLAN. NO STATE OR FEDERAL JURISDICTIONAL APPROVAL WAS OBTAINED FOR THIS PROPERTY.

BRADLEY J. CATE, CPSSo/SC DATE



FIRE MARSHAL NOTES

- ALL FIRE LANES, FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
- MAXIMUM HEIGHT: 3 STORIES, NOT TO EXCEED 42 FEET
- SINGLE FAMILY DWELLINGS ARE PROPOSED ON THE TWO SUBDIVIDED LOTS.
- BUILDING CONSTRUCTION TYPE: NFPA TYPE, WOOD FRAME.
- AUTOMATIC FIRE SPRINKLERS ARE NOT PROPOSED FOR THESE THE SINGLE FAMILY UNITS.
- THERE ARE NO FIRE HYDRANTS WITHIN THE IMMEDIATE VICINITY OF THE PROJECT.

LEGEND

PIPE/REBAR FOUND	○
POINT	•
CONCRETE MONUMENT FOUND	◻
CAPPED IRON PIPE TO BE SET	▲
EX PROPERTY LINE	---
PROP. PROPERTY LINE	---
PROP. LINE ADJ.	---
UTILITY POLE	⊗
FENCE	---

DELDOT RECORD PLAN NOTES:

- ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.
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SITENETWORKS
ENGINEERING
 PO BOX 2, 19 COMMERCE ST., HARRINGTON, DE 19952 Phone: (302) 841-7901
SUBDIVISION PLAN

LANDS OF BORDERS SUBDIVISION
TAX PARCEL NO. 531-7.00-1.00
HERONS CROSSING DRIVE (PRIVATE)
SEAFORD HUNDRED, SUSSEX COUNTY

ISSUE / REVISION BLOCK
 8/10/21 - SUSSEX COUNTY P&Z
 9/14/21 - DELDOT
 9/14/21 - FIRE MARSHAL
 10/8/21 - SUSSEX COUNTY P&Z

SCALE PROJECT # DRAWN BY
 1" = 80' 2145-BORD DMH
 DRAWING NUMBER
1
 SHEET 1 OF 1

LANDS OF BORDERS

SUBDIVISION APPLICATION

#2021-27

Owner:

**Dolores S. Borders
21882 Herons Crossing
Seaford, DE 19973**

SITWORKS
ENGINEERING

LANDS OF BORDERS

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TAB 1

LANDS OF BORDERS

PROJECT TEAM

Legal Owner

Dolores S. Borders
21882 Herons Crossing
Seaford, DE 19973

Project Engineer & Surveyor

Siteworks Engineering, LLC.
David Heatwole, PE
Edwin Tennefoss, PE
19 Commerce St., PO 17
Harrington, DE 19952

Environmental Consultant

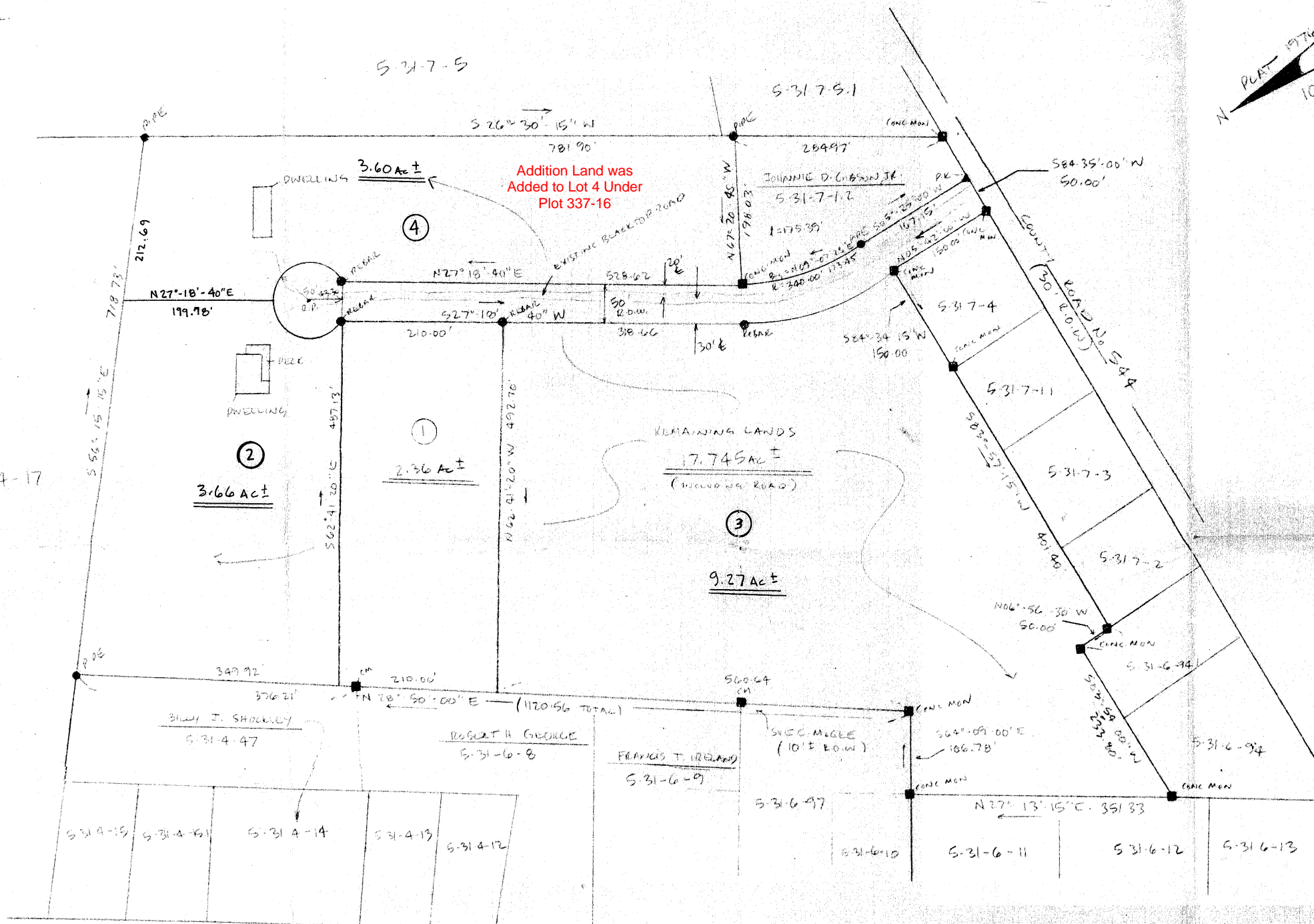
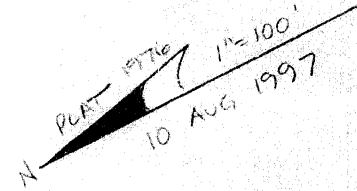
Eastern Shore Soil Services
Bradley Cate, Soil Scientist
P.O. Box 411
Georgetown, DE 19947

TAB 2

SITE DATA

1. TAX PARCEL NUMBER	531-7.00-1.00
2. EXISTING / PROPOSED ZONING	MEDIUM RESIDENTIAL (MR)
3. EXISTING LOTS	4
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16. POSTED SPEED LIMIT HEARNS POND RD	35 MPH
17. PROPERTY ADDRESS:	21800 HERONS CROSSING RD SEAFORD, DE 19973

RECORDER OF DEEDS
JOHN F. BRADY
07 FEB -5 PM 12:27
SUSSEX COUNTY
DOC. SURCHARGE PAID



APPROVED
@ P&Z Comm 5-22-97
8-12-97 SA
SUSSEX COUNTY
PLANNING & ZONING COMMISSION

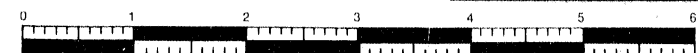
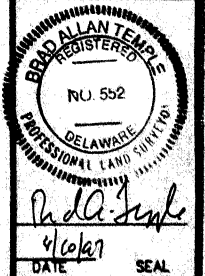
COUNTY ROAD No. 561

PLOT OF LANDS OF:
JACOB E. AND DOLORES S. BOLDERS
SITUATED IN:
SEAFORD HUNDED, SUSSEX COUNTY
STATE OF DELAWARE

DATE	8-10-97	SCALE	1"=100'
JOB NO.	S-31-7-1	DRAWN BY	BAT
FOLDER REF		DESIGNED BY	
		APPROVED BY	
DATE		REVISION	

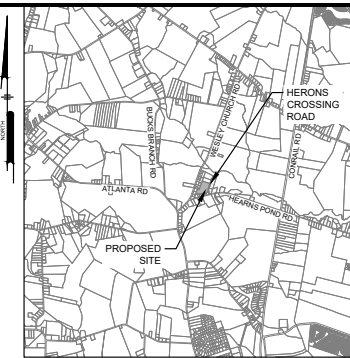


Brad A. Temple
Professional Land Surveyor
Maryland & Delaware
3969 Five Friars Rd.
Salisbury MD. 21801
Maryland (410) 860 4805
Delaware (302) 629 9709

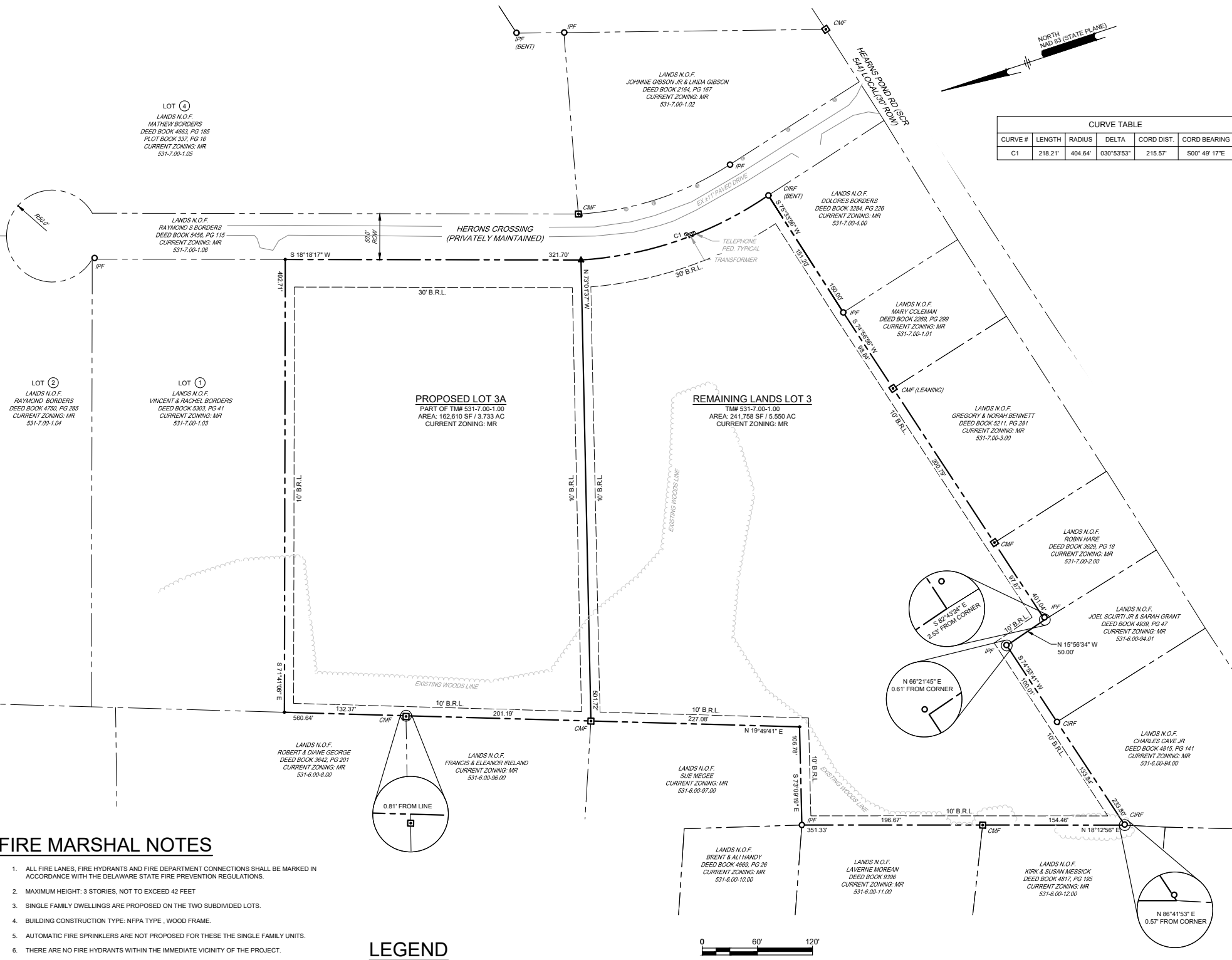


LANDS OF BORDERS SUBDIVISION

SUSSEX COUNTY PROJECT REFERENCE # 2021-27



LOCATION MAP
SCALE: 1" = 1 MILE



CURVE TABLE					
CURVE #	LENGTH	RADIUS	DELTA	CORD DIST.	CORD BEARING
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- | | |
|--|---|
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| 3. EXISTING LOTS | 4 |
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PHONE (302) 841-5002 |
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LEGEND

- | | |
|----------------------------|-------|
| PIPE/REBAR FOUND | ○ |
| POINT | • |
| CONCRETE MONUMENT FOUND | ◻ |
| CAPPED IRON PIPE TO BE SET | ▲ |
| EX PROPERTY LINE | — |
| PROP. PROPERTY LINE | — |
| PROP. LINE ADJACENT | - - - |
| UTILITY POLE | ⊥ |
| FENCE | — x — |

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DOLORES S. BORDERS DATE
21882 HERONS CROSSING RD.
SEAFORD, DE 19973
PHONE: (302) 841-5002

SITENETWORKS
ENGINEERING
PO BOX 2, 19 COMMERCE ST., HARRINGTON, DE 19952 Phone: (302) 841-7901
SUBDIVISION PLAN

LANDS OF BORDERS SUBDIVISION
TAX PARCEL NO. 531-7-00-1.00
HERONS CROSSING DRIVE (PRIVATE)
SEAFORD HUNDRED, SUSSEX COUNTY

ISSUE / REVISION BLOCK
8/10/21 - SUSSEX COUNTY P&Z
9/14/21 - DELDOT
9/14/21 - FIRE MARSHAL
10/8/21 - SUSSEX COUNTY P&Z
11/30/21 - DELDOT

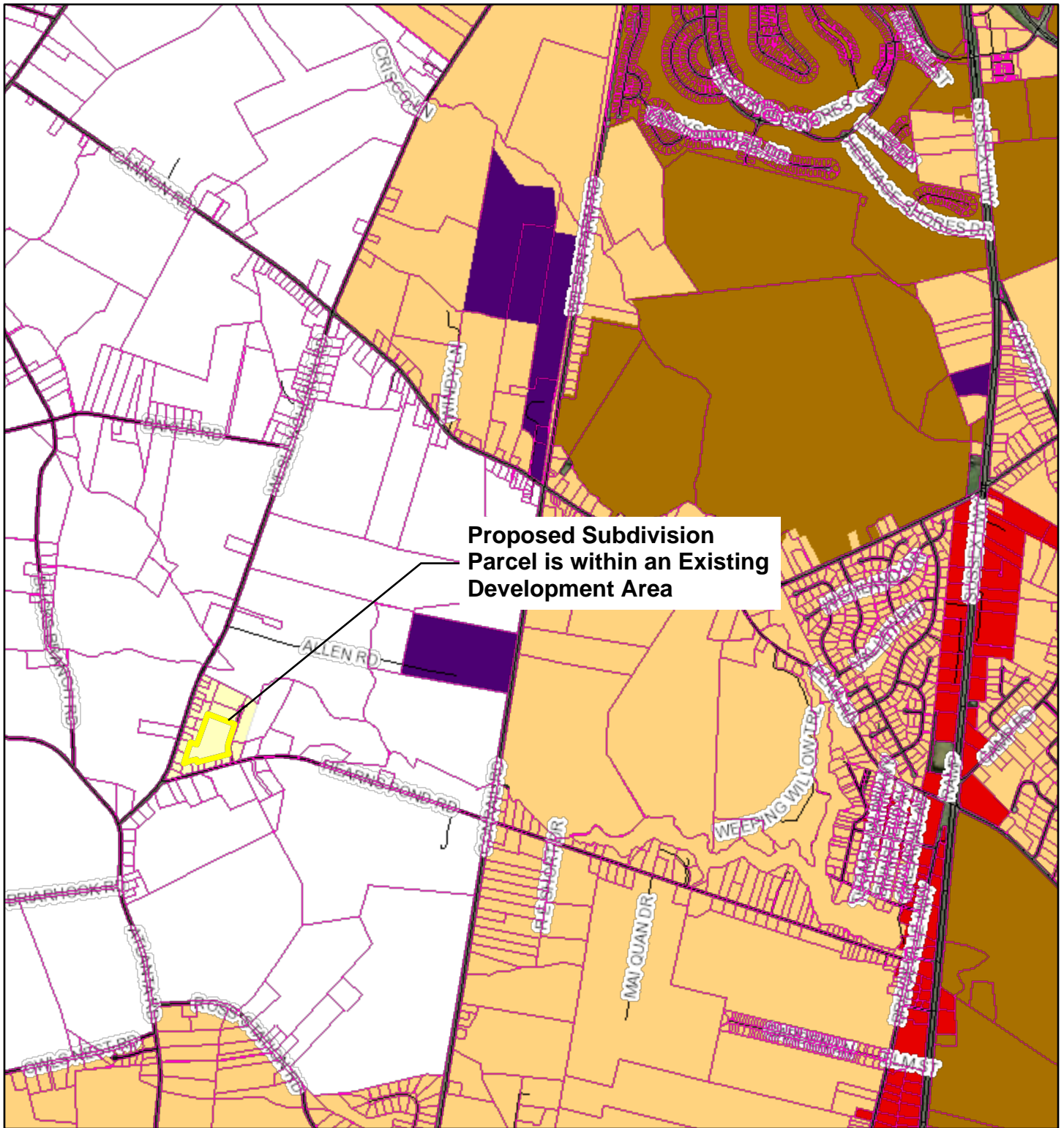
SCALE PROJECT # DRAWN BY
1" = 60' 2140-BORD DMH

DRAWING NUMBER
1
SHEET 1 OF 1

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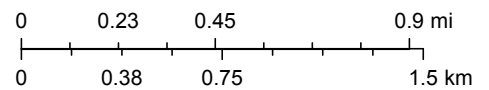
Sussex County - Future Land Use Map



February 6, 2022

1:36,112

- Override 1
- Coastal Area
- Commercial
- Developing Area
- Tax Parcels
- Existing Development Area
- Streets
- Industrial
- County Boundaries
- Municipalities
- 2019 Future Land Use
- Low Density
- Town Center



Sussex County - Zoning Map

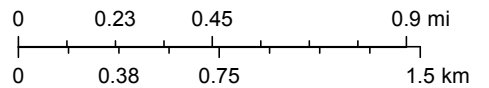


**Proposed Subdivision
parcel is zoned
Medium Residential**

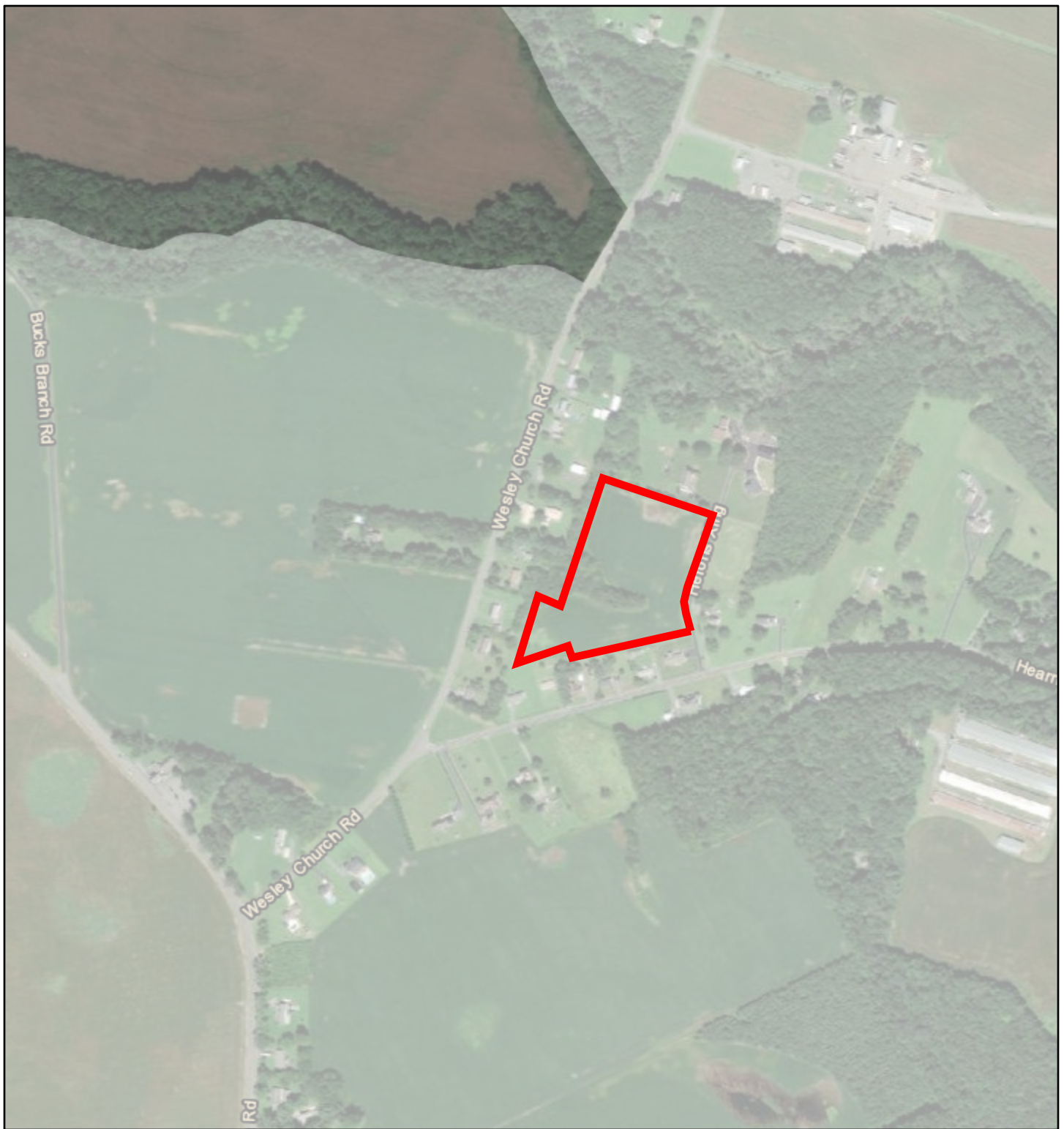
February 6, 2022

1:36,112

- | | | | |
|---------------|---------------------------------|--|----------------------------------|
| | Override 1 | | Medium Residential - MR |
| | Override 1 | | General Residential - GR |
| | Tax Parcels | | High Density Residential - HR-1 |
| | Streets | | High Density Residential - HR-2 |
| Zoning | | | Vacation, Retire, Resident - VRP |
| | Agricultural Residential - AR-1 | | Neighborhood Business - B-1 |
| | Agricultural Residential - AR-2 | | Neighborhood Business - B-2 |



Lands of Borders - 2020 State Strategies

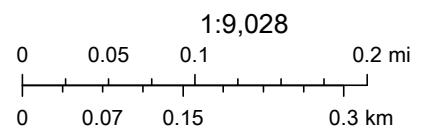


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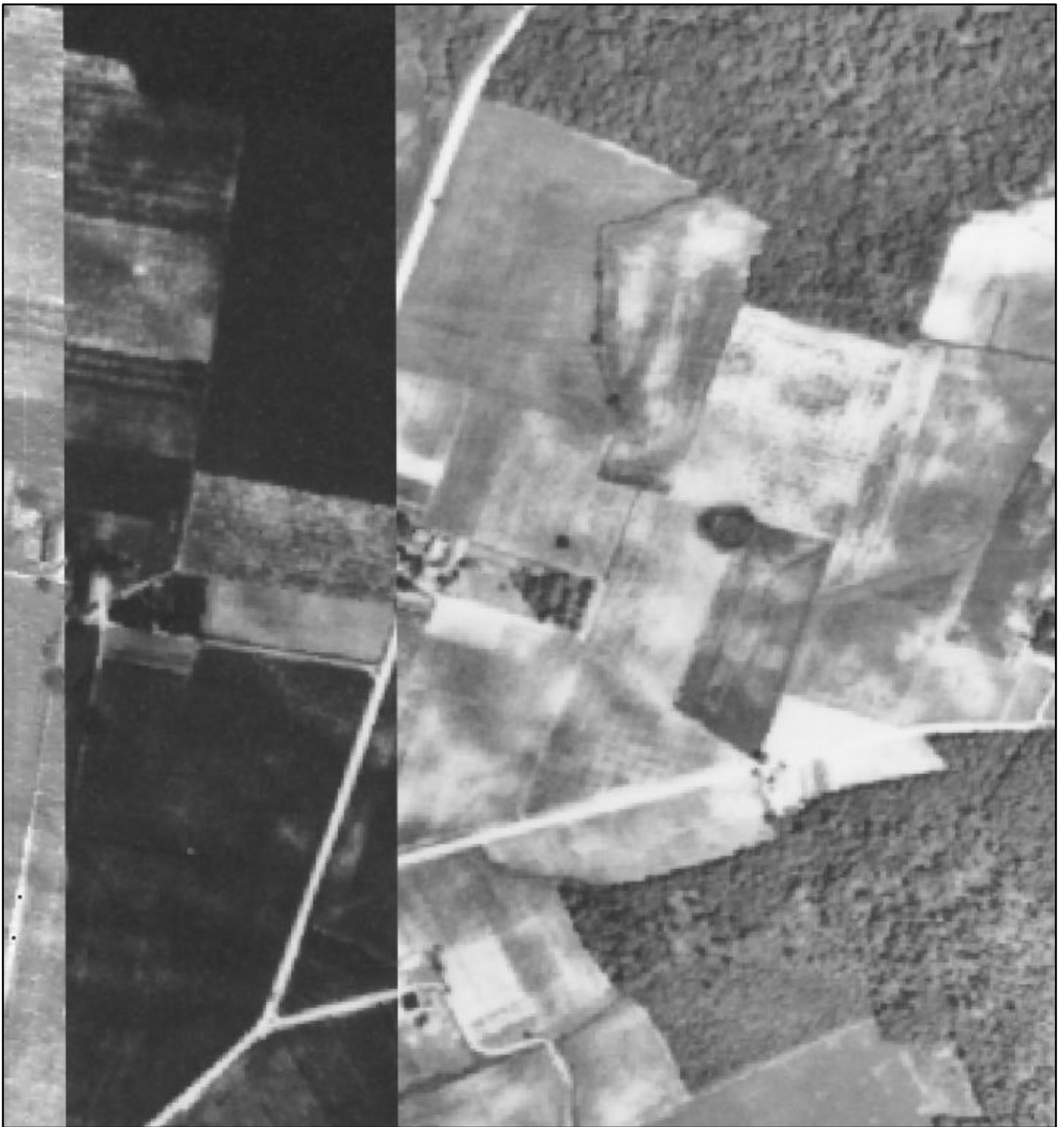
State Strategies - 2020

