PLANNING & ZONING COMMISSION

HOLLY WINGATE, CHAIR
JEFF ALLEN
G. SCOTT COLLINS
JOHN PASSWATERS
DAVID PETTYJOHN

Sussex County
DELAWARE
sussexcountyde.gov
(302) 855-7878

Sussex County
Planning & Zoning Commission

AGENDA

October 7, 2026

:00 PM

Call to Order

Approval of Agenda

Approval of Minutes – September 16, 2026

Other Business

Other Business Memo - 10/07/26 P&ZC

S-25-15 Milton DE Solar CSS, LLC (C/U 2550) JP
Preliminary & Final Site Plan

S-26-40 S-26-40 St. Jude the Apostle Catholic Church SC
Revised Final Site Plan

S-26-51 State of DE (C/U 2607) - DSP Troop 4 EVOC DP
Preliminary Site Plan

Lands of Patricia A. Quillen for Life JP
Minor Subdivision Plan off a proposed 50-ft easement

Lands of Investment Builders Inc. JP
Minor Subdivision Plan off a proposed 50-ft easement

Lands of Lisa and Aleisha Cannon JP
Minor Subdivision Plan off a proposed 30-ft easement

Lands of Tammy L. & Michael F. Horn JA
Minor Subdivision Plan off an existing 50-ft. easement and a proposed 30-ft. easement

Lands of Oak Road Rentals, LLC JA

EQUAL HOUSING OPPORTUNITY

Minor Subdivision Plan off a proposed 30-ft. easement

Lands of Senturk DP
Minor Subdivision Plan and Lot Line Adjustment off a proposed 30-ft easement

LG Investments & Farming, LLC JP
Consideration of Agricultural Preservation District

Old Business

C/U 252 Jamie & Darren Hooks JA
An Ordinance to grant a Conditional Use of land in an AR-1 Agricultural Residential District for a mechanic repair business, office, material and e uipment storage to be located on certain parcels of land lying and being in Sussex County, containing 4.2 acres, more or less. The properties are lying on the north side of Airport Road (S.C.R. 494), approximately 600 feet east of Old Hickory Road (S.C.R. 497). 911 Address: 7119 Airport Road, Laurel. Tax Map Parcels: 432-7.00-28.05 & 432-7.00-28.04 (P/O).

ORD 26-06
An Ordinance to amend the Future Land Use Map element of the Comprehensive Plan in relation to Tax Parcel No. 1 5-11.00- 1.00, 1 5-16.00-17.00 & 70.00. The properties contain approximately 42.54 acres of land, lying and being within Sussex County. The properties are lying on the north side of Lewes Georgetown Highway (Rt. 9), approximately 0.69 mile west of Gravel Hill Road (Rt. 30). 911 Addresses: 24215, 24217 & 20288 Lewes Georgetown Highway, Georgetown & N/A.

C/Z 206 Millsboro Towne Village, LLC JP
An Ordinance to amend the Comprehensive Zoning Map of Sussex County from an AR-1 Agricultural Residential District and a C-1 General Commercial District to an LI-2 Light Industrial District for a certain parcel of land lying and being in Sussex County, containing 42.54 acres, more or less. The properties are lying on the north side of Lewes Georgetown Highway (Rt. 9), approximately 0.69 mile west of Gravel Hill Road (Rt. 30). 911 Addresses: 24215, 24217 & 20288 Lewes Georgetown Highway, Georgetown & N/A. Tax Map Parcels: 135-11.00-31.00, 135-16.00-17.00 & 70.00.

C/U 25 7 Lonesome Road Community Energy Initiative, LLC JA
An Ordinance to grant a Conditional Use of land in an AR-1 Agricultural Residential District for solar arrays to be located on a certain parcel of land lying and being in Sussex County, containing 28.64 acres, more or less. The parcel is lying on the east side of Lonesome Road (S.C.R. 541), approximately 800 feet south of Woodpecker Road (S.C.R. 80). 911 Address: N/A. Tax Map Parcel: 531-12.00-92.02.

C/U 2601 Woodpecker Road Community Energy Initiative, LLC JA
An Ordinance to grant a Conditional Use of land in an AR-1 Agricultural Residential District for solar arrays to be located on a certain parcel of land lying and being in Sussex County, containing .281 acres, more or less. The parcel is lying on the northwest side of Woodpecker Road (S.C.R. 80), approximately 0.29 mile south of West Stein Highway (Rt. 20). 911 Address: N/A. Tax Map Parcel: 531-12.00-84.01.

C/U 26 Sunrise Solar, Inc. JA

An Ordinance to grant a Conditional Use of land in an AR-1 Agricultural Residential District for solar arrays to be located on a certain parcel of land lying and being in Sussex County, containing 47.20 acres, more or less. The parcel is lying on the north side of Sycamore Road (S.C.R. 466), approximately 0.27 miles east of Sussex Highway (Route 13). 911 Address: 11279 Sycamore Road, Laurel. Tax Map Parcel: 232-12.00-100.00.

C/U 2652 Sussex CSG , LLC JA

An Ordinance to grant a Conditional Use of land in an AR-1 Agricultural Residential District for solar arrays facility to be located on a certain parcel of land lying and being in Sussex County, containing 52. 4 acres, more or less. The parcel is lying the south side of Old Racetrack Road (S.C.R. 502), approximately 0.25 mile west of the intersection of Old Racetrack Road (S.C.R. 502) and North Second Street. 911 Address: N/A. Tax Map Parcel: 532-20.00-14.00.

Recess

Public Hearings

C/U 2548 Foxlane Homes Delaware, LLC (Hickman) DP

An Ordinance to grant a Conditional Use of land in an MR Medium-Density Residential District for multi-family dwellings (54 units) to be located on a certain parcel of land lying and being in Sussex County, containing 12.8 acres, more or less. The parcel is lying on the south side of Hickman Road (S.C.R. 359), approximately 560 feet east of Cedar Neck Road (S.C.R. 357). 911 Address: 38492 Hickman Road, Ocean View. Tax Map Parcel: 134-9.00-28.00.

C/U 25 Andrew Scrutchfield SC

An Ordinance to grant a Conditional Use of land in an AR-1 Agricultural Residential District for indoor storage units to be located on a certain parcel of land lying and being in Sussex County, containing 0.22 acres, more or less. The property is lying on the east side of Stingey Lane (Not a State Maintained Road) approximately 195 feet north of Beaver Dam Road (Rt. 23). 911 Address: 17659 Stingey Lane, Lewes. Tax Map Parcel: 334-5.00-195.00.

C/U 260 Walter Gon ale Dia JA

An Ordinance to grant a Conditional Use of land in an AR-1 Agricultural Residential District for an auto repair shop to be located on a certain parcel of land lying and being in Sussex County, containing 1 .5 acres, more or less. The property is lying on the east side of Vaughn Road (S.C.R. 520), approximately 0.34 mile north of Asbury Road (S.C.R. 446). 911 Address: N/A. Tax Map Parcel: 135-19.00-16.22.

C/Z 2051 Arctec Properties, LLC JP

An Ordinance to amend the Comprehensive Zoning Map of Sussex County from an AR-1 Agricultural Residential District to a C-2 Medium Commercial District for certain parcels of land lying and being in Sussex County, containing 8. acres, more or less. The properties are lying on the west side of Sussex Highway (Rt. 13), approximately 1.10 miles south of Adams Road (S.C.R. 583). 911 Addresses: 14890, 14906, & 14910 Sussex Highway, Bridgeville. Tax Map Parcels: 530-17.00-9.00 & 10.00.

Public Comment

In accordance with 2 Del. C. 10004(e)(2), this Agenda was posted on September 0, 2026, at 11:00 a.m., and at least seven (7) days in advance of the meeting.

This Agenda is subject to change to include the addition or deletion of items, including Executive Sessions, which arise at the time of the Meeting.

Agenda items listed may be considered out of se uence

Any person who intends to present a digital presentation or document, including PowerPoint files, for electronic display during County meetings shall submit said file(s) in advance, no later than one (1) business day before the respective public meeting. Files may be sent electronically to pand @sussexcountyde.gov or delivered by hand to the Planning & Zoning Department, located in the Sussex County Administrative Offices, 2 The Circle, in Georgetown. No external storage devices shall be permitted to connect to County e uipment.

-MEETING DETAILS-

The meeting will be streamed live at: https://sussexcountyde.gov/council-chamber-broadcast

The Planning & Zoning Commission meeting materials, including the "packet", are electronically accessible on the County's website at: **https://sussexcountyde.gov/**

If any member of the public would like to submit comments electronically, these may be sent to pandz@sussexcountyde.gov. All comments are encouraged to be submitted by 4:00 P.M on Tuesday, October 6, 2026.

JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR OF PLANNING & ZONING
(302) 855-7878
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Planning Commission Members
From: Jamie Whitehouse, AICP, Director, Department of Planning & Zoning; Jenny Norwood, Planning & Zoning Manager; Lauren Cecchine, AICP, Planning & Zoning Manager; Michael Lowrey, Planner IV; Christin Scott, Planner III; Ann Lepore, Planner I & Susan Isaacs, Planner I
CC: Vince Robertson, Assistant County Attorney
Date: September 30, 2026
RE: Other Business for October 7, 2026, Planning Commission Meeting

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This Memo provides background for the Planning Commission to consider as part of the Other Business to be reviewed during the Wednesday, October 7, 2026, Meeting of the Planning & Zoning Commission.

S-25-15 Milton DE Solar CSS, LLC (C/U 2550) JP

Preliminary & Final Site Plan

This is a Preliminary & Final Site Plan and Landscape Plan for the construction of a solar array facility and other related site improvements. Conditional Use No. 2550 to permit the use of a solar array at the site was approved by the Sussex County Council at their Meeting of Tuesday, June 23rd, 2026, via Ordinance No. 4072. The Plan includes solar arrays, ancillary transformer equipment, landscaped buffers, access roads, fencing with gated access to the site and other site improvements. The Conditional Use area is (14.82) acres +/- with the fenced in area containing the solar arrays occupying (12.86) acres +/- of the Parcel which is comprised of a total of (30.55) acres +/-. The Parcel is located on the west side of Harbeson Road (Route 5), approximately 850 feet south from the intersection of Diamond Farm Road (S.C.R. 257) and Harbeson Road. The Preliminary Site Plan complies with the Sussex County Zoning Code and all Conditions of Approval for (C/U 2550). Tax Parcel: 235-26.00-17.01 Zoning District: AR-1 (Agricultural Residential Zoning District). Staff are in receipt of all agency approvals. A Decommissioning Plan has also been included which addresses the financial security component of the Conditions of Approval; therefore, the Plan is eligible for both Preliminary & Final Approval.

S-26-40 St. Jude the Apostle Catholic Church SC

Revised Final Site Plan

This is a Revised Final Site Plan for the construction of proposed 8,050 square feet additions to an existing Church and other site improvements to be located on the east and south side of Tulip Drive and the north side of Coastal Highway (Rt. 1). The Revised Final Site Plan complies with the Sussex County Zoning Code. Tax Parcel: 335-11.00-90.00. Zoning: MR (Medium Residential District) and C-1 (General Commercial). Staff are awaiting agency approvals. Should the Commission desire to act favorably upon this proposal, staff are requesting that final approval be made subject to staff upon the receipt of all agency approvals.

S-26-51 State of DE (C/U 2607) - DSP Troop 4 EVOC DP

Preliminary Site Plan

This is a Preliminary Site Plan for (≈7.3 acre) Emergency Vehicle Operations Course (EVOC), vehicle parking, vehicle storage, and an adjacent pavilion structure (1,640 square feet) associated with the Delaware State Police (DSP) facility at the site which was permitted via Conditional Use (C/U 2477) (Ord No. 2975) as approved by County Council at their meeting of 1/23/2024. The (EVOC) was subsequently approved via (C/U 2607) (Ord. No. 4040) and approved by County Council at their meeting of 2/10/2026. The property is located on the west side of Patriots Way (S.C.R. 318) at the intersection of Avenue of Honor (S.C.R. 86) and Patriots Way (S.C.R. 318) in Millsboro. The Preliminary Site Plan complies with the Sussex County Zoning Code. Tax Parcel: 133-7.00-8.00. Zoning: AR-1 (Agricultural Residential District.) Staff are in receipt of all agency approvals.

Lands of Patricia A. Quillen for Life JP

Minor Subdivision Plan off a proposed 50-ft easement

This is a Minor Subdivision Plan for the creation of one (1) lot plus residual land. Proposed Lot 1 shall consist of 1.412-acre +/- and the residual land shall contain 1.279-acres +/-. A shared use maintenance agreement shall be established for the use of the shared access road. The property is located on the west side of Chaplains Chapel Road (S.C.R. 42). The Minor Subdivision Plan complies with the Sussex County Zoning and Subdivision Codes. Tax Parcel: 430-20.00-49.00. Zoning: AR-1 (Agricultural Residential District). Staff are awaiting agency approvals; should the Commission desire to act favorably upon this proposal, Staff are requesting that final approval be made subject to Staff upon the receipt of all agency approvals.

Lands of Investment Builders Inc. JP

Minor Subdivision Plan off a proposed 50-ft easement

This is a Minor Subdivision Plan for the creation of four (4) lots plus residual land. Proposed Lot 1 shall consist of 1.136-acre +/-, proposed Lot 2 shall consist of 1.479-acres +/-, proposed Lot 3 shall consist of 1.410-acres +/-, proposed Lot 4 shall consist of 1.315-acres +/-, and the residual land shall contain 1.245-acres +/-. A shared use maintenance agreement shall be established for the use of the shared access road. The property is located on the south side of Beach Highway (Route 16), approximately 0.27 miles +/- west of Owens Road (S.C.R. 611). The Minor Subdivision Plan complies with the Sussex County Zoning and Subdivision Codes. Tax Parcel: 430-6.00-15.06 Zoning: AR-1 (Agricultural Residential District). Staff are awaiting agency approvals; should the Commission desire to act favorably upon this proposal, Staff are requesting that final approval be made subject to Staff upon the receipt of all agency approvals.

Lands of Lisa and Aleisha Cannon JP

Minor Subdivision Plan off a proposed 30-ft easement

This is a Minor Subdivision Plan for the creation of two (2) lots plus residual land. Proposed Lot 1 shall consist of 1.000-acre +/-, Lot 2 shall consist of 1.006-acres +/-, and the residual land shall contain 11.746-acres +/-. A shared use maintenance agreement shall be established for the use of the shared access road. The property is located on the east side of Ponder Road (S.C.R. 232). The Minor Subdivision Plan complies with the Sussex County Zoning and Subdivision Codes. Tax Parcel: 430230-27.00-36.00 Zoning: AR-1 (Agricultural Residential District). Staff are awaiting agency approvals; should the Commission desire to act favorably upon this proposal, Staff are requesting that final approval be made subject to Staff upon the receipt of all agency approvals.

Lands of Tammy L. & Michael F. Horn JA

Minor Subdivision Plan off an existing 50-ft. easement and a proposed 30-ft. easement

This is a Minor Subdivision Plan for the creation of four (4) lots plus residual land. Proposed Lot 1 shall consist of 1.1784-acres +/-, proposed Lot 2 shall consist of 1.0002-acres +/-, proposed Lot 3 shall consist of 1.002-acres +/-, proposed Lot 4 shall consist of 1.002-acres +/-, and the residual land shall contain 10.1706 acres +/-. A shared-use maintenance agreement shall be established for the use of the shared access road. The property is accessed from the south side of Pepperbox Road (S.C.R. 66) through an existing 50-ft. and a proposed 30-foot ingress/egress access easement. The Minor Subdivision Plan complies with the Sussex County Zoning and Subdivision Codes. Tax Parcel: 532-22.00-18.00. Zoning: AR-1 (Agricultural Residential District). Staff are awaiting agency approvals. Should the Commission desire to act favorably upon this proposal, staff are requesting that final approval be made subject to staff upon the receipt of all agency approvals.

Lands of Oak Road Rentals, LLC JA

Minor Subdivision Plan off a proposed 30-ft. easement

This is a Minor Subdivision Plan for the creation of two (2) lots plus residual land. Proposed Lot 1 shall consist of 0.810-acre +/-, proposed Lot 2 shall consist of 0.790-acre +/-, and the residual land shall contain 0.756 acres+/-. A shared-use maintenance agreement shall be established for the use of the shared access road. The property is accessed from the east side of Old Stage Road (S.C.R. 461) through a proposed 30-foot ingress/egress access easement. The Minor Subdivision Plan complies with the Sussex County Zoning and Subdivision Codes. Tax Parcel: 332-2.00-77.00. Zoning: AR-1 (Agricultural Residential District). Staff are awaiting agency approvals. Should the Commission desire to act favorably upon this proposal, staff are requesting that final approval be made subject to staff upon the receipt of all agency approvals.

Lands of Senturk DP

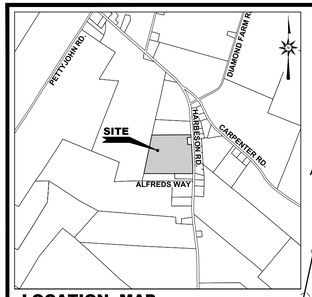
Minor Subdivision Plan and Lot Line Adjustment off a proposed 30-ft easement

This is a Minor Subdivision Plan for the creation of four (4) lots plus residual land. Proposed Lot 1 shall consist of 1.105-acre +/-, proposed Lot 2 shall consist of 1.066-acres +/-, proposed Lot 3 shall consist of 0.854-acres +/-, proposed Lot 4 shall consist of 0.843-acres +/-, and the residual land shall contain 1.135-acres +/-. A shared use maintenance agreement shall be established for the use of the shared access road. The property is located on the north side of Stockley Road (S.C.R. 280). The Minor Subdivision Plan complies with the Sussex County Zoning and Subdivision Codes. Tax Parcels: 234-5.00-89.00, 90.00 & 91.00 Zoning: AR-1 (Agricultural Residential District). Staff are awaiting agency approvals; should the Commission desire to act favorably upon this proposal, Staff are requesting that final approval be made subject to Staff upon the receipt of all agency approvals.

LG Investments & Farming, LLC JP

Consideration of Agricultural Preservation District

This is a request from the Delaware Agricultural Lands Preservation Foundation, acting through Delaware Department of Agriculture, for the creation of a new Agricultural Preservation District, to be known as the LG Investments & Farming, LLC District. The District would have a total area of 812.97 acres. The tract is located on the southeast side of Fleatown Road (S.C.R. 224), and the southeast side of Ponder Road (S.C.R. 232). Tax Parcel: 230-20.00-13.00. Zoning: AR-1 (Agricultural Residential District).



LOCATION MAP SCALE: 1" = 2000'

CONDITIONS OF APPROVAL:

1. THE USE SHALL BE FOR A GROUND-MOUNTED SOLAR ARRAY IN THE CONFIGURATION SHOWN ON THE APPLICANTS REVISED CONDITIONAL USE SITE PLAN DATED JUNE 1, 2026. NO OTHER TYPES OF ELECTRIC GENERATION SHALL BE PERMITTED AT THE SITE.
2. THE FINAL SITE PLAN SHALL CLEARLY SHOW THE LIMITS OF THE CONDITIONAL USE AREA FOR THIS SOLAR ARRAY AS WELL AS THE REMAINING ACREAGE THAT IS NOT PART OF THIS CONDITIONAL USE.
3. THE ENTIRE AREA OF THE SOLAR ARRAY SHALL BE SURROUNDED BY A 7-FOOT-TALL FENCE TO COMPLY WITH THE HEIGHT REQUIREMENT OF THE NATIONAL ELECTRIC CODE. THE FENCING SHALL INCLUDE INTERWOVEN SCREENING FOR A TEN-YEAR PERIOD WITH THE NORTHERN PROPERTY BEING SHIELDED FOR ITS LENGTH WITH ITS NEIGHBOR BY A SOLID FENCE. THE FENCE LOCATION AND TYPE OF SCREENING SHALL BE SHOWN ON THE FINAL SITE PLAN.
4. THE SOLAR ARRAY WILL BE LOCATED ON APPROXIMATELY 14.82 ACRES OF A LARGER 30.55-ACRE TRACT AS SHOWN ON THE REVISED PLAN DATED JUNE 1, 2026. THE ARRAY AREA COMPLIES WITH ALL THE CODE REQUIREMENTS FOR SEPARATION DISTANCES AND SETBACKS FROM PROPERTY LINES AND DWELLINGS AND THE SETBACKS ALONG THE NORTHERN BOUNDARY WITH THE RIDING ORGANIZATION HAVE BEEN INCREASED TO 220 FEET WITH A 20-FOOT-WIDE LANDSCAPED BUFFER. THIS LANDSCAPED BUFFER SHALL BE PLANTED WITH EVERGREEN VEGETATION THAT SERVES AS A SCREEN WHILE NOT IMPEDING THE USE AS A SOLAR ARRAY FACILITY. THE LOCATION AND TYPES OF VEGETATION USED WITHIN THIS BUFFER AREA SHALL BE INCLUDED IN A LANDSCAPE PLAN PROVIDED WITH THE FINAL SITE PLAN.

CONDITIONS OF APPROVAL (CONTINUED):

5. TRANSFORMERS AND SIMILAR EQUIPMENT SHALL BE CENTRALLY LOCATED ON THE SITE AS SHOWN ON THE REVISED CONDITIONAL USE SITE PLAN DATED JUNE 1, 2026.
6. ANY LIGHTING ON THE FACILITY SHALL ONLY CONSIST OF PERIMETER LIGHTING NEEDED FOR SECURITY PURPOSES. ANY LIGHTING SHALL BE DOWNWARD SCREENED SO THAT IT DOES NOT SHINE ON NEIGHBORING PROPERTIES OR ROADWAYS.
7. ONE UNLIT SIGN, NOT TO EXCEED 32 SQUARE FEET IN SIZE, SHALL BE PERMITTED. THE SIGN SHALL IDENTIFY THE OPERATOR OF THE SOLAR FARM AND SHALL PROVIDE CONTACT INFORMATION IN CASE OF EMERGENCY.
8. STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE STATE AND COUNTY REQUIREMENTS. THESE FACILITIES SHALL BE OPERATED USING BEST MANAGEMENT PRACTICES.
9. THE FINAL SITE PLAN SHALL INCLUDE A DECOMMISSIONING PLAN THAT INCLUDES A FINANCIAL SECURITY TO ENSURE THAT FUNDS ARE AVAILABLE FOR DECOMMISSIONING AND REMOVAL OF THE SOLAR FARM IN ITS ENTIRETY THROUGHOUT THE LIFE OF THE CONDITIONAL USE.
10. THE FINAL SITE PLAN SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE SUSSEX COUNTY PLANNING & ZONING COMMISSION.

SHEET INDEX

COVER SHEET
C-001 COVER SHEET & LAYOUT
EXISTING CONDITIONS PLAN
C-101 BOUNDARY & EXISTING CONDITIONS PLAN
SITE PLANS
C-201 SITE PLAN
CONSTRUCTION DETAILS
C-901 CONSTRUCTION DETAILS
LANDSCAPE PLANS
L-101 LANDSCAPE PLAN
L-102 LANDSCAPE DETAILS

GENERAL NOTES:

1. INFORMATION SHOWN HERON IS BASED UPON A FIELD SURVEY PERFORMED BY BECKER MORGAN GROUP, INC IN MARCH OF 2024
2. THE SITE IS NOT LOCATED WITHIN THE 100 YEAR FLOODPLAIN AS SHOWN ON FIRM 10005C0310L, DATED JUNE 20, 2018.
3. THERE ARE NO KNOWN WETLANDS ON SITE.
4. ALL ROADS, PARKING AND OTHER PAVED AREAS WILL BE PRIVATELY OWNED AND MAINTAINED AND ARE NOT INTENDED FOR DEDICATION.
5. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
6. THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENT FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
7. BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION HE MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM SUSSEX CONSERVATION DISTRICT (S.C.D.), DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT), AND APPROPRIATE STATE AND COUNTY AGENCIES.
8. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO THE STATE OF DELAWARE STANDARDS.
9. NO CEMETERY OR BURIAL GROUNDS WERE OBSERVED ON THIS SITE.
10. NO OBSERVED EVIDENCE OF EARTH MOVING WORK WITHIN RECENT MONTHS AT THE TIME OF THIS SURVEY.
11. NO OBSERVED EVIDENCE OF THIS SITE BEING USED AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL AT THE TIME OF SURVEY.
12. NO ENCROACHMENTS WERE OBSERVED ON THIS SITE AT THE TIME OF SURVEY.
13. PARCEL HAS DIRECT ACCESS TO DE ROUTE 5, A PUBLIC RIGHT OF WAY.
14. UTILITIES SHOWN HEREON ARE BASED UPON THE FIELD VISUAL OBSERVATIONS. LOCATIONS ARE NOT MEANT TO BE EXACT AS THE LINES WERE NOT EXCAVATED.
15. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
16. ALL PROPOSED SIGNAGE IS REQUIRED TO OBTAIN A SEPARATE PERMIT FROM SUSSEX COUNTY.

SITE DATA

1.	SITE NAME:	MILTON DE SOLAR CSS LLC
2.	OWNER OF RECORD:	CORNFARM LLC 18933 PALOMINO TRAIL HARBESON, DE 19951
	APPLICANT:	MILTON DE SOLAR CSS LLC C/O JONATHAN MANCINI 111 SPEEN STREET, SUITE 410 FRAMINGHAM, MA 01701 (612) 315-6933
3.	ENGINEER:	BECKER MORGAN GROUP, INC. C/O JON S. FALKOWSKI 309 SOUTH GOVERNORS AVE DOVER, DE 19904 302-734-7950
4.	PROPERTY LOCATION:	17204 HARBESON ROAD HARBESON, DE 19951
	LATITUDE:	38°44'35.8"N
	LONGITUDE:	75°17'23.4"W
5.	JURISDICTION:	SUSSEX COUNTY
6.	TAX PARCEL NUMBER:	235-26.00-17.01
7.	SOURCE OF TITLE:	PB: 6373, PG. 290
8.	SYSTEM SIZE:	2.00 MW (ac) / 2.796 MW (dc)
9.	TOTAL SITE AREA SUMMARY:	30.55 ACRES ±
10.	NET DEVELOPMENT AREA:	30.55 ACRES ±
11.	TOTAL CONDITIONAL USE AREA:	14.82 ACRES ±
12.	FENCED-IN ARRAY AREA:	12.86 ACRES ±
13.	ZONING CLASSIFICATION:	EXISTING - AR-1 - AGRICULTURAL RESIDENTIAL PROPOSED - AR-1 - AGRICULTURAL RESIDENTIAL
14.	MINIMUM SEGS SETBACKS REQUIREMENTS SHALL BE AS FOLLOWS:	
	ROAD / R.O.W.:	100 FEET
	REAR:	50 FEET
	SIDE:	50 FEET
	ADJACENT DWELLING:	200 FEET
15.	LAND USE:	
	EXISTING:	AGRICULTURAL
	PROPOSED:	COMMUNITY SOLAR ENERGY SYSTEM
16.	ROAD CLASSIFICATION:	HARBESON ROAD (#00022) - MAJOR COLLECTOR - 50 MPH
17.	FLOOD ZONE DETERMINATION:	
	(BASED ON FLOOD INSURANCE RATE MAPS PROVIDED BY FEMA)	
	FIRM MAP:	10005C0310L
	EFFECTIVE DATES:	JUNE 20, 2018
	FIRM ZONES:	"X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN
18.	PUBLIC WATER AND SEWER OR A PRIVATE WELL AND SEPTIC ARE **NOT** PROPOSED FOR THE SITE.	
19.	THERE ARE NO KNOWN WETLANDS PRESENT ON SITE.	
20.	FUTURE LAND USE MAP:	LOW DENSITY AREA

LEGEND

ITEM	EXISTING	PROPOSED
SANITARY GRAVITY SEWER LINE (**S**) SIZE & FLOW DIRECTION	EX. 10"S	10" S
SANITARY SEWER FORCE MAIN (**F.M.**) SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
SANITARY SEWER MANHOLE (**S.S.M.H.**)		
SANITARY SEWER CLEANOUT (**C.O.**)		
WATER MAIN & SIZE	EX. 10" W	12" W
FIRE HYDRANT (**F.H.**)	F.H.	F.H.
WATER VALVE (**W.V.**) OR METER (**W.M.**)	W.M. W.V.	W.M. W.V.
STORM DRAIN MANHOLE (**S.D.M.H.**)		
STORM DRAIN LINE (**CMP, RCP, HDPE**)		
CATCH BASIN (**C.B.**)		
UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (**O.T.**), ELECTRIC (**O.E.**)		
UNDERGROUND ELECTRIC (**U.E.**)	U.E.	U.E.
UNDERGROUND TELEPHONE (**U.T.**)	U.T.	U.T.
UNDERGROUND GAS MAIN (**G**)	EX. 2" G	2" G
CONCRETE CURB & GUTTER		
CONCRETE SIDEWALK, SLAB / PAVING		
IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT		
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	N/A
WIRE FENCE	X X X	X X X
CHAINLINK FENCE		
STOCKADE FENCE		
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)		
DRAINAGE DITCH OR SWALE		
WETLAND BOUNDARY LINE	V V V	N/A
CONTOUR	49	55
ELEVATION SPOT SHOT	43.55	25.50 T.C. 25.00 B.C.
BENCH MARK		25.15
PROPERTY OR RIGHT-OF-WAY LINE		N/A
CENTERLINE		
LIGHT POLE		

OWNERS CERTIFICATION

I, JONATHAN MANCINI, HEREBY CERTIFY THAT WE ARE THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN; THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

Jonathan Mancini — 2026-09-14

JONATHAN MANCINI — DATE

ENGINEERS CERTIFICATION

I, JONATHAN S. FALKOWSKI, HEREBY CERTIFY THAT I AM A DULY LICENSED 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 PRACTICE AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

JONATHAN S. FALKOWSKI — P.E. No. 18828 — 2026-09-14 — DATE

JONATHAN S. FALKOWSKI No. 18828 PROFESSIONAL ENGINEER DELAWARE

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
Dover 302.734.7950 Newark 302.369.3700
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Virginia
Virginia Beach 757.734.9110
North Carolina
Charlotte 980.270.9100 Raleigh 919.243.1332
Wilmington 910.341.7600
www.beckermorgan.com

PROJECT TITLE

CONDITIONAL USE NO.: 2550

MILTON DE SOLAR CSS LLC

S-25-15

17204 HARBESON ROAD
MILTON, DE 19968
SUSSEX COUNTY

SHEET TITLE

REVISED CONDITIONAL USE SITE PLAN

0 30 60 120

SCALE: 1" = 60'

ISSUE BLOCK		
3	09/10/26	AGENCY SUBMISSION
2	08/26/26	AGENCY SUBMISSION
1	07/20/26	AGENCY SUBMISSION
MARK	DATE	DESCRIPTION

LAYER/STATE: C-001

PROJECT NO.: 2024062.00
DATE: 2026-06-01
SCALE: 1" = 60'
DRAWN BY: **M.L.T.** | PROJ. MGR.: **A.P.C.**

SHEET
C-001

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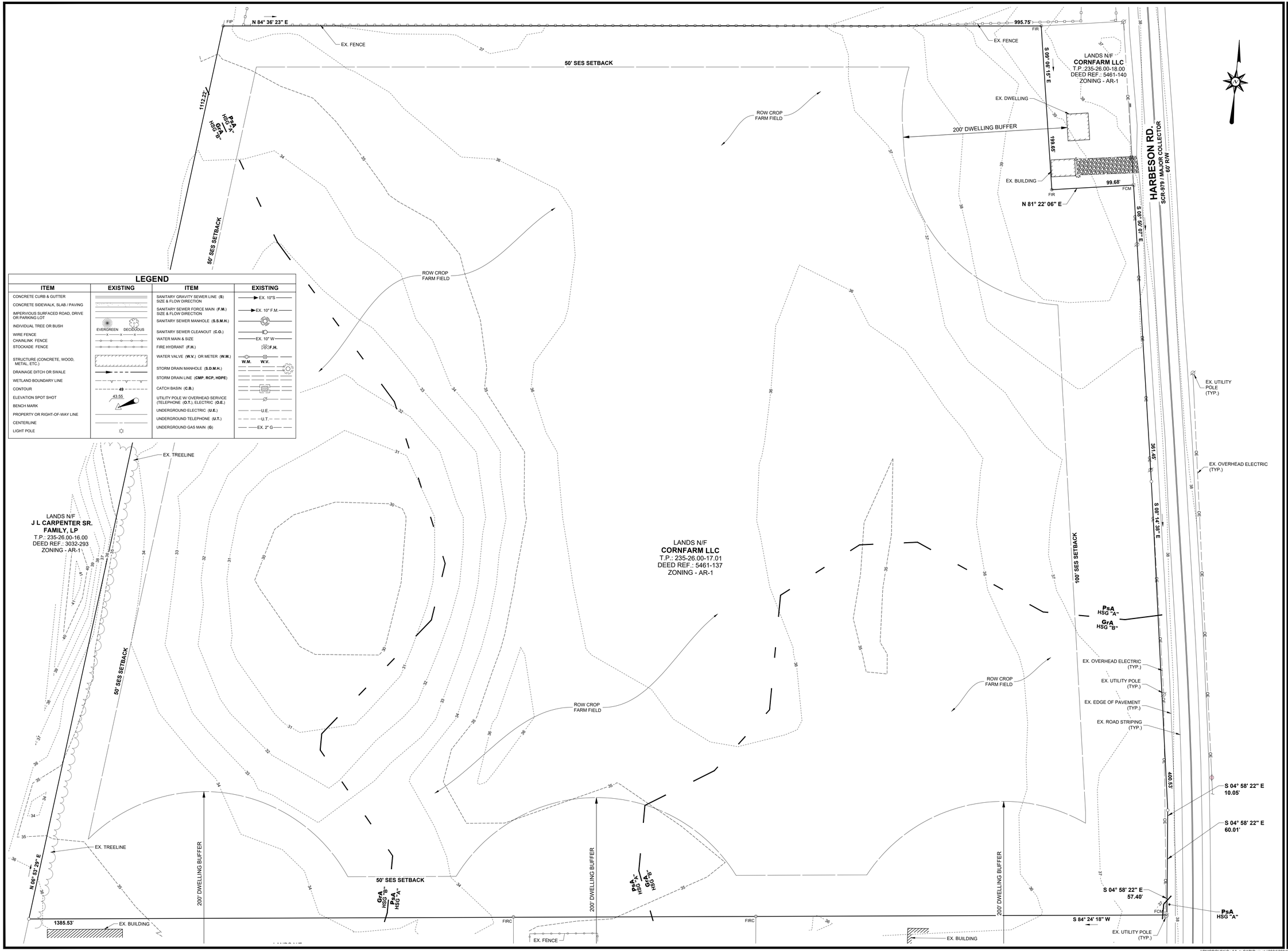

LEGEND

ITEM	EXISTING	ITEM	EXISTING
CONCRETE CURB & GUTTER		SANITARY GRAVITY SEWER LINE (S) SIZE & FLOW DIRECTION	EX. 10"S
CONCRETE SIDEWALK, SLAB / PAVING		SANITARY SEWER FORCE MAIN (F.M.) SIZE & FLOW DIRECTION	EX. 10" F.M.
IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT		SANITARY SEWER MANHOLE (S.S.M.H.)	
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	SANITARY SEWER CLEANOUT (C.O.)	
WIRE FENCE		WATER MAIN & SIZE	EX. 10" W
CHAINLINK FENCE		FIRE HYDRANT (F.H.)	F.H.
STOCKADE FENCE		WATER VALVE (W.V.) OR METER (W.M.)	W.M. W.V.
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)		STORM DRAIN MANHOLE (S.D.M.H.)	
DRAINAGE DITCH OR SWALE		STORM DRAIN LINE (CMP, RCP, HDPE)	
WETLAND BOUNDARY LINE		CATCH BASIN (C.B.)	
CONTOUR	49	UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (O.T.), ELECTRIC (O.E.)	
ELEVATION SPOT SHOT	43.55	UNDERGROUND ELECTRIC (U.E.)	U.E.
BENCH MARK		UNDERGROUND TELEPHONE (U.T.)	U.T.
PROPERTY OR RIGHT-OF-WAY LINE		UNDERGROUND GAS MAIN (G)	EX. 2" G
CENTERLINE			
LIGHT POLE			

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JONATHAN S. FALKOWSKI LICENSE No. 18828 DELAWARE PROFESSIONAL ENGINEER

Jon Falkowski

PROJECT TITLE

CONDITIONAL USE NO.: 2550

MILTON DE SOLAR CSS LLC

S-25-15

17204 HARBESON ROAD
MILTON, DE 19968
SUSSEX COUNTY

SHEET TITLE

EXISTING CONDITIONS AND DEMOLITION PLAN

0 25 50 100

SCALE: 1" = 50'

ISSUE BLOCK

MARK	DATE	DESCRIPTION
3	09/10/26	AGENCY SUBMISSION
2	08/26/26	AGENCY SUBMISSION
1	07/20/26	AGENCY SUBMISSION

LAYER STATE: C-101

PROJECT NO.:	2024062.00
DATE:	2026-06-01
SCALE:	1" = 50'
DRAWN BY: M.L.T.	PROJ. MGR.: A.P.C.

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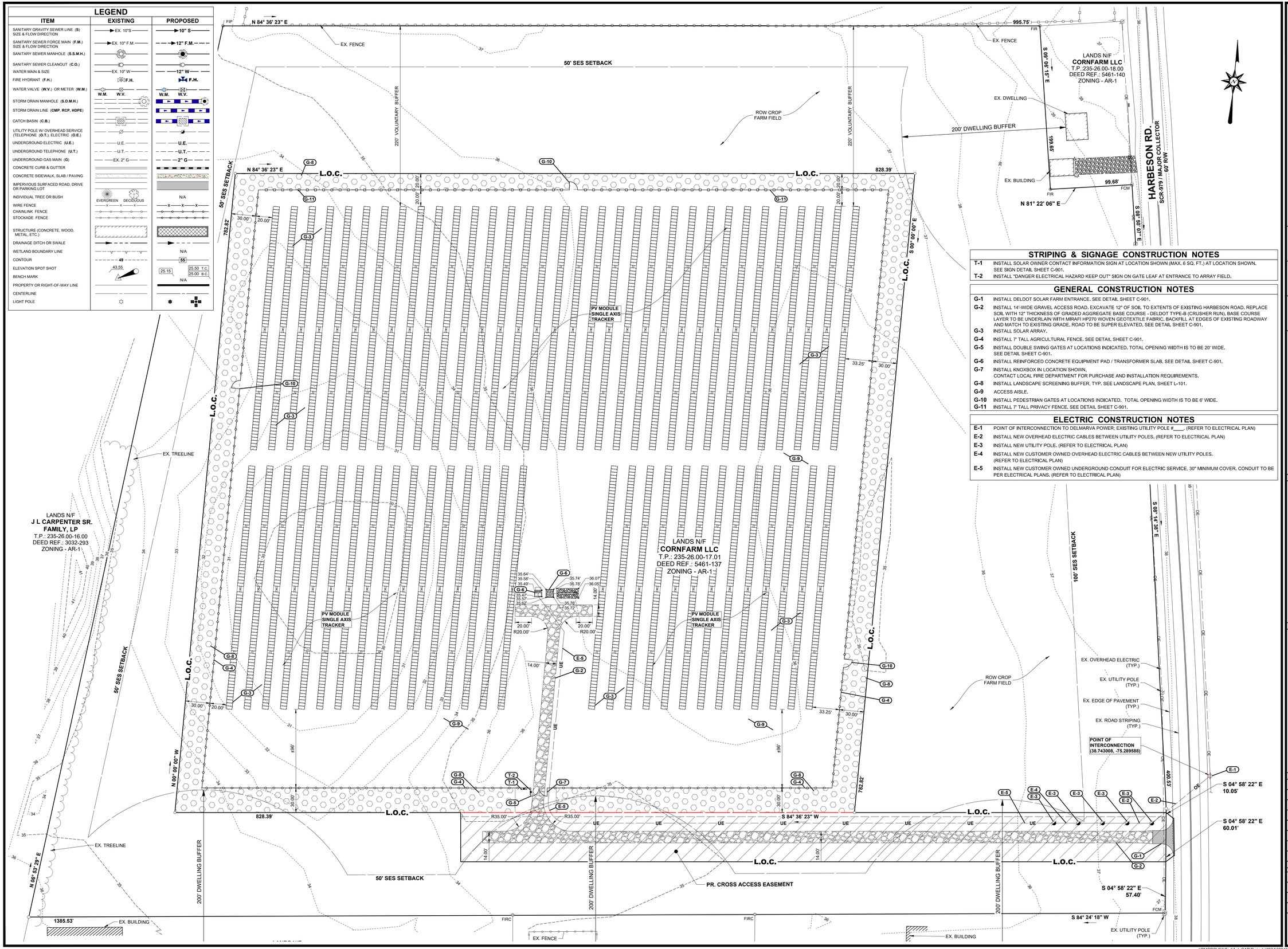
LEGEND

ITEM	EXISTING	PROPOSED
SANITARY GRAVITY SEWER LINE (**S**) SIZE & FLOW DIRECTION	EX. 10"S	10" S
SANITARY SEWER FORCE MAIN (**F.M.**) SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
SANITARY SEWER MANHOLE (**S.S.M.H.**)		
SANITARY SEWER CLEANOUT (**C.O.**)		
WATER MAIN & SIZE	EX. 10" W	12" W
FIRE HYDRANT (**F.H.**)	F.H.	F.H.
WATER VALVE (**W.V.**) OR METER (**W.M.**)	W.M. W.V.	W.M. W.V.
STORM DRAIN MANHOLE (**S.D.M.H.**)		
STORM DRAIN LINE (**CMP**, **RCP**, **HDPE**)		
CATCH BASIN (**C.B.**)		
UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (**O.T.**), ELECTRIC (**O.E.**)		
UNDERGROUND ELECTRIC (**U.E.**)	U.E.	U.E.
UNDERGROUND TELEPHONE (**U.T.**)	U.T.	U.T.
UNDERGROUND GAS MAIN (**G**)	EX. 2" G	2" G
CONCRETE CURB & GUTTER		
CONCRETE SIDEWALK, SLAB / PAVING		
IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT		N/A
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	
WIRE FENCE		
CHAINLINK FENCE		
STOCKADE FENCE		
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)		
DRAINAGE DITCH OR SWALE		N/A
WETLAND BOUNDARY LINE		
CONTOUR	49	55
ELEVATION SPOT SHOT	43.55	25.15
BENCH MARK		25.50 T.C. 25.00 B.C.
PROPERTY OR RIGHT-OF-WAY LINE		N/A
CENTERLINE		
LIGHT POLE		



STRIPING & SIGNAGE CONSTRUCTION NOTES

T-1	INSTALL SOLAR OWNER CONTACT INFORMATION SIGN AT LOCATION SHOWN (MAX. 6 SQ. FT.) AT LOCATION SHOWN. SEE SIGN DETAIL SHEET C-901.
T-2	INSTALL "DANGER ELECTRICAL HAZARD KEEP OUT" SIGN ON GATE LEAF AT ENTRANCE TO ARRAY FIELD.

GENERAL CONSTRUCTION NOTES

G-1	INSTALL DELDOT SOLAR FARM ENTRANCE. SEE DETAIL SHEET C-901.
G-2	INSTALL 14'-WIDE GRAVEL ACCESS ROAD. EXCAVATE 12" OF SOIL TO EXTENTS OF EXISTING HARBESON ROAD. REPLACE SOIL WITH 12" THICKNESS OF GRADED AGGREGATE BASE COURSE - DELDOT TYPE-B (CRUSHER RUN), BASE COURSE LAYER TO BE UNDERLAIN WITH MIRAFI HP270 WOVEN GEOTEXTILE FABRIC, BACKFILL AT EDGES OF EXISTING ROADWAY AND MATCH TO EXISTING GRADE. ROAD TO BE SUPER ELEVATED, SEE DETAIL SHEET C-901.
G-3	INSTALL SOLAR ARRAY.
G-4	INSTALL 7' TALL AGRICULTURAL FENCE, SEE DETAIL SHEET C-901.
G-5	INSTALL DOUBLE SWING GATES AT LOCATIONS INDICATED, TOTAL OPENING WIDTH IS TO BE 20' WIDE. SEE DETAIL SHEET C-901.
G-6	INSTALL REINFORCED CONCRETE EQUIPMENT PAD / TRANSFORMER SLAB, SEE DETAIL SHEET C-901.
G-7	INSTALL KNOXBOX IN LOCATION SHOWN. CONTACT LOCAL FIRE DEPARTMENT FOR PURCHASE AND INSTALLATION REQUIREMENTS.
G-8	INSTALL LANDSCAPE SCREENING BUFFER, TYP. SEE LANDSCAPE PLAN, SHEET L-101.
G-9	ACCESS AISLE.
G-10	INSTALL PEDESTRIAN GATES AT LOCATIONS INDICATED. TOTAL OPENING WIDTH IS TO BE 6' WIDE.
G-11	INSTALL 7' TALL PRIVACY FENCE. SEE DETAIL SHEET C-901.

ELECTRIC CONSTRUCTION NOTES

E-1	POINT OF INTERCONNECTION TO DELMARVA POWER; EXISTING UTILITY POLE #____. (REFER TO ELECTRICAL PLAN)
E-2	INSTALL NEW OVERHEAD ELECTRIC CABLES BETWEEN UTILITY POLES. (REFER TO ELECTRICAL PLAN)
E-3	INSTALL NEW UTILITY POLE. (REFER TO ELECTRICAL PLAN)
E-4	INSTALL NEW CUSTOMER OWNED OVERHEAD ELECTRIC CABLES BETWEEN NEW UTILITY POLES. (REFER TO ELECTRICAL PLAN)
E-5	INSTALL NEW CUSTOMER OWNED UNDERGROUND CONDUIT FOR ELECTRIC SERVICE, 30" MINIMUM COVER. CONDUIT TO BE PER ELECTRICAL PLANS. (REFER TO ELECTRICAL PLAN)

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JONTHAN S. FALKOWSKI LICENSE No. 18828 DELAWARE PROFESSIONAL ENGINEER

PROJECT TITLE

CONDITIONAL USE NO.: 2550

MILTON DE SOLAR CSS LLC

S-25-15

17204 HARBESON ROAD
MILTON, DE 19968
SUSSEX COUNTY

SHEET TITLE

SITE PLAN

0 25 50 100

SCALE: 1" = 50'

ISSUE BLOCK		
3	09/10/26	AGENCY SUBMISSION
2	08/26/26	AGENCY SUBMISSION
1	07/20/26	AGENCY SUBMISSION
MARK	DATE	DESCRIPTION

LAYER STATE: CUD1

PROJECT NO.:	2024062.00
DATE:	2026-06-01
SCALE:	1" = 50'
DRAWN BY: M.L.T.	PROJ. MGR.: A.P.C.

SHEET

C-201

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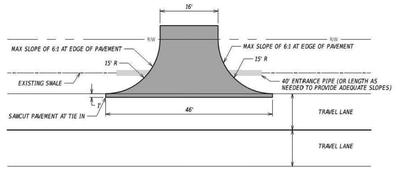
NOTES:
1. PIPE MATERIAL MAY INCLUDE REINFORCED CONCRETE PIPE (RCP) OR HIGH DENSITY POLYETHYLENE (HDPE) AS DETERMINED BY THE DISTRICT. THE LONGITUDINAL SLOPE FROM THE ENTRANCE PAVEMENT TO THE TOP OF THE PIPE SHALL BE 6:1.

2. WHEN A BITUMINOUS CONCRETE (ASPHALT) PAVEMENT SECTION IS PROPOSED, THE EXISTING FRONTAGE ROAD PAVEMENT SHALL BE SAWCUT 1'-0" INSIDE THE EDGE OF PAVEMENT, THE TIE-IN SHALL BE DONE PER THE ASPHALT PAVEMENT TIE-IN DETAIL AS SHOWN.

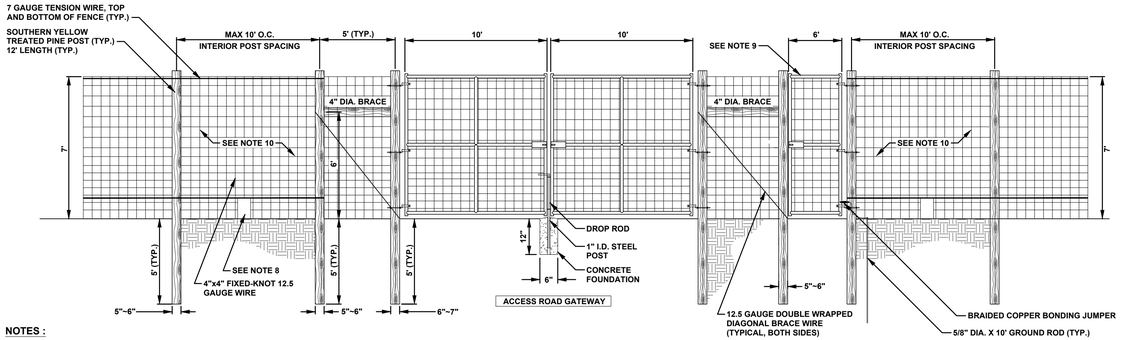
3. ENTRANCE DESIGNED FOR A P/B DESIGN VEHICLE.

ENTRANCE PAVEMENT SECTION

2" TYPE C ASPHALT
3" TYPE B ASPHALT
8" GABC OR SIMILAR APPROVED MATERIAL



SOLAR FARM / UTILITY ENTRANCE PLAN



ACCESS ROAD GATEWAY

GRAPHICAL DEPICTION OF PRIVACY FENCE SCREENING (SEE NOTE NO. 10)

NOTES :

1. GATE SHALL BE DOUBLE SWING TYPE, PROVIDED WITH GATE HOLD BACKS, LOCKABLE GATE LATCH AND DROP BAR INSTALLED IN A MINIMUM OF 1 CUBIC FOOT OF CONCRETE. GATES SHALL BE INSTALLED AND BRACED IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS. ALL GATE POSTS SHALL BE A MINIMUM OF 6" IN DIAMETER OR AS RECOMMENDED BY THE INSTALLER.
2. PROVIDE HORIZONTAL AND DIAGONAL BRACING AT ALL CORNERS, PULL, TERMINAL AND GATE POSTS.
3. LINE POSTS SHALL BE SPACED AT A MAXIMUM OF 10'-0", SEE DETAIL FOR GATE POST SPACING.
4. POSTS SHALL BE ROUND, PRESERVATIVE-TREATED SOUTHERN YELLOW PINE CONFORMING TO ASTM D3200 (MINIMUM 6" DIA.).
5. HORIZONTAL WOOD BRACES SHALL BE PINNED OR DOWELED.
6. GATE SHALL BE PT WOOD (4" MIN. SQUARE STOCK), METAL (2"Ø BLACK COATED) OR APPROVED EQUIVALENT.
7. MESH SHALL BE HIGH TENSILE STEEL 4"X4" FIXED-KNOT 12.5 GAUGE WIRE.
8. CUT 8"WX12"H SMALL ANIMAL PASSAGES ON BOTTOM OF MESH AT 100 FOOT INTERVALS AROUND PERIMETER.
9. INSTALL 6' WIDE PEDESTRIAN GATES AT LOCATIONS SHOWN ON PLAN TO ALLOW GATE TO BE OPENED BY EMERGENCY SERVICES PERSONNEL FOR EMERGENCY WILDLIFE EGRESS.
10. INSTALL 6' PRIVACY SCREENING ON KNOT WIRE FENCE. SCREENING TO BE WOVEN LENO-STITCH POLYPROPYLENE MONOFILAMENT FABRIC, FENCE SCREEN 600 SERIES COMMERCIAL OPEN, WITH OPTIONAL WIND WINDOWS. COLOR: MIDNIGHT GREEN. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL. EQUAL ALTERNATIVES SHALL BE SUBMITTED TO PROJECT ENGINEER FOR APPROVAL.
11. MESH TO BE SECURED TO TOP OF FENCE TO ALLOW BOTTOM TO BE OPEN FOR SMALL ANIMAL PASSAGE. MESH TO BE SECURED TO FENCE USING 304 STAINLESS STEEL CABLE TIES AT 18" TO 24" O.C. OR AT RECOMMENDED MANUFACTURERS SPACING, USING SUPPLIED GROMMETS.
12. SOIL ASSUMPTIONS

    FOUNDATION DESIGN IS BASED ON PRESUMPTIVE SOIL VALUES IN ACCORDANCE WITH IBC 2021 TABLE 1806.2.

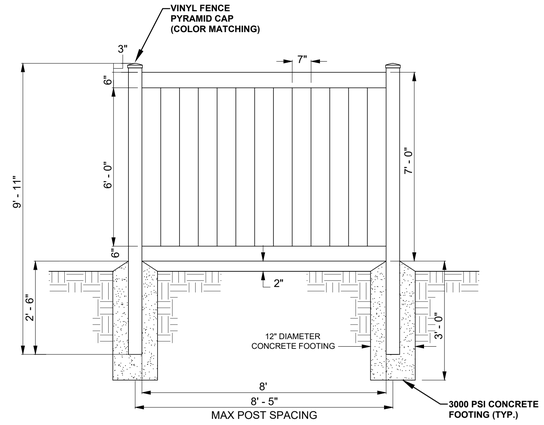
    SOIL IS ASSUMED TO BE SAND, SILTY, SAND, CLAYEY SAND, SILTY GRAVEL, OR CLAYEY GRAVEL UNLESS A GEOTECHNICAL REPORT INDICATED OTHERWISE. ALLOWABLE LATERAL BEARING PRESSURE ASSUMED: 150 PSI PER FOOT OF DEPTH BELOW FINISHED GRADE.

    IF SOILS ENCOUNTERED ARE WEAKER THAN THOSE LISTED ABOVE, ARE LOOSE, SATURATED, ORGANIC, OR OTHERWISE UNSUITABLE, THIS DETAIL SHALL NOT BE USED. ALTERNATIVE FOUNDATION DESIGN SHALL BE PROVIDED BY A REGISTERED ENGINEER.
13. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL. IF REVISIONS ARE NECESSARY TO PROVIDE WARRANTY, NOTIFY THE ENGINEER OF RECORD AND PROVIDE SIGNED AND SEALED DRAWINGS FOR REVIEW AND APPROVAL.

7' HIGH AGRICULTURAL FENCE WITH MESH DETAIL

NO SCALE

BMG NO.: SW-17G



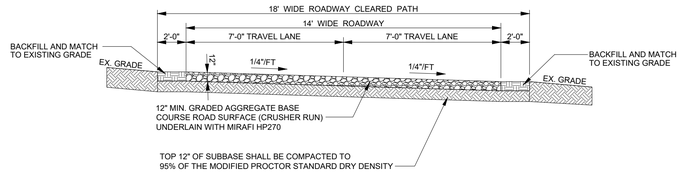
FRONT ELEVATION

NOTES :

1. THE CONTRACTOR SHALL PROVIDE AND INSTALL FENCING AND GATES AS SHOWN ON THE CONTRACT DRAWINGS AND AS REQUIRED BY THE CONTRACT DOCUMENTS AND MANUFACTURER'S RECOMMENDATIONS.
2. PROPOSED 7.0' HIGH, VINYL PRIVACY FENCE, COLOR TO BE WHITE, OR SIMILAR, TO BE SELECTED BY OWNER. TONGUE AND GROOVE STYLE WITH ALUMINUM INSERT POSTS. FENCE SHALL INCLUDE HORIZONTAL STEEL "J" CHANNELS AND BE CONSTRUCTED FOR HIGH WIND ENVIRONMENT. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL.
3. ALL POSTS SHALL BE PLUMB, AND SPACED AT 8' - 5" CENTERS MAXIMUM, WITH A TOLERANCE OF MINUS 2". SPACING OF POSTS SHALL BE UNIFORM AND ADDITIONAL INSTALLED AT ANY ABRUPT CHANGES IN GRADE OR DIRECTION.

VINYL PRIVACY FENCE DETAIL

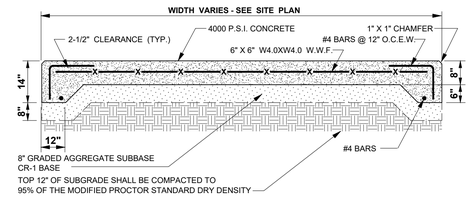
NO SCALE



1. 6" TOPSOIL SEED & MULCH ALL DISTURBED AREAS
2. REFER TO SITE GRADING SHEETS FOR ELEVATIONS.

TYPICAL 14' WIDE GRAVEL ACCESS ROAD SECTION (SUPER ELEVATED)

NO SCALE



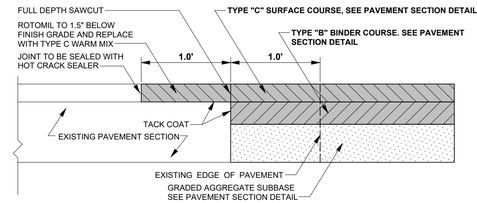
NOTE:

CONTRACTOR TO PROVIDE CONTRACTION JOINTS AT A MINIMUM OF 10' SPACING WITH EXPANSION JOINTS AT A MINIMUM SPACING OF 20' AND WHEN ADJACENT TO FIXED OBJECTS SUCH AS CURB, WALLS, ETC.

8" CONCRETE TRANSFORMER SLAB DETAIL

NO SCALE

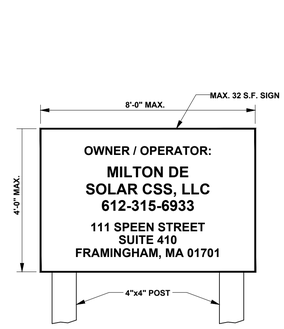
BMG NO.: SW-6D



PAVEMENT TIE-IN SECTION

NO SCALE

BMG NO.: SW-2DA

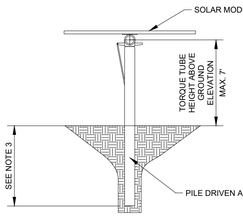


NOTES:

1. SIGNAGE SUBJECT TO A SEPARATE SIGN PERMIT TO BE SUBMITTED BY SIGN CONTRACTOR.
2. OPERATOR CONTACT INFORMATION SUBJECT TO CHANGE.
3. POSTS TO BE SET IN 3000 PSI CONCRETE FOOTING.

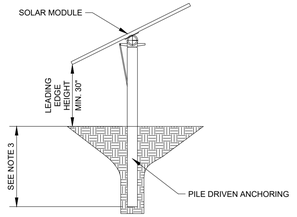
SOLAR CONTACT SIGN DETAIL

NO SCALE



TYP. SIDE VIEW

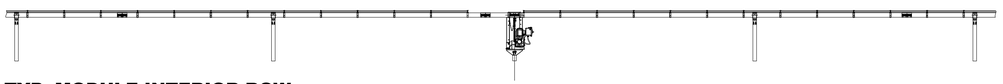
SCALE: 1/4" = 1'-0"



TYP. SIDE VIEW WITH 20° TILT

SCALE: 1/4" = 1'-0"

NOTES:
1. DRAWING IS DIAGRAMMATIC AS SHOWN AND INTENDED TO COMMUNICATE INTENT.
2. PILE SURVEYING SHALL BE PERFORMED BY A LICENSED SURVEYOR USING THE APPLICABLE STATE-PLANE COORDINATE SYSTEM.
3. EPC TO DETERMINE PILE EMBEDMENT AND FOUNDATIONS PER GEOTECH CALCULATIONS FOR EACH TORQUE TUBE HEIGHT AND BASE
4. FOUNDATION AND RACKING SHALL BE INSTALLED PER MANUFACTURER'S INSTALLATION MANUAL AND WITHIN STATED TOLERANCES.
5. ALL GRADING AND DRAINAGE SHALL BE PER CIVIL CONSTRUCTION DRAWINGS.
6. EPC TO DETERMINE RACKING SPACING
7. ALL STUCTURAL AND MECHANICAL DESIGNS TO BE PERFORMED BY A QUALIFIED LICENSED PROFESSIONAL ENGINEER.
8. DESIGN CRITERIA:
   - 8.1. 105 MPH WIND SPEED, ASCE 7-10, CAT I OR COUNTY MINIMUM REQUIREMENTS; WHICHEVER IS HIGHER
   - 8.2. 25 PSF GROUND SNOW EXPOSURE OR COUNTY MINIMUM REQUIREMENTS; WHICHEVER IS HIGHER
   - 8.3. ANCHORING IS PILE DRIVEN UNLESS OTHERWISE REQUIRED BY SITE CONDITIONS.
   - 8.4. PANELS AZIMUTH 180
   - 8.5. FINAL DESIGN MAY BE ADJUSTED PRIOR TO CONSTRUCTION. MAXIMUM HEIGHT NOT TO BE INCREASED WITHOUT APPROVAL FROM THE ENGINEER AND AHJ.
   - 8.6. <20% OF LEADING EDGES TO BE WITHIN 3' OF GROUND FOR PURPOSES OF POLLINATOR GROWTH.
   - 8.7. <5% OF TORQUE TUBE TO BE >8' ABOVE GROUND ELEVATION.
   - 8.8. RACKING TO BE SINGLE PORTRAIT ORIENTATION.



TYP. MODULE INTERIOR ROW

SCALE: 1/8" = 1'-0"

DANGER SIGN DETAIL (11"X17" SIZE)

NO SCALE

BECKER MORGAN GROUP

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JONATHAN S. FALKOWSKI LICENSE No. 18828 DELAWARE PROFESSIONAL ENGINEER

PROJECT TITLE

CONDITIONAL USE NO.: 2550

MILTON DE SOLAR CSS LLC

S-25-15

17204 HARBESON ROAD
MILTON, DE 19968
SUSSEX COUNTY

SHEET TITLE

CONSTRUCTION DETAILS

0

SCALE: 1" =

ISSUE	BLOCK	
3	09/10/26	AGENCY SUBMISSION
2	08/26/26	AGENCY SUBMISSION
1	07/20/26	AGENCY SUBMISSION
MARK	DATE	DESCRIPTION

LAYER STATE: C-901

PROJECT NO.: 2024062.00
DATE: 2026-06-01
SCALE: AS NOTED
DRAWN BY: M.L.T. | PROJ. MGR.: A.P.C.

SHEET
C-901

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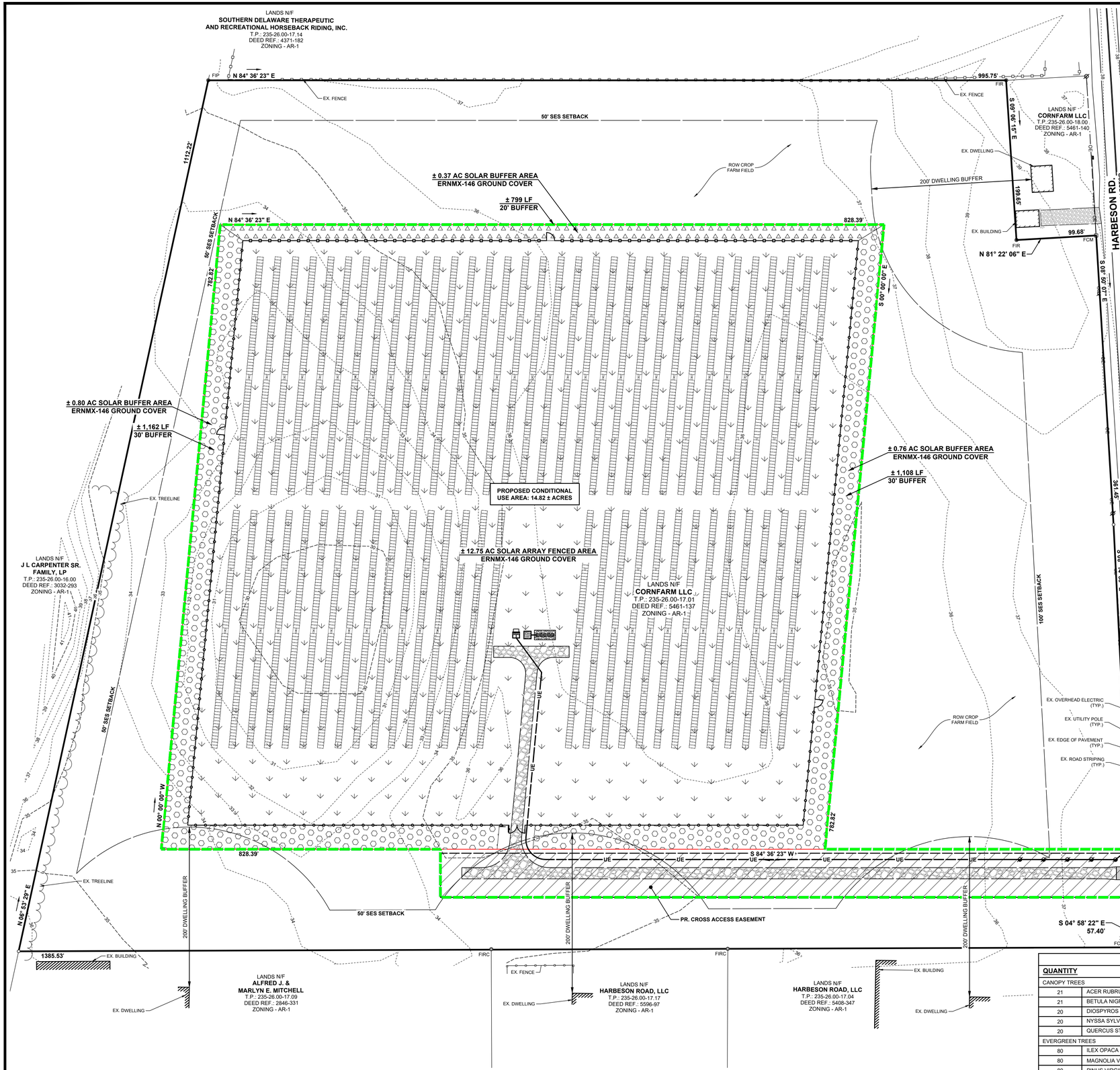

LEGEND	
ITEM	HATCH
30' PERIMETER BUFFER AREA	
20' SOLAR BUFFER AREA	
SOLAR ARRAY SEEDED AREA	

GENERAL LANDSCAPE NOTES :

1. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN "AMERICAN STANDARDS FOR NURSERY STOCK."

   EVERGREEN TREES SHALL HAVE A FULL, WELL-BRANCHED, CONICAL FORM TYPICAL OF THE SPECIES.

   ALL DECIDUOUS SHADE TREES SHALL BRANCH A MINIMUM OF 7'-0" ABOVE GROUND LEVEL. TREES SHALL BE PLANTED AND STAKED IN ACCORDANCE WITH THE DETAIL SHOWN.

   PLANT MATERIALS DELIVERED TO THE SITE IN UNCOVERED TRUCKS WILL BE REJECTED.