Level 4

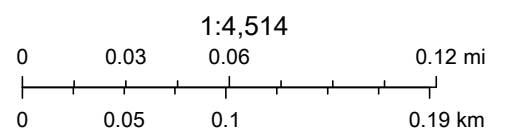
Out of Play



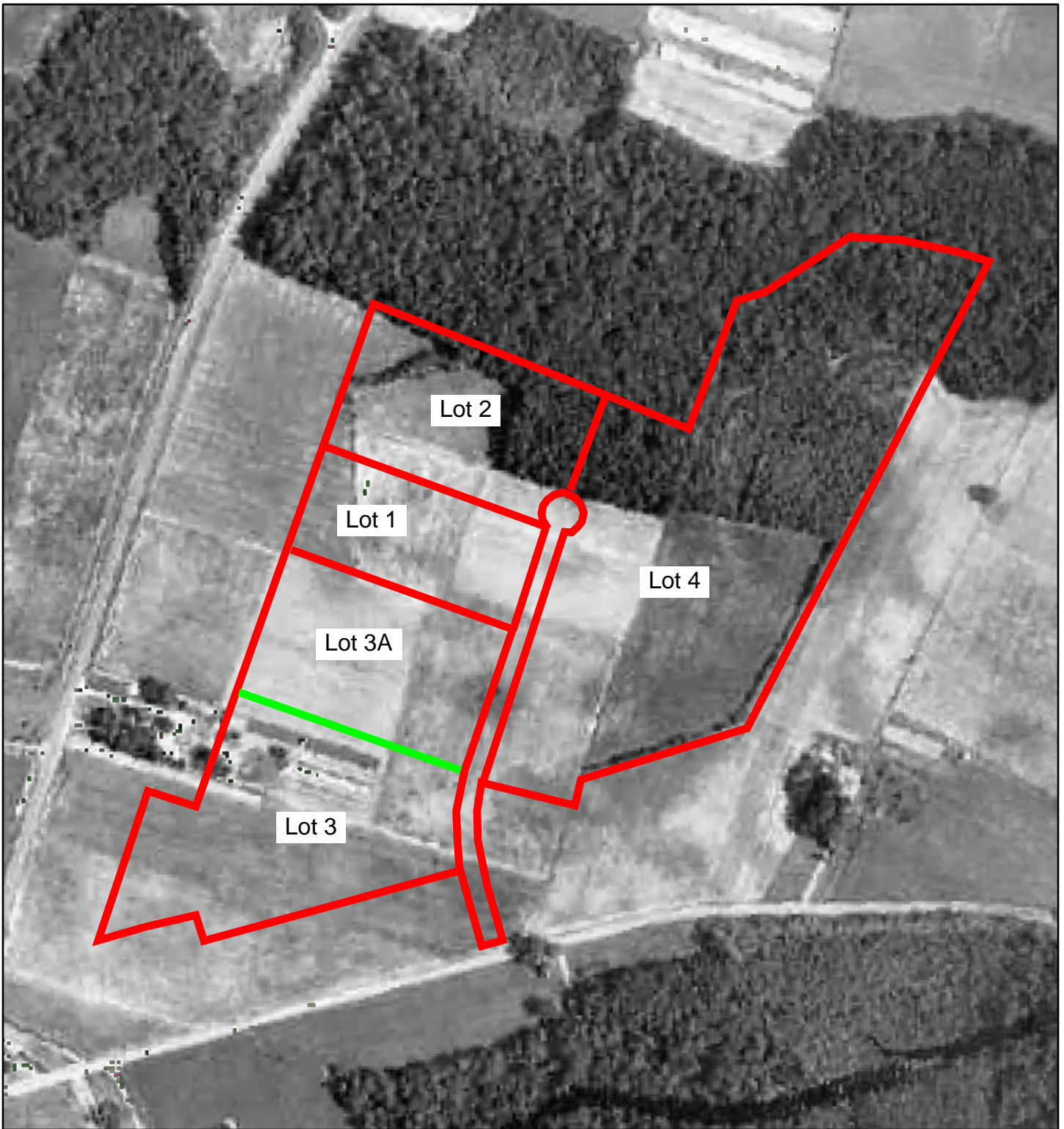
Lands of Borders - 1937 Aerial



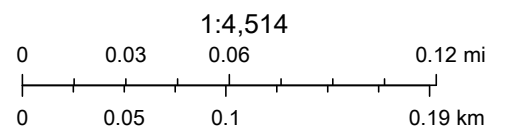
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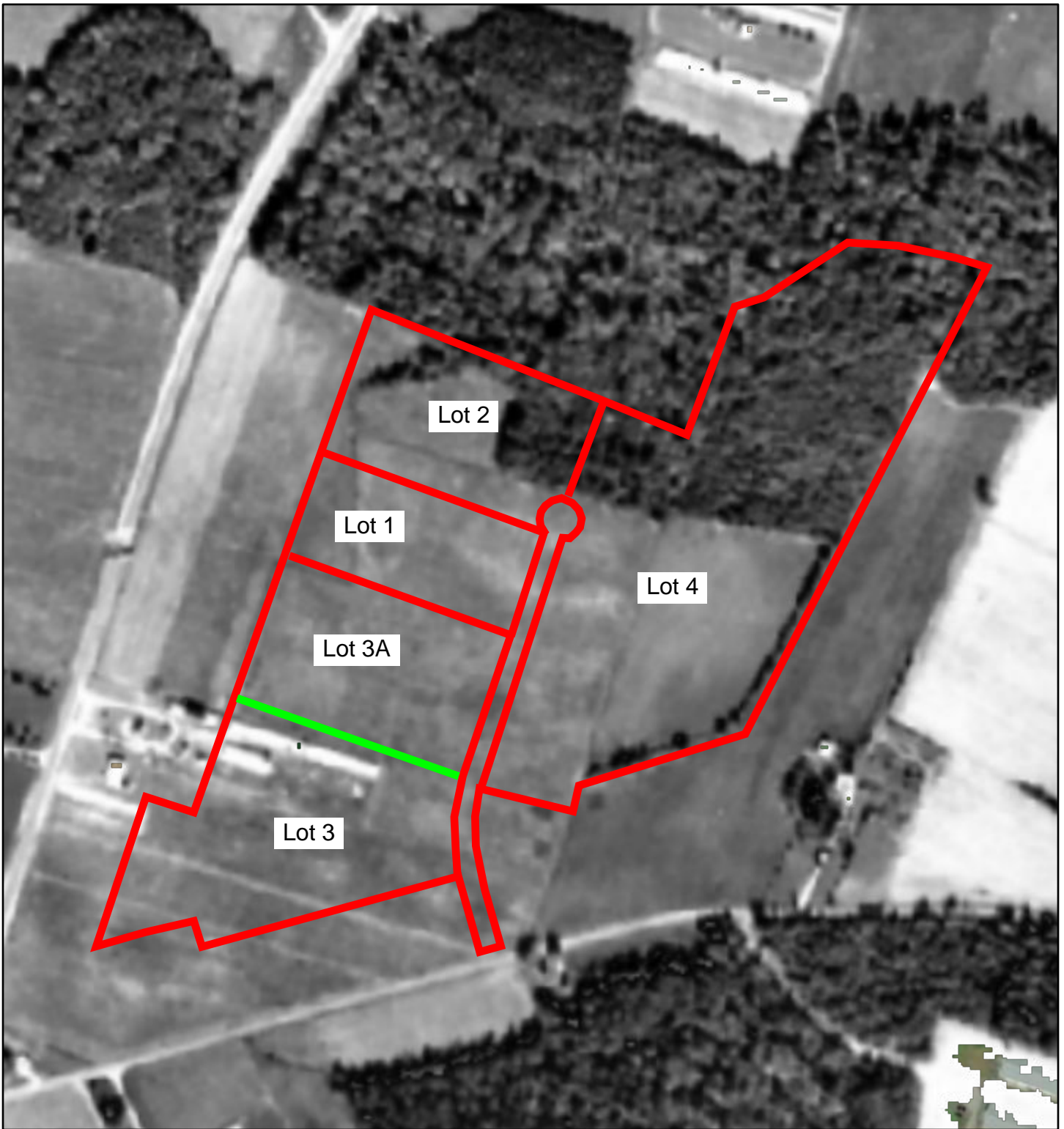
Lands of Borders - 1954 Aerial



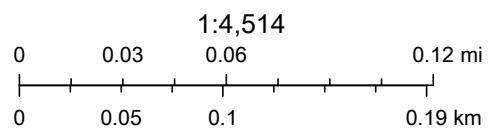
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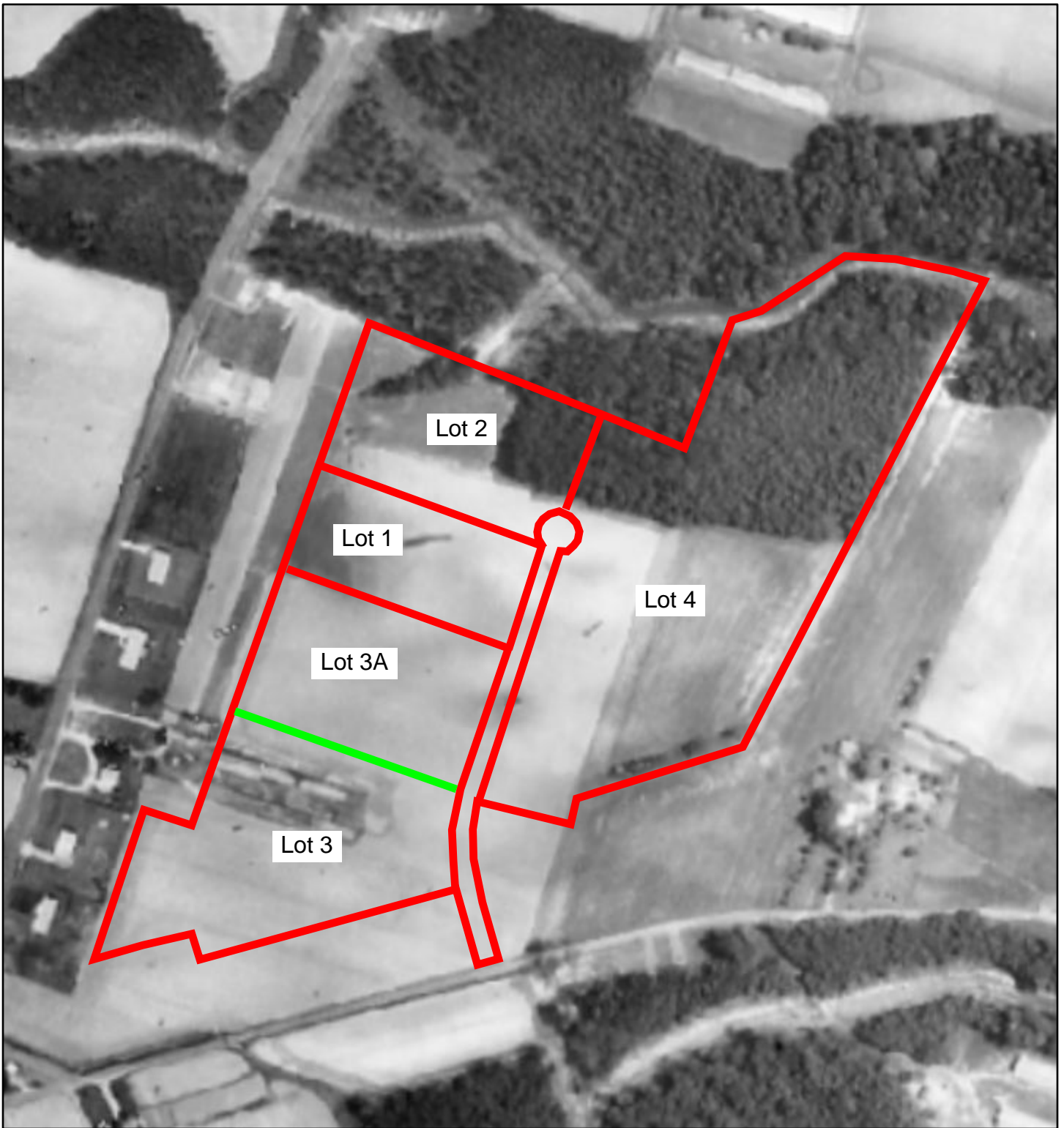
Lands of Borders - 1961 Aerial



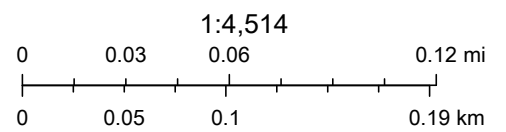
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Lands of Borders - 1968 Aerial



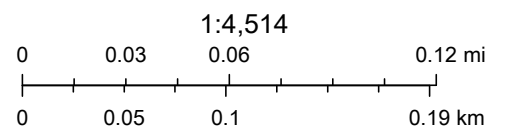
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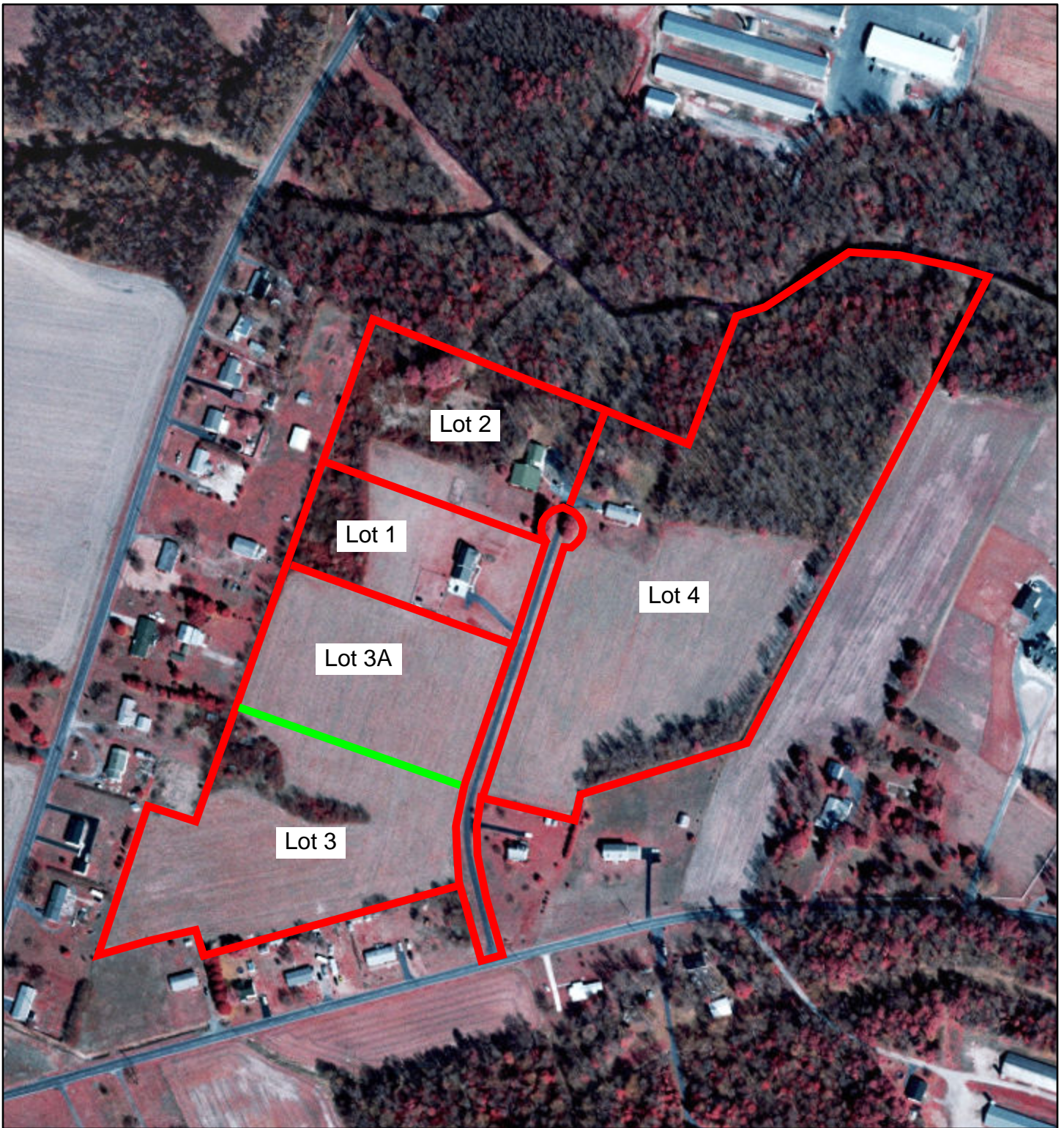
Lands of Borders - 1992 Aerial



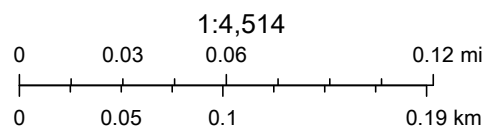
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Lands of Borders - 2002 Aerial



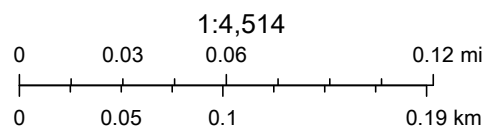
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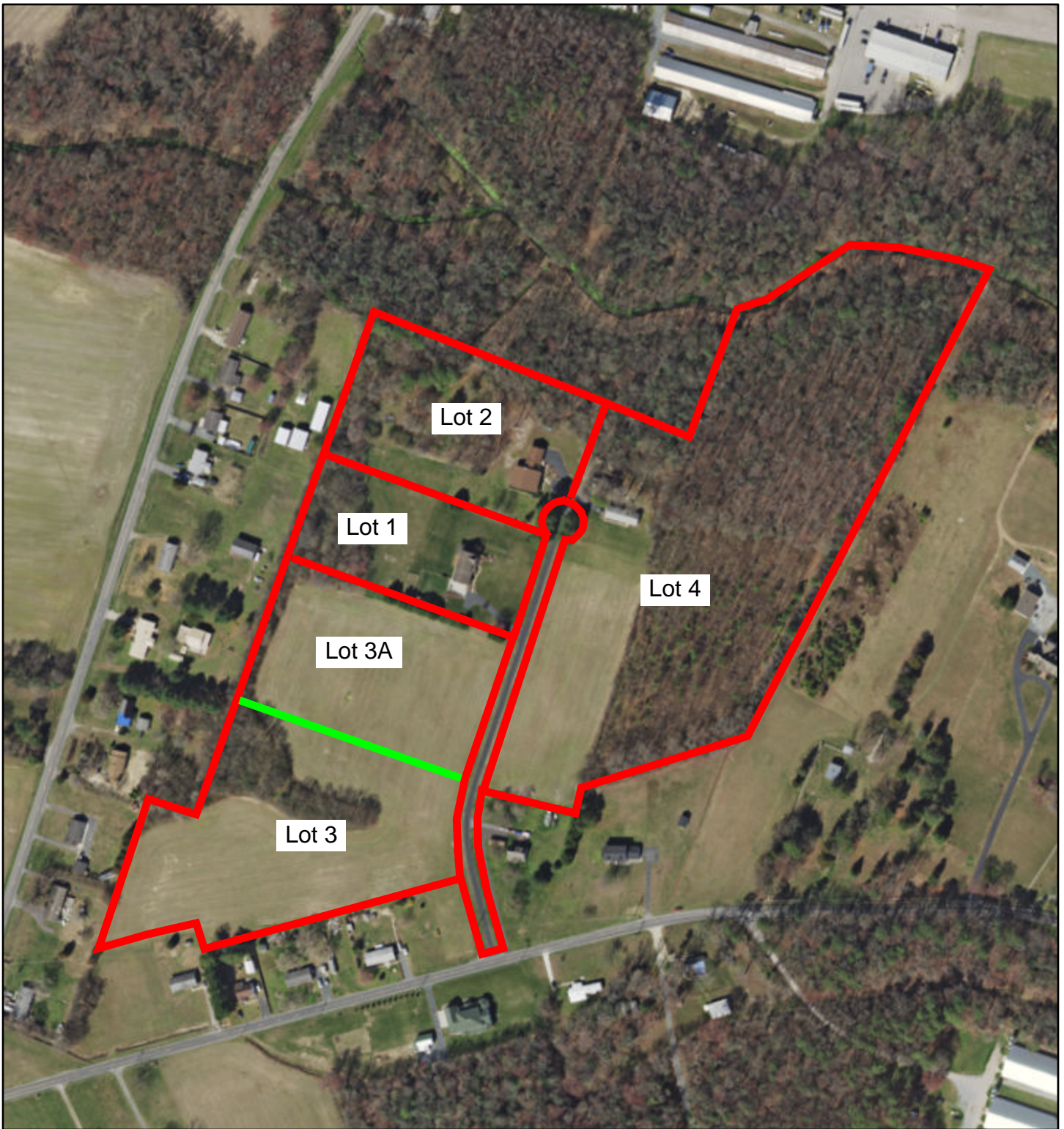
Lands of Borders - 2007 Aerial



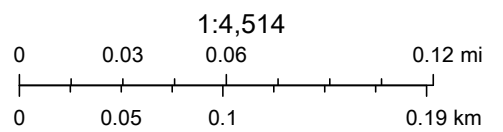
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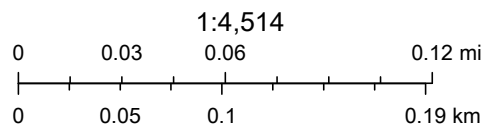
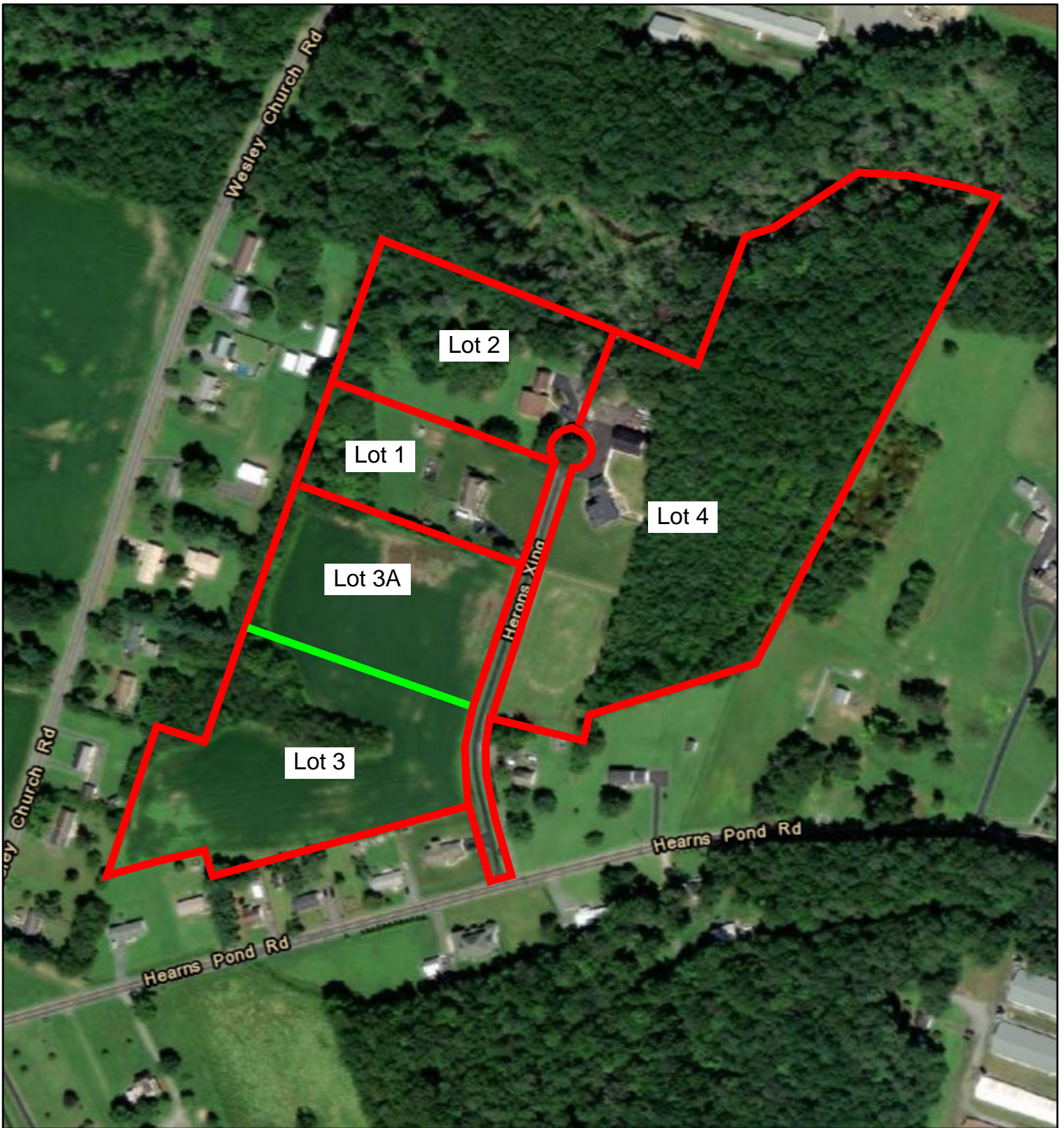
Lands of Borders - 2017 Aerial



2/5/2022, 12:39:31 PM



Lands of Borders - 2020 Aerial



TAB 3

LETTER OF TRANSMITTAL



PO Box 2
19 Commerce St
Harrington, DE 19952

TO: Sussex County Planning & Zoning
2 The Circle
Georgetown, DE 19947

DATE	8/11/21 8/30/21	JOB NO.	2140-BORD
ATTENTION	Mr. Jamie Whitehouse, Director		
RE:	Lands of Borders – Major Subdivision		

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

Shop Drawings Prints Plans Samples Specifications
 Copy of Letter Change Order _____

LIST OF ITEMS TRANSMITTED			
COPIES	DATE	NO:	DESCRIPTION
	8/30/21	1	Cover Letter
	8/30/21	2	Major Subdivision Application
	8/30/21	3	\$500.00 Check for Application Fee
	8/30/21	4	Letter of Support
	8/30/21	5	Site Evaluations
	8/30/21	6	Easement and Maintenance Agreement
	8/30/21	7	Lands of Borders – Subdivision Plat
	8/30/21	8	Original Subdivision Plat under Plot Book 111, Page 112

THESE ARE TRANSMITTED as checked below:

<input checked="" type="checkbox"/> For approval	<input type="checkbox"/> Approved as submitted	<input type="checkbox"/> Resubmit _____ copies for approval
<input type="checkbox"/> For your use	<input type="checkbox"/> Approved as noted	<input type="checkbox"/> Submit _____ copies for distribution
<input type="checkbox"/> As requested	<input type="checkbox"/> Returned for corrections	<input type="checkbox"/> Return _____ corrected prints
<input checked="" type="checkbox"/> For review and comment	<input type="checkbox"/> _____	
<input type="checkbox"/> FOR BIDS DUE _____	<input type="checkbox"/> PRINTS RETURNED AFTER LOAN TO US	

REMARKS

COPY TO _____

SIGNED: Dave Heatwole

Received by: _____

RECEIVED

AUG 30 2021

SUSSEX COUNTY
PLANNING & ZONING

August 30, 2021

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
2 The Circle
Georgetown, DE 19947

**RE: Lands of Borders – Subdivision
Submission Cover Letter
Tax Parcel: 531-7.00-1.00**

Dear Mr. Whitehouse:

I am submitting the Land of Borders Subdivision application for consideration at the next available Planning and Zoning meeting. This parcel was created by the subdivision recorded under plot book 111 and page 112 and fronts a 50-foot wide, privately maintained right of way. It is my understanding that a major subdivision is required based on conversations with Planning and Zoning Staff.

In support of the Lands of Borders Subdivision, I have included the following items:

- Letter of support by the property owners directly impacted by the subdivision
- A copy of the Declaration of Easement and Maintenance Agreement for the private right of way
- A copy of the Soils Evaluation for the existing and proposed lot

The applicant requests a waiver from the County's Forested Buffer and Street Requirements.

Would you please give me a call if you have any questions or concerns, 302-841-7901.



Dave Heatwole, PE | Principal
SITWORKS ENGINEERING

File #: _____

Pre-App Date: _____

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:

Location of Subdivision:

Hérons Crossing (Private Drive), Seaford, DE

Proposed Name of Subdivision:

Lands of Borders

Tax Map #: 531-7.00-1.00

Total Acreage: 9.283

Zoning: MR

Density: 0.214

Minimum Lot Size: 3.733

Number of Lots: 2

Open Space Acres: n/a

Water Provider: On-Site Well

Sewer Provider: On-Site Septic

Applicant Information

Applicant Name: Matthew Borders

Applicant Address: 21767 Herons Crossing, Rd

City: Seaford

State: DE

Zip Code: 19973

Phone #: (302) 841-5002

E-mail: mattborders10@gmail.com

Owner Information

Owner Name: Delores S. Borders

Owner Address: 32993 Herons Crossing

City: Seaford

State: DE

Zip Code: 19973

Phone #: (302) 841-5002

E-mail: mattborders10@gmail.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: David Heatwole

Agent/Attorney/Engineer Address: PO Box 2, 19 Commerce Street

City: Harrington

State: DE

Zip Code: 19952

Phone #: (302) 841-7901

E-mail: dave.heatwole@siteworkseng.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: 8/30/21

Signature of Owner



Date: 8-30-21

For office use only:

Date Submitted: _____ Fee: \$500.00 Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Date of PC Hearing: _____ Recommendation of PC Commission: _____



Attn: Mr. Jamie Whitehouse, Director
Sussex County Planning and Zoning
2 The Circle
P.O. Box 589
Georgetown, DE 19947

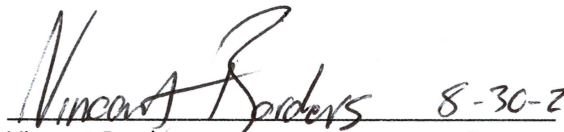

RE: Lands of Borders Subdivision
Tax Map 531-7.00-1.00

Dear Mr. Whitehouse,

We support the proposed Lands of Borders Subdivision for the parcel noted above and are agreeable to the terms of the easement and shared maintenance agreement included with the Lands of Borders Subdivision submission.

 Dolores S. Borders 21822 Herons Crossing Seaford, DE 19973	<u>8/30/21</u> Date	 Raymond S. Borders 21772 Herons Crossing Seaford, DE 19973	<u>8/30/21</u> Date
---	------------------------	---	------------------------

 Mathew S. Borders 21767 Herons Crossing Seaford, DE 19973	<u>8-22-21</u> Date	 Chelsea L. Borders 21767 Herons Crossing Seaford, DE 19973	<u>8/22/21</u> Date
--	------------------------	--	------------------------

 Vincent Borders 21786 Herons Crossing Seaford, DE 19973	<u>8-30-21</u> Date	 Rachael Borders 21786 Herons Crossing Seaford, DE 19973	<u>8/30/21</u> Date
--	------------------------	---	------------------------

Reference #:

565845

**SITE EVALUATION
Approval Page**

The soils on this site are approved when the following is completed in full and signed by the approving authority. Isolation distance requirements, limited area of suitable soils, placement of fill, removal of soil, or compaction of the evaluated area may preclude construction permit approval or modify the type of system that may be permitted. An approved report must accompany any permit application. This is not a construction permit.

Owner's Name and Address: Jacob E. & Delores S. Borders
21882 Herons Crossing
Seaford, DE 19973

Tax Map #: 5-31-7.00-1.01 P.O.
Lot #: Proposed Parcel 3A

**RECEIVED
08/12/2021
GROUNDWATER**

Limitations of Soil Investigation for System Design

This soil investigation was conducted for a residential on-site system of up to 600 GPD capacity.

For applications of this report to designs of greater capacity or alternative uses, contact the site evaluator or the Department to determine if additional field investigations are necessary.

Initial Disposal System:

Capping-fill gravity-fed seepage bed or trench disposal system. Experience has shown that seepage trenches can have greater functional longevity under a variety of soil and site conditions. While regulation allows the use of seepage bed designs, trenches are nevertheless recommended if space permits. Trench installations are limited to slopes of 15% or less (unless designed by a professional engineer) and bed installations are limited to slopes of 2% or less. The designer should visit the site to verify conditions prior to design. See exhibits M and N in the 1985 regulations (amended 1/11/14).

Location of Initial Disposal System:

In the immediate vicinity of profile(s) 1 & 2 (see plot).

Depth to Limiting Zone:

48"

Replacement Disposal System:

Same as above if space permits. Otherwise, the replacement system may be a sand-lined upgrade.

Location of Replacement Disposal System:

In the immediate vicinity of profile(s) referred to above.

Depth to Limiting Zone:

Same as above.

Design Considerations and Comments or Alternatives to the Initial Disposal System:

*Changes made to property lines or configuration from those included in the attached site evaluation report may negate this approval. A new plot drawing showing the locations of the soil borings in reference to changed property lines, fixed points of reference, etc. may be required in order for the site evaluation to be re-approved.

*Maintain all isolation distances specified in Exhibit "C" in the 1985 regulations (amended 1/11/14). The designated suitable soil area(s) appearing on the plot drawing may, in some cases, be negated or reduced due to required isolation distances.

Soils in the vicinity of SB #3 are suitable for a full-depth LPP disposal system with a limiting zone of 44" and an estimated percolation rate of 30MPI.

Instructions to Property Owner

- Contact a Licensed Class B System Designer.
- A permeability rate of 30 minutes per inch has been estimated for the soils on this site. These estimated rates are used to determine the required size of the disposal area. They are based on soil texture and are derived from tables developed by the DNREC. You may elect to use the estimated rate to size the disposal system or have the appropriate tests conducted. Contact the Site Evaluator at (302) 856-1853 or the DNREC at (302) 856-4561 in Sussex County, and (302) 739-9947 in Kent and New Castle Counties for testing information.
- Read the attached site evaluation report for additional information.
- Identify where the drainfield will be placed on the site and protect it from any vehicle overtravel or stockpiling of any construction materials. It is your responsibility to prevent soil compaction of the drainfield area!

**PAID
\$ 75.00 08/12/2021**

This report has been prepared by: Bradley J. Cate 8/12/2021

**Bradley J. Cate
Eastern Shore Soil Services**

License #: 2052

Field Checked _____

For Office Use Only

DNREC APPROVED

8/13/21

8/13/26

DNREC Reviewing Staff

Approval Date

Expiration Date

Disclaimer: Approval of a site evaluation indicates only that the site evaluation was conducted in compliance with the regulations. It is not an indication of the quality or correctness of the site evaluation.

**IF THERE ARE QUESTIONS
REGARDING THIS REPORT
CONTACT CLASS D LICENSEE**

**THE CLASS D LICENSEE
IS RESPONSIBLE FOR
ERRORS/OMISSIONS**

Site Evaluation Report

Eastern Shore Soil Services
P.O. Box 411, Savanna, IL 61074 (815) 273-3550
P.O. Box 411, Georgetown, DE 19947 (302) 856-1853
esss@grics.net www.easternshoresoil.com

12-Aug-21

File #: 5294

Owner's Name and Address: Jacob E. & Delores S. Borders
21882 Herons Crossing
Seaford, DE 19973
Telephone #: () - 0

Tax Map and Parcel #: 5-31-7.00-1.01 P.O. **County:** Sussex
Property Location: NW/S Herons Crossing Rd., ~365' N of CR 544
Name of Development: N/A
Lot # Proposed Parcel 3A **In Tax Ditch District?:** Yes
Central Sewer Available: No **Chesapeake/Inland Bays PSN3 Area?:** No
Central Water Available: No

Date of Investigation: 3/19/21
Evaluated by Test Pits: No **Evaluated by Soil Borings:** Yes

<u>Profile #:</u>	<u>Depth to Limiting Zone:</u>	<u>Limiting Zone Inferred From:</u>	<u>Subgroup Taxon Classification:</u>
1	49"	redox accumulations	Typic Hapludult
2	48"	redoximorphic features	Typic Hapludult
3	44"	redox accumulations	Humic Hapludult

Summary of Evaluation:

This site occupies a nearly level cultivated portion of a talf. Differences in depth to redoximorphic features were related to minor differences in topographic elevation. Free water observations should be considered qualitatively due to an insufficient equilibration period. Regional wet season hydrology was at or above normal at the time of the site visit.

Evaluated By: Bradley J. Cate
DE License #: 2052


Site Evaluator's Signature

Note:
Information contained in this site evaluation report and shown on the accompanying plot drawing reflects current regulatory policies and procedures at the time the evaluation was conducted. Changes made to the property and to adjacent properties after the evaluation was conducted or changes in regulatory policy may preclude or modify the type or location of the recommended on-site sewage system regardless of site evaluation approval. Data contained in this report may include information obtained from property owners, their agents, residents, adjacent residents, and departmental permits, when readily available. While this information is believed to be accurate it does not guarantee a septic permit and the attached plot should not be construed as a survey. All information should be verified by interested parties prior to the transfer of the property as well as prior to design and installation of the septic system. Interpretations made in this evaluation are intended for siting and design of a septic system only and are not suitable for other uses. Unless approved by the regulatory agency(ies) this report represents only a technical opinion rendered and does not constitute an approval for siting or design of any septic system on this site.

SOIL PROFILE NOTES

Eastern Shore Soil Services

Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: esss@grics.net



Profile #: 1

Date of Test: 3/19/21 Soil Boring or Test Pit (1)

Property Owner: Borders

Property Location: Parcel 3A Herons Crossing Rd

Site Evaluator: Bradley J. Cate, CPSS/SC

License No.: 2052

Slope: See Top Relief: _____

Estimated Permeability: mod Rapid

Depth to Limiting Zone: 49" to relax accumulations

Soil Series Identified: Typic Hapludalt

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
A _p	0 to B	10YR 3/4	/				LS	mgc	/ ufr
B ₁₁	B to 31	7.5YR 4/6	/				SL+	~	/ ufr
B ₁₂	31 to 37	7.5YR 5/6	/				SL+	m	/ ufr
B ₁₃	37 to 49	7.5YR 5/6	/				LS+	~	/ ufr
BC	49 to 53	7.5YR 5/6	7.5YR 5/3	c2d			LS	~	/ ufr
C	53 to 60	7.5YR 6/6	10YR 5/3 7.5YR 5/3	c2d c3d			stratified LS/L	~	/ ufr
	to								/
	to								/

Current Hydrology: "± to upper boundary of capillary fringe (or)

42"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)

(2) Boundary if described from a pit.

Site Evaluator's Signature

**SOIL PROFILE
NOTES**

Eastern Shore Soil Services

Environmental Consulting:
Soil Mapping, Land Use Planning, Wetland Studies,
Site Evaluations, Environmental Permits
P.O. Box 411, Georgetown, DE 19947
Phone: (302) 856-1853
P.O. Box 411, Savannah, IL 61074
Phone: (815) 273-3550
Email: csss@grice.net



Profile #: 2
Date of Test: 3/15/21 Soil Boring or Test Pit (1)
Property Owner: Borders
Property Location: Herons Crossing Rd Parcel 3A
Site Evaluator: **Bradley J. Cate, CPSS/SC** License No.: 2052

Slope: See Topo Relief: _____
Estimated Permeability: moderately poor
Depth to Limiting Zone: 48" to retromorphic features
Soil Series Identified: Typic Hapludult

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
A _p	0 to 14	10YR 4/3	/				LS	single	/ ufr
B ₁₁	14 to 19	10YR 4/6	/				SL	m	/ ufr
B ₁₂	19 to 40	7.5YR 5/6	/				SLT	10Sbc	/ ufr
B _c	40 to 48	7.5YR 5/6	/				LS _c	m	/ ufr
C	48 to 60	10YR 5/6	10YR 6/2	C 2 P			Stratified S.LS _c SL _c	m	/ ufr
	to								/
	to								/
	to								/

Current Hydrology: "± to upper boundary of capillary fringe (or)
41"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
(2) Boundary if described from a pit.

Site Evaluator's Signature

SOIL PROFILE NOTES

Eastern Shore Soil Services

Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: csss@grica.net



Profile #: 3

Date of Test: 3/19/21 Soil Boring or Test Pit (1)

Property Owner: Bardors

Property Location: Horvans Crossing Rd. Parcel 3A

Site Evaluator: **Bradley J. Cate, CPSS/SC**

License No.: 2052

Slope: See Topo Relief: _____

Estimated Permeability: Moderate

Depth to Limiting Zone: 44" to redox accumulations

Soil Series Identified: Humic Hapludult

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
Ap	0 to 9	1.7r3/3	/				SL ⁻	single	/ ufr
Bt1	9 to 24	10.7r4/4	/				SL ⁺	massive	/ ufr
Bt2	24 to 32	7.57r4/6	/				SEL	massive	/ ufr
Bt3	32 to 36	7.57r5/6	/				SL ⁺	massive	/ ufr
Bc	36 to 44	7.57r5/6	/				LS	~	/ ufr
C1	44 to 55	10.7r5/6	7.57r5/6			C2d	LS	~	/ ufr
C2	55 to 60	10.7r5/6	10.7r5/6 7.57r5/6			C2d	LS	~	/ ufr
	to								/

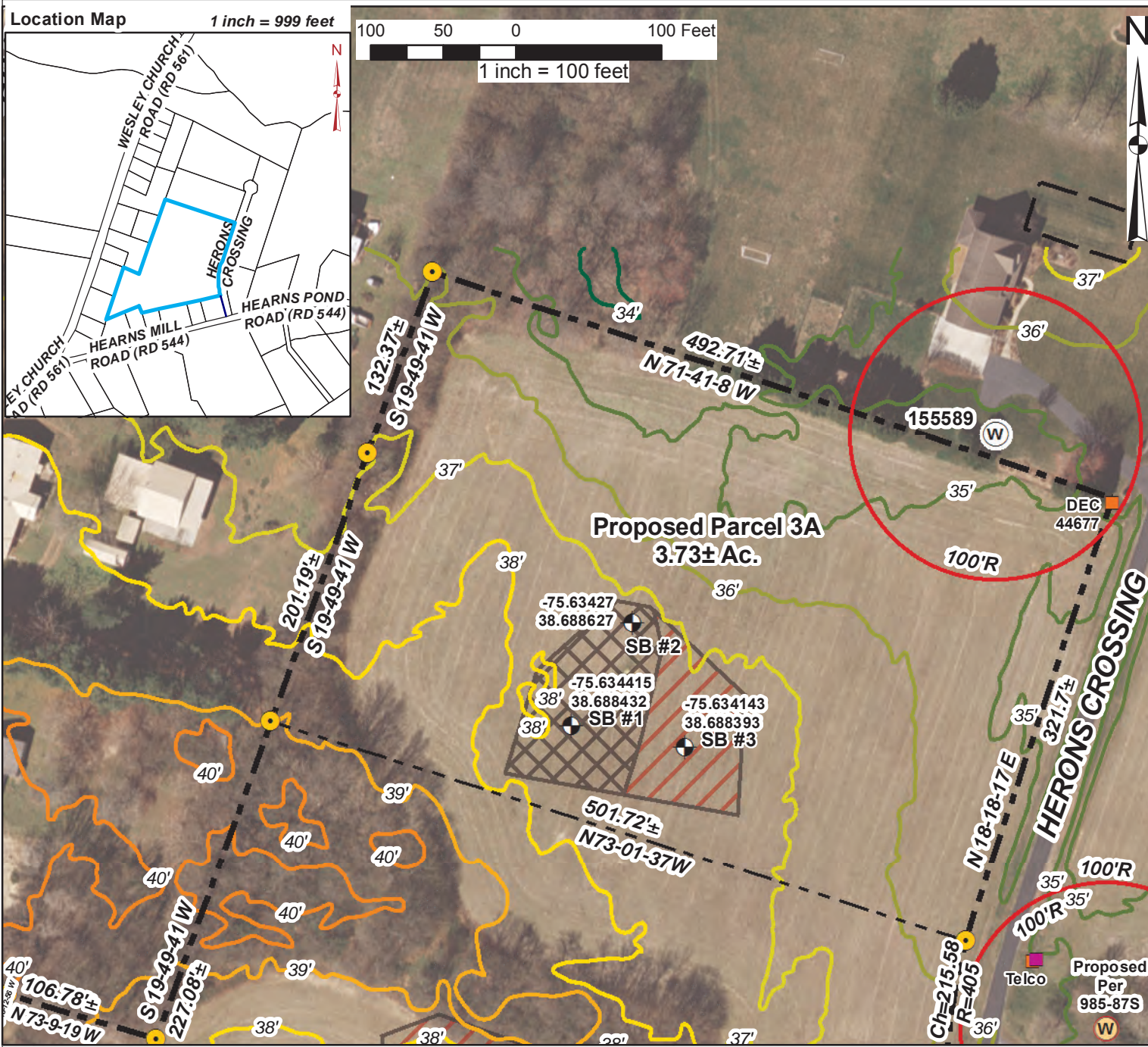
Current Hydrology: "± to upper boundary of capillary fringe (or)

44"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)

(2) Boundary if described from a pit.

Site Evaluator's Signature



Legend

- ⊙ Well Location from Records
- Misc. Point
- Concrete Monument
- ⊕ Soil Boring Location
- Utility Enclosure/Pede...
- ⊙ Well-Verified
- Property Line
- Proposed Property Line
- Approx. System Extents
- Well Arc & Radius
- ▨ Full-depth LPP System
- ▨ Capping-Fill Gravity-fed System

Note: Unless otherwise shown, adjacent wells >100' from evaluated area (public wells >150'). Any ditch or swale present is ephemeral unless depicted as a watercourse. If this plot is not in color or there are any problems with the legibility or scale, contact the evaluator for a clean, scaled, color copy.

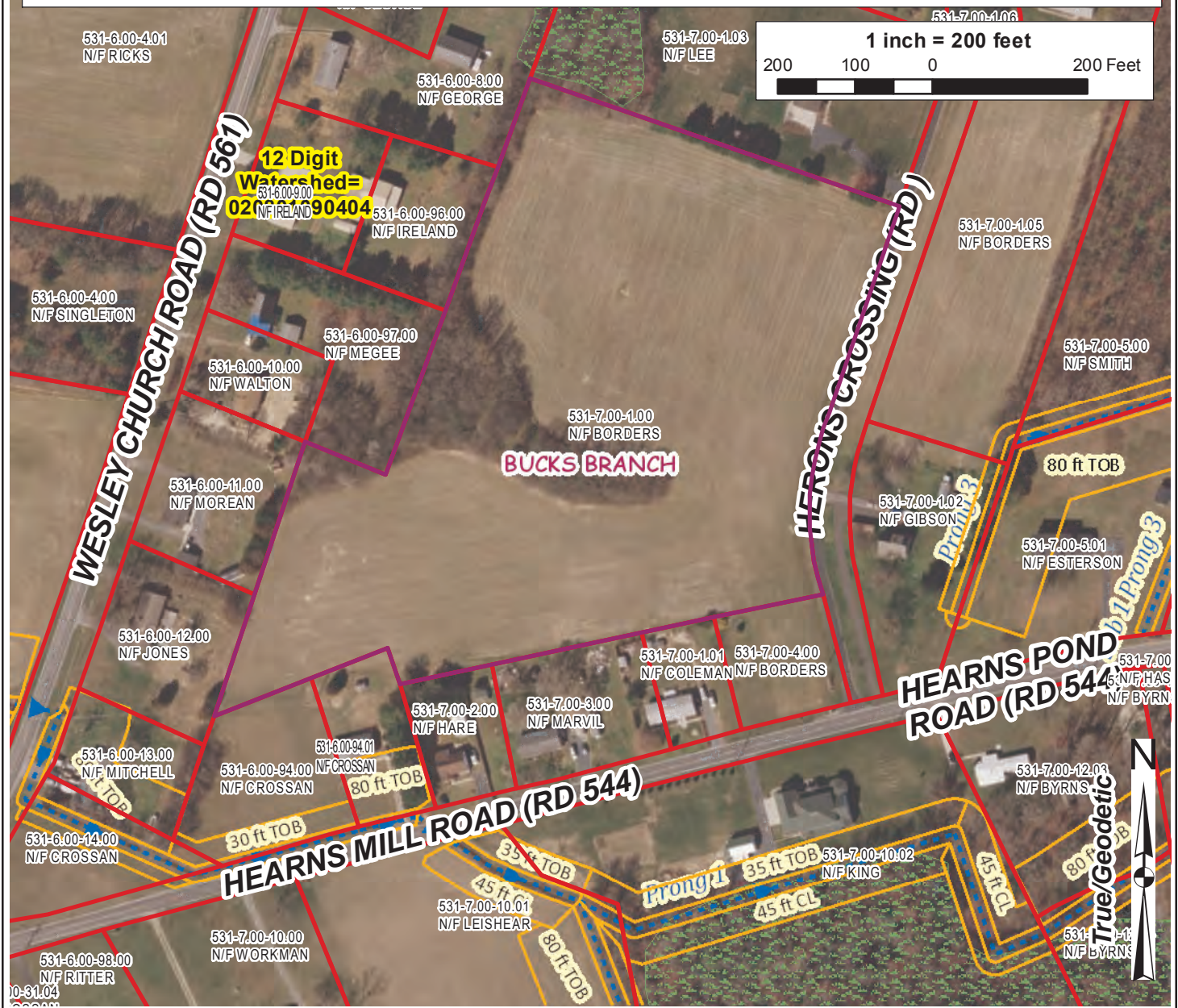
Disclaimer: This plot drawing is not represented as a survey. Boundary information has been compiled from any of the following sources: county GIS, tax map, deed, survey, recorded plot, or field located property corners. Locations of wells and septic systems are by direct observation where possible but, as with boundary information above, may include anecdotal information supplied by property owners, adjacent residents, and/or other interested parties. This plot represents site conditions at the time of evaluation. Subsequent alteration of the site or adjacent properties may negate the validity or usefulness of the information. Elevation contours, if provided, are derived from public domain LIDAR or GIS and should be confirmed. All information should be re-verified prior to purchase or use. In some cases, features such as property lines, utility poles, transformers, etc. may be slightly at odds with aerial photography due to minor errors in GPS data collection or due to horizontal biases inherited from the aerial photography source used.

Site Evaluation Plot
N/F Jacob E. & Delores S. Borders
TM# 5-31-7.00-1.00
Proposed Parcel 3A
Per Plan by Siteworks Eng.

Eastern Shore Soil Services
 Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: ess@grice.net



Additional Information Required by DNREC for Site Evaluation Reports per Section 5.0 and Subsections under "REGULATIONS GOVERNING THE DESIGN, INSTALLATION AND OPERATION OF ON-SITE WASTEWATER TREATMENT AND DISPOSAL SYSTEMS", amended 1/11/2014.*



Legend (if not shown on map above, does not apply to subject parcel)

- 12 Digit Watershed #
- Bay Building Line
- Tax Ditch Maximum ROWs
- Wetlands
- FEMA Flood Maps
- FEMA Flood Maps
- FEMA Flood Maps
- FEMA Flood Maps
- FEMA Flood Maps

*Information Source: DNREC <http://mapservices.dnrec.delaware.gov/arcgis/services>
 Eastern Shore Soil Services does not warrant the validity or necessarily concur with this information, particularly as it relates to any wetlands depicted. Questions regarding wetlands shown (or not shown) should be directed to the DNREC Wetlands and Subaqueous Lands Section @ (302) 739-9943. These wetland maps were prepared by 3rd parties and are included solely as a regulatory requirement for site evaluations. Do not call the site evaluator.

Site Evaluation Map of Additional Published Properties

(This information has NOT been developed by Eastern Shore Soil Services). Property lines from tax maps and subject to locational errors.

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 P.O. Box 411, Sevaana, IL 61074
 Phone: (815) 273-3550
 Email: ess@grics.net

PARID: 531-7.00-1.00
BORDERS JACOB E

ROLL: RP

Property Information

Property Location:

Unit:

City:

State:

Zip:

Class: AGR-Agriculture
 Use Code (LUC): AG-AG
 Town: 00-None
 Tax District: 531 – SEAFORD
 School District: 3 - SEAFORD
 Council District: 1-Vincent
 Fire District: 87-Seafood
 Deeded Acres:
 Frontage: 0
 Depth: .000
 Irr Lot:
 Zoning 1: MR-MEDIUM RESIDENTIAL
 Zoning 2: -
 Plot Book Page: 112 336/PB

100% Land Value: \$2,000
 100% Improvement Value
 100% Total Value

Legal

Legal Description: N/RD 544
 1180'E/RD 561
 LOT 3 REMAINING LAND

Owners

Owner	Co-owner	Address	City	State	Zip
BORDERS JACOB E	DOLORES S BORDERS	21882 HERONS CROSSING	SEAFORD	DE	19973

Reference #:

565846

**SITE EVALUATION
Approval Page**

RECEIVED

08/12/2021

GROUNDWATER

The soils on this site are approved when the following is completed in full and signed by the ~~approving authority~~. Isolation distance requirements, limited area of suitable soils, placement of fill, removal of soil, or compaction of the evaluated area may preclude construction permit approval or modify the type of system that may be permitted. An approved report must accompany any permit application. This is not a construction permit.

**Owner's Name
and Address:**

Jacob E. & Delores S. Borders

21882 Herons Crossing
Seaford, DE

19973

Tax Map #:

5-31-7.00-1.01 P.O.

Lot #: Remaining Lands of Lot 3

Limitations of Soil Investigation for System Design

This soil investigation was conducted for a residential on-site system of up to 600 GPD capacity.

For applications of this report to designs of greater capacity or alternative uses, contact the site evaluator or the Department to determine if additional field investigations are necessary.

Initial Disposal System:

Full-depth low pressure pipe (LPP) or elevated sand mound disposal system. LPP trenches to be 12" wide. The maximum slope allowed for elevated sand mound systems is 6% and 12% for percolation rates slower than 60 MPI and faster than 60 MPI, respectively, as indicated below. The designer should visit the site to verify conditions prior to design. See exhibits O and P in the 1985 regulations (amended 1/11/14).

Location of Initial Disposal System:

In the immediate vicinity of profile(s) 1 & 2 (see plot).

Depth to Limiting Zone:

41"

Replacement Disposal System:

Same as above if space permits. Otherwise, the replacement system may be a sand-lined upgrade.

Location of Replacement Disposal System:

In the immediate vicinity of profile(s) referred to above.

Depth to Limiting Zone:

Same as above.

Design Considerations and Comments or Alternatives to the Initial Disposal System:

*Changes made to property lines or configuration from those included in the attached site evaluation report may negate this approval. A new plot drawing showing the locations of the soil borings in reference to changed property lines, fixed points of reference, etc. may be required in order for the site evaluation to be re-approved.

*Maintain all isolation distances specified in Exhibit "C" in the 1985 regulations (amended 1/11/14). The designated suitable soil area(s) appearing on the plot drawing may, in some cases, be negated or reduced due to required isolation distances.

Soils in the vicinity of SB #3 are suitable for a capping-fill LPP with a 35" limiting zone and a 30MPI estimated percolation rate.

Instructions to Property Owner

- Contact a Licensed Class C System Designer.
- A permeability rate of 30 minutes per inch has been estimated for the soils on this site. These estimated rates are used to determine the required size of the disposal area. They are based on soil texture and are derived from tables developed by the DNREC. You may elect to use the estimated rate to size the disposal system or have the appropriate tests conducted. Contact the Site Evaluator at (302) 856-1853 or the DNREC at (302) 856-4561 in Sussex County, and (302) 739-9947 in Kent and New Castle Counties for testing information.
- Read the attached site evaluation report for additional information.
- Identify where the drainfield will be placed on the site and protect it from any vehicle overtravel or stockpiling of any construction materials. It is your responsibility to prevent soil compaction of the drainfield area!

PAID
\$ 75.00 08/12/2021

This report has been prepared by: _____ 8/12/2021

Bradley J. Cate
Eastern Shore Soil Services

License #: 2052

Field Checked _____

For Office Use Only

DNREC APPROVED

DNREC Reviewing Staff

8/13/21

Approval Date

8/13/26

Expiration Date

Disclaimer: Approval of a site evaluation indicates only that the site evaluation was conducted in compliance with the regulations. It is not an indication of the quality or correctness of the site evaluation.