   UNACCEPTABLE PLANT MATERIALS: MATERIALS WHICH HAVE DAMAGED OR CROOKED LEADERS, DEFORMED GROWTH HABIT, ABRASIONS OF THE BARK, SUN SCALD, WINDBURN, DISFIGURING NOT COMPLETELY CALLUSED WILL BE REJECTED. IN ADDITION, TREES HAVING THEIR CENTRAL LEADERS HEADED BACK WILL ALSO BE REJECTED. PLANTS WITH LOOSE OR CRACKED ROOT BALL OR CONTAINERS WILL BE REJECTED.
2. ALL PLANTS SHALL BE PLANTED IN TOPSOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACKFILLING PROGRESSES. NOTHING BUT SUITABLE TOPSOIL, FREE OF DRY SOD, STIFF CLAY, LITTER, STONES IN EXCESS OF ONE (1) INCH DIAMETER, ETC. SHALL BE USED FOR PLANTING.

   MULCH FOR PLANTING BEDS SHALL BE SHREDDED HARDWOOD BARK MULCH UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SHALL HAVE NO LEAVES, YOUNG GREEN GROWTH, BRANCHES, TWIGS, GREATER IN DIAMETER OF ½", WEEDS, SHAVINGS OR FOREIGN MATERIAL SUCH AS STONES, ETC. SHALL BE MIXED WITH THE MULCH. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS WITH A LIGHTLY COMPACTED DEPTH OF THREE (3) INCHES. ALL CONTAINER PLANTS ARE TO HAVE ROOTS CUT ON FOUR SIDES AND/ OR SPREAD OUT IN NEW SOIL MIXTURE.
3. ALL AREAS NOT STABILIZED IN PAVING OR PLANT MATERIALS SHOULD BE SEEDED AND MULCHED. (SEE EROSION & SEDIMENT CONTROL PLAN AND NOTES.)
4. AREAS DISTURBED BY LANDSCAPE OPERATIONS SHALL BE GRADED TO MATCH EXISTING TOPSOIL AND SEED OR SOD AS REQUIRED.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND MAY MAKE MINOR ADJUSTMENTS IN SPACING AND/OR LOCATION OF PLANT MATERIALS. CONTRACTOR TO VERIFY "AS BUILT" LOCATION OF ALL UTILITIES.
6. NO PLANT, EXCEPT GROUNDCOVERS, SHALL BE WITHIN THREE (3) FEET FROM SIDEWALKS.
7. NO TREE SHALL BE PLANTED CLOSER THAN TEN (10) FEET FROM ANY STRUCTURE OR BUILDING.
8. NO TREE SHALL BE PLANTED WITHIN TEN (10) FEET OF UNDERGROUND UTILITIES OR FIRE HYDRANTS.
9. ONLY TREES THAT REACH A HEIGHT AND SIZE AT MATURITY OF SMALL TO MEDIUM SHALL BE PLANTED UNDER POWER LINES.
10. THE CONTRACTOR SHALL WATER ALL PLANTS THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING, AND THEN WEEKLY OR MORE OFTEN, IF NECESSARY, DURING THE FIRST GROWING SEASON, UNLESS THE OWNER AGREES TO MAINTAIN AND WATER THEM.
11. TREES TO REMAIN ON-SITE SHALL BE PROTECTED WITH SNOW FENCE DURING CONSTRUCTION (SEE DETAIL). SNOW FENCING TO BE MAINTAINED DURING CONSTRUCTION BY CONTRACTOR.
12. THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.
13. NO SUBSTITUTIONS SHALL BE MADE WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT.
14. ALL NEW TREES SHALL BE GUARANTEED TO SURVIVE FOR ONE FULL YEAR AFTER INSTALLATION (FULL COST). ALL STAKES AND GUYS SHALL BE REMOVED FROM TREES AND SITE AS EARLY AS THREE (3) MONTHS, BUT NO LONGER THAN ONE (1) YEAR AFTER PLANTING.

SUSSEX COUNTY SOLAR - TREE DENSITY & BUFFER NOTES:

1.	TOTAL EXISTING WOODLAND :	0 S.F. (0 AC)
2.	EXISTING WOODLAND TO BE CLEARED :	0 S.F. (0 AC)
3.	EXISTING WOODLAND TO REMAIN :	0 S.F. (0 AC)
4.	SUSSEX CO. 30' PERIMETER BUFFER:	2,270 LF / 100 LF = 22.70 BUFFER UNITS 22.70 BUFFER UNITS X 15 TREES = 340.5 = 341 TREES 341 TREES X 30% = 102.3 = 102 CANOPY TREES 341 TREES X 70% = 238.7 = 239 EVERGREEN TREES
5.	SUSSEX CO. 20' SOLAR BUFFER:	799 LF / 100 LF = 7.99 BUFFER UNITS 7.99 BUFFER UNITS X 10 TREES = 79.9 = 80 EVERGREEN TREES
6.	TOTAL PLANTINGS PROVIDED:	102 CANOPY TREES 319 EVERGREEN TREES
7.	GROUNDCOVER PROVIDED:	FENCED AREA = 12.75 AC BUFFER AREA: = 1.93 AC TOTAL GROUNDCOVER AREA = 14.68 AC

DELAWARE LANDSCAPE ARCHITECTS CERTIFICATION

I, CHAD D. CARTER, RLA, ASLA, HEREBY CERTIFY THAT I AM A LANDSCAPE ARCHITECT IN THE STATE OF DELAWARE, THAT THE LANDSCAPING INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF, REPRESENTS GOOD LANDSCAPING PRACTICES.

CHAD D. CARTER, RLA, ASLA — S1-499 — 09/14/2026 DATE

CHAD D. CARTER No. S1-499 RESIDENT DELAWARE LANDSCAPE ARCHITECT

PLANT LIST

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
CANOPY TREES					
21	ACER RUBRUM	RED MAPLE	1.5" CAL. / 6' HGT. MIN.	B&B	FHV
21	BETULA NIGRA	RIVER BIRCH	1.5" CAL. / 6' HGT. MIN.	B&B	FHV
20	DIOSPYROS VIRGINIANA	COMMON PERSIMMON	1.5" CAL. / 6' HGT. MIN.	B&B	FHV
20	NYSSA SYLVATICA	BLACK GUM	1.5" CAL. / 6' HGT. MIN.	B&B	FHV
20	QUERCUS STELLATA	POST OAK	1.5" CAL. / 6' HGT. MIN.	B&B	FHV
EVERGREEN TREES					
80	ILEX OPACA	AMERICAN HOLLY	5' HGT MIN.	B&B	FHV
80	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	5' HGT MIN.	B&B	FHV
80	PINUS VIRGINIANA	VIRGINIA PINE	5' HGT MIN.	B&B	FHV
79	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	5' HGT MIN.	B&B	FHV

TOTAL: 102 CANOPY TREES, 319 EVERGREEN TREES

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

MILTON DE SOLAR CSS LLC

17204 HARBESON ROAD
MILTON, DE 19968
SUSSEX COUNTY

SHEET TITLE

LANDSCAPE PLAN

0 30 60 120

SCALE: 1" = 60'

ISSUE BLOCK		
1	07/20/26	AGENCY SUBMISSION
MARK	DATE	DESCRIPTION

LAYER STATE: L-101

PROJECT NO.:	2024062.00
DATE:	2026-06-01
SCALE:	1" = 60'
DRAWN BY: P.R.R.	PROJ. MGR.: A.P.C.

SHEET
L-101

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F:\AutoCAD\Projects\2024\2024062\DWG\20240620O-LSCAPE-C3D21.dwg, Sep 15, 2026 - 9:40am

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: July 15, 2026

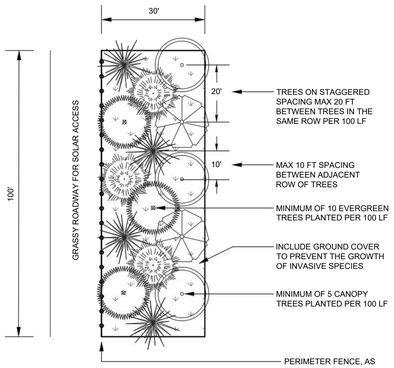
Fuzz & Buzz Mix - Standard - ERNMX-146

	Botanical Name	Common Name	Price/Lb
26.70%	Lolium perenne, 'Tribal', Tetraploid	Perennial Ryegrass, 'Tribal', Tetraploid	$3.12
21.00%	Dactylis glomerata, 'Tekapo'	Orchardgrass, 'Tekapo'	$5.72
18.80%	Poa pratensis, 'Filly'	Kentucky Bluegrass, 'Filly' (pasture type)	$4.55
12.40%	Bromus biebersteinii, 'Fleet'	Meadow Brome, 'Fleet'	$5.98
5.70%	Trifolium hybridum	Alsike Clover	$6.24
5.00%	Festuca elatior x Lolium perenne, Duo	Festulolium, 'Duo'	$3.90
4.80%	Trifolium pratense, Medium, Variety Not Stated	Red Clover, Medium, Variety Not Stated	$4.42
2.00%	Lotus corniculatus, 'Norcen'	Bird's Foot Trefoil, 'Norcen'	$11.70
1.00%	Linum perenne	Perennial Blue Flax	$46.80
0.80%	Cichorium intybus	Blue Chicory	$20.80
0.80%	Coreopsis lanceolata	Lanceleaf Coreopsis	$31.20
0.50%	Chrysanthemum leucanthemum	Oxeye Daisy	$44.20
0.30%	Aster oblongifolius, PA Ecotype	Aromatic Aster, PA Ecotype	$234.00
0.20%	Pycnanthemum tenuifolium	Narrowleaf Mountainmint	$260.00
100.00%		**Mix Price/Lb Bulk:**	**$6.96**

Seeding Rate: Expect to apply about 40 lbs per acre with a cover crop of annual ryegrass 12 lbs/acre

Forage & Pasture Sites, Forage & Pasture Sites, Mixes, Solar Sites

The Fuzz & Buzz Mix-Standard was developed to address the unique nutritional needs of sheep, while providing a low-growing, easily maintained and sustainable vegetation solution for solar installations. The plant species were chosen with guidance from the American Solar Grazing Association (ASGA). The wildflowers in this mix support pollinators. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.



NOTES:

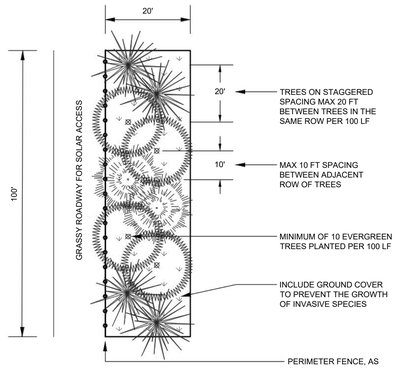
ALL TREES THAT ARE TO BE PLANTED SHALL INCLUDE A MIX OF 30% DECIDUOUS SHADE TREES AND 70% EVERGREEN TREES, A MAJORITY OF WHICH SHALL BE SUITABLE TREES OF COMMON LOCAL SPECIES, WHICH MAY INCLUDE EXISTING AS WELL AS PLANTED TREES. EVERY ONE-HUNDRED-FOOT LENGTH OF BUFFER SHALL INCLUDE A MINIMUM TOTAL OF 15 TREES. NO PLANTED SPECIES SHALL MAKE UP MORE THAN 40% OF THE PLANTINGS. EXISTING NATIVE VEGETATION MAY BE USED TO ACHIEVE THE REQUIRED PLANTED BUFFER. REFER TO PLANT LIST AND BUFFER NOTES FOR PLANT PERCENTAGE BREAKDOWN.

DEVELOPER SHALL PROVIDE A MINIMUM OF THREE (3) ROWS OF TREES ARRANGED IN A STAGGERED NATURAL MANNER THROUGHOUT THE ENTIRE WIDTH OF THE BUFFER TO EFFECTIVELY ACHIEVE A VISUAL LANDSCAPED SCREENING

INCLUDE GROUNDCOVER TO MINIMIZE GROWTH OF INVASIVE SPECIES OR PROVIDE A MOWING SCHEDULE UNTIL THE AREA IS FULLY ESTABLISHED IN NATURAL CONDITION. THE BUFFER SHALL BE MAINTAINED TO PREVENT DISEASE FROM SPREADING AND ANY TREES THAT DO NOT SURVIVE SHALL BE REPLACED.

SUSSEX CO. 30' PERIMETER BUFFER DETAIL

NO SCALE



NOTES:

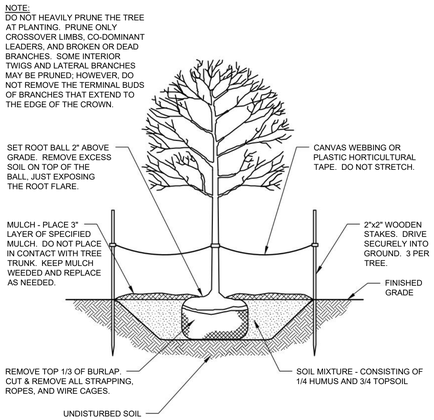
ALL TREES THAT ARE TO BE PLANTED SHALL INCLUDE 100% EVERGREEN TREES, A MAJORITY OF WHICH SHALL BE SUITABLE TREES OF COMMON LOCAL SPECIES, WHICH MAY INCLUDE EXISTING AS WELL AS PLANTED TREES. EVERY ONE-HUNDRED-FOOT LENGTH OF BUFFER SHALL INCLUDE A MINIMUM TOTAL OF 10 TREES. NO PLANTED SPECIES SHALL MAKE UP MORE THAN 40% OF THE PLANTINGS. EXISTING NATIVE VEGETATION MAY BE USED TO ACHIEVE THE REQUIRED PLANTED BUFFER. REFER TO PLANT LIST AND BUFFER NOTES FOR PLANT PERCENTAGE BREAKDOWN.

DEVELOPER SHALL PROVIDE A MINIMUM OF TWO (2) ROWS OF TREES ARRANGED IN A STAGGERED NATURAL MANNER THROUGHOUT THE ENTIRE WIDTH OF THE BUFFER TO EFFECTIVELY ACHIEVE A VISUAL LANDSCAPED SCREENING

INCLUDE GROUNDCOVER TO MINIMIZE GROWTH OF INVASIVE SPECIES OR PROVIDE A MOWING SCHEDULE UNTIL THE AREA IS FULLY ESTABLISHED IN NATURAL CONDITION. THE BUFFER SHALL BE MAINTAINED TO PREVENT DISEASE FROM SPREADING AND ANY TREES THAT DO NOT SURVIVE SHALL BE REPLACED.

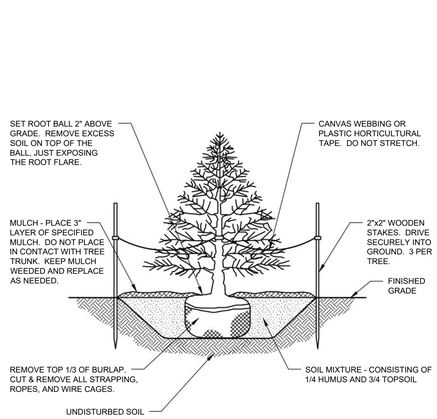
SUSSEX CO. 20' SOLAR BUFFER DETAIL

NO SCALE



DECIDUOUS TREE PLANTING DETAIL

NO SCALE BMG NO. : L-01



EVERGREEN TREE PLANTING DETAIL

NO SCALE BMG NO. : L-02

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

CHAD D. CARTER
No. S1-499
STATE OF DELAWARE
LANDSCAPE ARCHITECT

PROJECT TITLE

MILTON DE SOLAR CSS LLC

17204 HARBESON ROAD
MILTON, DE 19968
SUSSEX COUNTY

SHEET TITLE

LANDSCAPE DETAILS

ISSUE BLOCK

MARK	DATE	DESCRIPTION
1	07/20/26	AGENCY SUBMISSION

LAYER STATE: L-102

PROJECT NO.: 2024062.00
DATE: 2026-06-01
SCALE: NO SCALE
DRAWN BY: **P.R.R.** PROJ. MGR.: **A.P.C.**

SHEET
L-102

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F:\AutoCAD\Projects\2024\2024062\DWG\20240620-LSCAPE-C3D21.dwg, Sep 15, 2026 - 9:37am

From: Smith, James (DelDOT) <JamesA.Smith@delaware.gov>
Sent: Tuesday, July 28, 2026 7:15 AM
To: Andrew P. Colletti
Cc: Jon S. Falkowski
Subject: RE: 2024062 - Milton Solar CSS LLC Parcel 235-26.00-17.01

Good morning,

After review DelDOT has no objection to entrance location. Let this email serve as the EONO for parcel 235-26.00-17.01.

Thanks,
James Smith
Delaware Department of Transportation
Entrance Permit Supervisor
302-853-1342
applications on July 30 at 4:30p. Here are the main points to remember:

- Current EPS and UPA applications will shut down for data migration July 30 at 4:30p
- Your existing data will be migrated to the new system
- Your username will remain unchanged, but you will be prompted to create a new password
- You will have ONE login for any of the three applications you normally access: EPS, UPA, State Projects
- You can go ahead and watch training videos and review training guides prior to launch here: https://deldot.gov/Business/eusSystems/eus/index.shtml
- The new system will be available to you on August 4 at 8:00a at: https://EUS.DelDOT.gov

https://services.deldot.gov/EPSExternal/EPSpermit

From: Andrew P. Colletti <acolletti@beckermorgan.com>
Sent: Monday, July 27, 2026 5:17 PM
To: Smith, James (DelDOT) <JamesA.Smith@delaware.gov>
Cc: Jon S. Falkowski <jfalkowski@beckermorgan.com>
Subject: 2024062 - Milton Solar CSS LLC

James – hope all is well. Reaching out about an entrance permit application I just submitted (App #648901713). We are looking for an email of no objection to entrance location at this time. Not the actual entrance permit yet. Once we obtain the Sussex county final plan approval, we will follow up for an actual entrance permit.

Please let me know if you need anything else to forward email of no objection.

Thanks
Drew

Andrew P. Colletti
Associate
BECKER MORGAN GROUP, INC.
Delaware | Maryland | Virginia | North Carolina
302.369.3700x 294
631.487.1238 (cell)
acolletti@beckermorgan.com
www.beckermorgan.com
Facebook | LinkedIn | Instagram

OFFICE OF THE STATE FIRE MARSHAL
Technical Services

22705 Park Avenue
Georgetown, DE 19947

SFMO PERMIT – SHALL BE POSTED ON JOBSITE UNTIL FINAL INSPECTION

Plan Review Number: 2026-04-224900-MJS-01
Status: Approved as Submitted

Tax Parcel Number: 235-26.00-17.01
Date: 08/04/2026

Project

Milton DE Solar

Cornfarm LLC

17204 Harbeson Road
Milton DE 19968

Scope of Project

Number of Stories:
Square Footage:
Construction Class:
Fire District: 85 - Milton Fire Dept

Occupant Load Inside:
Occupancy Code:

Applicant

Jon S. Falkowski
309 South Governors Avenue
Dover, DE 19904

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: 2026-04-224900-MJS-01
Tax Parcel Number: 235-26.00-17.01
Status: Approved as Submitted
Date: 08/04/2026

PROJECT COMMENTS

1002 A	**This project has been reviewed under the provisions of the Delaware State Fire Prevention Regulations (DSFPR) ADOPTED September 1, 2021. The 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. The Office of the State Fire Marshal recommends theinstallation of fire sprinkler systems in all residential occupancies, including one- and two-family dwellings, duplexes, and townhomes. For additional information on residential sprinkler systems, please see here:https://statefiremarshal.delaware.gov /wp-content/uploads/sites /110/2017/07/Home_Sprinkler_Brochure.pdf**
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 orrevisions to the plans occur, plans are required to be submitted, reviewed, and approved.**

Sussex Conservation District
23181 Shortly Road
Georgetown, DE 19947
302-856-2105
https://www.sussexconservation.org

APPLICATION FOR STANDARD PLAN APPROVAL

NON-RESIDENTIAL CONSTRUCTION WITH LESS THAN 1.0 ACRE DISTURBED

Applicability Criteria

1. The disturbed area for construction of the improvements will not exceed 1.0 acre.
2. Within the disturbed area, the pre-development land use is not classified as forest.
3. For project site locations within an area previously managed for stormwater quantity and quality under an approved Sediment and Stormwater Plan, the post construction condition meets the original stormwater design criteria.
4. For project site locations within an area previously unmanaged for stormwater quantity and quality under an approved Sediment and Stormwater Plan, one of the following is met:
   a. Comparison of the existing parcel curved number (CN) based upon the Department's 2017 aerial photography to the proposed CN for the parcel after non-residential construction results in less than one whole number change in the CN, OR
   b. No new impervious area is proposed as a result of construction.

Site Information

Project Name: Milton DE Solar CSS, LLC
Site Location: 17204 Harbeson Road, Milton, DE 19968
Previous Plan Name: N/A
Previous Plan Approval Number: N/A
Tax Parcel ID: 235-26.00-17.01

Parcel Total Acres (nearest 0.1ac): 30.55 ac
Disturbed Acres (nearest 0.1ac): 0.81 ac
Proposed Impervious Area (square feet): 18,217.71 sf
Wooded area to be cleared: None
Pre CN: 71 Post CN: 41

Applicant Information

Owner: Cynthia L. & Allen W. Johnson Jr. Trustee
Mailing Address: 18933 Palomino Trail
Harbeson, DE 19951
Owner Phone:
Owner Email:
Applicant: Milton DE Solar CSS, LLC c/o Jonathan Mancini

Mailing Address: 111 Speen Street, Suite 410
Applicant Phone: 612-315-6933
Applicant Email: jmancini@ameresco.com

Approval Information (for office use only)

Approval # 2026-559 Fee Paid: $ 1100.00
Approved by: [signature] Approval Date: 8/19/2026
Title: Program Manager Expiration Date: 8/19/2031

RECEIVED
JUL 24 2026

Standard Conditions

1. Discharges from rooftops will be disconnected using one of the following methods or another method approved by the Department or Delegated Agency:
    a. Individual downspouts will discharge to lawn or landscape area.
    b. Discharges from downspouts will be collected to discharge to a rain garden.
    c. Discharges from downspouts will be collected in rain barrels or cisterns for reuse.
2. Driveways, sidewalks, patios, and other impervious surfaces will be graded to sheet flow to lawn or other pervious areas to the maximum extent practicable.
3. Unless waived in writing by the Department or Delegated Agency a construction site stormwater management plan in accordance with Department or Delegated Agency guidance for this Standard Plan shall be followed. The attached checklist has been developed to serve as guidance for preparing the construction site stormwater management plan.
4. Approval of this Standard Plan does not relieve the applicant from complying with any and all federal, state, county or municipal laws and regulations.

Stabilization Conditions

1. Following initial soil disturbance or redisturbance, temporary or permanent stabilization with seed and mulch shall be completed within 14 calendar days to the surface of all disturbed areas not actively under construction.
2. Specific stabilization recommendations may be found in the Delaware Erosion and Sediment Control Handbook, 3.4.3 Standard and Specifications for Vegetative Stabilization.

Applicant Certification

I, the undersigned, certify that the information supplied on this Application for Standard Plan Approval is accurate, the proposed land disturbing activity meets the criteria established, and all conditions of this Standard Plan Approval will be met by the applicant, builder, contractor, and owner during construction and post construction.

Applicant Signature: Jon Falkowski Date: **7-17-2026**

Applicant Printed Name: **Jon Falkowski, P.E.** Title: **Associate Principal**

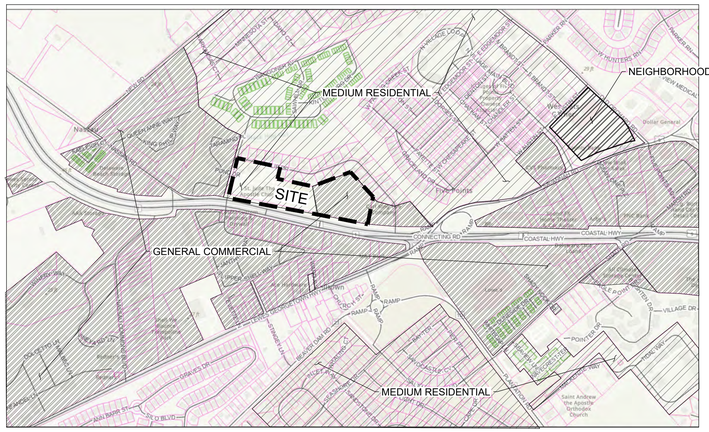
*****THIS STANDARD PLAN APPLICATION FORM MUST BE MAINTAINED ON THE SITE AT ALL TIMES DURING CONSTRUCTION****

ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

152 TULIP DRIVE, LEWES, DELAWARE

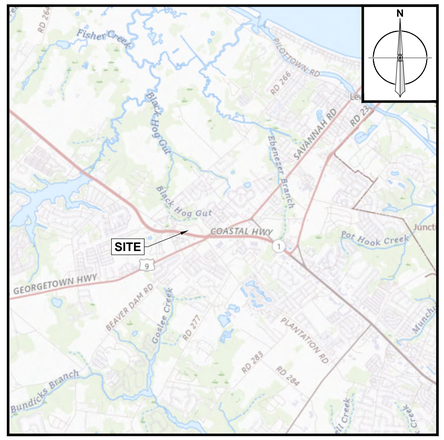
PREPARED FOR: DESIGN CONCEPTS

SITE PLAN NUMBER: S-26-40



GEOGRAPHICAL AND ZONING MAP
SCALE: 1" = 1,000'±

MAPPING PURPOSE: THE INTENT OF THIS MAP IS TO DISPLAY GENERAL ZONING DISTRICTS ADJACENT TO THE PROJECT SITE. IT IS NOT INTEND TO BE COMPREHENSIVE. DATA AND MAPPING ACQUIRED FROM SUSSEX COUNTY GIS APPLICATION.



VICINITY MAP
SCALE: 1" = 5,000'

SHEET LIST

DRAWING NO.	SHEET NO.	DRAWING TITLE
G-001	1	TITLE SHEET
G-002	2	GENERAL NOTES AND LEGEND
C-101	3	EXISTING CONDITIONS PLAN
C-102	4	DEMOLITION PLAN
C-103	5	PROPOSED SITE PLAN
C-104	6	PROPOSED SITE AND UTILITY PLAN
C-105	7	PROPOSED GRADING AND DRAINAGE PLAN
C-106	8	PROPOSED FIRE MARSHALL PLAN
C-107	9	EROSION AND SEDIMENT CONTROL PLAN
C-501	10	SITE DETAILS
C-502	11	SITE DETAILS
C-503	12	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
C-504	13	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
C-505	14	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
C-506	15	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

PROJECT AND SITE DATA

1. OWNER: ST. JUDE THE APOSTLE CHURCH
152 TULIP DRIVE
LEWES, DELAWARE 19958
CONTACT: MR. BOB HEARN
PHONE: 302-644-7300
EMAIL: BOB.HEARN@STJUDELEWES.ORG

2. ARCHITECT: DESIGN CONCEPTS
131 S. LOUDOUN STREET
WINCHESTER, VIRGINIA 22601
CONTACT: TIM MACHADO
PHONE: 540-722-7247
EMAIL: ARCHITECT@1DESIGNCONCEPTS.COM

3. ENGINEER: EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC. PBC
11200 RACETRACK ROAD, UNIT 101A
OCEAN PINES, MARYLAND 21811
CONTACT: STEVEN LEMASTERS
PHONE: 410-641-5341

4. SURVEYOR CYPRESS SURVEYS, LLC
12535 SHEPPARDS CROSSING ROAD
WHALEYVILLE, MARYLAND 21872
CONTACT: ROBERT RIGDON, JR.
PHONE: 443-614-2031
EMAIL: RPRIGDON@AOL.COM

5. SITE ADDRESS: 152 TULIP DRIVE, LEWES, DELAWARE 19958

6. PROPERTY: PARCEL ID: 335-11.00-90.00
DEED REFERENCE: 3702 / 156 & 2859 / 150
PLAT REFERENCE: 104 / 45
TOTAL LAND AREA = 14.68 ACRES (639,461± SQUARE FEET)
NET DEVELOPMENT AREA = 14.59 ACRES

7. EXISTING ZONING: MR - MEDIUM RESIDENTIAL
C-1 - GENERAL COMMERCIAL

8. PROP. ZONING MR - MEDIUM RESIDENTIAL
C-1 - GENERAL COMMERCIAL

9. EXISTING USE: MULTI-PURPOSE CHURCH FACILITIES

10. PROPOSED USE: MULTI-PURPOSE CHURCH FACILITIES

11. SETBACKS: COMBINED HIGHWAY CORRIDOR OVERLAY ZONE

MEDIUM RESIDENTIAL	GENERAL COMMERCIAL
FRONT = 40 FEET	FRONT = 60 FEET
REAR = 10 FEET	REAR = 5 FEET
SIDES = 10 FEET	SIDES = 5 FEET

12. MAXIMUM HEIGHT: 39' - 6" FEET

13. PARKING REQ'D: ASSEMBLY
1 PARKING SPACE / 4 SEATS
1028 SEATS WITH 18" SEATED AREA: 257 SPACES
850 SEATS WITH 22" SEATED AREA: 213 SPACES

8000 S.F. EDUCATION CENTER (PRIVATE SCHOOL)
1 SPACE / 1,000 SF + ONE SPACE / EMPLOYEE 8 SPACES

4200 S.F. OFFICE
1 PARKING SPACE / 200 S.F. 21 SPACES

350 SEAT VENUE HALL
1 PARKING SPACE / 4 SEATS 88 SPACES

TOTAL PARKING REQUIRED 330 - 374 SPACES

14. PARKING PROP. (378) 10'x20' SPACES
(36) HANDICAP ACCESSIBLE PARKING
414 TOTAL PARKING PROVIDED

15. LOADING ZONE REQUIRED: 1 SPACE PER 5,000 - 25,000 SF INSTITUTION/ASSEMBLY.
PROPOSED PROJECT: 15,612 S.F. = 1 SPACE
PROPOSED: 1 SPACE

16. FLOODPLAIN: ZONE X UNSHADED - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FIRM PANELS 10005C0193K AND 10005C0331K LAST REVISED MARCH 16, 2015.

17. SOILS PRESENT: DoA: DOWNER SANDY LOAM, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA

18. THERE ARE NO WETLANDS, WETLAND BUFFER, SPRINGS, SEEPS, OR OTHER NATURAL RESOURCES LOCATED WITHIN THE PROJECT LIMITS.

19. WATER SERVICE: TIDEWATER UTILITIES

20. SEWAGE SERVICE: SUSSEX COUNTY

21. POSTED SPEED LIMIT: 25 MPH OF FRONTAGE ROAD (TULIP DRIVE)
45 MPH (COASTAL HIGHWAY)

22. NET DEVELOPMENT AREA:

SITE USE AND PARKING STATEMENT:
THE SITE CONTAINS FOUR USES; CHURCH ASSEMBY, MEETING HALL, ADMINISTRATIVE OFFICES, AND EDUCATION CENTER. FUNCTIONS WITHIN THESE FOUR USES DO NOT OCCUR CONCURRENTLY. PEAK PARKING DEMAND OCCURS DURING SUNDAY CHURCH SERVICES.

EA Engineering, Science, and Technology, Inc., PBC

11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

HORIZONTAL DATUM:
DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

SCALE AS SHOWN

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
TITLE SHEET

DRAWING INFORMATION

DRAWN BY: JWB DESIGNED BY: JWB / SCL
CHECKED BY: GAT PROJECT MANAGER: SCL
PROJECT NUMBER: 6429401

DRAWING NO.
G-001

DATE: SEPTEMBER 2026 SHEET: 1 OF 15

100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST JUDES CH\ROHCAD\PRODUCTION\DESIGN SET\6429401 - 00\00 - TITLE SHEET (3WD).D.s011.LEMASTERS, STEVEN 9/8/2026 7:48 PM

GENERAL NOTES:

1. A LIMITED PROJECT-BASED FIELD-RUN TOPOGRAPHIC AND BOUNDARY TIE SURVEY WAS PERFORMED BY CYPRESS SURVEYS, LLC IN SEPTEMBER 2025. LIMITS OF SURVEY IS AS SHOWN ON THE PLANS. TOPOGRAPHY AND EXISTING CONDITIONS DATA BEYOND THE LIMITS OF THE FIELD RUN SURVEY HAVE BEEN SUPPLEMENTED WITH DATA PROVIDED BY DESIGN CONCEPTS AND UNDERSTOOD TO HAVE BEEN OBTAINED FROM ECI CORPORATION, MERESTONE CONSULTING, AND/OR COTTEN ENGINEERING, INC.
2. SURVEY DATUM: DELAWARE STATE PLANE: HORIZONTAL NAD83, VERTICAL NAVD88
3. SOILS DATA IS BASED ON THE USDA WEB SOIL SURVEY, ACCESSED OCTOBER 12, 2025.
4. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION AND ELEVATION. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST 48 HOURS IN ADVANCE. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS/HER NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL AGENCY CONSTRUCTION PERMIT APPLICATIONS HAVE BEEN COMPLETED, SUBMITTED, AND ALL APPLICABLE FEES HAVE BEEN PAID PRIOR TO COMMENCING CONSTRUCTION.
6. ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS OF EXISTING STRUCTURES SHOWN ON THE CONTRACT DRAWINGS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. TEST PIT, VERIFY, AND COORDINATE WITH THE ENGINEER AND UTILITY PROVIDER TO RESOLVE ANY CONFLICTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH WORK.
7. ALL ASPECTS OF CONSTRUCTION INSTALLATION SHALL BE PERFORMED / INSTALLED PLUMB AND TRUE AND SHALL CONFORM TO THE PRACTICES OF GOOD WORKMANSHIP. POSITIVE DRAINAGE SHALL BE PROVIDED IN ALL AREAS. AREAS OF STANDING WATER WILL NOT BE ACCEPTED.
8. THE CONTRACTOR SHALL EXECUTE DEMOLITION AND DISMANTLING WORK IN A MANNER TO ENSURE SAFETY OF PERSONS AND ADJACENT PROPERTY AGAINST DAMAGE BY SETTLEMENT, FALLING DEBRIS, OR OTHER CAUSES IN CONNECTION WITH THIS WORK.
9. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, AND PROCEDURES UTILIZED FOR THE CONSTRUCTION UNDER THE SCOPE OF WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND STANDARD CONSTRUCTION PRACTICES.
10. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH WORK.
11. THE CONTRACTOR SHALL VERIFY THE PRESENCE, LOCATION, AND DEPTH OF ANY EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
12. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS CONCERNING SAFETY AND PRESERVATION OF EXISTING UTILITIES ADJACENT TO ANY WORK AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING STRUCTURES BELOW AND ABOVE GRADE DURING THE COURSE OF DEMOLITION AND CONSTRUCTION. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE RE REPAIRED IMMEDIATELY AND THE COSTS OF SUCH REPAIR SHALL BE BORNE BY THE CONTRACTOR.
13. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN THE SCALED AND FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEER AT 410-584-7000 IN THE EVENT OF ANY DISCREPANCIES IN THE PLANS OR IN THE RELATIONSHIPS OF EXISTING SITE CONDITIONS AND FEATURES TO PROPOSED SITE CONDITIONS AND FEATURES PRIOR TO BEGINNING WORK.
15. ALL SAFETY MEASURES TO BE IMPLEMENTED DURING THE CONSTRUCTION OF THIS PROJECT ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL SAFETY REGULATIONS AS APPLICABLE, AND IN ACCORDANCE WITH CURRENT OSHA REGULATIONS.
16. ANY PROPOSED SIGNAGE SHALL REQUIRE A SEPARATE PERMIT FROM SUSSEX COUNTY. THE OWNER AND CONTRACTOR SHALL SUBMIT A SIGN PERMIT TO THE COUNTY SHOULD SIGNAGE BE PROPOSED.

STANDARD SEDIMENT CONTROL AND CONSTRUCTION NOTES

1. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THESE DRAWINGS REPRESENT THE MINIMUM MEASURES REQUIRED DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR INTEGRATING THESE MEASURES INTO THE CONTRACTOR'S PROPOSED WORK PLAN.
2. THE DNREC SEDIMENT AND STORMWATER PROGRAM SHALL BE NOTIFIED IN WRITING 5 DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
3. APPROVED PLANS REMAIN VALID FOR 5 YEARS FROM THE DATE OF APPROVAL.
4. REVIEW AND/OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATION, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
5. IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC OR THE DELEGATED AGENCY.
6. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
7. BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE, THE CONTRACTOR SHOULD CALL MISS UTILITY AT 811 OR 1-800-282-8555 AT LEAST 3 WORKING DAYS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITIES MARKED ONSITE.
8. ALL EROSIONS AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY CONSTRUCTION.
9. SCHEDULES FOR GRADING, TOPSOIL AND SEEDING SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO START OF WORK.
10. APPROVAL OF THE LOCATION AND TYPE OF CONTROL DEVICES SHALL BE MADE BY THE ENGINEER PRIOR TO COMMENCEMENT OF ANY SITE WORK.
11. FOLLOWING SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROL, SOILS STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN 14 CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.
12. HYDRAULIC EROSION CONTROL IS REQUIRED ON ALL SLOPES 3:1 OR GREATER AND IN AREAS OF CONCENTRATED FLOW.
13. CONTRACTOR IS REQUIRED TO SPRAY WATER TO CONTROL DUST.
14. CONTRACTOR SHALL INSPECT WEEKLY AND AFTER EACH STORM EVENT GREATER THAN OR EQUAL TO 0.25 INCHES, AND REPAIR AS NECESSARY ALL EROSION CONTROL MEASURES TO INSURE INTEGRITY OF THE SEDIMENT AND STORMWATER PLAN.
15. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES WITHIN THE LIMITS OF DISTURBANCE UNTIL FINAL ACCEPTANCE OF THE WORK IS PROVIDED BY THE OWNER. ANY MEASURES NOT CONTROLLING SEDIMENT AS DESIGNED ARE TO BE REPLACED AT THE CONTRACTOR'S EXPENSE.
16. AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHALL BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
17. APPROVAL OF A SEDIMENT AND STORMWATER MANAGEMENT PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
18. THE NOTICE OF INTENT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT FOR THIS PROJECT IS #-----. THE PERMITEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITIES UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY THE DEPARTMENT.
19. THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT.
20. THE CONTRACTOR SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT ASSOCIATED WITH THE PROJECT, INCLUDING BUT NOT LIMITED TO, PERFORMING WEEKLY SITE INSPECTIONS DURING CONSTRUCTION AND AFTER RAIN EVENTS, AND MAINTAINING WRITTEN LOGS OF THESE INSPECTIONS.
21. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND (DUST) FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
22. BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF 7. DEL C. CH 60 AND THE CURRENT DELAWARE CONSTRUCTION GENERAL PERMIT (CGP).
23. DOCUMENTATION OF SOILS TESTING AND MATERIALS USED FOR TEMPORARY OR PERMANENT STABILIZATION INCLUDING BUT NOT LIMITED TO SOIL TEST RESULTS, SEED TAGS, SOILS AMENDMENT TAGS, ETC., SHALL BE PROVIDED TO THE DEPARTMENT (OR THE RELEVANT DELEGATED AGENCY) TO VERIFY THAT THE PERMANENT OR TEMPORARY STABILIZATION HASE BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLAN.
24. THE DEPARTMENT (OR THE RELEVANT DELEGATED AGENCY) MAY REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, OR ALTERNATIVE MEASURES THAT PROVIDE FUNCTIONAL EQUIVALENCY.
25. WHEN DIRECTED BY THE DEPARTMENT (OR THE RELEVANT DELEGATED AGENCY) THE OWNER SHALL ACQUIRE THE SERVICES OF A THIRD PARTY CERTIFIED CONSTRUCTION REVIEWER (CCR) TO PERFORM WEEKLY CONSTRUCTION REVIEWS. SEDIMENT AND STORMWATER MANAGEMENT PLANS APPROVED BY THE DEPARTMENT SHALL HAVE A THIRD PARTY CCR.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND SATISFACTORY DISPOSAL OF ALL EROSION CONTROL STRUCTURES UPON COMPLETION OF ALL WORK AND SOIL STABILIZATION AS DIRECTED BY THE ENGINEER.
27. POST CONSTRUCTION VERIFICATION DOCUMENTS AREA TO BE SUBMITTED TO THE DEPARTMENT (OR RELEVANT DELEGATED AGENCY) WITHIN 60-DAYS OF COMPLETION.

ABBREVIATIONS

AC	ACRES
APPROX	APPROXIMATELY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BC	BOTTOM OF CURB
BGS	BELOW GROUND SURFACE
BLDG	BUILDING
BW	BOTTOM OF WALL
CATV	CABLE TELEVISION
CFL	COMPOST FILTER LOG
CL - C/L	CENTER LINE
COMM	COMMUNICATIONS
CONC	CONCRETE
CY - CU YDS	CUBIC YARDS
DA	DRAINAGE AREA
DIA	DIAMETER
DOT	DEPARTMENT OF TRANSPORTATION
ECP	ENVIRONMENTAL CONCEPT PLAN
EL - ELEV	ELEVATION
EPA	U.S. ENVIRONMENTAL PROTECTION AGENCY
ESC	SOIL EROSION AND SEDIMENT CONTROL
ESD	ENVIRONMENTAL SITE DESIGN
EX - EXST	EXISTING
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FT	FEET
GPS	GLOBAL POSITIONING SYSTEM
INV	INVERT
LOD	LIMITS OF LAND DISTURBANCE
LOW	LIMITS OF WORK (NO LAND DISTURBANCE)
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
MSL	MEAN SEA LEVEL
NA	NOT APPLICABLE
NAD83	NORTH AMERICAN DATUM OF 1983
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
NGS	NATIONAL GEODETIC SURVEY
NO.	NUMBER
NRCS	NATIONAL RESOURCE CONSERVATION SERVICE
OH - OVHD	OVERHEAD OR ABOVGROUND
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PR - PROP	PROPOSED
RCP	REINFORCED CONCRETE PIPE
RTK	REAL-TIME KINEMATIC
SCH	SCHEDULE
SD	STORM DRAIN
SF - SQ FT	SQUARE FEET
SS	SANITARY SEWER
SWM	STORMWATER MANAGEMENT
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TC	TOP OF CURB
TW	TOP OF WALL
TYP	TYPICAL
UG - UGND	UNDERGROUND
UNK	UNKNOWN
U.S.	UNITED STATES
USACE	U.S. ARMY CORPS OF ENGINEERS
USDA	U.S. DEPARTMENT OF AGRICULTURE
USGS	U.S. GEOLOGICAL SURVEY
W/	WITH
WSEL	WATER SURFACE ELEVATION

LEGEND

DESCRIPTION	EXISTING	PROPOSED
COMM MANHOLE	C	C
COMM VAULT	C	C
COMM CATV PEDESTAL	C	C
COMM CATV WITNESS POST	C	C
COMM FIBER OPTIC MANHOLE	FO	FO
COMM FIBER OPTIC VAULT	F	F
COMM FIBER OPTIC WITNESS POST	FO	FO
COMM TELEPHONE MANHOLE	T	T
COMM TELEPHONE VAULT	T	T
COMM TELEPHONE PEDESTAL	T	T
COMM TELEPHONE WITNESS POST	T	T
COMM CATV UTILITY MARKING	C	
COMM FIBER OPTIC UTILITY MARKING	FO	
COMM TELEPHONE UTILITY MARKING	T	
COMM OVHD LINE	OH	
COMM OVHD CATV LINE	OHC	OHC
COMM OVHD TELEPHONE LINE	OHT	OHT
COMM UGND CATV LINE		C
COMM UGND FIBER OPTIC LINE		FO
COMM UGND TELEPHONE LINE		T
ELECTRIC MANHOLE	E	E
ELECTRIC HANDHOLE	H	H
ELECTRIC PULL BOX	PB	PB
ELECTRIC METER	M	M
ELECTRIC VAULT	E	E
ELECTRIC TRANSFORMER	T	T
ELECTRIC SUBSTATION	S	S
ELECTRIC LIGHT POST	#	#
ELECTRIC UTILITY POLE	#	#
ELECTRIC GUY WIRE		
ELECTRIC GUY POLE		
ELECTRIC WITNESS POST	E	E
ELECTRIC UTILITY MARKING	E	
ELECTRIC OVHD LINE	OHE	OHE
ELECTRIC UGND LINE		E
FUEL MANHOLE	F	F
FUEL OIL VAULT	F	F
FUEL WITNESS POST	F	F
FUEL UTILITY MARKING	F	
FUEL OVHD LINE	OHF	OHF
FUEL UGND LINE		F
LANDFILL GAS VENT	#	#
LANDFILL GAS MONITORING PROBE	#	#
LANDFILL GAS WELL	#	#
LANDFILL GAS VALVE	#	#
LANDFILL MONITORING WELL	#	#
LANDFILL PIEZOMETER	#	#
LANDFILL CELL BOUNDARY		
LANDFILL GAS COLLECTION	LFG	LFG
LANDFILL LEACHATE LINER BOUNDARY		
LANDFILL LEACHATE COLLECTION	LCP	LCP
NATURAL GAS MANHOLE	G	G
NATURAL GAS METER	G	G
NATURAL GAS VALVE VAULT	G	G
NATURAL GAS PLANT	GP	GP
NATURAL GAS WITNESS POST	G	G
NATURAL GAS UTILITY MARKING	G	
NATURAL GAS OVHD LINE		OHG
NATURAL GAS UGND LINE		G
PROPERTY MARKER		
PROPERTY BOUNDARY		
PROPERTY BOUNDARY ADJOINER		
PROPERTY EASEMENT		
PROPERTY RIGHT-OF-WAY		
PROPERTY SETBACK		
SANITARY SEWER MANHOLE	S	S
SANITARY SEWER CLEANOUT	CO	CO
SANITARY SEWER METER	S	S
SANITARY SEWER LIFT STATION	L	L
SANITARY SEWER VALVE VAULT	S	S
SANITARY SEWER WITNESS POST	S	S
SEPTIC TANK	ST	ST
SANITARY SEWER UTILITY MARKING	SS	
SANITARY SEWER UTILITY MARKING FM	FM	
SANITARY SEWER LINE		SS
SANITARY SEWER FORCE MAIN		FM
SITE CONTROL POINT	#	#
SITE BENCHMARK	BM	BM
SITE SOIL BORING	SB	SB
SITE MONITORING WELL	MW	MW
SITE PERCOLATION TEST	PT	PT
SITE PIEZOMETER	PZ	PZ
SITE WATER LEVEL MARKER		
SITE FLOW ARROW		
SITE MANHOLE UNKNOWN UTILITY	M	M
SITE SIGN		
SITE FENCE POST		
SITE GATE POST		
SITE BOLLARD		
SITE UNKNOWN FEATURE	UNK	UNK
SITE SPOT ELEVATION	EL	EL
SITE HANDICAP PARKING SPACE		
SITE TRAFFIC ARROW		
SITE TREE	#'	#'
SITE CONTOUR	#	#
SITE CONCRETE		
SITE DEMOLITION		
SITE FEMA FLOODPLAIN		
SITE FENCE	X	X
SITE GRADE BREAK		

LEGEND

DESCRIPTION	EXISTING	PROPOSED
SITE RAIL ROAD TRACK		
SITE GUARD RAIL		
SITE GRAVEL		
SITE STEEP SLOPE 15-25%		
SITE STEEP SLOPE >25%		
SITE SOIL BOUNDARY		
SITE SOIL CLASSIFICATION	SfB HSG B	
SITE TREE/BRUSH LINE		
SITE ZONING		
SITE WETLAND	W	W
SITE WETLAND BUFFER	WB	WB
SITE WATERS OF THE U.S.	WUS	WUS
SITE LIMIT OF FIELD RUN SURVEY		
SITE UNKNOWN UTILITY LINE	UN	UN
STORM DRAIN MANHOLE	D	D
STORM DRAIN CATCH BASIN	CB	CB
STORM DRAIN HEADWALL		
STORM DRAIN FLARED END SECTION		
STORM DRAIN CLEANOUT	CO	CO
STORM DRAIN UTILITY MARKING	SD	
STORM DRAIN LINE		SD
STORM DRAIN RIP RAP		
TRAFFIC MANHOLE	TR	TR
TRAFFIC VAULT	T	T
TRAFFIC CABINET	TR	TR
TRAFFIC PEDESTAL	TR	TR
TRAFFIC SIGNAL POLE	TR	TR
TRAFFIC WITNESS POST	TR	TR
TRAFFIC UTILITY MARKING	TR	
TRAFFIC SIGNAL OVHD LINE	OTR	OTR
TRAFFIC SIGNAL UGND LINE		TR
WATER MANHOLE	W	W
WATER METER	W	W
WATER TANK	W	W
WATER VALVE VAULT	W	W
WATER WELL	W	W
WATER FIRE HYDRANT		
WATER WITNESS POST	W	W
WATER UTILITY MARKING	W	
WATER LINE		W
WATERWAY CRITICAL AREA		
WATERWAY EDGE OF WATER		
WATERWAY MEAN HIGH WATER	MHW	
WATERWAY MEAN HIGHER HIGH WATER	MHHW	
WATERWAY MEAN LOW WATER	MLW	
WATERWAY MEAN LOWER LOW WATER	MLW	
WATERWAY POND		
WATERWAY STREAM CHANNEL		
WATERWAY STREAM CHANNEL BUFFER	SB	SB
PLAN NORTH ARROW		
PLAN NUMBER CALLOUT		#
PLAN KEYNOTE CALLOUT		X
PLAN REVISION CALLOUT		#
PLAN STRUCTURE NAME/NUMBER		X / #
PLAN SECTION CUT VIEW BEGIN		X
PLAN SECTION CUT VIEW END		X'
PLAN POINT OF INVESTIGATION		
ESC LIMIT OF DISTURBANCE	LOD	LOD
ESC STABILIZED CONSTRUCTION ENTRANCE		
ESC DIVERSION FENCE	DF	DF
ESC SILT FENCE	SF	SF
ESC SUPER SILT FENCE	SSF	SSF
ESC TREE PROTECTION FENCE	TPF	TPF
ESC STONE CHECK DAM		CD
ESC STANDARD INLET PROTECTION		SIP
ESC REMOVABLE PUMPING STATION		RPS
ESC SUMP PIT		SP
ESC PORTABLE SEDIMENT TANK		PST
ESC FILTER BAG		FB
ESC CONCRETE WASHOUT STRUCTURE		CWS
LANDSCAPE / GRASS / OPEN AREAS		
MILL AND OVERLAY PAVEMENT SECTION		
FULL DEPTH PAVEMENT SECTION		

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HORIZONTAL DATUM: DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM: NAVD 88

SCALE AS SHOWN

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
GENERAL NOTES AND LEGEND

DRAWING INFORMATION

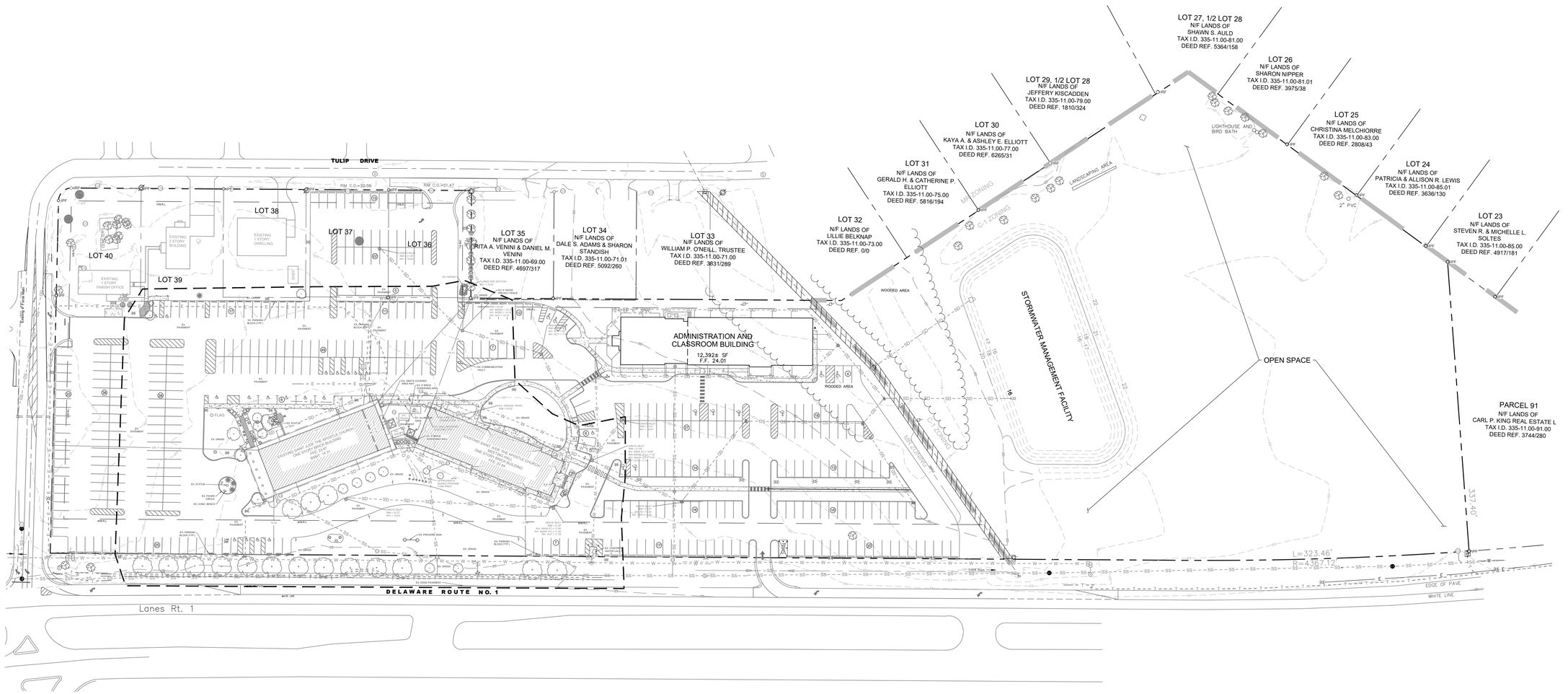
DRAWN BY: JWB	DESIGNED BY: JWB / SCL
CHECKED BY: GAT	PROJECT MANAGER: SCL
PROJECT NUMBER: 6429401	

DRAWING NO.
G-002

DATE: SEPTEMBER 2026 SHEET: 2 OF 15

100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN SET\6429401 - 00.00 - TITLE SHEET.DWG [5.0/G2] LISA.MISTERS, STEVEN 8/8/2026 7:48 PM



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HORIZONTAL DATUM:
DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

0 30 60 120
GRAPHIC SCALE IN FEET

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
EXISTING CONDITIONS SITE PLAN

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB / SCL
CHECKED BY: GAT	PROJECT MANAGER: SCL

PROJECT NUMBER: 6429401

DRAWING NO.
C-101

DATE: SEPTEMBER 2026 SHEET: 3 OF 15

100% PLANS - NOT FOR CONSTRUCTION

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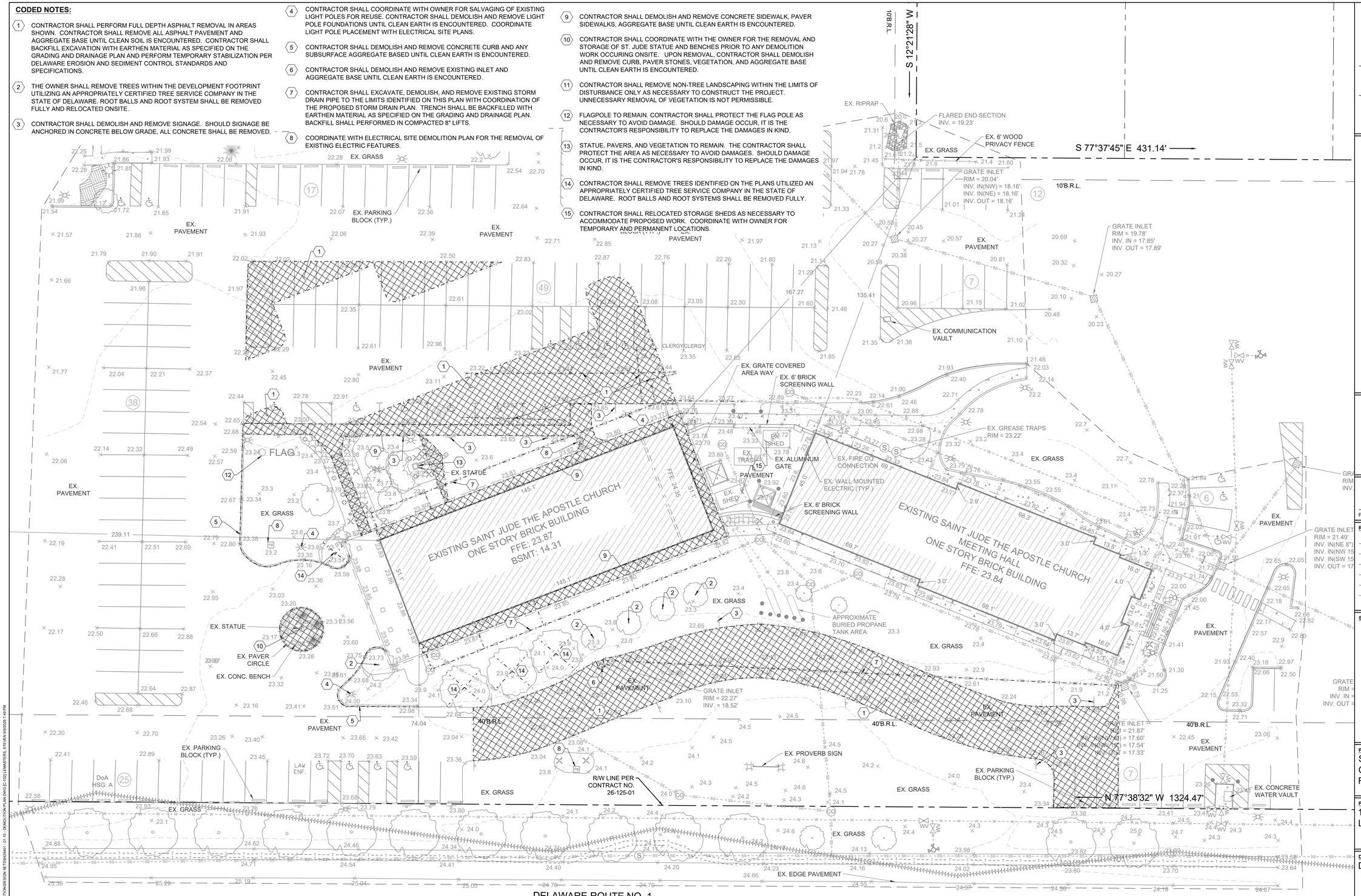
CODED NOTES:

1. CONTRACTOR SHALL PERFORM FULL DEPTH ASPHALT REMOVAL IN AREAS SHOWN. CONTRACTOR SHALL REMOVE ALL ASPHALT PAVEMENT AND AGGREGATE BASE UNTIL CLEAN SOIL IS ENCOUNTERED. CONTRACTOR SHALL BACKFILL EXCAVATION WITH EARTHEN MATERIAL AS SPECIFIED ON THE GRADING AND DRAINAGE PLAN AND PERFORM TEMPORARY STABILIZATION PER DELAWARE EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS.
2. THE OWNER SHALL REMOVE TREES WITHIN THE DEVELOPMENT FOOTPRINT UTILIZING AN APPROPRIATELY CERTIFIED TREE SERVICE COMPANY IN THE STATE OF DELAWARE. ROOT BALLS AND ROOT SYSTEM SHALL BE REMOVED FULLY AND RELOCATED ONSITE.
3. CONTRACTOR SHALL DEMOLISH AND REMOVE SIGNAGE. SHOULD SIGNAGE BE ANCHORED IN CONCRETE BELOW GRADE, ALL CONCRETE SHALL BE REMOVED.
4. CONTRACTOR SHALL COORDINATE WITH OWNER FOR SALVAGING OF EXISTING LIGHT POLES FOR REUSE. CONTRACTOR SHALL DEMOLISH AND REMOVE LIGHT POLE FOUNDATIONS UNTIL CLEAN EARTH IS ENCOUNTERED. COORDINATE LIGHT POLE PLACEMENT WITH ELECTRICAL SITE PLANS.
5. CONTRACTOR SHALL DEMOLISH AND REMOVE CONCRETE CURB AND ANY SUBSURFACE AGGREGATE BASED UNTIL CLEAN EARTH IS ENCOUNTERED.
6. CONTRACTOR SHALL DEMOLISH AND REMOVE EXISTING INLET AND AGGREGATE BASE UNTIL CLEAN EARTH IS ENCOUNTERED.
7. CONTRACTOR SHALL EXCAVATE, DEMOLISH, AND REMOVE EXISTING STORM DRAIN PIPE TO THE LIMITS IDENTIFIED ON THIS PLAN WITH COORDINATION OF THE PROPOSED STORM DRAIN PLAN. TRENCH SHALL BE BACKFILLED WITH EARTHEN MATERIAL AS SPECIFIED ON THE GRADING AND DRAINAGE PLAN. BACKFILL SHALL PERFORMED IN COMPACTED 8" LIFTS.
8. COORDINATE WITH ELECTRICAL SITE DEMOLITION PLAN FOR THE REMOVAL OF EXISTING ELECTRIC FEATURES.
9. CONTRACTOR SHALL DEMOLISH AND REMOVE CONCRETE SIDEWALK, PAVER SIDEWALKS, AGGREGATE BASE UNTIL CLEAN EARTH IS ENCOUNTERED.
10. CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR THE REMOVAL AND STORAGE OF ST. JUDE STATUE AND BENCHES PRIOR TO ANY DEMOLITION WORK OCCURING ONSITE. UPON REMOVAL, CONTRACTOR SHALL DEMOLISH AND REMOVE CURB, PAVER STONES, VEGETATION, AND AGGREGATE BASE UNTIL CLEAN EARTH IS ENCOUNTERED.
11. CONTRACTOR SHALL REMOVE NON-TREE LANDSCAPING WITHIN THE LIMITS OF DISTURBANCE ONLY AS NECESSARY TO CONSTRUCT THE PROJECT. UNNECESSARY REMOVAL OF VEGETATION IS NOT PERMISSIBLE.
12. FLAGPOLE TO REMAIN. CONTRACTOR SHALL PROTECT THE FLAG POLE AS NECESSARY TO AVOID DAMAGE. SHOULD DAMAGE OCCUR, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE THE DAMAGES IN KIND.
13. STATUE, PAVERS, AND VEGETATION TO REMAIN. THE CONTRACTOR SHALL PROTECT THE AREA AS NECESSARY TO AVOID DAMAGES. SHOULD DAMAGE OCCUR, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE THE DAMAGES IN KIND.
14. CONTRACTOR SHALL REMOVE TREES IDENTIFIED ON THE PLANS UTILIZED AN APPROPRIATELY CERTIFIED TREE SERVICE COMPANY IN THE STATE OF DELAWARE. ROOT BALLS AND ROOT SYSTEMS SHALL BE REMOVED FULLY.
15. CONTRACTOR SHALL RELOCATED STORAGE SHEDS AS NECESSARY TO ACCOMMODATE PROPOSED WORK. COORDINATE WITH OWNER FOR TEMPORARY AND PERMANENT LOCATIONS.