**IF THERE ARE QUESTIONS
REGARDING THIS REPORT
CONTACT CLASS D LICENSEE**

**THE CLASS D LICENSEE
IS RESPONSIBLE FOR
ERRORS/OMISSIONS**

Site Evaluation Report

Eastern Shore Soil Services
P.O. Box 411, Savanna, IL 61074 (815) 273-3550
P.O. Box 411, Georgetown, DE 19947 (302) 856-1853
esss@grics.net www.easternshoresoil.com

12-Aug-21

File #: 5293

Owner's Name and Address: Jacob E. & Delores S. Borders
21882 Herons Crossing
Seaford, DE 19973

Telephone #: () - 0

Tax Map and Parcel #: 5-31-7.00-1.01 P.O. **County:** Sussex

Property Location: NW/S Herons Crossing Rd., ~150' N of CR 544

Name of Development: N/A

Lot # Remaining Lands of Lot 3 **In Tax Ditch District?:** Yes

Central Sewer Available: No **Chesapeake/Inland Bays PSN3 Area?:** No

Central Water Available: No

Date of Investigation: 3/19/21

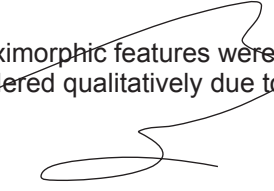
Evaluated by Test Pits: No **Evaluated by Soil Borings:** Yes

<u>Profile #:</u>	<u>Depth to Limiting Zone:</u>	<u>Limiting Zone Inferred From:</u>	<u>Subgroup Taxon Classification:</u>
1	41"	redoximorphic features	Oxyaquic Paleudult
2	46"	redox accumulations	Humic Hapludult
3	35"	redox accumulations	Oxyaquic Hapludult

Summary of Evaluation:

This site occupies a nearly level cultivated portion of a talf. Differences in depth to redoximorphic features were related to minor differences in topographic elevation. Free water observations should be considered qualitatively due to an insufficient equilibration period.

Evaluated By: Bradley J. Cate
DE License #: 2052


Site Evaluator's Signature

Note:
Information contained in this site evaluation report and shown on the accompanying plot drawing reflects current regulatory policies and procedures at the time the evaluation was conducted. Changes made to the property and to adjacent properties after the evaluation was conducted or changes in regulatory policy may preclude or modify the type or location of the recommended on-site sewage system regardless of site evaluation approval. Data contained in this report may include information obtained from property owners, their agents, residents, adjacent residents, and departmental permits, when readily available. While this information is believed to be accurate it does not guarantee a septic permit and the attached plot should not be construed as a survey. All information should be verified by interested parties prior to the transfer of the property as well as prior to design and installation of the septic system. Interpretations made in this evaluation are intended for siting and design of a septic system only and are not suitable for other uses. Unless approved by the regulatory agency(ies) this report represents only a technical opinion rendered and does not constitute an approval for siting or design of any septic system on this site.

SOIL PROFILE NOTES

Eastern Shore Soil Services

Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: ess@grice.net



Profile #: 1

Date of Test: 3/15/21 Soil Boring or Test Pit (1)

Property Owner: Borjors

Property Location: Herons Crossing Rd Remainder of Lot 3

Site Evaluator: **Bradley J. Cate, CPSS/SC**

License No.: 2052

Slope: See Topo Relief: _____

Estimated Permeability: Low Rapid

Depth to Limiting Zone: 41" to redoximorphic features

Soil Series Identified: Oxyaquic Paludic H

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
<u>Ap</u>	<u>0 to 10</u>	<u>10YR 3/3</u>	<u>/</u>				<u>LS+</u>	<u>mg</u>	<u>/ufr</u>
<u>E</u>	<u>10 to 21</u>	<u>10YR 5/4</u>	<u>/</u>				<u>LS+</u>	<u>m</u>	<u>/ufr</u>
<u>Bt1</u>	<u>21 to 41</u>	<u>10YR 5/6</u>	<u>/</u>				<u>SL</u>	<u>msbk</u>	<u>/ufr</u>
<u>Bt2</u>	<u>41 to 51</u>	<u>10YR 5/4</u>	<u>10YR 5/2</u> <u>10YR 5/6</u>	<u>t2d</u>			<u>SL</u>	<u>msbk</u>	<u>/ufr</u>
<u>Bt3</u>	<u>51 to 60</u>	<u>10YR 5/4</u>	<u>10YR 5/2</u> <u>7.5YR 5/3</u>	<u>c3d</u> <u>c2p</u>			<u>SL</u>	<u>-</u>	<u>/ufr</u>
	<u>to</u>								<u>/</u>
	<u>to</u>								<u>/</u>
	<u>to</u>								<u>/</u>

Current Hydrology: "± to upper boundary of capillary fringe (or)

43"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from _____ " -if applicable)

(2) Boundary if described from a pit.

Site Evaluator's Signature

SOIL PROFILE NOTES

Eastern Shore Soil Services

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P.O. Box 411, Savannah, IL 61074
Phone: (815) 273-3550
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Profile #: 2
 Date of Test: 3/19/21 Soil Boring or Test Pit (1)
 Property Owner: Borders
 Property Location: Herons Crossing Rd. Remainder of Lot 3
 Site Evaluator: **Bradley J. Cate, CPSS/SC** License No.: 2052
 Slope: See Topo Relief: _____
 Estimated Permeability: Moderate
 Depth to Limiting Zone: 46" to relax accumulations
 Soil Series Identified: Munir Hapludult

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
A	0 to 9	10YR2/3	/				SL	1mjt	/ uf
Bt1	9 to 24	10YR4/4	/				SCC-	1mshk	/ fr
Bt2	24 to 40	7.5YR5/6	/				SL	1CS62	/ ufr
E & Bt3	40 to 46	10YR5/4	90%				L5	~	/ ufr
		7.5YR5/6	20%				SL	~	/ ufr
C1	46 to 50	10YR5/4	7.5YR5/3	f4p			L5	~	/ ufr
C2	50 to 60	10YR6/4	10YR5/3	c2p			L5	~	/ ufr
	to								/
	to								/

Current Hydrology: "± to upper boundary of capillary fringe (or)
 44"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
 (2) Boundary if described from a pit.

Site Evaluator's Signature

SOIL PROFILE NOTES

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 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: cess@grics.net



Profile #: 3

Date of Test: 3/15/21 Soil Boring or Test Pit (1)

Property Owner: Borders

Property Location: Heron's Crossing At Remainder of Lot 3

Site Evaluator: **Bradley J. Cate, CPSS/SC**

License No.: 2052

Slope: See Topo Relief: _____

Estimated Permeability: moderate

Depth to Limiting Zone: 35" to redox accumulations

Soil Series Identified: Dryaquic Hapludult

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
Ap	0 to 11	10YR 3/3	/				SL	1m gr	/ v fr
Bt1	11 to 15	10YR 4/4	/				SLL	1m sbk	/ fr
Bt2	15 to 20	10YR 4/6	/				SLL	1m sbk	/ fr
Bt3	20 to 27	7.5YR 4/6	/				SLL	1m sbk	/ fr
Bt4	27 to 35	7.5YR 5/6	/				SL	~	/ v fr
C	35 to 46	10YR 5/6	5YR 5/8 10YR 5/8	C2p C3d			LS	~	/ v fr
Cg	46 to 60	2.5Y 5/2	10YR 5/8 2.5Y 5/4	C3p C5d			Stratified LS, SL	~	/ v fr
	to								

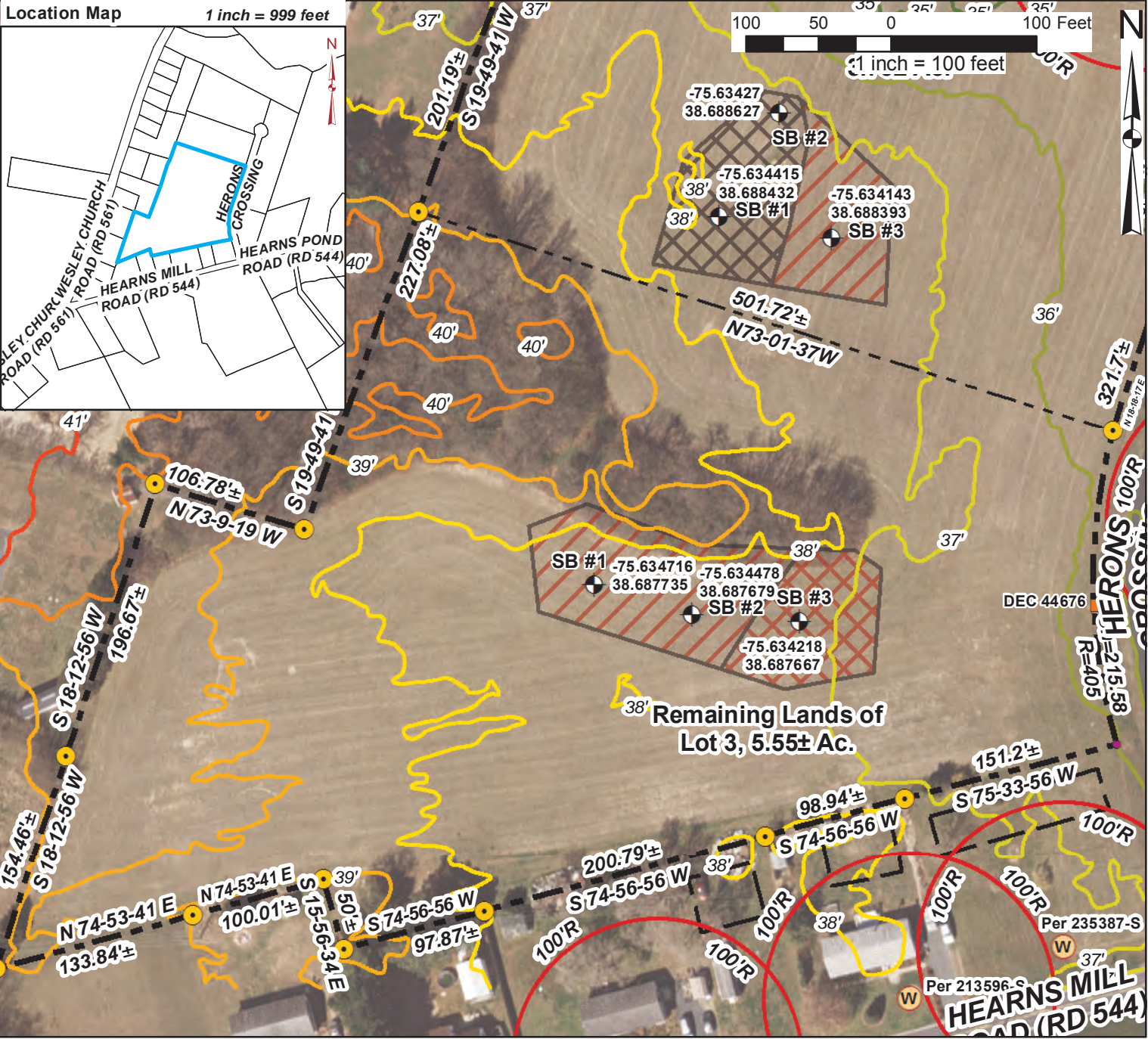
Current Hydrology: "± to upper boundary of capillary fringe (or)

35 "± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)

(2) Boundary if described from a pit.

Site Evaluator's Signature



Legend

- W Well Location from Records
- Misc. Point
- Soil Boring Location
- Utility Enclosure/Pede...
- Rebar
- Property Line
- Proposed Property Line
- Approx. System Extents
- Well Arc & Radius
- Capping-Fill LPP System
- Full-depth LPP System
- Capping-Fill Gravity-fed System

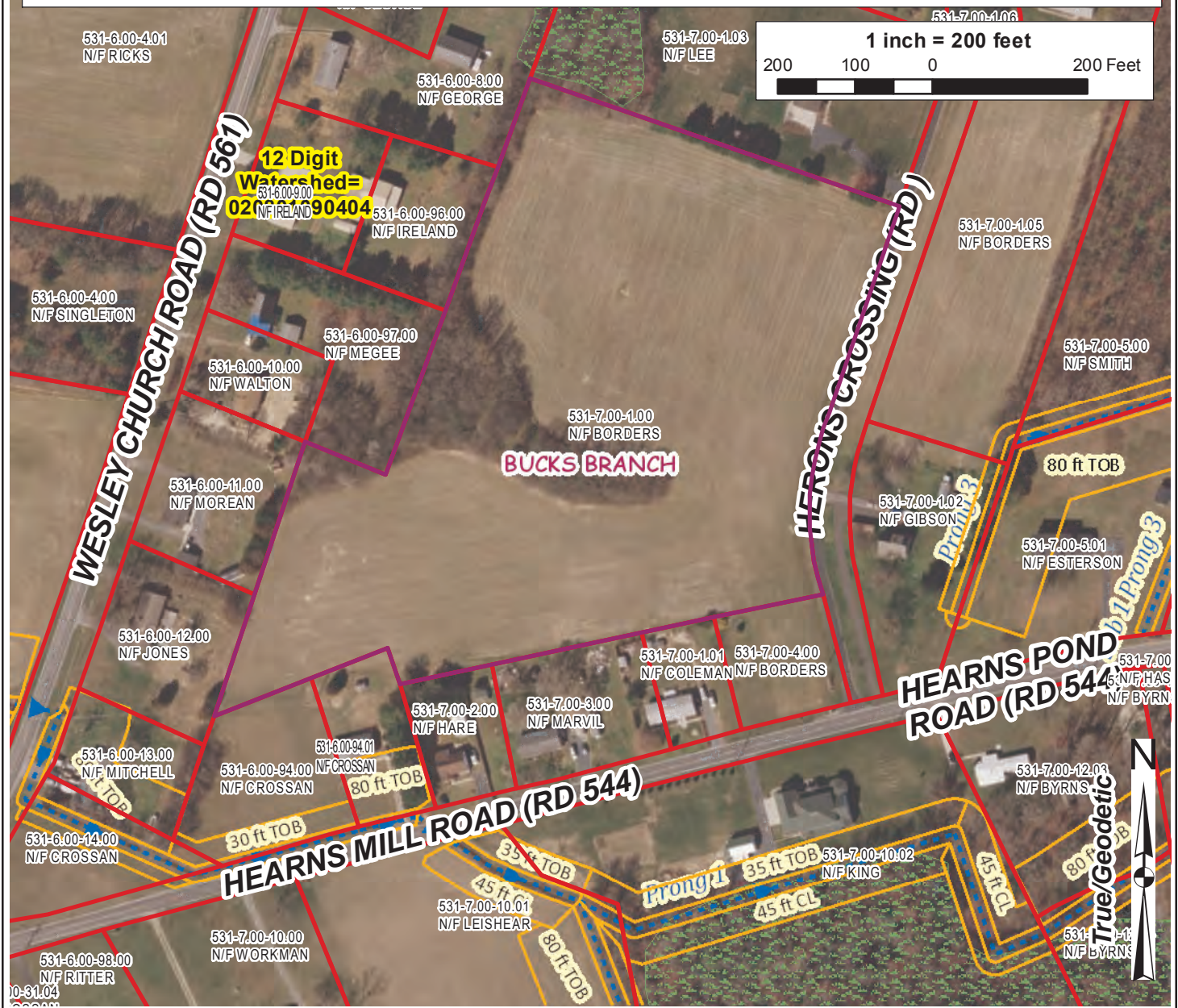
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TM# 5-31-7.00-1.00, P.O.
Remaining Lands of Lot 3
Per Plan by Siteworks Eng.

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Legend (if not shown on map above, does not apply to subject parcel)

	12 Digit Watershed #		FEMA Flood Maps
	Bay Building Line		X 500
	Tax Ditch Maximum ROWs		A
	Extent of Right-of-Way		AE
	Wetlands		AO
			VE

*Information Source: DNREC <http://mapservices.dnrec.delaware.gov/arcgis/services>
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PARID: 531-7.00-1.00
BORDERS JACOB E

ROLL: RP

Property Information

Property Location:

Unit:

City:

State:

Zip:

Class: AGR-Agriculture
 Use Code (LUC): AG-AG
 Town: 00-None
 Tax District: 531 – SEAFORD
 School District: 3 - SEAFORD
 Council District: 1-Vincent
 Fire District: 87-Seafood
 Deeded Acres:
 Frontage: 0
 Depth: .000
 Irr Lot:
 Zoning 1: MR-MEDIUM RESIDENTIAL
 Zoning 2: -
 Plot Book Page: 112 336/PB

100% Land Value: \$2,000
 100% Improvement Value
 100% Total Value

Legal

Legal Description: N/RD 544
 1180'E/RD 561
 LOT 3 REMAINING LAND

Owners

Owner	Co-owner	Address	City	State	Zip
BORDERS JACOB E	DOLORES S BORDERS	21882 HERONS CROSSING	SEAFORD	DE	19973

TM: 5-31-7.00-1.03;
5-31-7.00-1.04;
5-31-7.00-1.05;
5-31-7.00-1.06; and,
5-31-7.00-4.00

Prepared by and Return to:
The Smith Firm, LLC
8866 Riverside Dr.
Seaford, DE 19973

**DECLARATION OF EASEMENT AND
SHARED MAINTENANCE AGREEMENT**

THIS DECLARATION OF EASEMENT AND SHARED MAINTENANCE AGREEMENT (the "Agreement") is made and entered into this ___ day of _____, 2020, by **VINCENT BORDERS** and **RACHEL BORDERS**, having an address for purposes of this Agreement of 21786 Herons Crossing, Seaford, Delaware 19973,

AND

RAYMOND S. BORDERS, having an address for purposes of this Agreement of 21772 Herons Crossing, Seaford, Delaware 19973,

AND

JACOB E. BORDERS and **DOLORES S. BORDERS**, having an address for purposes of this Agreement of 21882 Herons Crossing, Seaford, Delaware 19973;

AND

MATHEW S. BORDERS and **CHELSEA L. BORDERS**, having an address for purposes of this Agreement of 21767 Herons Crossing, Seaford, Delaware 19973.

RECITALS

WHEREAS, as of the date of this Agreement, Vincent and Rachel Borders are the record owners of Sussex County tax district, map and parcel identification number 5-31-7.00-1.03; otherwise known as 21786 Herons Crossing, Seaford, Delaware 19973 (hereinafter "Lot 1");

WHEREAS, as of the date of this Agreement, Raymond S. Borders is the record owner of Sussex County tax district, map and parcel identification number 5-31-7.00-1.04; otherwise known as 21772 Herons Crossing, Seaford, Delaware 19973 (hereinafter "Lot 2");

WHEREAS, as of the date of this Agreement, Jacob E. Borders and Dolores S. Borders are the record owners of Sussex County tax district, map and parcel identification number 5-31-7.00-4.00; otherwise known as 21882 Herons Crossing, Seaford, Delaware 19973 (hereinafter "Lot 3");

WHEREAS, as of the date of this Agreement, Mathew S. Borders and Chelsea L. Borders are the record owners of Sussex County tax district, map and parcel identification number 5-31-7.00-1.05; otherwise known as 21767 Herons Crossing, Seaford, Delaware 19973 (hereinafter "Lot 4");

WHEREAS, as of the date of this Agreement, there is a 50' private right-of-way identified as Sussex County tax district, map and parcel identification number 5-31-7.00-1.06, and more fully shown on a plat placed of record in the Office of the Recorder of Deeds at Plat Book 111, Page 112 (the "ROW"); with the said ROW providing a means of ingress and egress to and from Lots 1, 2, 3 and 4 (collectively the "Properties").

WHEREAS, as of the date of this Agreement, the ROW is improved with an asphalt surface; and,

WHEREAS, as of the date of this Agreement, the ROW is owned by Jacob E. Borders and Dolores S. Borders; however, it is the intention of the said parties to convey the ROW, subject to the terms set forth herein, to Raymond S. Borders either simultaneous with the recordation of this Agreement, or shortly thereafter.

WITNESSETH

NOW THEREFORE, in consideration of the covenants and easements herein contained, and as a material condition to the conveyance to any third-party of any or all of the Properties subject hereto, as well as for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is agreed as follows:

1. *Grant of Easement.* The parties hereto, inclusive of the record owner of the ROW at the time this Agreement is signed and recorded, do hereby agree in their respective names and as a covenant that will run by and with the Properties hereinabove described, to forever allow the owners of the Properties, and their successors in title to enjoy a right of ingress and egress over the ROW. The easement rights herein described are appurtenant to the lands at issue, and are not in gross to any individuals named herein.

2. *Obstructions.* No owners of the Properties hereinabove described shall obstruct, impede, or otherwise interfere with each other in the reasonable use of the ROW.

3. *Maintenance.* It is hereby agreed that the owners of the Properties, along with their respective successors in title, shall share, as detailed below, in the responsibility of maintaining the ROW in a usable, neat, and uniform manner, so that the overall appearance of said ROW is in keeping with its intended use. Maintenance of the ROW shall include, at a

minimum, biennial seal coating. Upon the affirmative vote of a majority of the Properties subject hereto (each Property having a single vote), maintenance of the ROW shall also include resurfacing and other more major repairs. Notwithstanding anything contained herein or elsewhere to the contrary, maintenance of the ROW, as aforesaid, shall be paid for as follows:

(A) For so long as either Jacob E. Borders or Dolores S. Borders hold an ownership interest in Lot 3:

- (i) Owners of Lot 1 - 22%
- (ii) Owners of Lot 2 - 39%
- (iii) Owners of Lot 3 - 0%
- (iv) Owners of Lot 4 - 39%

(B) Once Jacob E. Borders and Dolores S. Borders no longer hold an ownership interest in Lot 3:

- (i) Owners of Lot 1 - 20%
- (ii) Owners of Lot 2 - 37%
- (iii) Owners of Lot 3 - 6%
- (iv) Owners of Lot 4 - 37%

4. *Claim of Contribution for Damages.* Notwithstanding the foregoing, the owners of the Properties reserve any and all legal rights to pursue all claims related to damage to the ROW or any improvement thereon, normal wear and tear excepted, due to the negligence or intentional acts of any owner or third person.

5. *Binding effect.* This Agreement shall be binding upon the owners of the Properties, as well as their respective successors, heirs, executors, administrators, and assigns. This Agreement shall be a covenant that binds and runs with the land.

6. *No Public Use.* The easement herein described is not intended for public use, nor is any such right of public use created by this Agreement.

The Lot 1 owners have set their hands and SEALS on this Agreement as of the day and year set forth below

Signed, Sealed and Delivered
in the presence of:

_____ (SEAL)
Vincent Borders

_____ (SEAL)
Rachel Borders

STATE OF _____, COUNTY OF _____ : to-wit

BE IT REMEMBERED, that on _____, 2020, personally came before me, the subscriber, VINCENT BORDERS and RACHEL BORDERS, parties to this Indenture, known to me personally to be such, and they acknowledged this Indenture to be their act and deed.

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

Notary Public
My Commission Expires:

The Lot 2 owner has set his hand and SEAL on this Agreement as of the day and year set forth below

Signed, Sealed and Delivered
in the presence of:

_____ (SEAL)
Raymond S. Borders

STATE OF _____, COUNTY OF _____: to-wit

BE IT REMEMBERED, that on _____, 2020, personally came before me, the subscriber, RAYMOND S. BORDERS, party to this Indenture, known to me personally to be such, and he acknowledged this Indenture to be his act and deed.

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

Notary Public
My Commission Expires:

The Lot 3 owners have set their hands and SEALS on this Agreement as of the day and year set forth below

Signed, Sealed and Delivered
in the presence of:

_____ (SEAL)
Jacob E. Borders

_____ (SEAL)
Dolores S. Borders

STATE OF _____, COUNTY OF _____: to-wit

BE IT REMEMBERED, that on _____, 2020, personally came before me, the subscriber, JACOB E. BORDERS and DOLORES S. BORDERS, parties to this Indenture, known to me personally to be such, and they acknowledged this Indenture to be their act and deed.

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

Notary Public
My Commission Expires:

The Lot 4 owners have set their hands and SEALS on this Agreement as of the day and year set forth below

Signed, Sealed and Delivered
in the presence of:

_____ (SEAL)
Mathew S. Borders

_____ (SEAL)
Chelsea L. Borders

STATE OF _____, COUNTY OF _____: to-wit

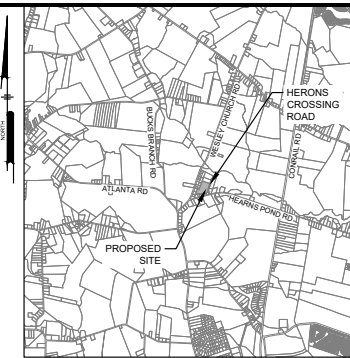
BE IT REMEMBERED, that on _____, 2020, personally came before me, the subscriber, MATHEW S. BORDERS and CHELSEA L. BORDERS, parties to this Indenture, known to me personally to be such, and they acknowledged this Indenture to be their act and deed.

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

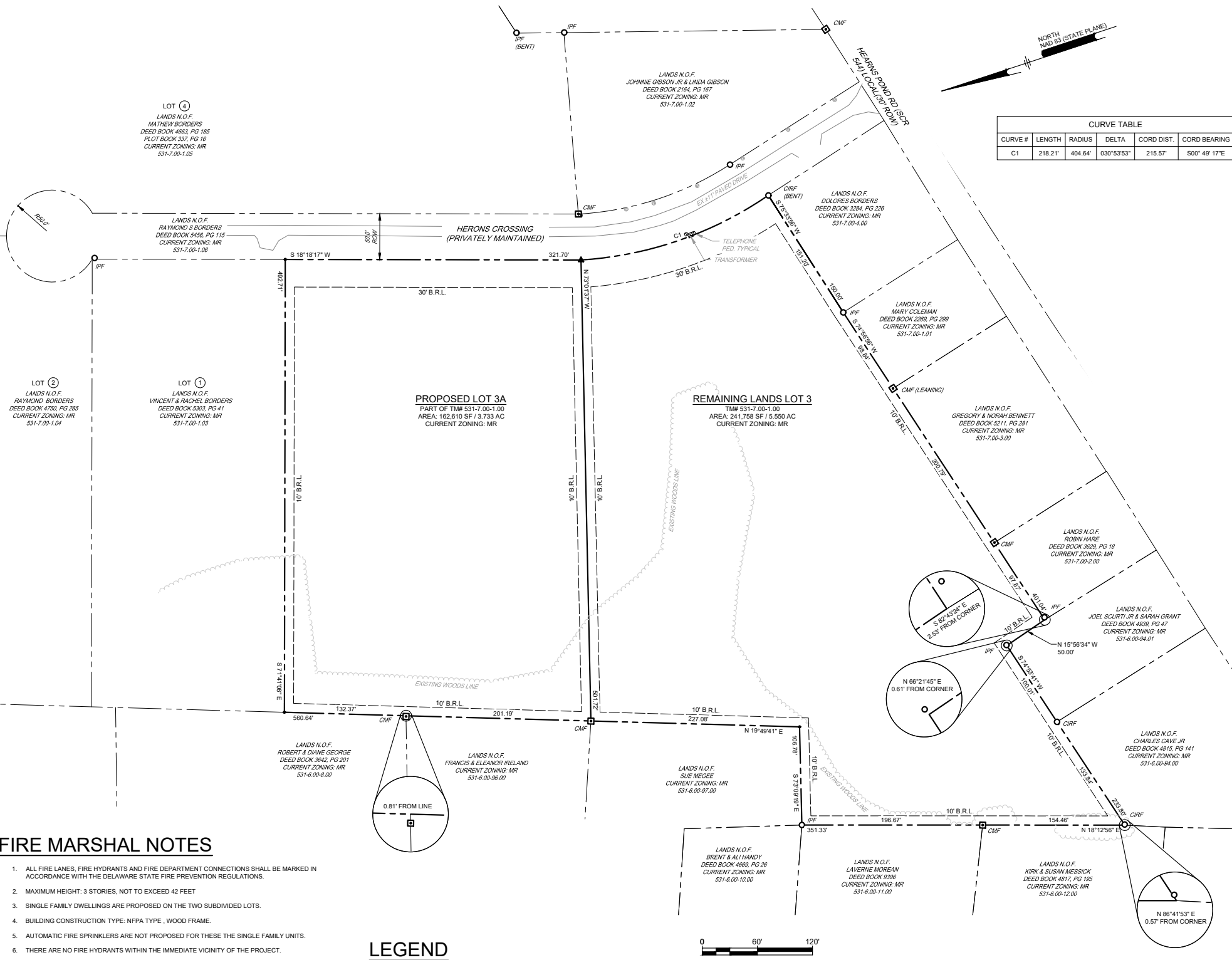
Notary Public
My Commission Expires:

LANDS OF BORDERS SUBDIVISION

SUSSEX COUNTY PROJECT REFERENCE # 2021-27



LOCATION MAP
SCALE: 1" = 1 MILE



CURVE TABLE					
CURVE #	LENGTH	RADIUS	DELTA	CORD DIST.	CORD BEARING
C1	218.21'	404.64'	030°53'53"	215.57'	S00°49'17"E

NOTES

- THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE LOT THREE AS SHOWN ON PLOT BOOK 111, PAGE 112 IN THE SUSSEX COUNTY RECORDER OF DEEDS CREATING ONE ADDITIONAL LOT FRONTING HERONS CROSSING ROAD, A PRIVATELY OWNED AND MAINTAINED STREET.
- PROPERTY REFERENCES: PLOT BOOK 111, PAGE 112, AND DEED BOOK 807 PAGE 335
- SURVEY CLASS: SUBURBAN
- HORIZONTAL DATUM: NAD83 - DELAWARE STATE PLANE
- THIS BOUNDARY SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT AND IS SUBJECT TO ANY ENCUMBRANCES, RESTRICTIONS, EASEMENTS AND/OR RIGHTS OR WAY THAT MIGHT BE REVEALED BY A THOROUGH TITLE SEARCH.
- ACCESS TO THE PROPOSED LOT 3A AND THE REMAINING LOT 3 LANDS SHALL BE FROM HERONS CROSSING, A PRIVATELY MAINTAINED 50' WIDE ROW.
- MAINTENANCE OF HERONS CROSSING SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS OF THIS SUBDIVISION, LOTS 1, 2, 3, 3A, AND 4.
- 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 NOISE, DUST, MANURE, AND OTHER ODORS, 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.
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- THE SITE IS NOT IMPACTED BY ANY WELL HEAD PROTECTION AREA AS MAPPED BY THE DNREC ENVIRONMENTAL NAVIGATOR.
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SITE DATA

- | | |
|--|---|
| 1. TAX PARCEL NUMBER | 531-7-00-1.00 |
| 2. EXISTING / PROPOSED ZONING | MEDIUM RESIDENTIAL (MR) |
| 3. EXISTING LOTS | 4 |
| 4. PROPOSED LOTS | 1 (5 TOTAL) |
| 5. BUILDING SETBACKS | FRONT YARD: 40-FEET
SIDE YARD: 10-FEET
REAR YARD: 10-FEET |
| 6. LOT AREA PRIOR TO SUBDIVISION | 9.283 ACRES (GROSS PROPERTY AREA) |
| 7. AREA WITHIN PROPOSED STREETS | 0.000 ACRES |
| 8. PROPOSED DENSITY | 0.215 LOTS / ACRES OR 4.642 ACRES / LOT |
| 9. WETLAND AREA | 0.000 ACRES |
| 10. WATER & SEWER SERVICE | PRIVATE - ON-SITE WELL AND SEPTIC |
| 11. FLOODPLAIN - THIS SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP PANEL NUMBERS 10005C0250L, EFFECTIVE DATE: JUNE 20, 2018, AND 10005C0245L, EFFECTIVE DATE: JUNE 20, 2018. | |
| 12. PRESENT USE | AGRICULTURAL |
| 13. PROPOSED USE | AGRICULTURAL AND RESIDENTIAL |
| 14. OWNER OF RECORD | DOLORES S. BORDERS
21882 HERONS CROSSING RD
SEAFORD, DE 19973
PHONE (302) 841-5002 |
| 15. PROXIMITY TO IDENTIFIED T.I.D. | NOT WITHIN AN IDENTIFIED T.I.D. |
| 16. POSTED SPEED LIMIT HEARNS POND RD | 35 MPH |
| 17. PROPERTY ADDRESS: | 21800 HERONS CROSSING RD
SEAFORD, DE 19973 |

FIRE MARSHAL NOTES

- ALL FIRE LANES, FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
- MAXIMUM HEIGHT: 3 STORIES, NOT TO EXCEED 42 FEET
- SINGLE FAMILY DWELLINGS ARE PROPOSED ON THE TWO SUBDIVIDED LOTS.
- BUILDING CONSTRUCTION TYPE: NFPA TYPE, WOOD FRAME.
- AUTOMATIC FIRE SPRINKLERS ARE NOT PROPOSED FOR THESE THE SINGLE FAMILY UNITS.
- THERE ARE NO FIRE HYDRANTS WITHIN THE IMMEDIATE VICINITY OF THE PROJECT.

LEGEND

- | | |
|----------------------------|-------|
| PIPE/REBAR FOUND | ○ |
| POINT | • |
| CONCRETE MONUMENT FOUND | ◻ |
| CAPPED IRON PIPE TO BE SET | ▲ |
| EX PROPERTY LINE | — |
| PROP. PROPERTY LINE | — |
| PROP. LINE ADJ. | - - - |
| UTILITY POLE | ⊥ |
| FENCE | — x — |

DELDOT RECORD PLAN NOTES:

- ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.
- SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
- ENTRANCES TO PRIVATE STREETS SERVING MULTIPLE RESIDENTIAL LOTS SHOULD BE PAVED, FROM THE EDGE OF THE TRAVEL LANE TO THE ROW LINE (AT A MINIMUM), WITH A DRIVEWAY/THROAT WIDTH OF 16 TO 24 FEET. REFER TO DELDOT DCM SECTION 3.3.3

WETLANDS STATEMENT

EASTERN SHORE SOIL SERVICES, INC. HAS CONDUCTED A FIELD REVIEW WITHIN THE BOUNDARIES OF THIS PLAN TO EVALUATE THE PRESENCE OR ABSENCE OF POTENTIAL STATE AND FEDERAL JURISDICTIONAL WETLANDS FOR THE PURPOSES OF DELAWARE WETLAND AND SUBAQUEOUS LAND REGULATIONS AND SECTION 404 OF THE CLEAN WATER ACT. EASTERN SHORE SOIL SERVICES' REVIEW WAS CONDUCTED IN GENERAL ACCORDANCE WITH THE TECHNIQUES AND CRITERIA PROVIDED IN THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL: ATLANTIC AND GULF COSTAL PLAN REGION (VERSION 2.0), DATED NOVEMBER 2010. NO WETLANDS OR WATERWAYS WERE OBSERVED WITHIN THE BOUNDARIES OF THIS PLAN. NO STATE OR FEDERAL JURISDICTIONAL APPROVAL WAS OBTAINED FOR THIS PROPERTY.

BRADLEY J. CATE, CPSSc/SC DATE

ENGINEERS CERTIFICATION

IT IS HEREBY CERTIFIED THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION, AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

DAVID HEATWOLE, P.E. (DE LICENSE NO. #17700) DATE
19 COMMERCE STREET
HARRINGTON, DE 19952

OWNER(S) CERTIFICATION

IT IS HEREBY CERTIFIED THAT I AM THE LEGAL OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT, AND DESIRE THE PLAN TO BE RECORDED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

DOLORES S. BORDERS DATE
21882 HERONS CROSSING RD.
SEAFORD, DE 19973
PHONE: (302) 841-5002

SITENETWORKS
ENGINEERING
PO BOX 2, 19 COMMERCE ST., HARRINGTON, DE 19952 Phone: (302) 841-7901
SUBDIVISION PLAN

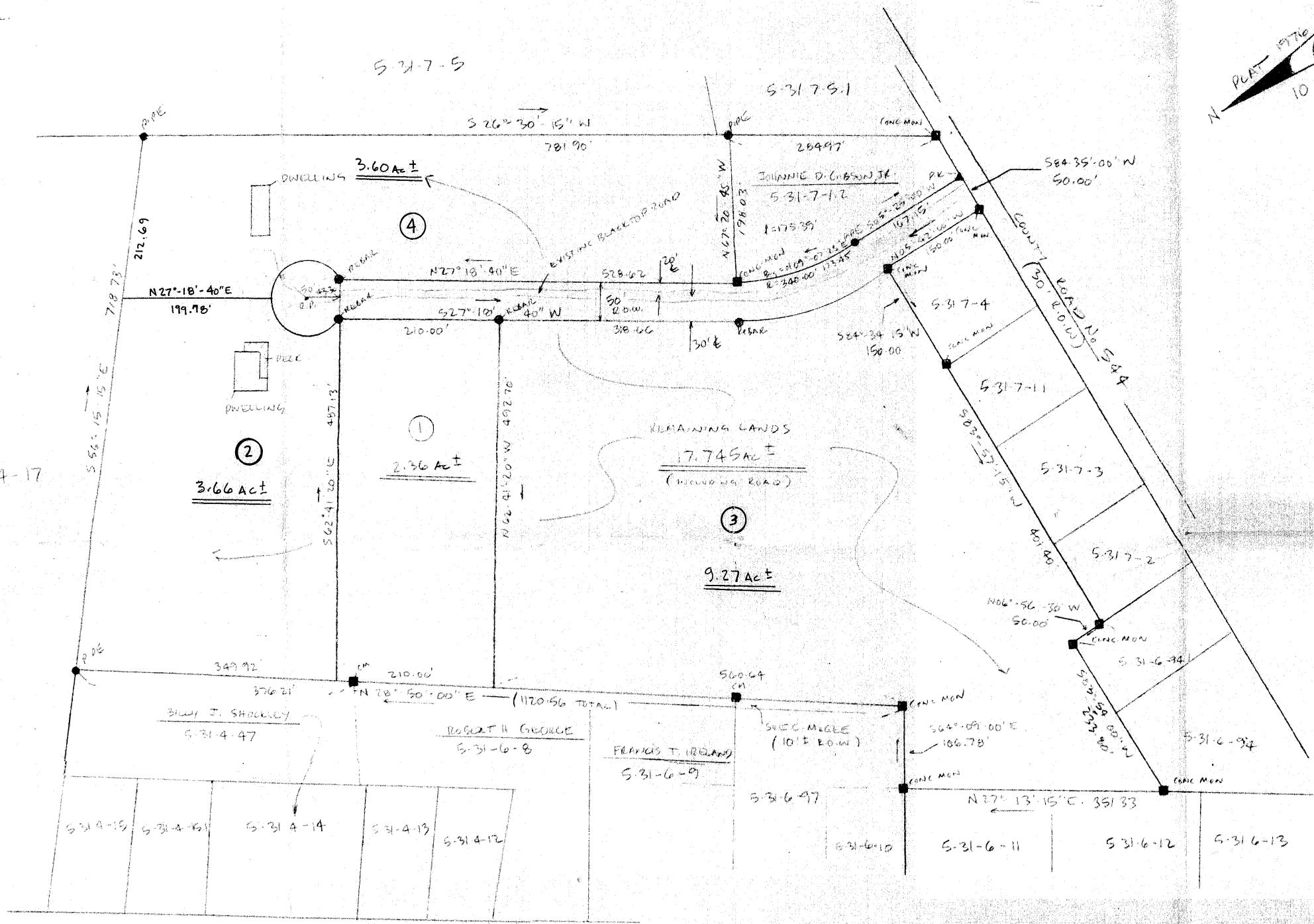
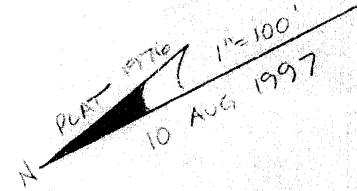
LANDS OF BORDERS SUBDIVISION
TAX PARCEL NO. 531-7-00-1.00
HERONS CROSSING DRIVE (PRIVATE)
SEAFORD HUNDRED, SUSSEX COUNTY

ISSUE / REVISION BLOCK
8/10/21 - SUSSEX COUNTY P&Z
9/14/21 - DELDOT
9/14/21 - FIRE MARSHAL
10/8/21 - SUSSEX COUNTY P&Z

SCALE	PROJECT #	DRAWN BY
1" = 60'	2140-BORD	DMH
DRAWING NUMBER		

Z:\PROJECTS\BORDER\2140-BORD-Subdiv\DWG\2140-BORD-Subdiv.dwg PLOTTED: 10/8/21 1:57 AM BY: dmh

RECORDER OF DEEDS
JOHN F. BRADY
07 FEB -5 PM 12:27
SUSSEX COUNTY
DOC. SURCHARGE PAID



APPROVED
@ P&Z Comm 5/22/97
8/12/97 SA
SUSSEX COUNTY
PLANNING & ZONING COMMISSION

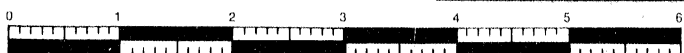
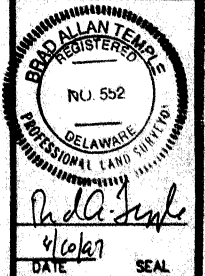
COUNTY ROAD No. 561

PLOT OF LANDS OF:
JACOB E. AND DOLORES S. BOLDERS
SITUATED IN:
SEAFORD HUNDED, SUSSEX COUNTY
STATE OF DELAWARE

DATE	8-10-97	SCALE	1"=100'
JOB NO.	S-31-7-1	DRAWN BY	BAT
FOLDER REF		DESIGNED BY	
		APPROVED BY	
DATE		REVISION	



Brad A. Temple
Professional Land Surveyor
Maryland & Delaware
3969 Five Friars Rd.
Salisbury MD. 21801
Maryland (410) 860 4805
Delaware (302) 629 9709



TAB 4

Sussex County Code Chapter 99-9C Compliance

for

Lands of Borders

Seaford Hundred
Sussex County, Delaware

Prepared By:
Siteworks Engineering, LLC
19 Commerce St.
P.O. Box 2
Harrington, DE 19952
Ph: 302-526-7022
Attn: David Heatwole, P.E.

February 2022

SUSSEX COUNTY CODE

CHAPTER 99-9C COMPLIANCE

It is the intent of this submittal to demonstrate how the proposed Lands of Borders project, meets, or exceeds, the regulatory requirements and follows the County grown objectives with regard to the Sussex County Code and Ordinances.

The project property is zoned Medium Residential (MR) and is a single lot subdivision. The existing lot is 9.2 acres, and will then become roughly two 4.64 acre parcels. The subdivision meets all requirements of the Sussex County Code.

The parcel is located off of Herons Crossing Road, a privately maintained road, and additional infrastructure is not necessary as part of this subdivision. The water and sewer service will be provided with a private well and septic respectively and will be designed and constructed in accordance with DNREC standards.

The information below is provided to address the requirements of Chapter 99-9C of the Sussex County Code:

1. Integration of the proposed subdivision into existing terrain and surrounding landscape.

The proposed development area is primarily proposed within the area previously utilized for agricultural purposes. The development is anticipated to result in minimal clearing and disturbance. The proposed grading is anticipated to maintain overall drainage patterns of the existing condition. Also, as noted previously the lot sizes are almost 5 acres so the large lot size provides a large lot size provides a natural distance buffer from surrounding properties.

2. Minimal use of wetland and flood plains.

A wetlands evaluation was performed by Eastern Shore Soil Services. After inspection of the property it was noted that there were no wetlands located on the property.

Review of the FEMA floodplain maps indicate that the entirety of the parcel is located within the limits of the areas determined to be outside the 0.2% annual chance floodplain. Therefore, no impacts to the floodplain are anticipated as a result of the proposed subdivision.

3. Preservation of natural and historical features

As noted above, there are no wetlands located on the property. We are not aware of any rare and endangered plants, animals, natural communities or historical features on the property. There was a chicken house on the property back in the 60's, but based on the aerial photos, it was removed sometime between 1968 and 1992. Therefore, there are no longer any historical features will be preserved.

4. *Preservation of open space and scenic views*

This project is again the addition of one additional lot, where each lot is still greater than 4 acres. Therefore, the open space and scenic views will be largely unaffected.

5. *Minimization of tree, vegetation and soil removal and grade changes*

As this subdivision, is only adding one additional lot. They will only need to remove the trees, vegetation and soil as necessary to construct one house and appurtenances. The grade changes will also be very minor, as necessary to ensure that stormwater runs away from the house. Erosion control will be in accordance with Sussex Conservation District (SCD) regulations to erosion and loss of soil throughout the construction process.

6. *Screening of objectionable features from neighboring properties and roadways*

We are requesting a waiver from the forested buffer requirement. There is a natural hedgerow along the back of the property which will remain in place and undisturbed. The large lot size does not change the character of the existing community and provides distance as a natural buffer. It also seems counterproductive to buffer residential area from other residential area.

7. *Provision for water supply*

There are no public utilities being installed as part of the project. Water supply will be with a private well.

8. *Provision for sewage disposal*

There will be no public sewer treatment. Treatment will be with a private septic system, which would be designed and installed per DNREC regulations. Soil evaluations have been completed and are attached. Both lots meet the requirements for a private septic system.

9. *Prevention of pollution of surface and groundwater.*

Stormwater management and erosion control measures will be installed in accordance with SCD and DNREC regulations to minimize any impact that may occur from the additional development. The best available technology methods will be used to comply with the regulations. Stormwater management will incorporate the best management practices as necessary to meet the regulations.

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 the groundwater recharge is maximized.*

Again, the best management practices and best available technology will be employed to ensure the project will meet or exceed the SCD and DNREC stormwater and erosion and sediment control regulations.

The best management practices will also be employed to minimize any potential flooding, and maximizing groundwater recharge. The project will meet or exceed the regulations required to ensure SDC stormwater approval.

11. Provision of safe vehicular and pedestrian movement within the site and to adjacent ways

The new lot has road frontage along Herons Crossing Road a private access road. This property will become part of the maintenance agreement for road. Use of Herons Crossing Road, will provide access to public roadways. The existing road has the capacity to handle the additional usage that will be caused by this project. DeIDOT has reviewed the project for conformance with entrance regulations and has provided a letter of no objection.

12. Effect on area property values

We expect that this project will have no impact on the area property values. The proposed lots are still much larger than many of the adjacent lots so it will not negatively impact those properties, and could potentially increase the value of the neighboring properties.

13. Preservation and conservation of farmland

This project will not preserve farmland. Approximately 80% of the existing 9 acre lot is farmed. The subdivision will convert the land to two approximately 4.5 acre lots. It is expected that the new houses will be built in the farmland area. It's unknown if any portion of the remaining lands will continue to be farmed.

14. Effect on schools, public buildings and community facilities

As this is only the addition of one additional lot, any impact on schools, public buildings, and community facilities would be de minimis in nature.

15. Effect on area roadways and public transportation

Again with this only being the addition of one additional lot, any impact on roadways and public transportation would be de minimis in nature. DeIDOT has already issued a Letter of No Objection and is attached in the approval section of this submission.

16. Compatibility with other area land uses

This property is completely surrounded by other residential lots. Creating an additional residential lot would be compatible and in character with the surrounding lands.

17. Effect on area waterways

We do not anticipate any impact on area waterways. As noted previously, the subdivision will comply with all stormwater and erosion and sediment control regulations so as to not create a negative impact. In fact converting the 9 acres of farmland into residential lots would actually slightly improve the water quality and reduce the amount of stormwater runoff.

January 22, 2022

Ms. Lauren DeVore, Planner III
Sussex County Planning & Zoning
2 The Circle
Georgetown, DE 19947

**RE: 2021-27 Lands of Borders – Subdivision
Waiver Request
Tax Parcel: 531-7.00-1.00**

Dear Ms. DeVore:

I am writing to request a waiver from the forested buffer requirement in §99-16.D and from the Street Design Standards in §99-18.

The major subdivision will create two (2) single-family lots from an existing 9.28 +/- acre parcel and will not change the character of the existing community.

Would you please give me a call if you have any questions or concerns, 302-841-7901.



Dave Heatwole, PE | Principal
SITWORKS ENGINEERING

Z:\PROJECTS\Borders\2140-BORD - Subdivision\Record Documents\Sussex County P&Z\220122 - Approvals and Waiver Request\Lands of Borders - Waiver Request.docx

TAB 5

National Flood Hazard Layer FIRMMette



75°38'21"W 38°41'32"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000
 Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | |
|---|--|
| <p>SPECIAL FLOOD HAZARD AREAS</p> | <ul style="list-style-type: none"> Without Base Flood Elevation (BFE)
<i>Zone A, V, A99</i> With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> Regulatory Floodway |
| <p>OTHER AREAS OF FLOOD HAZARD</p> | <ul style="list-style-type: none"> 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> Area with Flood Risk due to Levee <i>Zone D</i> |
| <p>OTHER AREAS</p> | <ul style="list-style-type: none"> NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> Effective LOMRs Area of Undetermined Flood Hazard <i>Zone D</i> |
| <p>GENERAL STRUCTURES</p> | <ul style="list-style-type: none"> Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall |
| <p>OTHER FEATURES</p> | <ul style="list-style-type: none"> 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation 17.5 Coastal Transect Coastal Transect Base Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary Coastal Transect Baseline Profile Baseline Hydrographic Feature |
| <p>MAP PANELS</p> | <ul style="list-style-type: none"> Digital Data Available No Digital Data Available Unmapped |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

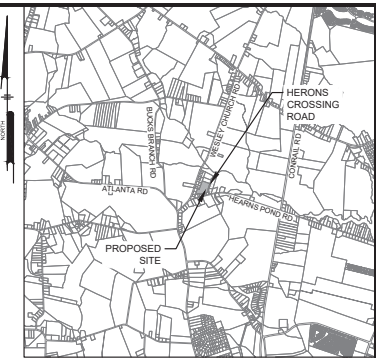
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **2/5/2022 at 2:10 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

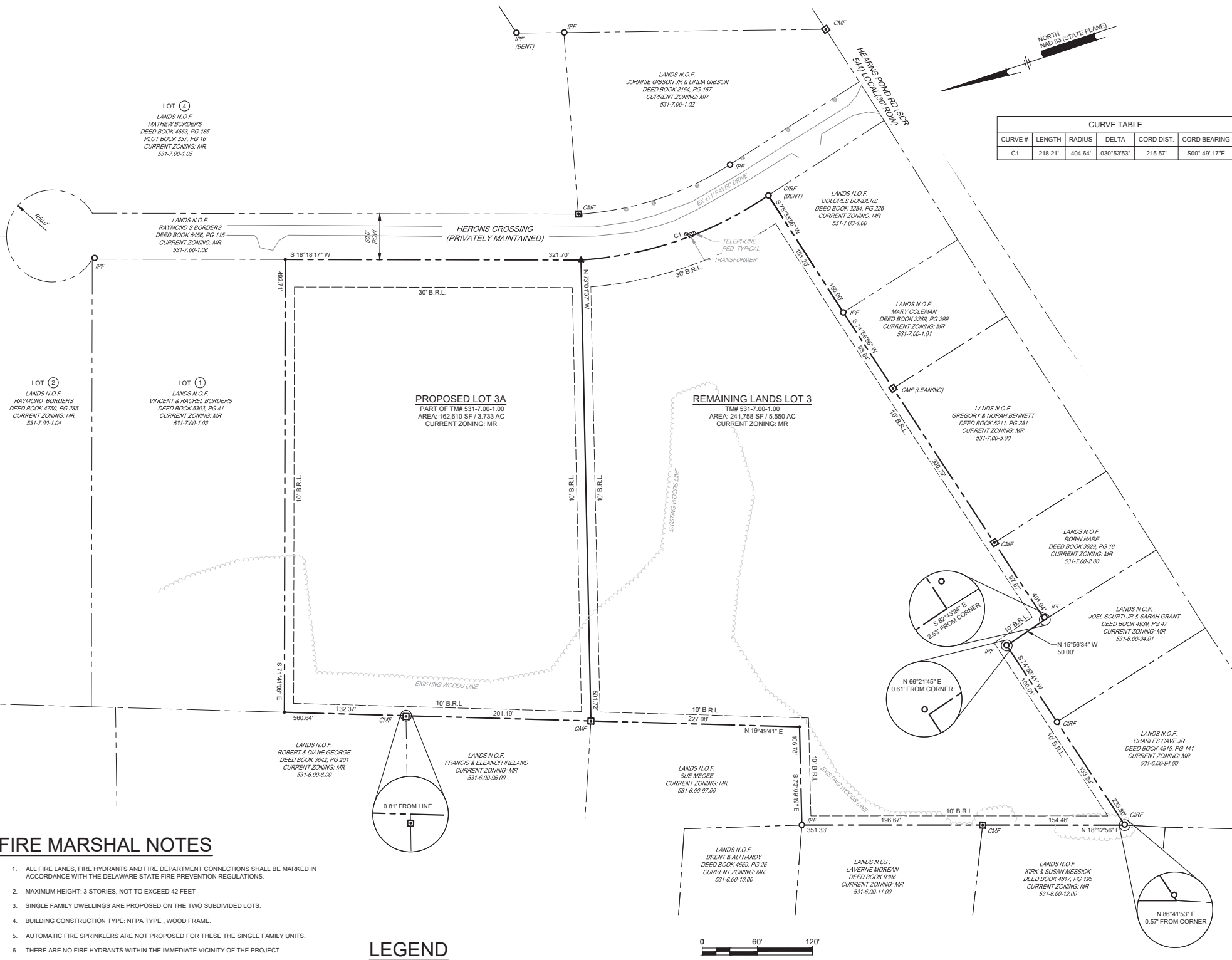
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

LANDS OF BORDERS SUBDIVISION

SUSSEX COUNTY PROJECT REFERENCE # 2021-27



LOCATION MAP
SCALE: 1" = 1 MILE



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| 14. OWNER OF RECORD | DOLORES S. BORDERS
21882 HERONS CROSSING RD
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| 16. POSTED SPEED LIMIT HEARNS POND RD | 35 MPH |
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SEAFORD, DE 19973 |

FIRE MARSHAL NOTES

- ALL FIRE LANES, FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
- MAXIMUM HEIGHT: 3 STORIES, NOT TO EXCEED 42 FEET
- SINGLE FAMILY DWELLINGS ARE PROPOSED ON THE TWO SUBDIVIDED LOTS.
- BUILDING CONSTRUCTION TYPE: NFPA TYPE, WOOD FRAME.
- AUTOMATIC FIRE SPRINKLERS ARE NOT PROPOSED FOR THESE THE SINGLE FAMILY UNITS.
- THERE ARE NO FIRE HYDRANTS WITHIN THE IMMEDIATE VICINITY OF THE PROJECT.

LEGEND

- | | |
|----------------------------|-------|
| PIPE/REBAR FOUND | ○ |
| POINT | • |
| CONCRETE MONUMENT FOUND | ◻ |
| CAPPED IRON PIPE TO BE SET | ▲ |
| EX PROPERTY LINE | — |
| PROP. PROPERTY LINE | — |
| PROP. LINE ADJACENT | - - - |
| UTILITY POLE | ⊥ |
| FENCE | — x — |

DELDOT RECORD PLAN NOTES:

- ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.
- SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
- ENTRANCES TO PRIVATE STREETS SERVING MULTIPLE RESIDENTIAL LOTS SHOULD BE PAVED, FROM THE EDGE OF THE TRAVEL LANE TO THE ROW LINE (AT A MINIMUM), WITH A DRIVEWAY THROAT WIDTH OF 16 TO 24 FEET. REFER TO DELDOT DCM SECTION 3.3.3

WETLANDS STATEMENT

EASTERN SHORE SOIL SERVICES, INC. HAS CONDUCTED A FIELD REVIEW WITHIN THE BOUNDARIES OF THIS PLAN TO EVALUATE THE PRESENCE OR ABSENCE OF POTENTIAL STATE AND FEDERAL JURISDICTIONAL WETLANDS FOR THE PURPOSES OF DELAWARE WETLAND AND SUBAQUEOUS LAND REGULATIONS AND SECTION 404 OF THE CLEAN WATER ACT. EASTERN SHORE SOIL SERVICES' REVIEW WAS CONDUCTED IN GENERAL ACCORDANCE WITH THE TECHNIQUES AND CRITERIA PROVIDED IN THE 1987 CORPUS OF ENGINEERS WETLANDS DELINEATION MANUAL AND THE REGIONAL SUPPLEMENT TO THE CORPUS OF ENGINEERS WETLANDS DELINEATION MANUAL: ATLANTIC AND GULF COASTAL PLAN REGION (VERSION 2.0), DATED NOVEMBER 2010. NO WETLANDS OR WATERWAYS WERE OBSERVED WITHIN THE BOUNDARIES OF THIS PLAN. NO STATE OR FEDERAL JURISDICTIONAL APPROVAL WAS OBTAINED FOR THIS PROPERTY.