DELAWARE ROUTE NO. 1
165' WIDE RIGHT-OF-WAY
PER DELDOT R/W CONTRACT NO. 26-125-01

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HORIZONTAL DATUM:
DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

0 10 20 40
GRAPHIC SCALE IN FEET

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
DEMOLITION PLAN

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB / SCL
CHECKED BY: GAT	PROJECT MANAGER: SCL

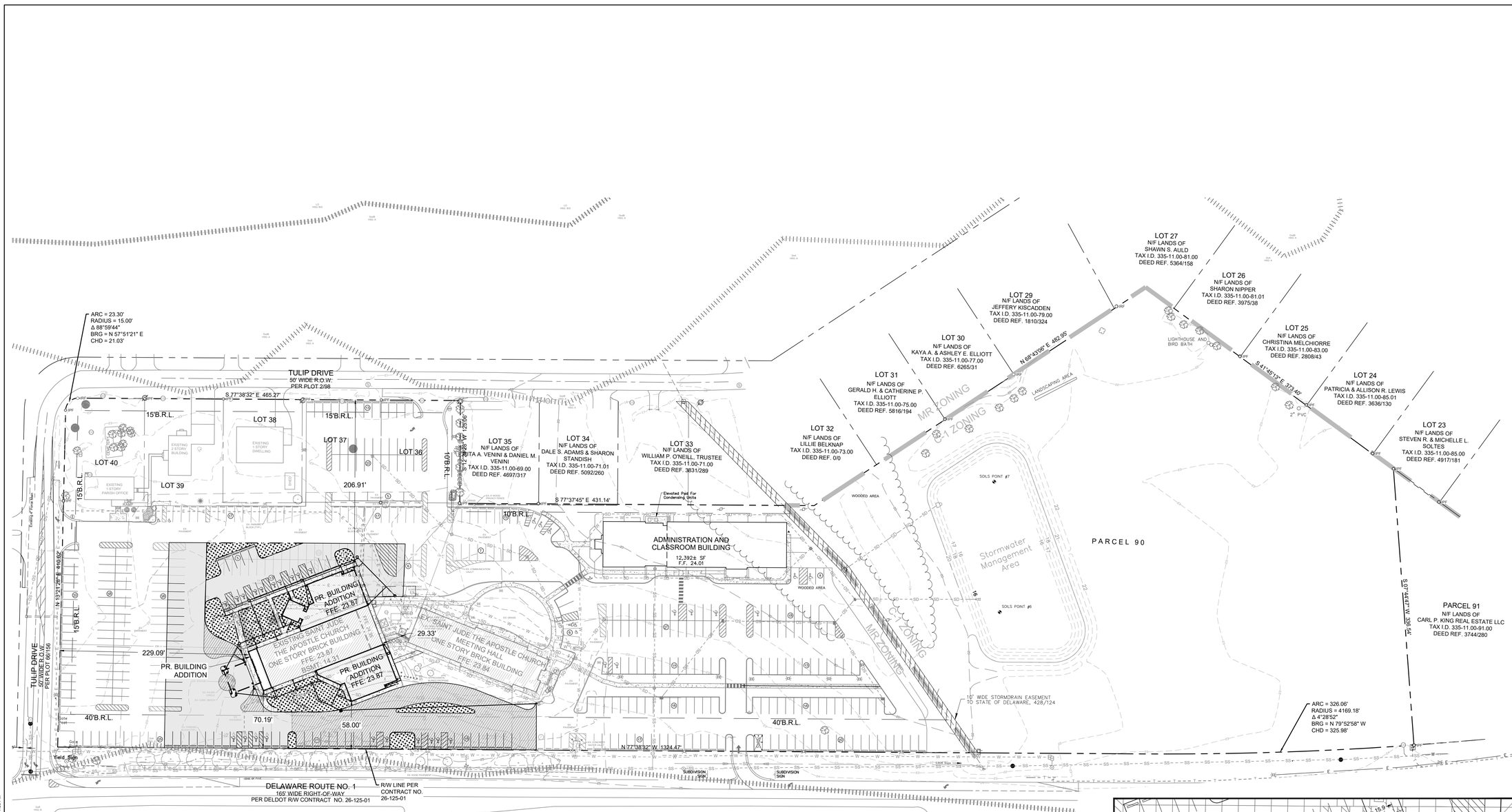
PROJECT NUMBER: 6429401

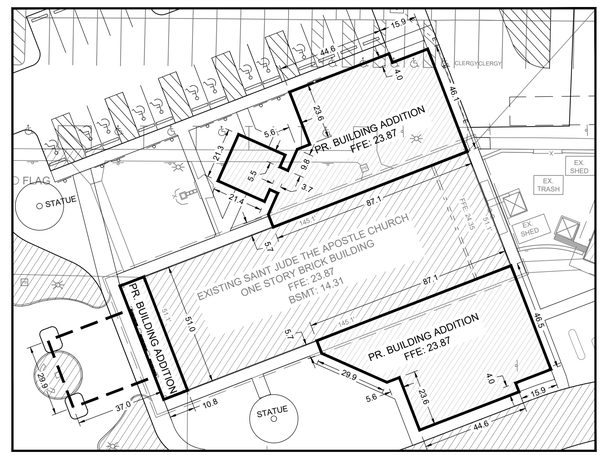
DRAWING NO.
C-102

DATE: SEPTEMBER 2026 SHEET: 4 OF 15

100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN SET\6429401 - 01 19 - DEMOLITION PLAN.DWG,JC-102(1).EMASTERS, STEVEN 9/8/2026 7:49 PM





PROPOSED BUILDING DIMENSIONS
SCALE: 1" = 30'

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HORIZONTAL DATUM:
DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

0 30 60 120
GRAPHIC SCALE IN FEET

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
PROPOSED SITE PLAN

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB / SCL
CHECKED BY: GAT	PROJECT MANAGER: SCL

PROJECT NUMBER: 6429401

DRAWING NO.
C-103

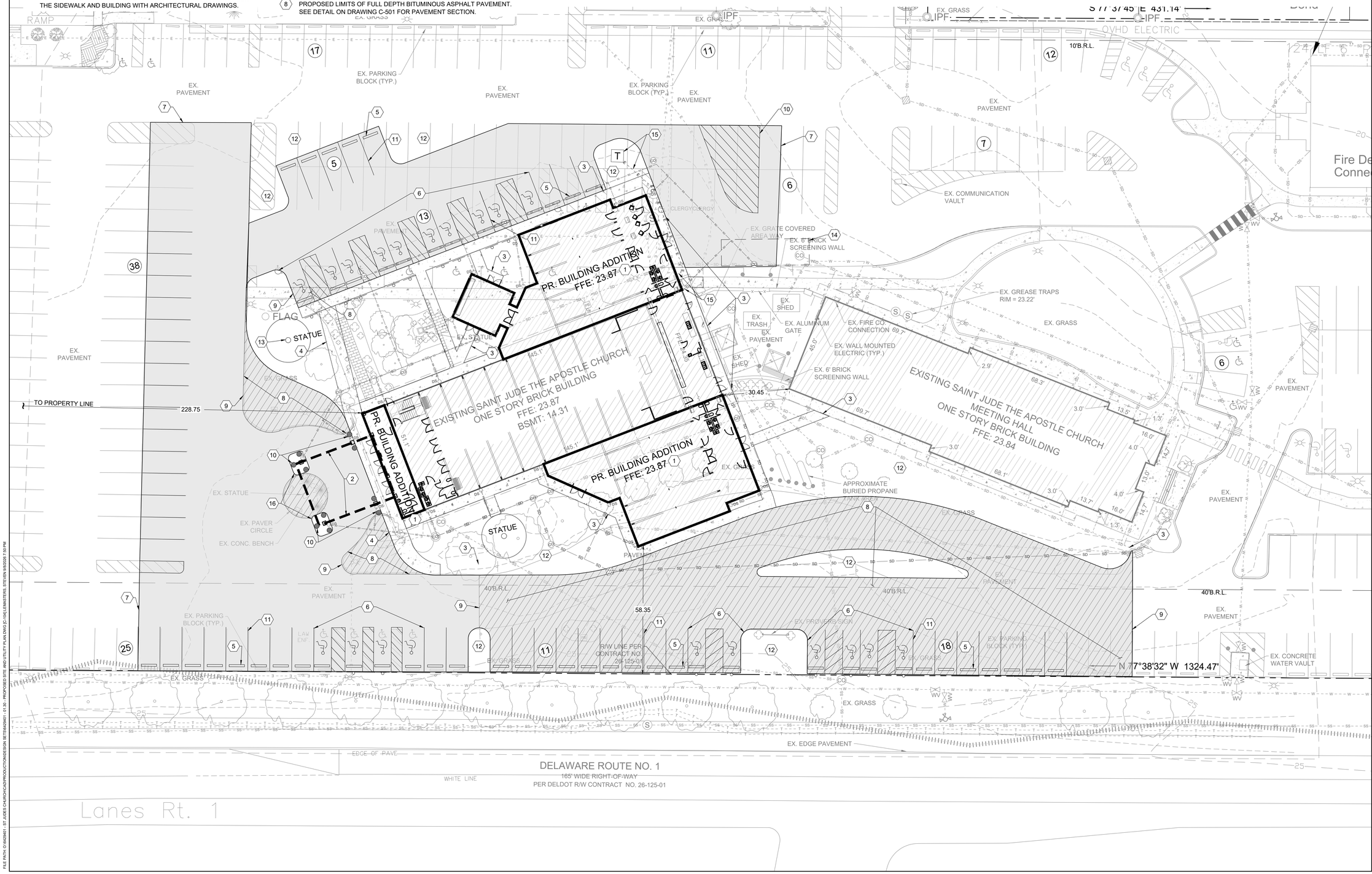
DATE: SEPTEMBER 2026 SHEET: 5 OF 15

100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST. JUDES CHURCH\CAD\PRODUCTION\DESIGN SET\6429401 - 01 2D - PROPOSED SITE PLAN.DWG [C-103] LEEMASTERS, STEVEN 9/8/2026 7:50 PM

CODED NOTES:

1. PROPOSED BUILDING ADDITIONS. SEE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING PLANS FOR FURTHER INFORMATION.
2. PROPOSED OUTLINE OF VEHICULAR FRONT DOOR DROPOFF CANOPY. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR FURTHER INFORMATION.
3. PROPOSED 5-FT. WIDE CONCRETE SIDEWALK. CONTRACTOR SHALL INSTALL SIDEWALK PER DETAIL ON DRAWING C-501. CONTRACTOR IS RESPONSIBLE FOR MAKING A FLUSH CONNECTION TO EXISTING CONNECTED SIDEWALK AREAS.
4. PROPOSED 8-FT. WIDE CONCRETE SIDEWALK ALONG FRONT DOOR DROPOFF AREA. SIDEWALK SHALL BE FLUSH WITH PROPOSED ASPHALT DROPOFF AREA. COORDINATE THE TRANSITION BETWEEN THE SIDEWALK AND BUILDING WITH ARCHITECTURAL DRAWINGS.
5. PROPOSED CONCRETE PARKING BUMPERS. WHERE PARKING BUMPERS ARE PROPOSED WHEN EXISTING BUMPERS EXIST. THE CONTRACTOR SHALL EITHER REPLACE WITH NEW OR COORDINATE DIRECTLY WITH THE OWNER ON THEIR STATE FOR REUSE. SEE DETAIL ON DRAWING C-501.
6. PROPOSED ADA-ACCESSIBLE HANDICAP PARKING SPACES AND SIGNAGE. SEE DETAIL ON DRAWING C-501 FOR DETAILING OF THE PARKING LAYOUT/DIMENSIONING AND SIGNAGE. PARKING AND SIGNAGE SHALL COMPLY WITH THE LATEST VERSION OF THE ADA ACCESSIBILITY GUIDELINES.
7. PROPOSED LIMITS OF 2" MILL AND OVERLAY. OVERLAY SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST VERSION OF THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
8. PROPOSED LIMITS OF FULL DEPTH BITUMINOUS ASPHALT PAVEMENT. SEE DETAIL ON DRAWING C-501 FOR PAVEMENT SECTION.
9. PROPOSED BUTT JOINT BETWEEN EXISTING PAVEMENT AND PROPOSED FULL DEPTH PAVEMENT SECTION. SEE DRAWING ON C-501.
10. PROPOSED DECORATIVE CONCRETE BOLLARD SYSTEM. CONTRACTOR SHALL FURNISH AND INSTALL BARRIER1 B1 TOMCAT (TIB-67-SA) BOLLARD SYSTEM PER THE MANUFACTURER'S INSTALLATION DETAIL AS PROVIDED ON DRAWING C-501 WITH CONCRETE PLANTER COVER SAVANNAH IN CHARCOAL COLOR.
11. PROPOSED WHITE PARKING STRIPING. STRIPING SHALL BE 4-INCHES WIDE AND APPLIED IN TWO COATS TO OBTAIN A MINIMUM 15MIL THICKNESS USING A WATERBASED ACRYLIC PAINT.
12. PROPOSED LANDSCAPING AREA. ANY LANDSCAPE AREA THAT WAS PREVIOUSLY PAVED SHALL BE RESTORED WITH A MINIMUM OF 6 INCHES OF TOPSOIL.
13. PROPOSED RELOCATED ST. JUDE STATUE.
14. PROPOSED 12' x 40' LOADING ZONE.
15. PROPOSED ELECTRIC SERVICE TRANSFORMER, DISCONNECT, AND CONDUCTOR CONDUIT. SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.
16. LANDSCAPED ISLANDS FOR BUILDING CANOPY COLUMNS.



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HORIZONTAL DATUM:
DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

0 10 20 40
GRAPHIC SCALE IN FEET

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
PROPOSED SITE AND UTILITY PLAN

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB / SCL
CHECKED BY: GAT	PROJECT MANAGER: SCL

PROJECT NUMBER: 6429401

DRAWING NO.
C-104

DATE: SEPTEMBER 2026 SHEET: 6 OF 15

100% PLANS - NOT FOR CONSTRUCTION

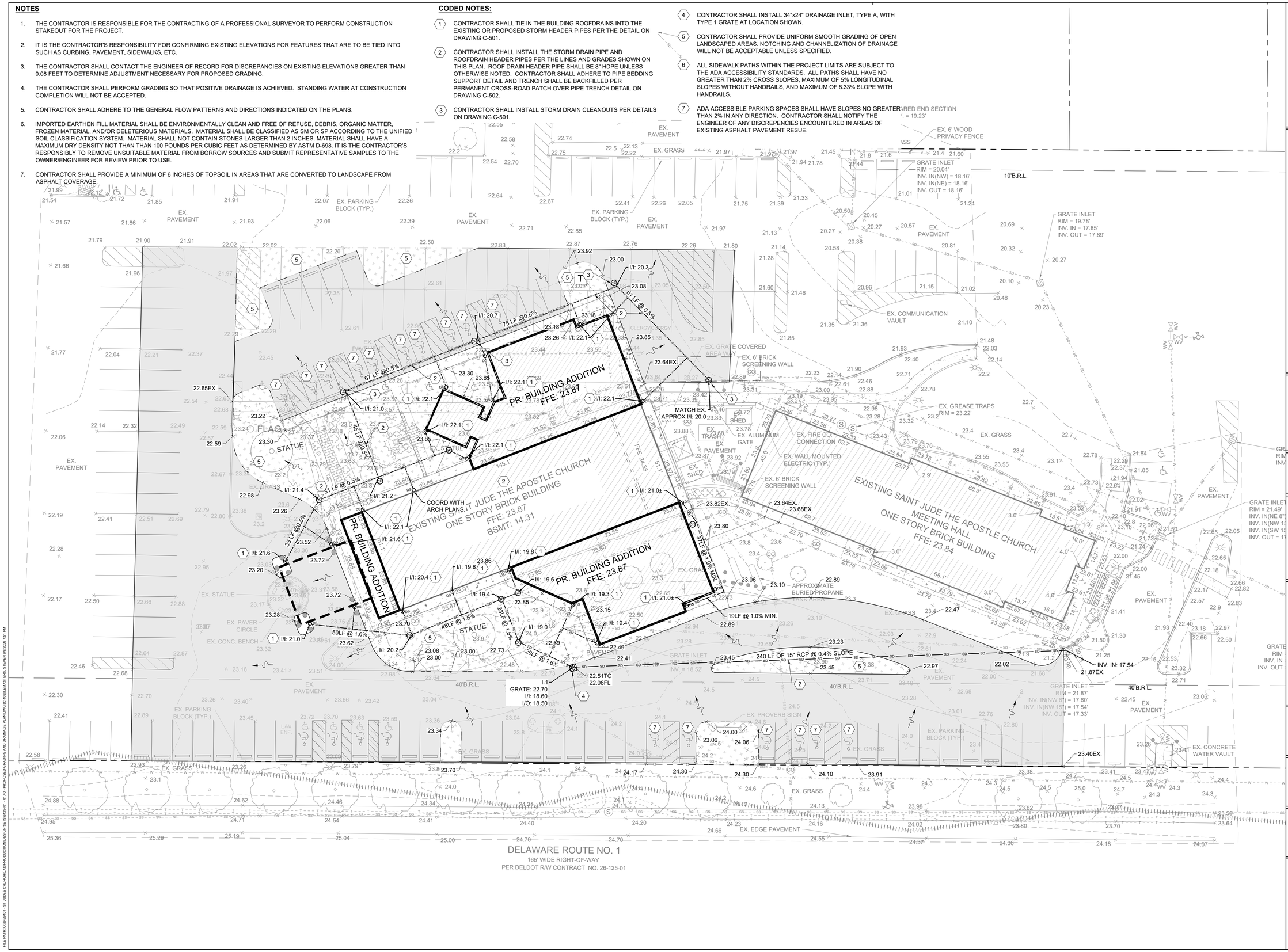
FILE PATH: O:\6429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN SET\6429401 - 01-30 - PROPOSED SITE AND UTILITY PLAN.DWG [C-104]LEMASTERS, STEVEN 9/8/2026 7:50 PM

NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTRACTING OF A PROFESSIONAL SURVEYOR TO PERFORM CONSTRUCTION STAKEOUT FOR THE PROJECT.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY FOR CONFIRMING EXISTING ELEVATIONS FOR FEATURES THAT ARE TO BE TIED INTO SUCH AS CURBING, PAVEMENT, SIDEWALKS, ETC.
3. THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD FOR DISCREPANCIES ON EXISTING ELEVATIONS GREATER THAN 0.08 FEET TO DETERMINE ADJUSTMENT NECESSARY FOR PROPOSED GRADING.
4. THE CONTRACTOR SHALL PERFORM GRADING SO THAT POSITIVE DRAINAGE IS ACHIEVED. STANDING WATER AT CONSTRUCTION COMPLETION WILL NOT BE ACCEPTED.
5. CONTRACTOR SHALL ADHERE TO THE GENERAL FLOW PATTERNS AND DIRECTIONS INDICATED ON THE PLANS.
6. IMPORTED EARTHEN FILL MATERIAL SHALL BE ENVIRONMENTALLY CLEAN AND FREE OF REFUSE, DEBRIS, ORGANIC MATTER, FROZEN MATERIAL, AND/OR DELETERIOUS MATERIALS. MATERIAL SHALL BE CLASSIFIED AS SM OR SP ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM. MATERIAL SHALL NOT CONTAIN STONES LARGER THAN 2 INCHES. MATERIAL SHALL HAVE A MAXIMUM DRY DENSITY NOT THAN THAN 100 POUNDS PER CUBIC FEET AS DETERMINED BY ASTM D-698. IT IS THE CONTRACTOR'S RESPONSIBLY TO REMOVE UNSUITABLE MATERIAL FROM BORROW SOURCES AND SUBMIT REPRESENTATIVE SAMPLES TO THE OWNER/ENGINEER FOR REVIEW PRIOR TO USE.
7. CONTRACTOR SHALL PROVIDE A MINIMUM OF 6 INCHES OF TOPSOIL IN AREAS THAT ARE CONVERTED TO LANDSCAPE FROM ASPHALT COVERAGE.

CODED NOTES:

1. CONTRACTOR SHALL TIE IN THE BUILDING ROOFDRAINS INTO THE EXISTING OR PROPOSED STORM HEADER PIPES PER THE DETAIL ON DRAWING C-501.
2. CONTRACTOR SHALL INSTALL THE STORM DRAIN PIPE AND ROOFDRAIN HEADER PIPES PER THE LINES AND GRADES SHOWN ON THIS PLAN. ROOF DRAIN HEADER PIPE SHALL BE 8" HDPE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL ADHERE TO PIPE BEDDING SUPPORT DETAIL AND TRENCH SHALL BE BACKFILLED PER PERMANENT CROSS-ROAD PATCH OVER PIPE TRENCH DETAIL ON DRAWING C-502.
3. CONTRACTOR SHALL INSTALL STORM DRAIN CLEANOUTS PER DETAILS ON DRAWING C-501.
4. CONTRACTOR SHALL INSTALL 34"x24" DRAINAGE INLET, TYPE A, WITH TYPE 1 GRATE AT LOCATION SHOWN.
5. CONTRACTOR SHALL PROVIDE UNIFORM SMOOTH GRADING OF OPEN LANDSCAPED AREAS. NOTCHING AND CHANNELIZATION OF DRAINAGE WILL NOT BE ACCEPTABLE UNLESS SPECIFIED.
6. ALL SIDEWALK PATHS WITHIN THE PROJECT LIMITS ARE SUBJECT TO THE ADA ACCESSIBILITY STANDARDS. ALL PATHS SHALL HAVE NO GREATER THAN 2% CROSS SLOPES, MAXIMUM OF 5% LONGITUDINAL SLOPES WITHOUT HANDRAILS, AND MAXIMUM OF 8.33% SLOPE WITH HANDRAILS.
7. ADA ACCESSIBLE PARKING SPACES SHALL HAVE SLOPES NO GREATER THAN 2% IN ANY DIRECTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPENCIES ENCOUNTERED IN AREAS OF EXISTING ASPHALT PAVEMENT RESUE.



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HORIZONTAL DATUM: DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM: NAVD 88

GRAPHIC SCALE IN FEET (0, 10, 20, 40)

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
PROPOSED GRADING AND DRAINAGE PLAN

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB / SCL
CHECKED BY: GAT	PROJECT MANAGER: SCL

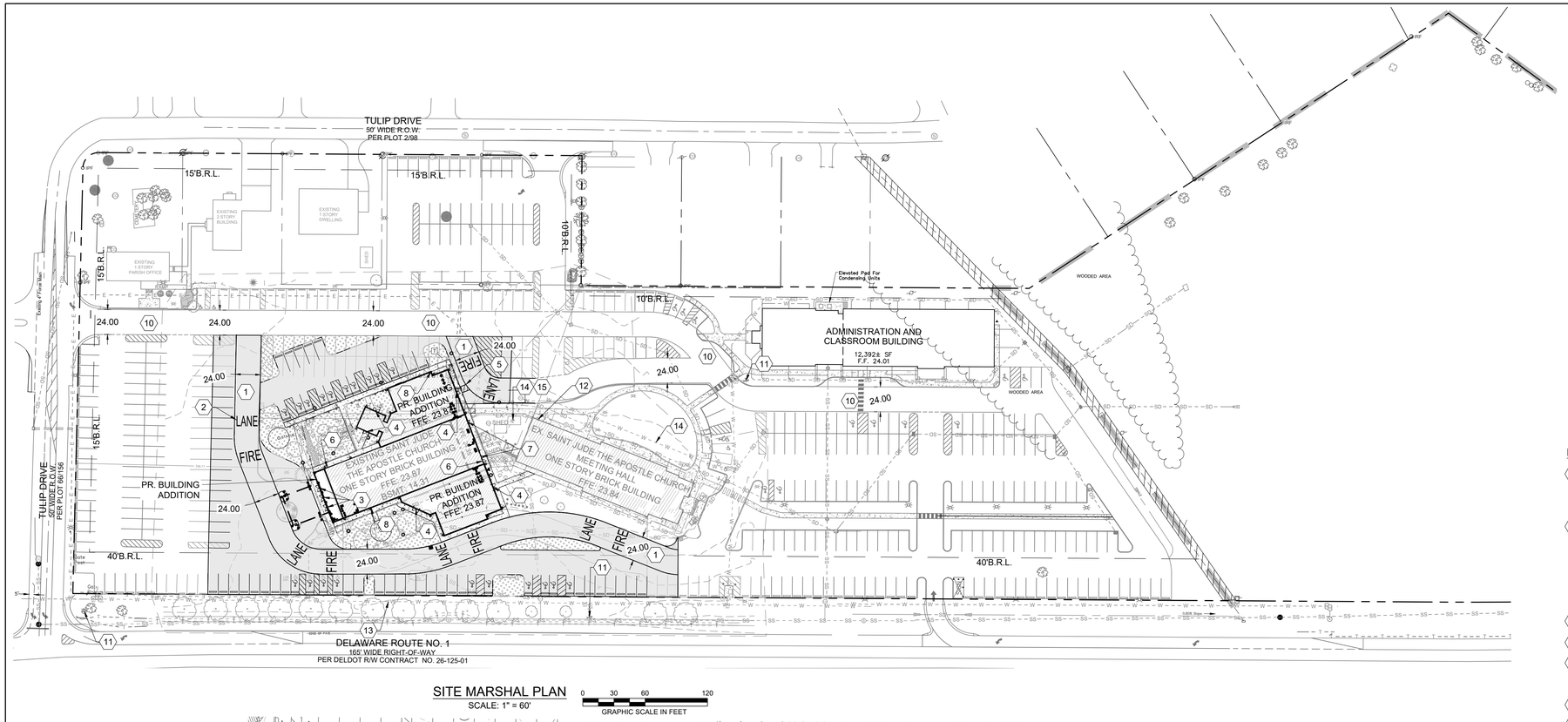
PROJECT NUMBER: 6429401

DRAWING NO.
C-105

DATE: SEPTEMBER 2026 SHEET: 7 OF 15

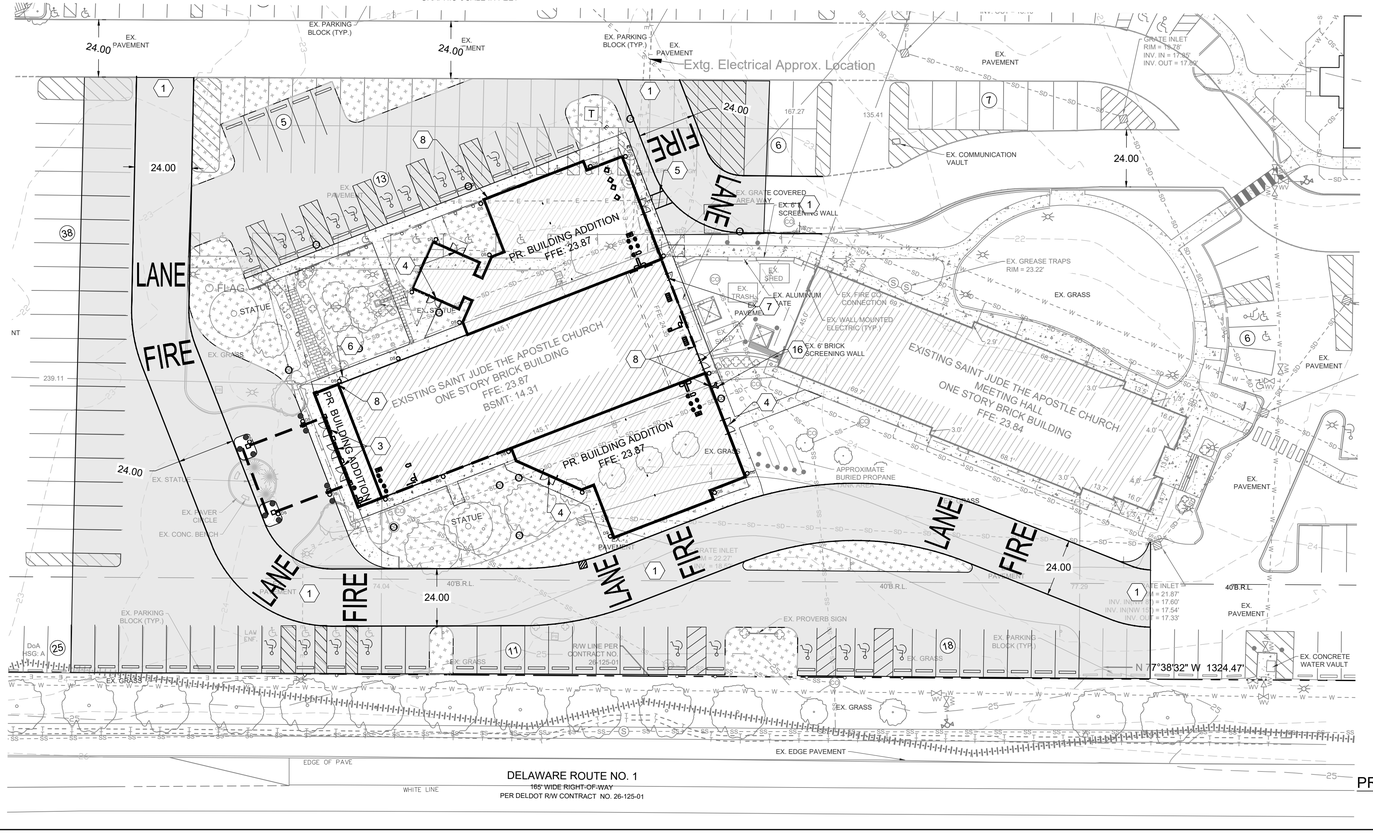
100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN SET\6429401 - 01-40 - PROPOSED GRADING AND DRAINAGE PLAN.DWG [C-105] LEMASTERS, STEVEN 8/8/2026 7:51 PM



SITE MARSHAL PLAN
SCALE: 1" = 60'

0 30 60 120
GRAPHIC SCALE IN FEET



PROJECT FIRE MARSHAL PLAN
SCALE: 1" = 40'

0 15 30 60
GRAPHIC SCALE IN FEET

PROJECT AND SITE DATA

1. OWNER: ST. JUDE THE APOSTLE CHURCH
152 TULIP DRIVE
LEWES, DELAWARE 19958
CONTACT: MR. BOB HEARN
PHONE: 302-644-7300
EMAIL: BOB.HEARN@STJUDELEWES.ORG

2. ENGINEER: EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC., PBC
11200 RACETRACK ROAD, UNIT 101A
OCEAN PINES, MARYLAND 21811
CONTACT: STEVEN LEMASTERS
PHONE: 410-641-5341
EMAIL: SLEMASTERS@EAEST.COM

3. SITE ADDRESS: 152 TULIP DRIVE
LEWES, DELAWARE 19958

4. PROPERTY: ST JUDE THE APOSTLE CATHOLIC CHURCH
MAP NUMBER: 11
PARCEL: 90
DISTRICT: 335
PARID: 335-11.00-90.00
AREA = 14.94 ACRES
LAND USE CODE: 812 - INSTITUTIONAL - RELIGIOUS

5. PROPOSED USE: ASSEMBLY

6. WATER IS TO BE PROVIDED BY TIDEWATER UTILITIES, INC..

7. BUILDING ADDITION IS PROTECTED BY AUTOMATIC SPRINKLER.

8. BUILDING CONSTRUCTION = NFPA TYPE V (000)

9. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.

10. LOCK BOX REQUIRED. CONTACT THE LOCAL FIRE CHIEF FOR ORDERING INFORMATION AND LOCATION OF BOX ON THE BUILDING.

11. MAXIMUM BUILDING HEIGHT = 39'-6" , ONE-STORY STRUCTURE\

12. EXISTING BUILDING AREA: 7,400 SQUARE FEET

13. PROPOSED BUILDING ADDITION AREA: 8,050 SQUARE FEET

FIRE MARSHAL PLAN NOTES:

1. FIRE LANE DEMARCATION SHALL BE PROVIDED ON BOTH SIDES OF THE FIRE LANE AND SHALL BE 4" SOLID YELLOW VIVID AND DURABLE PAINT SUITABLE FOR ASPHALT PAVEMENT SURFACES PER DELAWARE STATE FIRE PREVENTION REGULATIONS.
2. ROADWAY MARKINGS SHALL UTILIZE THE WORDS "FIRE" AND "LANE" IN LIEU OF FIRE LANE SIGNS. THE FIRST WORD "FIRE" SHALL BE CLOSEST TO A DRIVER APPROACHING SUCH MARKING. EACH WORK SHALL BE AT LEAST TEN FEET IN HEIGHT AND 20 FEET WIDE. THE DISTANCE BETWEEN THE WORD "FIRE" AND THE WORD "LANE" SHALL BE NO GREATER THAN 30 FEET. THE DISTANCE FROM THE WORD "LANE" TO THE BEGINNING OF THE SECOND SET OF ROADWAY MARKINGS WHERE THE WORD "FIRE" BEGINS SHALL BE NO GREATER THAN 100 FEET.
3. 6' WIDE PRIMARY BUILDING ENTRANCES.
4. 6' WIDE SECONDARY BUILDING ENTRANCES.
5. 6' WIDE NO PARKING ZONE FOR SECONDARY ENTRANCE. STRIPING SHALL BE DIAGONAL AND MEET THE SPECIFICATIONS FOR FIRE LANE DEMARCATION IN NOTE 1.
6. 3' WIDE SECONDARY BUILDING ENTRANCES.
7. 2'-8" WIDE SECONDARY BUILDING ENTRANCES.
8. FIRE LANE BUILDING COVERAGE
BUILDING PERIMETER = 664'
REQUIRED COVERAGE = 664 * 0.5 = 332'
FIRE LANE ACCESS COVERAGE PROVIDED = 448'
9. LIMITS OF PAVEMENT AND FIRE LANE CONSTRUCTION
10. EXISTING FIRE LANE
11. EXISTING FIRE HYDRANTS
12. EXISTING FIRE DEPARTMENT CONNECTION
13. EXISTING 12" WATER MAIN
14. EXISTING 8" WATER SERVICE LINE
15. EXISTING BUILDING'S FIRE SUPPRESSION WATER MAIN
16. FIRE DEPARTMENT CONNECTION

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Ocean Pines, Maryland 21811
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HORIZONTAL DATUM: DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM: NAVD 88

GRAPHIC SCALE AS SHOWN

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
PROPOSED FIRE MARSHAL PLAN

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB / SCL
CHECKED BY: GAT	PROJECT MANAGER: SCL

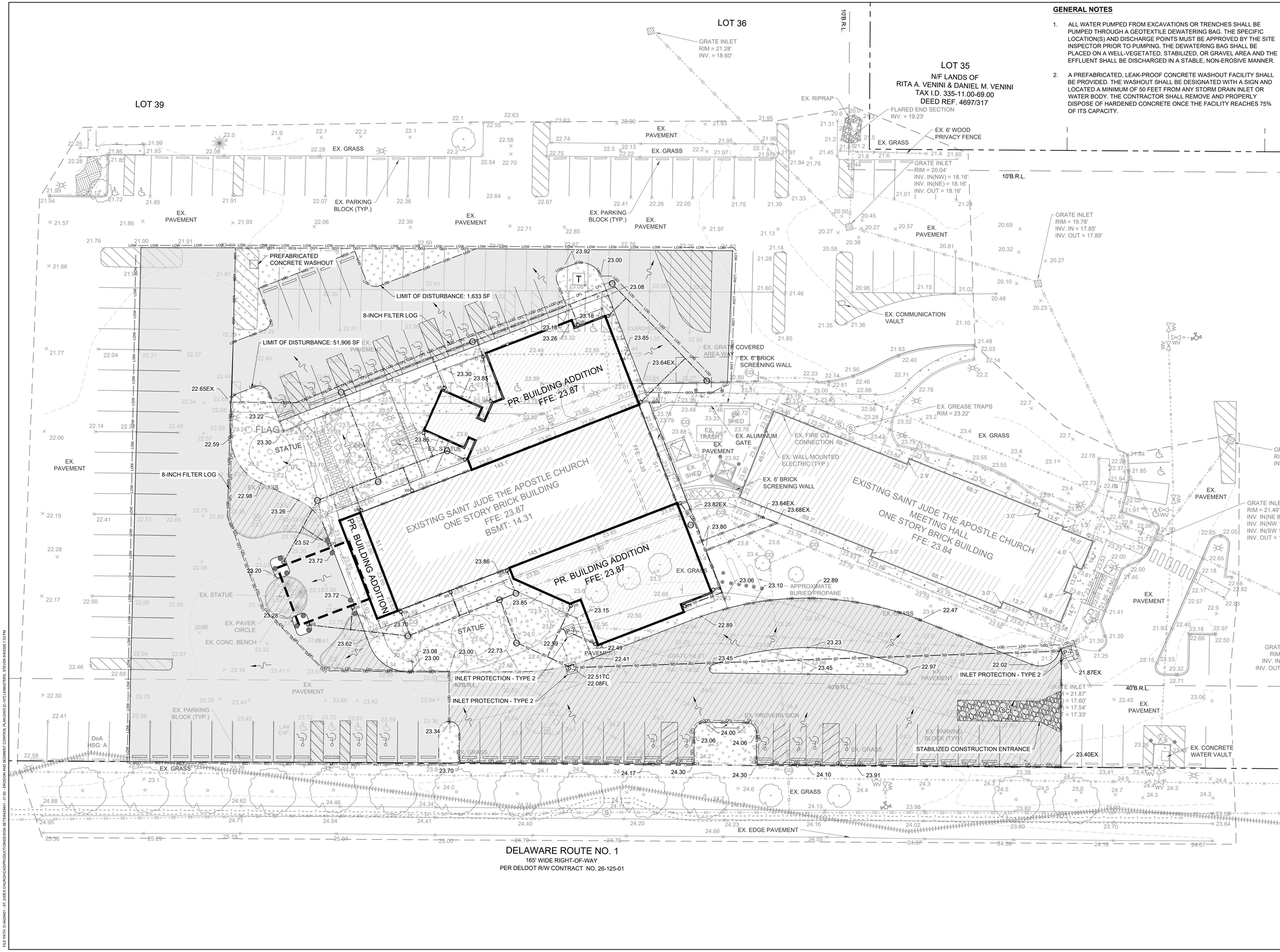
PROJECT NUMBER: 6429401

DRAWING NO.
C-106

DATE: SEPTEMBER 2026 SHEET: 8 OF 15

100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN SET\6429401 - 01 50 - PROPOSED FIRE MARSHALL PLAN.DWG [C-106] LEMASTERS, STEVEN 9/9/2026 7:52 PM



GENERAL NOTES

1. ALL WATER PUMPED FROM EXCAVATIONS OR TRENCHES SHALL BE PUMPED THROUGH A GEOTEXTILE DEWATERING BAG. THE SPECIFIC LOCATION(S) AND DISCHARGE POINTS MUST BE APPROVED BY THE SITE INSPECTOR PRIOR TO PUMPING. THE DEWATERING BAG SHALL BE PLACED ON A WELL-VEGETATED, STABILIZED, OR GRAVEL AREA AND THE EFFLUENT SHALL BE DISCHARGED IN A STABLE, NON-EROSIVE MANNER.
2. A PREFABRICATED, LEAK-PROOF CONCRETE WASHOUT FACILITY SHALL BE PROVIDED. THE WASHOUT SHALL BE DESIGNATED WITH A SIGN AND LOCATED A MINIMUM OF 50 FEET FROM ANY STORM DRAIN INLET OR WATER BODY. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF HARDENED CONCRETE ONCE THE FACILITY REACHES 75% OF ITS CAPACITY.

EA Engineering, Science, and Technology, Inc., PBC
11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341
www.eaest.com

HORIZONTAL DATUM: DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM: NAVD 88

0 10 20 40
GRAPHIC SCALE IN FEET

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
EROSION AND SEDIMENT CONTROL PLAN

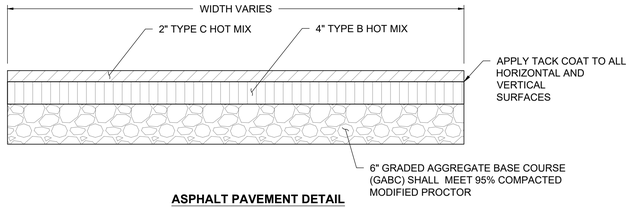
DRAWING INFORMATION
DRAWN BY: JWB DESIGNED BY: JWB / SCL
CHECKED BY: GAT PROJECT MANAGER: SCL
PROJECT NUMBER: 6429401

DRAWING NO.
C-107

DATE: SEPTEMBER 2026 SHEET: 9 OF 15

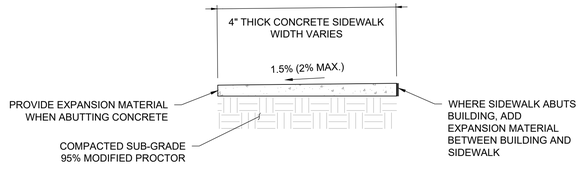
100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN SETS\6429401 - 01.60 - EROSION AND SEDIMENT CONTROL PLAN.DWG [C-107] LEMASTERS, STEVEN 9/8/2026 7:53 PM



ASPHALT PAVEMENT DETAIL
NOT TO SCALE

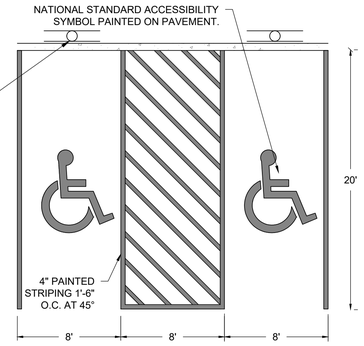
NOTES:
1. SHALL BE UTILIZED FOR ALL IMPERVIOUS ASPHALT AREAS WITHIN THE PROPERTY BOUNDARY. ASPHALT PAVEMENT SHALL ADHERE TO DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. CONSULT GEOTECHNICAL ENGINEER FOR PROPER SUBGRADE INSPECTION, TESTING, AND VERIFICATION OF PAVEMENT SECTION, SUBGRADE AND AGGREGATE SUITABILITY.
3. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE. POOLING/PONDING OF WATER WILL NOT BE ACCEPTED.



CONCRETE SIDEWALK DETAIL
NOT TO SCALE

NOTES:
1. CONCRETE SHALL BE 4,000 PSI, 28 DAY COMPRESSIVE STRENGTH.
2. SUB-GRADE SHALL BE 4" OF COMPACTED SELECT FILL. COMPACT TO 95% OF MODIFIED PROCTOR.
3. MAXIMUM LONGITUDINAL SLOPE IS 5% SLOPE.
4. MAXIMUM CROSS SLOPE IS 2%.
5. ALL WALKS SHALL HAVE CONSTRUCTION JOINTS SPACED THE SAME AS THE WIDTH OF THE SIDEWALK AND FULL DEPTH EXPANSION JOINTS SPACED AT 4 TIMES THE WIDTH OF OF THE WALKWAY AND WHEN JOINING AGAINST EXISTING POLES, PIPES, AND CONCRETE.
6. PROVIDE A SMOOTH BROOM FINISH.

PARTIAL ELEVATION
NOT TO SCALE

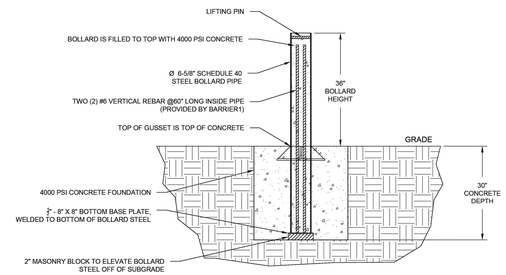


PARTIAL PLAN VIEW
NOT TO SCALE

B1 TOMCAT
TRAFFIC IMPACT BOLLARD - MODEL TIB-67-SA
UNOFFICIAL CRASH TEST STOPPED 2,430 LB. VEHICLE AT 40 MPH IMPACT WITHIN 3.3FT

TYPICAL SINGLE BOLLARD INSTALLATION

KEY FEATURES:
1. PREFABRICATED BOLLARD UNIT
2. NO REBAR IN FOUNDATION
3. BOLLARD SYSTEM CAN ACCOMMODATE ANY TURNING RADIUS

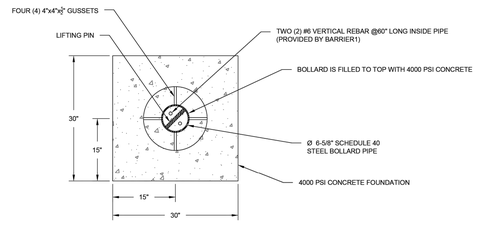


NOTE:
TOTAL QUANTITY OF BOLLARDS PROVIDED TO BE LISTED ON PURCHASE ORDER.

BARRIER1 SYSTEMS	**BARRIER1 SYSTEMS, LLC** 3300 BATTLEGROUND AVE, STE 320 GREENSBORO, NC 27410 (336) 617-8478 www.barrier1.com sales@barrier1.com	PATENT PROTECTED THE DRAWINGS AND INFORMATION CONTAINED HEREIN ARE PROPRIETARY AND CONFIDENTIAL, AND ARE AUTHORIZED ONLY FOR USE FOR WORK ASSOCIATED WITH BARRIER1 SYSTEMS, LLC ALL RIGHTS RESERVED.	ELEVATION VIEW (STAND-ALONE)	TIB-67-SA WWEBSITE DRAWING	SHEET: 1 OF 6 20250915-10-M SCALE: N.T.S.

B1 TOMCAT
TRAFFIC IMPACT BOLLARD - MODEL TIB-67-SA
UNOFFICIAL CRASH TEST STOPPED 2,430 LB. VEHICLE AT 40 MPH IMPACT WITHIN 3.3FT

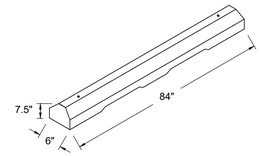
TYPICAL SINGLE BOLLARD INSTALLATION



BARRIER1 SYSTEMS	**BARRIER1 SYSTEMS, LLC** 3300 BATTLEGROUND AVE, STE 320 GREENSBORO, NC 27410 (336) 617-8478 www.barrier1.com sales@barrier1.com	PATENT PROTECTED THE DRAWINGS AND INFORMATION CONTAINED HEREIN ARE PROPRIETARY AND CONFIDENTIAL, AND ARE AUTHORIZED ONLY FOR USE FOR WORK ASSOCIATED WITH BARRIER1 SYSTEMS, LLC ALL RIGHTS RESERVED.	PLAN VIEW (STAND-ALONE)	TIB-67-SA WWEBSITE DRAWING	SHEET: 2 OF 6 20250915-10-M SCALE: N.T.S.

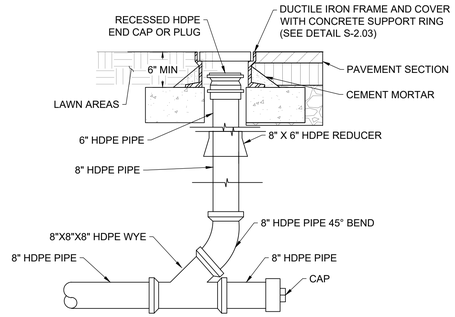
HANDICAP PARKING STALL AND SIGNAGE DETAIL
NOT TO SCALE

NOTES:
1. STRIPING AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE CITY OF MILFORD AND CURRENT A.D.A. REGULATIONS.
2. SIGNAGE SHALL BE POST MOUNTED AT THE HEAD OF THE FRONT-ABUTTING PARKING STALLS. ON FRONT-ABUTTING PARKING STALLS, SIGNAGE SHALL BE PROVIDED ON BOTH SIDE OF THE POST.

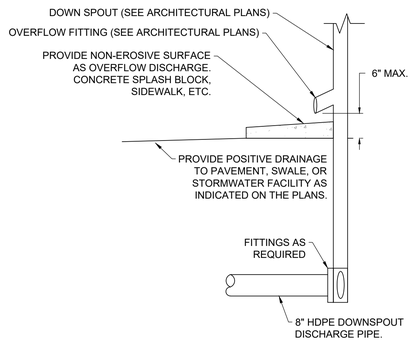


STANDARD CONCRETE PARKING DETAIL
NOT TO SCALE

NOTES:
1. 7'-0" LONG - 370 LBS. TWO ⅝"X18" ANCHOR PINS.
2. SMOOTH STEEL FORM FINISH.
3. HIGH STRENGTH 4,500 PSI CONCRETE.

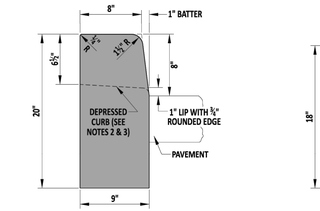


STORMWATER CLEANOUT DETAIL
NOT TO SCALE

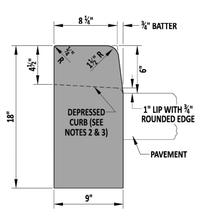


BELOW-GRADE DOWNSPOUT TIE-IN DETAIL
NOT TO SCALE

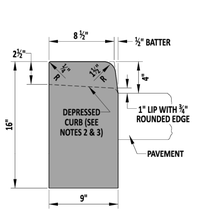
SCALE : NTS



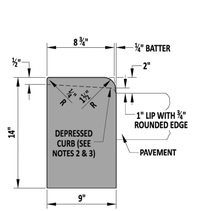
PCC CURB
TYPE 1-8



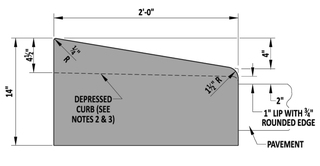
PCC CURB
TYPE 1-6



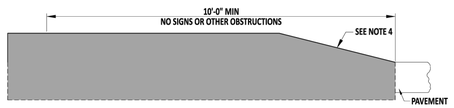
PCC CURB
TYPE 1-4



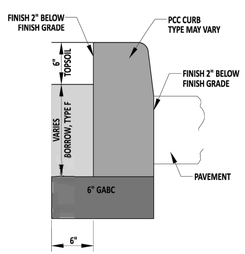
PCC CURB
TYPE 1-2



PCC CURB
TYPE 2



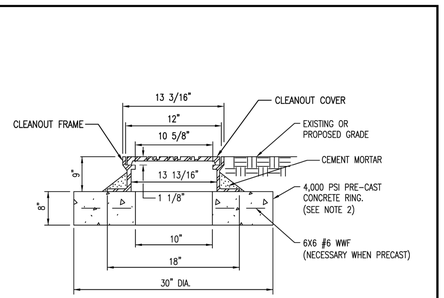
TYPICAL TAPER SECTION AT NOSE OF MEDIANS



TYPICAL PCC CURB SECTION

NOTES:
1). CONSTRUCT IN ACCORDANCE WITH SECTION 701.
2). WHEN PCC CURB OR INTEGRAL PCC CURB AND GUTTER IS PLACED ADJACENT TO PORTLAND CEMENT CONCRETE PAVEMENT, CONSTRUCT THE JOINT AS PER THE LONGITUDINAL JOINT SEALANT DETAIL ON DETAIL P-2, SHEET 3. USE APPROVED JOINT FILLER TO SEAL. WORK TO BE PAID UNDER RESPECTIVE CURB AND GUTTER ITEM.
3). THE DEPRESSED CURB DIMENSIONS (INCLUDING 1" LIP) ON THIS SHEET ARE FOR USE AT ENTRANCES ONLY. FOR CURB DEPRESSIONS AT PEDESTRIAN CONNECTION, SEE DETAIL C-1, SHEET 3.
4). DEPRESS CURB FLUSH WITH PAVEMENT OR ADJACENT AREA TO ALL CORNER RADII OF TRIANGULAR ISLANDS AND MEDIANS, TAPERING BACK TO FULL HEIGHT AT A RATE OF 4:1.
5). TAPER END OF CURB RUNS NOT PART OF AN ISLAND OR MEDIAN FLUSH WITH PAVEMENT OR ADJACENT AREA AT A RATE OF 12:1.

DelDOT	Andrew Short 10/15/2024 ENGINEERING SUPPORT DATE **RECOMMENDED**	PCC CURB, TYPICAL CURB SECTION, AND TYPICAL TAPER SECTION AT NOSE OF MEDIANS	REVIEWED DEPUTY DIRECTOR, DESIGN	23 October 2024 DATE
		STANDARD NO. C-1 (2025) SHT. 1 OF 4	APPROVED CHIEF ENGINEER	10/25/2024 DATE



FRAME AND COVER SECTION

NOTES:
1. FRAME AND COVER ASSEMBLY SHALL BE CENTERED OVER THE CLEANOUT RISER.
2. HDPE COMPOSITE SUPPORT RING BASE MAY BE SUBSTITUTED FOR CONCRETE RING IN NON-TRAFFIC AREA. HDPE SUPPORT RING IS NOT PERMITTED IN TRAFFIC BEARING AREA.
3. CLEANOUT FRAME AND COVER SHALL BE INSTALLED BY UTILITY CONTRACTOR PRIOR TO SUBSTANTIAL COMPLETION INSPECTION FOR DEVELOPMENT PROJECTS.
4. MATERIAL FOR FRAME AND COVER SHALL BE HEAVY DUTY GRAY IRON CL35B MEETING THE REQUIREMENTS OF ASTM A48.
5. CLEANOUT COVER SHALL HAVE A RAISED DIAMOND PATTERN WITH A 2" MIN. RAISED "S" IMPRINTED IN SHARP FACE GOTHIC AT CENTER OF COVER. A SINGLE 1" MIN. WIDE PICKHOLE SHALL BE PROVIDED AT EDGE.
6. SEWER CLEANOUT COVERS LOCATED WITHIN A PEDESTRIAN WALKWAY MUST BE ADA COMPLIANT.
7. REFER TO CURRENT DELDOT REQUIREMENTS FOR INSTALLATIONS WITHIN DELDOT RIGHT-OF-WAY.

SUSSEX COUNTY ENGINEERING DEPARTMENT APPROVED SUSSEX COUNTY ENGINEER	8" SEWER LATERAL CLEANOUT FRAME AND COVER	DETAIL S-2.03 DATE ISSUED: 5/31/2022

EA Engineering, Science, and Technology, Inc., PBC

11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

HORIZONTAL DATUM:
DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

SCALE AS SHOWN

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
SITE DETAILS

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB / SCL
CHECKED BY: GAT	PROJECT MANAGER: SCL
PROJECT NUMBER: 6429401	

DRAWING NO.
C-501

DATE: SEPTEMBER 2026 SHEET: 10 OF 15

100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\4429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN_RETS\6429401 - 05-50 - SITE DETAILS.DWG|JC-0011|EMASTERS, STEVEN 8/6/2026 7:53 PM

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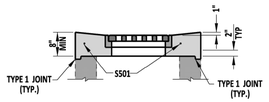
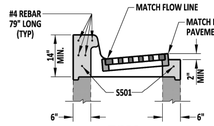
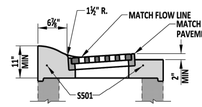


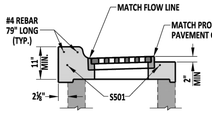
TYPE A



TYPE B



TYPE D



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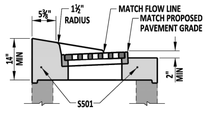
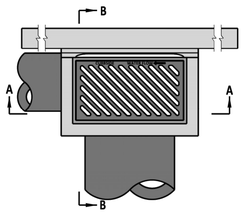


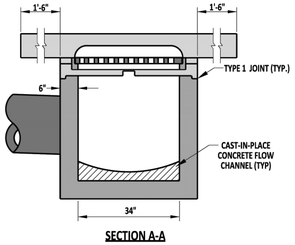
TYPE E

TOP UNIT DETAILS

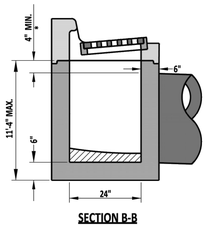
NOTE: SEE DETAIL D-5, SHEET 3 OF 9 FOR INLET TOP UNIT APPLICATIONS.



TOP VIEW



SECTION A-A



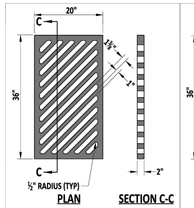
SECTION B-B

DRAINAGE INLET DETAILS

NOTE: REFER TO PREVIOUS SHEETS FOR REINFORCING REQUIREMENTS
* - SEE OPTIONAL PIPE OPENING DETAIL ON STANDARD NO. D-4, SHEET 1 OF 1

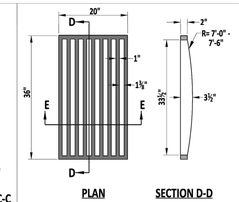
DelDOT					
ENGINEERING SUPPORT 09/01/2020 DATE	34" x 24" DRAINAGE INLET			REVIEWED DEPUTY DIRECTOR - DESIGN	09/01/2020 DATE
RECOMMENDED	STANDARD NO. D-5 (2020)	SHT. 6	OF 9	APPROVED CHIEF ENGINEER	09/01/2020 DATE

SCALE : NTS

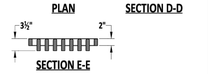


PLAN SECTION C-C

TYPE 1

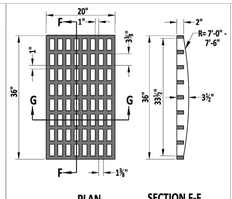


PLAN SECTION D-D

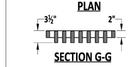


SECTION E-E

TYPE 2

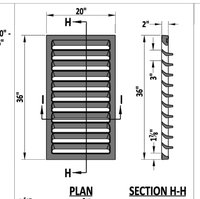


PLAN SECTION F-F

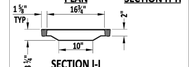


SECTION G-G

TYPE 3

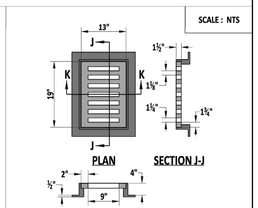


PLAN SECTION H-H

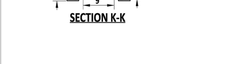


SECTION I-I

TYPE 4

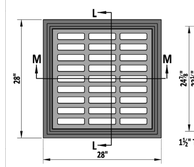


PLAN SECTION J-J

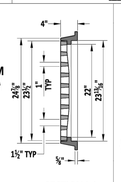


SECTION K-K

TYPE 5

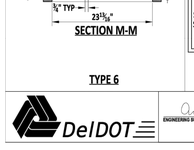


PLAN



SECTION L-L

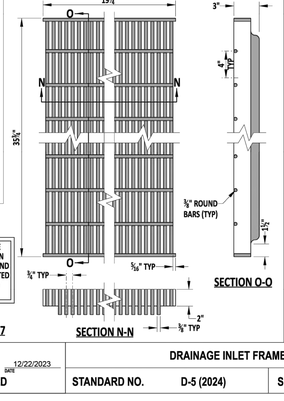
TYPE 6



SECTION M-M

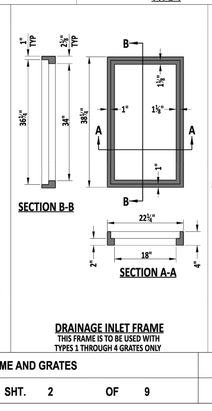
NOTE: THIS INLET GRATE IS ONLY TO BE USED WHEN SPECIFIED ON THE PLANS AND SHOULD NOT BE RETROFITTED WITHOUT APPROVAL BY THE ENGINEER.

TYPE 7



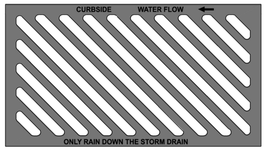
SECTION N-N SECTION O-O

TYPE 6



SECTION B-B SECTION A-A

DRAINAGE INLET FRAME
THIS FRAME IS TO BE USED WITH TYPES 1 THROUGH 4 GRATES ONLY



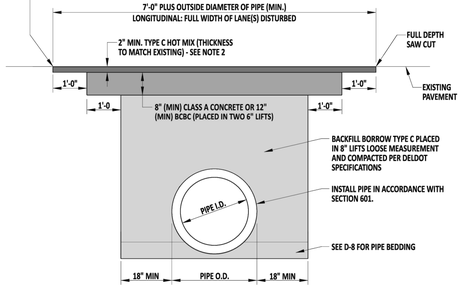
DRAINAGE GRATE LABELING EXAMPLE DETAIL

NOTES:
1). INSTALL TYPE 1 AND 4 DRAINAGE INLET GRATES ONLY IN CONJUNCTION WITH CURB OR CURB & GUTTER.
2). INSTALL TYPE 2 DRAINAGE INLET GRATE ONLY WHERE BICYCLE TRAFFIC IS NOT EXPECTED TO BE PRESENT.
3). LABEL THE TOP OF ALL DRAINAGE INLET GRATES, EXCEPT TYPE 7, WITH "ONLY RAIN DOWN THE STORM DRAIN". LABEL DRAINAGE INLET GRATES TYPE 1 AND TYPE 4 WITH "WATER FLOW" AND AN ARROW INDICATING FLOW DIRECTION AS SHOWN IN THE EXAMPLE DETAIL.
4). LABEL THE TOP AND BOTTOM OF THE TYPE 1 DRAINAGE INLET GRATE WITH "CURBSIDE" AS SHOWN ON THE EXAMPLE DETAIL.
5). ONLY USE THE TYPES 5 & 6 DRAINAGE INLET FRAME AND GRATE COMBINATIONS ON LAWN INLET DRAINAGE BOXES. SEE SCHEDULE ON D-4, SHEET 1 FOR WHICH BOX SIZES ARE CONSIDERED LAWN INLET DRAINAGE BOXES.
6). THE TYPE 6 DRAINAGE INLET FRAME AND GRATE COMBISNATION SHOWN IS THE NEENAH FOUNDRY FRAME AND GRATE COMBINATION MODEL NF-1878-A5G, AN ACCEPTABLE ALTERNATIVE IS THE EAST JORDAN IRON WORKS FRAME AND GRATE COMBINATION MODEL V-5622.

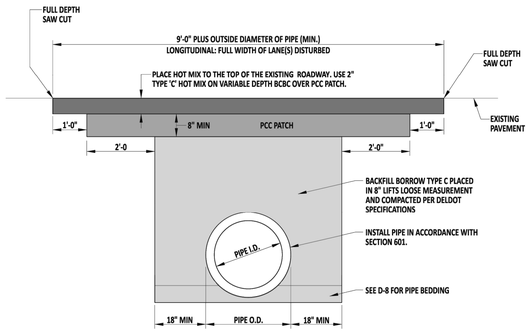
DelDOT					
ENGINEERING SUPPORT 12/22/2023 DATE	DRAINAGE INLET FRAME AND GRATES			REVIEWED DEPUTY DIRECTOR - DESIGN	22 December 2023 DATE
RECOMMENDED	STANDARD NO. D-5 (2024)	SHT. 2	OF 9	APPROVED CHIEF ENGINEER	01/11/2024 DATE

22-DEC-2023

SCALE : NTS



PERMANENT CROSS-ROAD OR LONGITUDINAL PATCH DETAIL



PERMANENT CROSS-ROAD OR LONGITUDINAL PATCH DETAIL
* EXISTING CONCRETE PAVEMENT OVERLAYED WITH HOTMIX LOCATIONS

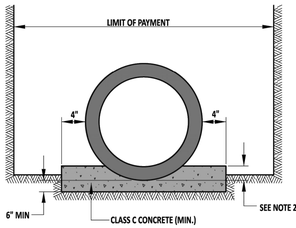
NOTES:
1). PATCH WIDTHS ARE MEASURED ALONG THE ROADWAY CENTERLINE. CONSTRUCT PATCHES THE FULL WIDTH OF THE LANE OR LANES DISTURBED.
2). THIS IS A MINIMUM PATCH. IF THE EXISTING ROADWAY HAS A HEAVIER CROSS SECTION THAN SHOWN HERE, IT WILL BE REPLACED WITH THAT CROSS SECTION, OR AS DIRECTED BY THE ENGINEER.

DelDOT					
ENGINEERING SUPPORT 12/22/2023 DATE	PERMANENT CROSS-ROAD PATCH OVER PIPE TRENCH			REVIEWED DEPUTY DIRECTOR - DESIGN	22 December 2023 DATE
RECOMMENDED	STANDARD NO. P-4 (2024)	SHT. 1	OF 1	APPROVED CHIEF ENGINEER	01/11/2024 DATE

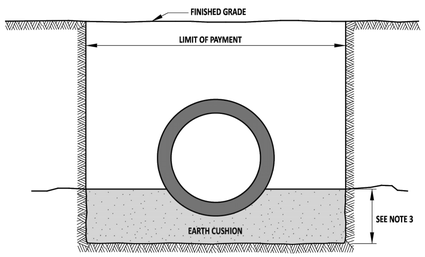
NOTE:

1. IN AREAS OF PIPE TRENCHING WITH PROPOSED GRASS COVER, BACKFILL WITH TYPE C BACKFILL OR EXISTING MATERIAL IF IT MEETS THE REQUIREMENTS OF THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 1001 FOR TYPE C BORROW.

SCALE : NTS

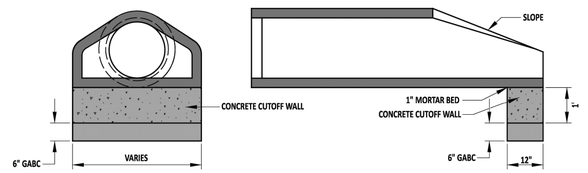


CLASS A PIPE BEDDING



CLASS C PIPE BEDDING

PIPE BEDDING



END SECTIONS FOR CONCRETE PIPE

NOTES:
1). USE CLASS C BEDDING UNLESS OTHERWISE INDICATED.
2). FOR CLASS A BEDDING, IMBED PIPE IN CONCRETE 6" FOR PIPES SMALLER THAN 24" I.D., 10" FOR PIPES 24" TO 60", AND FOR PIPES LARGER THAN 60" SEE PROJECT DETAILS.
3). USE IN SITU MATERIAL AS APPROVED BY THE ENGINEER OR AS PER MANUFACTURER REQUIREMENTS.
4). USE CLASS B CONCRETE FOR CONCRETE CUTOFF WALLS, PRECAST AS DIRECTED BY THE ENGINEER.

DelDOT					
ENGINEERING SUPPORT 12/08/2021 DATE	PIPE BEDDING AND PIPE FLARED END SUPPORT			REVIEWED DEPUTY DIRECTOR - DESIGN	12/08/2021 DATE
RECOMMENDED	STANDARD NO. D-8 (2021)	SHT. 1	OF 1	APPROVED CHIEF ENGINEER	12/20/2021 DATE

EA Engineering, Science, and Technology, Inc., PBC

11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

HORIZONTAL DATUM:
DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

SCALE AS SHOWN

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
SITE DETAILS

DRAWING INFORMATION

DRAWN BY: JWB | DESIGNED BY: JWB / SCL
CHECKED BY: GAT | PROJECT MANAGER: SCL
PROJECT NUMBER: 6429401

DRAWING NO.
C-502

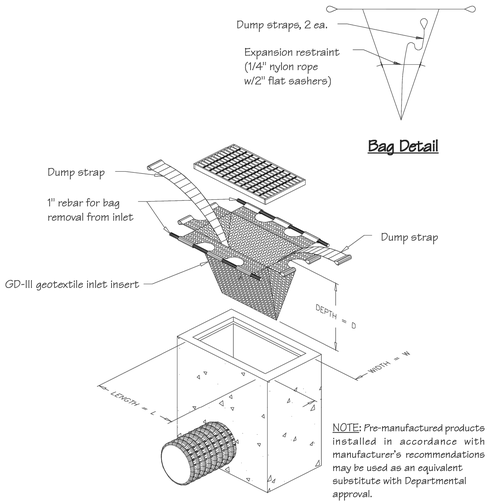
DATE: SEPTEMBER 2026 | SHEET: 11 OF 15

100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN SET\6429401 - D5.00 - SITE DETAILS.DWG | JC-9021 | EAMASTERS, STEVEN | 8/8/2026 7:54 PM

Standard Detail & Specifications

Inlet Protection - Type 2



Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	IP-2	DE-ESC-3.1.5.2 Sheet 1 of 2 Effective July 2023

Standard Detail & Specifications

Inlet Protection - Type 2

Notes:

1. This practice shall only be used in situations in which Inlet Protection - Type 1 cannot be used due to site constraints. These include, but are not limited to partially completed parking areas, streets, roads, etc.
2. It may be necessary to transition from Type 1 to Type 2 Inlet Protection as construction proceeds.
3. For areas where there is a concern for oil run-off or spills, insert shall meet one of the above specifications with an oil-absorbant pillow or shall be made completely from an oil-absorbant material with a woven pillow.

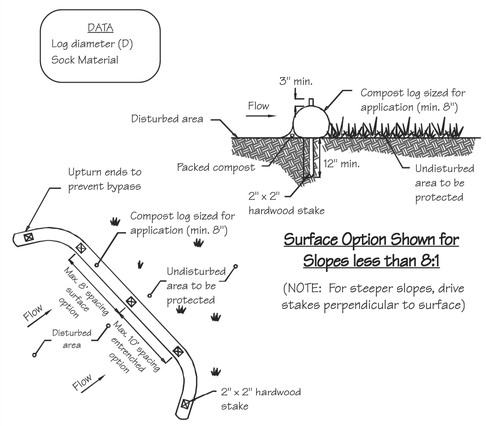
Materials:

The geotextile inlet insert shall meet or exceed the specifications of Type GD-III geotextile in accordance with Appendix A-3 of the Delaware Erosion & Sediment Control Handbook.

Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	IP-2	DE-ESC-3.1.5.2 Sheet 2 of 2 Effective July 2023

Standard Detail & Specifications

Compost Filter Log



NOTE: Manufacturer's recommendations supersede any installation details shown for this practice

Source:	Symbol:	Detail No.
Adapted from MD Stds & Specs for ESC & Filtrexx™ International	CFL	DE-ESC-3.1.7 Sheet 1 of 2 Effective July 2023

Standard Detail & Specifications

Compost Filter Log

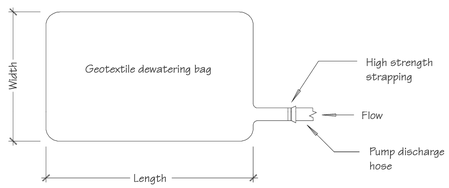
Construction Notes:

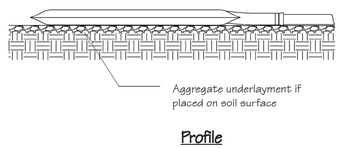
1. Prior to installation, clear bedding area of obstructions including rocks or debris larger than 1 inch and fill in any sharp depression areas.
2. If socks are prepared on-site, fill the sock fabric using a pneumatic blower so that the logs are rigid and do not deform. Terminate at the desired length.
3. For trenched applications, excavate 2 to 4 inches below grade along the width and length of the compost filter log.
4. Install the compost filter logs perpendicular to the flow direction and parallel to the slope with the beginning and end of the installation pointing up the slope a minimum of 1 foot elevation difference. On sites where this is not possible, upturn at a minimum length of 10' at a 30 degree angle to prevent runoff bypass.
5. For untrenched applications, blow or hand pack soil, mulch, or compost on the upslope side of the log, filling the bottom void area.
6. Stake the filled log every 10 feet maximum through the center of the sock for trenched applications, or every 8 feet for untrenched. The stake shall be a 2" by 2" hardwood. It should extend 12" below grade and protrude at least 3" above the top of the sock. If located on a slope greater than 8:1, the stake shall be angled downslope at a 45 degree angle to prevent the force of the water from dislodging to log.
7. When the length of the compost filter log needed exceeds the available compost filter sock length, the next sock shall be overlapped a minimum of 12" before being filled, and a stake placed through both socks at the overlap.
8. Remove accumulated sediment when it has reached half of the effective height of the log.
9. Inspect weekly and after rain event. If sock is degrading or the sock is failing, vegetate to secure the compost, replace the log, or reinforce with an additional log. If the log has been crushed due to construction equipment, it can be "fluffed" back to its effective height. If the effective height can no longer be restored, the log shall be replaced or reinforced with an additional compost filter log.