BRADLEY J. CATE, CPSSc/SC DATE 2/2/2022

ENGINEERS CERTIFICATION

IT IS HEREBY CERTIFIED THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION, AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

DAVID HEATWOLE, P.E. (DE LICENSE NO. #17700) DATE
19 COMMERCE STREET
HARRINGTON, DE 19952

OWNER(S) CERTIFICATION

IT IS HEREBY CERTIFIED THAT I AM THE LEGAL OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT, AND DESIRE THE PLAN TO BE RECORDED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

DOLORES S. BORDERS DATE
21882 HERONS CROSSING RD.
SEAFORD, DE 19973
PHONE: (302) 841-5002

SITENETWORKS
ENGINEERING
PO BOX 2, 19 COMMERCE ST., HARRINGTON, DE 19952 Phone: (302) 841-7901
SUBDIVISION PLAN

LANDS OF BORDERS SUBDIVISION
TAX PARCEL NO. 531-7-00-1.00
HERONS CROSSING DRIVE (PRIVATE)
SEAFORD HUNDRED, SUSSEX COUNTY

ISSUE / REVISION BLOCK
8/10/21 - SUSSEX COUNTY P&Z
9/14/21 - DELDOT
9/14/21 - FIRE MARSHAL
10/8/21 - SUSSEX COUNTY P&Z
11/30/21 - DELDOT

SCALE PROJECT # DRAWN BY
1" = 60' 2140-BORD DMH

DRAWING NUMBER
1
SHEET 1 OF 1







Z:\PROJECTS\BORDER\2140-BORD-Sub\Drawings\2140-BORD-Sub\Plan.dwg PLOTTED: 1/18/2022 7:38 AM BY: Dora Haddock ROSTYLE_SussexCoBNG.dwg

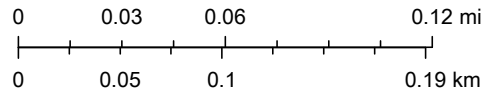
Lands of Borders - Tax Ditch Impacts



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- | | |
|---|---|
|  Approx. Watershed Boundary |  Tax Ditch Channel |
|  DE_Roadways_Main - CENTER LINE |  State and County Boundaries |
|  DE_StateParcels - Sussex | |
|  Extent of Right-of-Way | |



DNREC, Division of Watershed Stewardship, Drainage Program,
john.inkster@state.de.us, Maxar

LANDS OF BORDERS



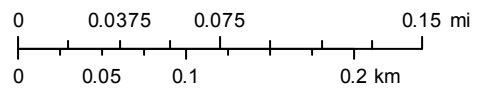
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Parcels



Groundwater Recharge Areas



GROUNDWATER RECHARGE AREAS



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

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



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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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

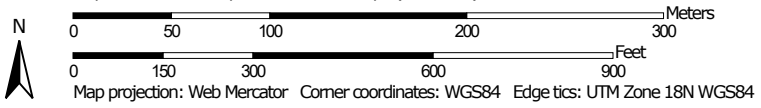
Soil Map

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



Map Scale: 1:3,840 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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	13.6	38.4%
leA	Ingleside loamy sand, 0 to 2 percent slopes	11.1	31.3%
LO	Longmarsh and Indiantown soils, frequently flooded	2.8	8.0%
RoA	Rosedale loamy sand, 0 to 2 percent slopes	7.6	21.5%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	0.3	0.9%
Totals for Area of Interest		35.4	100.0%

Map Unit Descriptions

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

FadA—Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2thvq

Elevation: 0 to 40 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

Fallsington, undrained, and similar soils: 48 percent

Fallsington, drained, and similar soils: 27 percent

Minor components: 25 percent

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

Description of Fallsington, Undrained

Setting

Landform: Flats, depressions, drainageways, swales

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Talf, dip

Down-slope shape: Linear, concave

Across-slope shape: Linear, concave

Parent material: Loamy fluviomarine deposits

Typical profile

Oe - 0 to 2 inches: mucky peat

A - 2 to 10 inches: sandy loam

Btg - 10 to 32 inches: sandy clay loam

BCg - 32 to 39 inches: loamy sand

Cg1 - 39 to 46 inches: sandy clay loam

Cg2 - 46 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

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: None

Frequency of ponding: Occasional

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.3 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 8.8 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 Fallsington, Drained

Setting

Landform: Depressions, swales, flats
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Loamy fluviomarine deposits

Typical profile

Ap - 0 to 10 inches: sandy loam
Btg - 10 to 32 inches: sandy clay loam
BCg - 32 to 39 inches: loamy sand
Cg1 - 39 to 46 inches: sandy clay loam
Cg2 - 46 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
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 10 to 20 inches
Frequency of flooding: None
Frequency of ponding: Rare
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.3 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Woodstown

Percent of map unit: 9 percent
Landform: Broad interstream divides, fluviomarine terraces, flats
Landform position (three-dimensional): Tread, talf, rise
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Hammonton

Percent of map unit: 8 percent
Landform: Drainageways, flats
Landform position (three-dimensional): Dip, rise
Down-slope shape: Concave, linear
Across-slope shape: Linear
Hydric soil rating: No

Othello

Percent of map unit: 8 percent
Landform: Depressions, swales, drainageways, flats
Landform position (two-dimensional): Footslope, toeslope

Custom Soil Resource Report

Landform position (three-dimensional): Dip, tal
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

1eA—Ingleside loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qthb
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: All areas are prime farmland

Map Unit Composition

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

Description of Ingleside

Setting

Landform: Flats, depressions, fluvio-marine terraces
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave

Typical profile

Ap - 0 to 10 inches: loamy sand
E - 10 to 15 inches: sandy loam
Bt - 15 to 33 inches: sandy loam
BC - 33 to 43 inches: sandy loam
C1 - 43 to 56 inches: loamy sand
2C2 - 56 to 80 inches: silt loam

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 low to high
(0.06 to 5.95 in/hr)
Depth to water table: About 40 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 1

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Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Evesboro

Percent of map unit: 5 percent
Landform: Dunes, knolls, flats
Landform position (three-dimensional): Rise
Hydric soil rating: No

Cedartown

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

Woodstown

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

Hammonton

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

Downer

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

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

Custom Soil Resource Report

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 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

Custom Soil Resource Report

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

RoA—Rosedale loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qtjx
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: Prime farmland if irrigated

Map Unit Composition

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

Description of Rosedale

Setting

Landform: Flats
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits over fluviomarine deposits

Typical profile

A - 0 to 9 inches: loamy sand
E - 9 to 25 inches: loamy sand
Bt - 25 to 38 inches: sandy loam
C - 38 to 68 inches: loamy sand
2Cg - 68 to 80 inches: sandy clay loam

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
(0.20 to 5.95 in/hr)
Depth to water table: About 40 to 72 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

Evesboro

Percent of map unit: 10 percent
Landform: Flats
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Hambrook

Percent of map unit: 5 percent
Landform: Fluvio-marine terraces, flats, depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
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

Klej

Percent of map unit: 5 percent
Landform: Flats, depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

WddA—Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2thvr
Elevation: 0 to 110 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: All areas are prime farmland

Map Unit Composition

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

Description of Woodstown

Setting

Landform: Fluvio-marine terraces, depressions, broad interstream divides, flats
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Loamy fluvio-marine deposits

Typical profile

Ap - 0 to 7 inches: sandy loam
E - 7 to 11 inches: sandy loam
Bt - 11 to 29 inches: sandy loam
BCg - 29 to 45 inches: fine sandy loam
Cg - 45 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
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 20 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Fallsington

Percent of map unit: 6 percent
Landform: Drainageways, depressions, swales, flats
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Hammonton

Percent of map unit: 6 percent
Landform: Flats, depressions, drainageways, broad interstream divides
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Mattapex

Percent of map unit: 4 percent
Landform: Flats, depressions, swales, broad interstream divides
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Hambrook

Percent of map unit: 4 percent
Landform: Fluvio-marine terraces, flats, depressions
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities 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 property or quality.

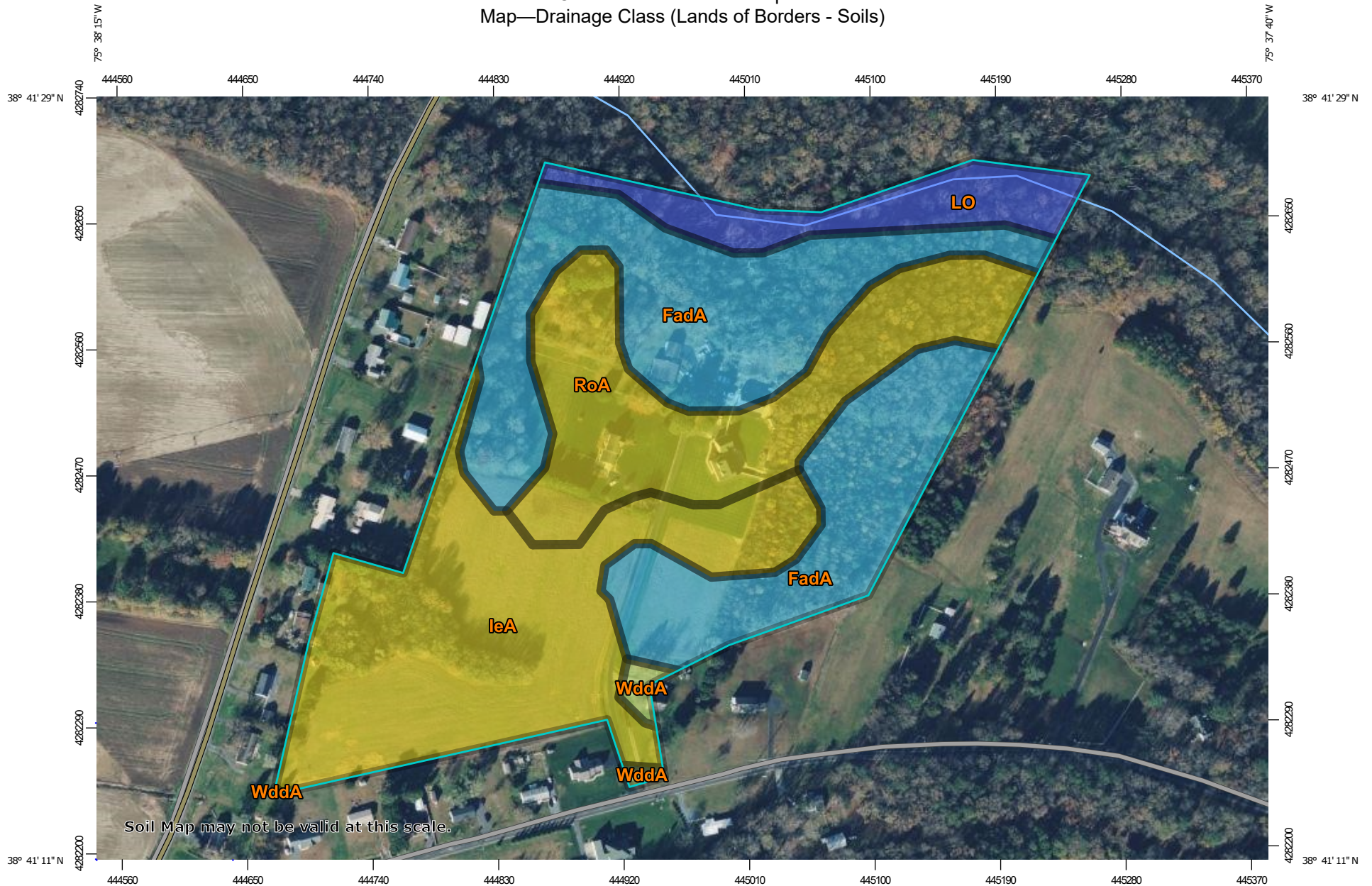
Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

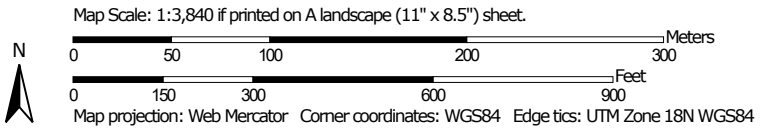
Drainage Class (Lands of Borders - Soils)

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Custom Soil Resource Report
Map—Drainage Class (Lands of Borders - Soils)




Soil Map may not be valid at this scale.




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Excessively drained
-  Somewhat excessively drained
-  Well drained
-  Moderately well drained
-  Somewhat poorly drained
-  Poorly drained
-  Very poorly drained
-  Subaqueous
-  Not rated or not available


Soil Rating Lines

-  Excessively drained
-  Somewhat excessively drained
-  Well drained
-  Moderately well drained
-  Somewhat poorly drained
-  Poorly drained
-  Very poorly drained
-  Subaqueous
-  Not rated or not available





Soil Rating Points

-  Excessively drained
-  Somewhat excessively drained
-  Well drained
-  Moderately well drained
-  Somewhat poorly drained
-  Poorly drained
-  Very poorly drained
-  Subaqueous
-  Not rated or not available


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.

Table—Drainage Class (Lands of Borders - Soils)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	Poorly drained	13.6	38.4%
leA	Ingleside loamy sand, 0 to 2 percent slopes	Well drained	11.1	31.3%
LO	Longmarsh and Indiantown soils, frequently flooded	Very poorly drained	2.8	8.0%
RoA	Rosedale loamy sand, 0 to 2 percent slopes	Well drained	7.6	21.5%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	Moderately well drained	0.3	0.9%
Totals for Area of Interest			35.4	100.0%

Rating Options—Drainage Class (Lands of Borders - Soils)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Hydrologic Soil Group (Lands of Borders - Soils)

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

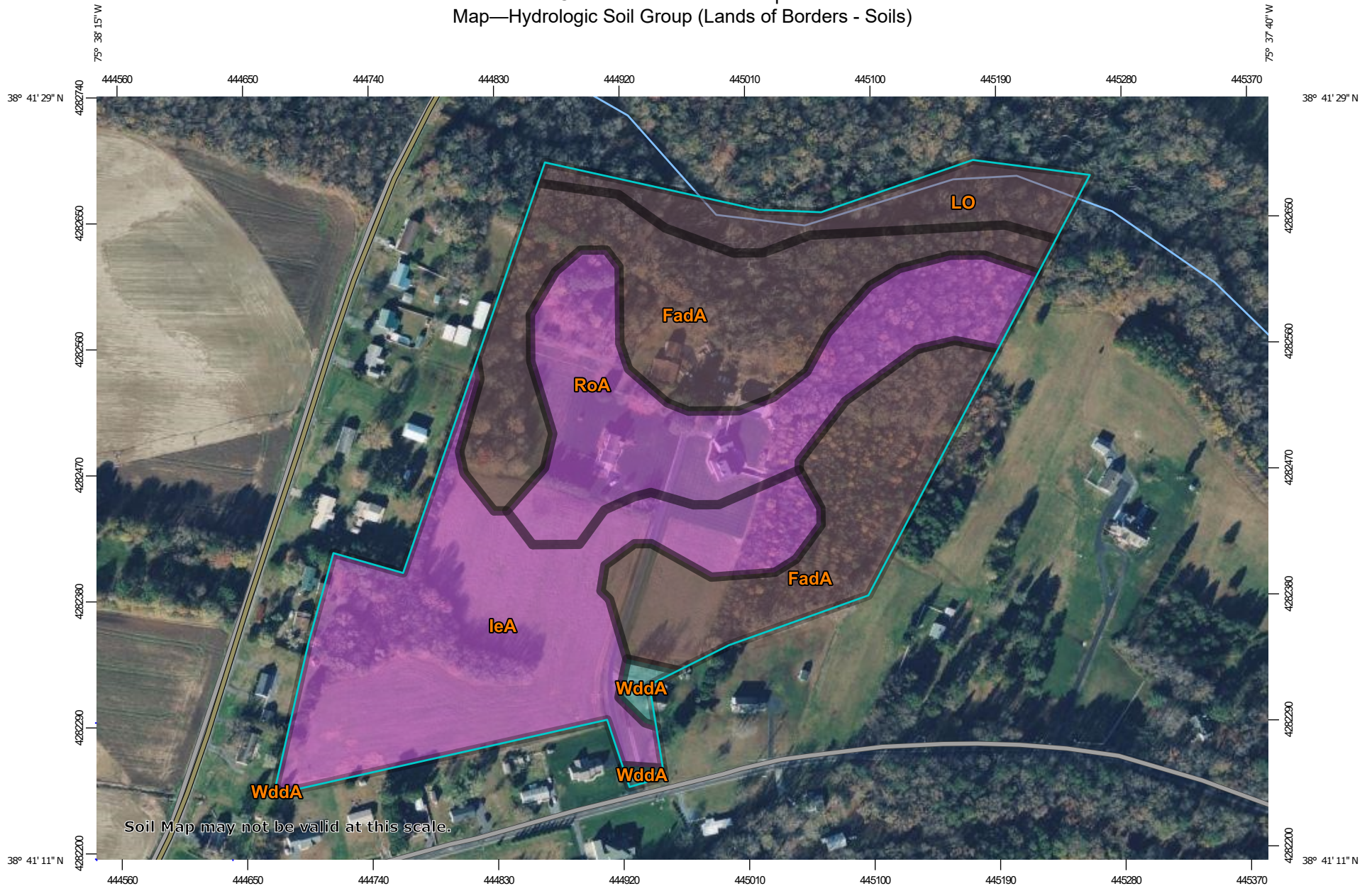
Custom Soil Resource Report

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

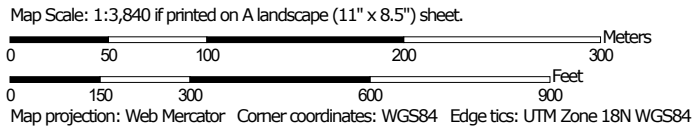
Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

































Custom Soil Resource Report
 Map—Hydrologic Soil Group (Lands of Borders - Soils)



Soil Map may not be valid at this scale.



MAP LEGEND

- Area of Interest (AOI)**
 -  Area of Interest (AOI)
- Soils**
 - Soil Rating Polygons**
 -  A
 -  A/D
 -  B
 -  B/D
 -  C
 -  C/D
 -  D
 -  Not rated or not available
 - Soil Rating Lines**
 -  A
 -  A/D
 -  B
 -  B/D
 -  C
 -  C/D
 -  D
 -  Not rated or not available
 - Soil Rating Points**
 -  A
 -  A/D
 -  B
 -  B/D
- Soils**
 -  C
 -  C/D
 -  D
 -  Not rated or not available
- 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.

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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

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.

Table—Hydrologic Soil Group (Lands of Borders - Soils)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	B/D	13.6	38.4%
IeA	Ingleside loamy sand, 0 to 2 percent slopes	A	11.1	31.3%
LO	Longmarsh and Indiantown soils, frequently flooded	B/D	2.8	8.0%
RoA	Rosedale loamy sand, 0 to 2 percent slopes	A	7.6	21.5%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	C	0.3	0.9%
Totals for Area of Interest			35.4	100.0%

Rating Options—Hydrologic Soil Group (Lands of Borders - Soils)

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.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
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- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- 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>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

TAB 6



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. Box 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

January 20, 2022

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning Commission
Sussex County Administration Building
P.O. Box 417
Georgetown, Delaware 19947

**SUBJECT: Minor Subdivision - Letter of No Objection to Recordation
Lands of Borders Subdivision
Tax Parcel # 531-7.00-1.00
SCR00544-HEARNS MILL ROAD
Seaford Hundred, Sussex County**

Dear Mr. Whitehouse:

The Department of Transportation has reviewed the Minor Subdivision Plan dated August 10, 2021 (last revised November 30, 2021), for the above referenced site, and has no objection to its recordation as shown on the enclosed drawing. This "No Objection to Recordation" approval shall be valid for a period of **five (5) years**. If the Minor Subdivision Plan is not recorded and/or an entrance permit is not issued for the lot(s) prior to the expiration of the "No Objection to Recordation", then the plan must be updated to meet current requirements and resubmitted for review and approval.

Entrances(s) must be installed prior to the sale of the lot(s). All entrances shall conform to DelDOT's [Development Coordination Manual](#) and shall be subject to its approval. **This letter does not authorize the commencement of entrance construction.**

This "No Objection to Recordation" letter is not a DelDOT endorsement of the project discussed above. Rather, it is a recitation of the transportation improvements, which the applicant may be required to make as a pre-condition to recordation steps and deed restrictions as required by the respective county/municipality in which the project is located. If transportation investments are necessary, they are based on an analysis of the proposed project, its location, and its estimated impact on traffic movements and densities. The required improvements conform to DelDOT's published rules, regulations and standards. Ultimate responsibility for the approval of any project rests with the local government in which the land use decisions are authorized. There may be other

Lands of Borders Subdivision
Mr. Jamie Whitehouse
Page 2
January 20, 2022

reasons (environmental, historic, neighborhood composition, etc.) which compel that jurisdiction to modify or reject this proposed plan even though DeIDOT has established that these enumerated transportation improvements are acceptable.

The owner shall be responsible to submit a copy of the **recorded Minor Subdivision Plan** showing all appropriate signatures, seals, plot book and page number to the South District Public Works office (302) 853-1341 in order to obtain the entrance permit(s) for the proposed minor subdivision.

Sincerely,



R. Stephen McCabe
Sussex County Review Coordinator
Development Coordination

cc: Dave Heatwole, SiteWorks Engineering, LLC.
Sussex County Planning & Zoning
Jessica L. Watson, Sussex Conservation District
Matt Schlitter, South District Public Works Engineer
James Argo, South District Project Reviewer
James Smith, South District Entrance Permit Supervisor
Shannon Anderson, South District Public Work Admin Specialist
Wendy L. Polasko, P.E., Subdivision Engineer
John Andrescavage, Sussex County Reviewer

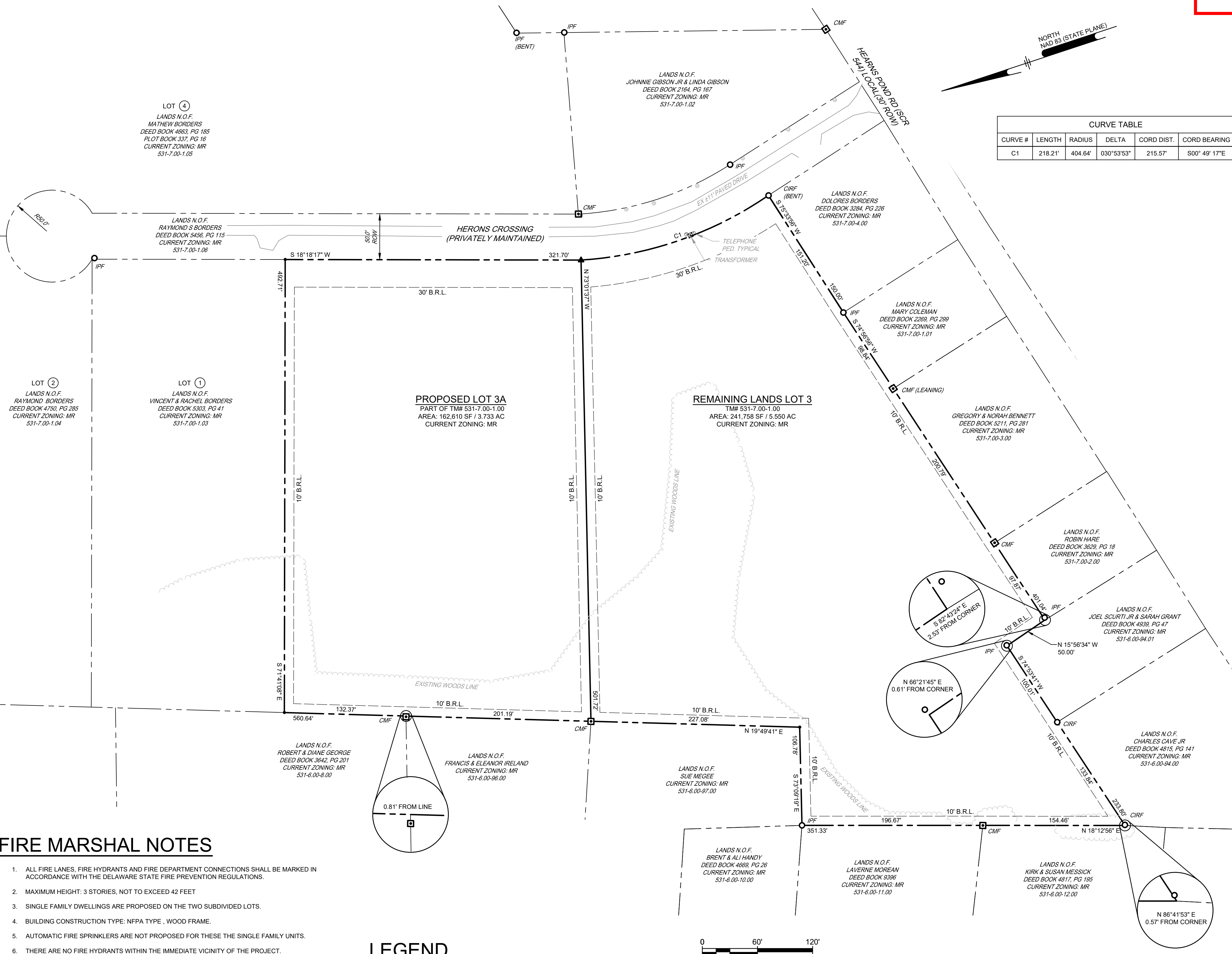
LANDS OF BORDERS SUBDIVISION

SUSSEX COUNTY PROJECT REFERENCE # 2021-27

DeIDOT
NO OBJECTION TO RECORDATION
January 20, 2022
DATE



LOCATION MAP
SCALE: 1" = 1 MILE



CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	CORD DIST. / CORD BEARING
C1	218.21'	404.64'	030°53'33"	215.57' / S00°49'17"E

NOTES

- THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE LOT THREE AS SHOWN ON PLOT BOOK 111, PAGE 112 IN THE SUSSEX COUNTY RECORDER OF DEEDS CREATING ONE ADDITIONAL LOT FRONTING HERONS CROSSING ROAD, A PRIVATELY OWNED AND MAINTAINED STREET.
- PROPERTY REFERENCES: PLOT BOOK 111, PAGE 112, AND DEED BOOK 807 PAGE 335
- SURVEY CLASS: SUBURBAN
- HORIZONTAL DATUM: NAD83 - DELAWARE STATE PLANE
- THIS BOUNDARY SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT AND IS SUBJECT TO ANY ENCUMBRANCES, RESTRICTIONS, EASEMENTS AND/OR RIGHTS OR WAY THAT MIGHT BE REVEALED BY A THOROUGH TITLE SEARCH.
- ACCESS TO THE PROPOSED LOT 3A AND THE REMAINING LOT 3 LANDS SHALL BE FROM HERONS CROSSING, A PRIVATELY MAINTAINED 50' WIDE ROW.
- MAINTENANCE OF HERONS CROSSING SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS OF THIS SUBDIVISION, LOTS 1, 2, 3, 3A, AND 4.
- THE PROPERTY IS LOCATED IN THE VICINITY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES ON WHICH NORMAL AGRICULTURAL USES AND ACTIVITIES HAVE BEEN APPROVED. 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 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.
- IF EXISTING ENTRANCES ARE ALTERED, THEY SHALL CONFORM TO DELDOT'S DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL. NO CONSTRUCTION SHALL OCCUR IN THE RIGHT-OF-WAY WITHOUT A DELDOT PERMIT.
- THE SITE IS NOT IMPACTED BY ANY WELL HEAD PROTECTION AREA AS MAPPED BY THE DNREC ENVIRONMENTAL NAVIGATOR.
- A PORTION OF THE SITE IS LOCATED IN AN EXCELLENT RECHARGE AREA PER THE DNREC ENVIRONMENTAL NAVIGATOR.