Source:	Symbol:	Detail No.
Adapted from MD Stds & Specs for ESC & Filtrexx™ International	CFL	DE-ESC-3.1.7 Sheet 2 of 2 Effective July 2023

Standard Detail & Specifications

Geotextile Dewatering Bag





NOTE: Pre-manufactured products installed in accordance with manufacturer's recommendations may be used as an equivalent substitute with Departmental approval.

Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	GB	DE-ESC-3.2.1.2 Sheet 1 of 2 Effective July 2023

Standard Detail & Specifications

Geotextile Dewatering Bag

Construction Notes:

1. The dewatering bag should be placed so the incoming water flows into and through the bag, and then flow off the site without creating more erosion. The neck should be tied off tightly to stop the water from flowing out of the bag without going through the walls. The dewatering bag should be placed on a gravel bed to allow water to flow in all directions.
2. The dewatering bag is considered full and should be disposed when it is impractical for the bag to filter the sediment out at a reasonable flow rate. At this point, it should be replaced with a new bag.
3. Disposal may be accomplished as directed by the construction reviewer. If the site allows, the bag may be buried on site and seeded, visible fabric removed and seeded or removed from site to a proper disposal area.

Materials:

1. The geotextile fabric shall be a Type GD-IV.
2. The dewatering bag shall be sewn with a double needle machine using high strength thread. All structural seams will be sewn with high strength, double stitched "J" type. Seam strength test will have the following minimum average roll values:

Type	TEST METHOD	TEST RESULT
Heavy duty	ASTM D-4884	100 lb / in

3. The dewatering bag shall have an opening large enough to accommodate a four (4) inch discharge hose with attached strap to tie off the hose to prevent the pumped water from escaping from the bag without being filtered.

Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	GB	DE-ESC-3.2.1.2 Sheet 2 of 2 Effective July 2023

Standard Detail & Specifications

Topsoiling

Construction Notes:

1. Site Preparation (Where Topsoil is to be added)

Note: When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, waterways and sediment basins.

a. Grading - Grades on the areas to be topsoiled which have been previously established shall be maintained.

b. Liming - Where the topsoil is either highly acid or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet). Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

c. Tilling - After the areas to be topsoiled have been brought to grade, and immediately prior to dumping and spreading the topsoil, the subgrade shall be loosened by discing or by scarifying to a depth of a least 3 inches to permit bonding of the topsoil to the subsoil. Pack by passing a bulldozer up and down over the entire surface area of the slope to create horizontal erosion check slots to prevent topsoil from sliding down the slope.

2. Topsoil Material and Application

Note:Topsoil salvaged from the existing site may often be used but it should meet the same standards as set forth in these specifications. The depth of topsoil to be salvaged shall be no more than the depth described as a representative profile for that particular soil type as described in the soil survey published by USDA-SCS in cooperation with Delaware Agricultural Experimental Station.

Source:	Symbol:	Detail No.
USDA - NRCS		DE-ESC-3.4.1 Sheet 1 of 2 Effective July 2023

Standard Detail & Specifications

Topsoiling

Construction Notes (cont.)

a. Materials - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand or other soil as approved by an agronomist or soil scientist. It shall not have a mixture of contrasting textured subsoil and contain no more than 5 percent by volume of cinders, stones, slag, coarse fragment, gravel, sticks, roots, trash or other extraneous materials larger than 1-1/2 inches in diameter. Topsoil must be free of plants or plant parts of bermudagrass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistles, or others as specified. All topsoil shall be tested by a reputable laboratory for organic matter content, pH and soluble salts. A pH of 6.0 to 7.5 and an organic content of not less than 1.5 percent by weight is required. If pH value is less than 6.0 lime shall be applied and incorporated with the topsoil to adjust the pH to 6.5 or higher. Topsoil containing soluble salts greater than 500 parts per million shall not be used.

Note: No sod or seed shall be placed on soil which has been treated with soil sterilant or chemicals used for weed control until sufficient time has elapsed to permit dissipation of toxic materials.

b. Grading - The topsoil shall be uniformly distributed and compacted to a minimum of four (4) inches. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

Note:Topsoil substitutes or amendments as approved by a qualified agronomist or soil scientist, may be used in lieu of natural topsoil. Compost material used to improve the percentage of organic matter shall be provided by a certified supplier.

Compost amendments that are intended to meet specific post-construction stormwater management goals shall further meet the requirements of **Appendix 3.06.2 Post Construction Stormwater Management BMP Standards and Specifications, Section 14.0 Soil Amendments.**

Source:	Symbol:	Detail No.
USDA - NRCS		DE-ESC-3.4.1 Sheet 2 of 2 Effective July 2023

EA Engineering, Science, and Technology, Inc., PBC

11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

HORIZONTAL DATUM:
DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

SCALE AS SHOWN

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

DRAWING INFORMATION

DRAWN BY: JWB | DESIGNED BY: JWB / SCL
CHECKED BY: GAT | PROJECT MANAGER: SCL
PROJECT NUMBER: 6429401

DRAWING NO.
C-503

DATE: SEPTEMBER 2026 SHEET: 12 OF 15

100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN SET\6429401 - 05.10 - EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.DWG [C-503] LEMASTERS, STEVEN 9/8/2026 7:54 PM

Standard Detail & Specifications

Vegetative Stabilization

TEMPORARY SEEDING BY RATES, DEPTHS AND DATES

Mix #	Species[5]	Seeding Rate		Optimum Seeding Dates [1] O = Optimum Planting Period; A = Acceptable Planting Period							Planting Depth[3]
				Coastal Plain			Piedmont			All	
	Certified Seed	lb/Ac [4]	lb/1000 sq.ft.	2/1-4/30	[2] 5/1-8/14	8/15-10/31	3/1-4/30	[2]5/1-7/31	8/1-10/31	10/31-2/1	
1	Barley	125	4	O	A	O	O	A	O		1-2 inches 2-3" sandy soils
2	Oats	125	4	O	A	A	O	A	A		1-2 inches 2-3" sandy soils
3	Rye	125	4	O	A	O	O	A	O	A	1-2 inches 2-3" sandy soils
4	Perennial Ryegrass	125	4	O	A	O	O	A	O		0.5 inches 1-2" sandy soils
5	Annual Ryegrass	125	4	O	A	O	O	A	O	A	0.5 inches 1-2" sandy soils
6	Winter Wheat	125	4	O	A	O	O	A	O	A	1-2 inches 2-3" sandy soils
7	Foxtail Millet	30 PLS	0.7		O			O			0.5 inches 1-2" sandy soils
8	Pearl Millet	20 PLS	0.5		O			O			0.5 inches 1-2" sandy soils

1. Winter seeding requires 3 tons per acre of straw mulch for proper stabilization.
2. May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
3. Applicable on slopes 3:1 or less.
4. Use varieties currently recommended for Delaware. Contact a County Extension Office for information.
5. Warm season grasses such as Millet may be used between 5/1 and 9/1 if desired. Seed at 3-5 lbs. per acre. Good on low fertility and acid areas. Seed after frost through summer at a depth of 0.5".

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 1 of 4 Effective July 2023

Standard Detail & Specifications

Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES

Seeding Mixtures		Seeding Rate[1]		Optimum Seeding Dates [2] O = Optimum Planting Period A = Acceptable Planting Period							Remarks
Mix No.	Certified Seed[3]			Coastal Plain			Piedmont			All[4]	
	Well Drained Soils	lb/Ac	lb/1000 sq.ft.	2/1-4/30	5/1-8/14	8/15-10/31	3/1-4/30	5/1-7/31	8/1-10/31	10/31-2/1	
1	Tall Fescue	140	3.2	A	O	A	A	O	A	Add 100 lbs./ac Winter Rye	Good erosion control mix Tolerant of low fertility soils
	Canada Wild Rye	10	0.23								Good for droughty sites
2	Deertongue	30	0.69	A	O	A	A	O	A	Add 100 lbs./ac Winter Rye	Good erosion control mix Tolerant of low fertility soils Legume that fixes atmospheric N into soil
	Sheep Fescue	30	0.69								
	White Clover	10	0.35								
3	Tall Fescue (Turf-type) **or**	50	1.15	O	A[4]	O	O	A[4]	O	Add 100 lbs./ac. Winter Rye	Good erosion control mix Tall Fescue for droughty conditions. Creeping Red Fescue for heavy shade. Flatpea to suppress woody vegetation.
	Strong Creeping Red Fescue **or**	50	1.15								
	Perennial Ryegrass	50	1.15								
	plus Flatpea[5]	15	0.34								
4	Strong Creeping Red Fescue	100	2.3	O	A[4]	O	O	A[4]	O	Add 100 lbs./ac. Winter Rye	Suitable waterway mix. Canada Bluegrass more drought tolerant. Use Redtop for increased drought tolerance.
	Kentucky Bluegrass	70	1.61								
	Perennial Ryegrass **or**	15	0.35								
	Redtop	5	0.11								
	plus White Clover[5]	3	0.07								
5	Switchgrass[6,7] **or**	10	0.23			O			O		Native warm-season mixture. Tolerant of low fertility soils. Drought tolerant. Poor shade tolerance. N fertilizer discouraged - weeds
	Coastal Panicgrass	10	0.23								
	Big Bluestem	5	0.11								
	Little Bluestem	5	0.11								
	Indian Grass	5	0.1								
6	Tall Fescue (turf-type) (Blend of 3 cultivars)	150	3.5	O	A[4]	O	O	A[4]	O		Managed filter strip for nutrient uptake.
7	Tall Fescue	150	3.5	O	A[4]	O	O	A[4]	O		Three cultivars of Kentucky Bluegrass. Traffic tolerant.
	Ky. Bluegrass (Blend)	20	0.46								
	Perennial Ryegrass	20	0.46								
8	Big Bluestem[7]	10	0.23	O	A[4]		O	A[4]			All species are native. Indian Grass and Bluestem have fluffy seeds. Plant with a specialized native seed drill.
	Indian Grass[7]	10	0.23								
	Little Bluestem[7]	8	0.18								
	Creeping Red Fescue	30	0.69								
	plus one of:										
	Partridge Pea	5	0.11								Creeping Red Fescue will provide erosion protection while the warm season grasses get established.
	Bush Clover	3	0.07								
	Wild Indigo	3	0.07								
	Showy Tick-Trefoil	2	0.05								

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 2 of 4 Effective July 2023

Standard Detail & Specifications

Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES (cont.)

Seeding Mixtures		Seeding Rate[1]		Optimum Seeding Dates [2] O = Optimum Planting Period A = Acceptable Planting Period							Remarks
Mix No.	Certified Seed[3]			Coastal Plain			Piedmont			All[4]	
	Poorly Drained Soils	lb/Ac	lb/1000 sq.ft.	2/1-4/30	5/1-8/14	8/15-10/31	3/1-4/30	5/1-7/31	8/1-10/31	10/31-2/1	
9	Redtop	75	1.72	O	A[4]	O	O	A[4]	O	Add 100 lbs./ac. Winter Rye	Quick stabilization of disturbed sites and waterways
	Creeping Bentgrass	35	0.8								
	Sheep Fescue	30	0.69								
	Rough Bluegrass	45	1								
10	Switchgrass[6]	10	0.23	A		O	A		O		Good erosion control, wildlife cover and wetland revegetation.
	Residential Lawns										
11	Tall Fescue	100	2.3	O	A[4]	O	O	A[4]	O		High value, high maintenance, light traffic, irrigation necessary. Well drained soils, full sun.
	Perennial Ryegrass	25	0.57								
	Kentucky Bluegrass Blend	30	0.69								
12	Tall Fescue	100	2.3	O	A[4]	O	O	A[4]	O		Moderate value, low maintenance, traffic tolerant
	Perennial Ryegrass	25	0.57								
	Sheep Fescue	25	0.57								
13	Creeping Red Fescue	50	1.15	O	A[4]	O	O	A[4]	O		Shade tolerant, moderate traffic tolerance, moderate maintenance.
	Chewings Fescue	50	1.15								
	Rough Bluegrass	20	0.4								
	Kentucky Bluegrass	20	0.4								
14	Creeping Red Fescue	50	1.15	O	A[4]	O	O	A[4]	O		Shade tolerant, moisture tolerant.
	Rough Bluegrass **or**	90	2.1								
	Chewings Fescue										
15	K-31 Tall Fescue	150	3.5	O	A[4]	O	O	A[4]	O		Monoculture, but performs well alone in lawns. Discouraged.

1. When hydroseeding is the chosen method of application, the total rate of seed should be increased by 25%.
2. Winter seeding requires 3 tons per acre of straw mulch. Planting dates listed above are average for Delaware. These dates may require adjustment to reflect local conditions.
3. All seed shall meet the minimum purity and minimum germination percentages recommended by the Delaware Department of Agriculture. The maximum % of weed seeds shall be in accordance with Chapter 15, Title 3 of the Delaware Code.
4. Turf-type species may be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
5. It is recommended that all leguminous seed be inoculated.
6. Warm season grass mix and Switchgrass cannot be mowed more than 4 times per year.
7. Warm season grasses require a soil temperature of at least 50 degrees in order to germinate and will remain dormant until then.

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 3 of 4 Effective July 2023

Standard Detail & Specifications

Vegetative Stabilization

Construction Notes:

1. Site Preparation
   a. Prior to seeding, install needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, grassed waterways, and sediment basins.
   b. Final grading and shaping is not necessary for temporary seedings.
2. Seedbed Preparation

   It is important to prepare a good seedbed to ensure the success of establishing vegetation. The seedbed should be well prepared, loose, uniform, and free of large clods, rocks, and other objectionable material. The soil surface should not be compacted or crusted.
3. Soil Amendments
   a. Lime - Apply liming materials based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply dolomitic limestone at the rate of 1 to 2 tons per acre. Apply limestone uniformly and incorporate into the top 4 to 6 inches of soil.
   b. Fertilizer - Apply fertilizer based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply a formulation of 10-10-10 at the rate of 600 pounds per acre. Apply fertilizer uniformly and incorporate into the top 4 to 6 inches of soils.
4. Seeding
   a. For **temporary stabilization**, select a mixture from **Sheet 1 .** For a **permanent stabilization**, select a mixture from **Sheet 2** or **Sheet 3** depending on the conditions. Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.
   b. Apply seed uniformly with a broadcast seeder, drill, cultipacker seeder or hydroseeder. All seed will be applied at the recommended rate and planting depth.
   c. Seed that has been broadcast should be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used and the seed and fertilizer is mixed, they will be mixed on site and the seeding shall be done immediately and without interruption.
5. Mulching

   All mulching shall be done in accordance with detail **DE-ESC-3.4.5**.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 4 of 4 Effective July 2023

Standard Detail & Specifications

Mulching

1. Materials and Amounts

a. *Straw* - Straw shall be unrotted small grain straw applied at the rate of 1-1/2 to 2 tons per acre, or 70 to 90 pounds (two bales) per 1,000 square feet. Mulch materials shall be relatively free of weeds and shall be free of noxious weeds such as; thistles, Johnsongrass, and quackgrass. Spread mulch uniformly by hand or mechanically. For uniform distribution of hand spread mulch, divide area into approximately 1,000 square feet sections and place 70-90 pounds (two bales) of mulch in each section.

b. *Wood chips* - Apply at the rate of approximately 6 tons per acre or 275 pounds per 1,000 square feet when available and when feasible. These are particularly well suited for utility and road rights-of-way. If wood chips are used, increase the application rate of nitrogen fertilizer by 20 pounds of N per acre (200 pounds of 10-10-10 or 66 pounds of 30-0-0 per acre).

c. *Hydraulically applied mulch* -The following conditions apply to hydraulically applied mulch:

i. Definitions:

a. Wood fiber mulch shall consist of specially prepared wood that has been processed to a uniform state, is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment, and consists of a minimum of 70% virgin or recycled wood fiber combined with 30% paper fiber and additives.

b. Blended fiber mulch shall consist of any hydraulic mulch that contains greater than 30% paper fiber. The paper component must consist of specially prepared paper that has been processed to a uniform fibrous state and is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment.

c. A bonded fiber matrix (BFM) consists of long strand, specially prepared wood fibers that have been processed to a uniform state held together by a water resistant bonding agent. BFMs shall contain no paper (cellulose) mulch but may contain small percentages of synthetic fibers to enhance performance.

d. Refer to **Figure 3.4.5a** for conditions and limitations of use for each of the above categories of hydraulic mulch.

ii. All components of the hydraulically applied mulches shall be pre-packaged by the manufacturer to assure material performance. Field mixing of the mulch components is acceptable, but must be done per manufacturers recommendations to ensure the proper results.

iii. Hydraulic mulches shall be applied with a viable seed and at manufacturer's recommended rates. Increased rates may be necessary based on site conditions.

iv. Hydraulically applied mulches and additives shall be mixed according to manufacturers recommendations.

iv. Materials within this category shall only be used when hydraulically applied mulch has been specified for use on the approved Sediment and Stormwater Plan, or supplemental approval from the plan approval agency has been obtained in writing for a specific area.

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrexx™ International		**DE-ESC-3.4.5** Sheet 1 of 3 Effective July 2023

Standard Detail & Specifications

Mulching

v. Application:
   a. Apply product to geotechnically stable slopes that have been designed and constructed to divert runoff away from the face of the slope.
   b. Do not apply to saturated soils, or if precipitation is anticipated within 24-48 hours.
   c. During the spring (March 1 to May 31) and fall (September 1 to November 30) seasons, hydraulic mulches may be applied in a one-step process where all components are mixed together in single-tank loads. It is recommended that the product be applied from opposing directions to achieve optimum soil coverage.
   d. During the summer (June 1 to August 31) and winter (December 1 to February 28) seasons, the following two-step process is required:
      Step One– Mix and apply seed and soil amendments with a small amount of mulch for visual metering.
      Step Two – Mix and apply mulch at manufacturers recommended rates over freshly seeded surfaces. Apply from opposing directions to achieve optimum soil coverage.
   e. Minimum curing temperature is 40° F (4° C). The best results and more rapid curing are achieved at temperatures exceeding 60°F (15°C). Curing times may be accelerated in high temperature, low humidity conditions on dry soils.

vi. Recommended application rates are for informational purposes only. Conformance with this standard and specification shall be performance-based and requires **100% soil coverage**. Any areas with bare soil showing shall be top dressed until full coverage is achieved.

d. *Compost blanket (CB)* - Loosely applied with a pneumatic blower so that a 1" compost blanket uniformly covers the **soil with 100% coverage**. This application can be used with seed to promote germination by applying the approved seed mix directly into the loosely blown compost. The compost blanket performs best on slopes less than 2:1 and requires no mulch anchoring.

2. Anchoring mulch - Mulch must be anchored immediately to minimize loss by wind or water. This may be done by one of the following methods, depending upon size of area, erosion hazard, and cost.

a. *Crimping* - A crimper is a tractor drawn implement designed to punch and anchor mulch into the top two (2) inches of soil. This practice affords maximum erosion control but is limited to flatter slopes where equipment can operate safely. On sloping land, crimping should be done on the contour whenever possible.
b. *Tracking* - Tracking is the process of cutting mulch (usually straw) into the soil using a bulldozer or other equipment that runs on cleated tracks. Tracking is used primarily on slopes 3:1 or steeper and should be done up and down the slope with cleat marks running across the slope.
c. *Liquid mulch binders* - Applications of liquid mulch binders should be heavier at edges, in valleys, and at crests of banks and other areas where the mulch will be moved by wind or water. All other areas should have a uniform application of binder. The use of synthetic binders is the preferred method of mulch binding and should be applied at the rates recommended by the manufacturer.
d. *Paper fiber* - The fiber binder shall be applied at a net dry weight of 750 lbs/ac. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons.
e. *Nettings* - Biodegradable nettings may be used to secure straw mulch. Install and secure according to the manufacturer's recommendations. Photodegradable or synthetic nettings are not acceptable.

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrexx™ International		**DE-ESC-3.4.5** Sheet 2 of 3 Effective July 2023

Standard Detail & Specifications

Mulching

MULCHING MATERIAL SELECTION GUIDE

Percent Slope	Type of Mulch / App. Rate'	Dec. 1 to Feb. 28(29)	March 1 to May 31	June 1 to Aug. 31	Sept. 1 to Nov. 30
		OK (1:1 Max.)	OK (1:1 Max.)		OK (1:1 Max.)
Less than 2%	Blended Fiber @ 2000 lbs/ac. minimum	xxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxx	
	Wood Fiber @ 2000 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK		OK
	BFM @ 3000 lbs/ac. min.	OK	OK	OK	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
2% to 5.9%	Blended Fiber @ 2500 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	BFM @ 3000-3500 lbs/ac. min	OK	OK	OK	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
6% to 10.9%	Wood Fiber @ 2000-2500 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	BFM @ 3500-4000 lbs/ac. min.	OK	OK	OK	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
11% to 24.9%	Wood Fiber @ 2500-3000 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	BFM @ 3500-4000 lbs/ac. min.	OK	OK	OK	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
25% to 33%	Wood Fiber @ 2500-3000 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	BFM @ 4000 lbs/ac. min.	OK	OK	OK	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
33% and up	Blended Fiber @ 4000 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	Straw @ 2 Tons/ac. min.***	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
		2:1 Max.	2:1 Max.	2:1 Max.	2:1 Max.

* Note: Manufacturers Recommended Rates for informational purposes only. Performance standard requires 100% soil coverage.
** Note: Stabilization Matting must be applied in accordance with Section 3.4.6 of the Delaware ESC Handbook.
*** Note: Straw mulch application rate must be increased to 3 tons per acre if mulch tackifier (fiber, binder, etc.) does not apply to slopes steeper than 2:1.
OK = Acceptable to use during this time period.
xxx = Not acceptable to use during this time period.
All application rates are minimums

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrexx™ International		**DE-ESC-3.4.5** Sheet 3 of 3 Effective July 2023

EA Engineering, Science, and Technology, Inc., PBC

11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

HORIZONTAL DATUM:
DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

SCALE AS SHOWN

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

DRAWING INFORMATION

DRAWN BY: JWB | DESIGNED BY: JWB / SCL
CHECKED BY: GAT | PROJECT MANAGER: SCL
PROJECT NUMBER: 6429401

DRAWING NO.
C-504

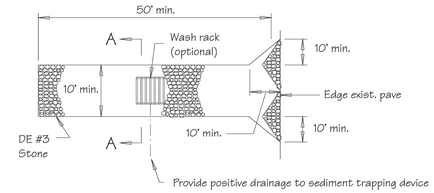
DATE: SEPTEMBER 2026 SHEET: 13 OF 15

100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN SET\6429401 - 05 10 - EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.DWG [C-504] LEEMASTERS, STEVEN 9/8/2026 7:54 PM

Standard Detail & Specifications

Stabilized Construction Entrance



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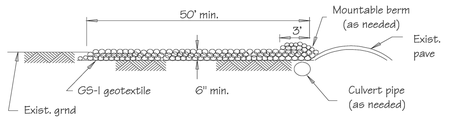

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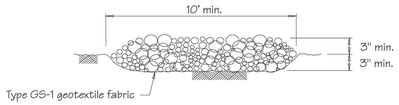
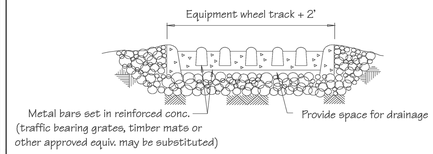


Section A-A (Std.)

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SCE	**DE-ESC-3.4.7** Sheet 1 of 2 Effective July 2023

Standard Detail & Specifications

Stabilized Construction Entrance



Section A-A (Opt.)

Construction Notes:

1. Stone size - Use DE #3 stone.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than size (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Geotextile - Type GS-I; placed over the entire area prior to placing of stone.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Vehicle wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Inspection - Periodic inspection and needed maintenance shall be provided after each rain.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SCE	**DE-ESC-3.4.7** Sheet 2 of 2 Effective July 2023

Standard Detail & Specifications

Construction Site Pollution Prevention

Delaware NPDES Discharge Permit
General Permit for Discharge of Stormwater from Construction Activities

((Project Name))

((NOI Permit Number))

((Agency Plan Approval ID))

((Contact Name & Number for Additional Site Information))

((Contact Name & Number to Obtain Copy of Approved Plan))

If you observe indicators of stormwater pollutants in the discharge or in the receiving waterbody, call the DNREC Spill Notification 24 HR Hotline at

1-800-662-8802

Example Construction General Permit (CGP) Signage

NOTES:
1. Minimum sign size 2' x 2'
2. Minimum text size 1"
3. Sign must be posted at a safe, publicly accessible location close to construction site
4. Sign must be visible from the public road nearest the active construction site
5. Signs posted within a DelDOT or other public road right-of-way (ROW) must be in accordance with all local and/or State requirements in regards to safety, location, orientation, etc.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.1** Sheet 1 of 4 Effective July 2023

Standard Detail & Specifications

Construction Site Pollution Prevention

Notes:

The Construction Site Pollution Prevention Plan includes the following elements:

1. **Material Inventory**

   Document the storage and use of the following materials:
   a. Concrete
   b. Detergents
   c. Paints (enamel and latex)
   d. Cleaning solvents
   e. Pesticides
   f. Wood scraps
   g. Fertilizers
   h. Petroleum based products
2. **Good housekeeping practices**
   a. Store only enough product required to do the job.
   b. Store all materials in a neat, orderly manner in their original labeled containers and covered.
   c. Do not mix different substances.
   d. When possible, use all of a product prior to disposal of the container.
   e. Manufacturers' instructions for disposal should be strictly adhered to.
   f. Designate someone to inspect all BMPs daily.
3. **Waste management practices**
   a. Collect and store all waste materials in securely lidded dumpsters in a location that does not drain to a waterbody.
   b. Salvage and/or recycle waste materials whenever possible.
   c. The dumpsters shall be emptied a minimum of twice per week, or more if necessary. The licensed trash hauler is responsible for cleaning out dumpsters.

Source:	Symbol:	Detail No.
Adapted from USEPA Pub. 840-B-92-002		**DE-ESC-3.6.1** Sheet 2 of 4 Effective July 2023

Standard Detail & Specifications

Construction Site Pollution Prevention

Notes (cont.)

d. Dispose of all trash in accordance with all applicable Delaware laws.
e. Littering is strictly prohibited. Trash cans should be placed at all lunch spots and recycle bins should be placed near the construction trailer.
f. If fertilizer bags can not be stored in a weather-proof location, they should be kept on a pallet and covered with plastic sheeting which is overlapped and anchored.

4. **Equipment maintenance practices**
   a. If possible, equipment should be taken to off-site commercial facilities for washing and maintenance.
   b. If performed on-site, wash vehicles with high-pressure water spray without detergents in an area contained by an impervious berm.
   c. Use drip pans for all equipment maintenance.
   d. Inspect equipment for leaks on a daily basis.
   e. Direct washout from concrete trucks into a temporary pit for hardening and proper disposal.
   f. Equip fuel nozzles with automatic shut-off valves.
   g. Dispose of all used products such as oil, antifreeze, solvents and tires in accordance with manufacturers' recommendations and local, state and federal laws and regulations.
5. **Spill prevention practices**
   a. Identify potential spill areas and contain them in covered areas with no connection to the storm drain system.
   b. Post warning signs in hazardous material storage areas.
   c. Perform preventive maintenance on all tanks, valves, pumps, pipes and other equipment as necessary.
   d. Prioritize low or non-toxic substances for use.

Source:	Symbol:	Detail No.
Adapted from USEPA Pub. 840-B-92-002		**DE-ESC-3.6.1** Sheet 3 of 4 Effective July 2023

Standard Detail & Specifications

Construction Site Pollution Prevention

Notes (cont.)

e. Prominently post contact information for reporting spills through the DNREC 24-Hour Toll Free Number.

6. **Education**
   a. Include Best Management Practices (BMPs) for construction site pollution control as part of regular progress meetings.
   b. Information regarding waste management, equipment maintenance and spill prevention should be prominently posted in the construction trailer.

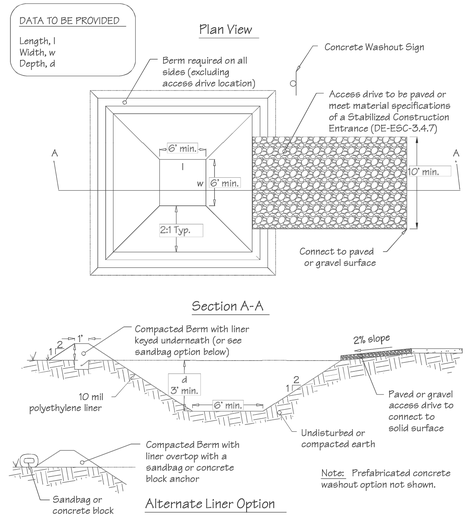
CONTACT INFORMATION

DNREC 24-Hour Toll Free Number	**800-662-8802**
DNREC Solid & Hazardous Waste Management Section	**302-739-9403**

Source:	Symbol:	Detail No.
Adapted from USEPA Pub. 840-B-92-002		**DE-ESC-3.6.1** Sheet 4 of 4 Effective July 2023

Standard Detail & Specifications

Concrete Washout



Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	CW	**DE-ESC-3.6.2** Sheet 1 of 2 Effective July 2023

Standard Detail & Specifications

Concrete Washout

Construction Notes:

1. Locate washout area a minimum of 50 feet from open channels, stormdrain inlets, wetlands or waterbodies.
2. Locate washout area so that it is accessible to concrete equipment (service with a minimum 10 foot wide gravel accessway), but so it is not in a highly active construction area causing accidental damage.
3. Minimum dimensions for prefabricated units are 4 feet by 4 feet by 1 foot deep with a minimum 4mil polyethylene plastic liner. Minimum dimensions for constructed concrete washout areas are 6 feet by 6 feet by 3 feet deep, with a minimum 10mil polyethylene liner, 2:1 side slopes, and a 1 foot high by 1 foot wide compacted fill berm.
4. The liner must be free of tears or holes and placed over smooth surfaces to prevent puncturing. For excavated washouts, anchor the liner underneath the berm or overtop with sandbags or concrete blocks to hold in place.
5. Provide a sign designating the washout area, and for large construction sites, provide signs throughout directing traffic to its location.
6. Allow washed out concrete mixture to harden through evaporation of the wastewater. Once the facility has reached 75 percent of its capacity, remove the hardened concrete by reusing the broken aggregate onsite, recycling, or disposing of offsite. The hardened material can be buried on site with minimum of 1 foot of clean, compacted fill.
7. Apply a new liner before reusing the station for additional washouts after maintenance has occurred.

Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	CW	**DE-ESC-3.6.2** Sheet 2 of 2 Effective July 2023

EA Engineering, Science, and Technology, Inc., PBC

11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

HORIZONTAL DATUM:
DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

SCALE AS SHOWN

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

DRAWING INFORMATION

DRAWN BY: JWB | DESIGNED BY: JWB / SCL
CHECKED BY: GAT | PROJECT MANAGER: SCL
PROJECT NUMBER: 6429401

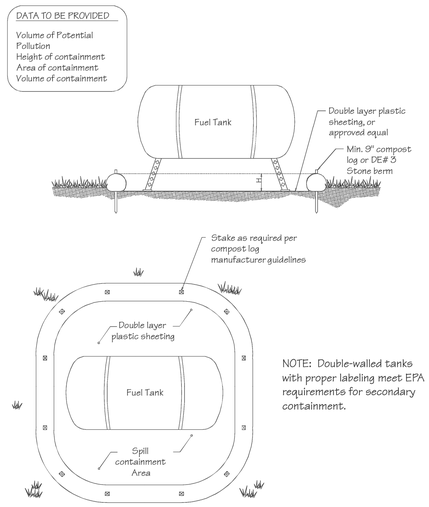
DRAWING NO.
C-505

DATE: SEPTEMBER 2026 SHEET: 14 OF 15

100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN SET\6429401 - 05.10 - EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.DWG [C-505] LEMASTERS, STEVEN 9/8/2026 7:55 PM

Standard Detail & Specifications
Fueling & Spill Control



Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.4** Sheet 1 of 2 Effective July 2023

Standard Detail & Specifications
Fueling & Spill Control

Pollution Prevention – Fueling & Spill Control

1. Fueling should only take place in signed designated areas, away from downstream drainage facilities and watercourses.
2. Fueling must be with nozzles equipped with automatic shut-off to control drips. Do not top off.
3. Protect the areas where equipment or vehicles are being repaired, maintained, fueled or parked from storm water run-on and runoff.
4. Use barriers such as berms to prevent storm water run-on and runoff, and to contain spills.
5. Place a "Fueling Area" sign next to each fueling area.
6. Store hazardous materials such as fuel, solvents, oil and chemicals in secondary containment.
7. Inspect vehicles and equipment for leaks on each day of use. Repair fluid and oil leaks immediately.
8. Absorbent spill clean-up materials and spill kits must be available in fueling areas and on fuel trucks.
9. If fueling is to take place at night, make sure the fueling area is sufficiently illuminated.
10. Properly dispose of used oil, fluids, lubricants and spill clean-up materials.

CLEAN UP SPILLS

1. If it is safe to do so, immediately contain and clean up any chemical and/or hazardous material spills.
2. Properly dispose of used oil, fluids, lubricants and spill clean-up materials.
3. Do not bury spills or wash them down with water.

LEAKS AND DRIPS

1. Use drip pans or absorbent pads at all times. Place under and around leaky equipment.
2. Do not allow oil, grease, fuel or chemicals to drip onto the ground.
3. Have spill kits and clean up material on-site.
4. Repair leaky equipment promptly or remove problem vehicles and equipment from the site. Clean up contaminated soil immediately.
5. Store contaminated waste in sealed containers constructed of suitable material. Label these containers properly.
6. Clean up all spills and leaks. Promptly dispose of waste and spent clean up materials.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.4** Sheet 2 of 2 Effective July 2023

SEDIMENT AND STORMWATER SEQUENCE OF CONSTRUCTION

THE FOLLOWING SEQUENCE OF CONSTRUCTION WAS DEVELOPED AS PART OF THE EROSION AND SEDIMENT CONTROL PERMIT. THE CONTRACTOR MAY PETITION THE ENGINEER AND DNREC SEDIMENT AND STORMWATER MANAGEMENT PROGRAM TO REVISE THE SEQUENCE AT NO ADDITIONAL COST TO THE OWNER. THE REVISED SEQUENCE MUST COMPLY WITH THE APPROVED PERMIT.

THE PROPOSED SEQUENCE OF CONSTRUCTION IDENTIFIED BELOW WAS PREPARED UTILIZING THE OWNER'S SELECTED CONTRACTOR IN ORDER TO SEQUENCE THE PROJECT'S CONSTRUCTION FOR THE BUILDING TO REMAIN OPERATIONAL. THE PROJECT IS PROPOSED TO BE PERFORMED AS A SINGLE PHASE FOR THE PURPOSES OF SEDIMENT AND CONTROL PERMITTING, WITH SUBPHASES OUTLINED BELOW.

THE CHURCH IS TO REMAIN SUBSTANTIALLY OPEN THROUGH CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH THE REGULATORY INSPECTOR TO PROVIDE SAFE PASSAGE OF PATRONS THROUGH THE SITE AND ACROSS EROSION AND SEDIMENT CONTROL DEVICES. IN AREAS OF COMPOST FILTER LOGS, COORDINATE WITH THE INSPECTOR TO ALLOW A TEMPORARY BREAK WITHIN THE LOGS TO PERMIT PATRONS TO WALK THROUGH DURING SERVICES. ALL TEMPORARY BREAKS SHALL BE REPAIRED AFTER SERVICES HAVE COMPLETED.

1. NOTIFY DNREC IN WRITING AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
2. COORDINATE AND HOLD PRE-CONSTRUCTION MEETING AT LEAST ONE WEEK BEFORE STARTING CONSTRUCTION. THE MEETING WILL BE ATTENDED BY OWNER, CONTRACTOR, CERTIFIED CONSTRUCTION REVIEWER (CCR), REGULATORY CONSTRUCTION REVIEWER, AND ENGINEER.
3. FLAG LIMITS OF CONSTRUCTION AND ESTABLISH CONTRACTOR STAGING AREA.
4. CONTRACTOR TO PROVIDE, INSTALL, MAINTAIN, AND INSPECT ALL TEMPORARY AND PERMANENT CONTROLS IN ACCORDANCE WITH THE APPROVED PLANS. CONTRACTOR IS RESPONSIBLE FOR ADDRESSING AND COMPLETING ANY REQUIRED REPAIRS RESULTING FROM ANY NOTICE OF VIOLATIONS ISSUED BY DNREC PERTAINING TO EROSION AND SEDIMENT CONTROLS AT NO COST TO THE OWNER.
5. CONTRACTOR TO INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES AT THEIR OWN EXPENSE AS NEEDED TO CONTROL AND MANAGE THE SITE THROUGHOUT CONSTRUCTION.
6. ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY THE CCR AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.

SUBPHASE 1A - SOUTHERN BUILDING EXPANSION AND ROADWAY IMPROVEMENTS

1. INSTALL CONSTRUCTION SECURITY FENCING, COMPOST FILTER LOG PERIMETER CONTROL ALONG DE ROUTE 1, AND INLET PROTECTION.
2. PERFORM ANY NECESSARY CLEARING, GRUBBING, AND TREE REMOVAL WITHIN THE LIMITS OF SUBPHASE 1A. COORDINATE WITH OWNER FOR THE STORAGE OR PLANTING LOCATION OF SMALLER DIAMETER TREES IDENTIFIED IN THE DRAWINGS.
3. STRIP TOPSOIL AND HAUL OFFSITE.
4. SAWCUT AND REMOVE ASPHALT AND STONE BASE.
5. PERFORM BULK GRADING OF SOUTH SIDE OF SITE.
6. PERFORM GRADING OF SOUTHERN BUILDING EXPANSION PAD.
7. PERFORM STORM DRAIN AND ROOF DRAIN COLLECTION SYSTEM DEMOLITION AND CONSTRUCTION TO WITHIN 5 FEET OF BUILDING. INSTALL INLET PROTECTION ON NEWLY INSTALLED STRUCTURE.
8. COMMENCE FOUNDATION INSTALLATION FOR SOUTHERN BUILDING ADDITION.
9. COMMENCE VERTICAL BUILDING CONSTRUCTION.
10. PERFORM ROOF DRAIN CONNECTION TO COLLECTION HEADER.
11. PERFORM VEGETATIVE STABILIZATION FOR AREAS TO REMAIN UNWORKED AND UNDISTURBED UNTIL FINAL PAVING.

SUBPHASE 1B - NORTHERN BUILDING EXPANSION AND ROADWAY IMPROVEMENTS

1. INSTALL CONSTRUCTION SECURITY FENCING AND COMPOST FILTER LOG PERIMETER CONTROLS.
2. SAWCUT AND REMOVE ASPHALT AND STONE BASE AROUND THE AREA OF BUILDING PAD CONSTRUCTION ONLY.
3. PERFORM GRADING OF NORTHERN BUILDING EXPANSION PAD.
4. PERFORM ROOF DRAIN COLLECTION SYSTEM DEMOLITION AND CONSTRUCTION TO WITHIN 5 FEET OF BUILDING.
5. COMMENCE FOUNDATION INSTALLATION FOR NORTHERN BUILDING ADDITION.
6. COMMENCE VERTICAL BUILDING CONSTRUCTION.
7. PERFORM ROOF DRAIN CONNECTION TO COLLECTION HEADER.
8. SAWCUT AND REMOVE ASPHALT AND STONE BASE TO FINAL SITE CONDITION LIMITS.
9. WITHIN AREAS THAT ARE TO REMAIN OPEN, PLACE TOPSOIL AND PERFORM SAME DAY VEGETATIVE STABILIZATION. MAINTAIN STABILIZED AREAS TO MINIMIZE EROSION. REPAIR AREAS OF EROSION AS IDENTIFIED AT WEEKLY AND/OR ROUTINE CCR INSPECTIONS.

SUBPHASE 1C - WESTERN BUILDING ADDITION AND ROADWAY IMPROVEMENTS

1. INSTALL CONSTRUCTION SECURITY FENCING AND COMPOST FILTER LOG PERIMETER CONTROLS
2. REMOVE EXISTING STATUE AND COORDINATE WITH OWNER FOR TEMPORARY STORAGE AND/OR PLACEMENT.
3. SAWCUT AND REMOVE ASPHALT AND STONE BASE.
4. PERFORM DEMOLITION OF EXISTING SITE FEATURES SUCH AS SIDEWALKS, PAVERS, LANDSCAPING, BENCHES, ETC. TO PREPARE FOR PROPOSED DROPOFF CANOPY AND BUILDING ENTRANCE INSTALLATION.
5. COMMENCE FOUNDATION INSTALLATION FOR WESTERN IMPROVEMENTS.
6. COMMENCE VERTICAL BUILDING AND DROPOFF CANOPY CONSTRUCTION.
7. INSTALL PROTECTIVE BOLLARDS FOR CANOPY COLUMNS.
8. PERFORM STABILIZATION OF ALL DISTURBED AREA WHILE THE SITE IS BEING PREPARED FOR FINAL CURB, SIDEWALKS, LANDSCAPING, AND PAVING. MAINTAIN STABILIZED AREAS TO MINIMIZE EROSION. REPAIR AREAS OF EROSION AS IDENTIFIED AT WEEKLY AND/OR ROUTINE CCR INSPECTIONS.

SUBPHASE 1D - FINAL SITE IMPROVEMENTS

1. FORM AND POUR CONCRETE CURBING AND SIDEWALKS THROUGHOUT THE SITE.
2. PERFORM FINAL LANDSCAPING
3. INSTALL PERMANENT STABILIZATION WITHIN ALL REMAINING DISTURBED AREA. PERFORM ANY NECESSARY ADDITIONAL STABILIZATION IN SPARSELY GROWING AREAS.
4. PERFORM BASE PAVING IN AREAS OF FULL DEPTH PAVEMENT.
5. PERFORM MILLING OF AREAS IDENTIFIED AS BEING MILL AND OVERLAY.
6. PERFORM FINAL SURFACE PAVING OF ENTIRE SITE.
7. PERMANENTLY STABILIZE ALL DISTURBED AREAS. MAINTAIN STABILIZED AREAS TO MINIMIZE EROSION. REPAIR AREAS OF EROSION AS IDENTIFIED AT WEEKLY AND/OR ROUTINE CCR INSPECTIONS.
8. REMOVE ANY AND ALL REMAINING DEBRIS OR TRASH FROM THE SITE.
9. EROSION AND SEDIMENT CONTROL DEVICES TO BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH WRITTEN APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER
10. THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF THE POST CONSTRUCTION VERIFICATION DOCUMENT, INCLUDING FINAL STABILIZATION THROUGHOUT THE SITE, ALL ELEMENTS OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND DNREC'S ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.

EA Engineering, Science, and Technology, Inc., PBC

11200 Racetrack Road, Unit A101
Ocean Pines, Maryland 21811
(410) 641-5341

www.eaest.com

HORIZONTAL DATUM:
DELAWARE STATE PLANE, NAD 83, US SURVEY FEET

VERTICAL DATUM:
NAVD 88

SCALE AS SHOWN

FULL SIZE PLOT: 24" x 36"

REVISIONS

SEAL

PROJECT NAME
ST JUDE THE APOSTLE CATHOLIC CHURCH RENOVATIONS & ADDITIONS

PROJECT ADDRESS
152 TULIP DRIVE
LEWES, DELAWARE 19958

DRAWING TITLE
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

DRAWING INFORMATION

DRAWN BY: JWB	DESIGNED BY: JWB / SCL
CHECKED BY: GAT	PROJECT MANAGER: SCL

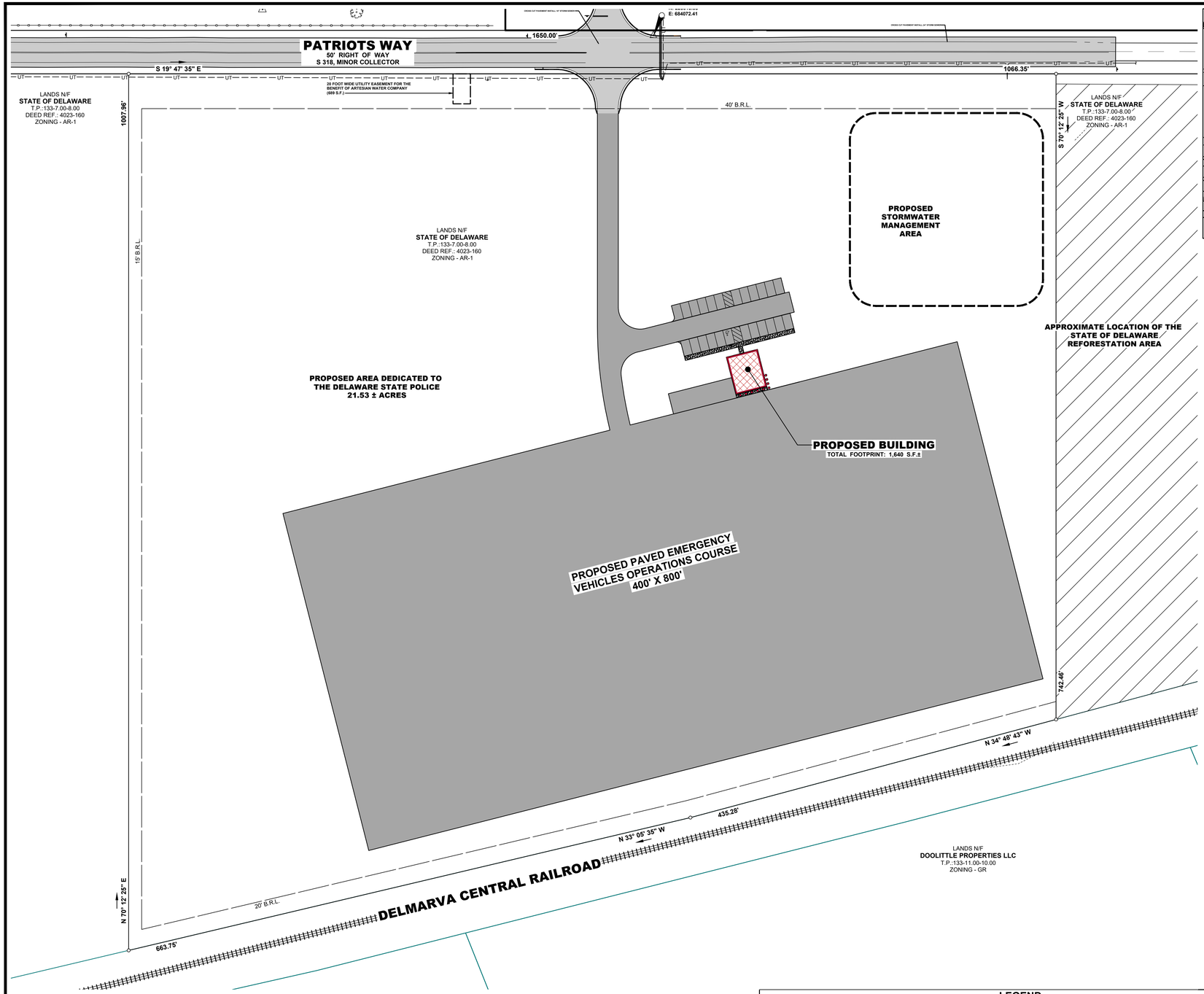
PROJECT NUMBER: 6429401

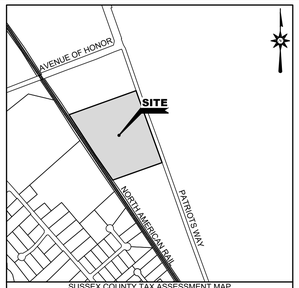
DRAWING NO.
C-506

DATE: SEPTEMBER 2026 SHEET: 15 OF 15

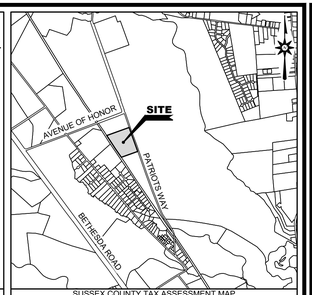
100% PLANS - NOT FOR CONSTRUCTION

FILE PATH: O:\6429401 - ST JUDES CHURCH\CAD\PRODUCTION\DESIGN SETS\6429401 - 05.10 - EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.DWG [C-506] LEMASTERS, STEVEN 9/8/2026 7:55 PM





LOCATION MAP SCALE: 1" = 1000'



VICINITY MAP SCALE: 1" = 3000'

SHEET INDEX

C-001	COVER SHEET
C-101	EXISTING CONDITIONS & DEMOLITION PLAN
C-201	SITE PLAN, UTILITY PLAN, & GRADING PLAN
C-202	SITE PLAN, UTILITY PLAN, & GRADING PLAN
C-500	COVER SHEET AND GENERAL NOTES
C-501 - C-502	PRE - CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-503 - C-504	CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-505 - C-506	POST - CONSTRUCTION STORMWATER MANAGEMENT PLAN B.M.P.
C-507 - C-510	CONSTRUCTION SITE DETAILS AND NOTES
C-701	WATER MAIN PROFILE
C-901	CONSTRUCTION DETAILS
C-902	WATER MAIN PROFILE
L-101	LANDSCAPE PLAN

SITE DATA

1.	OWNER OF RECORD:	STATE OF DELAWARE C/O JENNIFER COVERDALE PO BOX 778 DOVER, DE 19903 (302) 744-1166
2.	PROPERTY ADDRESS	PATRIOTS WAY GEORGETOWN, DE 19947
3.	ENGINEER / SURVEYOR:	BECKER MORGAN GROUP INC. 309 SOUTH GOVERNORS AVE. DOVER, DELAWARE 19904 302-734-7950
4.	PROPERTY MAP NUMBER:	133-7.00-8.00
5.	ZONING CLASSIFICATION:	EXISTING: AR-1 AGRICULTURAL RESIDENTIAL / (SUSSEX COUNTY) PROPOSED: AR-1 AGRICULTURAL RESIDENTIAL / (SUSSEX COUNTY)
6.	DEED SUMMARY:	DEED BOOK: 4023 PAGE: 160
7.	BUILDING TYPE:	TYPE V
8.	PLAT REFERENCE:	-
9.	PRESENT USE:	OPEN LOT / FARMLAND
10.	PROPOSED USE:	EMERGENCY VEHICLE OPERATOR COURSE (E.V.O.C.)
11.	TOTAL SITE AREA:	21.53 ACRES
12.	IMPERVIOUS COVERAGE:	EXISTING: 0 S.F. (0.0 A.C.) (0.00%) PROPOSED: 348.969 S.F. (8.01 A.C.) (37.20%) (WITHIN C/U AREA)
13.	PARKING CALCULATIONS:	OFFICE: 1 SPACE PER 200 S.F. OF FLOOR AREA FLOOR SPACE PROVIDED: 840 S.F. PARKING SPACES REQUIRED: 5 PARKING SPACES PROVIDED: 24 ACCESSIBLE PARKING SPACES PROVIDED: 1 LOADING SPACE USE CATEGORY: OFFICE BUILDING THE 5,000 S.F. THRESHOLD IS NOT MET FOR REQUIRING A LOADING SPACE REQUIRED LOADING SPACES: 0
14.	SETBACKS:	FRONT: 40 FT. SIDE: 15 FT. REAR: 20 FT.
15.	SIGNAGE	FUTURE PERMIT SUBMISSION
16.	BUILDING HEIGHT:	PERMITTED: 42 FEET PROPOSED: 15 FEET
17.	UTILITIES:	ELECTRIC: DELMARVA POWER WATER: ARTESIAN WATER COMPANY SEWER: SUSSEX COUNTY SEWER
18.	SURVEY DATUM:	NGS MONUMENTS VERTICAL: NAVD 88 - CORS HORIZONTAL: NAD 83 DSP - CORS
19.	PROJECT LOCATION:	LATITUDE: 38.619602 LONGITUDE: -75.316975
20.	DISCHARGE LOCATION:	COW BRIDGE BRANCH
21.	SC. EX. LAND USE MAP:	LOW DENSITY
22.	SC. PR. LAND USE MAP:	LOW DENSITY
23.	NET DEVELOPMENT AREA:	± 13.47 A.C.
24.	CUT / FILL VOLUME:	FILL: 15,389 C.Y.

GENERAL NOTES:

1. THE TOPOGRAPHIC DATA SHOWN HEREON WAS COMPILED FROM A FIELD SURVEY PERFORMED BY BECKER MORGAN GROUP, INC., DOVER, DE., IN JULY OF 2025.
2. SUBJECT AREA WITHIN ZONE "X", AREA OF MINIMAL FLOOD HAZARD, BASED ON FEMA FLOOD MAP 1005C0452K, EFFECTIVE JUNE 6, 2018.
3. BECKER MORGAN GROUP CERTIFIES THAT THERE ARE NO FRESH WATER WETLANDS LOCATED WITHIN THE IMPROVED AREA.
4. ALL ROADS, PARKING AND OTHER PAVED AREAS WILL BE PRIVATELY OWNED AND MAINTAINED AND ARE NOT INTENDED FOR DEDICATION.
5. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
6. ALL HANDICAPPED PARKING DEMARCATION, STALLS, AND BUILDING ACCESSIBLE ROUTES SHALL COMPLY WITH THE "AMERICAN WITH DISABILITIES ACT".
7. THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENT FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
8. BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION HE MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM SUSSEX COUNTY PLANNING, SUSSEX COUNTY ENGINEERING DEPARTMENT, DELAWARE DEPARTMENT OF NATURAL RESOURCES (D.N.R.E.C.), DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT), AND APPROPRIATE STATE AND COUNTY AGENCIES.
9. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO SUSSEX COUNTY ENGINEERING CONSTRUCTION STANDARD AND SPECIFICATIONS AND THE STATE OF DELAWARE CONSTRUCTION STANDARDS AND SPECIFICATIONS.
10. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
11. IT IS HIGHLY RECOMMENDED TO TEST PIT FOR ALL EXISTING UTILITIES PRIOR TO MAJOR EARTHWORK. ESPECIALLY AT POTENTIAL CONFLICT POINTS SUCH AS UTILITY CROSSINGS OR STRUCTURAL LOCATIONS.

OWNERS CERTIFICATION

WE, THE STATE OF DELAWARE, HEREBY CERTIFY THAT WE ARE THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

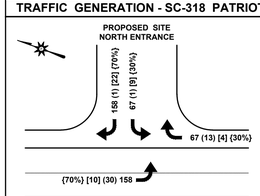
SIGNATURE DATE

ENGINEERS CERTIFICATION

I, JONATHAN D. RICHARD, HEREBY CERTIFY THAT I AM A REGISTERED 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.

JONATHAN D. RICHARD, P.E. P.E. NO. 18832 08/27/2026 DATE

TRAFFIC GENERATION - SC-318 PATRIOTS WAY (SC-00318-F)



TRAFFIC GENERATION DIAGRAM
ADT (A.M. PEAK HOUR) [P.M. PEAK HOUR]

ROAD TRAFFIC DATA

FUNCTIONAL CLASSIFICATION - MINOR COLLECTOR
POSTED SPEED LIMIT: 35 MPH
ROADWAY AADT = 2,038 TRIPS (2024 DELDOT TRAFFIC SUMMARY)
10 YEAR PROJECTED AADT: 1.16 X 2,038 = 2,364TRIPS
TRAFFIC PATTERN GROUP: 7
K FACTOR: 13.5
D FACTOR: 59.1
COMBO-UNIT TRUCK: N/A

SITE TRIPS GENERATED:

SOURCE: SIMILAR FACILITY DSP- TROOP 3
SOURCE: OPERATIONS AT SIMILAR FACILITY
DESIGN VEHICLE - WB-40
48,000 S.F. OF POLICE BARRACKS
15,700 S.F. OF MAINTENANCE FACILITY
2,600 S.F. OF OTHER SUPPORTING INFRASTRUCTURE
TOTAL SITE ADT = 450 ADT (225 ENTER / 225 EXIT)
45 AM PK (43 ENTER / 2 EXIT)
45 PM PK (14 ENTER / 31 EXIT)
DIRECTIONAL DISTRIBUTION:
70% TO AND FROM THE NORTH
30% TO AND FROM THE SOUTH
PEAK HOUR HV: 12.14%

LEGEND

ITEM	EXISTING	PROPOSED
CONCRETE CURB & GUTTER		
CONCRETE SIDEWALK, SLAB / PAVING		
IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT		N/A
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	
WIRE FENCE	x x x	x x x
CHAINLINK FENCE		
STOCKADE FENCE		
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)		
DRAINAGE DITCH OR SWALE		
WETLAND BOUNDARY LINE		N/A
CONTOUR	49	55
ELEVATION SPOT SHOT	43.55	25.15
BENCH MARK		25.50 T.C. 25.00 B.C.
PROPERTY OR RIGHT-OF-WAY LINE		N/A
CENTERLINE		
LIGHT POLE		

ITEM	EXISTING	PROPOSED
SANITARY GRAVITY SEWER LINE (**S**) SIZE & FLOW DIRECTION	EX. 10"S	10" S
SANITARY SEWER FORCE MAIN (**F.M.**) SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
SANITARY SEWER MANHOLE (**S.S.M.H.**)		
SANITARY SEWER CLEANOUT (**C.O.**)		
WATER MAIN & SIZE	EX. 10" W	12" W
FIRE HYDRANT (**F.H.**)	F.H.	F.H.
WATER VALVE (**W.V.**) OR METER (**W.M.**)	W.M. W.V.	W.M. W.V.
STORM DRAIN MANHOLE (**S.D.M.H.**)		
STORM DRAIN LINE (**CMP**, **RCP**, **HDPE**)		
CATCH BASIN (**C.B.**)		
UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (**O.T.**), ELECTRIC (**O.E.**)		
UNDERGROUND ELECTRIC (**U.E.**)	U.E.	U.E.
UNDERGROUND TELEPHONE (**U.T.**)	U.T.	U.T.
UNDERGROUND GAS MAIN (**G**)	EX. 2" G	2" G

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950

The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

COVER SHEET

0 30 60 120

SCALE: 1" = 60'

ISSUE	BLOCK	
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C-001

PROJECT NO.: 2022235.00
DATE: 11/05/2025
SCALE: 1" = 60'
DRAWN BY: J.N.K. PROJ. MGR.: J.D.R.

SHEET
C-001

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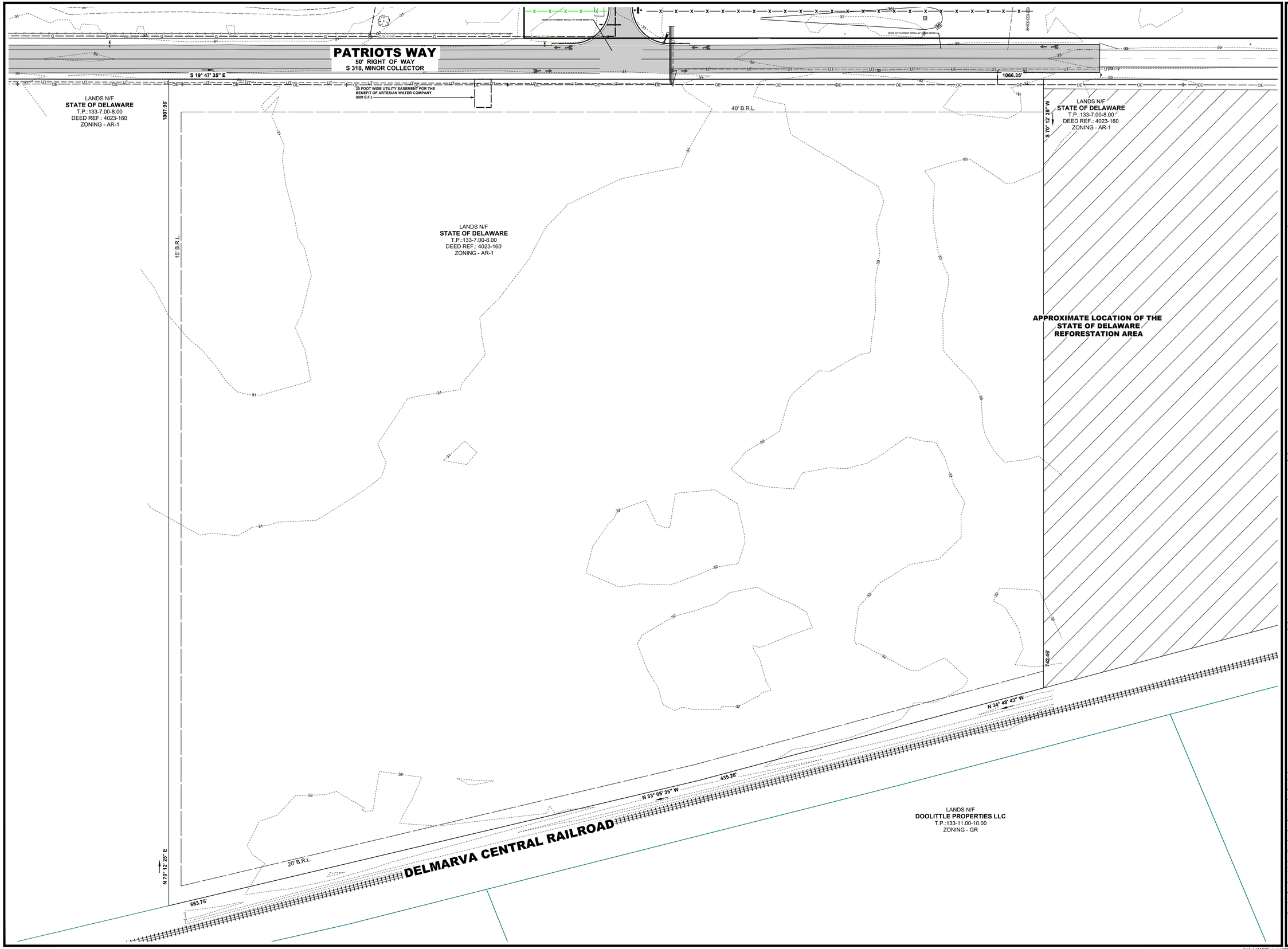

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950

The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
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302.369.3700

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312 West Main Street, Suite 300
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3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS LICENSE No. 18832 DELAWARE PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE

EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

EXISTING CONDITIONS & DEMOLITION PLAN

0 25 50 100

SCALE: 1" = 50'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C-101

PROJECT NO.:	**2022235.00**
DATE:	**12/18/2025**
SCALE:	**1" = 50'**
DRAWN BY: **J.N.K.**	PROJ. MGR.: **J.D.R.**

SHEET

C-101

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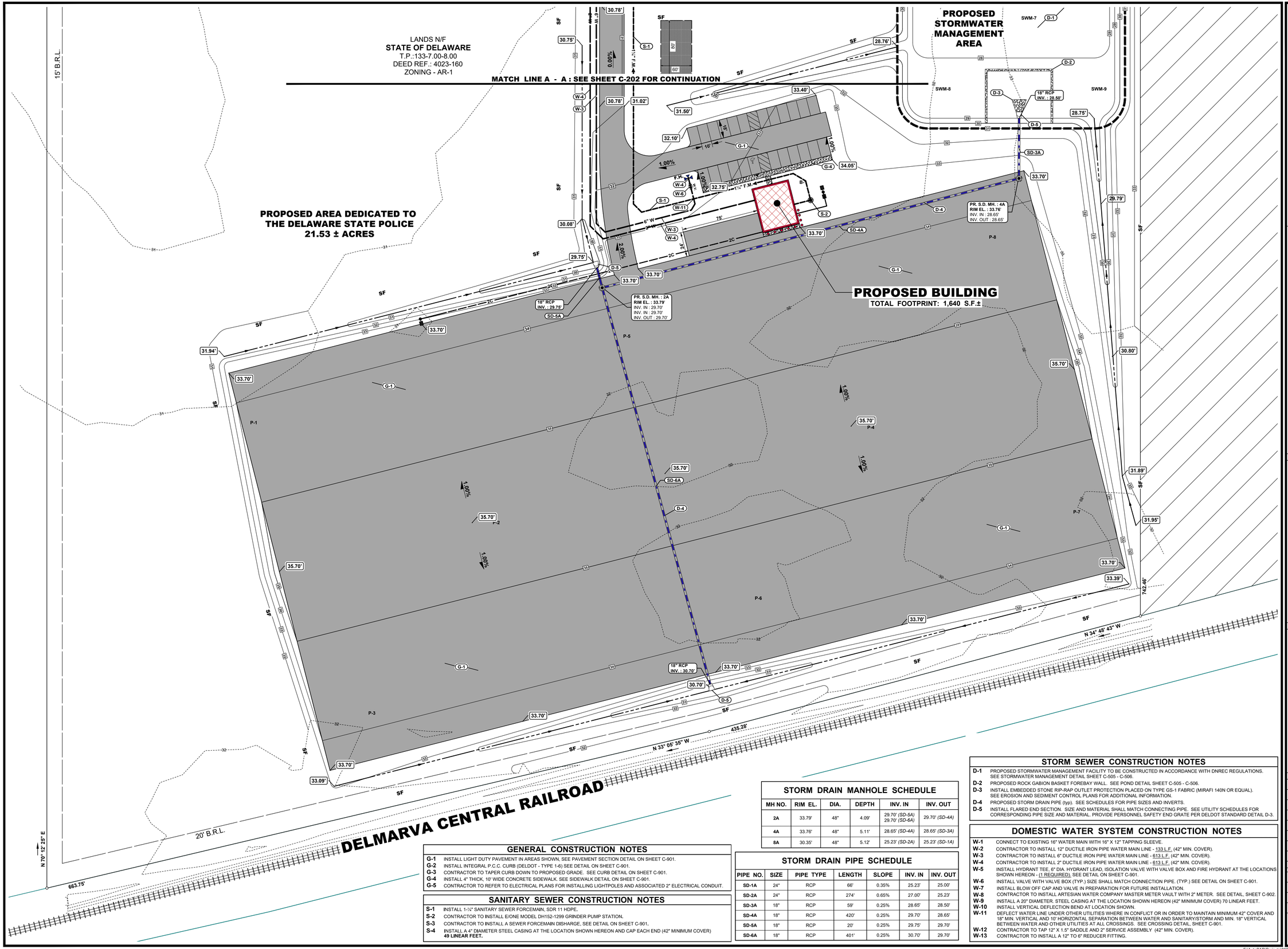

GENERAL CONSTRUCTION NOTES

G-1	INSTALL LIGHT DUTY PAVEMENT IN AREAS SHOWN, SEE PAVEMENT SECTION DETAIL ON SHEET C-901.
G-2	INSTALL INTEGRAL P.C.C. CURB (DELDOT - TYPE 1-6) SEE DETAIL ON SHEET C-901.
G-3	CONTRACTOR TO TAPER CURB DOWN TO PROPOSED GRADE. SEE CURB DETAIL ON SHEET C-901.
G-4	INSTALL 4" THICK, 10' WIDE CONCRETE SIDEWALK. SEE SIDEWALK DETAIL ON SHEET C-901.
G-5	CONTRACTOR TO REFER TO ELECTRICAL PLANS FOR INSTALLING LIGHTPOLES AND ASSOCIATED 2" ELECTRICAL CONDUIT.

SANITARY SEWER CONSTRUCTION NOTES

S-1	INSTALL 1-¼" SANITARY SEWER FORCEMAIN, SDR 11 HDPE.
S-2	CONTRACTOR TO INSTALL E/ONE MODEL DH152-1299 GRINDER PUMP STATION.
S-3	CONTRACTOR TO INSTALL A SEWER FORCEMAIN DISHARGE, SEE DETAIL ON SHEET C-901.
S-4	INSTALL A 4" DIAMETER STEEL CASING AT THE LOCATION SHOWN HEREON AND CAP EACH END (42" MINIMUM COVER) **49 LINEAR FEET.**

STORM DRAIN MANHOLE SCHEDULE

MH NO.	RIM EL.	DIA.	DEPTH	INV. IN	INV. OUT
2A	33.79'	48"	4.09'	29.70' *(SD-5A)* 29.70' *(SD-6A)*	29.70' *(SD-4A)*
4A	33.76'	48"	5.11'	28.65' *(SD-4A)*	28.65' *(SD-3A)*
8A	30.35'	48"	5.12'	25.23' *(SD-2A)*	25.23' *(SD-1A)*

STORM DRAIN PIPE SCHEDULE

PIPE NO.	SIZE	PIPE TYPE	LENGTH	SLOPE	INV. IN	INV. OUT
SD-1A	24"	RCP	66'	0.35%	25.23'	25.00'
SD-2A	24"	RCP	274'	0.65%	27.00'	25.23'
SD-3A	18"	RCP	59'	0.25%	28.65'	28.50'
SD-4A	18"	RCP	420'	0.25%	29.70'	28.65'
SD-5A	18"	RCP	20'	0.25%	29.75'	29.70'
SD-6A	18"	RCP	401'	0.25%	30.70'	29.70'

STORM SEWER CONSTRUCTION NOTES

D-1	PROPOSED STORMWATER MANAGEMENT FACILITY TO BE CONSTRUCTED IN ACCORDANCE WITH DNREC REGULATIONS. SEE STORMWATER MANAGEMENT DETAIL SHEET C-505 - C-506.
D-2	PROPOSED ROCK GABION BASKET FOREBAY WALL. SEE POND DETAIL SHEET C-505 - C-506.
D-3	INSTALL EMBEDDED STONE RIP-RAP OUTLET PROTECTION PLACED ON TYPE GS-1 FABRIC (MIRAFI 140N OR EQUAL). SEE EROSION AND SEDIMENT CONTROL PLANS FOR ADDITIONAL INFORMATION.
D-4	PROPOSED STORM DRAIN PIPE (typ). SEE SCHEDULES FOR PIPE SIZES AND INVERTS.
D-5	INSTALL FLARED END SECTION. SIZE AND MATERIAL SHALL MATCH CONNECTING PIPE. SEE UTILITY SCHEDULES FOR CORRESPONDING PIPE SIZE AND MATERIAL. PROVIDE PERSONNEL SAFETY END GRATE PER DELDOT STANDARD DETAIL D-3.

DOMESTIC WATER SYSTEM CONSTRUCTION NOTES

W-1	CONNECT TO EXISTING 16" WATER MAIN WITH 16" X 12" TAPPING SLEEVE.
W-2	CONTRACTOR TO INSTALL 12" DUCTILE IRON PIPE WATER MAIN LINE - 133 L.F. (42" MIN. COVER).
W-3	CONTRACTOR TO INSTALL 6" DUCTILE IRON PIPE WATER MAIN LINE - 613 L.F. (42" MIN. COVER).
W-4	CONTRACTOR TO INSTALL 2" DUCTILE IRON PIPE WATER MAIN LINE - 613 L.F. (42" MIN. COVER).
W-5	INSTALL HYDRANT TEE, 6" DIA. HYDRANT LEAD, ISOLATION VALVE WITH VALVE BOX AND FIRE HYDRANT AT THE LOCATIONS SHOWN HEREON - (1 REQUIRED). SEE DETAIL ON SHEET C-901.
W-6	INSTALL VALVE WITH VALVE BOX (TYP.) SIZE SHALL MATCH CONNECTION PIPE. (TYP.) SEE DETAIL ON SHEET C-901.
W-7	INSTALL BLOW OFF CAP AND VALVE IN PREPARATION FOR FUTURE INSTALLATION.
W-8	CONTRACTOR TO INSTALL ARTESIAN WATER COMPANY MASTER METER VAULT WITH 2" METER. SEE DETAIL, SHEET C-902.
W-9	INSTALL A 20" DIAMETER. STEEL CASING AT THE LOCATION SHOWN HEREON (42" MINIMUM COVER) 70 LINEAR FEET.
W-10	INSTALL VERTICAL DEFLECTION BEND AT LOCATION SHOWN.
W-11	DEFLECT WATER LINE UNDER OTHER UTILITIES WHERE IN CONFLICT OR IN ORDER TO MAINTAIN MINIMUM 42" COVER AND 18" MIN. VERTICAL AND 10' HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY/STORM AND MIN. 18" VERTICAL BETWEEN WATER AND OTHER UTILITIES AT ALL CROSSINGS. SEE CROSSING DETAIL, SHEET C-901.
W-12	CONTRACTOR TO TAP 12" X 1.5" SADDLE AND 2" SERVICE ASSEMBLY (42" MIN. COVER).
W-13	CONTRACTOR TO INSTALL A 12" TO 6" REDUCER FITTING.

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS
LICENSE
No. 18832
DELAWARE
PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE

EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

SITE PLAN, UTILITY PLAN, & GRADING PLAN

0 20 40 80

SCALE: 1" = 40'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER/STATE: C-201

PROJECT NO.:	**2022235.00**
DATE:	**12/18/2025**
SCALE:	**1" = 40'**
DRAWN BY: **J.N.K.**	PROJ. MGR.: **J.D.R.**

SHEET

C-201

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STORM DRAIN MANHOLE SCHEDULE

MH NO.	RIM EL.	DIA.	DEPTH	INV. IN	INV. OUT
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SD-5A	18"	RCP	20'	0.25%	29.75'	29.70'
SD-6A	18"	RCP	401'	0.25%	30.70'	29.70'

PROPOSED BUILDING 2
MAINTENANCE BUILDING
TOTAL FOOTPRINT: 15,700 S.F.±

PROPOSED BUILDING 1
DELAWARE STATE POLICE TROOP 4
TOTAL FOOTPRINT: 46,000 S.F.±
BUILDING HEIGHT: 37'6"±
F.F. EL.: 31.00'
BID PACK 2

HVAC OUTDOOR EQUIPMENT AREA (1,770 S.F.)

REMOVAL OF BUILDING NOT IN THE CONTRACT

PATRIOTS WAY
50' RIGHT OF WAY
S 318, MINOR COLLECTOR

S 19° 47' 35" E — 1007.96'

N 70° 12' 25" E — 1650.00'

S 70° 12' 25" W — 1066.35'

15' B.R.L.

40' B.R.L.

LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

PROPOSED STORMWATER MANAGEMENT AREA
SWM-5 | SWM-6 | SWM-7 | SWM-8 | SWM-9

PROPOSED IMPROVEMENTS PREVIOUSLY APPROVED. SEE PLANS ENTITLED "DELAWARE STATE POLICE TROOP 4 COMPLEX" BY BECKER MORGAN GROUP

MATCH LINE A - A : SEE SHEET C-201 FOR CONTINUATION

PR. C.B. : 29 GRATE : 30.50' INV. OUT : 27.86'

20 FOOT WIDE UTILITY EASEMENT FOR THE BENEFIT OF ARTESIAN WATER COMPANY (689 S.F.)

PR. C.B. : 28 GRATE : 31.03' INV. IN : 27.33' INV. OUT : 27.33'

PR. C.B. : 30 GRATE : 30.40' INV. IN : 27.04' INV. OUT : 27.04'

PR. C.B. : 27 GRATE : 30.56' INV. IN : 26.85' INV. IN : 26.85' INV. OUT : 26.85'

PR. C.B. : 31 GRATE : 30.45' INV. OUT : 27.10'

PR. S.D. MH. : 8A RIM EL. : 30.35' INV. IN : 25.23' INV. OUT : 25.23'

CMO L: 10' W: 10' D: 3'

CW L: 10' W: 10' D: 3'

STORM SEWER CONSTRUCTION NOTES

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W-12 CONTRACTOR TO TAP 12" X 1.5" SADDLE AND 2" SERVICE ASSEMBLY (42" MIN. COVER).
W-13 CONTRACTOR TO INSTALL A 12" TO 6" REDUCER FITTING.

GENERAL CONSTRUCTION NOTES

G-1 INSTALL LIGHT DUTY PAVEMENT IN AREAS SHOWN, SEE PAVEMENT SECTION DETAIL ON SHEET C-901.
G-2 INSTALL INTEGRAL P.C.C. CURB (DELDOT - TYPE 1-6) SEE DETAIL ON SHEET C-901.
G-3 CONTRACTOR TO TAPER CURB DOWN TO PROPOSED GRADE. SEE CURB DETAIL ON SHEET C-901.
G-4 INSTALL 4" THICK, 10' WIDE CONCRETE SIDEWALK. SEE SIDEWALK DETAIL ON SHEET C-901.
G-5 CONTRACTOR TO REFER TO ELECTRICAL PLANS FOR INSTALLING LIGHTPOLES AND ASSOCIATED 2" ELECTRICAL CONDUIT.

SANITARY SEWER CONSTRUCTION NOTES

S-1 INSTALL 1-¼" SANITARY SEWER FORCEMAIN, SDR 11 HDPE.
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08/27/2026

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EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
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DRAWN BY: J.N.K.	PROJ. MGR.: J.D.R.

SHEET
C-202

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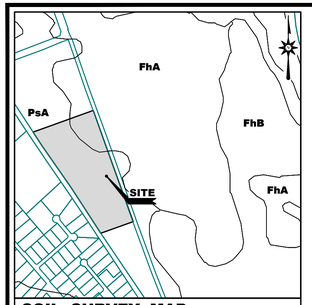
DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE
SEDIMENT AND STORMWATER MANAGEMENT PLANS
INDIAN RIVER BAY | DAGSBORO HUNDRED
TAX PARCEL: 133-7.00-8.00
SUSSEX COUNTY, DELAWARE

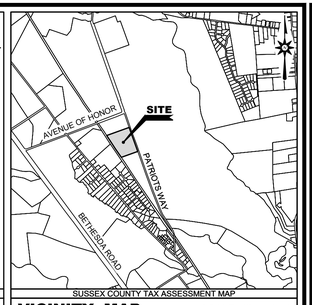


SOIL SURVEY MAP SCALE: 1" = 1,000

SOIL MAP TAKEN FROM "WEB SOIL SURVEY"
https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx
FhA : FORT MOTT HENLOPEN COMPLEX, 0 TO 2 PERCENT SLOPES
FhB : FOR MOTT HENLOPEN COMPLEX, 2 TO 5 PERCENT SLOPES
PsA : PEPPERBOX ROSEDALE COMPLEX, 0 TO 2 PERCENT SLOPES

SUSSEX COUNTY TAX ASSESSMENT MAP

LOCATION MAP SCALE: 1" = 1000'



SUSSEX COUNTY TAX ASSESSMENT MAP

VICINITY MAP SCALE: 1" = 3000'

LEGEND

ITEM	EXISTING	PROPOSED
SANITARY GRAVITY SEWER LINE, SIZE & FLOW DIRECTION	EX. 10"S	10" S
SANITARY SEWER FORCE MAIN, SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
SANITARY SEWER MANHOLE (S.M.H.)		
SANITARY SEWER CLEANOUT		
WATER MAIN & SIZE	EX. 10" W	12" W
FIRE HYDRANT	F.H.	F.H.
WATER VALVE (W.V.) OR METER (W.M.)	W.M. W.V.	W.M. W.V.
STORM DRAIN MANHOLE (S.D.M.H.)		
STORM DRAIN LINE (CMP OR RCP)		
CATCH BASIN		
UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE OR ELECTRIC OR BOTH)		
UNDERGROUND ELECTRIC	U.E.	U.E.
UNDERGROUND TELEPHONE	U.T.	U.T.
UNDERGROUND GAS MAIN	EX. 2" G	2" G
CONCRETE CURB & GUTTER		
CONCRETE SIDEWALK, SLAB / PAVING		
IMPERVIOUS SURFACED ROAD, DRIVE OR LOT		
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	N/A
WIRE FENCE	X X X	X X X
CHAINLINK FENCE		
STOCKADE FENCE		
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)		
DRAINAGE DITCH OR SWALE		
CONTOUR	49	55
ELEVATION SPOT SHOT	43.55	25.15 25.50 T.C. 25.00 B.C.
BENCH MARK		N/A
PROPERTY OR RIGHT-OF-WAY LINE		
CENTERLINE		
LIGHT POLE		
DRAINAGE AREA BOUNDARY LINE		
SOIL BOUNDARY LINE		N/A
TIME OF CONCENTRATION FLOW PATH		

SHEET INDEX

SEDIMENT AND STORMWATER MANAGEMENT PLANS

C-500	COVER SHEET AND GENERAL NOTES
C-501 - C-502	PRE - CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-503 - C-504	CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-505 - C-506	POST - CONSTRUCTION STORMWATER MANAGEMENT PLAN B.M.P.
C-507 - C-510	CONSTRUCTION SITE DETAILS AND NOTES

SITE DATA

1.	OWNER OF RECORD:	STATE OF DELAWARE C/O JENNIFER COVERDALE PO BOX 778 DOVER, DE 19903 (302) 744-1166
2.	PROPERTY ADDRESS	PATRIOTS WAY GEORGETOWN, DE 19947
3.	ENGINEER / SURVEYOR:	BECKER MORGAN GROUP INC. 309 SOUTH GOVERNORS AVE. DOVER, DELAWARE 19904 302-734-7950
4.	PROPERTY MAP NUMBER:	133-7.00-8.00
5.	ZONING CLASSIFICATION:	EXISTING: AR-1 AGRICULTURAL RESIDENTIAL / (SUSSEX COUNTY) PROPOSED: AR-1 AGRICULTURAL RESIDENTIAL / (SUSSEX COUNTY)
6.	DEED SUMMARY:	DEED BOOK: 4023 PAGE: 160
7.	BUILDING TYPE:	TYPE V
8.	PLAT REFERENCE:	.
9.	PRESENT USE:	OPEN LOT / FARMLAND
10.	PROPOSED USE:	EMERGENCY VEHICLE OPERATOR COURSE (E.V.O.C.)
11.	TOTAL SITE AREA:	21.53 ACRES
12.	IMPERVIOUS COVERAGE:	EXISTING: 0 S.F. (0.0 A.C.) (0.00%) PROPOSED: 348.969 S.F. (8.01 A.C.) (37.20%) (WITHIN C/U AREA)
13.	PARKING CALCULATIONS:	OFFICE: 1 SPACE PER 200 S.F. OF FLOOR AREA FLOOR SPACE PROVIDED: 840 S.F. PARKING SPACES REQUIRED: 5 PARKING SPACES PROVIDED: 24 ACCESSIBLE PARKING SPACES PROVIDED: 1 LOADING SPACE USE CATEGORY: OFFICE BUILDING THE 5,000 S.F. THRESHOLD IS NOT MET FOR REQUIRING A LOADING SPACE REQUIRED LOADING SPACES: 0
14.	SETBACKS:	FRONT: 40 FT. SIDE: 15 FT. REAR: 20 FT.
15.	SIGNAGE	FUTURE PERMIT SUBMISSION
16.	BUILDING HEIGHT:	PERMITTED: 42 FEET PROPOSED: 15 FEET
17.	UTILITIES:	ELECTRIC: DELMARVA POWER WATER: ARTESIAN WATER COMPANY SEWER: SUSSEX COUNTY SEWER
18.	SURVEY DATUM:	NGS MONUMENTS VERTICAL: NAVD 88 - CORS HORIZONTAL: NAD 83 DSP - CORS
19.	PROJECT LOCATION:	LATITUDE: 38.619602 LONGITUDE: -75.316975
20.	DISCHARGE LOCATION:	COW BRIDGE BRANCH
21.	SC. EX. LAND USE MAP:	LOW DENSITY
22.	SC. PR. LAND USE MAP:	LOW DENSITY
23.	NET DEVELOPMENT AREA:	± 13.47 A.C.
24.	CUT / FILL VOLUME:	FILL: 15,388 C.Y.

ENGINEERS CERTIFICATION

I, JONATHAN D. RICHARD P.E., HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES.

JONATHAN D. RICHARD — No. 18832 — DELAWARE — PROFESSIONAL ENGINEER

JONATHAN D. RICHARD P.E. — P.E. NO. 18832 — 08/27/2026 DATE

BECKER MORGAN GROUP
309 S. GOVERNORS AVE.
DOVER, DELAWARE 19904
(302) 734-7950

OWNER CERTIFICATION

WE, STATE OF DELAWARE, CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN AND THAT RESPONSIBLE PERSONNEL (I.E., BLUE CARD HOLDER) INVOLVED IN THE LAND DISTURBANCE WILL HAVE A CERTIFICATION OF TRAINING PRIOR TO INITIATION OF THE PROJECT, AT A DNREC SPONSORED OR APPROVED TRAINING COURSE FOR THE CONTROL OF EROSION AND SEDIMENT DURING CONSTRUCTION. IN ADDITION I GRANT THE DNREC SEDIMENT AND STORMWATER PROGRAM AND/OR THE RELEVANT DELEGATED AGENCY THE RIGHT TO CONDUCT ON-SITE REVIEWS, AND I UNDERSTAND MY RESPONSIBILITIES UNDER THE NPDES CONSTRUCTION GENERAL PERMIT, AS REFERENCED ON THIS COVERSHEET.

ROBBIE MULLIN — DATE

STATE OF DELAWARE OFFICE OF MANAGEMENT AND BUDGET
540 S. DUPONT HIGHWAY SUITE 1
DOVER DELAWARE 19901

SEDIMENT AND STORMWATER APPROVAL STAMP

SEDIMENT AND STORMWATER: SEQUENCE OF CONSTRUCTION

1. NOTIFY THE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL IN WRITING AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
2. OBTAIN ALL CITY, COUNTY, AND STATE PERMITS PRIOR TO THE START OF CONSTRUCTION.
3. PRIOR TO ANY CLEARING, INSTALLATION OF SEDIMENT CONTROL MEASURES OR GRADING, A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED AND CONDUCTED WITH THE AGENCY CONSTRUCTION SITE REVIEWER. THE LANDOWNER/DEVELOPER, CONTRACTOR, AND CERTIFIED CONSTRUCTION REVIEWER ARE REQUIRED TO BE IN ATTENDANCE AT THE PRE-CONSTRUCTION MEETING; THE DESIGNER IS RECOMMENDED TO ATTEND.
4. CLEAR AND GRUB AREAS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS.
5. INSTALL PERIMETER CONTROLS AT THE LOCATIONS SHOWN ON THE SITE CONSTRUCTION STORMWATER MANAGEMENT PLAN, SHEET C-501. CONTACT THE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC) INSPECTOR FOR INSPECTION PRIOR TO PROCEEDING TO STEP No. 7.
6. ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY THE AGENCY CONSTRUCTION SITE REVIEWER AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.
7. CLEAR AND GRUB VEGETATED AREAS NECESSARY FOR CONSTRUCTION. STRIP TOPSOIL AND STOCKPILE IN DESIGNATED STOCKPILE LOCATION ENCLOSED BY SILT FENCE.
8. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHOULD BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENTATION ON THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR REPAIR MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
9. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAINTAIN AND REPAIR ALL EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PRACTICES DURING CONSTRUCTION AND UTILITY INSTALLATION.
10. INSTALL UNDERGROUND UTILITIES INCLUDING ELECTRIC, TELEPHONE, CABLE, GAS, WATER AND SEWER. INSTALL SOIL STABILIZATION PER PLAN.
11. NOTIFY THE PERSON RESPONSIBLE FOR STORMWATER SYSTEM CONSTRUCTION REVIEW AT LEAST 3 DAYS PRIOR TO THE START OF THE STORMWATER SYSTEM CONSTRUCTION; STORMWATER FACILITIES MUST BE REVIEWED THROUGHOUT THEIR CONSTRUCTION
12. EXCAVATE STORMWATER MANAGEMENT POND AND INSTALL RESPECTIVE SPILLWAY AND OUTFALL PROTECTION. THE POND SHOULD BE UTILITIZED AS TEMPORARY PIPE OUTLET SEDIMENT TRAP DURING CONSTRUCTION. REFER TO POND SPECIFIC SEQUENCE OF CONSTRUCTION ON SHEET C-505.
    - 12.1. INSTALL CONCRETE FLARED END SECTION AND OUTFALL PIPE IN ACCORDANCE WITH DETAIL SHEETS AND PLANS
    - 12.2. EXCAVATE STORMWATER MANAGEMENT POND AS PER APPROVED PLANS. STORE EXCAVATED MATERIAL AT APPROVED TEMPORARY SOIL STOCKPILE LOCATIONS. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL USE A GEOTEXTILE DEWATERING BAG (ACF DIRTBAG OR APPROVED EQUIVALENT). CONTRACTOR SHALL USE STABILIZATION MEASURES AS NECESSARY TO ENSURE SLOPE STABILITY.
    - 12.3. INSTALL TEMPORARY DEWATERING DEVICES AND BERM ASSOCIATED WITH THE POND. INSTALL SEDIMENT AND EROSION CONTROL MEASURES AS SHOWN. (I.E. INLET PROTECTION AND SILT FENCE) THE CONTRACTOR SHALL IMMEDIATELY BACKFILL, COMPACT, SEED, MULCH, AND OTHERWISE STABILIZE AT THE END OF EACH DAY.
    - 12.4. FINAL GRADE POND SLOPES AND LEAVE 1 FT OF SOIL IN BOTTOM OF THE TEMPORARY PIPE SEDIMENT TRAP AND INSTALL EROSION CONTROL MATTING ON SIDE SLOPES AS REQUIRED.
    - 12.5. PROVIDE SEEDING AND STABILIZATION AS PER SEEDING AND STABILIZATION SCHEDULE.
13. INSTALL SYSTEM PER MANUFACTURERS SPECIFICATIONS CONTRACTOR TO PROVIDE AS-BUILT AS REQUIRED BY CODE.
14. PLACE SELECT FILL FOR BUILDING PAD AND BRING TO APPROPRIATE GRADE. INSTALL BUILDING FOUNDATIONS.
15. INSTALL UTILITIES TO BUILDING PAD INCLUDING WATER SERVICE, SEWER, ELECTRIC, AND GAS.
16. ROUGH GRADE PROPOSED PAVED AREAS.
17. INSTALL CURB AND CRUSHER RUN/STONE BASE IN PAVED AREAS AS SPECIFIED.
18. INSTALL BUILDING SLAB AND BEGIN CONSTRUCTION OF BUILDING.
19. ROUGH GRADE ALL NON-PAVED AREAS ON THE PROJECT SITE. INSTALL SIDEWALKS, HANDICAPPED CURB RAMPS AND OTHER SITE FEATURES.
20. FINE GRADE G.A.B.C. IN PROPOSED PAVED AREAS.
21. INSTALL BITUMINOUS PAVING PER PAVEMENT SECTION.
22. FINAL GRADE ALL NON-PAVED AREAS. INSTALL LANDSCAPING. PERFORM INSPECTION OF STORMWATER MANAGEMENT FACILITIES. CORRECT ANY DEFICIENCIES, AS NECESSARY (EROSION, SCOUR, FOREBAYS, ETC.).
23. TOPSOIL SEED AND STABILIZE ALL DISTURBED AREAS, AS PER SEEDING NOTES PRIOR TO PROCEEDING WITH PHASE 2. AN INSPECTION OF PERIMETER CONTROLS WILL BE REQUIRED PRIOR TO COMMENCEMENT OF PHASE 2. E&S CONTROLS MUST BE REPLACED INDEPENDENTLY OF PHASE 1 CONTROLS. APPROVAL OF SUFFICIENT STABILIZATION FROM THE AGENCY CONSTRUCTION SITE REVIEWER MUST BE ACQUIRED BEFORE PROCEEDING TO PHASE 2.
24. PROVIDE FINAL SEEDING AND STABILIZATION AS PER SEEDING AND STABILIZATION SCHEDULE.
25. PROVIDE THREE (3) DAYS NOTICE TO DNREC SEDIMENT AND STORMWATER INSPECTOR AND CCR PRIOR TO SEDIMENT TRAP CONVERSION. EXCAVATE STORMWATER MANAGEMENT BASINS TO FINAL GRADE. VEHICLES ARE PROHIBITED FROM DRIVING ON THE BOTTOM OF THE POND.
26. FOLLOWING CONSTRUCTION AND STABILIZATION OF THE UPSTREAM AREAS, THE REMAINING 1 FOOT OF MATERIAL SHALL BE EXCAVATED AND THE SEDIMENT TRAP SHALL BE CONVERTED TO THE FINAL INFILTRATION POND PER THE APPROVED PLANS. THE TRAP SHALL BE EXCAVATED FROM THE SIDES AND NO HEAVY EQUIPMENT SHALL BE USED IN THE BOTTOM OF THE BASIN.
27. POST CONSTRUCTION VERIFICATION DOCUMENTS OF THE INFILTRATION POND MUST BE PREPARED AND SUBMITTED TO DNREC FOR APPROVAL. CONTRACTOR IS RESPONSIBLE FOR HAVING THESE DOCUMENTS PREPARED AND SUBMITTED AT AT COSTS ASSOCIATED WITH APPROVAL OF THESE DOCUMENTS ARE INCIDENTAL TO THE CONTRACT.
28. FINAL GRADE POND AND INSTALL EROSION CONTROL MATTING, RIP-RAP OUTLET PROTECTION AND FOREBAY AS SHOWN.
29. EROSION AND SEDIMENT CONTROL DEVICES SHOULD BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH WRITTEN APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.
30. NOTIFY DNREC FOR FINAL INSPECTION PRIOR TO REMOVING ANY PERIMETER CONTROLS. REMOVE ANY REMAINING PERIMETER CONTROLS AFTER STABILIZATION IS COMPLETED AND APPROVAL FROM DNREC INSPECTOR IS OBTAINED.
31. THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF THE POST CONSTRUCTION VERIFICATION DOCUMENTS, INCLUDING FINAL STABILIZATION THROUGHOUT THE SITE. ALL ELEMENTS OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.

AREA OF DISTURBANCE

TOTAL: 13.47 ± ACRES

SEDIMENT AND STORMWATER CONSTRUCTION NOTES:

1. THE DNREC SEDIMENT AND STORMWATER PROGRAM SHALL BE NOTIFIED IN WRITING 5 DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
2. REVIEW AND/OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
3. IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC.
4. FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN 14 CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.
5. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
6. AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHOULD BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
7. APPROVED PLANS REMAIN VALID FOR 5 YEARS FROM THE DATE OF APPROVAL.
8. POST CONSTRUCTION VERIFICATION DOCUMENTS SHALL BE SUBMITTED TO DNREC WITHIN 60-DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION.
9. APPROVAL OF A SEDIMENT AND STORMWATER MANAGEMENT PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
10. THE NOTICE OF INTENT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT FOR THIS PROJECT IS # (7360). THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITIES UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY THE DEPARTMENT.
11. THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT.
12. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
13. BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE, THE CONTRACTOR SHOULD CALL MISS UTILITY AT 811 OR 1-800-282-8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITIES MARKED ONSITE.
14. BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF 7 DEL.C. CH. 60 AND THE CURRENT DELAWARE CONSTRUCTION GENERAL PERMIT (CGP).
15. DOCUMENTATION OF SOIL TESTING AND MATERIALS USED FOR TEMPORARY OR PERMANENT STABILIZATION INCLUDING BUT NOT LIMITED TO SOIL TEST RESULTS, SEED TAGS, SOIL AMENDMENT TAGS, ETC. SHALL BE PROVIDED TO DNREC TO VERIFY THAT THE PERMANENT OR TEMPORARY STABILIZATION HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLAN.
16. DNREC MAY REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, OR ALTERNATIVE MEASURES THAT PROVIDE FUNCTIONAL EQUIVALENCY.
17. WHEN DIRECTED BY DNREC THE OWNER SHALL ACQUIRE THE SERVICES OF A THIRD PARTY CERTIFIED CONSTRUCTION REVIEWER (CCR) TO PERFORM WEEKLY CONSTRUCTION REVIEWS. SEDIMENT AND STORMWATER MANAGEMENT PLANS APPROVED BY THE DEPARTMENT SHALL HAVE A THIRD PARTY CCR.

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEVELOP AND CONSTRUCT A NEW POLICE SKID PAD.
2. TOPOGRAPHIC SURVEY PLAN SHOWN HEREON WAS PREPARED BY BECKER MORGAN GROUP, DOVER DE, IN FEBRUARY 2023. HORIZONTAL DATUM IS BASED ON NAD 83 2011. VERTICAL DATUM IS BASED ON NAVD 88.
3. THE EXISTING UTILITIES SHOWN WERE TAKEN FROM THE BEST AVAILABLE RECORDS. THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELMARVA (1-800-282-8555) TO VERIFY THEIR EXACT LOCATION PRIOR TO THE START OF ANY CONSTRUCTION. ANY DAMAGE INCURRED TO ANY UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE. IF THE CONTRACTOR RELIES ON THE UTILITY LOCATIONS SHOWN HEREON, HE DOES SO AT HIS OWN RISK AND WILL NOT BE ENTITLED TO ADDITIONAL COMPENSATION DUE TO TIME DELAYS FROM SAID RELIANCE.
4. THIS AREA OF DEVELOPMENT IS NOT IMPACTED BY THE 100 YEAR FLOOD PLAN AS SHOWN ON FIRM 10005C0452K EFF. 6/20/2018.
5. BECKER MORGAN GROUP CERTIFIES THAT THERE ARE NO FRESH WATER WETLANDS LOCATED WITHIN THE IMPROVED AREA.
6. ALL ROADS, PARKING AND OTHER PAVED AREAS WILL BE PRIVATELY OWNED AND MAINTAINED AND ARE NOT INTENDED FOR DEDICATION.
7. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
8. ALL HANDICAPPED PARKING DEMARCATION, STALLS, AND BUILDING ACCESSIBLE ROUTES SHALL COMPLY WITH THE "AMERICAN WITH DISABILITIES ACT".
9. THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENT FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
10. BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION THEY MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM SUSSEX COUNTY, DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC) DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT) AND APPROPRIATE STATE AND COUNTY AGENCIES.

STABILIZATION AND SEEDING NOTES :

1. PERMANENT SEEDING :
    - A. SHALL BE CONDUCTED YEAR AROUND.
    - B. SEED BED PREPARATION : SHALL BE IN ACCORDANCE WITH DE-ESC-3.4.3, SHEET 2 OF 4.
    - C. SOIL AMENDMENTS : FERTILIZER AND LIME APPLICATION SHALL BE IN ACCORDANCE WITH DE-ESC-3.4.3, SHEET 2 OF 4.
    - D. SEEDING : APPLY PERMANENT SEEDING MIX #7. APPLY SEED UNIFORMLY WITH A BROADCAST SEEDER, DRILL, CULTIPACKER SEEDER OR HYDROSEEDER. ALL SEED WILL BE APPLIED AT THE RECOMMENDED RATE AND PLANTING DEPTH, IN ACCORDANCE WITH DE-ESC-3.4.3.
    - E. MULCH : IMMEDIATELY AFTER SEEDING, UNIFORMLY MULCH ENTIRE AREA WITH STRAW AT A RATE OF 2 TONS PER ACRE MINIMUM. ALL MULCHING SHALL BE DONE IN ACCORDANCE WITH DETAIL DE-ESC-3.4.5.
    - F. TOPSOIL : ALL AREAS TO BE PERMANENTLY SEEDED SHALL HAVE A MINIMUM OF 6" OF TOPSOIL.
2. TEMPORARY STABILIZATION :
    - A. PROVIDE SEED BED SAME AS 1-B ABOVE.
    - B. APPLY MIX NO. 5 (ANNUAL RYEGRASS) IN ACCORDANCE WITH DETAIL DE-ESC-3.4.3, SHEET 2 OF 4.
    - C. MULCH SAME AS 1-E ABOVE.
3. IF TEMPORARY STABILIZATION IS REQUIRED, PERMANENT SEEDING SHALL BE PERFORMED AS SOON AS POSSIBLE.
4. ALL FILL SLOPE AREAS SHOWN ON PLAN ARE TO BE STABILIZED AS PER STATEMENT 1 OR 2 ABOVE IMMEDIATELY AFTER COMPLETION OF GRADING OPERATIONS FOR THESE SLOPES.
5. EROSION CONTROL MATTING IS REQUIRED ON ALL SLOPES OF 3:1 OR GREATER.

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

COVER SHEET GENERAL NOTES

ISSUE BLOCK

MARK	DATE	DESCRIPTION
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED

LAYER STATE: C-500

PROJECT NO.: 2022235.00
DATE: 12/18/2025
SCALE: NONE
DRAWN BY: **J.N.K.** PROJ. MGR.: **J.D.R.**

SHEET
C-500

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LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

15' B.R.L.

LAY DOWN / STAGING AREA
(80' x 60') = 4,800 S.F.

MATCH LINE A - A : SEE SHEET C-502 FOR CONTINUATION

PROPOSED LIMITS OF DISTURBANCE - 13.47 AC.

BASIN

SWM-7 SWM-8 SWM-9

APPROXIMATE LOCATION OF THE STATE OF DELAWARE REFORESTATION AREA

TYPE: B
BOTTOM WIDTH: 6'
FLOW DEPTH: 1'

PROPOSED LIMITS OF DISTURBANCE - 13.47 AC.

INSTALL SILT FENCE
SEE DETAIL, SHEET C-507

N 33° 05' 35" W 435.28'

N 34° 48' 43" W 742.46'

20' B.R.L.

N 70° 12' 25" E 663.75'

DELMARVA CENTRAL RAILROAD

LANDS N/F
DOOLITTLE PROPERTIES LLC
T.P.:133-11.00-10.00
ZONING - GR

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS LICENSE No. 18832 DELAWARE PROFESSIONAL ENGINEER
08/27/2026

PROJECT TITLE
DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE
OVERALL PRE - CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN

0 20 40 80
SCALE: 1" = 40'

ISSUE BLOCK

MARK	DATE	DESCRIPTION
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED

LAYER STATE: C-501

PROJECT NO.: 2022235.00
DATE: 12/18/2025
SCALE: 1" = 40'
DRAWN BY: **J.N.K.** PROJ. MGR.: **J.D.R.**

SHEET
C-501

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MAINTENANCE BUILDING
TOTAL FOOTPRINT: 15,700 S.F.±

PROPOSED BUILDING 1
DELAWARE STATE POLICE TROOP 4
TOTAL FOOTPRINT: 48,000 S.F.±
BUILDING HEIGHT: 37.9'±
BID PACK 2

HVAC OUTDOOR EQUIPMENT AREA (1,770 S.F.)

EX. 6" WATER

EX. 8" WATER

18" R.C.P. (2) INV: 30.20'

18" R.C.P. (2) INV: 30.10'

PATRIOTS WAY
50' RIGHT OF WAY
S 318, MINOR COLLECTOR

S 19° 47' 35" E

N 70° 12' 25" E

1650.00

S 70° 12' 25" W

1066.35'

1007.36'

20 FOOT WIDE UTILITY EASEMENT FOR THE BENEFIT OF ARTESIAN WATER COMPANY (689 S.F.)

STABILIZED CONSTRUCTION ENTRANCE

CMO
CW
CMO L: 10' W: 10' D: 3'
CW L: 10' W: 10' D: 3'

SOIL STOCKPILE
MAX HEIGHT: 20'
50' X 50'

POLLUTION PREVENTION PRACTICES

LAY DOWN / STAGING AREA
(80' x 60') = 4,800 S.F.

PROPOSED LIMITS OF DISTURBANCE - 13.47 AC.

TEMPORARY SEDIMENT BASIN

SWM-5
SWM-6
SWM-7
SWM-8
SWM-9

LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

40' B.R.L.

15' B.R.L.

L.O.D.

SF

SAP

TS-B-1

B-1

IP-1

MATCH LINE A - A : SEE SHEET C-501 FOR CONTINUATION

APPROXIMATE LOCATION OF THE STATE OF DELAWARE REFORESTATION AREA

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS
LICENSE
No. 18832
DELAWARE
PROFESSIONAL ENGINEER

08/27/2026

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EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

OVERALL PRE - CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN

0 20 40 80

SCALE: 1" = 40'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER/STATE: C-501

PROJECT NO.:	2022235.00
DATE:	12/18/2025
SCALE:	1" = 40'
DRAWN BY: J.N.K.	PROJ. MGR.: J.D.R.

SHEET
C-502

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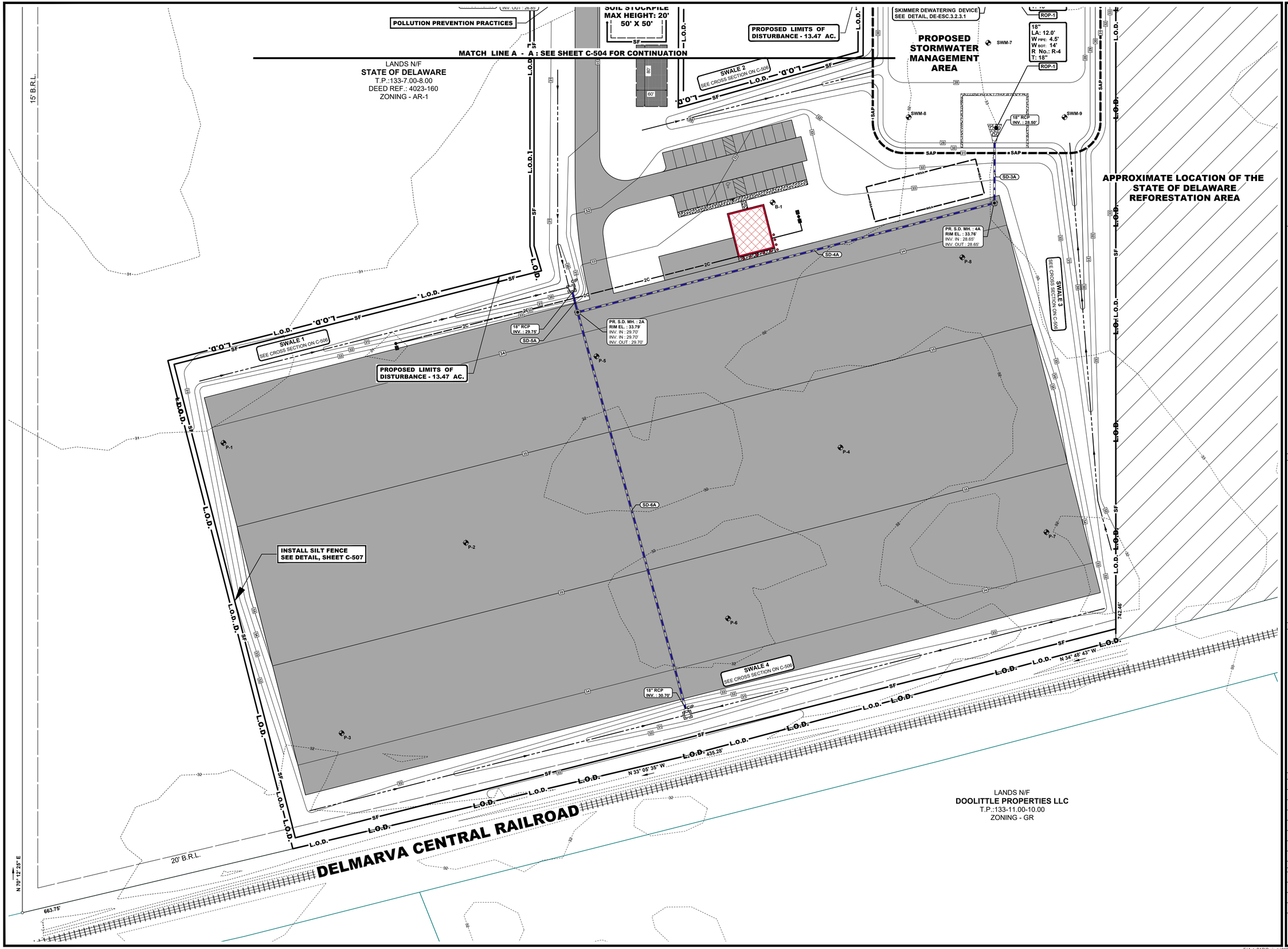

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS
LICENSE
No. 18832
DELAWARE
PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE

EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN

0 20 40 80

SCALE: 1" = 40'

ISSUE	BLOCK	
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C-503

PROJECT NO.:	2022235.00
DATE:	12/18/2025
SCALE:	1" = 40'
DRAWN BY: J.N.K.	PROJ. MGR.: J.D.R.

SHEET

C-503

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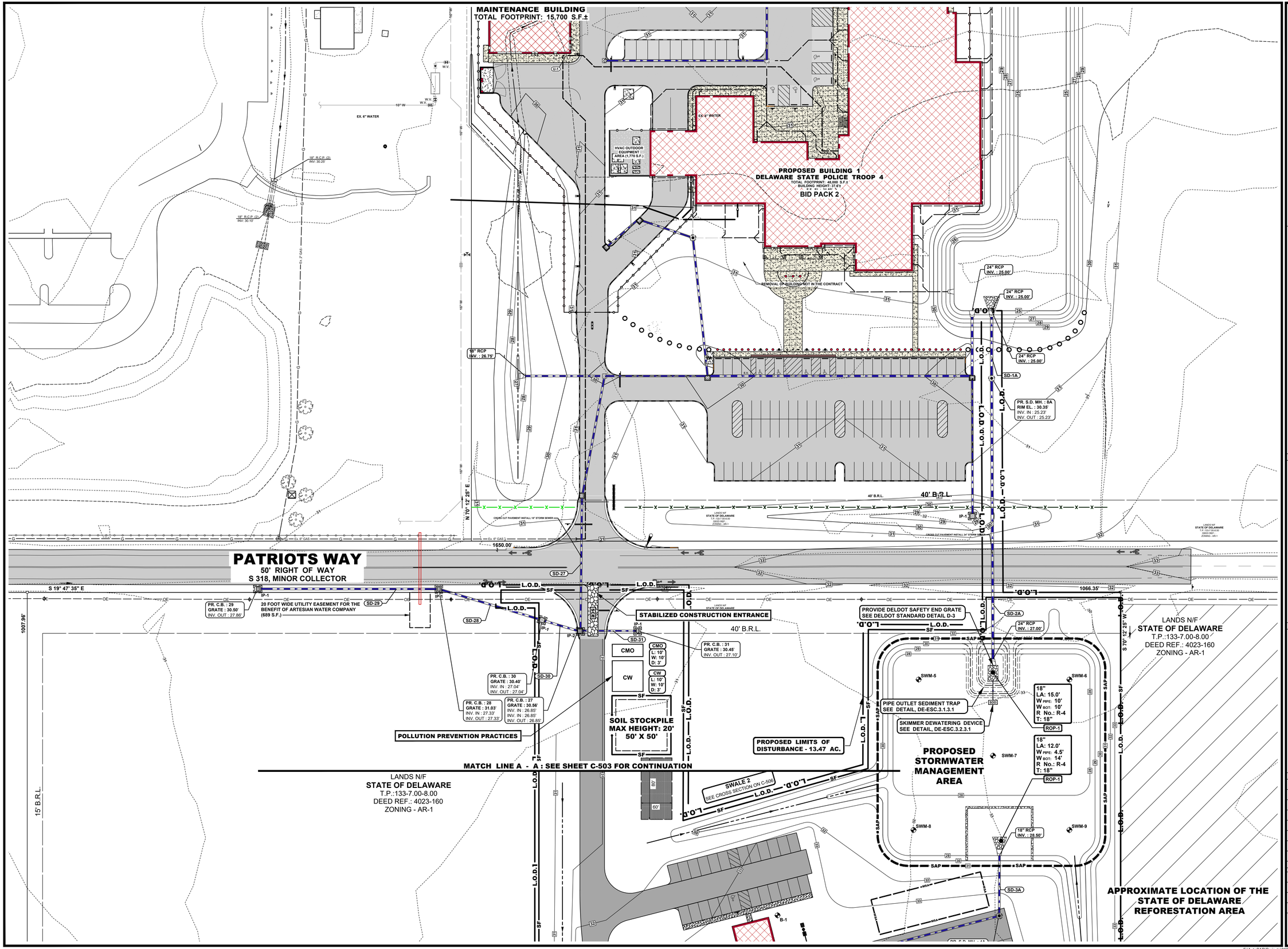

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ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS
LICENSE
No. 18832
DELAWARE
PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN

0 20 40 80
SCALE: 1" = 40'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
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1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER/STATE: C-503

PROJECT NO.:	2022235.00
DATE:	12/18/2025
SCALE:	1" = 40'
DRAWN BY: J.N.K.	PROJ. MGR.: J.D.R.

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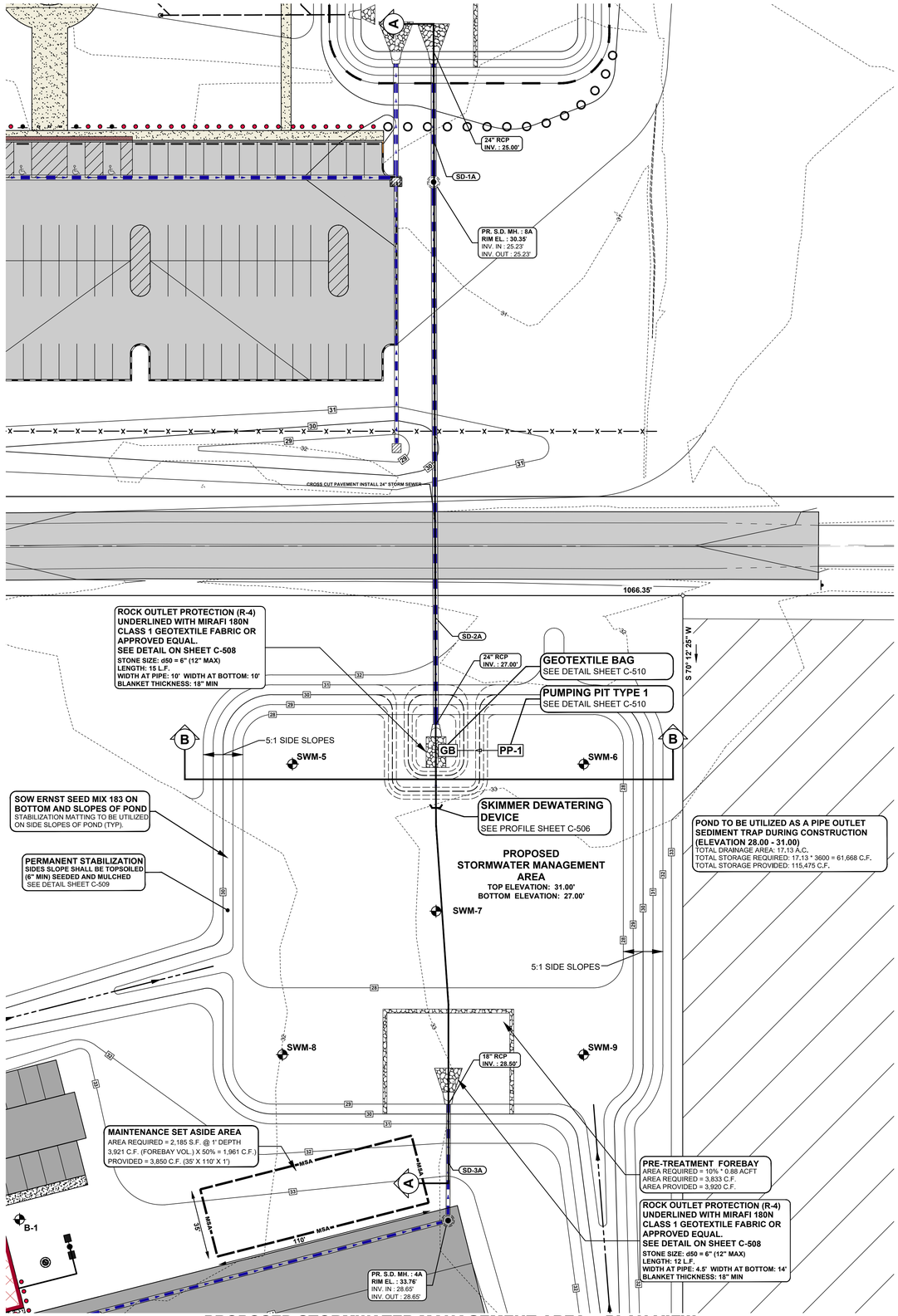

PROPOSED STORMWATER MANAGEMENT AREA - PLAN VIEW

SCALE : 1" = 30'

OPERATION AND MAINTENANCE NOTES

1. SPECIFY WHOSE RESPONSIBILITY IT WILL BE TO OPERATE AND MAINTAIN EACH POST CONSTRUCTION STORMWATER MANAGEMENT FACILITY.
2. THE DNREC SEDIMENT AND STORMWATER PROGRAM AND /OR THE RELEVANT DELEGATED AGENCY RESERVES THE RIGHT TO ENTER PRIVATE PROPERTY FOR PURPOSES OF PERIODIC SITE REVIEW.
3. THE DNREC SEDIMENT AND STORMWATER PROGRAM SHALL BE NOTIFIED WITHIN 30 BUSINESS DAYS IF THE PROPERTY OWNERSHIP IS TRANSFERRED TO A NEW PERSON OR ENTITY.
4. THE DNREC SEDIMENT ANDS STORMWATER PROGRAM MAY SEEK ENFORCEMENT ACTION AGAINST ANY OWNER DEEMED NEGLIGENT IN FULFILLING THE OPERATION AND MAINTENANCE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
5. THE DNREC SEDIMENT AND STORMWATER PROGRAM SHALL BE CONTACTED WHEN A CONCERN ARISES REGARDING ANY STORMWATER MANAGEMENT FACILITIES, BEFORE ANY NON-ROUTINE MAINTENANCE, OR IF MODIFICATIONS TO THE FACILITY ARE DESIRED.
6. ANY DESIGNED MODIFICATIONS MADE TO THE STORMWATER SYSTEM SHALL REQUIRE THE CREATION OF A NEW POST CONSTRUCTION STORMWATER MANAGEMENT PLAN AND/OR OPERATIONS AND MAINTENANCE PLAN, WITH APPROVAL OF THE PLAN(S) BY DNREC.
7. FOR ALL STORMWATER EASEMENT AREAS (I.E., ACCESS, MAINTENANCE, OR OFFSITE) AND MINIMUM 15-FOOT ACCESSWAYS TO STORMWATER FACILITIES AND THEIR STRUCTURAL COMPONENTS, REGULAR MOWING SHALL BE PREFORMED TO KEEP THE GRASS 6" TOR LESS; NO TREES OR SHRUBS SHALL BE PLANTED, AND ANY FOUND GROWING SHALL BE REMOVED; AND NO PERMANENT STRUCTURES, SUCH AS FENCES OR SHEDS, SHALL BE LOCATED WITHIN THE EASEMENT OR ACCESSWAY.
8. TREES SHALL NOT BE PLANTED, AND SHALL BE REMOVED IF FOUND GROWING, ON OR WITHIN 15 FEET OF ALL POND EMBANKMENTS, ON POND SLOPES OR SAFETY BENCHES, AND WITHIN 10 FEET OF STRUCTURAL COMPONENTS, SUCH AS PIPE INLETS.
9. WHEN THE FACILITY IS EXCAVATED TO REMOVE ACCUMULATED SEDIMENT, THE DISPOSAL AREA SHALL BE PERMANENTLY STABILIZED SO THAT IT DOES NOT RECREATE AN EROSION PROBLEM. ANY MATERIAL TAKEN OFF-SITE SHALL STILL BE UTILIZED OR DISPOSED OF IN AN APPROVED DNREC MANNER.
10. BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE, THE CONTRACTOR SHALL CALL MISS UTILITY AT 811 OR 1.800.282.8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITIES MARKED ONSITE.
11. INCLUDE ANY FACILITY SPECIFIC ROUTINE OR NON-ROUTINE MAINTENANCE, AND/OR OPERATIONAL REQUIREMENTS NOT LISTED IN THE ABOVE-MENTIONED STANDARD REQUIREMENTS FOR THE TYPE OF FACILITY. MAY INCLUDE, BUT IS NOT LIMITED TO ANY MOWING, SEDIMENT REMOVAL, PIPE INSPECTIONS, WATERING, RE-SEEDING/PLANTING, TRASH REMOVAL, ETC.
    - 11.1. THE NOTES SHALL INDICATED THE FREQUENCY OF THE MAINTENANCE INSPECTIONS.
    - 11.2. O&M SPECIFICATIONS FOR PROPRIETARY SYSTEMS MUST BE INCLUDED ON THE PLANS.
    - 11.3. ANY DETAILS NECESSARY TO COMPLETE THE O&M PROCEDURES MUST BE INCLUDED.

OPERATION AND MAINTENANCE PLAN: DRY POND

FREQUENCY	MAINTENANCE ITEMS
DURING ESTABLISHMENT, AS NEEDED (FIRST YEAR)	• INSPECT THE SITE AFTER STORM EVENT THAT EXCEEDS 0.5 INCHES OF RAINFALL. • STABILIZE ANY BARE OR ERODING AREAS IN THE CONTRIBUTING DRAINAGE AREA INCLUDING THE WET POND PERIMETER AREA • WATER TREES AND SHRUBS PLANTED IN THE WET POND VEGETATED PERIMETER AREA DURING THE FIRST GROWING SEASON. IN GENERAL, WATER EVERY 3 DAYS FOR FIRST MONTH, AND THEN WEEKLY DURING THE REMAINDER OF THE FIRST GROWING SEASON (APRIL-OCTOBER), DEPENDING ON RAINFALL.
QUARTERLY OR AFTER MAJOR STORMS (>1 INCH OF RAINFALL)	• REMOVE DEBRIS AND BLOCKAGES. • REPAIR UNDERCUT, ERODED, AND BARE SOIL AREAS
TWICE A YEAR	• MOWING OF THE DRY POND VEGETATED PERIMETER AREA AND EMBANKMENT
ANNUALLY	• SHORELINE CLEANUP TO REMOVE TRASH, DEBRIS AND FLOATABLES • A FULL MAINTENANCE REVIEW • OPEN UP THE RISER TO ACCESS AND TEST THE VALVES • REPAIR BROKEN MECHANICAL COMPONENTS, IF NEEDED.
ONE TIME - DURING THE SECOND YEAR FOLLOWING CONSTRUCTION	• DRY POND VEGETATED PERIMETER AND AQUATIC BENCH REINFORCEMENT PLANTINGS.
EVERY 5 TO 7 YEARS	• FOREBAY SEDIMENT REMOVAL
EVERY 5 TO 25 YEAR	• REPAIR PIPES, THE RISER AND SPILLWAYS, AS NEEDED • REMOVE SEDIMENT FROM WET POND AREA OUTSIDE OF FOREBAYS

SEQUENCE OF CONSTRUCTION: DRY DETENTION

1. NOTIFY THE PERSON RESPONSIBLE FOR STORMWATER SYSTEM CONSTRUCTION REVIEW AT LEAST THREE (3) DAYS PRIOR TO THE START OF STORMWATER SYSTEM CONSTRUCTION; STORMWATER FACILITIES MUST BE REVIEWED THROUGHOUT THEIR CONSTRUCTION
2. INSTALL PIPE OUTLET SEDIMENT TRAP (AS SHOWN ON C-504).
    - 2.1. CONSTRUCT PIPE OUTLET SEDIMENT TRAP TO SPECIFIED ELEVATIONS SHOWN ON THIS SHEET. AS THE FACILITY IS A STORMWATER MANAGEMENT PRACTICE, THE SITE CCR MUST BE PRESENT DURING CONSTRUCTION OF THE OUTFALL AND ALL ASSOCIATED PIPES PERTAINING TO THE OUTFALL OF THE FACILITY. UTILIZE APPROVED DEWATERING DEVICES, AS NECESSARY, (SEE SKIMMER CONNECTION TO THE OUTFALL STRUCTURE SHEET C-510.)
    - 2.2. CONSTRUCT PIPE OUTLET SEDIMENT TRAP TO SPECIFIED ELEVATIONS SHOWN ON SHEET C-506. UTILIZE APPROVED DEWATERING DEVICES, AS NECESSARY. (SEE SKIMMER CONNECTION TO THE OUTFALL STRUCTURE SHEET C-506.)
    - 2.3. INSTALL ROCK OUTLET PROTECTION ON ALL PIPES DISCHARGING FROM THE FACILITY.
    - 2.4. INSTALL OUTLET STRUCTURE, DISCHARGE PIPE & ROCK OUTLET PROTECTION IN ACCORDANCE WITH THE APPROVED PLANS. INSTALL TEMPORARY SKIMMER IN LOW-FLOW OUTLET ORIFICE.
    - 2.5. ALL OF THE SIDE SLOPES AND DISTURBED AREAS IN AND AROUND THE SEDIMENT TRAP SHALL BE STABILIZED IMMEDIATELY. INSTALL SEED MIX AND STABILIZATION MATTING ON ALL BASIN SIDE SLOPES (SEE SHEET C-505).
    - 2.6. INSTALL SEDIMENT AND EROSION CONTROL MEASURES AS SHOWN (I.E. INLET PROTECTION AND SILT FENCE) THE CONTRACTOR SHALL IMMEDIATELY BACKFILL, COMPACT, SEED, MULCH AND OTHERWISE STABILIZE DISTURBED AREAS WITHIN 14 DAYS OF INACTIVITY.
3. ONCE THE CONTRIBUTORY AREA IS STABILIZED, CONVERSION OF THE SEDIMENT TRAP TO A DRY POND MAY COMMENCE:
    - 3.1. A CCR MUST BE PRESENT DURING CONSTRUCTION OF THE FACILITY.
    - 3.2. EXCAVATE TO FINAL DESIGN ELEVATIONS. DEWATER AREA AS NECESSARY PER APPLICABLE REGULATIONS.
    - 3.3. INSTALL ALL APPURTENANCES, INCLUDING FOREBAYS AND REMAINING RIP-RAP.
    - 3.4. ENSURE FINAL OUTLET STRUCTURE IS INSTALLED PER THE APPROVED DESIGN.
4. SEED AND STABILIZE THE FACILITY AND ADJACENT AREAS. SEE SHEET C-500 FOR SEED MIXTURES. OVERSEED POND SIDE SLOPES WITH PERMANENT SEEDING MIXTURES.
5. TEMPORARY SKIMMER DEVICE SHOULD ONLY BE REMOVED WITH DNREC APPROVAL.
6. THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF THE POST CONSTRUCTION VERIFICATION DOCUMENTS, INCLUDING FINAL STABILIZATION THROUGHOUT THE SITE, ALL ELEMENTS OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.
7. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING AS-BUILT PLANS TO DNREC WITHIN 30 DAYS OF COMPLETION.

SWM POND 1 DATA	
POND ELEVATION	AREA (S.F.)
BOTTOM EL. : 27.00'	0 S.F.
EL. : 28.00'	26,302 S.F.
EL. : 29.00'	40,810 S.F.
EL. : 30.00'	46,705 S.F.
TOP EL. : 31.00'	53,123 S.F.

SWM POND 1 STORAGE DATA		
STORM	DESIGN ELEV.	STORAGE
RPV - 2.7"	27.70'	6,388 C.F.
CV - 5.2"	28.15'	17,232 C.F.
FV - 8.9"	29.55'	69,892 C.F.

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS
LICENSE
No. 18832
DELAWARE
PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

POST - CONSTRUCTION STORMWATER MANAGEMENT PLAN B.M.P.

0 10 20 40

SCALE: 1" = 20'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C505

PROJECT NO.: 2022235.00
DATE: 02-17-2026
SCALE: 1" = 20'
DRAWN BY: **J.N.K.** | PROJ. MGR.: **J.D.R.**

SHEET
C-505

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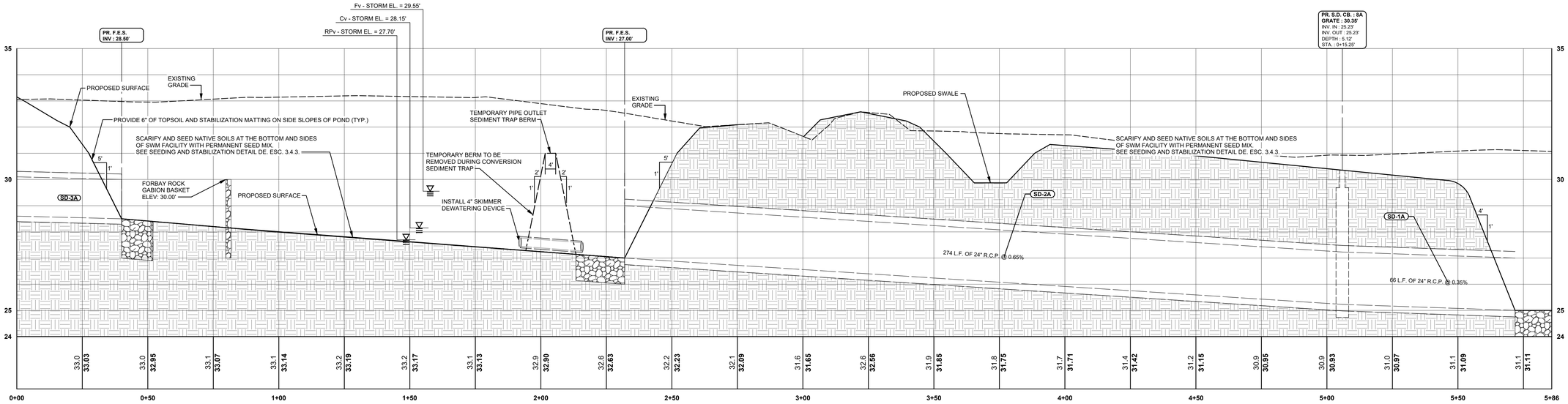
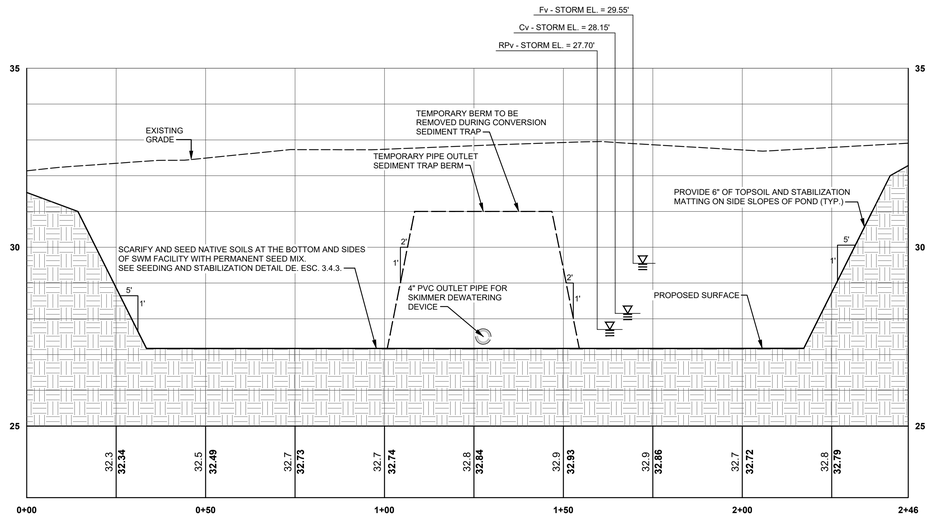


PROPOSED STORMWATER MANAGEMENT AREA - SECTION A-A 0+00.00 - 5+85.81

SCALE : 1" = 20'
VERTICAL SCALE : 1" = 2'

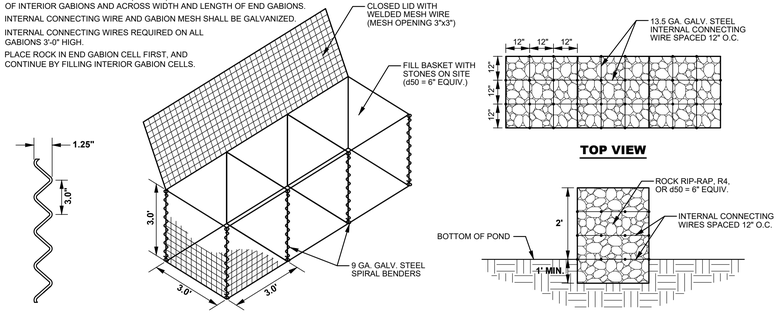


PROPOSED STORMWATER MANAGEMENT AREA - SECTION B-B

SCALE : 1" = 20'
VERTICAL SCALE : 1" = 2'

NOTES :

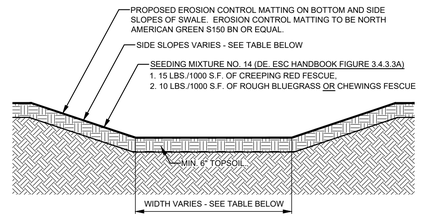
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. INTERNAL CONNECTING WIRES (13.5-GA.) TO BE INSTALLED ACROSS WIDTH OF INTERIOR GABIONS AND ACROSS WIDTH AND LENGTH OF END GABIONS.
3. INTERNAL CONNECTING WIRE AND GABION MESH SHALL BE GALVANIZED.
4. INTERNAL CONNECTING WIRES REQUIRED ON ALL GABIONS 3'-0" HIGH.
5. PLACE ROCK IN END GABION CELL FIRST, AND CONTINUE BY FILLING INTERIOR GABION CELLS.



SPIRAL BENDER **ISOMETRIC** **TOP VIEW** **CROSS-SECTION**

ROCK GABION BASKET FOREBAY WALL (TYP.)