SITE DATA

- | | |
|--|---|
| 1. TAX PARCEL NUMBER | 531-7-00-1.00 |
| 2. EXISTING / PROPOSED ZONING | MEDIUM RESIDENTIAL (MR) |
| 3. EXISTING LOTS | 4 |
| 4. PROPOSED LOTS | 1 (5 TOTAL) |
| 5. BUILDING SETBACKS | FRONT YARD: 40-FOET
SIDE YARD: 10-FOET
REAR YARD: 10-FOET |
| 6. LOT AREA PRIOR TO SUBDIVISION | 9.283 ACRES (GROSS PROPERTY AREA) |
| 7. AREA WITHIN PROPOSED STREETS | 0.000 ACRES |
| 8. PROPOSED DENSITY | 0.215 LOTS / ACRES OR 4.642 ACRES / LOT |
| 9. WETLAND AREA | 0.000 ACRES |
| 10. WATER & SEWER SERVICE | PRIVATE - ON-SITE WELL AND SEPTIC |
| 11. FLOODPLAIN - THIS SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA MAP PANEL NUMBERS 10005C0250L, EFFECTIVE DATE: JUNE 20, 2018, AND 10005C0245L, EFFECTIVE DATE: JUNE 20, 2018. | |
| 12. PRESENT USE | AGRICULTURAL |
| 13. PROPOSED USE | AGRICULTURAL AND RESIDENTIAL |
| 14. OWNER OF RECORD | DOLORES S. BORDERS
21882 HERONS CROSSING RD
SEAFORD, DE 19873
PHONE (302) 841-5002 |
| 15. PROXIMITY TO IDENTIFIED T.I.D. | NOT WITHIN AN IDENTIFIED T.I.D. |
| 16. POSTED SPEED LIMIT HEARNS POND RD | 35 MPH |
| 17. PROPERTY ADDRESS: | 21800 HERONS CROSSING RD
SEAFORD, DE 19873 |

FIRE MARSHAL NOTES

- ALL FIRE LANES, FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
- MAXIMUM HEIGHT: 3 STORIES, NOT TO EXCEED 42 FEET
- SINGLE FAMILY DWELLINGS ARE PROPOSED ON THE TWO SUBDIVIDED LOTS.
- BUILDING CONSTRUCTION TYPE: NFPA TYPE, WOOD FRAME.
- AUTOMATIC FIRE SPRINKLERS ARE NOT PROPOSED FOR THESE THE SINGLE FAMILY UNITS.
- THERE ARE NO FIRE HYDRANTS WITHIN THE IMMEDIATE VICINITY OF THE PROJECT.

DELDOT RECORD PLAN NOTES:

- ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.
- SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO AN ADJACENT PROPERTY OWNERS' LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
- ENTRANCES TO PRIVATE STREETS SERVING MULTIPLE RESIDENTIAL LOTS SHOULD BE PAVED, FROM THE EDGE OF THE TRAVEL LANE TO THE ROW LINE (AT A MINIMUM), WITH A DRIVEWAY THROAT WIDTH OF 16 TO 24 FEET. REFER TO DELDOT DCM SECTION 3.3.3

LEGEND

- | | |
|----------------------------|-----|
| PIPE/REBAR FOUND | ○ |
| POINT | • |
| CONCRETE MONUMENT FOUND | ◻ |
| CAPPED IRON PIPE TO BE SET | ▲ |
| EX PROPERTY LINE | --- |
| PROP. PROPERTY LINE | --- |
| PROP. LINE ADJACENT | --- |
| UTILITY POLE | x |
| FENCE | --- |

WETLANDS STATEMENT

EASTERN SHORE SOIL SERVICES, INC. HAS CONDUCTED A FIELD REVIEW WITHIN THE BOUNDARIES OF THIS PLAN TO EVALUATE THE PRESENCE OR ABSENCE OF POTENTIAL STATE AND FEDERAL JURISDICTIONAL WETLANDS FOR THE PURPOSES OF DELAWARE WETLAND AND SUBAQUEOUS LAND REGULATIONS AND SECTION 404 OF THE CLEAN WATER ACT. EASTERN SHORE SOIL SERVICES' REVIEW WAS CONDUCTED IN GENERAL ACCORDANCE WITH THE TECHNIQUES AND CRITERIA PROVIDED IN THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL: ATLANTIC AND GULF COSTAL PLAN REGION (VERSION 2.0), DATED NOVEMBER 2010. NO WETLANDS OR WATERWAYS WERE OBSERVED WITHIN THE BOUNDARIES OF THIS PLAN. NO STATE OR FEDERAL JURISDICTIONAL APPROVAL WAS OBTAINED FOR THIS PROPERTY.

BRADLEY J. CATE, CPSSc/SC DATE

ENGINEERS CERTIFICATION

IT IS HEREBY CERTIFIED THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION, AND TO MY BEST KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

David Heathcote
DAVID HEATHCOTE, P.E. (DE LICENSE NO. #17760) DATE 1/10/22
19 COMMERCE STREET
HARRINGTON, DE 19952

OWNER(S) CERTIFICATION

IT IS HEREBY CERTIFIED THAT I AM THE LEGAL OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT, AND DESIRE THE PLAN TO BE RECORDED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

Dolores S. Borders 1-10-2022 DATE
DOLORES S. BORDERS
21882 HERONS CROSSING RD
SEAFORD, DE 19873
PHONE: (302) 841-5002

SITENETWORKS
ENGINEERING
PO BOX 2, 19 COMMERCE ST., HARRINGTON, DE 19952 Phone: (302) 841-7901
SUBDIVISION PLAN

LANDS OF BORDERS SUBDIVISION
TAX PARCEL NO. 531-7-00-1.00
HERONS CROSSING DRIVE (PRIVATE)
SEAFORD HUNDRED, SUSSEX COUNTY

ISSUE / REVISION BLOCK
8/10/21 - SUSSEX COUNTY P&Z
9/14/21 - DELDOT
9/14/21 - FIRE MARSHAL
10/8/21 - SUSSEX COUNTY P&Z
11/30/21 - DELDOT

SCALE PROJECT # DRAWN BY
1" = 60' 2140-BORD DMH

DRAWING NUMBER
1
SHEET 1 OF 1

Z:\PROJECTS\2021\2021-27\2021-27.dwg PLOTTED: 1/10/2022 3:39 PM BY: DWH PLOTSTYLE: S:\shw\sw.dwt



January 21, 2022

Mr. Dave Heatwole
Siteworks Engineering
P.O. Box 2
19 Commerce Street
Harrington, DE 19952

**RE: Lands of Borders Subdivision
TM# 531-7.00-1.00 Lots 3 and 3A**

Dear Mr. Heatwole,

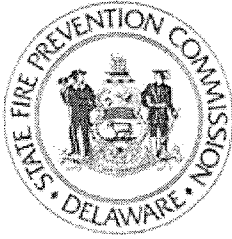
The Sussex Conservation District has reviewed the plan for the above referenced site. The District concurs with the information provided and has no objection with recordation of the two proposed lots.

A Residential Standard Plan will be needed for each lot prior to home construction. Please contact the District if you have any questions or concerns at 302-856-2105.

Sincerely,

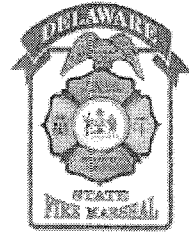
Jessica L. Watson

Jessica L. Watson
Program Manager



**OFFICE OF THE STATE FIRE MARSHAL
Technical Services**

22705 Park Avenue
Georgetown, DE 19947



SFMO PERMIT

Plan Review Number: 2021-04-208198-MIS-01

Tax Parcel Number: 531-7.00-1.00

Status: Approved as Submitted

Date: 09/16/2021

Project

Borders Subdivision

21800 Herons Crossing Road

Dolores Borders Property

Seaford DE 19973

Scope of Project

Number of Stories:

Square Footage:

Construction Class:

Fire District: 87 - Seaford Volunteer Fire Dept Inc

Occupant Load Inside:

Occupancy Code: 9601

Applicant

Dave Heatwole

34 John Andrews Drive

Harrington, DE 19952

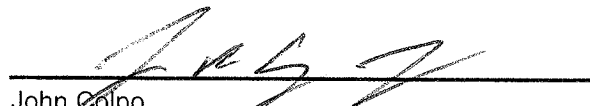
This office has reviewed the plans and specifications of the above described project for compliance with the Delaware State Fire Prevention Regulations, in effect as of the date of this review.

A Review Status of "Approved as Submitted" or "Not Approved as Submitted" must comply with the provisions of the attached Plan Review Comments.

Any Conditional Approval does not relieve the Applicant, Owner, Engineer, Contractor, nor their representatives from their responsibility to comply with the plan review comments and the applicable provisions of the Delaware State Fire Prevention Regulations in the construction, installation and/or completion of the project as reviewed by this Agency.

A final inspection is required.

This Plan Review Project was prepared by:


John Colpo
Fire Protection Specialist

FIRE PROTECTION PLAN REVIEW COMMENTS

Plan Review Number: 2021-04-208198-MIS-01

Tax Parcel Number: 531-7.00-1.00

Status: Approved as Submitted

Date: 09/16/2021

PROJECT COMMENTS

- 1002 A** This project has been reviewed under the provisions of the Delaware State Fire Prevention Regulations (DSFPR) UPDATED March 11, 2016. The current Delaware State Fire Prevention Regulations are available on our website at www.statefiremarshal.delaware.gov. These plans were not reviewed for compliance with the Americans with Disabilities Act (ADA). These plans were not reviewed for compliance with any Local, Municipal, nor County Building Codes.
- 1010 A** The following water for fire protection requirements apply: **NONE. On-Site Wells Proposed.** this site meets Water Flow Table 1. therefore the provisions of NFPA 1142 shall apply to this site (DSFPR Regulation 702, Chapter 6, Section 3). Since wells are proposed for this site, no additional requirements will be made by this Agency for water for fire protection.
- 1180 A** This report reflects site review only. It is the responsibility of the applicant and owner to forward copies of this review to any other agency as required by those agencies.
- 1501 A** If there are any questions about the above referenced comments please feel free to contact the Fire Protection Specialist who reviewed this project. Please have the plan review number available when calling about a specific project. When changes or revisions to the plans occur, plans are required to be submitted, reviewed, and approved.

Reference #:

565845

**SITE EVALUATION
Approval Page**

The soils on this site are approved when the following is completed in full and signed by the approving authority. Isolation distance requirements, limited area of suitable soils, placement of fill, removal of soil, or compaction of the evaluated area may preclude construction permit approval or modify the type of system that may be permitted. An approved report must accompany any permit application. This is not a construction permit.

Owner's Name and Address: Jacob E. & Delores S. Borders
21882 Herons Crossing
Seaford, DE 19973

Tax Map #: 5-31-7.00-1.01 P.O.
Lot #: Proposed Parcel 3A

**RECEIVED
08/12/2021
GROUNDWATER**

Limitations of Soil Investigation for System Design

This soil investigation was conducted for a residential on-site system of up to 600 GPD capacity.

For applications of this report to designs of greater capacity or alternative uses, contact the site evaluator or the Department to determine if additional field investigations are necessary.

Initial Disposal System:

Capping-fill gravity-fed seepage bed or trench disposal system. Experience has shown that seepage trenches can have greater functional longevity under a variety of soil and site conditions. While regulation allows the use of seepage bed designs, trenches are nevertheless recommended if space permits. Trench installations are limited to slopes of 15% or less (unless designed by a professional engineer) and bed installations are limited to slopes of 2% or less. The designer should visit the site to verify conditions prior to design. See exhibits M and N in the 1985 regulations (amended 1/11/14).

Location of Initial Disposal System:

In the immediate vicinity of profile(s) 1 & 2 (see plot).

Depth to Limiting Zone:

48"

Replacement Disposal System:

Same as above if space permits. Otherwise, the replacement system may be a sand-lined upgrade.

Location of Replacement Disposal System:

In the immediate vicinity of profile(s) referred to above.

Depth to Limiting Zone:

Same as above.

Design Considerations and Comments or Alternatives to the Initial Disposal System:

*Changes made to property lines or configuration from those included in the attached site evaluation report may negate this approval. A new plot drawing showing the locations of the soil borings in reference to changed property lines, fixed points of reference, etc. may be required in order for the site evaluation to be re-approved.

*Maintain all isolation distances specified in Exhibit "C" in the 1985 regulations (amended 1/11/14). The designated suitable soil area(s) appearing on the plot drawing may, in some cases, be negated or reduced due to required isolation distances.

Soils in the vicinity of SB #3 are suitable for a full-depth LPP disposal system with a limiting zone of 44" and an estimated percolation rate of 30MPI.

Instructions to Property Owner

- Contact a Licensed Class B System Designer.
- A permeability rate of 30 minutes per inch has been estimated for the soils on this site. These estimated rates are used to determine the required size of the disposal area. They are based on soil texture and are derived from tables developed by the DNREC. You may elect to use the estimated rate to size the disposal system or have the appropriate tests conducted. Contact the Site Evaluator at (302) 856-1853 or the DNREC at (302) 856-4561 in Sussex County, and (302) 739-9947 in Kent and New Castle Counties for testing information.
- Read the attached site evaluation report for additional information.
- Identify where the drainfield will be placed on the site and protect it from any vehicle overtravel or stockpiling of any construction materials. It is your responsibility to prevent soil compaction of the drainfield area!

**PAID
\$ 75.00 08/12/2021**

This report has been prepared by: Bradley J. Cate 8/12/2021

**Bradley J. Cate
Eastern Shore Soil Services**

License #: 2052

Field Checked _____

For Office Use Only

DNREC APPROVED

8/13/21

8/13/26

DNREC Reviewing Staff

Approval Date

Expiration Date

Disclaimer: Approval of a site evaluation indicates only that the site evaluation was conducted in compliance with the regulations. It is not an indication of the quality or correctness of the site evaluation.

**IF THERE ARE QUESTIONS
REGARDING THIS REPORT
CONTACT CLASS D LICENSEE**

**THE CLASS D LICENSEE
IS RESPONSIBLE FOR
ERRORS/OMISSIONS**

Site Evaluation Report

Eastern Shore Soil Services
P.O. Box 411, Savanna, IL 61074 (815) 273-3550
P.O. Box 411, Georgetown, DE 19947 (302) 856-1853
esss@grics.net www.easternshoresoil.com

12-Aug-21

File #: 5294

Owner's Name and Address: Jacob E. & Delores S. Borders
21882 Herons Crossing
Seaford, DE 19973

Telephone #: () - 0

Tax Map and Parcel #: 5-31-7.00-1.01 P.O. **County:** Sussex

Property Location: NW/S Herons Crossing Rd., ~365' N of CR 544

Name of Development: N/A

Lot # Proposed Parcel 3A **In Tax Ditch District?:** Yes

Central Sewer Available: No **Chesapeake/Inland Bays PSN3 Area?:** No

Central Water Available: No

Date of Investigation: 3/19/21

Evaluated by Test Pits: No **Evaluated by Soil Borings:** Yes

<u>Profile #:</u>	<u>Depth to Limiting Zone:</u>	<u>Limiting Zone Inferred From:</u>	<u>Subgroup Taxon Classification:</u>
1	49"	redox accumulations	Typic Hapludult
2	48"	redoximorphic features	Typic Hapludult
3	44"	redox accumulations	Humic Hapludult

Summary of Evaluation:

This site occupies a nearly level cultivated portion of a talf. Differences in depth to redoximorphic features were related to minor differences in topographic elevation. Free water observations should be considered qualitatively due to an insufficient equilibration period. Regional wet season hydrology was at or above normal at the time of the site visit.

Evaluated By: Bradley J. Cate
DE License #: 2052


Site Evaluator's Signature

Note:
Information contained in this site evaluation report and shown on the accompanying plot drawing reflects current regulatory policies and procedures at the time the evaluation was conducted. Changes made to the property and to adjacent properties after the evaluation was conducted or changes in regulatory policy may preclude or modify the type or location of the recommended on-site sewage system regardless of site evaluation approval. Data contained in this report may include information obtained from property owners, their agents, residents, adjacent residents, and departmental permits, when readily available. While this information is believed to be accurate it does not guarantee a septic permit and the attached plot should not be construed as a survey. All information should be verified by interested parties prior to the transfer of the property as well as prior to design and installation of the septic system. Interpretations made in this evaluation are intended for siting and design of a septic system only and are not suitable for other uses. Unless approved by the regulatory agency(ies) this report represents only a technical opinion rendered and does not constitute an approval for siting or design of any septic system on this site.

SOIL PROFILE NOTES

Eastern Shore Soil Services

Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: esss@grics.net



Profile #: 1
 Date of Test: 3/19/21 Soil Boring or Test Pit (1)
 Property Owner: Borders
 Property Location: Parcel 3A Herons Crossing Rd
 Site Evaluator: Bradley J. Cate, CPSS/SC License No.: 2052

Slope: See Top Relief: _____
 Estimated Permeability: mod Rapid
 Depth to Limiting Zone: 49" to relax accumulations
 Soil Series Identified: Typic Hapludalt

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
<u>Ap</u>	<u>0 to 8</u>	<u>10YR 3/4</u>	<u>/</u>				<u>LS</u>	<u>img</u>	<u>/ vfr</u>
<u>Bt1</u>	<u>8 to 31</u>	<u>7.5YR 4/6</u>	<u>/</u>				<u>SL+</u>	<u>~</u>	<u>/ vfr</u>
<u>Bt2</u>	<u>31 to 37</u>	<u>7.5YR 5/6</u>	<u>/</u>				<u>SL+</u>	<u>~</u>	<u>/ vfr</u>
<u>Bt3</u>	<u>37 to 49</u>	<u>7.5YR 5/6</u>	<u>/</u>				<u>LS+</u>	<u>~</u>	<u>/ vfr</u>
<u>Bc</u>	<u>49 to 53</u>	<u>7.5YR 5/6</u>	<u>7.5YR 5/3</u>	<u>c2d</u>			<u>LS</u>	<u>~</u>	<u>/ vfr</u>
<u>C</u>	<u>53 to 60</u>	<u>7.5YR 6/6</u>	<u>10YR 5/3</u> <u>7.5YR 5/3</u>	<u>c2d</u> <u>c3d</u>			<u>stratified</u> <u>LS/SL</u>	<u>~</u>	<u>/ vfr</u>
	<u>to</u>								<u>/</u>
	<u>to</u>								<u>/</u>

Current Hydrology: "± to upper boundary of capillary fringe (or)
42"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
 (2) Boundary if described from a pit.

Site Evaluator's Signature

SOIL PROFILE NOTES

Eastern Shore Soil Services

Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savannah, IL 61074
 Phone: (815) 273-3550
 Email: csss@grice.net



Profile #: 2
 Date of Test: 3/15/21 Soil Boring or Test Pit (1)
 Property Owner: Borders
 Property Location: Herons Crossing Rd Parcel 3A
 Site Evaluator: **Bradley J. Cate, CPSS/SC** License No.: 2052

Slope: See Topo Relief: _____
 Estimated Permeability: moderately poor
 Depth to Limiting Zone: 48" to retromorphic features
 Soil Series Identified: Typic Hapludult

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
A _p	0 to 14	10YR 4/3	/				LS	single	/ ufr
B ₁₁	14 to 19	10YR 4/6	/				SL	m	/ ufr
B ₁₂	19 to 40	7.5YR 5/6	/				SLT	10Sbc	/ ufr
B _c	40 to 48	7.5YR 5/6	/				LS _c	m	/ ufr
C	48 to 60	10YR 5/6	10YR 6/2	C 2 P			Stratified S.LS _c SL _c	m	/ ufr
	to								/
	to								/
	to								/

Current Hydrology: "± to upper boundary of capillary fringe (or)
41"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
 (2) Boundary if described from a pit.

Site Evaluator's Signature

SOIL PROFILE NOTES

Eastern Shore Soil Services

Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: csss@grica.net



Profile #: 3

Date of Test: 3/19/21 Soil Boring or Test Pit (1)

Property Owner: Bardors

Property Location: Horvans Crossing Rd. Parcel 3A

Site Evaluator: **Bradley J. Cate, CPSS/SC**

License No.: 2052

Slope: See Topo Relief: _____

Estimated Permeability: Moderate

Depth to Limiting Zone: 44" to redox accumulations

Soil Series Identified: Humic Hapludult

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
Ap	0 to 9	1.7r3/3	/				SL ⁻	single	/ ufr
Bt1	9 to 24	10.7r4/4	/				SL ⁺	massive	/ ufr
Bt2	24 to 32	7.57r4/6	/				SEL	massive	/ ufr
Bt3	32 to 36	7.57r5/6	/				SL ⁺	massive	/ ufr
Bc	36 to 44	7.57r5/6	/				LS	~	/ ufr
C1	44 to 55	10.7r5/6	7.57r5/6			C2d	LS	~	/ ufr
C2	55 to 60	10.7r5/6	10.7r5/6 7.57r5/6			C2d	LS	~	/ ufr
	to								/

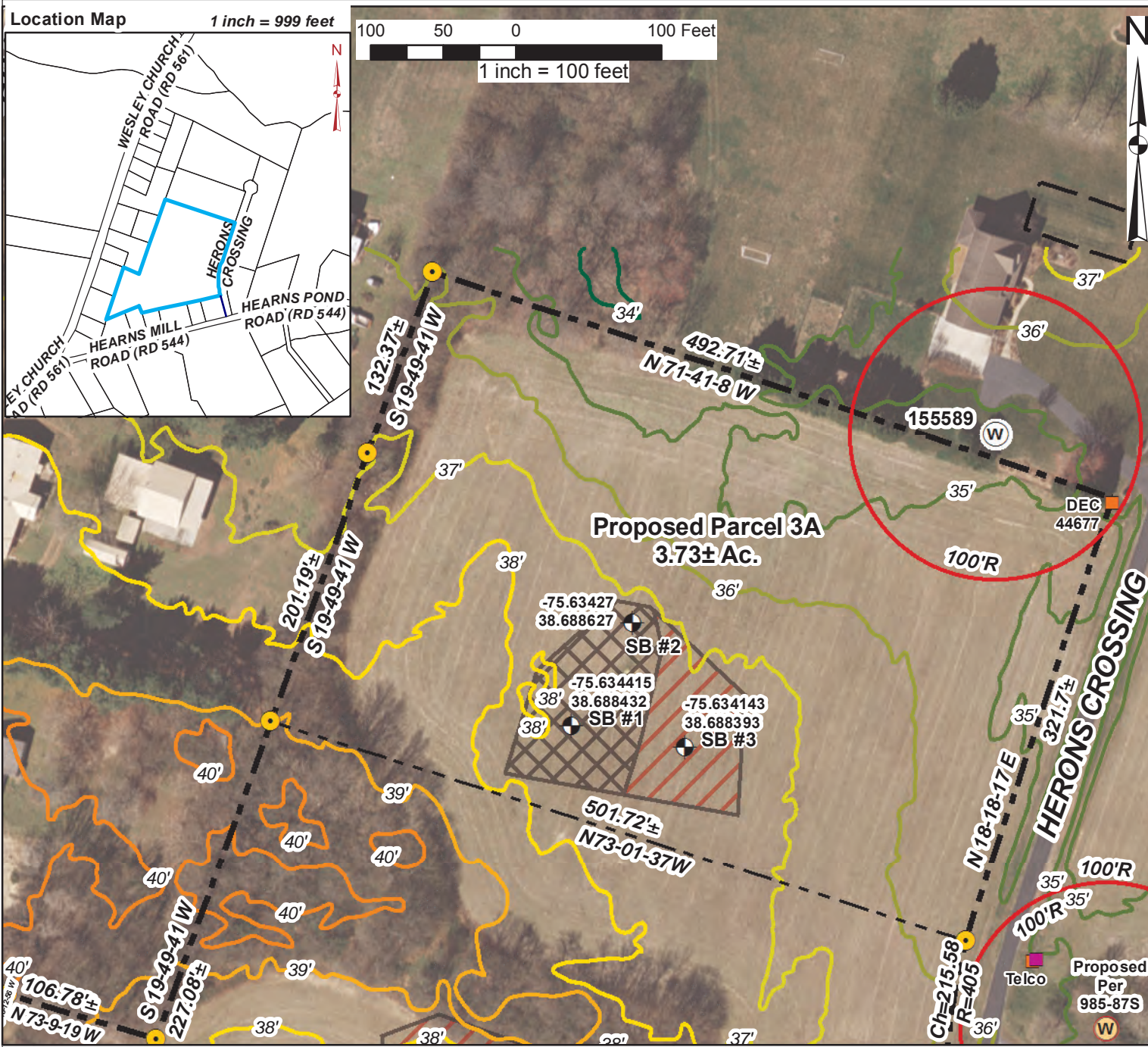
Current Hydrology: "± to upper boundary of capillary fringe (or)

44"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)

(2) Boundary if described from a pit.

Site Evaluator's Signature



Legend

- Well Location from Records
- Well-Verified
- Misc. Point
- Concrete Monument
- Soil Boring Location
- Utility Enclosure/Pede...
- Property Line
- Proposed Property Line
- Approx. System Extents
- Well Arc & Radius
- Capping-Fill Gravity-fed System
- Full-depth LPP System

Note: Unless otherwise shown, adjacent wells >100' from evaluated area (public wells >150'). Any ditch or swale present is ephemeral unless depicted as a watercourse. If this plot is not in color or there are any problems with the legibility or scale, contact the evaluator for a clean, scaled, color copy.