NO SCALE



DITCH PARAMETERS

DITCH #	BTM. WIDTH	SIDE SLOPES	LENGTH	SLOPE
1	4 FT.	4:1	585 L.F.	0.75 %
2	4 FT.	6:1	232 L.F.	0.75 %
3	4 FT.	5:1	400 L.F.	1.00 %
4	4 FT.	4:1	800 L.F.	0.75 %

DITCH CROSS SECTION DETAIL

NO SCALE

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ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
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Maryland
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North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
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www.beckermorgan.com

JONATHAN D. RICHARDS LICENSE No. 18832 DELAWARE PROFESSIONAL ENGINEER

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0 10 20 40

SCALE: 1" = 20'

ISSUE BLOCK

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1	05/08/26	AGENCY COMMENTS ADDRESSED

LAYER STATE: C-505

PROJECT NO.: 2022235.00
DATE: 02-16-2026
SCALE: 1" = 20'
DRAWN BY: **J.N.K.** PROJ. MGR.: **J.D.R.**

SHEET
C-506

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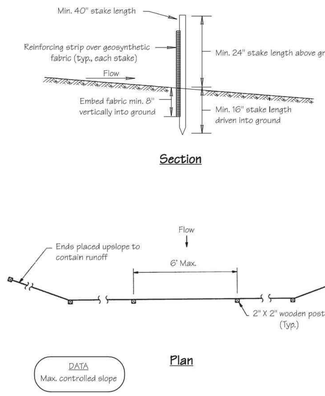
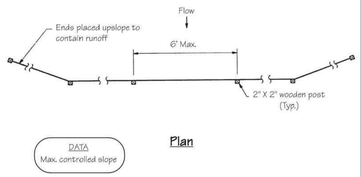
Standard Detail & Specifications

Silt Fence



Section



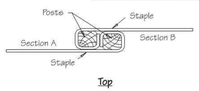
Plan

Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	SF	DE-ESC-3.1.2.1 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Silt Fence

Construction Detail



Method for joining continuous sections

Top

Construction Notes:

1. Geosynthetic fabric to be fastened securely to fence posts with wire ties or staples.
2. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
3. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

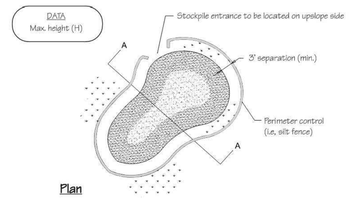
Materials:

1. Stakes: Steel (either T or U) or 2" x 2" hardwood
2. Geosynthetic Fabric: Type GD-I
3. Reinforcing strip: Wooden lath or plastic strip

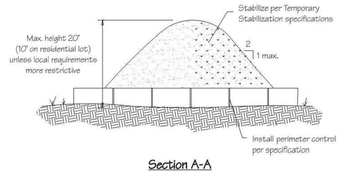
Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	SF	DE-ESC-3.1.2.1 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Soil Stockpile



Plan



Section A-A

Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	SP	DE-ESC-3.7.3 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Soil Stockpile

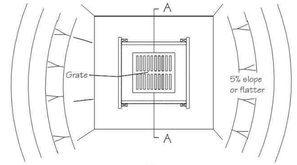
Construction Notes:

1. Locate stockpiles so that they are 50 feet from any storm drain inlet, open channel, wetland or waterbody. Redirect any concentrated flow around the stockpile using an approved erosion and sediment control measure.
2. Secure the perimeter of the stockpile with an approved erosion and sediment control perimeter device.
3. If stockpile is to remain inactive for more than 14 calendar days, the stockpile must be vegetated. Follow the temporary vegetation specifications. The vegetation chosen shall last the duration of the stockpile; the stockpile shall be restabilized if the temporary vegetation dies or erosion results.

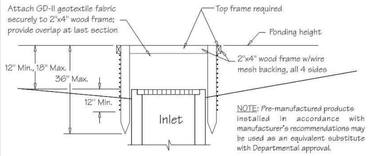
Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	SP	DE-ESC-3.7.3 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Inlet Protection - Type 1



Plan



Section A-A

Source:	Symbol:	Detail No.
Adapted from Erosion Draw Manual J. McCullah & Assoc.	IP-1	DE-ESC-3.1.5.1 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Inlet Protection - Type 1

Construction Notes:

1. Excavate completely around inlet to a depth of 18" below grate elevation.
2. Drive 2" x 4" post 1' into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2" x 4" frame using overlap joint shown. Top of frame (weir) must be 6" below edge of roadway adjacent to inlet.
3. Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
4. Stretch geotextile fabric tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet grate elevation. Fasten securely to frame. Ends must meet at post, be overlapped and folded, then fastened down.
5. Backfill around inlet in compacted 6" layers until at least 12" of geotextile fabric is buried.
6. If the inlet is not in a low point, construct a compacted earth dike in the ditchline below it. The top of this dike is to be at least 6" higher than the top of frame (weir).
7. This structure must be inspected frequently and the filter fabric replaced when clogged.

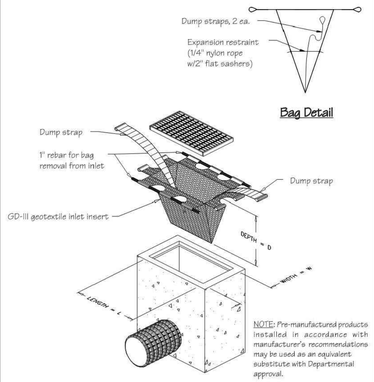
Materials:

1. Wooden frame is to be constructed of 2" x 4" construction grade lumber.
2. Wire mesh must be of sufficient strength to support filter fabric with water fully impounded against it.
3. Geotextile fabric: Type GD-II

Source:	Symbol:	Detail No.
Adapted. from Erosion Draw Manual J. McCullah & Assoc.	IP-1	DE-ESC-3.1.5.1 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Inlet Protection - Type 2



Bag Detail

Perspective

Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	IP-2	DE-ESC-3.1.5.2 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Inlet Protection - Type 2

Notes:

1. This practice shall only be used in situations in which Inlet Protection - Type 1 cannot be used due to site constraints. These include, but are not limited to partially completed parking areas, streets, roads, etc.
2. It may be necessary to transition from Type 1 to Type 2 Inlet Protection as construction proceeds.
3. For areas where there is a concern for oil run-off or spills, insert shall meet one of the above specifications with an oil-absorbant pillow or shall be made completely from an oil-absorbant material with a woven pillow.

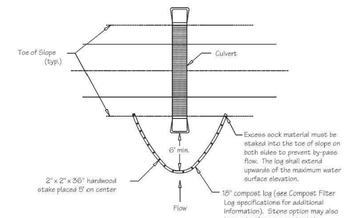
Materials:

The geotextile inlet insert shall meet or exceed the specifications of Type GD-III geotextile in accordance with Appendix A-3 of the Delaware Erosion & Sediment Control Handbook.

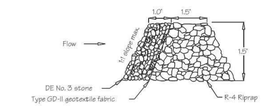
Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	IP-2	DE-ESC-3.1.5.2 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Culvert Inlet Protection



Plan View - Compost Log Option



Section View - Stone Option

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook & Filtrexx™ International	CIP	DE-ESC-3.1.6 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Culvert Inlet Protection

Construction Notes

1. Compost logs shall be designed and installed in accordance with the Standard Detail and Specifications for Compost Logs (DE-ES-3.1.7).
2. If compost logs can not be installed properly or flow conditions exceed the design capabilities of the compost logs, the stone option shall be employed. Additional filtration may be provided by using a Type GD-II geotextile incorporated into the design as an option.
3. Placement of the compost log or stone barrier should be in a "horseshoe" shape and provide a minimum of 6 feet of clearance from the culvert inlet.

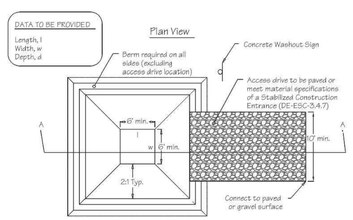
Materials

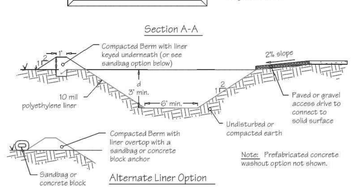
1. Stakes: 2" x 2" x 36" hardwood.
2. Compost media : See requirements in Standard Detail and Specifications for Compost Logs (DE-ES-3.1.7).
3. Filter sock: See requirements in Standard Detail and Specifications for Compost Logs (DE-ES-3.1.7).
4. Geotextile: Type GD-II for stone/riprap option.
5. Stone: DE No. 3 for stone/riprap option.
6. Riprap: R-6 for stone/riprap option.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook & Filtrexx™ International	CIP	DE-ESC-3.1.6 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Concrete Washout





Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	CW	DE-ESC-3.6.2 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Concrete Washout

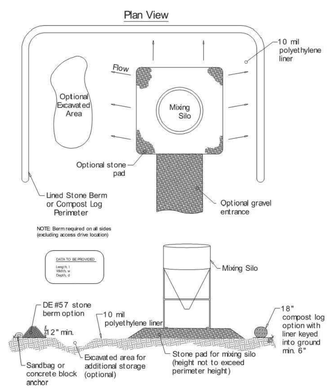
Construction Notes:

1. Locate washout area a minimum of 50 feet from open channels, stormdrain inlets, wetlands or waterbodies.
2. Locate washout area so that it is accessible to concrete equipment (service with a minimum 10 foot wide gravel accessway), but so it is not in a highly active construction area causing accidental damage.
3. Minimum dimensions for prefabricated units are 4 feet by 4 feet by 1 foot deep with a minimum 4mil polyethylene plastic liner. Minimum dimensions for constructed concrete washout areas are 6 feet by 6 feet by 3 feet deep, with a minimum 10mil polyethylene liner, 2:1 side slopes, and a 1 foot high by 1 foot wide compacted fill berm.
4. The liner must be free of tears or holes and placed over smooth surfaces to prevent puncturing. For excavated washouts, anchor the liner underneath the berm or overtop with sandbags or concrete blocks to hold in place.
5. Provide a sign designating the washout area, and for large construction sites, provide signs throughout directing traffic to its location.
6. Allow washed out concrete mixture to harden through evaporation of the wastewater. Once the facility has reached 75 percent of its capacity, remove the hardened concrete by reusing the broken aggregate onsite, recycling, or disposing of offsite. The hardened material can be buried on site with minimum of 1 foot of clean, compacted fill.
7. Apply a new liner before reusing the station for additional washouts after maintenance has occurred.

Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	CW	DE-ESC-3.6.2 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Concrete Mixing Operation



Section View

Source:	Symbol:	Detail No.
Adapted from MN/DOT Concrete Manual, Chap. 4	CMO	DE-ESC-3.6.3 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Concrete Mixing Operation

Construction Notes:

1. Locate concrete mixing and containment area a minimum of 50 feet from open channels, stormdrain inlets, wetlands or waterbodies.
2. Locate concrete mixing and containment area so that it is accessible to telescopic lifts (service with a minimum 10 foot wide gravel or paved accessway), but so it is not in a highly active construction area causing accidental damage.
3. Minimum volume for installed containment areas are 3.5 cubic feet per cubic foot of mixing capacity. The installed containment area must encompass the storage silo and mixing unit, and be surround on three sides minimum by a 12" high stone berm (DE #57) or 18" compost log
4. The 10-mil poly liner must be free of tears or holes and placed over smooth surfaces to prevent puncturing. The liner shall cover the perimeter control and be secured on the backside using cement or sandbags, or keyed into the ground a minimum of 6".
5. Allow cementitious waste to harden through evaporation of the wastewater. Once the facility has reached 75 percent of its capacity, remove the hardened concrete by reusing the broken aggregate onsite, recycling, or disposing of offsite. The hardened material can be buried on site with minimum of 1 foot of clean, compacted fill.
6. Apply a new liner before reusing the station for additional mixing after maintenance has occurred.

Source:	Symbol:	Detail No.
Adapted from MN/DOT Concrete Manual, Chap. 4	CMO	DE-ESC-3.6.3 Sheet 2 of 2 Effective January 2026

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS LICENSE No. 18832 DELAWARE PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE

EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONSTRUCTION SITE DETAILS AND NOTES

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C507

PROJECT NO.: 2022235.00
DATE: 02/17/2026
SCALE: NONE
DRAWN BY: J.N.K. | PROJ. MGR.: J.D.R.

SHEET

C-507

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F:\AutoCAD\Projects\2022\2022235\DWG\2022235-DETAILS-EVOC.dwg, Aug 27, 2026 - 4:06pm

Standard Detail & Specifications

Construction Site Pollution Prevention

Delaware NPDES Discharge Permit
General Permit for Discharge of Stormwater from Construction Activities

((Project Name))

((NOI Permit Number))

((Agency Plan Approval ID))

((Contact Name & Number for Additional Site Information))

((Contact Name & Number to Obtain Copy of Approved Plan))

If you observe indicators of stormwater pollutants in the discharge or in the receiving waterbody, call the DNREC Spill Notification 24 HR Hotline at

1-800-662-8802

Example Construction General Permit (CGP) Signage

NOTES:

1. Minimum sign size 2' x 2'
2. Minimum text size 1"
3. Sign must be posted at a safe, publicly accessible location close to construction site
4. Sign must be visible from the public road nearest the active construction site
5. Signs posted within a DelDOT or other public road right-of-way (ROW) must be in accordance with all local and/or State requirements in regards to safety, location, orientation, etc.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.1** Sheet 1 of 3 Effective January 2026

Standard Detail & Specifications

Construction Site Pollution Prevention

1) Equipment and Vehicle Fueling and Maintenance

a. Minimize spills and leaks of fuels and oils.
   i. Fuel only in marked areas a minimum of 50 feet away from drains and watercourses. Use automatic shut-off nozzles and do not top off tanks. Provide lighting if fueling at night.
   ii. Use berms or other barriers around fueling, maintenance, and parking areas to prevent stormwater from running through and to contain spills. Use drip pans during maintenance.
   iii. Take equipment and vehicles to off-site facilities for maintenance when possible.
   iv. Check vehicles and equipment daily for leaks. Repair immediately or remove from site.
   v. Clean up any spills right away. Do not hose them down.
b. Keep absorbent materials and spill kits on site, especially in fueling and storage areas.
c. Dispose of or recycle used oil, fluids, lubricants, and cleanup materials according to manufacturer instructions and all local, state, and federal regulations.

2) Equipment and Vehicle Washing

a. Minimize discharge of pollutants from wash water.
   i. Use off-site commercial wash facilities when possible.
   ii. If washing on-site, use high-pressure water without detergents in a contained area with an impervious berm.
   iii. Dispose of concrete washout water only in designated washout areas for hardening and proper disposal.
b. Do not discharge soaps, solvents, or detergents.
c. Store soaps, detergents, and solvents under cover (e.g., plastic sheeting, temporary roofs) or use another effective method to prevent contact with stormwater.

3) Storage, Handling, and Disposal of Building Products, Materials, and Waste

a. Minimize exposure of materials, products, and waste to rain, stormwater, and wind.
b. Building materials and products:
   i. Cover materials (e.g., plastic sheeting, tarp, or roof) to prevent contact with rain and stormwater. Final building materials and products intended for outdoor use do not require cover.
   ii. Secure materials (e.g., tarp, mesh, or lidded dumpster) to protect from wind.

Source:	Symbol:	Detail No.
Adapted from USEPA CGP 2022 (as modified)		**DE-ESC-3.6.1** Sheet 2 of 3 Effective January 2026

Standard Detail & Specifications

Construction Site Pollution Prevention

c. Construction and domestic waste:
   i. Provide enough containers (e.g., dumpsters, trash bins) to hold all waste.
   ii. Keep container lids closed when not in use and during storms.
   iii. For containers without lids, cover with a tarp or temporary roof to prevent exposure to rain and wind.
   iv. Do not dump or allow liquid wastes (e.g., paint, solvents, chemicals) to enter the ground, drains, or waterways.
d. Dispose of waste in designated containers and clean up loose trash immediately.
e. Empty dumpsters when at 80% capacity by volume.
f. Waste containers are not required for final building materials and products if stored separately from other construction, domestic or other waste. If mixed, the waste must be managed as construction and domestic waste in Section 3(c).

4) Hazardous Materials, Other Chemicals and Sanitary Waste:

a. Store hazardous materials and chemicals under cover or in secondary containment, at least 50 feet from drains or waterways.
b. Keep containers labeled, sealed, watertight, and closed when not in use.
c. Store contaminated waste in sealed, labeled containers made of suitable material.
d. Dispose of hazardous materials according to Delaware laws and regulations.
e. Post spill reporting contact information clearly on site.

5) Pesticides, Herbicides, Fertilizers, and Landscape Material:

a. Keep all products labeled and covered (e.g., plastic sheeting or temporary roofs) to prevent contact with rain and stormwater.
b. Provide similarly effective protection methods, such as storing fertilizer in a weatherproof area or on a covered pallet, to minimize polluted run-off.
c. Apply all products according to state and federal regulations.

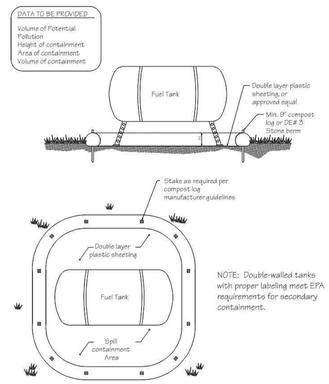
CONTACT INFORMATION

DNREC 24-Hour Toll Free Number	**800-662-8802**
DNREC Solid & Hazardous Waste Management Section	**302-739-9403**

Source:	Symbol:	Detail No.
Adapted from USEPA CGP 2022 (as modified)		**DE-ESC-3.6.1** Sheet 3 of 3 Effective January 2026

Standard Detail & Specifications

Fueling & Spill Control



Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.4** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Fueling & Spill Control

Pollution Prevention – Fueling & Spill Control

1. Fueling should only take place in signed designated areas, away from downstream drainage facilities and watercourses.
2. Fueling must be with nozzles equipped with automatic shut-off to control drips. Do not top off.
3. Protect the areas where equipment or vehicles are being repaired, maintained, fueled or parked from storm water run-on and runoff.
4. Use barriers such as berms to prevent storm water run-on and runoff, and to contain spills.
5. Place a "Fueling Area" sign next to each fueling area.
6. Store hazardous materials such as fuel, solvents, oil and chemicals in secondary containment.
7. Inspect vehicles and equipment for leaks on each day of use. Repair fluid and oil leaks immediately.
8. Absorbent spill clean-up materials and spill kits must be available in fueling areas and on fuel trucks.
9. If fueling is to take place at night, make sure the fueling area is sufficiently illuminated.
10. Properly dispose of used oil, fluids, lubricants and spill clean-up materials.

CLEAN UP SPILLS

1. If it is safe to do so, immediately contain and clean up any chemical and/or hazardous material spills.
2. Properly dispose of used oil, fluids, lubricants and spill clean-up materials.
3. Do not bury spills or wash them down with water.

LEAKS AND DRIPS

1. Use drip pans or absorbent pads at all times. Place under and around leaky equipment.
2. Do not allow oil, grease, fuel or chemicals to drip onto the ground.
3. Have spill kits and clean up material on-site.
4. Repair leaky equipment promptly or remove problem vehicles and equipment from the site. Clean up contaminated soil immediately.
5. Store contaminated waste in sealed containers constructed of suitable material. Label these containers properly.
6. Clean up all spills and leaks. Promptly dispose of waste and spent clean up materials.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.4** Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Fueling & Spill Control

Pollution Prevention – Fueling & Spill Control

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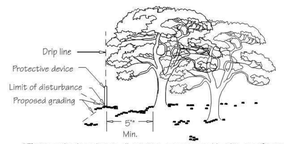
Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.4** Sheet 2 of 2 Effective January 2026

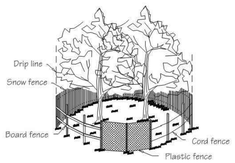
Standard Detail & Specifications

Sensitive Area Protection



"5' min. setback applies to all sensitive areas covered by this specification.

Location of Sensitive Area Protection



Methods of Sensitive Area Protection

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SAP	**DE-ESC-3.7.2** Sheet 1 of 3 Effective January 2026

Standard Detail & Specifications

Sensitive Area Protection

Construction Notes:

Fencing shall be installed at the extents of all sensitive areas. For trees, the fencing shall be installed outside the dripline (mature canopy) and at no time within 5 feet of the trunk. Personnel must be instructed to honor protective devices. The devices described are suggested only, and are not intended to exclude the use of other devices which will protect the trees to be retained. If silt fence is to be used for demarcation purposes, appropriate signage shall be provided a minimum of every 20 feet denoting the area as a sensitive area protection zone.

Materials:

1. Snow Fence - Standard 40-inch high snow fence shall be placed at the limits of clearing or construction on standard steel posts set 6 feet apart.
2. Board Fence - Board fencing consisting of 4-inch square posts set securely in the ground and protruding at least 4 feet above the ground shall be placed at the limits of clearing with a minimum of two horizontal boards between posts. For tree protection, if it is not practical to erect a fence at the drip line, construct a triangular fence nearer the trunk. The limits of clearing will still be located at the drip line, since the root zone within the drip line will still require protection.
3. Plastic Fencing - 40-inch high "international orange" plastic (polyethylene) web fencing secured to conventional metal "T" or "U" posts driven to a minimum depth of 18 inches on 6-foot minimum centers shall be installed at the limits of clearing. The fence should have the following minimum physical qualities:

a.	Tensile yield:	Average 2,000 lbs. per 4-foot width (ASTM D638)
b.	Ultimate tensile yield:	Average 2,900 lbs. per 4-foot width (ASTM D638)
c.	Elongation at break (%):	Greater than 1000% (ASTM D638)
d.	Chemical resistance:	Inert to most chemicals and acids

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SAP	**DE-ESC-3.7.2** Sheet 2 of 3 Effective January 2026

Standard Detail & Specifications

Sensitive Area Protection

4. Cord Fence - Posts with a minimum size of 2 inches square or 2 inches in diameter set securely in the ground and protruding at least 4 feet above the ground shall be placed at the limits of clearing with two rows of cord 1/4-inch or thicker at least 2 feet apart running between posts with strips of colored surveyor's flagging tied securely to the string at intervals no greater than 3 feet.
5. Earth Berms - Temporary earth berms shall be constructed according to specifications for a Temporary Earth Dike with the base of the berm on the sensitive area side located along the limits of clearing. Earth berms may not be used for this purpose if their presence will conflict with drainage patterns.
6. Trunk Armoring (Tree Protection Only) - As a last resort, a tree trunk can be armored with burlap wrapping and 2-inch studs wired vertically no more than 2 inches apart to a height of 5 feet encircling the trunk. If this alternative is used, the root zone within the drip line will still require protection. Nothing should ever be nailed to a tree.

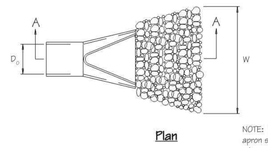
Maintenance:

Fencing and armoring devices shall be in place before any excavation or grading is begun, shall be kept in good repair for the duration of construction activities, and shall be the last items removed during the final cleanup after the completion of the project.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SAP	**DE-ESC-3.7.2** Sheet 3 of 3 Effective January 2026

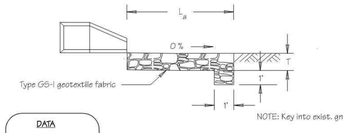
Standard Detail & Specifications

Riprap Outlet Protection - 1



Plan

NOTE: Depress centerline of apron slightly to prevent edge-cutting



DATA
Pipe diameter (D_o)
Apron length (L_a)
Apron width (W)
Riprap size (R No.)
Riprap thickness (T)

Section A-A

$T_W < 0.5\,D_o$

Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	ROP-1	**DE-ESC-3.3.10.1** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Riprap Outlet Protection - 1

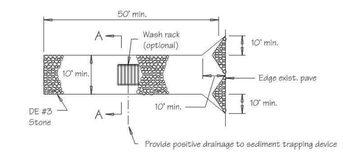
Construction Notes:

1. The subgrade for the riprap shall be prepared to the required lines and grades as shown on the plan. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
2. The riprap shall conform to the grading limits as shown on the plan.
3. Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged area. All connecting joints should overlap a minimum of 1 ft. If the damage is extensive, replace the entire filter cloth.
4. Stone for the riprap or gabion outlets may be placed by equipment. Riprap shall be placed in a manner to prevent damage to the filter cloth. Hand placement will be required to the extent necessary to prevent damage to the conduits, structures, etc.

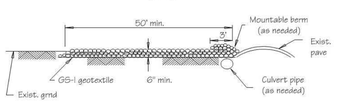
Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	ROP-1	**DE-ESC-3.3.10.1** Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

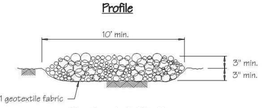
Stabilized Construction Entrance



Plan



Profile

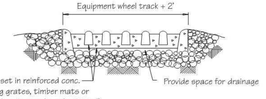


Section A-A (Std.)

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SCE	**DE-ESC-3.4.7** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Stabilized Construction Entrance



Section A-A (Opt.)

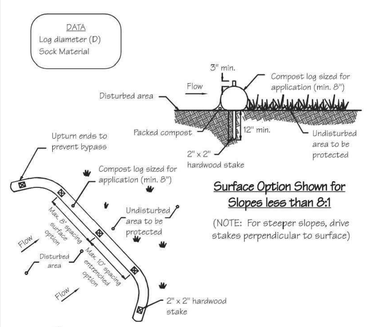
Construction Notes:

1. Stone size - Use DE #3 stone.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than size (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Geotextile - Type GS-I; placed over the entire area prior to placing of stone.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Vehicle wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Inspection - Periodic inspection and needed maintenance shall be provided after each rain.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SCE	**DE-ESC-3.4.7** Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Compost Filter Log



Surface Option Shown for Slopes less than 8:1

(NOTE: For steeper slopes, drive stakes perpendicular to surface)

Plan

NOTE: Manufacturer's recommendations supersede any installation details shown for this practice

Source:	Symbol:	Detail No.
Adapted from MD Stds & Specs for ESC & Filtrexx™ International	CFL	**DE-ESC-3.1.7** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Compost Filter Log

Construction Notes:

1. Prior to installation, clear bedding area of obstructions including rocks or debris larger than 1 inch and fill in any sharp depression areas.
2. If socks are prepared on-site, fill the sock fabric using a pneumatic blower so that the logs are rigid and do not deform. Terminate at the desired length.
3. For trenched applications, excavate 2 to 4 inches below grade along the width and length of the compost filter log.
4. Install the compost filter logs perpendicular to the flow direction and parallel to the slope with the beginning and end of the installation pointing up the slope a minimum of 1 foot elevation difference. On sites where this is not possible, upturn at a minimum length of 10' at a 30 degree angle to prevent runoff bypass.
5. For untrenched applications, blow or hand pack soil, mulch, or compost on the upslope side of the log, filling the bottom void area.
6. Stake the filled log every 10 feet maximum through the center of the sock for trenched applications, or every 8 feet for untrenched. The stake shall be a 2" by 2" hardwood. It should extend 12" below grade and protrude at least 3" above the top of the sock. If located on a slope greater than 8:1, the stake shall be angled downslope at a 45 degree angle to prevent the force of the water from dislodging to log.
7. When the length of the compost filter log needed exceeds the available compost filter sock length, the next sock shall be overlapped a minimum of 12" before being filled, and a stake placed through both socks at the overlap.
8. Remove accumulated sediment when it has reached half of the effective height of the log.
9. Inspect weekly and after rain event. If sock is degrading or the sock is failing, vegetate to secure the compost, replace the log, or reinforce with an additional log. If the log has been crushed due to construction equipment, it can be "fluffed" back to its effective height. If the effective height can no longer be restored, the log shall be replaced or reinforced with an additional compost filter log.

Source:	Symbol:	Detail No.
Adapted from MD Stds & Specs for ESC & Filtrexx™ International	CFL	**DE-ESC-3.1.7** Sheet 2 of 2 Effective January 2026

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950

The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS — LICENSE — No. 18832 — DELAWARE — PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE

EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONSTRUCTION SITE DETAILS AND NOTES

ISSUE BLOCK

MARK	DATE	DESCRIPTION
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED

LAYER STATE: C-507

PROJECT NO.: 2022235.00
DATE: 02/17/2026
SCALE: NONE
DRAWN BY: **J.N.K.** PROJ. MGR.: **J.D.R.**

SHEET
C-508

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Standard Detail & Specifications

Topsoiling

Construction Notes:

1. **Site Preparation** (Where Topsoil is to be added)

   Note: When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, waterways and sediment basins.

   a. Grading - Grades on the areas to be topsoiled which have been previously established shall be maintained.

   b. Liming - Where the topsoil is either highly acid or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet). Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

   c. Tilling - After the areas to be topsoiled have been brought to grade, and immediately prior to dumping and spreading the topsoil, the subgrade shall be loosened by discing or by scarifying to a depth of a least 3 inches to permit bonding of the topsoil to the subsoil. Pack by passing a bulldozer up and down over the entire surface area of the slope to create horizontal erosion check slots to prevent topsoil from sliding down the slope.

2. **Topsoil Material and Application**

   Note:Topsoil salvaged from the existing site may often be used but it should meet the same standards as set forth in these specifications. The depth of topsoil to be salvaged shall be no more than the depth described as a representative profile for that particular soil type as described in the soil survey published by USDA-SCS in cooperation with Delaware Agricultural Experimental Station.

Source:	Symbol:	Detail No.
USDA - NRCS		**DE-ESC-3.4.1** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Topsoiling

Construction Notes (cont.)

a. Materials - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand or other soil as approved by an agronomist or soil scientist. It shall not have a mixture of contrasting textured subsoil and contain no more than 5 percent by volume of cinders, stones, slag, coarse fragment, gravel, sticks, roots, trash or other extraneous materials larger than 1-1/2 inches in diameter. Topsoil must be free of plants or plant parts of bermudagrass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistles, or others as specified. All topsoil shall be tested by a reputable laboratory for organic matter content, pH and soluble salts. A pH of 6.0 to 7.5 and an organic content of not less than 1.5 percent by weight is required. If pH value is less than 6.0 lime shall be applied and incorporated with the topsoil to adjust the pH to 6.5 or higher. Topsoil containing soluble salts greater than 500 parts per million shall not be used.

Note: No sod or seed shall be placed on soil which has been treated with soil sterilant or chemicals used for weed control until sufficient time has elapsed to permit dissipation of toxic materials.

b. Grading - The topsoil shall be uniformly distributed and compacted to a minimum of four (4) inches. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

Note:Topsoil substitutes or amendments as approved by a qualified agronomist or soil scientist, may be used in lieu of natural topsoil. Compost material used to improve the percentage of organic matter shall be provided by a certified supplier.

Compost amendments that are intended to meet specific post-construction stormwater management goals shall further meet the requirements of **Appendix 3.06.2 Post Construction Stormwater Management BMP Standards and Specifications, Section 14.0 Soil Amendments.**

Source:	Symbol:	Detail No.
USDA - NRCS		**DE-ESC-3.4.1** Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Vegetative Stabilization

TEMPORARY SEEDING BY RATES, DEPTHS AND DATES

Mix #	Species[6]	Seeding Rate		Optimum Seeding Dates [1] O = Optimum Planting Period. A = Acceptable Planting Period							Planting Depth[7]
				Coastal Plain		Piedmont		All			
	Certified Seed	lb/Ac.[4]	lb/1000 sq.ft.	2/1-4/30	5/1-8/14	8/15-10/31	3/1-4/30	5/1-7/31	8/1-10/31	10/31-2/1	
1	Barley	125	4	O	A	O	O	A	O		1-2 inches 2-3" sandy soils
2	Oats	125	4	O	A	O	O	A	A		1-2 inches 2-3" sandy soils
3	Rye	125	4	O	A	O	O	A	O	A	1-2 inches 2-3" sandy soils
4	Perennial Ryegrass	125	4	O	A	O	O	A	O		0.5 inches 1-2" sandy soils
5	Annual Ryegrass	125	4	O	A	O	O	A	O	A	0.5 inches 1-2" sandy soils
6	Winter Wheat	125	4	O	A	O	O	A	O	A	1-2 inches 2-3" sandy soils
7	Foxtail Millet	30 PLS	0.7		O				O		0.5 inches 1-2" sandy soils
8	Pearl Millet	20 PLS	0.5		O				O		0.5 inches 1-2" sandy soils

1. Winter seeding requires 3 tons per acre of straw mulch for proper stabilization.
2. May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
3. Applicable on slopes 3:1 or less.
4. Use varieties currently recommended for Delaware. Contact a County Extension Office for information.
5. Warm season grasses such as Millet may be used between 5/1 and 9/1 if desired. Seed at 3-5 lbs. per acre. Good on low fertility and acid areas. Seed after frost through summer at a depth of 0.5".

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 1 of 4 Effective January 2026

Standard Detail & Specifications

Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES

Mix No.	Seeding Mixtures: Certified Seed[6] / Well Drained Soils	Seeding Rate[1] lb/Ac	lb/1000 sq.ft.	Optimum Seeding Dates [2] O = Optimum Planting Period. A = Acceptable Planting Period. Coastal Plain 2/1-4/30	Coastal Plain 5/1-8/14	Piedmont 8/15-10/31	Piedmont 3/1-4/30	Piedmont 5/1-7/31	All[3] 8/1-10/31	All[3] 10/31-2/1	Remarks
1	Tall Fescue or Canada Wild Rye	140 10	3.2 0.23	A	O	A	A	O	A		Good erosion control mix Tolerant of low fertility soils Good for droughty sites
2	Deertongue Sheep Fescue White Clover	30 30 10	0.69 0.69 0.35	A	O	A	A	O	A		Add 100 lbs./ac Winter Rye Good erosion control mix Tolerant of low fertility soils Legume that fixes atmospheric N into soil
3	Tall Fescue (Turf-type) **or** Strong Creeping Red Fescue **or** Perennial Ryegrass plus Flatpea[5]	50 50 50 15	1.15 1.15 1.15 0.34	O	A*	O	O	A*	O		Add 100 lbs./ac Winter Rye Good erosion control mix Tall Fescue for droughty conditions. Creeping Red Fescue for heavy shade. Flatpea for suppress woody vegetation.
4	Strong Creeping Red Fescue Kentucky Bluegrass Perennial Ryegrass **or** Redtop plus White Clover[5]	100 70 15 5 3	2.3 1.61 0.35 0.11 0.07	O	A*	O	O	A*	O		Add 100 lbs./ac Winter Rye Suitable waterway mix. Canada Bluegrass more drought tolerant. Use Redtop for increased drought tolerance.
5	Switchgrass[6] **or** Coastal Panicgrass Big Bluestem Little Bluestem Indian Grass	10 10 5 5 5	0.23 0.23 0.11 0.11 0.11		O			O			Native warm-season mixture; Tolerant of low fertility soils. Drought tolerant. Poor shade tolerance. N fertilizer discouraged - weeds
6	Tall Fescue (turf-type) (Blend of 3 cultivars)	150	3.5	O	A*	O	O	A*	O		Managed filter strip for nutrient uptake.
7	Tall Fescue Ky. Bluegrass (Blend) Perennial Ryegrass	150 20 20	3.5 0.46 0.46	O	A*	O	O	A*	O		Three cultivars of Kentucky Bluegrass. Traffic tolerant.
8	Big Bluestem[7] Indian Grass[7] Little Bluestem[7] Creeping Red Fescue **plus one of:** Partridge Pea Bush Clover Wild Indigo Showy Tick-Trefoil	10 10 8 30 5 3 3 2	0.23 0.23 0.18 0.69 0.11 0.07 0.07 0.05	O	A*	O	O	A*			All species are native. Indian Grass and Bluestem have fluffy seeds. Plant with a specialized native seed drill. Creeping Red Fescue will provide erosion protection while the warm season grasses get established.

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 2 of 4 Effective January 2026

Standard Detail & Specifications

Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES (cont.)

Mix No.	Seeding Mixtures: Certified Seed[6] / Poorly Drained Soils	Seeding Rate[1] lb/Ac	lb/3000 sq.ft.	Optimum Seeding Dates [2] O = Optimum Planting Period. A = Acceptable Planting Period. Coastal Plain 2/1-4/30	Coastal Plain 5/1-8/14	Piedmont 8/15-10/31	Piedmont 3/1-4/30	Piedmont 5/1-7/31	All[3] 8/1-10/31	All[3] 10/31-2/1	Remarks
9	Redtop Creeping Bentgrass Sheep Fescue Rough Bluegrass	75 35 30 45	1.72 0.8 0.69 1	O	A*	O	O	A*	O	Add 100 lbs./ac Winter Rye	Quick stabilization of disturbed sites and waterways
10	Switchgrass[6]	10	0.23	A		O	A		O		Good erosion control, wildlife cover and wetland revegetation.
	Residential Lawns										
11	Tall Fescue Perennial Ryegrass Kentucky Bluegrass Blend	100 25 30	2.3 0.57 0.69	O	A*	O	O	A*	O		High value, high maintenance, light traffic, irrigation necessary. Well drained soils, full sun.
12	Tall Fescue Perennial Ryegrass Sheep Fescue	100 25 25	2.3 0.57 0.57	O	A*	O	O	A*	O		Moderate value, low maintenance, traffic tolerant
13	Creeping Red Fescue Chewings Fescue Rough Bluegrass Kentucky Bluegrass	50 50 20 20	1.15 1.15 0.4 0.4	O	A*	O	O	A*	O		Shade tolerant, moderate traffic tolerance, moderate maintenance.
14	Creeping Red Fescue Rough Bluegrass **or** Chewings Fescue	50 90	1.15 2.1	O	A*	O	O	A*	O		Shade tolerant, moisture tolerant.
15	K-31 Tall Fescue	150	3.5	O	A*	O	O	A*	O		Monoculture, but performs well alone in lawns. Discouraged.

1. When hydroseeding is the choice method of application, the total rate of seed should be increased by 25%.
2. Winter seeding requires 3 tons per acre of straw mulch. Planting dates listed above are average for Delaware. These dates may require adjustment to reflect local conditions.
3. All seed shall meet the minimum purity and minimum germination percentages recommended by the Delaware Department of Agriculture. The maximum % of weed seeds shall be in accordance with Chapter 15, Title 3 of the Delaware Code.
4. Turf-type species may be planted throughout summer if moisture is adequate or seeded area can be irrigated.
5. It is recommended that all leguminous seed be inoculated.
6. Warm season grass mix and Switchgrass cannot be mowed more than 4 times per year.
7. Warm season grasses require a soil temperature of at least 50 degrees in order to germinate and will remain dormant until then.

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 3 of 4 Effective January 2026

Standard Detail & Specifications

Vegetative Stabilization

Construction Notes:

1. Site Preparation
   a. Prior to seeding, install needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, grassed waterways, and sediment basins.
   b. Final grading and shaping is not necessary for temporary seedings.
2. Seedbed Preparation

   It is important to prepare a good seedbed to ensure the success of establishing vegetation. The seedbed should be well prepared, loose, uniform, and free of large clods, rocks, and other objectionable material. The soil surface should not be compacted or crusted.
3. Soil Amendments
   a. Lime - Apply liming materials based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply dolomitic limestone at the rate of 1 to 2 tons per acre. Apply limestone uniformly and incorporate into the top 4 to 6 inches of soil.
   b. Fertilizer - Apply fertilizer based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply a formulation of 10-10-10 at the rate of 600 pounds per acre. Apply fertilizer uniformly and incorporate into the top 4 to 6 inches of soils.
4. Seeding
   a. For **temporary stabilization**, select a mixture from **Sheet 1** . For a **permanent stabilization**, select a mixture from **Sheet 2** or **Sheet 3** depending on the conditions. Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.
   b. Apply seed uniformly with a broadcast seeder, drill, cultipacker seeder or hydroseeder. All seed will be applied at the recommended rate and planting depth.
   c. Seed that has been broadcast should be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used and the seed and fertilizer is mixed, they will be mixed on site and the seeding shall be done immediately and without interruption.
5. Mulching

   All mulching shall be done in accordance with detail **DE-ESC-3.4.5**.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 4 of 4 Effective January 2026

Standard Detail & Specifications

Mulching

1. Materials and Amounts

a. *Straw* - Straw shall be unrotted small grain straw applied at the rate of 1-1/2 to 2 tons per acre, or 70 to 90 pounds (two bales) per 1,000 square feet. Mulch materials shall be relatively free of weeds and shall be free of noxious weeds such as; thistles, Johnsongrass, and quackgrass. Spread mulch uniformly by hand or mechanically. For uniform distribution of hand spread mulch, divide area into approximately 1,000 square feet sections and place 70-90 pounds (two bales) of mulch in each section.

b. *Wood chips* - Apply at the rate of approximately 6 tons per acre or 275 pounds per 1,000 square feet when available and when feasible. These are particularly well suited for utility and road rights-of-way. If wood chips are used, increase the application rate of nitrogen fertilizer by 20 pounds of N per acre (200 pounds of 10-10-10 or 66 pounds of 30-0-0 per acre).

c. *Hydraulically applied mulch* -The following conditions apply to hydraulically applied mulch:

   i. Definitions:
      a. Wood fiber mulch shall consist of specially prepared wood that has been processed to a uniform state, is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment, and consists of a minimum of 70% virgin or recycled wood fiber combined with 30% paper fiber and additives.
      b. Blended fiber mulch shall consist of any hydraulic mulch that contains greater than 30% paper fiber. The paper component must consist of specially prepared paper that has been processed to a uniform fibrous state and is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment.
      c. A bonded fiber matrix (BFM) consists of long strand, specially prepared wood fibers that have been processed to a uniform state held together by a water resistant bonding agent. BFMs shall contain no paper (cellulose) mulch but may contain small percentages of synthetic fibers to enhance performance.
      d. Refer to **Figure 3.4.5a** for conditions and limitations of use for each of the above categories of hydraulic mulch.
   ii. All components of the hydraulically applied mulches shall be pre-packaged by the manufacturer to assure material performance. Field mixing of the mulch components is acceptable, but must be done per manufacturers recommendations to ensure the proper results.
   iii. Hydraulic mulches shall be applied with a viable seed and at manufacturer's recommended rates. Increased rates may be necessary based on site conditions.
   iv. Hydraulically applied mulches and additives shall be mixed according to manufacturers recommendations.
   iv. Materials within this category shall only be used when hydraulically applied mulch has been specified for use on the approved Sediment and Stormwater Plan, or supplemental approval from the plan approval agency has been obtained in writing for a specific area.

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrexx™ International		**DE-ESC-3.4.5** Sheet 1 of 3 Effective January 2026

Standard Detail & Specifications

Mulching

v. Application:
   a. Apply product to geotechnically stable slopes that have been designed and constructed to divert runoff away from the face of the slope.
   b. Do not apply to saturated soils, or if precipitation is anticipated within 24-48 hours.
   c. During the spring (March 1 to May 31) and fall (September 1 to November 30) seasons, hydraulic mulches may be applied in a one-step process where all components are mixed together in single-tank loads. It is recommended that the product be applied from opposing directions to achieve optimum soil coverage.
   d. During the summer (June 1 to August 31) and winter (December 1 to February 28) seasons, the following two-step process is required:
      Step One– Mix and apply seed and soil amendments with a small amount of mulch for visual metering.
      Step Two – Mix and apply mulch at manufacturers recommended rates over freshly seeded surfaces. Apply from opposing directions to achieve optimum soil coverage.
   e. Minimum curing temperature is 40° F (4° C). The best results and more rapid curing are achieved at temperatures exceeding 60°F (15°C). Curing times may be accelerated in high temperature, low humidity conditions on dry soils.
   vi. Recommended application rates are for informational purposes only. Conformance with this standard and specification shall be performance-based and requires **100% soil coverage**. Any areas with bare soil showing shall be top dressed until full coverage is achieved.
   d. *Compost blanket (CB)* - **Loosely applied** with a pneumatic blower so that a 1" compost blanket uniformly covers **the soil with 100% coverage**. This application can be used with seed to promote germination by applying the approved seed mix directly into the loosely blown compost. The compost blanket performs best on slopes less than 2:1 and requires no mulch anchoring.

2. Anchoring mulch - Mulch must be anchored immediately to minimize loss by wind or water. This may be done by one of the following methods, depending upon size of area, erosion hazard, and cost.
   a. *Crimping* - A crimper is a tractor drawn implement designed to punch and anchor mulch into the top two (2) inches of soil. This practice affords maximum erosion control but is limited to flatter slopes where equipment can operate safely. On sloping land, crimping should be done on the contour whenever possible.
   b. *Tracking* - Tracking is the process of cutting mulch (usually straw) into the soil using a bulldozer or other equipment that runs on cleated tracks. Tracking is used primarily on slopes 3:1 or steeper and should be done up and down the slope with cleat marks running across the slope.
   c. *Liquid mulch binders* - Applications of liquid mulch binders should be heavier at edges, in valleys, and at crests of banks and other areas where the mulch will be moved by wind or water. All other areas should have a uniform application of binder. The use of synthetic binders is the preferred method of mulch binding and should be applied at the rates recommended by the manufacturer.
   d. *Paper fiber* - The fiber binder shall be applied at a net dry weight of 750 lbs/ac. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons.
   e. *Nettings* - Biodegradable nettings may be used to secure straw mulch. Install and secure according to the manufacturer's recommendations. Photodegradable or synthetic nettings are not acceptable.

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrexx™ International		**DE-ESC-3.4.5** Sheet 2 of 3 Effective January 2026

Standard Detail & Specifications

Mulching

MULCHING MATERIAL SELECTION GUIDE

Type of Mulch / App. Rate	Percent Slope	Dec - 1 to Feb. 28/29	March 1 to May 31	June 1 to Aug. 31	Sept. 1 to Nov. 30
Blended Fiber @ 2000 lbs/ac. minimum (Hydraulic Application Mulch)	Less than 2%	OK Cv, Au	OK Cv, Au	OK Cv, Au	OK Cv, Au
BFM @ 3000 lbs/ac. min. (Hydraulic Application Mulch)	2% to 5%	OK Cv, Au	OK Cv, Au	OK Cv, Au	OK Cv, Au
Wood Fiber @ 2000 lbs/ac. min. Straw @ 2 Tons/ac. min. (Hydraulic Application Mulch)	5% to 10%	OK Cv, Au	OK Cv, Au	OK Cv, Au	OK Cv, Au
Straw @ 2 Tons/ac. min. + Compost Blanket (CB)	5% to 10%	xxxxxxxxxx	OK Cv, Au	OK Cv, Au	OK Cv, Au
Wood Fiber @ 2500-3000 lbs/ac. min. BFM @ 3500-4000 lbs/ac. min. (Hydraulic Application Mulch)	10% to 24.5%	OK Cv, Au	OK Cv, Au	OK Cv, Au	OK Cv, Au
Straw @ 2 Tons/ac. min. + Compost Blanket (CB)	10% to 24.5%	xxxxxxxxxx	OK Cv, Au	OK Cv, Au	OK Cv, Au
Wood Fiber @ 2500-3000 lbs/ac. min. BFM @ 3500-4000 lbs/ac. min. (Hydraulic Application Mulch)	25% to 33%	OK Cv, Au	OK Cv, Au	OK Cv, Au	OK Cv, Au
Straw @ 2 Tons/ac. min.** + Compost Blanket (CB)	25% to 33%	xxxxxxxxxx	OK Cv, Au	OK Cv, Au	OK Cv, Au
Compost Blanket (CB)	33% and up	xxxxxxxxxx	OK Cv, Au	OK Cv, Au	OK Cv, Au

Cv - Performance standard requires 100% soil coverage.
Au - Not recommended for use during this period.
** - Straw applied on slopes greater than 33% must be netted (this does not apply to topsoil substitutes).
* Note: Manufacturers Recommended Rates for informational purposes only. Conformance with this standard and specification shall be performance-based and requires **100% soil coverage**. Any areas with bare soil showing shall be top dressed until full coverage is achieved.
** Note: Straw applied on slopes greater than 33% must be netted (this does not apply to topsoil substitutes).
NA = Not acceptable for use during this time period.
All application rates are minimums

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrexx™ International		**DE-ESC-3.4.5** Sheet 3 of 3 Effective January 2026

Standard Detail & Specifications

Dust Control

Temporary Methods:

1. Mulches - See **DE-ESC-3.4.5**, Standard Detail and Specifications for Mulching.
2. Vegetative cover - See **DE-ESC-3.4.3**, Std. Detail and Specifications for Vegetative Stabilization.
3. Adhesives - Use on mineral soils only (not effective on muck soils). Keep traffic off these areas. The following table may be used for general guidance.

Type of Emulsion	Water Dilution	Type of Nozzle	Apply Gal/Ac.
Latex emulsion	12.5:1	Fine spray	235
Resin-in-water emulsion	4.1	Fine spray	300
Acrylic emulsion (non-traffic)	7:1	Coarse spray	450
Acrylic emulsion (traffic)	3.5:1	Coarse spray	350

4. Tillage - For emergency temporary treatment, scarify the soil surface to prevent or reduce the amount of blowing dust until a more appropriate solution can be implemented. Begin the tillage operation on the windward side of the site using a chisel-type plow for best results.
5. Sprinkling - Sprinkle site with water until the surface is moist . Repeat as needed.
6. Calcium Chloride - Apply as flakes or granular material with a spreader at a rate that will keep the soil surface moist. Re-apply as necessary.
7. Barriers - Place barriers such as solid board fences, snow fences, hay bales, etc. at right angles to the prevailing air currents at intervals of approx. 10X their height.

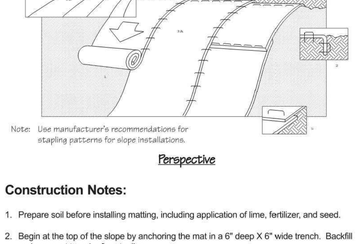
Permanent Methods:

1. Vegetative cover - See **DE-ESC-3.4.3**, Std. Detail and Specifications for Vegetative Stabilization.
2. Stone - Apply layer of crushed stone or coarse gravel to protect soil surface.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook		**DE-ESC-3.4.8** Sheet 1 of 1 Effective January 2026

Standard Detail & Specifications

Stabilization Matting - Slope



Note: Use manufacturer's recommendations for stapling patterns for slope installations.

Perspective

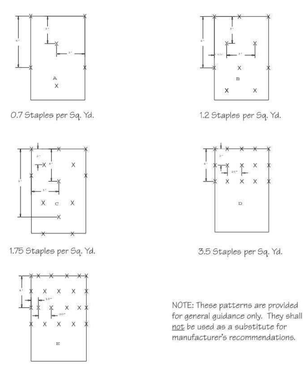
Construction Notes:

1. Prepare soil before installing matting, including application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the mat in a 6" deep X 6" wide trench. Backfill and compact trench after stapling.
3. Roll the mats (A) down or (B) horizontally across the slope.
4. The edges of parrallel mats must be stapled with approx. 2" overlap.
5. When mats must be spliced down the slope, place mats end over end (shingle style) with approx. 4" overlap. Staple through overlapped area, approx. 12" apart.

Source:	Symbol:	Detail No.
Adapted from North American Green, Inc.	SM-S	**DE-ESC-3.4.6.1** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Stabilization Matting - Slope



0.7 Staples per Sq. Yd. | 1.2 Staples per Sq. Yd. | 1.75 Staples per Sq. Yd. | 3.5 Staples per Sq. Yd. | 3.75 Staples per Sq. Yd.

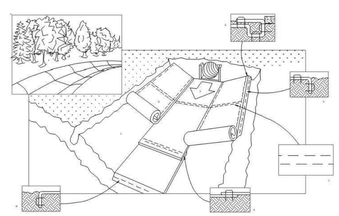
NOTE: These patterns are provided for general guidance only. They shall not be used as a substitute for manufacturer's recommendations.

Stapling Patterns

Source:	Symbol:	Detail No.
Adapted from North American Green, Inc.	SM-S	**DE-ESC-3.4.6.1** Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Stabilization Matting - Channel



Perspective

CRITICAL POINTS
A. Overlaps and seams
B. Projected waterline
C. Channel bottom/side slope vertices

Note: Horizontal staple spacing should be altered if necessary to allow staples to secure the critical points along the channel surface.

Use manufacturer's recommendations for stapling patterns for channel installations.

Source:	Symbol:	Detail No.
Adapted from North American Green, Inc.	SM-C	**DE-ESC-3.4.6.2** Sheet 1 of 3 Effective January 2026

Standard Detail & Specifications

Stabilization Matting - Channel

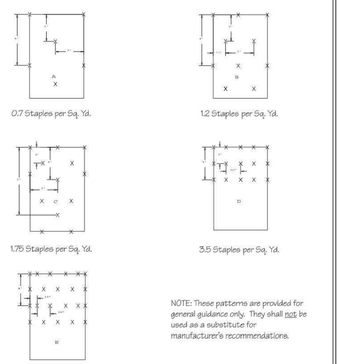
Construction Notes:

1. Prepare soil before installing matting, including application of lime, fertilizer, and seed.
2. Begin at the top of the channel by anchoring the mat in a 6" deep X 6" wide trench. Backfill and compact the trench after stapling.
3. Roll center mat in direction of water flow on bottom of channel.
4. Place mats end over end (shingle style) with a 6" overlap, use a double row of staggered staples 4" apart to secure mats.
5. Full Length edge of mats at top of side slopes must be anchored in 6" deep X 6" wide trench; backfill and compact the trench after stapling.
6. Mats on side slopes must be overlapped 4" over the center mat and stapled.
7. In high flow channel applications, a staple check slot is recommended at 30 to 40 foot intervals. Use a row of staples 4" apart over entire width of the channel. Place a second row 4" below the first row in a staggered pattern.
8. The terminal end of the mats must be anchored in a 6" X 6" wide trench. Backfill and compact the trench after stapling.

Source:	Symbol:	Detail No.
Adapted from North American Green, Inc.	SM-C	**DE-ESC-3.4.6.2** Sheet 2 of 3 Effective January 2026

Standard Detail & Specifications

Stabilization Matting - Channel



0.7 Staples per Sq. Yd. | 1.2 Staples per Sq. Yd. | 1.75 Staples per Sq. Yd. | 3.5 Staples per Sq. Yd. | 3.75 Staples per Sq. Yd.

NOTE: These patterns are provided for general guidance only. They shall not be used as a substitute for manufacturer's recommendations.

Stapling Patterns

Source:	Symbol:	Detail No.
Adapted from North American Green, Inc.	SM-C	**DE-ESC-3.4.6.2** Sheet 3 of 3 Effective January 2026

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302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS — No. 18832 — DELAWARE PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE

EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONSTRUCTION SITE DETAILS AND NOTES

ISSUE BLOCK

MARK	DATE	DESCRIPTION
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3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED

LAYER STATE: C-507

PROJECT NO.: 2022235.00
DATE: 02/17/2026
SCALE: NONE
DRAWN BY: **J.N.K.** PROJ. MGR.: **J.D.R.**

SHEET

C-509

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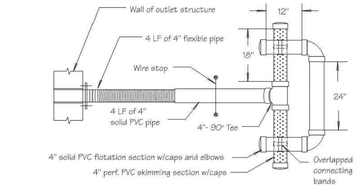
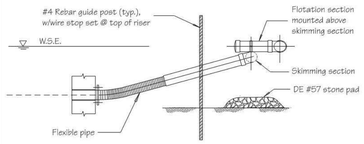
F:\AutoCAD\Projects\2022\2022235\DWG\2022235-DETAILS-EVOC.dwg, Aug 27, 2026 - 4:06pm

Standard Detail & Specifications

Skimmer Dewatering Device



Plan



Profile thru ℄ of Pipe

Source:	Symbol:	Detail No.
Adapted from drawing by Vandemark & Lynch, Inc.	SDD	DE-ESC-3.2.3.1 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Skimmer Dewatering Device

Construction Notes:

1. Pipe flotation section shall be solvent welded to ensure an airtight assembly. Contractor to conduct a test to check for leaks prior to installation.
2. Skimmer section shall have (12) rows of 1/2" dia. holes, 1-1/4" on center. If additional filtration is necessary, the filtering media shall consist of a Type GD-II geotextile fabric wrapped around the perforated portion of the skimmer and attached with plastic snap ties, bands, etc.
3. Flexible pipe shall be inserted into solid pipe and fastened with (2) #8 wood screws.
4. At a minimum, the structure shall be inspected after each rain and repairs made as needed. If vandalism is a problem, more frequent inspection may be necessary.
5. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
6. The structure shall only be removed when the contributing drainage area has been properly stabilized.

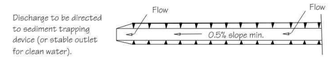
Materials:

1. Solid pipe - 4" Sched. 40 PVC
2. Perforated pipe - 4" Sched. 40 PVC
3. 90° Tee (1 ea.) - 4" Sched. 40 PVC
4. 90° Elbow (2 ea.) - 4" Sched. 40 PVC
5. Cap (4 ea.) - 4" Sched. 40 PVC, solid
6. Flexible pipe - 4" corrugated plastic tubing (non-perforated)

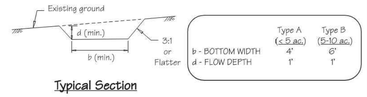
Source:	Symbol:	Detail No.
Delaware ESC Handbook	SDD	DE-ESC-3.2.3.1 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Temporary Swale



Plan



Typical Section

FLOW CHANNEL STABILIZATION CHART

Stabilization Method	Channel Grade	Type A	Type B
1	0.5-3.0%	Seed with stab. blanket	Seed with stab. blanket
2	3.1-5.0%	Seed with stab. blanket	Seed using stab. blanket; sod; DE #2 stone
3	5.1-8.0%	Seed with stab. blanket; sod; DE #2 stone	Lined R-4 riprap
4	8.1-20%	Lined R-4 riprap	Engineering design

a. Stone to be DE #2 inch stone in a layer at least 3 inches in thickness and underlain with GS-I geotextile.
b. Riprap to be R-4 in a layer at least 8 inches thickness and and underlain with GS-I geotextile.

Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	TS- (A/B)(1-4)	DE-ESC-3.3.1 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Temporary Swale

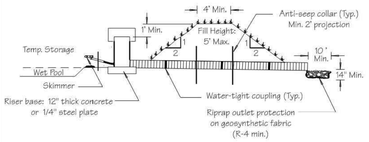
Construction Notes:

1. All temporary swales shall have uninterrupted positive grade to an outlet with a minimum of erosion.
2. Diverted runoff from a disturbed area shall be conveyed to a sediment trapping device.
3. Diverted runoff from an undisturbed area shall outlet directly into an undisturbed stabilized area at a non-erosive velocity.
4. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.
5. The swale shall be excavated or shaped to line, grade, and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fills shall be compacted by earth moving equipment.
7. All earth removed and not needed on construction shall be placed so that it will not interfere with the functioning of the swale.
8. Inspection and required maintenance shall be provided after each rain event.

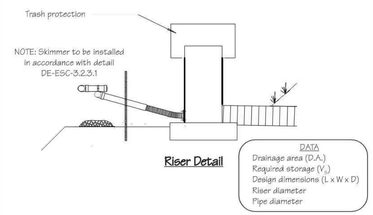
Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	TS- (A/B)(1-4)	DE-ESC-3.3.1 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Pipe Outlet Sediment Trap



Profile thru Pipe Outlet



Riser Detail

DATA
Drainage area (D.A.)
Required storage (V_s)
Design dimensions (L x W x D)
Riser diameter
Pipe diameter

Source:	Symbol:	Detail No.
DE ESC Handbook	PST	DE-ESC-3.1.3.1 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Pipe Outlet Sediment Trap

Construction Notes

1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material, or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
4. All pipe connections shall be watertight.
5. Fill material around the pipe spillway shall be hand compacted in four (4) inch layers. A minimum of two (2) feet of hand-compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment.
6. The riser shall be anchored with either a concrete base or steel plate base to prevent flotation. Concrete bases shall be 12 inches thick with the riser embedded nine (9) inches. Steel plate bases will be 1/4 inch minimum thickness attached to the riser by a continuous weld around the bottom to form a watertight connection. The plate shall have 2.5 feet of stone, gravel or tamped earth placed on it.
7. Volume of temporary storage shall be 3,600 cubic feet per acre of drainage area. Wet pool storage should be provided whenever practicable, but shall not be used to fulfill the temporary storage volume requirement.
8. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
9. The structure shall be inspected after each rain and repairs made as needed.
10. **A skimmer dewatering device shall be considered an integral part of the trap. Any additional dewatering operations for the wet pool shall be conducted in accordance with any and all regulatory requirements.**
11. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized. Disturbed areas shall be stabilized in accordance with the Standards and Specifications for Vegetative Stabilization contained in this Handbook.
12. The structure shall be removed and area stabilized when the drainage area has been properly stabilized.

MAXIMUM DRAINAGE AREA: 5 ACRES

Source:	Symbol:	Detail No.
DE ESC Handbook	PST	DE-ESC-3.1.3.1 Sheet 2 of 2 Effective January 2026

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302.734.7950

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100 Discovery Boulevard, Suite 102
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1	05/08/26	AGENCY COMMENTS ADDRESSED

LAYER STATE: C-507

PROJECT NO.: 2022235.00
DATE: 02/17/2026
SCALE: NONE
DRAWN BY: **J.N.K.** PROJ. MGR.: **J.D.R.**

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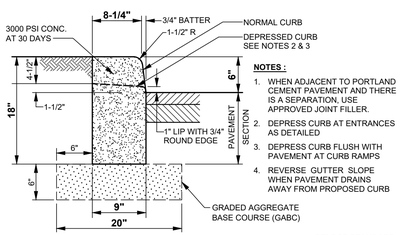


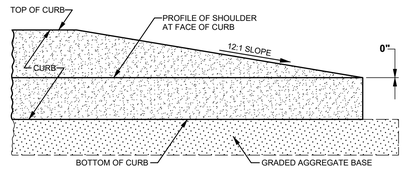
NOTES :

1. WHEN ADJACENT TO PORTLAND CEMENT PAVEMENT AND THERE IS A SEPARATION, USE APPROVED JOINT FILLER.
2. DEPRESS CURB AT ENTRANCES AS DETAILED
3. DEPRESS CURB FLUSH WITH PAVEMENT AT CURB RAMPS
4. REVERSE GUTTER SLOPE WHEN PAVEMENT DRAINS AWAY FROM PROPOSED CURB

P.C.C. CURB - TYPE 1 - 6

DELDOT STANDARD NO.: C-1 (2017)

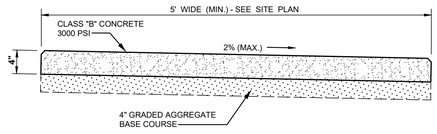
NO SCALE — SHOWN FOR REFERENCE ONLY - SEE DELDOT STANDARDS — BMG NO. : SW-01I-A



CURB TAPER DETAIL

DELDOT ACCESS MANUAL - PAGE 4-3

NO SCALE — BMG NO. : SW-1C

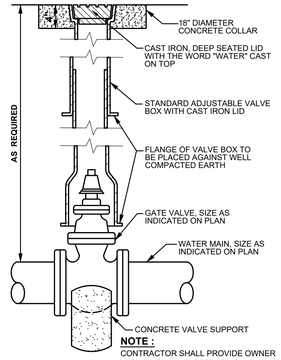


NOTES:

1. MARK IN 5' SQUARES, USE PREMOLDED EXPANSION JOINTS AT INTERVALS NOT GREATER THAN 20'
2. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED AS PER SPECIFICATIONS.

CONCRETE SIDEWALK

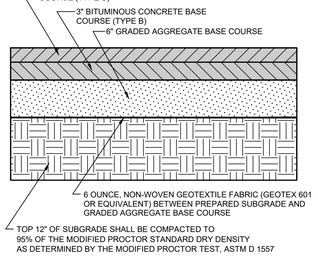
NO SCALE — BMG NO. : SW-3C



NOTE :
CONTRACTOR SHALL PROVIDE OWNER WITH TWO VALVE OPERATING WRENCHES

GATE VALVE DETAIL

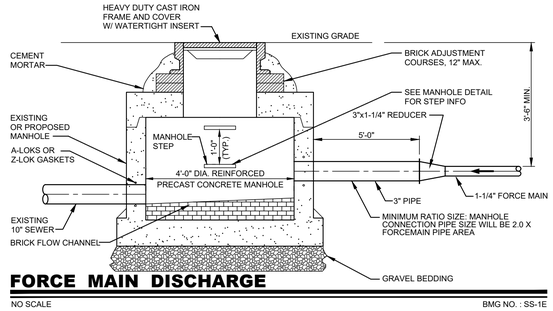
NO SCALE — BMG NO.: W-03A



PAVEMENT SECTION FOR :
PASSENGER CARS - LIGHT DUTY

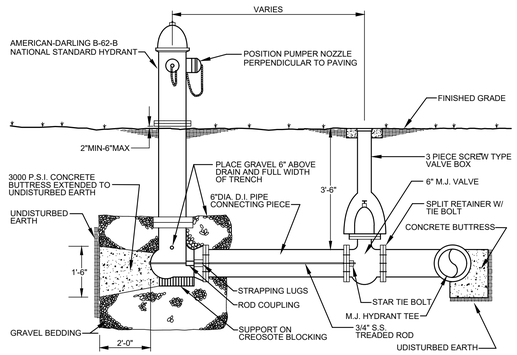
PAVEMENT SECTION DETAIL

NO SCALE



FORCE MAIN DISCHARGE

NO SCALE — BMG NO. : SS-1E



FIRE HYDRANT DETAIL

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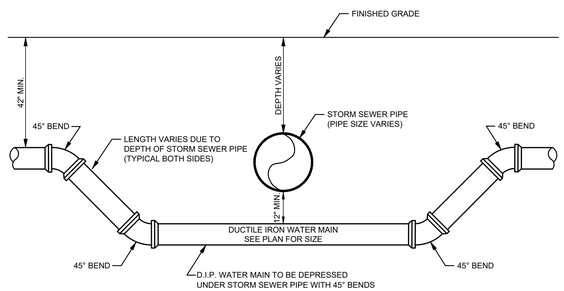
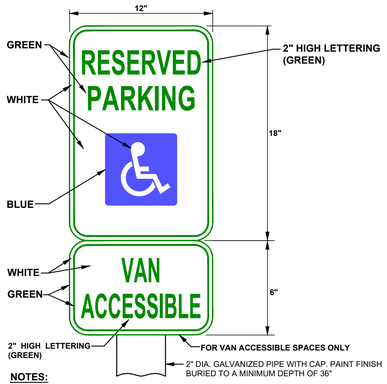


WATER MAIN / STORM SEWER CROSSING DETAIL

NO SCALE — BMG NO. : W-12

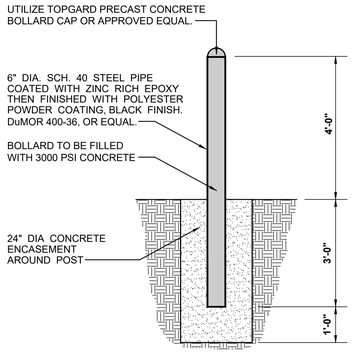


NOTES:

1. THE BOTTOM EDGE OF SIGN SHALL BE A MINIMUM OF 5.0' AND A MAXIMUM OF 7.0' ABOVE FINISHED GRADE. CONTRACTOR SHALL INSTALL ONE SIGN PER ACCESSIBLE PARKING SPACE. SIGNS ARE TO BE CENTERED ON STALL WIDTH, FACING PARKING.
2. THE SIGN BE INACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS AS DEFINED BY THE CURRENT AMERICANS WITH DISABILITIES ACT (ADA) REGULATIONS.

ACCESSIBLE PARKING SIGN DETAIL

NO SCALE — BMG NO.: SW-4CB-VAN



PIPE BOLLARD DETAIL

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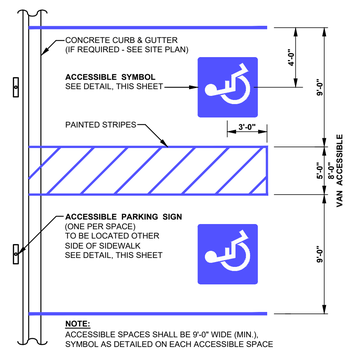
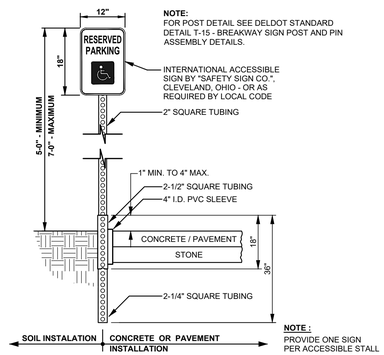


NOTE:
ACCESSIBLE SPACES SHALL BE 9'-0" WIDE (MIN.). SYMBOL AS DETAILED ON EACH ACCESSIBLE SPACE

ACCESSIBLE PARKING SPACE PLAN

NO SCALE — BMG NO. : SW-4B1



NOTE:
FOR POST DETAIL SEE DELDOT STANDARD DETAIL T-15 - BREAKWAY SIGN POST AND PIN ASSEMBLY DETAILS.