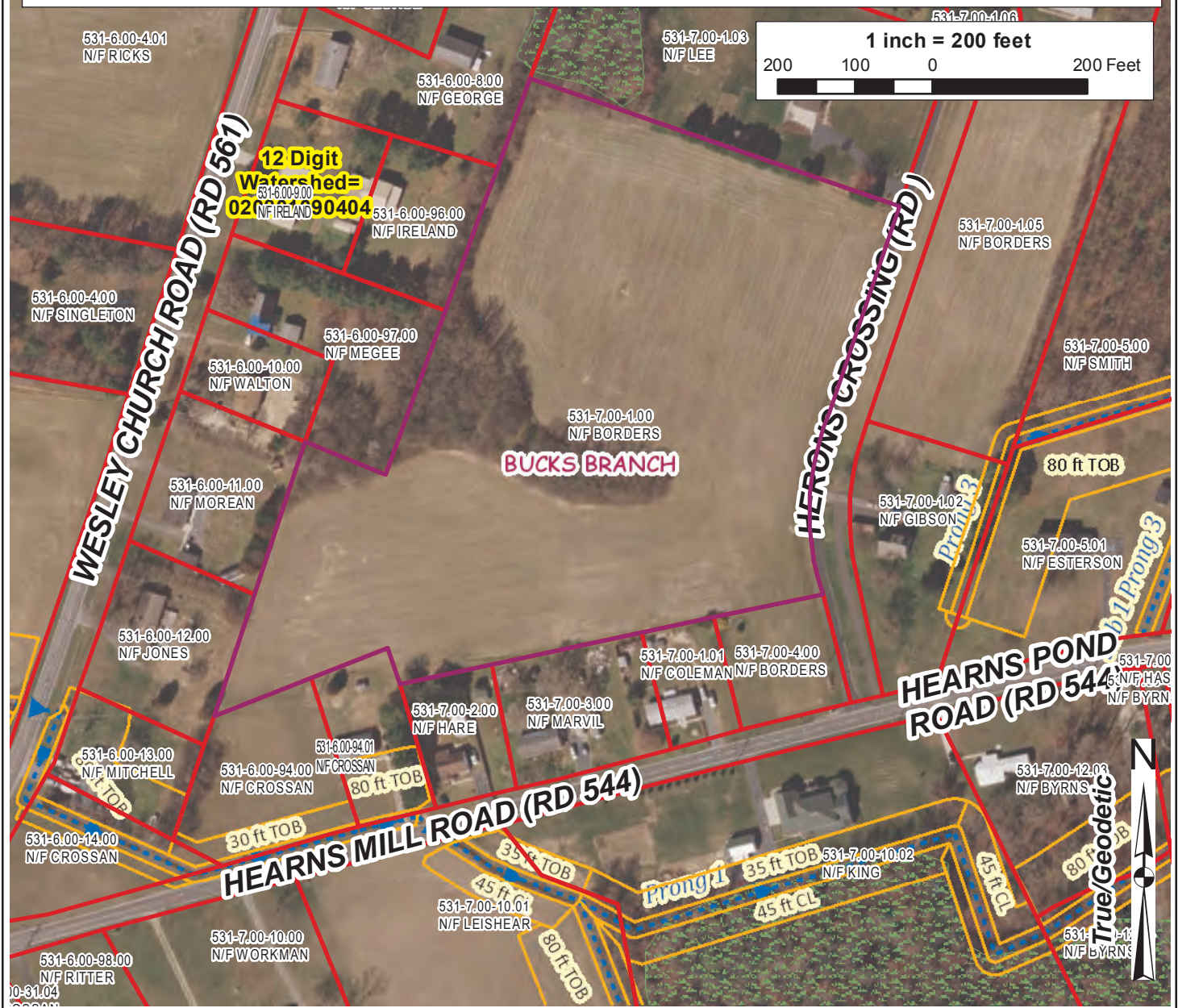
Disclaimer: This plot drawing is not represented as a survey. Boundary information has been compiled from any of the following sources: county GIS, tax map, deed, survey, recorded plot, or field located property corners. Locations of wells and septic systems are by direct observation where possible but, as with boundary information above, may include anecdotal information supplied by property owners, adjacent residents, and/or other interested parties. This plot represents site conditions at the time of evaluation. Subsequent alteration of the site or adjacent properties may negate the validity or usefulness of the information. Elevation contours, if provided, are derived from public domain LIDAR or GIS and should be confirmed. All information should be re-verified prior to purchase or use. In some cases, features such as property lines, utility poles, transformers, etc. may be slightly at odds with aerial photography due to minor errors in GPS data collection or due to horizontal biases inherited from the aerial photography source used.

Site Evaluation Plot
N/F Jacob E. & Delores S. Borders
TM# 5-31-7.00-1.00
Proposed Parcel 3A
Per Plan by Siteworks Eng.

Eastern Shore Soil Services
 Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: ess@grice.net



Additional Information Required by DNREC for Site Evaluation Reports per Section 5.0 and Subsections under "REGULATIONS GOVERNING THE DESIGN, INSTALLATION AND OPERATION OF ON-SITE WASTEWATER TREATMENT AND DISPOSAL SYSTEMS", amended 1/11/2014.*



Legend (if not shown on map above, does not apply to subject parcel)

	12 Digit Watershed #		FEMA Flood Maps
	Bay Building Line		X 500
	Tax Ditch Maximum ROWs		A
	Extent of Right-of-Way		AE
	Wetlands		AO
			VE

*Information Source: DNREC <http://mapservices.dnrec.delaware.gov/arcgis/services>
 Eastern Shore Soil Services does not warrant the validity or necessarily concur with this information, particularly as it relates to any wetlands depicted. Questions regarding wetlands shown (or not shown) should be directed to the DNREC Wetlands and Subaqueous Lands Section @ (302) 739-9943. These wetland maps were prepared by 3rd parties and are included solely as a regulatory requirement for site evaluations. Do not call the site evaluator.

Site Evaluation Map of Additional Published Properties

(This information has NOT been developed by Eastern Shore Soil Services). Property lines from tax maps and subject to locational errors.

Eastern Shore Soil Services
 Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Sevaana, IL 61074
 Phone: (815) 273-3550
 Email: ess@grics.net

PARID: 531-7.00-1.00
BORDERS JACOB E

ROLL: RP

Property Information

Property Location:

Unit:

City:

State:

Zip:

Class: AGR-Agriculture
 Use Code (LUC): AG-AG
 Town: 00-None
 Tax District: 531 – SEAFORD
 School District: 3 - SEAFORD
 Council District: 1-Vincent
 Fire District: 87-Seafood
 Deeded Acres:
 Frontage: 0
 Depth: .000
 Irr Lot:
 Zoning 1: MR-MEDIUM RESIDENTIAL
 Zoning 2: -
 Plot Book Page: 112 336/PB

100% Land Value: \$2,000
 100% Improvement Value
 100% Total Value

Legal

Legal Description: N/RD 544
 1180'E/RD 561
 LOT 3 REMAINING LAND

Owners

Owner	Co-owner	Address	City	State	Zip
BORDERS JACOB E	DOLORES S BORDERS	21882 HERONS CROSSING	SEAFORD	DE	19973

Reference #:

565846

**SITE EVALUATION
Approval Page**

RECEIVED

08/12/2021

GROUNDWATER

The soils on this site are approved when the following is completed in full and signed by the ~~approving authority~~. Isolation distance requirements, limited area of suitable soils, placement of fill, removal of soil, or compaction of the evaluated area may preclude construction permit approval or modify the type of system that may be permitted. An approved report must accompany any permit application. This is not a construction permit.

**Owner's Name
and Address:**

Jacob E. & Delores S. Borders

21882 Herons Crossing
Seaford, DE

19973

Tax Map #:

5-31-7.00-1.01 P.O.

Lot #: Remaining Lands of Lot 3

Limitations of Soil Investigation for System Design

This soil investigation was conducted for a residential on-site system of up to 600 GPD capacity.

For applications of this report to designs of greater capacity or alternative uses, contact the site evaluator or the Department to determine if additional field investigations are necessary.

Initial Disposal System:

Full-depth low pressure pipe (LPP) or elevated sand mound disposal system. LPP trenches to be 12" wide. The maximum slope allowed for elevated sand mound systems is 6% and 12% for percolation rates slower than 60 MPI and faster than 60 MPI, respectively, as indicated below. The designer should visit the site to verify conditions prior to design. See exhibits O and P in the 1985 regulations (amended 1/11/14).

Location of Initial Disposal System:

In the immediate vicinity of profile(s) 1 & 2 (see plot).

Depth to Limiting Zone:

41"

Replacement Disposal System:

Same as above if space permits. Otherwise, the replacement system may be a sand-lined upgrade.

Location of Replacement Disposal System:

In the immediate vicinity of profile(s) referred to above.

Depth to Limiting Zone:

Same as above.

Design Considerations and Comments or Alternatives to the Initial Disposal System:

*Changes made to property lines or configuration from those included in the attached site evaluation report may negate this approval. A new plot drawing showing the locations of the soil borings in reference to changed property lines, fixed points of reference, etc. may be required in order for the site evaluation to be re-approved.

*Maintain all isolation distances specified in Exhibit "C" in the 1985 regulations (amended 1/11/14). The designated suitable soil area(s) appearing on the plot drawing may, in some cases, be negated or reduced due to required isolation distances.

Soils in the vicinity of SB #3 are suitable for a capping-fill LPP with a 35" limiting zone and a 30MPI estimated percolation rate.

Instructions to Property Owner

- Contact a Licensed Class C System Designer.
- A permeability rate of 30 minutes per inch has been estimated for the soils on this site. These estimated rates are used to determine the required size of the disposal area. They are based on soil texture and are derived from tables developed by the DNREC. You may elect to use the estimated rate to size the disposal system or have the appropriate tests conducted. Contact the Site Evaluator at (302) 856-1853 or the DNREC at (302) 856-4561 in Sussex County, and (302) 739-9947 in Kent and New Castle Counties for testing information.
- Read the attached site evaluation report for additional information.
- Identify where the drainfield will be placed on the site and protect it from any vehicle overtravel or stockpiling of any construction materials. It is your responsibility to prevent soil compaction of the drainfield area!

PAID
\$ 75.00 08/12/2021

This report has been prepared by: _____ 8/12/2021

Bradley J. Cate
Eastern Shore Soil Services

License #: 2052

Field Checked _____

For Office Use Only

DNREC APPROVED

DNREC Reviewing Staff

8/13/21

Approval Date

8/13/26

Expiration Date

Disclaimer: Approval of a site evaluation indicates only that the site evaluation was conducted in compliance with the regulations. It is not an indication of the quality or correctness of the site evaluation.

**IF THERE ARE QUESTIONS
REGARDING THIS REPORT
CONTACT CLASS D LICENSEE**

**THE CLASS D LICENSEE
IS RESPONSIBLE FOR
ERRORS/OMISSIONS**

Site Evaluation Report

Eastern Shore Soil Services
P.O. Box 411, Savanna, IL 61074 (815) 273-3550
P.O. Box 411, Georgetown, DE 19947 (302) 856-1853
esss@grics.net www.easternshoresoil.com

12-Aug-21

File #: 5293

Owner's Name and Address: Jacob E. & Delores S. Borders
21882 Herons Crossing
Seaford, DE 19973

Telephone #: () - 0

Tax Map and Parcel #: 5-31-7.00-1.01 P.O. **County:** Sussex

Property Location: NW/S Herons Crossing Rd., ~150' N of CR 544

Name of Development: N/A

Lot # Remaining Lands of Lot 3 **In Tax Ditch District?:** Yes

Central Sewer Available: No **Chesapeake/Inland Bays PSN3 Area?:** No

Central Water Available: No

Date of Investigation: 3/19/21

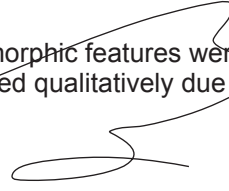
Evaluated by Test Pits: No **Evaluated by Soil Borings:** Yes

<u>Profile #:</u>	<u>Depth to Limiting Zone:</u>	<u>Limiting Zone Inferred From:</u>	<u>Subgroup Taxon Classification:</u>
1	41"	redoximorphic features	Oxyaquic Paleudult
2	46"	redox accumulations	Humic Hapludult
3	35"	redox accumulations	Oxyaquic Hapludult

Summary of Evaluation:

This site occupies a nearly level cultivated portion of a talf. Differences in depth to redoximorphic features were related to minor differences in topographic elevation. Free water observations should be considered qualitatively due to an insufficient equilibration period.

Evaluated By: Bradley J. Cate
DE License #: 2052



Site Evaluator's Signature

Note:
Information contained in this site evaluation report and shown on the accompanying plot drawing reflects current regulatory policies and procedures at the time the evaluation was conducted. Changes made to the property and to adjacent properties after the evaluation was conducted or changes in regulatory policy may preclude or modify the type or location of the recommended on-site sewage system regardless of site evaluation approval. Data contained in this report may include information obtained from property owners, their agents, residents, adjacent residents, and departmental permits, when readily available. While this information is believed to be accurate it does not guarantee a septic permit and the attached plot should not be construed as a survey. All information should be verified by interested parties prior to the transfer of the property as well as prior to design and installation of the septic system. Interpretations made in this evaluation are intended for siting and design of a septic system only and are not suitable for other uses. Unless approved by the regulatory agency(ies) this report represents only a technical opinion rendered and does not constitute an approval for siting or design of any septic system on this site.

SOIL PROFILE NOTES

Eastern Shore Soil Services

Environmental Consulting:
 Soil Mapping, Land Use Planning, Wetland Studies,
 Site Evaluations, Environmental Permits
 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: ess@grice.net



Profile #: 1
 Date of Test: 3/15/21 Soil Boring or Test Pit (1)
 Property Owner: Borjors
 Property Location: Herons Crossing Rd Remainder of lot 3
 Site Evaluator: **Bradley J. Cate, CPSS/SC** License No.: 2052

Slope: See Topo Relief: _____
 Estimated Permeability: Low Rapid
 Depth to Limiting Zone: 41" to redoximorphic features
 Soil Series Identified: Oxyaquic Paludic H

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
<u>Ap</u>	<u>0 to 10</u>	<u>10YR 3/3</u>	<u>/</u>				<u>LS+</u>	<u>mg</u>	<u>ufr</u>
<u>E</u>	<u>10 to 21</u>	<u>10YR 5/4</u>	<u>/</u>				<u>LS+</u>	<u>m</u>	<u>uif</u>
<u>Bt1</u>	<u>21 to 41</u>	<u>10YR 5/6</u>	<u>/</u>				<u>SL</u>	<u>msbk</u>	<u>uif</u>
<u>Bt2</u>	<u>41 to 51</u>	<u>10YR 5/4</u>	<u>10YR 5/2</u> <u>10YR 5/6</u>	<u>t2d</u>			<u>SL</u>	<u>msbk</u>	<u>uif</u>
<u>Bt3</u>	<u>51 to 60</u>	<u>10YR 5/4</u>	<u>10YR 5/2</u> <u>7.5YR 5/3</u>	<u>c3d</u> <u>c2p</u>			<u>SL</u>	<u>-</u>	<u>uif</u>
	<u>to</u>								<u>/</u>
	<u>to</u>								<u>/</u>
	<u>to</u>								<u>/</u>

Current Hydrology: "± to upper boundary of capillary fringe (or)
43"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
 (2) Boundary if described from a pit.

Site Evaluator's Signature

SOIL PROFILE NOTES

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 P.O. Box 411, Savannah, IL 61074
 Phone: (815) 273-3550
 Email: ess@grics.net



Profile #: 2
 Date of Test: 3/19/21 Soil Boring or Test Pit (1)
 Property Owner: Borders
 Property Location: Herons Crossing Rd. Remainder of Lot 3
 Site Evaluator: **Bradley J. Cate, CPSS/SC** License No.: 2052
 Slope: See Topo Relief: _____
 Estimated Permeability: Moderate
 Depth to Limiting Zone: 46" to relax accumulations
 Soil Series Identified: Munir Hapludult

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
A	0 to 9	10YR2/3	/				SL	1mjt	/ uf
Bt1	9 to 24	10YR4/4	/				SCC-	1mshk	/ fr
Bt2	24 to 40	7.5YR5/6	/				SL	1CS62	/ ufr
E & Bt3	40 to 46	10YR5/4	90%				L5	~	/ ufr
		7.5YR5/6	20%				SL	~	/ ufr
C1	46 to 50	10YR5/4	7.5YR5/3	f4p			L5	~	/ ufr
C2	50 to 60	10YR6/4	10YR5/3	c2p			L5	~	/ ufr
	to								/
	to								/

Current Hydrology: "± to upper boundary of capillary fringe (or)
 44"± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
 (2) Boundary if described from a pit.

Site Evaluator's Signature

SOIL PROFILE NOTES

Eastern Shore Soil Services

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 P.O. Box 411, Georgetown, DE 19947
 Phone: (302) 856-1853
 P.O. Box 411, Savanna, IL 61074
 Phone: (815) 273-3550
 Email: ccss@grics.net



Profile #: 3
 Date of Test: 3/15/21 Soil Boring or Test Pit (1)
 Property Owner: Borders
 Property Location: Heron's Crossing At Remainder of Lot 3
 Site Evaluator: **Bradley J. Cate, CPSS/SC** License No.: 2052

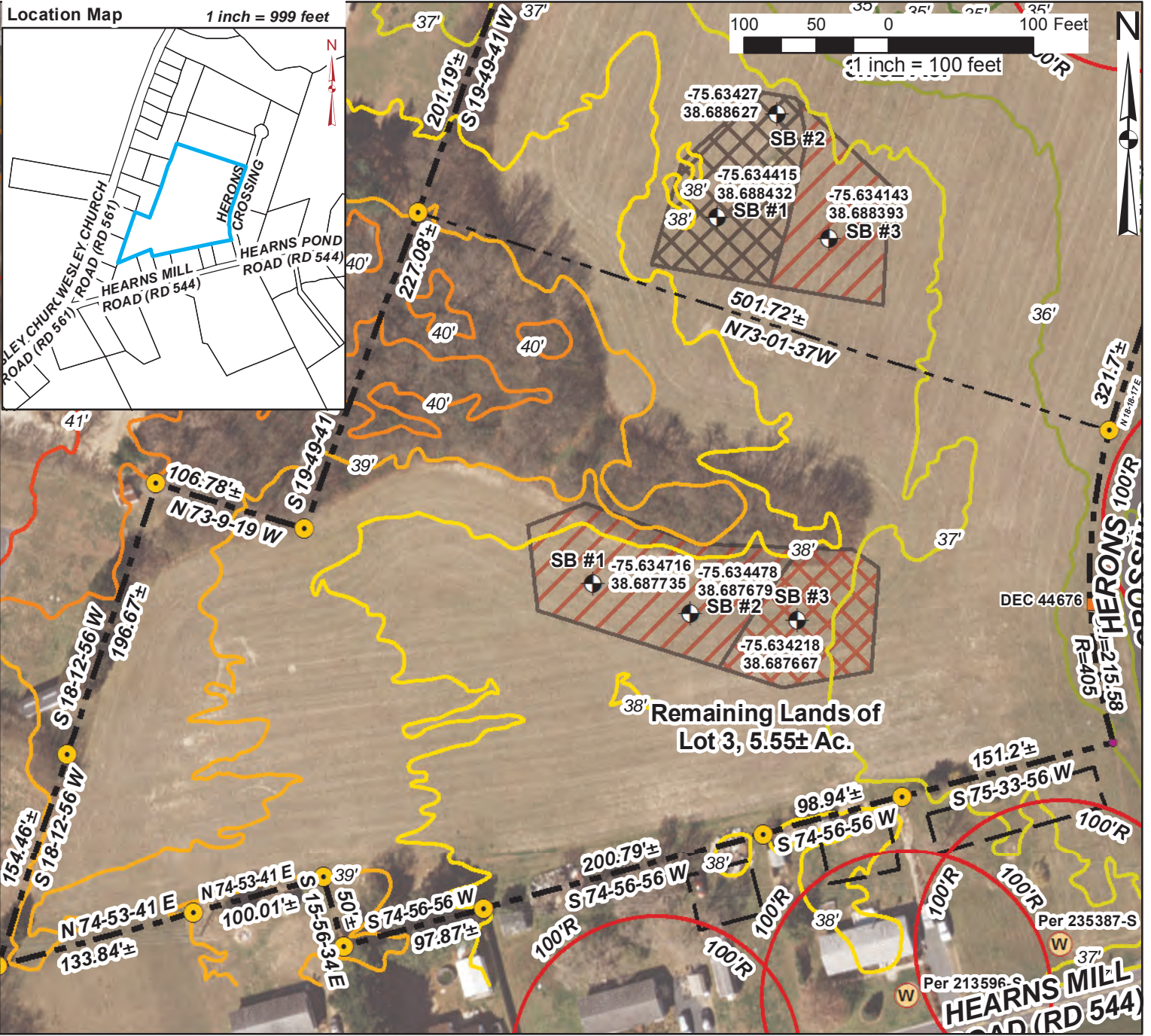
Slope: See Topo Relief: _____
 Estimated Permeability: moderate
 Depth to Limiting Zone: 35" to redox accumulations
 Soil Series Identified: Dryaquic Hapludult

Horizon	Depth	Colors		Mottles Desc.			Texture	Structure	Boundary(2)/ Consistence
		Matrix	Mottles	Ab.	S.	Con.			
Ap	0 to 11	10YR 3/3	/				SL	1m gr	/ vfr
Bt1	11 to 15	10YR 4/4	/				SLL	1m sbk	/ fr
Bt2	15 to 20	10YR 4/6	/				SLL	1m sbk	/ fr
Bt3	20 to 27	7.5YR 4/6	/				SLL	1m sbk	/ fr
Bt4	27 to 35	7.5YR 5/6	/				SL	~	/ vfr
C	35 to 46	10YR 5/6	5YR 5/8 10YR 5/8	C2p C3d			LS	~	/ vfr
Cg	46 to 60	2.5Y 5/2	10YR 5/8 2.5Y 5/4	C3p C5d			Stratified LS, SL	~	/ vfr
	to								

Current Hydrology: "± to upper boundary of capillary fringe (or)
 35 "± to free water (if applicable)

(1) Pit observation is extended by bucket auger from " -if applicable)
 (2) Boundary if described from a pit.

Site Evaluator's Signature



Legend

- (W) Well Location from Records
- (●) Misc. Point
- (⊕) Soil Boring Location
- (■) Utility Enclosure/Pede...
- (●) Rebar
- (---) Property Line
- (---) Proposed Property Line
- (---) Approx. System Extents
- (---) Well Arc & Radius
- (Hatched) Capping-Fill LPP System
- (Hatched) Full-depth LPP System
- (Cross-hatched) Capping-Fill Gravity-fed System

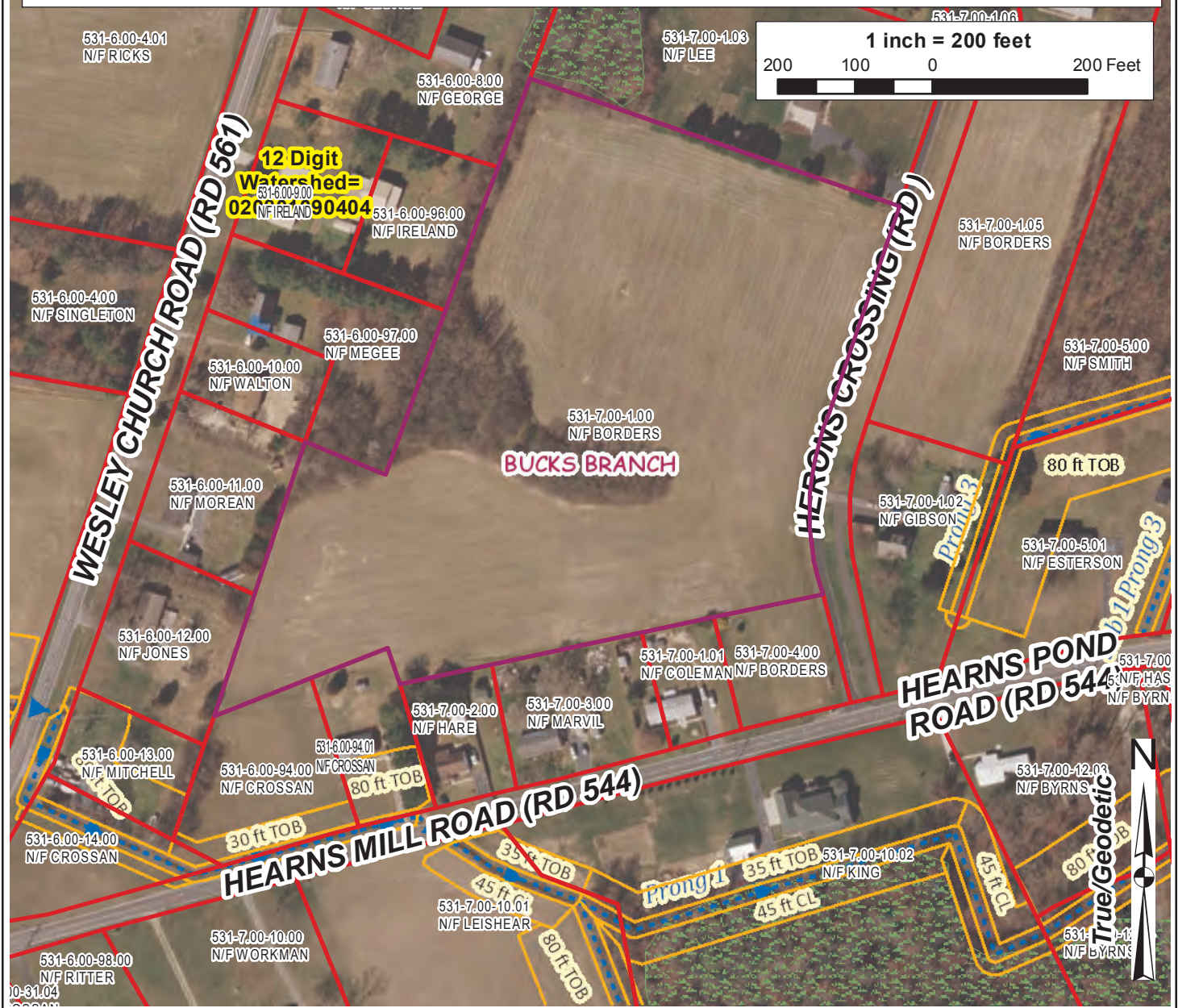
Site Evaluation Plot
N/F Jacob E. & Delores S. Borders
TM# 5-31-7.00-1.00, P.O.
Remaining Lands of Lot 3
Per Plan by Siteworks Eng.

Note: Unless otherwise shown, adjacent wells >100' from evaluated area (public wells >150'). Any ditch or swale present is ephemeral unless depicted as a watercourse. If this plot is not in color or there are any problems with the legibility or scale, contact the evaluator for a clean, scaled, color copy.

Disclaimer: This plot drawing is not represented as a survey. Boundary information has been compiled from any of the following sources: county GIS, tax map, deed, survey, recorded plot, or field located property corners. Locations of wells and septic systems are by direct observation where possible but, as with boundary information above, may include anecdotal information supplied by property owners, adjacent residents, and/or other interested parties. This plot represents site conditions at the time of evaluation. Subsequent alteration of the site or adjacent properties may negate the validity or usefulness of the information. Elevation contours, if provided, are derived from public domain LIDAR or GIS and should be confirmed. All information should be re-verified prior to purchase or use. In some cases, features such as property lines, utility poles, transformers, etc. may be slightly at odds with aerial photography due to minor errors in GPS data collection or due to horizontal biases inherited from the aerial photography source used.

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Additional Information Required by DNREC for Site Evaluation Reports per Section 5.0 and Subsections under "REGULATIONS GOVERNING THE DESIGN, INSTALLATION AND OPERATION OF ON-SITE WASTEWATER TREATMENT AND DISPOSAL SYSTEMS", amended 1/11/2014.*



Legend (if not shown on map above, does not apply to subject parcel)

	12 Digit Watershed #		FEMA Flood Maps
	Bay Building Line		X 500
	Tax Ditch Maximum ROWs		A
	Extent of Right-of-Way		AE
	Wetlands		AO
			VE

*Information Source: DNREC <http://mapservices.dnrec.delaware.gov/arcgis/services>
 Eastern Shore Soil Services does not warrant the validity or necessarily concur with this information, particularly as it relates to any wetlands depicted. Questions regarding wetlands shown (or not shown) should be directed to the DNREC Wetlands and Subaqueous Lands Section @ (302) 739-9943. These wetland maps were prepared by 3rd parties and are included solely as a regulatory requirement for site evaluations. Do not call the site evaluator.

Site Evaluation Map of Additional Published Properties

(This information has NOT been developed by Eastern Shore Soil Services). Property lines from tax maps and subject to locational errors.

Eastern Shore Soil Services
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 P.O. Box 411, Sevaana, IL 61074
 Phone: (815) 273-3550
 Email: ess@grics.net

PARID: 531-7.00-1.00
BORDERS JACOB E

ROLL: RP

Property Information

Property Location:

Unit:

City:

State:

Zip:

Class: AGR-Agriculture
 Use Code (LUC): AG-AG
 Town: 00-None
 Tax District: 531 – SEAFORD
 School District: 3 - SEAFORD
 Council District: 1-Vincent
 Fire District: 87-Seafood
 Deeded Acres:
 Frontage: 0
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 LOT 3 REMAINING LAND

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