NOTE :
PROVIDE ONE SIGN PER ACCESSIBLE STALL

ACCESSIBLE PARKING SIGN & POLE

NO SCALE — BMG NO. : SW-4D

NOTE:

1. PROVIDE PREFORMED THERMOPLASTIC (90 MIL) ACCESSIBLE SYMBOL COLOR: WHITE SYMBOL ON BLUE BACKGROUND. SIZE: 48" X 48".

ACCESSIBLE THERMO SYMBOL

NO SCALE — BMG NO. : SW-4E-2

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08/27/2026

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2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C901

PROJECT NO.: 2022235.00
DATE: 12/22/2025
SCALE: NONE
DRAWN BY: **J.N.K.** | PROJ. MGR.: **J.D.R.**

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C-901

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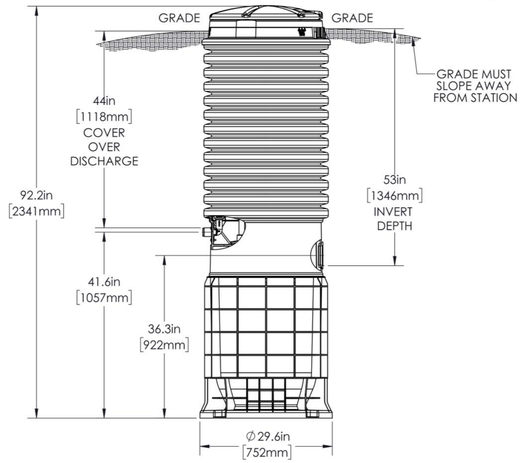
DH071-93



NOTE: DIMENSIONS ARE FOR REF ONLY

CONCRETE BALLAST NOT REQUIRED

DISCHARGE: 1-1/4in FEMALE PIPE THREAD

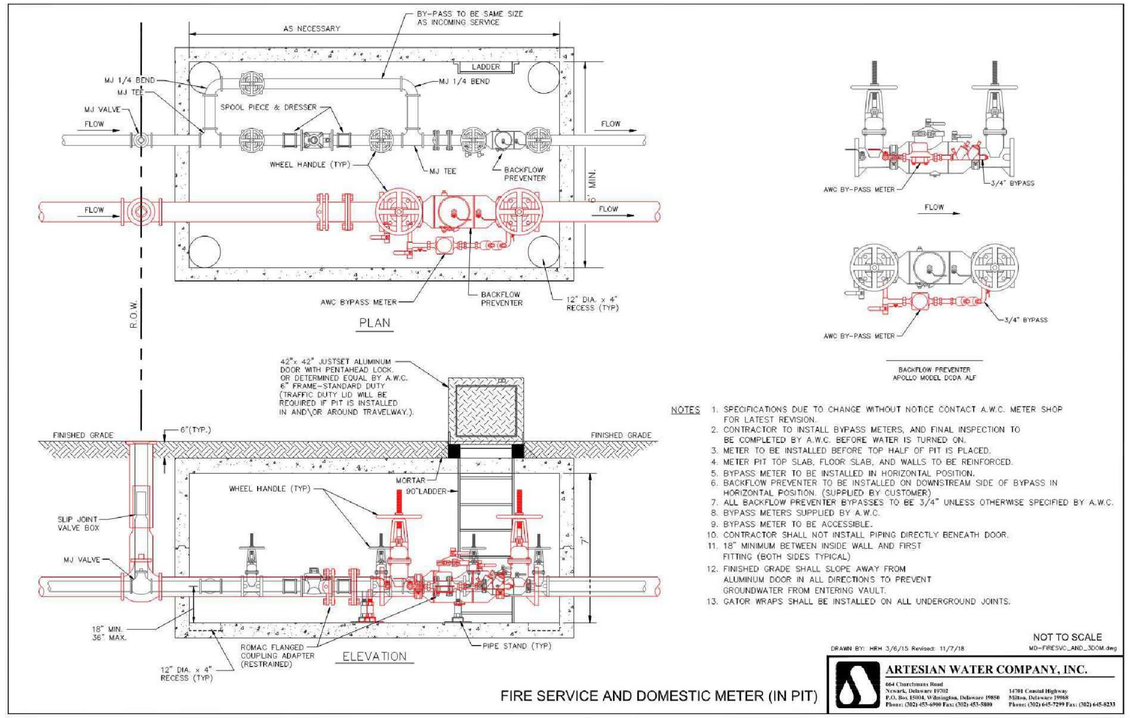
INLET: EPDM GROMMET FOR 4in DWV PIPE (STANDARD)

BK	JG	10/13/2023	D	1:16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH071-93
CUT SHEET

NA0050P06



NOT TO SCALE
DRAWN BY: HRH 3/6/15 Revised: 11/7/18 WG-FIRESVC_AND_3004.dwg

ARTESIAN WATER COMPANY, INC.
664 Churchmans Road, Newark, Delaware 19702, P.O. Box 15004, Wilmington, Delaware 19850, Phone: (302) 453-6900 Fax: (302) 453-5889
14701 Coastal Highway, Millton, Delaware 19968, Phone: (302) 645-7299 Fax: (302) 645-8233

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Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS LICENSE No. 18832 DELAWARE PROFESSIONAL ENGINEER
08/27/2026

PROJECT TITLE
DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE
CONSTRUCTION DETAILS

ISSUE BLOCK

4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

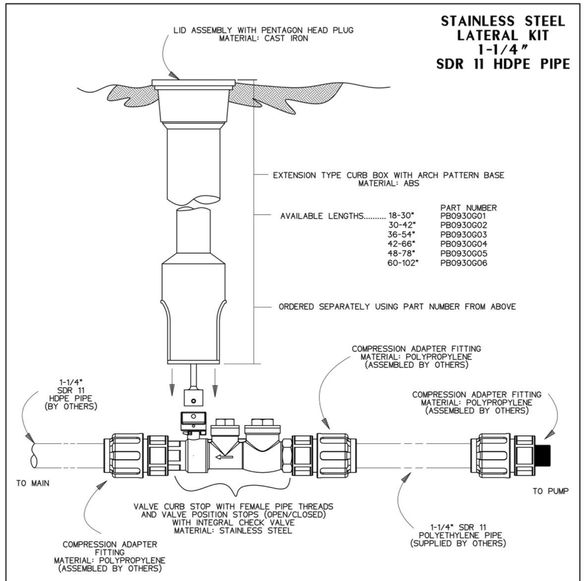
LAYER STATE: C901

PROJECT NO.: 2022235.00
DATE: 12/22/2025
SCALE: NONE
DRAWN BY: J.N.K. PROJ. MGR.: J.D.R.

SHEET
C-902

COPYRIGHT 2023

STAINLESS STEEL LATERAL KIT 1-1/4" SDR 11 HDPE PIPE



KIT PARTS ARE NOT ASSEMBLED

NOTES:

1. SS CURB STOP/CHECK VALVE AND FITTINGS ARE PROVIDED SEPARATELY, TO BE ASSEMBLED BY OTHERS
2. TO ASSEMBLE, APPLY A DOUBLE LAYER OF TEFLON TAPE, AND A LAYER OF PIPE DOPE (SUPPLIED BY OTHERS) TO THE THREADS ON THE PLASTIC FITTINGS AND INSTALL PER THE MANUFACTURER'S INSTRUCTIONS
3. ASSEMBLY IS TO BE PRESSURE TESTED (BY OTHERS)
4. ASSEMBLY IS TO BE USED WITH SDR11 HDPE PIPE
5. TO ORDER SS LATERAL KIT, USE PART NUMBER NC0193G01
6. CURB BOX IS TO BE ORDERED SEPARATELY, SEE ABOVE

SGS	DN	11/02/11	A	3/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

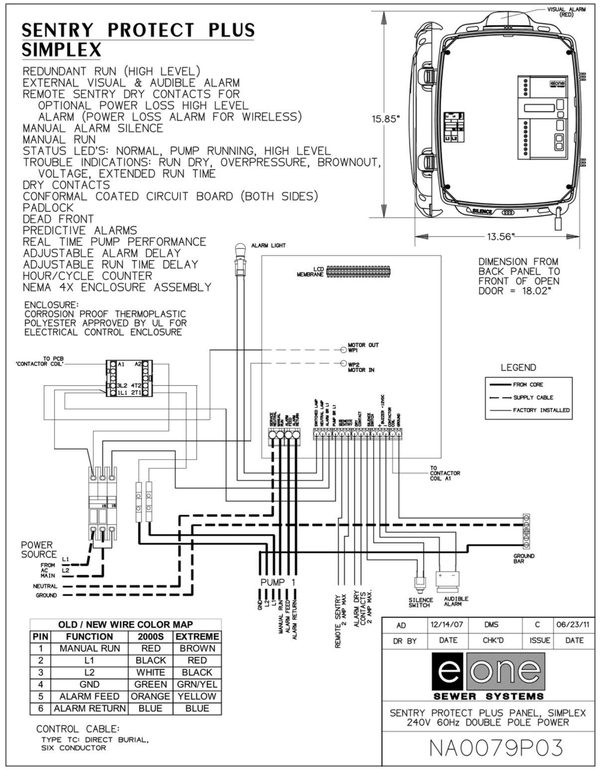
STAINLESS STEEL LATERAL KIT
1-1/4" SDR 11 HDPE PIPE

NA0330P02

SENTRY PROTECT PLUS SIMPLEX

REDUNDANT RUN (HIGH LEVEL)
EXTERNAL VISUAL & AUDIBLE ALARM
REMOTE SENTRY DRY CONTACTS FOR
OPTIONAL POWER LOSS HIGH LEVEL
ALARM (POWER LOSS ALARM FOR WIRELESS)
MANUAL ALARM SILENCE
MANUAL RUN
STATUS LED'S: NORMAL, PUMP RUNNING, HIGH LEVEL
TROUBLE INDICATIONS: RUN DRY, OVERPRESSURE, BROWNOUT, VOLTAGE, EXTENDED RUN TIME
DRY CONTACTS
CONFORMAL COATED CIRCUIT BOARD (BOTH SIDES)
PADLOCK
DEAD FRONT
PREDICTIVE ALARMS
REAL TIME PUMP PERFORMANCE
ADJUSTABLE ALARM DELAY
ADJUSTABLE RUN TIME DELAY
HOUR/CYCLE COUNTER
NEMA 4X ENCLOSURE ASSEMBLY

ENCLOSURE:
CORROSION PROOF THERMOPLASTIC POLYESTER APPROVED BY UL FOR ELECTRICAL CONTROL ENCLOSURE



OLD / NEW WIRE COLOR MAP			
PIN	FUNCTION	2000S	EXTREME
1	MANUAL RUN	RED	BROWN
2	L1	BLACK	RED
3	L2	WHITE	BLACK
4	GND	GREEN	GRN/YEL
5	ALARM FEED	ORANGE	YELLOW
6	ALARM RETURN	BLUE	BLUE

CONTROL CABLE:
TYPE TC: DIRECT BURIAL, SIX CONDUCTOR

AD	12/14/07	DMS	C	06/23/11
DR BY	DATE	CHK'D	ISSUE	DATE

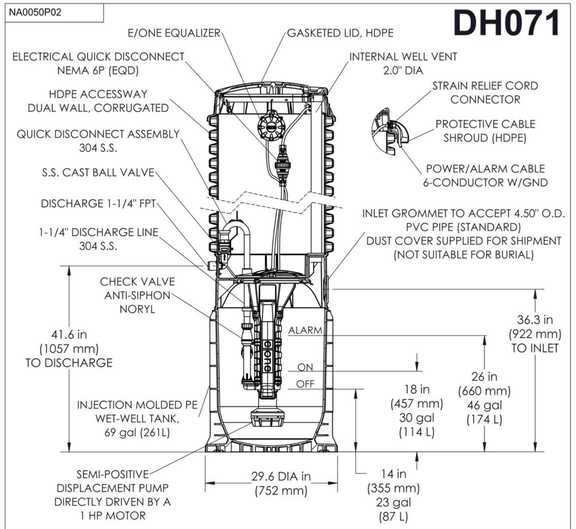
e/one SEWER SYSTEMS

SENTRY PROTECT PLUS PANEL, SIMPLEX
240V 60Hz DOUBLE POLE POWER

NA0079P03

NA0050P02

DH071



CONCRETE BALLAST NOT REQUIRED

NOTE: DIMENSIONS ARE FOR REF ONLY

FIELD JOINT REQUIRED FOR MODELS DH071-129 / DH071-160

JVL	SGS	7/14/2023	F	1:16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH071
DETAIL SHEET

NA0050P02

F:\AutoCAD\Projects\2022\2022235\DWG\2022235-DETAILS-EVOC.dwg, Aug 27, 2026 - 4:07pm

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

SHANTÉ A. HASTINGS
SECRETARY

June 23, 2026

Mr. Jonathan Richard
Becker Morgan Group, Inc.
309 S Governors Ave
Dover, Delaware 19904

SUBJECT: **Entrance Plan Approval Letter**
Delaware State Police Troop 4 Complex
Tax Parcel #133-7.00-8.00
PATRIOTS WAY (SCR 318)
Dagsboro Hundred, Indian River Hundred, Sussex County

Dear Mr. Richard:

The Department of Transportation has reviewed the Commercial Entrance Plans dated January 17, 2024 (signed and stamped June 15, 2026) for the referenced project and determined that they are in general conformance with the Department's current regulations, specifications and standard details. By signing and sealing the plan set, the developer's engineer is responsible for accuracy of content. Any errors, omissions or required field changes will be the responsibility of the developer. This plan approval shall be valid a period of **three (3) years from the original approval date of September 10. 2024**. If an entrance permit has not been obtained within three years, then the plans must be updated to meet current requirements and resubmitted for review and approval.

This letter does not authorize the commencement of entrance construction. The following items will be required prior to the permit being issued. A pre-construction meeting may be required as determined by the South District Public Works office.

1. A copy of the recorded Plan which is consistent with the DelDOT "No Objection to Recordation" stamped plan and all appropriate signatures, seals, plot book and page number.
2. Three (3) copies of the approved entrance plans.
3. Completed permit application.
4. Executed agreements (i.e. construction, signal, letter).
5. An itemized construction cost estimate.

DelDOT

6. A 150% security based upon an approved itemized construction cost estimate and W-9 form (if providing escrow).
7. A letter of source of materials, work schedule, list of subcontractors, emergency telephone numbers and names of contact persons.

Please contact the South District Public Works office (302) 853-1340 concerning any questions you may have relative to the aforementioned required items.

Sincerely,

Brian Urbanek
Sussex County Review Coordinator,
Development Coordination

cc: Patrick McKenna, State of Delaware (OMB)
Jamie Whitehouse, Sussex County Planning & Zoning
Sussex County Planning & Zoning
Jessica L. Watson, Sussex Conservation District
Matt Schlitter, South District Public Works Engineer
Travis Schirmer, South District Public Works Supervisor
James Argo, South District Project Reviewer
James Smith, South District Entrance Permit
Jerry Nagyiski, Work Zone Operations Program Manager
Curtis Davis, Temporary Traffic Control Program Manager
Robert Cubbage, Safety Officer South District
Jennifer Pinkerton, Chief Materials & Research Engineer
Linda Osiecki, Pedestrian Coordinator
John Fiori, Bicycle Coordinator
Sean Humphrey, Traffic Development Coordination Engineer
Tim Phillips, Maintenance Support Manager
Jared Kauffman, DTC Planner
Amy Fitzgerald, JMT
Wendy L. Polasko, P.E., Assistant Director
Kevin Hickman, Sussex County Reviewer

DELAWARE DEPARTMENT OF
NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL

285 Beiser Blvd
Dover, DE 19904
302-608-5458
dnrec.delaware.gov

August 13, 2026

Robbie Mullin
State of Delaware OMB/DFM
robbie.mullin@delaware.gov

RE: Plan Approval
DNREC Project: 2025-116 - DSP - Troop 4 Emergency Vehicle Operation Course (E.V.O.C)
Project NOI: 7360

Dear Robbie Mullin:

The Sediment and Stormwater Management Plan for the DSP - Troop 4 Emergency Vehicle Operation Course (E.V.O.C) project, as submitted by your authorized agent, Jonathan Richard P.E., of Becker Morgan Group, Inc., has been reviewed and evaluated regarding the Sediment and Stormwater Management requirements of this Division and is approved with conditions (see attached). This plan approval pertains to compliance with the Delaware Sediment and Stormwater Regulations, effective February 11, 2019.

Please understand that the approval of this plan does not relieve you from complying with any and all federal, state, county, or municipal laws and regulations. **Approval of a Sediment and Stormwater Plan does not grant or imply a right to discharge stormwater runoff. The owner/developer is responsible for acquiring any and all agreements, easements, etc., necessary to comply with State drainage and other applicable laws.** A digitally stamped copy of the approved plan is available for download from the following link: Approval Documents

The digitally stamped plan is password protected from making any changes but can be printed and is considered equivalent to a stamped hard copy for regulatory purposes under the Delaware Sediment and Stormwater Regulations.

We provide technical assistance, environmental education, and training to those we regulate. If we may be of any assistance to you, regarding the sediment and stormwater specifications of this project, please contact us at the address and number listed above.

Sincerely,

Brendan Diener

Brendan Diener
Engineer V

cc: Cody Robinson, Program Manager II(Acting), Sediment and Stormwater Program
Jonathan Richard P.E., Becker Morgan Group, Inc.

DELAWARE DEPARTMENT OF
NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL

285 Beiser Blvd
Dover, DE 19904
302-608-5458
dnrec.delaware.gov

CONDITIONS OF APPROVAL

NOTIFICATION

1. Notify the DNREC Sediment and Stormwater Management Program of your intent to begin construction in writing five (5) days prior to commencing. Failure to do so constitutes a violation of the approved plan.

2. A pre-construction meeting must take place before any land disturbing activity begins. The meeting may take place on site and be attended by the owner, contractor, design consultant, responsible personnel, Third Party Certified Construction Reviewer (CCR) and DNREC Sediment and Stormwater Program Construction Reviewer. To schedule the preconstruction meeting, the following items must be submitted to DNREC.Stormwater@delaware.gov or mailed to 285 Beiser Boulevard, Suite 102, Dover, DE 19904.

- Written notification of intent to begin construction.
- A completed Third Party CCR Application form. This application must be filled out completely including the required signatures.
- A completed Project Contact Information Form.
- One (1) printed copy of the full-sized digitally stamped plan set. This plan is for the DNREC construction reviewer's use in the field.

PLANS AND PERMIT COVERAGE

3. This approved plan will remain valid for five (5) years from the date of the original approval unless specifically extended or renewed by DNREC Sediment and Stormwater Program.

4. Submittal of the Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity Under a NPDES General Permit together with this approval of the detailed Sediment and Stormwater Plan provides this project with Federal permit coverage to be authorized to discharge stormwater associated with construction activities. It is the owner's responsibility to ensure that permit coverage remains valid throughout construction by submitting the NOI fee annually as requested.

5. The owner is responsible for ensuring printed copies of the approved plan are distributed to the contractor, Third Party CCR and other individuals as appropriate.

6. This project is to be undertaken in accordance with the plans submitted and as approved. If changes are necessary at any time during the completion of the project, submit revised plans, prior to further construction, to the DNREC Sediment and Stormwater Program for review and approval of the revision.

DELAWARE DEPARTMENT OF
NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL

285 Beiser Blvd
Dover, DE 19904
302-608-5458
dnrec.delaware.gov

7. Should ownership change during the construction period, a revised plan must be submitted for approval showing the new owner's signature on the owner's certification. In addition, the original owner must file a Notice of Termination (NOT) and the new owner must file a new Notice of Intent (NOI) to continue Federal permit coverage to be authorized to discharge stormwater associated with construction activities.

CONSTRUCTION AND CLOSEOUT

8. Effective February 11, 2019, all State and Federal projects require construction review services by an approved Third Party CCR throughout construction. CCR reports shall be submitted weekly.

9. Keep available on-site, during all phases of construction, a copy of the approved Sediment and Stormwater Management Plan.

10. Any sediment transported off-site to roads or road rights-of-way including ditches shall be removed. Any damage to ditches shall be repaired and stabilized to original condition.

11. Grading shall not impair surface drainage, create an erosion hazard, or create a source of sediment to any adjacent watercourse or property owner.

12. Failure to implement the permanent stormwater management practices as mentioned herein constitutes a violation of the conditions of this plan approval; it may result in the suspension or revocation of building permits or grading permits issued by the local jurisdiction; and it may result in legal action by the DNREC to bring the site into compliance with the approved Sediment and Stormwater Management Plan and the *Delaware Sediment and Stormwater Regulations*.

13. The permanent stormwater management facility or facilities must be constructed and accepted by DNREC Sediment and Stormwater Program prior to final closeout of the project site. Post construction verification documentation of the stormwater management facility or facilities must be completed as soon as construction of the facility or facilities is complete so that any necessary modifications may be made during the construction period.

OFFICE OF THE STATE FIRE MARSHAL
Technical Services

22705 Park Avenue
Georgetown, DE 19947

SFMO PERMIT – SHALL BE POSTED ON JOBSITE UNTIL FINAL INSPECTION

Plan Review Number: 2024-04-216239-MJS-01
Status: Approved as Submitted

Tax Parcel Number: 133-7.00-8.00
Date: 02/09/2024

Project

Delaware State Troop 4 Complex

Stockley Center Property - Georgetown

Patriots Way
Georgetown DE 19947

Scope of Project

Number of Stories:
Square Footage:
Construction Class:
Fire District: 83 - Millsboro Fire Co Inc

Occupant Load Inside:
Occupancy Code:

Applicant

Jonathan D Richard
309 South Governors Avenue
Dover, DE 19904

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:

Desiree McCall
Fire Protection Specialist II

FIRE PROTECTION PLAN REVIEW COMMENTS

Plan Review Number: 2024-04-216239-MJS-01
Tax Parcel Number: 133-7.00-8.00
Status: Approved as Submitted
Date: 02/09/2024

PROJECT COMMENTS

1002 A	**This project has been reviewed under the provisions of the Delaware State Fire Prevention Regulations (DSFPR) ADOPTED September 1, 2021. The 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. The Office of the State Fire Marshal recommends theinstallation of fire sprinkler systems in all residential occupancies, including one- and two-family dwellings, duplexes, and townhomes. For additional information on residential sprinkler systems, please see here:https://statefiremarshal.delaware.gov /wp-content/uploads/sites /110/2017/07/Home_Sprinkler_Brochure.pdf**
1004	**Plans are approved as submitted. Please email a PDF of the approved version to:** desiree.mccall@delaware.gov
1040 A	**This site meets Water Flow Table 2, therefore the following water for fire protection requirements apply: Main Sizes: 6" minimum. Minimum Capacity: 1,000 gpm @ 20 psi residual for 1 hour duration. Hydrant Spacing: 800' on center.**
1050 A	**This site meets Water Flow Table 2, therefore the following water for fire protection requirements apply: Main Sizes: 6" minimum. Minimum Capacity: 1,500 gpm @ 20 psi residual for 2 hours duration. Hydrant Spacing: 800' on center.**
1000 A	**The site plans have been approved as submitted. The Office of State Fire Marshal has no objection to recordation. The Office of the State Fire Marshal recommends the installation of fire sprinkler systems in all residential occupancies, includingone- and two-family dwellings, duplexes, and townhomes. For additional information on residential sprinkler systems, please see here: https://statefiremarshal.delaware.gov/ wp-content/uploads/sites /110/2017/07/Home_Sprinkler_Brochure.pdf**
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.
1190 A	**Separate plan submittal is required for the building(s) proposed for this project.**
1130 A	**Provide a water flow test on the subdivision hydrant(s) once they have been installed, and before they are placed into service (DSFPR Reg 701, Chap 4 and Reg 703, Chapter 3). Results are to be forwarded to this Agency for review.**
1132 A	**Fire hydrants shall be color coded in accordance with the DSFPR, Reg 703, Chap 3. This includes both color coding the bonnet and 2" reflective tape around the barrel under the top flange.**
1232 A	**All threads provided for fire department connections, to sprinkler systems, standpipes, yard hydrants or any other fire hose connections shall be uniform to those used by the fire department in whose district they are located.DSFPR Reg 703, Chap 1**
1332 A	**The distance between a fire hydrant and the nearest edge of the street shall not be greater than ten feet (10') unless an alternate distance is approved by the State Fire Marshal. DSFPR Reg 705, Chap 6, Section 2.6**
1432 A	**The steamer connection of all fire hydrants shall be so positioned so as to be facing the street or fire lane. (DSFPR Regulation 705, Chapter 5, Section 10). The center of all hose outlet(s) on fire hydrants shall be not less than 18 inches above finalgrade (NFPA 24)**
1299 A	**The required Fire Lane Access and Perimeter Access and all fire lane markings shall be in accordance with the site plan as approved by this Agency. This will be field verified at the final inspection. Noncompliance may cause a delay in approval forCertificate of Occupancy.**
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 orrevisions to the plans occur, plans are required to be submitted, reviewed, and approved.**

DNREC Division of Watershed Stewardship
285 Beiser Boulevard, Suite 102
Dover, DE 19904
(302) 739-9921

APPLICATION FOR

SEDIMENT AND STORMWATER MANAGEMENT PLAN APPROVAL

PROJECT NAME: Delaware State Police - Troop 4 Emergency Vehicle Operation Course (E.V.O.C)

PROJECT DESCRIPTION: Emergency Vehicle Operation Course

PROJECT ADDRESS: Patriots Way (STREET) Georgetown DE (CITY) 19947 (ZIP)

PROJECT LOCATION: Sussex County (COUNTY) 133-7.00-8.00 (TAX PARCEL #)

PROJECT LIMIT OF DISTURBANCE (LOD) AREA IN ACRES: 12.0 Acres
EXPRESSED TO THE NEAREST TENTH OF AN ACRE (I.E. 4.2 ACRES)

OWNER/DEVELOPER NAME: State of Delaware - Robbie Mullin

OWNER/DEVELOPER ADDRESS: PO Box 778 (STREET) Dover Delaware (CITY) 19903 (ZIP)

OWNER/DEVELOPER CONTACT INFO: 302-739-5644 (PHONE) robbie.mullin@delaware.gov (EMAIL)

CONSULTANT/ENGINEER NAME: Becker Morgan Group Inc.

CONTACT PERSON/PROJECT ENGINEER: Jonathan D. Richard, P.E.

CONSULTANT/ENGINEER ADDRESS: 309 South Governors Avenue (STREET) Dover Delaware (CITY) 19904 (ZIP)

CONSULTANT/ENGINEER CONTACT INFO: 302-734-7950 (PHONE) jrichard@beckermorgan.com (EMAIL)

FEES

THE REVIEW FEE IS $80 PER DISTURBED ACRE TO THE NEAREST 0.1 ACRE WITH A MINIMUM FEE OF $80 FOR ANY DETAILED PLAN APPROVALS DISTURBING LESS THAN 1.0 ACRE. MAKE CHECKS PAYABLE TO DIVISION OF WATERSHED STEWARDSHIP.

Submittal/ Approval Information (*For Office Use Only*)

- [X] **Step 1: Stormwater Assessment Study (SAS)/ Stormwater Assessment Report (SAR)** — BRD (reviewer's initials)
- [X] **Step 2: Preliminary Sediment & Stormwater Management Plan Review Checklist** — BRD (reviewer's initials)
- [X] **Step 3: Sediment & Stormwater Management Plan Review Checklist** — BRD (reviewer's initials)
- [ ] **Step 2/3: Combined Sediment & Stormwater Management Plan Review Checklist** — (reviewer's initials)
- [X] **Sediment and Stormwater Management Plans (Approval Set)** — BRD (reviewer's initials)
- [X] **NPDES Notice of Intent (NOI) Application (#** 7360 **)**

Tracking #: 2025-116 **Fee Paid: $** 1060.00 (Amount) 3693 (Check #)

Approved By: [signature] **Approval Date:** 08/13/2026

Title: Engineer V **Expiration Date:** 08/13/2031

OWNER/DEVELOPER CERTIFICATION

"I/We certify that the information on this form and the attached plans is true and accurate to the best of my/our knowledge."

"I/We understand that DNREC may request information in addition to that set forth herein as may be deemed appropriate in considering this application."

"I/We will abide by the condition of this approval as issued."

"I/We certify that all land clearing, construction and development shall be done pursuant to the approved attached plans and that responsible personnel (i.e. Blue Card Holder) involved in the land disturbance will have a Certification of Training prior to initiation of the project, at a DNREC sponsored or approved training course for the control of erosion and sediment during construction. In addition, I/We grant the DNREC Sediment and Stormwater Program and/or relevant Delegated Agency the right to conduct on-site reviews, and I/We understand my/our responsibilities under the NPDES Construction General Permit, associated with this site."

Owner/Developer Signature — Date: 12/17/25

Robbie Mullin

Owner/Developer Name and Title (Printed or Typed)

DESIGNER CERTIFICATION

"I hereby certify that this plan has been prepared under my supervision and to the best of my knowledge complies with the applicable state and local regulations and ordinances."

Designer Signature — Date: 12/17/2025 — Delaware Reg. No. (if Applicable): 18832

Jonathan D. Richard, Senior Associate — Type (P.E., P.L.S., or R.L.A.): P.E.

Designer Name and Title (Printed or Typed)

AGENT AUTHORIZATION*

(*If this authorization form is completed with the application, all future correspondence may be signed by the duly authorized agent.)

I,_____ hereby designate and authorize the following identified agent to act on my behalf in the processing of this application and to furnish any information that is requested.

AGENT NAME:_____

AGENT ADDRESS:_____
STREET CITY ZIP

AGENT CONTACT INFO:_____
PHONE EMAIL

_____ _____
Owner/Developer Signature Date Agent Signature Date

STORMWATER MANAGEMENT REPORT

FOR

DELAWARE STATE POLICE TROOP 4 EVOC

Sussex County, Delaware

December 2025
Revised May 2026
Revised June 2026
Revised June 2026
Revised July 2026
Revised August 2026

BECKER MORGAN GROUP

JONATHAN D. RICHARD LICENSE No. 18832 DELAWARE PROFESSIONAL ENGINEER

08/07/2026

State of Delaware DNREC
Sediment and Stormwater Management Plan

No.: 2025-116

By: _____

Title: Engineer V

Approval Date: 08/13/2026

Expiration Date: 08/13/2031

Prepared by:

Becker Morgan Group, Inc.
309 S. Governors Avenue
Dover, DE 19904

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1.0 INTRODUCTION

This report has been prepared to address stormwater management and drainage considerations in coordination with the Delaware Sediment and Stormwater Regulations (DSSR) and for the subject site known as Delaware State Police Troop 4 Emergency Vehicles Operations Course (EVOC). Troop 4 EVOC is part of a greater State-owned complex known as the Stockley Center. Along Patriots way in Sussex County. Troop 4 Complex is located along Patriots way South of Avenue of Honor. This report demonstrates compliance with the Delaware Sediment and Stormwater Regulations (DSSR) as it relates to stormwater management. ***For the purposes of this report, this report will update the previous Troop 4 Stormwater Management Report in part specifically with respect to the infiltration basins and achieving compliance with the DSSR. This report is not intended to modify compliance with the DSP Troop 4 Complex with respect to the DSSR. It should be noted that the two (2) infiltration practices were designed to accept E.V.O.C. that was proposed directly adjacent to the ponds. The E.V.O.C. was relocated. This report will specifically update changes to Drainage Area 3, the effects on the ponds and DSSR compliance.***

2.0 EXISTING CONDITIONS

Existing Land and Drainage Characteristics

The subject site is a comprises 828.73 acres +/- and is owned by the State of Delaware. A portion of this land (21.53A.C.) is to be dedicated to the Delaware State Police - Troop 4 Emergency Vehicle Operation Course (E.V.O.C.). Currently, the 21.53 acres located on the west side of Patriots Way is used for agricultural purposes. The pre-developed drainage area included in the report entitled "Delaware State Police Troop 4 Complex" prepared by Becker Morgan Group, Inc. last updated December 2025. The drainage area for this farm field in the pre-developed condition drains to a sump within the farm field. It was determined that the sump water surface elevation overtops Patriots Way in the larger storm events. Per the improvements of the DSP-Troop 4 project, storm drain will be installed on the west side of Patriots Way and convey the runoff from the sump to the (2) infiltration basins located on the Troop 4 site. Refer to the approved DSP Troop 4 Complex Stormwater Management report on the pre-developed conditions.

3.0 DEVELOPED CONDITIONS

The proposed site consists of approximately 345,655 sf +/- Emergency Vehicle Operation Course (E.V.O.C), and various other impervious supporting structures and parking areas. The post-developed drainage areas and Analysis points are similar location per the DSP Troop 4 approved report.

The post-developed condition for the EVOC is as described below.

Drainage Area 3 has been broken down into two subareas, Subarea 3A and Subarea 3B.

Subarea 3A contains a portion of the site and consists of grass and impervious areas within the development envelope. The area drains towards a ditch through a combination of overland flow and sub-surface drainage. The runoff from this subarea is conveyed under Patriots Way via a storm drain network to the two (2), infiltration ponds within the Troop 4 site and ultimately discharges to Analysis Point 1.

Subarea 3B contains a portion of the site and consists of grass and impervious areas outside the development envelope. The runoff from this subarea is conveyed under Patriots Way via a storm drain network to the two (2) infiltration ponds within the Troop 4 site and ultimately discharges to Analysis Point 1.

Table 1: Post-Developed Drainage Area Characteristics

	Subarea 1A	Subarea 1B	Subarea 1C	DA- 2	Subarea 3A	Subarea 3B
Acres (+/-)	10.00	11.55	8.89	8.02	***16.58***	***26.08***
CN	53	66	39	58	***66***	***58***
Tc (min).	26.0	21.0	73.9	11.8	***62.1***	***82.2***

4.0 STORMWATER MANAGEMENT METHODOLOGY

Compliance with the Delaware Sediment and Stormwater Regulations (DSSR) has been determined by meeting the applicable requirements for the Resource Protection Event (RPv), Conveyance Event (Cv), and Flooding Event (Fv).

3.1 Resource Protection Event (RPv)

RPv (1-year, 24-hour rainfall event) – compliance with **Section 5.2.1** of the DSSR which states that.

> *"The Resource Protection Event criteria provide runoff management measures to reduce the volume of stormwater runoff generated on a site, recharge groundwater, minimi e impacts to downstream channels from runoff leaving the site and reduce pollutant loads discharged into receiving waters."*

This project is an extension of the previously approved "Delaware State Police Troop 4 Complex". The previous project memorialized an RPv credit of ***91,347 c.f***. from the two infiltration facilities on the site. The attached DURMM calculations show that this EVOC development proposes a shortfall of ***41,044 c.f.*** Below is a table which summarizes the RPv results for this proposed development.

Table 2: RPv Treatment Summary

Stormwater Management Facility	RPv Treatment (cf)
Memorialized RPv Credit from DSP Troop 4 Complex	**86,928**
DURMM Proposed Shortfall	41,044
RPv Credit	45,884

As Table 6 demonstrates, the RPv requirement is met in accordance with the current DSSR. The two (2) stormwater management practices with memorialized RPv Credit from the DSP Troop4 Complex have treated a greater volume than was required by the DURMM v2.51 spreadsheet and therefore resulted in an RPv credit of ***45,884 c.f.***

Conveyance Event (Cv)

Compliance for the Cv (10-year, 24-hour rainfall) event are met due to the disturbed area and dedicated lands for Troop 4 lying entirely within the Drainage basin for Cow Bridge Branch. In accordance with the D.S.S.R 5.3.3.5, which states that "The site LOD comprises 10% or less of the total upstream contributing drainage area at the point of discharge for sites that discharge directly to a natural stream, waterbody, or tax ditch; or". For Drainage Area 1 the LOD area for Drainage Area 1 is (31.52 Ac. + 12.73 Ac. = 44.25 ac) which is less than 10% of the overall drainage area (30.3 Square miles from Appendix G. = 19,392 Acres) which equates to 0.23% (44.25 ac / 19,392 ac +/-). Thus, per section 5.3.3.5 of the D.S.S.R. this project is in compliance. See Appendix C for HydroCAD Report printouts.

Table 3: Pre vs. Post-Developed Analysis Point 1 Characteristics

Analysis Point 1 (Node AP-1)		
Storm	Pre Q (cfs)	Post Q (cfs)
RPv (1-yr)	5.11	***0.33***
Cv (10-yr)	11.62	***0.26***

Compliance for the Cv event for Drainage Area 2 and 3 is in accordance with the D.S.S.R. 5.3.3.1, which states that "The Cv shall be managed using BMP's as set forth in Section 11.00 such that there is no adverse impact by limiting the increase on downstream post-developed water surface elevation to no more than 0.05 feet: or". The development maintains compliance with the D.S.S.R. for Drainage Area 2 by maintaining the peak rates of runoff to within 0.00 cfs of the predeveloped state, as well as no change greater than 0.05' to the flow depth of water surface elevation of the DHSS Stockley Medical Center Pond. See the post developed calculations for the existing DHSS pond. This meets compliance with Section 5.3.3.1 of the 2019 Delaware Sediment and Stormwater Regulations. See Tables 12 - 15, below, as well as Appendix C for HydroCAD Report printouts.

Table 4: Pre vs. Post-Developed As-Built of Pond 1 DHSS Medical Center Peak Runoff Rates (Pond Node 8P)

Analysis Point 2 (Node 8P)		
Storm	Pre Q (cfs)	Post Q (cfs)
RPv (1-yr)	1.23	1.23
Cv (10-yr)	2.62	2.62

Table 5: Pre vs. Post-Developed Pond 2 DHSS Medical Center Peak Runoff Rates (Pond Node 16P)

Analysis Point 2 (Node 16P)		
Storm	Pre Q (cfs)	Post Q (cfs)
RPv (1-yr)	1.57	1.57
Cv (10-yr)	4.62	4.62

Table 6: Pre vs. Post-Developed As-Built of Pond 1 DHSS Medical Center Peak Water Surface Elevations (Pond Node 8P)

Analysis Point 2 (Node 8P)		
Storm	Pre WSEL (ft)	Post WSEL (ft)
RPv (1-yr)	27.14	27.14
Cv (10-yr)	27.44	27.44

*As-built top of bank elevation 30.00'

Table 7: Pre vs. Post-Developed Pond 2 DHSS Medical Center Peak Water Surface Elevations (Pond Node 16P)

Analysis Point 2 (Node 16P)		
Storm	Pre WSEL (ft)	Post WSEL (ft)
RPv (1-yr)	25.98	25.98
Cv (10-yr)	27.10	27.10

*Design top of bank elevation 29.00'

Table 8: Pre vs. Post-Developed Analysis Point 3 Characteristics (Pond Node 3P)

Analysis Point 3		
Storm	Pre Q (cfs)	Post Q (cfs)
RPv (1-yr)	0.00	***2.26***
Cv (10-yr)	0.38	***4.99***

Table 9: Pond 3 Existing Sump WSEL

Design Storm	Pond 3P Pre WSEL(cfs)	Pond 3P Post WSEL(cfs)
RPV (1-yr)	31.34'	***30.57'***
10-yr	31.60'	***30.69'***

*Crown of Patriots Way 31.55'

Flooding Event (Fv)

Compliance for the Fv (100-year, 24 hour rainfall) event are met due to the disturbed area and dedicated lands for Troop 4 lying entirely within the Drainage basin for Cow Bridge Branch. In accordance with the D.S.S.R 5.4.3.5, which states that "The site LOD comprises 10% or less of the total upstream contributing drainage area at the point of discharge for sites that discharge directly to a natural stream, waterbody, or tax ditch; or". For Drainage Area 1 the LOD area for Drainage Area 1 is (31.52 Ac. + 12.73 Ac. = 44.25 ac) which is less than 10% of the overall drainage area (30.3 Square miles from Stream Stats Printout in Appendix G. = 19,392 Acres) which equates to 0.23% (44.25 ac / 19,392 ac +/-). Thus, per section 5.4.3.5 of the D.S.S.R. this project is in compliance. See appendix G for the Streamstats of the overall delineated basin.

Table 10: Pre vs. Post-Developed Analysis Point 1 Characteristics (AP-1)

Analysis Point 1		
Storm	Pre Q (cfs)	Post Q (cfs)
Fv (100-yr)	38.62	***16.61***

Compliance for the Fv event for Drainage Area 2 and 3 is in accordance with the D.S.S.R. 5.4.3.1, which states that "The Fv shall be managed using BMP's as set forth in Section 11.00 such that there is no adverse impact by limiting the increase on downstream post-developed water surface elevation to no more than 0.05 feet: or". The development maintains compliance with the D.S.S.R. for Drainage Area 2 by maintaining the peak rates of runoff to within 0.00 cfs of the predeveloped state, as well as no change greater than 0.05' to the flow depth of water surface elevation of the DHSS Stockley Medical Center Pond. See the post developed calculations for the existing DHSS pond. This meets compliance per Section 5.3.3.1 of the 2019 Delaware Sediment and Stormwater Regulations. See Tables 16 - 19, below, as well as Appendix C for HydroCAD Report printouts.

Table 11: Pre vs. Post-Developed As-Built of Pond 1 DHSS Medical Center Peak Runoff Rates (Pond Node 8P)

Analysis Point 2 (Node 8P)		
Storm	Pre Q (cfs)	Post Q (cfs)
Fv (100-yr)	11.84	5.99

Table 12: Pre vs. Post-Developed Pond 2 DHSS Medical Center Peak Runoff Rates (Pond Node 16P)

Analysis Point 2 (Node 16P)		
Storm	Pre Q (cfs)	Post Q (cfs)
Fv (100-yr)	17.17	17.17

Table 13: Pre vs. Post-Developed As-Built of Pond 1 DHSS Medical Center Peak Water Surface Elevations (Pond Node 8P)

Analysis Point 2 (Node 8P)		
Storm	Pre WSEL (ft)	Post WSEL (ft)
Fv (100-yr)	29.12	28.63

*As-built top of bank elevation 30.00'

Table 14: Pre vs. Post-Developed Pond 2 DHSS Medical Center Peak Water Surface Elevations (Pond Node 16P)

Analysis Point 2 (Node 16P)		
Storm	Pre WSEL (ft)	Post WSEL (ft)
Fv (100-yr)	28.67	***28.67***

*Design top of bank elevation 29.00'

Table 15: Pond 3 Existing Sump WSEL

Design Storm	Pond 3P Pre WSEL(cfs)	Pond 3P Post WSEL(cfs)
100-yr	31.69'	***31.26'***

*Crown of Patriots Way 31.55'

5.0 REGULATOR GUIDANCE MEMORANDUM (RGM-4) COMPLIANCE

As part of DNREC's Sediment and stormwater program's Regulatory Guidance Memorandum (RGM-4) dated November 1st, 2025, and effective as of January 1st, 2026, this project must clearly and accurately state the impact of all discharges exiting and entering the DelDOT right-of-way located along Patriots Way in front of the site. These areas have already been accounted for meeting Delaware Sediment Stormwater Regulations. However these areas are being analyzed strictly to meet the RGM-4 requirements and are independent of the aforementioned calculations. Each of these drainage areas assumes the 6-minute Time of Concentration. We have provided a DURMM Report for these combined areas in Appendix I.

Drainage Area 4, in the pre and post developed conditions is +/- 0.291 acres. This area drains off towards the DHSS medical facility BMP. The runoff is therefore removed from the DelDOT right of way and accounted for below, in Table 16.

Drainage Area 5 in the pre and post developed conditions is +/- 0.165 acres. This area drains off towards the existing catch basin on the North side of the Troop 4 entrance. The runoff is therefore removed from the DelDOT right of way and accounted for below in Table 17.

Drainage Area 6 in the pre condition is +/- 0.893 acres and +/- 0.730 acres in the post condition. This area drains off towards the existing sump on the Southwest side of Patriots Way to be collected by the existing closed drainage system which drains towards the existing BMP's on the Troop 4 site. The runoff is therefore removed from the DelDOT right of way and accounted for below in Table 18.

Drainage Area 7 in the pre and post developed conditions is +/- 0.298 acres. This area drains off towards the existing catch basin on the South Side of the Troop 4 entrance. The runoff is therefore removed from the DelDOT right of way and accounted for below in Table 19.

Drainage Area 8 in the pre condition does not exist and is +/- 0.162 acres in the post condition. This area drains off towards the proposed sites BMP. The runoff is therefore removed from the DelDOT right of way and accounted for below in Table 20.

Table 16: Pre vs. Post-Developed (Link Node AP-4)

Analysis Point 4 (Node AP-4)				
Storm	Pre Q (cfs)	Pre V (ac-ft)	Post Q (cfs)	Post V (ac-ft)
RPv (1-yr)	0.27	0.029	0.27	0.029
Cv (10-yr)	0.72	0.070	0.72	0.070
Fv (100-yr)	1.56	0.155	1.56	0.155

Table 17: Pre vs. Post-Developed (Link Node AP-5)

Analysis Point 5 (Node AP-5)				
Storm	Pre Q (cfs)	Pre V (ac-ft)	Post Q (cfs)	Post V (ac-ft)
RPv (1-yr)	0.16	0.016	0.16	0.016
Cv (10-yr)	0.41	0.040	0.41	0.040
Fv (100-yr)	0.89	0.088	0.89	0.088

Table 18: Pre vs. Post-Developed (Link Node AP-6)

Analysis Point 6 (Node AP-6)				
Storm	Pre Q (cfs)	Pre V (ac-ft)	Post Q (cfs)	Post V (ac-ft)
RPv (1-yr)	0.96	0.101	0.88	0.090
Cv (10-yr)	2.46	0.242	2.15	0.213
Fv (100-yr)	5.09	0.512	4.30	0.437

Table 19: Pre vs. Post-Developed (Link Node AP-7)

Analysis Point 7 (Node AP-7)				
Storm	Pre Q (cfs)	Pre V (ac-ft)	Post Q (cfs)	Post V (ac-ft)
RPv (1-yr)	0.30	0.031	0.30	0.031
Cv (10-yr)	0.77	0.076	0.77	0.076
Fv (100-yr)	1.65	0.164	1.65	0.164

Table 20: Pre vs. Post-Developed (Link Node AP-8)

Analysis Point 8 (Node AP-8)				
Storm	Pre Q (cfs)	Pre V (ac-ft)	Post Q (cfs)	Post V (ac-ft)
RPv (1-yr)	0.00	0.000	0.27	0.029
Cv (10-yr)	0.00	0.000	0.42	0.041
Fv (100-yr)	0.00	0.000	0.90	0.089

6.0 CONSTRUCTION SITE CONDITIONS

Erosion and sediment control (ESC) measures have been designed to capture sediment-laden runoff prior to leaving the site. In accordance with the DSSR and the DNREC Erosion and Sediment Control Handbook, the following erosion and sedimentation control practices are utilized for this project: Silt fence, stabilized construction entrances, temporary sediment basin, culvert inlet protection, rock outlet protection, temporary seeding and mulching, sensitive area protection, and permanent vegetative cover. Pollution prevention practices such as concrete washout stations, concrete mixing operations, and fuel filling stations are also among the quality practices to be used. Construction is proposed to be phased so that disturbed areas are limited to a maximum of 20 acres before being stabilized.

Forebay Calculations

Proposed forebays have been sized for a minimum of 10% of RPv event. See Table 21, below.

Table 21: Forebay Calculations

SWM Area	RPv Runoff Volume (af)	10% of RPv Runoff Volume (cf)	Forebay Volume Provided
A	2.04	8,899	9,645
C	1.55	6,752	7,468
D	0.12	523	1,753
E	0.88	3,833	3,920

Sediment Basin Calculations

Storage volumes in proposed sediment basins for erosion and sediment control have been sized as: Total drainage area (ac) * 3,600 = Total Storage Required (cf). See Table 22, below.

Table 22: Sediment Basin Calculations

Sediment Basin #	Total Drainage Area (ac)	Total Storage Required (cf)	Total Storage Provided (cf)
1 & 2	33.12	119,232	153,646
3	17.13	61,668	115,475

Tractive Force Analysis

We have included calculations for determining erosive flow at the emergency spillway. Please see Appendix F for tractive Force Calculations and references for the Permissible Shear Stress Charts.

Pipe Buoyancy Calculations

We have included calculations for determining if some of the larger pipes are affected by buoyancy from being full of water. See Appendix H.

7.0 CONCLUSION

This report has been prepared to address stormwater management and drainage considerations in coordination with the Delaware Sediment and Stormwater Regulations (DSSR). Runoff reduction practices include implementation of two infiltration basins to provide 0% effective imperviousness in the Runoff Protection Volume (RPv). The required Conveyance event and Flooding Event by having an LOD less than 10% of the drainage area to a natural stream, waterbody, or tax ditch.

Appendix A: Post-developed Drainage Area Maps

PRE - DEVELOPED ANALYSIS POINT - 1	
RPv (1 - YR) STORM Q:	0.11 C.F.S.
Cv (10 - YR) STORM Q:	4.83 C.F.S.
Fv (100 - YR) STORM Q:	12.03 C.F.S.

PRE-SUBAREA 1C
GRASS (A): 1.44 AC
WOODS (A): 0.23 AC
IMPERVIOUS (A): 0.03 AC
TOTAL: 1.70 AC
Tc PATH = 29.7 MIN
CURVE NUMBER = 39

PRE-SUBAREA 2
IMPERVIOUS (A): 2.63 AC
GRASS (A): 5.39 AC
TOTAL: 8.02 AC
Tc PATH = 11.8 MIN
CURVE NUMBER = 58

PRE - DEVELOPED ANALYSIS POINT - 2	
RPv (1 - YR) STORM Q:	1.57 C.F.S.
Cv (10 - YR) STORM Q:	4.62 C.F.S.
Fv (100 - YR) STORM Q:	17.17 C.F.S.

PRE-SUBAREA 1B
IMPERVIOUS (A): 5.38 AC
GRASS (A): 10.52 AC
WOODS (A): 0.10 AC
TOTAL: 16.00 AC
Tc PATH = 6.0 MIN
CURVE NUMBER = 59

PRE-SUBAREA 1A
IMPERVIOUS (A): 2.33 AC
GRASS (A): 10.36 AC
TOTAL: 12.70 AC
Tc PATH = 6.0 MIN
CURVE NUMBER = 50

PRE - DEVELOPED ANALYSIS POINT - 3	
RPv (1 - YR) STORM Q:	0 C.F.S.
Cv (10 - YR) STORM Q:	0.38 C.F.S.
Fv (100 - YR) STORM Q:	7.40 C.F.S.

PRE-SUBAREA 3A
IMPERVIOUS (A): 0.82 AC
GRASS (A): 1.52 AC
ROW CROPS (A): 40.31 AC
TOTAL: 42.65 AC
Tc PATH = 126.2 MIN
CURVE NUMBER = 67

PATRIOTS WAY
50' RIGHT OF WAY
S 318, MINOR COLLECTOR

S 19° 47' 35" E 1650.00'
S 70° 12' 25" W 1650.00'
N 70° 12' 25" E 1650.00'

AP-4 AP-5 AP-6 AP-7

EL. 31.55' EL. 30.75' EL. 35.50' EL. 36.25'

FLOW PATH - A
100 FT OF SHEET FLOW
SLOPE: 0.008 FT/FT

FLOW PATH - B
350 FT OF SHALLOW CONC.
SLOPE: 0.011 FT/FT

FLOW PATH - C
1,493 FT OF SHALLOW CONC.
SLOPE: 0.0007 FT/FT

LIMITS OF EXISTING SUMP
23.13 ACRES
EL. 32.00

FhA (SOIL GROUP A)
PsA (SOIL GROUP A)
FhB (SOIL GROUP A)

LANDS N/F STATE OF DELAWARE T.P. 133-7.00-8.00 DEED REF.: 4023-156 ZONING - AR-1

LANDS N/F STATE OF DELAWARE T.P. 133-11.00-1.00 DEED REF.: 4023-156 ZONING - AR-1

LANDS N/F JEMMICA D. JACOBS T.P. 133-11.00-10.00 ZONING - GR

LANDS N/F VANESSA M. NOCKS-HAGANS T.P. 133-11.00-9.00 ZONING - GR

LANDS N/F DOOLITTLE PROPERTIES LLC T.P. 133-11.00-10.00 ZONING - GR

ANALYSIS POINT 4						
POINT OF INVESTIGATION (POI) NUMBER	RPv DISHARGE RATE (cfs)	RPv DISHARGE VOLUME (ac-ft)	Cv DISHARGE RATE (cfs)	Cv DISHARGE VOLUME (ac-ft)	Fv DISHARGE RATE (cfs)	FV DISHARGE VOLUME (ac-ft)
EXISTING	0.27	0.029	0.72	0.070	1.56	0.155
PROPOSED	0.27	0.029	0.72	0.070	1.56	0.155
NET CHANGE (±)	0.00	0.000	0.00	0.000	0.00	0.000

ANALYSIS POINT 5						
POINT OF INVESTIGATION (POI) NUMBER	RPv DISHARGE RATE (cfs)	RPv DISHARGE VOLUME (ac-ft)	Cv DISHARGE RATE (cfs)	Cv DISHARGE VOLUME (ac-ft)	Fv DISHARGE RATE (cfs)	FV DISHARGE VOLUME (ac-ft)
EXISTING	0.16	0.016	0.41	0.040	0.89	0.088
PROPOSED	0.16	0.016	0.41	0.040	0.89	0.088
NET CHANGE (±)	0.00	0.000	0.00	0.000	0.00	0.000

ANALYSIS POINT 6						
POINT OF INVESTIGATION (POI) NUMBER	RPv DISHARGE RATE (cfs)	RPv DISHARGE VOLUME (ac-ft)	Cv DISHARGE RATE (cfs)	Cv DISHARGE VOLUME (ac-ft)	Fv DISHARGE RATE (cfs)	FV DISHARGE VOLUME (ac-ft)
EXISTING	0.96	0.101	2.46	0.242	5.09	0.512
PROPOSED	0.88	0.090	2.15	0.213	4.30	0.437
NET CHANGE (±)	-0.08	-0.011	-0.31	-0.029	-0.79	-0.075

ANALYSIS POINT 7						
POINT OF INVESTIGATION (POI) NUMBER	RPv DISHARGE RATE (cfs)	RPv DISHARGE VOLUME (ac-ft)	Cv DISHARGE RATE (cfs)	Cv DISHARGE VOLUME (ac-ft)	Fv DISHARGE RATE (cfs)	FV DISHARGE VOLUME (ac-ft)
EXISTING	0.30	0.031	0.77	0.076	1.65	0.164
PROPOSED	0.30	0.031	0.77	0.076	1.65	0.164
NET CHANGE (±)	0.00	0.000	0.00	0.000	0.00	0.000

ANALYSIS POINT 8						
POINT OF INVESTIGATION (POI) NUMBER	RPv DISHARGE RATE (cfs)	RPv DISHARGE VOLUME (ac-ft)	Cv DISHARGE RATE (cfs)	Cv DISHARGE VOLUME (ac-ft)	Fv DISHARGE RATE (cfs)	FV DISHARGE VOLUME (ac-ft)
EXISTING	0.00	0.000	0.00	0.000	0.00	0.000
PROPOSED	0.27	0.029	0.42	0.041	0.90	0.089
NET CHANGE (±)	+0.27	+0.029	+0.42	+0.041	+0.90	+0.089

LEGEND

LIMIT OF DISTURBANCE BOUNDARY — L.O.D.

SUBAREA BOUNDARY

TIME OF CONCENTRATION PATH

SOIL BOUNDARY (SOIL GROUP B) (SOIL GROUP C)

PRE-DEVELOPED LIMIT OF DISTURBANCE DATA

1.	TOTAL L.O.D.:	13.47 ACRES
2.	HSG (A) WITHIN L.O.D.:	13.47 ACRES
3.	PRE-DEVELOPED GRASS (A):	0.00 ACRES
4.	PRE-DEVELOPED IMPERVIOUS (A):	0.02 ACRES
5.	PRE-DEVELOPED ROW CROPS (A):	13.45 ACRES
6.	PRE-DEVELOPED WOODS (A):	0.00 ACRES

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950

The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

DELAWARE STATE POLICE EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN, DELAWARE
SUSSEX COUNTY

SHEET TITLE

PRE-DEVELOPED DRAINAGE MAP

0 60 120 240
SCALE: 1" = 120'

ISSUE BLOCK

MARK	DATE	DESCRIPTION
LAYER STATE: SWM-PRE		

PROJECT NO.: 2022235.00
DATE: 10/13/2025
SCALE: 1" = 120'
DRAWN BY: J.N.K. PROJ. MGR.: J.D.R.

SHEET
SWM-PRE

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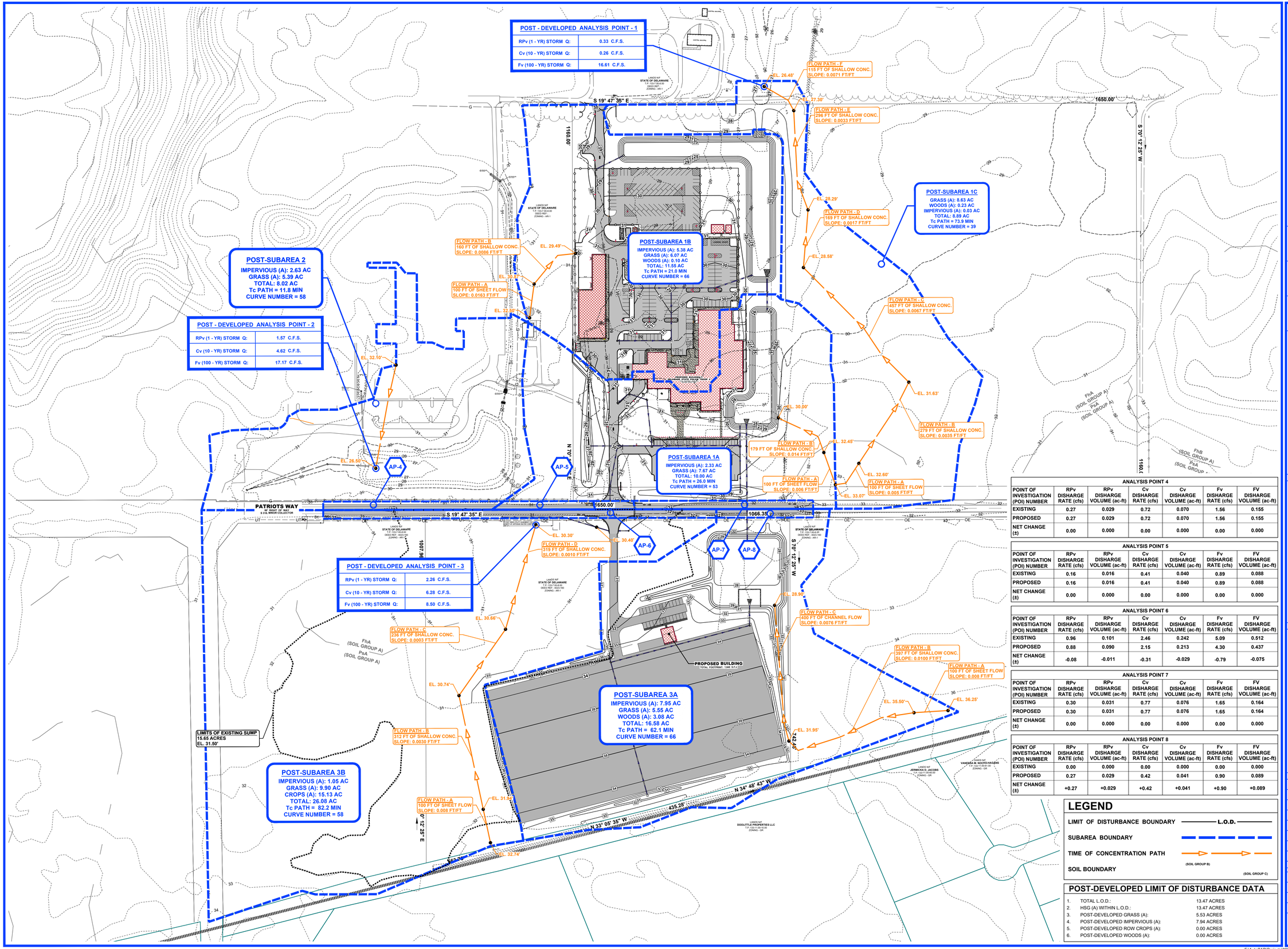

ANALYSIS POINT 4						
POINT OF INVESTIGATION (POI) NUMBER	RPv DISHARGE RATE (cfs)	RPv DISHARGE VOLUME (ac-ft)	Cv DISHARGE RATE (cfs)	Cv DISHARGE VOLUME (ac-ft)	Fv DISHARGE RATE (cfs)	FV DISHARGE VOLUME (ac-ft)
EXISTING	0.27	0.029	0.72	0.070	1.56	0.155
PROPOSED	0.27	0.029	0.72	0.070	1.56	0.155
NET CHANGE (±)	0.00	0.000	0.00	0.000	0.00	0.000

ANALYSIS POINT 5						
POINT OF INVESTIGATION (POI) NUMBER	RPv DISHARGE RATE (cfs)	RPv DISHARGE VOLUME (ac-ft)	Cv DISHARGE RATE (cfs)	Cv DISHARGE VOLUME (ac-ft)	Fv DISHARGE RATE (cfs)	FV DISHARGE VOLUME (ac-ft)
EXISTING	0.16	0.016	0.41	0.040	0.89	0.088
PROPOSED	0.16	0.016	0.41	0.040	0.89	0.088
NET CHANGE (±)	0.00	0.000	0.00	0.000	0.00	0.000

ANALYSIS POINT 6						
POINT OF INVESTIGATION (POI) NUMBER	RPv DISHARGE RATE (cfs)	RPv DISHARGE VOLUME (ac-ft)	Cv DISHARGE RATE (cfs)	Cv DISHARGE VOLUME (ac-ft)	Fv DISHARGE RATE (cfs)	FV DISHARGE VOLUME (ac-ft)
EXISTING	0.96	0.101	2.46	0.242	5.09	0.512
PROPOSED	0.88	0.090	2.15	0.213	4.30	0.437
NET CHANGE (±)	-0.08	-0.011	-0.31	-0.029	-0.79	-0.075

ANALYSIS POINT 7						
POINT OF INVESTIGATION (POI) NUMBER	RPv DISHARGE RATE (cfs)	RPv DISHARGE VOLUME (ac-ft)	Cv DISHARGE RATE (cfs)	Cv DISHARGE VOLUME (ac-ft)	Fv DISHARGE RATE (cfs)	FV DISHARGE VOLUME (ac-ft)
EXISTING	0.30	0.031	0.77	0.076	1.65	0.164
PROPOSED	0.30	0.031	0.77	0.076	1.65	0.164
NET CHANGE (±)	0.00	0.000	0.00	0.000	0.00	0.000

ANALYSIS POINT 8						
POINT OF INVESTIGATION (POI) NUMBER	RPv DISHARGE RATE (cfs)	RPv DISHARGE VOLUME (ac-ft)	Cv DISHARGE RATE (cfs)	Cv DISHARGE VOLUME (ac-ft)	Fv DISHARGE RATE (cfs)	FV DISHARGE VOLUME (ac-ft)
EXISTING	0.00	0.000	0.00	0.000	0.00	0.000
PROPOSED	0.27	0.029	0.42	0.041	0.90	0.089
NET CHANGE (±)	+0.27	+0.029	+0.42	+0.041	+0.90	+0.089

LEGEND

LIMIT OF DISTURBANCE BOUNDARY — L.O.D. —

SUBAREA BOUNDARY

TIME OF CONCENTRATION PATH

SOIL BOUNDARY (SOIL GROUP B) (SOIL GROUP C)

POST-DEVELOPED LIMIT OF DISTURBANCE DATA

1.	TOTAL L.O.D.:	13.47 ACRES
2.	HSG (A) WITHIN L.O.D.:	13.47 ACRES
3.	POST-DEVELOPED GRASS (A):	5.53 ACRES
4.	POST-DEVELOPED IMPERVIOUS (A):	7.94 ACRES
5.	POST-DEVELOPED ROW CROPS (A):	0.00 ACRES
6.	POST-DEVELOPED WOODS (A):	0.00 ACRES

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

DELAWARE STATE POLICE EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN, DELAWARE
SUSSEX COUNTY

SHEET TITLE

POST - DEVELOPED DRAINAGE MAP

0 60 120 240
SCALE: 1" = 120'

ISSUE BLOCK

MARK	DATE	DESCRIPTION

LAYER STATE: SIMILAR POST

PROJECT NO.: 2022235.00
DATE: 12/20/2025
SCALE: 1" = 120'
DRAWN BY: J.N.K. PROJ. MGR.: J.D.R.

SHEET

SWM - POST

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Appendix B: DURMM Spreadsheets

PROJECT:	2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID:	Overall LOD
LOCATION (County):	Sussex
UNIT HYDROGRAPH:	DMV

CONTRIBUTING AREA RUNOFF CURVE NUMBER (C.A. RCN) WORKSHEET

Cover Type	Treatment	Hydrologic Condition	Curve Numbers for Hydrologic Soil Type A Acres	A RCN	B Acres	B RCN	C Acres	C RCN	D Acres	D RCN
CULTIVATED AGRICULTURAL LANDS										
Fallow	Bare soil	----		77		86		91		94
	Crop residue (CR)	poor		76		85		90		93
	Crop residue (CR)	good		74		83		88		90
Row Crops	Straight row (SR)	poor		72		81		88		91
	Straight row (SR)	good		67		78		85		89
	SR + Crop residue	poor		71		80		87		90
	SR + Crop residue	good		64		75		82		85
	Contoured (C)	poor		70		79		84		88
	Contoured (C)	good		65		75		82		86
	C + Crop residue	poor		69		78		83		87
	C + Crop residue	good		64		74		81		85
	Cont & terraced(C&T)	poor		66		74		80		82
	Cont & terraced(C&T)	good		62		71		78		81
	C&T + Crop residue	poor		65		73		79		81
	C&T + Crop residue	good		61		70		77		80
Small Grain	Straight row (SR)	poor		65		76		84		88
	Straight row (SR)	good		63		75		83		87
	SR + Crop residue	poor		64		75		83		86
	SR + Crop residue	good		60		72		80		84
	Contoured (C)	poor		63		74		82		85
	Contoured (C)	good		61		73		81		84
	C + Crop residue	poor		62		73		81		84
	C + Crop residue	good		60		72		80		83
	Cont & terraced(C&T)	poor		61		72		79		82
	Cont & terraces(C&T)	good		59		70		78		81
	C&T + Crop residue	poor		60		71		78		81
	C&T + Crop residue	good		58		69		77		80
Close-seeded	Straight row	poor		66		77		85		89
or broadcast	Straight row	good		58		72		81		85
legumes or	Contoured	poor		64		75		83		85
rotation	Contoured	good		55		69		78		83
meadow	Cont & terraced	poor		63		73		80		83
	Cont & terraced	good		51		67		76		80
OTHER AGRICULTURAL LANDS										
	Pasture, grassland or range	poor		68		79		86		89
		fair		49		69		79		84
		good		39		61		74		80
	Meadow -cont. grass (non grazed)	----		30		58		71		78
	Brush - brush, weed, grass mix	poor		48		67		77		83
		fair		35		56		70		77
		good		30		48		65		73
	Woods - grass combination	poor		57		73		82		86
		fair		43		65		76		82
		good		32		58		72		79
	Woods	poor		45		66		77		83
		fair		36		60		73		79
		good		30		55		70		77
	Farmsteads	----		59		74		82		86
FULLY DEVELOPED URBAN AREAS (Veg Established)										
Open space (Lawns,parks etc.)										
	Poor condition; grass cover < 50%			68		79		86		89
	Fair condition; grass cover 50% to 75 %			49		69		79		84
	Good condition; grass cover > 75%		5.53	39		61		74		80
Impervious Areas										
	Paved parking lots, roofs, driveways		7.94	98		98		98		98
	Streets and roads									
	Paved; curbs and storm sewers			98		98		98		98
	Paved; open ditches (w/right-of-way)			83		89		92		93
	Gravel (w/ right-of-way)			76		85		89		91
	Dirt (w/ right-of-way)			72		82		87		89
Urban Districts		Avg % impervious								
	Commercial & business	85		89		92		94		95
	Industrial	72		81		88		91		93
Residential districts by average lot size		Avg % impervious								
	1/8 acre (town houses)	65		77		85		90		92
	1/4 acre	38		61		75		83		87
	1/3 acre	30		57		72		81		86
	1/2 acre	25		54		70		80		85
	1 acre	20		51		68		79		84
	2 acre	12		46		65		77		82
DEVELOPING URBAN AREA (No Vegetation)										
	Newly graded area (pervious only)			77		86		91		94
USER DEFINED										

Subarea Contributing Area per Soil Type (ac)		13.47	0	0	0
Subarea Contributing Area (ac)	13.47				
Subarea Weighted RCN	74				

UPSTREAM CONTRIBUTING AREAS	*Subarea ID*	*Acres*	*RCN*
Upstream Contributing Area 1			
Upstream Contributing Area 2			
Upstream Contributing Area 3			
Upstream Contributing Area 4			

Total Contributing Area w. Upstream Areas (ac)	13.5
Weighted Runoff Curve Number (RCN)	74

PROJECT:	2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID:	Overall LOD
LOCATION (County):	Sussex
UNIT HYDROGRAPH:	DMV

LIMIT OF DISTURBANCE (LOD) WORKSHEET

Step 1 - Subarea LOD Data	**HSG A**	**HSG B**	**HSG C**	**HSG D**
1.1 HSG Area Within LOD (ac)	13.47			
1.2 Pre-Developed Woods/Meadow Within LOD (ac)				
1.3 Pre-Developed Impervious Within LOD (ac)	0.02			
1.4.a Post-Developed Imperviousness Within LOD, Option #1 (ac); ***OR***	7.95			
1.4.b Post-Developed Imperviousness Within LOD, Option #2 (%)	59%	0%	0%	0%

Step 2 - Subarea LOD Runoff Calculations				
2.1 RCN per HSG	73.82	0.00	0.00	0.00
2.2 RPv per HSG (in.)	1.05	0.00	0.00	0.00
2.3 Target RCN per HSG	39.07	0.00	0.00	0.00
2.4 Target Runoff per HSG (in.)	0.21	0.00	0.00	0.00

2.5 Subarea LOD (ac)	13.47
2.6 Subarea Weighted RCN	73.82
2.7 Subarea Weighted RPv (in.)	1.05
2.8 Subarea Weighted Target Runoff (in.)	0.21

Step 3 - Upstream LOD Areas ***(from previous DURMM Report as applicable)***	**Area 1**	**Area 2**	**Area 3**	**Area 4**
3.1 Upstream Sub-Area ID				
3.2 Upstream Contributing Area (ac)				
3.3 Target Runoff for Upstream Area (in.)				
3.4 Adjusted CN after all reductions				
3.5 Adjusted RPv (in.)				
3.6 Adjusted Cv (in.)				
3.7 Adjusted Fv (in.)				

Step 4 - RPv Calculations for Combined LOD	
4.1 Combined LOD (ac)	13.47
4.2 Weighted RCN	73.82
4.3 Weighted RPv (in.)	1.05
4.4 Weighted Target Runoff (in.)	0.21
4.5 Estimated Annual Runoff (in.)	13.83
4.6 Req'd Runoff to be Managed within LOD (in.)	0.84
4.7 Req'd Runoff to be Managed within LOD (%)	80%

PROJECT:	2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID:	Overall LOD
LOCATION (County):	Sussex
UNIT HYDROGRAPH:	DMV

OUTSIDE LIMIT OF DISTURBANCE (OLOD) WORKSHEET

Step 1 - Site Data

1.1 Total Contributing Area (ac)	N/A
1.2 C.A. RCN	N/A
1.3 LOD Area (ac)	N/A
1.4 LOD RCN	N/A
1.5 Outside LOD Area (ac)	N/A
1.6 Outside LOD RCN	N/A

Step 2 - Time of Concentration

FLOW TYPE	2.1 LENGTH (feet)	2.2 SLOPE (ft./ft.)	2.3 SURFACE CODE	2.4 MANNINGS "n"	2.5 VELOCITY (ft./sec.)	2.6 TRAVEL TIME (hrs)
Sheet				----------	N/A	0.00
				----------	N/A	0.00
				----------	N/A	0.00
Shallow Concentrated				N/A	----------	0.00
				N/A	----------	0.00
				N/A	----------	0.00
Open Channel			N/A			0.00
			N/A			0.00
			N/A			0.00
			N/A			0.00
			N/A			0.00

2.7 Time of Concentration (Tc): 0.10

Sheet Flow Surface Codes

a smooth surface
b fallow (no residue)
c cultivated < 20% Res.
d cultivated > 20% Res.
e grass - range, short
f grass, dense
g grass, bermuda
h woods, light
i woods, dense
j range, natural

Shallow Concentrated Surface Codes

u unpaved surface
p paved surface

Step 3 - Peak Discharge

3.1 Unit Hydrograph Type	DMV	
3.2 Frequency (yr)	10	100
3.3 24-HR Rainfall, P (in.)	5.3	9.2
3.4 Initial Abstraction, Ia (in.)	#N/A	#N/A
3.5 Ia/P ratio	#N/A	#N/A
3.6 Unit Peak Discharge, qu (csm/in)	#N/A	#N/A
3.7 Runoff (in.)	#VALUE!	#VALUE!
3.8 Peak Discharge, qp (cfs)	#VALUE!	#VALUE!
3.9 Equiv. unit peak discharge (cfs/ac)	0.00	0.00

PROJECT: 2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID: Overall LOD
LOCATION (County): Sussex

RESOURCE PROTECTION EVENT (RPv) WORKSHEET

	BMP 1		BMP 2		BMP 3		BMP 4		BMP 5	
	Type	0-No BMP	Type	--	Type	--	Type	--	Type	--
Step 1 - Calculate Initial RPv	**Data**									
1.1 Total contributing area to BMP (ac)	13.47									
1.2 Initial RCN	73.82									
1.3 RPv for Contributing Area (in.)	1.05									
1.4 Req'd RPv to be Managed for Contributing Area (in.)	0.84									
1.5 Req'd RPv to be Managed for Contributing Area (%)	80%									
Step 2 - Adjust for Retention Reduction										
2.1 Retention volume provided (cu. ft.)										
2.2 Retention reduction allowance (%)	0%		N/A		N/A		N/A		N/A	
2.3 Retention reduction volume (ac-ft)	0.00		N/A		N/A		N/A		N/A	
2.4 Retention reduction volume (in.)	0.00		N/A		N/A		N/A		N/A	
2.5 Runoff volume after retention reduction (in.)	1.05		N/A		N/A		N/A		N/A	
2.6 Adjusted CN*	73.86		N/A		N/A		N/A		N/A	
Step 3 - Adjust for Annual Runoff Reduction										
3.1 Annual CN (ACN)	73.82		N/A		N/A		N/A		N/A	
3.2 Annual runoff (in.)	13.83		N/A		N/A		N/A		N/A	
3.3 Proportion A/B soils in BMP footprint (%)	0%		0%		0%		0%		0%	
3.4 Annual runoff reduction allowance (%)	0%		N/A		N/A		N/A		N/A	
3.5 Annual runoff after reduction (in.)	13.83		N/A		N/A		N/A		N/A	
3.6 Adjusted ACN	73.82		N/A		N/A		N/A		N/A	
3.7 Annual Runoff Reduction Allowance for RPv (in.)	0.00		N/A		N/A		N/A		N/A	
Step 4 - Calculate RPv with BMP Reductions										
4.1 RPv Runoff Manangement Provided (cu. ft.)	0		N/A		N/A		N/A		N/A	
4.2 RPv runoff volume after all reductions (in.)	1.05		N/A		N/A		N/A		N/A	
4.3 RPv runoff volume after all reductions (cu.ft.)	51,341		N/A		N/A		N/A		N/A	
4.4 Total RPv runoff reduction (in.)	0.00		N/A		N/A		N/A		N/A	
4.5 Total RPv runoff reduction (%)	0%		N/A		N/A		N/A		N/A	
4.6 Adjusted CN after all reductions*	73.82		N/A		N/A		N/A		N/A	
4.7 Adjusted equivalent annual runoff (in.)	13.83		N/A		N/A		N/A		N/A	
4.8 RPv Compliance Met Through Runoff Reduction?	NO		N/A		N/A		N/A		N/A	
4.9 Runoff Reduction Credit, if Applicable (cu.ft)	N/A		N/A		N/A		N/A		N/A	
Step 5 - Determine Residual Volume to be Managed or Offset										
5.1 RPv Residual Volume (in.)	0.84		N/A		N/A		N/A		N/A	
5.2 RPv Residual Volume (cu.ft./ac)	3,047		N/A		N/A		N/A		N/A	
5.3 Residual Volume to be Managed or Offset (cu.ft.)	41,044		N/A		N/A		N/A		N/A	
5.4 RPv avg. discharge rate for 48-hr detention (cfs)	0.238		N/A		N/A		N/A		N/A	
5.5 RPv max. discharge rate for 48-hr detention (cfs)	1.188		N/A		N/A		N/A		N/A	

***NOTE: No additional runoff reduction credit can be taken for surface recharge practices once the "Adjusted CN after all reductions" (Step 4.6) reaches the equivalent CN for the native soil-cover condition of the BMP footprint itself (i.e. for Sheet Flow to Turf Filter Strip on B soils Step 4.6 cannot be below 61). If this occurs contact the DNREC – SSP for further guidance.**

PROJECT: 2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID: Overall LOD
TMDL WATERSHED: Indian River Bay

TOTAL MAXIMUM DAILY LOAD (TMDL) WORKSHEET

	BMP 1				BMP 2				BMP 3				BMP 4				BMP 5			
	Type:	0-No BMP			Type:	--			Type:	--			Type:	--			Type:	--		
Step 1 - Calculate Annual Runoff Volume	Data	TN	TP	TSS	Data	TN	TP	TSS	Data	TN	TP	TSS	Data	TN	TP	TSS	Data	TN	TP	TSS
1.1 Total contributing area to BMP (ac)	13.47																			
1.2 Initial RCN	74																			
1.3 Annual runoff volume (in.)	13.83																			
1.4 Annual runoff volume (liters)	1.91E+07																			
Step 2 - Calculate Annual Pollutant Load																				
2.1 EMC (mg/L)		2.80	0.49	90		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
2.2 Load (mg/yr)		5.36E+07	9.38E+06	1.72E+09		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
2.3 Stormwater Load (lb/ac/yr)		8.77	1.54	282		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
Step 3 - Adjust for Pollutant Reduction																				
3.1 BMP annual runoff reduction (%)	0%				N/A				N/A				N/A				N/A			
3.2 Adjusted annual runoff volume (in)	13.83				N/A				N/A				N/A				N/A			
3.3 Adjusted annual runoff volume (liters)	1.91E+07				N/A				N/A				N/A				N/A			
3.4 Adjusted load from annual reductions (lb/ac/yr)		8.77	1.54	282.01		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
3.5 BMP removal efficiency (%)		0%	0%	0%		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
3.6 BMP effluent concentration (mg/L)		2.80	0.49	90.00		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
3.7 Final Adjusted load (lb/ac/yr)		8.77	1.54	282		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
Step 4 - Pollutant Reduction Met? *(For Informational Purposes)*																				
4.1 TMDL (lb/ac/yr)		5.70	0.23	N/A																
4.2 Reduction met?		NO	NO	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
4.3 Final Adjusted Load (lb/yr)		118.18	20.68	3799		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A

PROJECT:	2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID:	Overall LOD
LOCATION (County):	Sussex

CONVEYANCE EVENT (Cv) WORKSHEET

	BMP 1		BMP 2		BMP 3		BMP 4		BMP 5	
	Type:	**0-No BMP**	**Type:**	**--**	**Type:**	**--**	**Type:**	**--**	**Type:**	**--**
Step 1 - Calculate Initial Cv	**Data**		**Data**		**Data**		**Data**		**Data**	
1.1 Total contributing area to BMP (ac)	13.47		13.47		13.47		13.47		13.47	
1.2 Initial RCN	73.82									
1.3 10-Year Rainfall (in.)	5.3									
1.4 Cv runoff volume (in.)	2.59									
Step 2 - Adjust for Retention Reduction										
2.1 Storage volume (cu. ft.)	0.00		N/A		N/A		N/A		N/A	
2.2 Storage volume (ac-ft)	0.00		N/A		N/A		N/A		N/A	
2.3 Storage volume (in.)	0.00		N/A		N/A		N/A		N/A	
2.4 Runoff volume after reduction (in.)	2.59		N/A		N/A		N/A		N/A	
2.5 CN*	73.82		N/A		N/A		N/A		N/A	
Step 3 - Adjust for Annual Runoff Reduction										
3.1 Runoff reduction allowance (%)	0%		N/A		N/A		N/A		N/A	
3.2 Annual runoff after reduction (in.)	2.59		N/A		N/A		N/A		N/A	
3.3 Adjusted ACN	73.82		N/A		N/A		N/A		N/A	
3.4 Event-based runoff reduction (in.)	0.00		N/A		N/A		N/A		N/A	
Step 4 - Calculate Cv with BMP Reductions										
4.1 Cv runoff volume after all reductions (in.)	2.59		N/A		N/A		N/A		N/A	
4.2 Total Cv runoff reduction (%)	0%		N/A		N/A		N/A		N/A	
4.3 Adjusted RCN for H&H modeling	73.82		N/A		N/A		N/A		N/A	

PROJECT: 2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID: Overall LOD
LOCATION (County): Sussex

FLOODING EVENT (Fv) WORKSHEET

	BMP 1		BMP 2		BMP 3		BMP 4		BMP 5	
	Type:	0-No BMP	Type:	--	Type:	--	Type:	--	Type:	--
Step 1 - Calculate Initial Fv	Data		Data		Data		Data		Data	
1.1 Total contributing area to BMP (ac)	13.47		13.47		13.47		13.47		13.47	
1.2 Initial RCN	73.82									
1.3 100-Year Rainfall (in.)	9.2									
1.4 Fv runoff volume (in.)	5.99									
Step 2 - Adjust for Retention Reduction										
2.1 Storage volume (cu. ft.)	0.00		N/A		N/A		N/A		N/A	
2.2 Storage volume (ac-ft)	0.00		N/A		N/A		N/A		N/A	
2.3 Storage volume (in.)	0.00		N/A		N/A		N/A		N/A	
2.4 Runoff volume after reduction (in.)	5.99		N/A		N/A		N/A		N/A	
2.5 CN*	73.82		N/A		N/A		N/A		N/A	
Step 3 - Adjust for Annual Runoff Reduction										
3.1 Runoff reduction allowance (%)	0%		N/A		N/A		N/A		N/A	
3.2 Annual runoff after reduction (in.)	5.99		N/A		N/A		N/A		N/A	
3.3 Adjusted ACN	73.82		N/A		N/A		N/A		N/A	
3.4 Event-based runoff reduction (in.)	0.00		N/A		N/A		N/A		N/A	
Step 4 - Calculate Fv with BMP Reductions										
4.1 Fv runoff volume after all reductions (in.)	5.99		N/A		N/A		N/A		N/A	
4.2 Total Fv runoff reduction (%)	0%		N/A		N/A		N/A		N/A	
4.3 Adjusted RCN for H&H modeling	73.82		N/A		N/A		N/A		N/A	

PROJECT:	2022235.00 DSP - Troop 4 - EVOC		
DRAINAGE SUBAREA ID:	Overall LOD		
COUNTY:	Sussex	**UNIT HYDROGRAPH:**	DMV
TMDL Watershed:	Indian River Bay	**VERSION:**	DURMM v2.51.220414

DURMM OUTPUT WORKSHEET

Site Data

Contributing Area to BMPs (ac.)	13.47			
C.A. RCN	73.78			
Subarea LOD (ac.)	13.47			
Subarea RCN	73.82			
Upstream Subarea ID	N/A	N/A	N/A	N/A
Upstream Subarea LOD (ac.)	0.00	0.00	0.00	0.00
Combined LOD with Upstream Areas (ac.)	13.47			
Combined RCN with Upstream Areas (ac.)	73.82			
Watershed TMDL-TN (lb/ac/yr)	5.70			
Watershed TMDL-TP (lb/ac/yr)	0.23			
Watershed TMDL-TSS (lb/ac/yr)	N/A			

BMP Data

	BMP 1	BMP 2	BMP 3	BMP 4	BMP 5
	0-No BMP	--	--	--	--
RPv runoff volume after all reductions (in.)	1.05	N/A	N/A	N/A	N/A
Total RPv runoff reduction (in.)	0.00	N/A	N/A	N/A	N/A
Total RPv runoff reduction (%)	0%	N/A	N/A	N/A	N/A
RPv Compliance Met Through Runoff Reduction?	NO	N/A	N/A	N/A	N/A
RPv Residual Volume (cu. ft.)	41,044	N/A	N/A	N/A	N/A
Adjusted pollutant load, TN (lb/ac/yr)	8.77	N/A	N/A	N/A	N/A
Adjusted pollutant load, TP (lb/ac/yr)	1.54	N/A	N/A	N/A	N/A
Adjusted pollutant load, TSS (lb/ac/yr)	282.01	N/A	N/A	N/A	N/A
Cv runoff volume after all reductions (in.)	2.59	N/A	N/A	N/A	N/A
Fv runoff volume after all reductions (in.)	5.99	N/A	N/A	N/A	N/A

Resource Protection Event (RPV)

RPv for Contributing Area (in.)	1.05		
Annual Runoff for Contributing Area (in.)	13.83		
Req'd RPv to be Managed for Contributing Area (in.)	0.84		
Req'd RPv to be Managed for Contributing Area (%)	80%		
RPv Runoff Management Required (cu. Ft.)	41044		
RPv Runoff Management Provided (cu. Ft.)	0		
RPv Residual Volume (cu.ft.)	41044	SHORTFALL	(Requires additional management or offset)
C.A. RPv avg. discharge rate (cfs)	0.24		
C.A. RPv max. discharge rate (cfs)	1.19		
TN Pollutant Load (lb/yr)	118.18		
TP Pollutant Load (lb/yr)	20.68		
TSS Pollutant Load (lb/yr)	3799		

Conveyance Event (Cv)

Cv runoff volume (in.)	2.59
Adjusted RCN for H&H Modeling (CN*)	73.82

Flooding Event (Fv)

Fv runoff volume (in.)	5.99
Equivalent RCN for H&H Modeling (CN*)	73.82

Adjusted Subarea Data for Downstream DURMM Modeling

Subarea ID	Overall LOD
Contributing Area (ac.)	13.47
Weighted Target Runoff (in.)	0.21
Adjusted CN after all reductions	73.82
Adjusted RPv (in.)	1.05
Adjusted Cv (in.)	2.59
Adjusted Fv (in.)	5.99

Adjusted Subarea Data for Nutrient Protocol Modeling

Contributing Area (ac.)	13.47
LOD Area (ac.)	13.47
TN Pollutant Load (lb/yr)	118.18
TP Pollutant Load (lb/yr)	20.68
TSS Pollutant Load (lb/yr)	3799
Percent Impervious Cover	59%

Adjusted Subarea Data for the Summary Table for Sub-Areas Draining to a Common Point of Interest

Subarea ID	Overall LOD		
Contributing Area (ac.)	13.47		
RPv Residual Volume (cu.ft.)	41044	SHORTFALL	(Requires additional management or offset)
Adjusted CN after all reductions	73.82		
Cv RCN for H&H Modeling	73.82		
Fv RCN for H&H Modeling	73.82		
TN Pollutant Load (lb/yr)	118.18		
TP Pollutant Load (lb/yr)	20.68		
TSS Pollutant Load (lb/yr)	3799		

Summary Table for Site RPv Compliance[1]

Project:	2022235.00 DSP -Troop 4 EVOC			TMDL WS:	Indian River Bay		Rel. 1

Ref. #	Sub-Area ID[2]	Contributing Area[3] (ac)	Runoff[4] (in)	Runoff (cf)	RPv Runoff Management (cf)		TN Pollutant Load[7] (lb/yr)	TP Pollutant Load[7] (lb/yr)	TSS Pollutant Load[7] (lb/yr)
					Required[5]	Provided[6]			
Section I - Complete this section for total site LOD management requirement									
0	Total Site LOD	13.47	1.05	51340.9	41044		118.18	20.68	3799
Section II - Complete this section for BMPs provided for partial LOD management OR sub-area by sub-area management									
1	Infiltration Basin	13.47	1.05	51340.9		41044	118.18	20.68	3799
2				0.0					
3				0.0					
4				0.0					
5				0.0					
6				0.0					
7				0.0					
8				0.0					
9				0.0					
10				0.0					
11				0.0					
12				0.0					
13				0.0					
14				0.0					
15				0.0					
16				0.0					
17				0.0					
18				0.0					
19				0.0					
20				0.0					
Totals					**41044 cf**	**41044 cf**	**118.18 lb/yr**	**20.68 lb/yr**	**3799 lb/yr**
RPv Runoff Reduction Goal Met?		**YES**							
Total Credit/Shortfall		**0 cf**	**N/A**						

Notes:
1. All subareas must lie within the same HUC 8 watershed.
2. Only the most downstream sub-area information should be entered for a series of sub-areas that drain to each other or for a treatment train.
3. From DURMM v2.5 Report, Line 7 OR Approved Hydrologic Software Report
4. From DURMM v2.5 Report, Line 35 OR Approved Hydrologic Software Report
5. From DURMM v2.5 Report, Line 39 OR Approved Hydrologic Software Report
6. From DURMM v2.5 Report, Line 40 OR Approved Hydrologic Software Report
7. From DURMM v2.5 Report, Lines 44-46 OR Complete Sheet 2

DURMM Spreadsheet for within DelDOT Right-of-way

PROJECT:	2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID:	RGM - 4
LOCATION (County):	Sussex
UNIT HYDROGRAPH:	DMV

CONTRIBUTING AREA RUNOFF CURVE NUMBER (C.A. RCN) WORKSHEET

Cover Type	Treatment	Hydrologic Condition	Curve Numbers for Hydrologic Soil Type A Acres	A RCN	B Acres	B RCN	C Acres	C RCN	D Acres	D RCN
CULTIVATED AGRICULTURAL LANDS										
Fallow	Bare soil	----		77		86		91		94
	Crop residue (CR)	poor		76		85		90		93
	Crop residue (CR)	good		74		83		88		90
Row Crops	Straight row (SR)	poor		72		81		88		91
	Straight row (SR)	good		67		78		85		89
	SR + Crop residue	poor		71		80		87		90
	SR + Crop residue	good		64		75		82		85
	Contoured (C)	poor		70		79		84		88
	Contoured (C)	good		65		75		82		86
	C + Crop residue	poor		69		78		83		87
	C + Crop residue	good		64		74		81		85
	Cont & terraced(C&T)	poor		66		74		80		82
	Cont & terraced(C&T)	good		62		71		78		81
	C&T + Crop residue	poor		65		73		79		81
	C&T + Crop residue	good		61		70		77		80
Small Grain	Straight row (SR)	poor		65		76		84		88
	Straight row (SR)	good		63		75		83		87
	SR + Crop residue	poor		64		75		83		86
	SR + Crop residue	good		60		72		80		84
	Contoured (C)	poor		63		74		82		85
	Contoured (C)	good		61		73		81		84
	C + Crop residue	poor		62		73		81		84
	C + Crop residue	good		60		72		80		83
	Cont & terraced(C&T)	poor		61		72		79		82
	Cont & terraces(C&T)	good		59		70		78		81
	C&T + Crop residue	poor		60		71		78		81
	C&T + Crop residue	good		58		69		77		80
Close-seeded	Straight row	poor		66		77		85		89
or broadcast	Straight row	good		58		72		81		85
legumes or	Contoured	poor		64		75		83		85
rotation	Contoured	good		55		69		78		83
meadow	Cont & terraced	poor		63		73		80		83
	Cont & terraced	good		51		67		76		80
OTHER AGRICULTURAL LANDS										
	Pasture, grassland or range	poor		68		79		86		89
		fair		49		69		79		84
		good		39		61		74		80
	Meadow -cont. grass (non grazed)	----		30		58		71		78
	Brush - brush, weed, grass mix	poor		48		67		77		83
		fair		35		56		70		77
		good		30		48		65		73
	Woods - grass combination	poor		57		73		82		86
		fair		43		65		76		82
		good		32		58		72		79
	Woods	poor		45		66		77		83
		fair		36		60		73		79
		good		30		55		70		77
	Farmsteads	----		59		74		82		86
FULLY DEVELOPED URBAN AREAS (Veg Established)										
Open space (Lawns,parks etc.)										
	Poor condition; grass cover < 50%			68		79		86		89
	Fair condition; grass cover 50% to 75 %			49		69		79		84
	Good condition; grass cover > 75%		0.48	39		61		74		80
Impervious Areas										
	Paved parking lots, roofs, driveways		1.16	98		98		98		98
	Streets and roads									
	Paved; curbs and storm sewers			98		98		98		98
	Paved; open ditches (w/right-of-way)			83		89		92		93
	Gravel (w/ right-of-way)			76		85		89		91
	Dirt (w/ right-of-way)			72		82		87		89
Urban Districts		Avg % impervious								
	Commercial & business	85		89		92		94		95
	Industrial	72		81		88		91		93
Residential districts by average lot size		Avg % impervious								
	1/8 acre (town houses)	65		77		85		90		92
	1/4 acre	38		61		75		83		87
	1/3 acre	30		57		72		81		86
	1/2 acre	25		54		70		80		85
	1 acre	20		51		68		79		84
	2 acre	12		46		65		77		82
DEVELOPING URBAN AREA (No Vegetation)										
	Newly graded area (pervious only)			77		86		91		94
USER DEFINED										

Subarea Contributing Area per Soil Type (ac)		1.64	0	0	0
Subarea Contributing Area (ac)	1.64				
Subarea Weighted RCN	81				

UPSTREAM CONTRIBUTING AREAS	*Subarea ID*	*Acres*	*RCN*
Upstream Contributing Area 1			
Upstream Contributing Area 2			
Upstream Contributing Area 3			
Upstream Contributing Area 4			

Total Contributing Area w. Upstream Areas (ac)	1.64
Weighted Runoff Curve Number (RCN)	81

PROJECT:	2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID:	RGM - 4
LOCATION (County):	Sussex
UNIT HYDROGRAPH:	DMV

LIMIT OF DISTURBANCE (LOD) WORKSHEET

Step 1 - Subarea LOD Data	**HSG A**	**HSG B**	**HSG C**	**HSG D**
1.1 HSG Area Within LOD (ac)	1.64			
1.2 Pre-Developed Woods/Meadow Within LOD (ac)				
1.3 Pre-Developed Impervious Within LOD (ac)	1.13			
1.4.a Post-Developed Imperviousness Within LOD, Option #1 (ac); ***OR***	1.16			
1.4.b Post-Developed Imperviousness Within LOD, Option #2 (%)	71%	0%	0%	0%

Step 2 - Subarea LOD Runoff Calculations				
2.1 RCN per HSG	80.73	0.00	0.00	0.00
2.2 RPv per HSG (in.)	1.34	0.00	0.00	0.00
2.3 Target RCN per HSG	73.55	0.00	0.00	0.00
2.4 Target Runoff per HSG (in.)	1.04	0.00	0.00	0.00

2.5 Subarea LOD (ac)	1.64
2.6 Subarea Weighted RCN	80.73
2.7 Subarea Weighted RPv (in.)	1.34
2.8 Subarea Weighted Target Runoff (in.)	1.04

Step 3 - Upstream LOD Areas ***(from previous DURMM Report as applicable)***	**Area 1**	**Area 2**	**Area 3**	**Area 4**
3.1 Upstream Sub-Area ID				
3.2 Upstream Contributing Area (ac)				
3.3 Target Runoff for Upstream Area (in.)				
3.4 Adjusted CN after all reductions				
3.5 Adjusted RPv (in.)				
3.6 Adjusted Cv (in.)				
3.7 Adjusted Fv (in.)				

Step 4 - RPv Calculations for Combined LOD	
4.1 Combined LOD (ac)	1.64
4.2 Weighted RCN	80.73
4.3 Weighted RPv (in.)	1.34
4.4 Weighted Target Runoff (in.)	1.04
4.5 Estimated Annual Runoff (in.)	18.91
4.6 Req'd Runoff to be Managed within LOD (in.)	0.30
4.7 Req'd Runoff to be Managed within LOD (%)	22%

PROJECT:	2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID:	RGM - 4
LOCATION (County):	Sussex
UNIT HYDROGRAPH:	DMV

OUTSIDE LIMIT OF DISTURBANCE (OLOD) WORKSHEET

Step 1 - Site Data

1.1 Total Contributing Area (ac)	N/A
1.2 C.A. RCN	N/A
1.3 LOD Area (ac)	N/A
1.4 LOD RCN	N/A
1.5 Outside LOD Area (ac)	N/A
1.6 Outside LOD RCN	N/A

Step 2 - Time of Concentration

FLOW TYPE	2.1 LENGTH (feet)	2.2 SLOPE (ft./ft.)	2.3 SURFACE CODE	2.4 MANNINGS "n"	2.5 VELOCITY (ft./sec.)	2.6 TRAVEL TIME (hrs)
Sheet				----------	N/A	0.00
				----------	N/A	0.00
				----------	N/A	0.00
Shallow Concentrated				N/A	----------	0.00
				N/A	----------	0.00
				N/A	----------	0.00
Open Channel			N/A			0.00
			N/A			0.00
			N/A			0.00
			N/A			0.00
			N/A			0.00

2.7 Time of Concentration (Tc): 0.10

Sheet Flow Surface Codes

a smooth surface
b fallow (no residue)
c cultivated < 20% Res.
d cultivated > 20% Res.
e grass - range, short
f grass, dense
g grass, bermuda
h woods, light
i woods, dense
j range, natural

Shallow Concentrated Surface Codes

u unpaved surface
p paved surface

Step 3 - Peak Discharge

3.1 Unit Hydrograph Type	DMV	
3.2 Frequency (yr)	10	100
3.3 24-HR Rainfall, P (in.)	5.3	9.2
3.4 Initial Abstraction, Ia (in.)	#N/A	#N/A
3.5 Ia/P ratio	#N/A	#N/A
3.6 Unit Peak Discharge, qu (csm/in)	#N/A	#N/A
3.7 Runoff (in.)	#VALUE!	#VALUE!
3.8 Peak Discharge, qp (cfs)	#VALUE!	#VALUE!
3.9 Equiv. unit peak discharge (cfs/ac)	0.00	0.00

PROJECT:	2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID:	RGM - 4
LOCATION (County):	Sussex

RESOURCE PROTECTION EVENT (RPv) WORKSHEET

	BMP 1		BMP 2		BMP 3		BMP 4		BMP 5	
	Type	0-No BMP	Type	--	Type	--	Type	--	Type	--
Step 1 - Calculate Initial RPv	Data									
1.1 Total contributing area to BMP (ac)	1.64									
1.2 Initial RCN	80.73									
1.3 RPv for Contributing Area (in.)	1.34									
1.4 Req'd RPv to be Managed for Contributing Area (in.)	0.30									
1.5 Req'd RPv to be Managed for Contributing Area (%)	22%									
Step 2 - Adjust for Retention Reduction										
2.1 Retention volume provided (cu. ft.)										
2.2 Retention reduction allowance (%)	0%		N/A		N/A		N/A		N/A	
2.3 Retention reduction volume (ac-ft)	0.00		N/A		N/A		N/A		N/A	
2.4 Retention reduction volume (in.)	0.00		N/A		N/A		N/A		N/A	
2.5 Runoff volume after retention reduction (in.)	1.34		N/A		N/A		N/A		N/A	
2.6 Adjusted CN*	80.72		N/A		N/A		N/A		N/A	
Step 3 - Adjust for Annual Runoff Reduction										
3.1 Annual CN (ACN)	80.73		N/A		N/A		N/A		N/A	
3.2 Annual runoff (in.)	18.91		N/A		N/A		N/A		N/A	
3.3 Proportion A/B soils in BMP footprint (%)	0%		0%		0%		0%		0%	
3.4 Annual runoff reduction allowance (%)	0%		N/A		N/A		N/A		N/A	
3.5 Annual runoff after reduction (in.)	18.91		N/A		N/A		N/A		N/A	
3.6 Adjusted ACN	80.73		N/A		N/A		N/A		N/A	
3.7 Annual Runoff Reduction Allowance for RPv (in.)	0.00		N/A		N/A		N/A		N/A	
Step 4 - Calculate RPv with BMP Reductions										
4.1 RPv Runoff Manangement Provided (cu. ft.)	0		N/A		N/A		N/A		N/A	
4.2 RPv runoff volume after all reductions (in.)	1.34		N/A		N/A		N/A		N/A	
4.3 RPv runoff volume after all reductions (cu.ft.)	7,977		N/A		N/A		N/A		N/A	
4.4 Total RPv runoff reduction (in.)	0.00		N/A		N/A		N/A		N/A	
4.5 Total RPv runoff reduction (%)	0%		N/A		N/A		N/A		N/A	
4.6 Adjusted CN after all reductions*	80.72		N/A		N/A		N/A		N/A	
4.7 Adjusted equivalent annual runoff (in.)	18.90		N/A		N/A		N/A		N/A	
4.8 RPv Compliance Met Through Runoff Reduction?	NO		N/A		N/A		N/A		N/A	
4.9 Runoff Reduction Credit, if Applicable (cu.ft)	N/A		N/A		N/A		N/A		N/A	
Step 5 - Determine Residual Volume to be Managed or Offset										
5.1 RPv Residual Volume (in.)	0.30		N/A		N/A		N/A		N/A	
5.2 RPv Residual Volume (cu.ft./ac)	1,094		N/A		N/A		N/A		N/A	
5.3 Residual Volume to be Managed or Offset (cu.ft.)	1,794		N/A		N/A		N/A		N/A	
5.4 RPv avg. discharge rate for 48-hr detention (cfs)	0.010		N/A		N/A		N/A		N/A	
5.5 RPv max. discharge rate for 48-hr detention (cfs)	0.052		N/A		N/A		N/A		N/A	

***NOTE: No additional runoff reduction credit can be taken for surface recharge practices once the "Adjusted CN after all reductions" (Step 4.6) reaches the equivalent CN for the native soil-cover condition of the BMP footprint itself (i.e. for Sheet Flow to Turf Filter Strip on B soils Step 4.6 cannot be below 61). If this occurs contact the DNREC – SSP for further guidance**

PROJECT: 2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID: RGM - 4
TMDL WATERSHED: Indian River Bay

TOTAL MAXIMUM DAILY LOAD (TMDL) WORKSHEET

	BMP 1				BMP 2				BMP 3				BMP 4				BMP 5			
	Type:	0-No BMP			Type:	--			Type:	--			Type:	--			Type:	--		
Step 1 - Calculate Annual Runoff Volume	Data	TN	TP	TSS	Data	TN	TP	TSS	Data	TN	TP	TSS	Data	TN	TP	TSS	Data	TN	TP	TSS
1.1 Total contributing area to BMP (ac)	1.64																			
1.2 Initial RCN	81																			
1.3 Annual runoff volume (in.)	18.91																			
1.4 Annual runoff volume (liters)	3.19E+06																			
Step 2 - Calculate Annual Pollutant Load																				
2.1 EMC (mg/L)		2.80	0.49	90		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
2.2 Load (mg/yr)		8.93E+06	1.56E+06	2.87E+08		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
2.3 Stormwater Load (lb/ ac/yr)		12.00	2.10	386		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
Step 3 - Adjust for Pollutant Reduction																				
3.1 BMP annual runoff reduction (%)	0%				N/A				N/A				N/A				N/A			
3.2 Adjusted annual runoff volume (in)	18.90				N/A				N/A				N/A				N/A			
3.3 Adjusted annual runoff volume (liters)	3.19E+06				N/A				N/A				N/A				N/A			
3.4 Adjusted load from annual reductions (lb/ac/yr)		11.99	2.10	385.51		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
3.5 BMP removal efficiency (%)		0%	0%	0%		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
3.6 BMP effluent concentration (mg/L)		2.80	0.49	90.00		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
3.7 Final Adjusted load (lb/ ac/yr)		11.99	2.10	386		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
Step 4 - Pollutant Reduction Met? *(For Informational Purposes)*																				
4.1 TMDL (lb/ac/yr)		5.70	0.23	N/A																
4.2 Reduction met?		NO	NO	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A
4.3 Final Adjusted Load (lb/yr)		19.67	3.44	632		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A

PROJECT: 2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID: RGM - 4
LOCATION (County): Sussex

CONVEYANCE EVENT (Cv) WORKSHEET

	BMP 1		BMP 2		BMP 3		BMP 4		BMP 5	
	Type:	0-No BMP	Type:	--	Type:	--	Type:	--	Type:	--
Step 1 - Calculate Initial Cv	Data		Data		Data		Data		Data	
1.1 Total contributing area to BMP (ac)	1.64		1.64		1.64		1.64		1.64	
1.2 Initial RCN	80.73									
1.3 10-Year Rainfall (in.)	5.3									
1.4 Cv runoff volume (in.)	3.23									
Step 2 - Adjust for Retention Reduction										
2.1 Storage volume (cu. ft.)	0.00		N/A		N/A		N/A		N/A	
2.2 Storage volume (ac-ft)	0.00		N/A		N/A		N/A		N/A	
2.3 Storage volume (in.)	0.00		N/A		N/A		N/A		N/A	
2.4 Runoff volume after reduction (in.)	3.23		N/A		N/A		N/A		N/A	
2.5 CN*	80.73		N/A		N/A		N/A		N/A	
Step 3 - Adjust for Annual Runoff Reduction										
3.1 Runoff reduction allowance (%)	0%		N/A		N/A		N/A		N/A	
3.2 Annual runoff after reduction (in.)	3.23		N/A		N/A		N/A		N/A	
3.3 Adjusted ACN	80.73		N/A		N/A		N/A		N/A	
3.4 Event-based runoff reduction (in.)	0.00		N/A		N/A		N/A		N/A	
Step 4 - Calculate Cv with BMP Reductions										
4.1 Cv runoff volume after all reductions (in.)	3.23		N/A		N/A		N/A		N/A	
4.2 Total Cv runoff reduction (%)	0%		N/A		N/A		N/A		N/A	
4.3 Adjusted RCN for H&H modeling	80.73		N/A		N/A		N/A		N/A	

PROJECT: 2022235.00 DSP - Troop 4 - EVOC
DRAINAGE SUBAREA ID: RGM - 4
LOCATION (County): Sussex

FLOODING EVENT (Fv) WORKSHEET

	BMP 1		BMP 2		BMP 3		BMP 4		BMP 5	
	Type:	0-No BMP	Type:	--	Type:	--	Type:	--	Type:	--
Step 1 - Calculate Initial Fv	Data		Data		Data		Data		Data	
1.1 Total contributing area to BMP (ac)	1.64		1.64		1.64		1.64		1.64	
1.2 Initial RCN	80.73									
1.3 100-Year Rainfall (in.)	9.2									
1.4 Fv runoff volume (in.)	6.85									
Step 2 - Adjust for Retention Reduction										
2.1 Storage volume (cu. ft.)	0.00		N/A		N/A		N/A		N/A	
2.2 Storage volume (ac-ft)	0.00		N/A		N/A		N/A		N/A	
2.3 Storage volume (in.)	0.00		N/A		N/A		N/A		N/A	
2.4 Runoff volume after reduction (in.)	6.85		N/A		N/A		N/A		N/A	
2.5 CN*	80.73		N/A		N/A		N/A		N/A	
Step 3 - Adjust for Annual Runoff Reduction										
3.1 Runoff reduction allowance (%)	0%		N/A		N/A		N/A		N/A	
3.2 Annual runoff after reduction (in.)	6.85		N/A		N/A		N/A		N/A	
3.3 Adjusted ACN	80.73		N/A		N/A		N/A		N/A	
3.4 Event-based runoff reduction (in.)	0.00		N/A		N/A		N/A		N/A	
Step 4 - Calculate Fv with BMP Reductions										
4.1 Fv runoff volume after all reductions (in.)	6.85		N/A		N/A		N/A		N/A	
4.2 Total Fv runoff reduction (%)	0%		N/A		N/A		N/A		N/A	
4.3 Adjusted RCN for H&H modeling	80.73		N/A		N/A		N/A		N/A	

PROJECT:	2022235.00 DSP - Troop 4 - EVOC		
DRAINAGE SUBAREA ID:	RGM - 4		
COUNTY:	Sussex	**UNIT HYDROGRAPH:**	DMV
TMDL Watershed:	Indian River Bay	**VERSION:**	DURMM v2.51.220414

DURMM OUTPUT WORKSHEET

Site Data

Contributing Area to BMPs (ac.)	1.64				
C.A. RCN	80.73				
Subarea LOD (ac.)	1.64				
Subarea RCN	80.73				
Upstream Subarea ID	N/A	N/A	N/A	N/A	
Upstream Subarea LOD (ac.)	0.00	0.00	0.00	0.00	
Combined LOD with Upstream Areas (ac.)	1.64				
Combined RCN with Upstream Areas (ac.)	80.73				
Watershed TMDL-TN (lb/ac/yr)	5.70				
Watershed TMDL-TP (lb/ac/yr)	0.23				
Watershed TMDL-TSS (lb/ac/yr)	N/A				

BMP Data

	BMP 1	BMP 2	BMP 3	BMP 4	BMP 5
	0-No BMP	--	--	--	--
RPv runoff volume after all reductions (in.)	1.34	N/A	N/A	N/A	N/A
Total RPv runoff reduction (in.)	0.00	N/A	N/A	N/A	N/A
Total RPv runoff reduction (%)	0%	N/A	N/A	N/A	N/A
RPv Compliance Met Through Runoff Reduction?	NO	N/A	N/A	N/A	N/A
RPv Residual Volume (cu. ft.)	1,794	N/A	N/A	N/A	N/A
Adjusted pollutant load, TN (lb/ac/yr)	11.99	N/A	N/A	N/A	N/A
Adjusted pollutant load, TP (lb/ac/yr)	2.10	N/A	N/A	N/A	N/A
Adjusted pollutant load, TSS (lb/ac/yr)	385.51	N/A	N/A	N/A	N/A
Cv runoff volume after all reductions (in.)	3.23	N/A	N/A	N/A	N/A
Fv runoff volume after all reductions (in.)	6.85	N/A	N/A	N/A	N/A

Resource Protection Event (RPV)

RPv for Contributing Area (in.)	1.34		
Annual Runoff for Contributing Area (in.)	18.91		
Req'd RPv to be Managed for Contributing Area (in.)	0.30		
Req'd RPv to be Managed for Contributing Area (%)	22%		
RPv Runoff Management Required (cu. Ft.)	1794		
RPv Runoff Management Provided (cu. Ft.)	0		
RPv Residual Volume (cu.ft.)	1794	SHORTFALL	(Requires additional management or offset)
C.A. RPv avg. discharge rate (cfs)	0.01		
C.A. RPv max. discharge rate (cfs)	0.05		
TN Pollutant Load (lb/yr)	19.67		
TP Pollutant Load (lb/yr)	3.44		
TSS Pollutant Load (lb/yr)	632		

Conveyance Event (Cv)

Cv runoff volume (in.)	3.23
Adjusted RCN for H&H Modeling (CN*)	80.73

Flooding Event (Fv)

Fv runoff volume (in.)	6.85
Equivalent RCN for H&H Modeling (CN*)	80.73

Adjusted Subarea Data for Downstream DURMM Modeling

Subarea ID	RGM - 4
Contributing Area (ac.)	1.64
Weighted Target Runoff (in.)	1.04
Adjusted CN after all reductions	80.72
Adjusted RPv (in.)	1.34
Adjusted Cv (in.)	3.23
Adjusted Fv (in.)	6.85

Adjusted Subarea Data for Nutrient Protocol Modeling

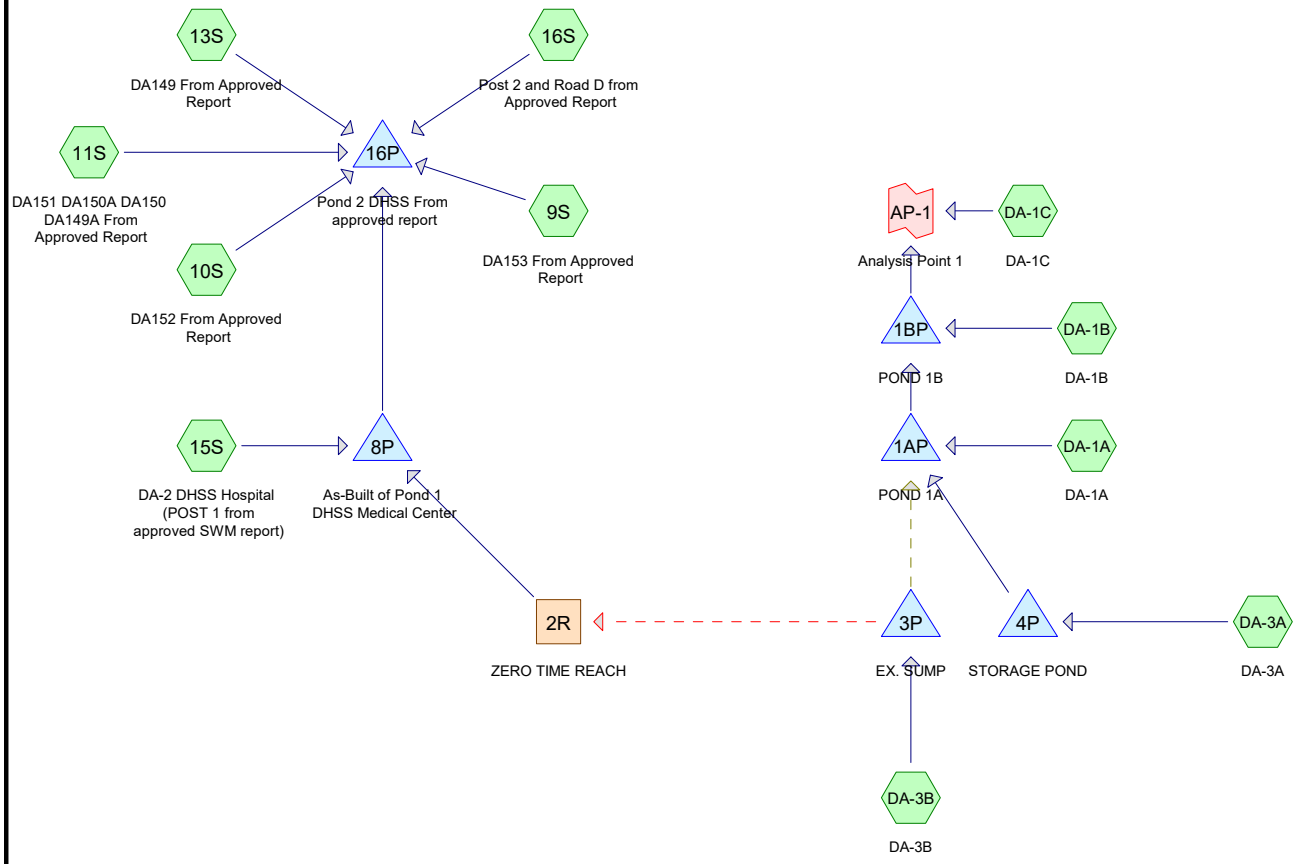
Contributing Area (ac.)	1.64
LOD Area (ac.)	1.64
TN Pollutant Load (lb/yr)	19.67
TP Pollutant Load (lb/yr)	3.44
TSS Pollutant Load (lb/yr)	632
Percent Impervious Cover	71%

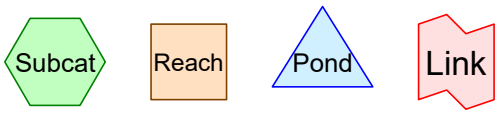
Adjusted Subarea Data for the Summary Table for Sub-Areas Draining to a Common Point of Interest

Subarea ID	RGM - 4		
Contributing Area (ac.)	1.64		
RPv Residual Volume (cu.ft.)	1794	SHORTFALL	(Requires additional management or offset)
Adjusted CN after all reductions	80.72		
Cv RCN for H&H Modeling	80.73		
Fv RCN for H&H Modeling	80.73		
TN Pollutant Load (lb/yr)	19.67		
TP Pollutant Load (lb/yr)	3.44		
TSS Pollutant Load (lb/yr)	632		

Appendix C: HydroCAD Reports

Post-Developed
Runoff Protection Event (RPv) Calculations





Routing Diagram for 202223500-POST-EVOC
Prepared by Becker Morgan Group, Inc, Printed 7/22/2026
HydroCAD® 10.20-9a s/n 01093 © 2026 HydroCAD Software Solutions LLC

Summary for Subcatchment 9S: DA153 From Approved Report

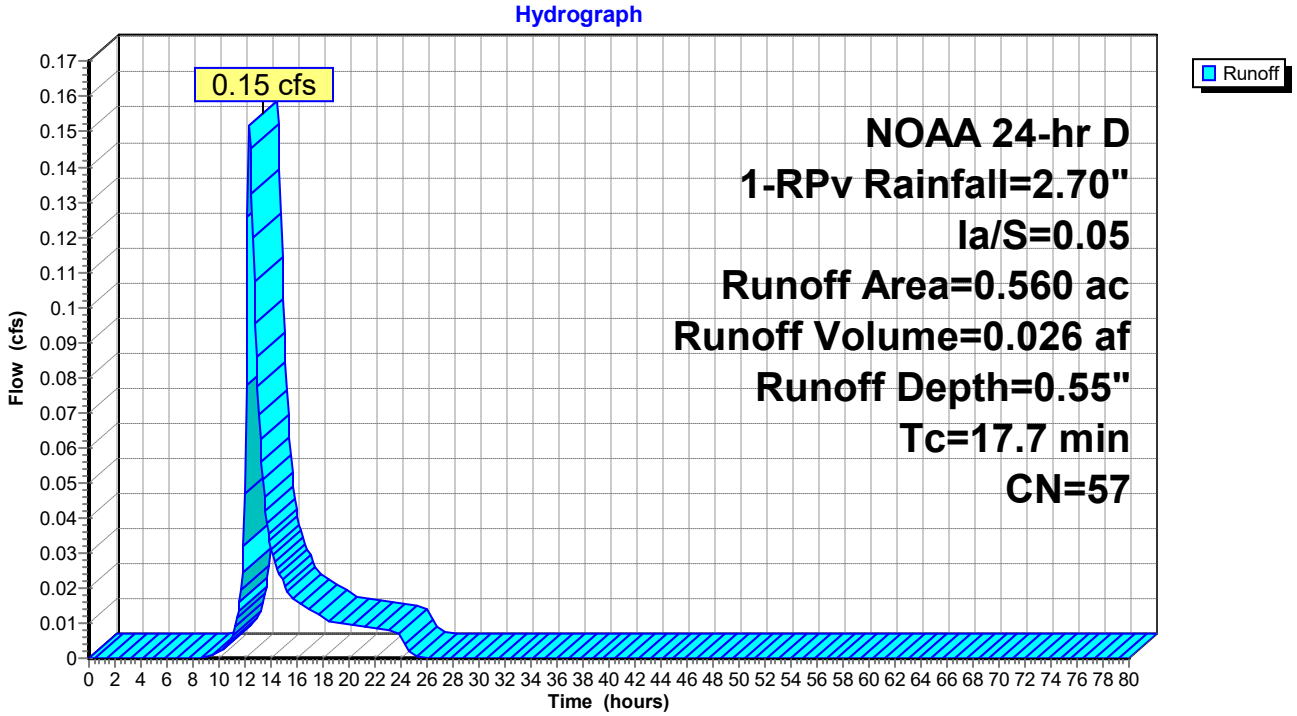
Runoff = 0.15 cfs @ 12.33 hrs, Volume= 0.026 af, Depth= 0.55"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

	Area (ac)	CN	Description
*	0.560	57	DA153
	0.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7					**Direct Entry,**

Subcatchment 9S: DA153 From Approved Report



Summary for Subcatchment 10S: DA152 From Approved Report

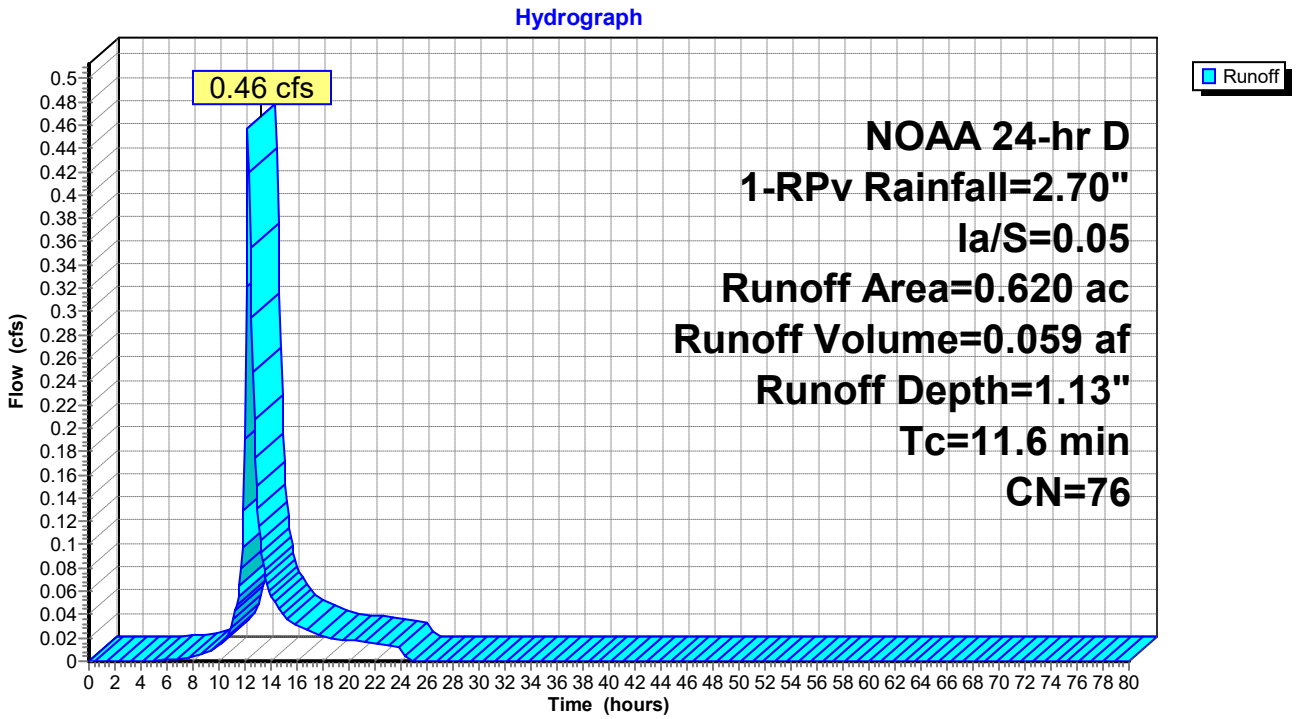
Runoff = 0.46 cfs @ 12.23 hrs, Volume= 0.059 af, Depth= 1.13"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

	Area (ac)	CN	Description
*	0.620	76	
	0.620		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6					**Direct Entry,**

Subcatchment 10S: DA152 From Approved Report



Summary for Subcatchment 11S: DA151 DA150A DA150 DA149A From Approved Report

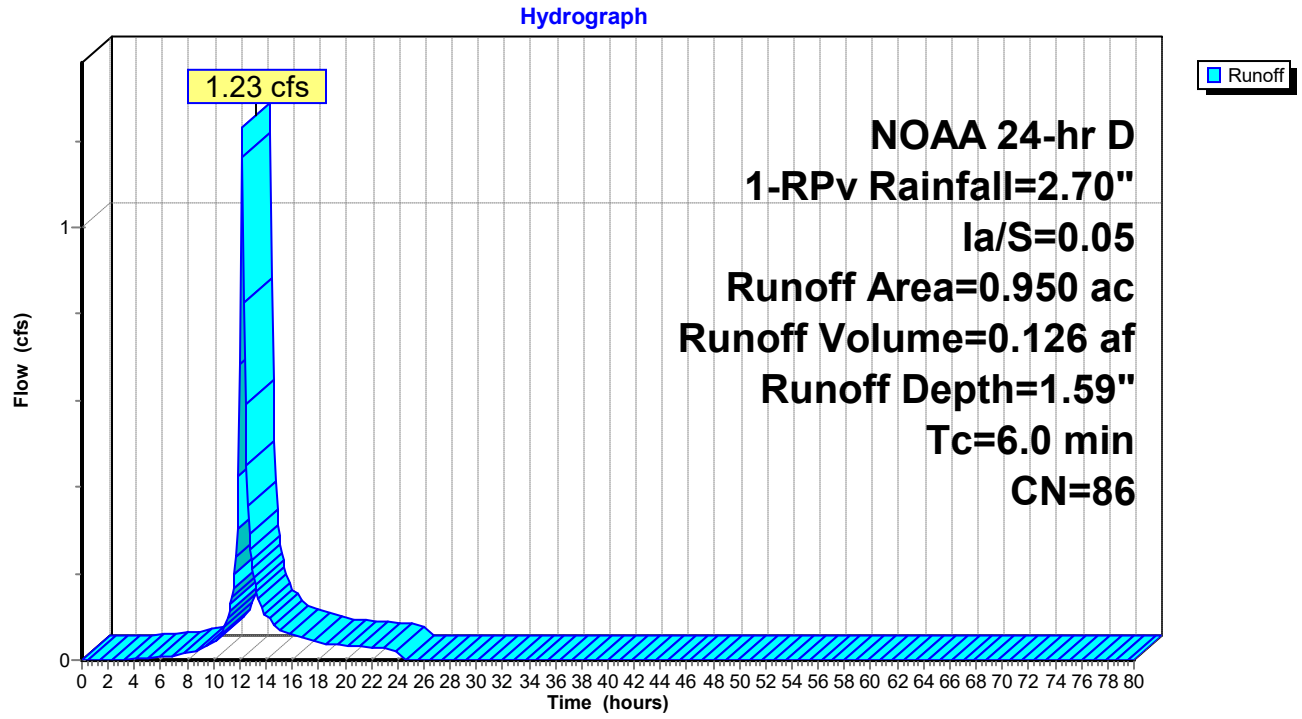
Runoff = 1.23 cfs @ 12.15 hrs, Volume= 0.126 af, Depth= 1.59"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

	Area (ac)	CN	Description
*	0.360	90	DA-151
*	0.150	78	DA-150A
*	0.290	88	DA-150
*	0.150	78	DA-149A
	0.950	86	Weighted Average
	0.950		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: DA151 DA150A DA150 DA149A From Approved Report



Summary for Subcatchment 13S: DA149 From Approved Report

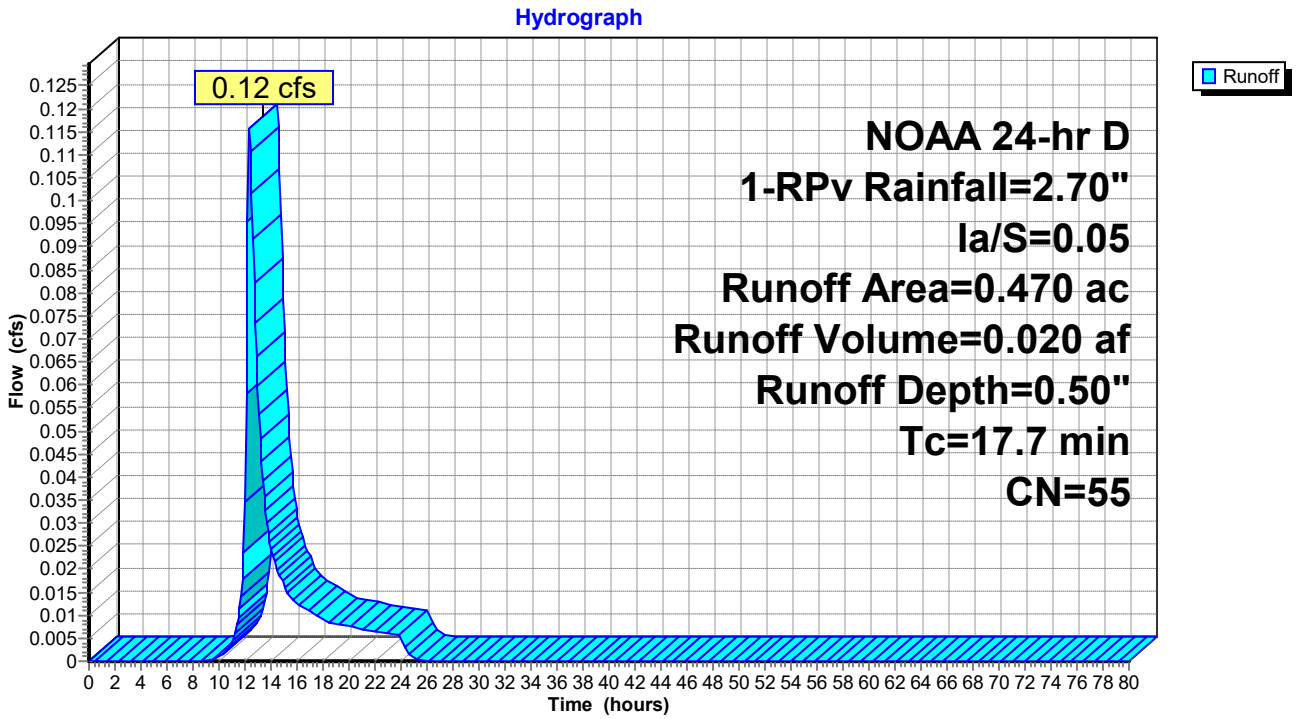
Runoff = 0.12 cfs @ 12.33 hrs, Volume= 0.020 af, Depth= 0.50"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

	Area (ac)	CN	Description
*	0.470	55	
	0.470		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7					**Direct Entry,**

Subcatchment 13S: DA149 From Approved Report



Summary for Subcatchment 15S: DA-2 DHSS Hospital (POST 1 from approved SWM report)

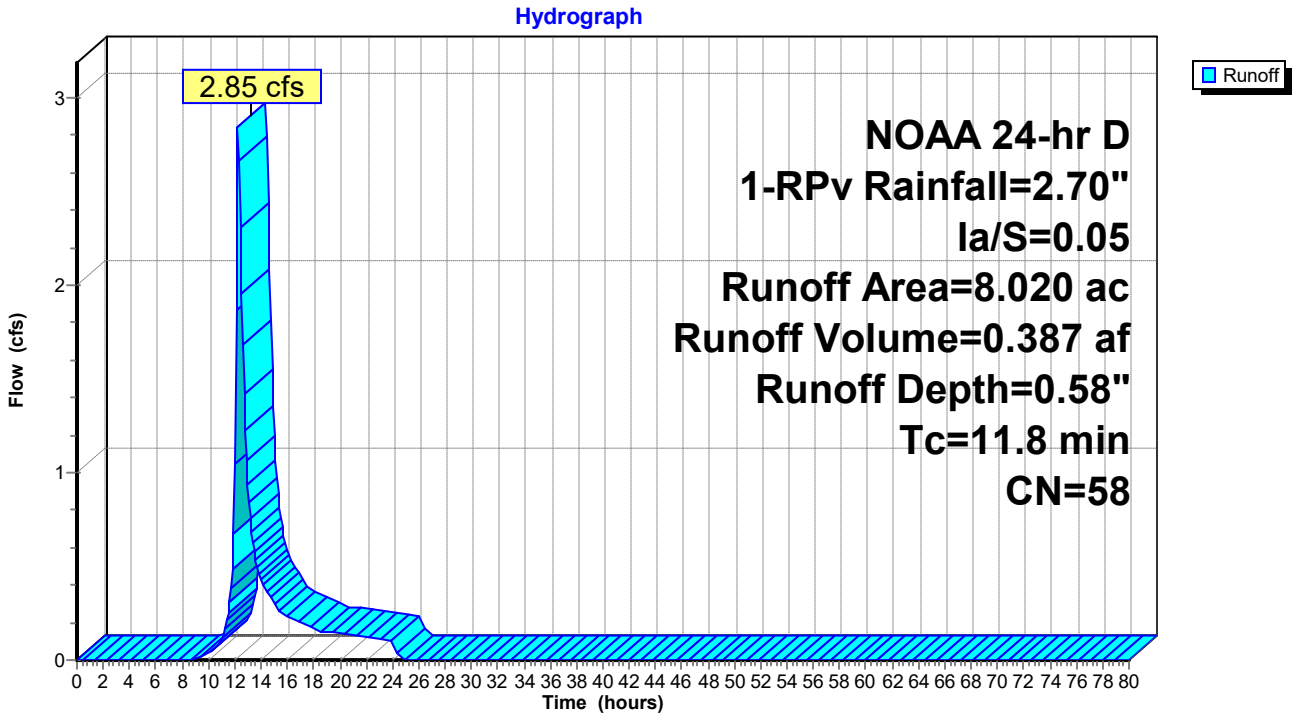
Runoff = 2.85 cfs @ 12.24 hrs, Volume= 0.387 af, Depth= 0.58"
Routed to Pond 8P : As-Built of Pond 1 DHSS Medical Center

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

	Area (ac)	CN	Description
	2.560	98	Paved parking, HSG A
	5.390	39	>75% Grass cover, Good, HSG A
*	0.070	98	PR. Paved parking, HSG A
	8.020	58	Weighted Average
	5.390		67.21% Pervious Area
	2.630		32.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8					**Direct Entry,**

Subcatchment 15S: DA-2 DHSS Hospital (POST 1 from approved SWM report)



Summary for Subcatchment 16S: Post 2 and Road D from Approved Report

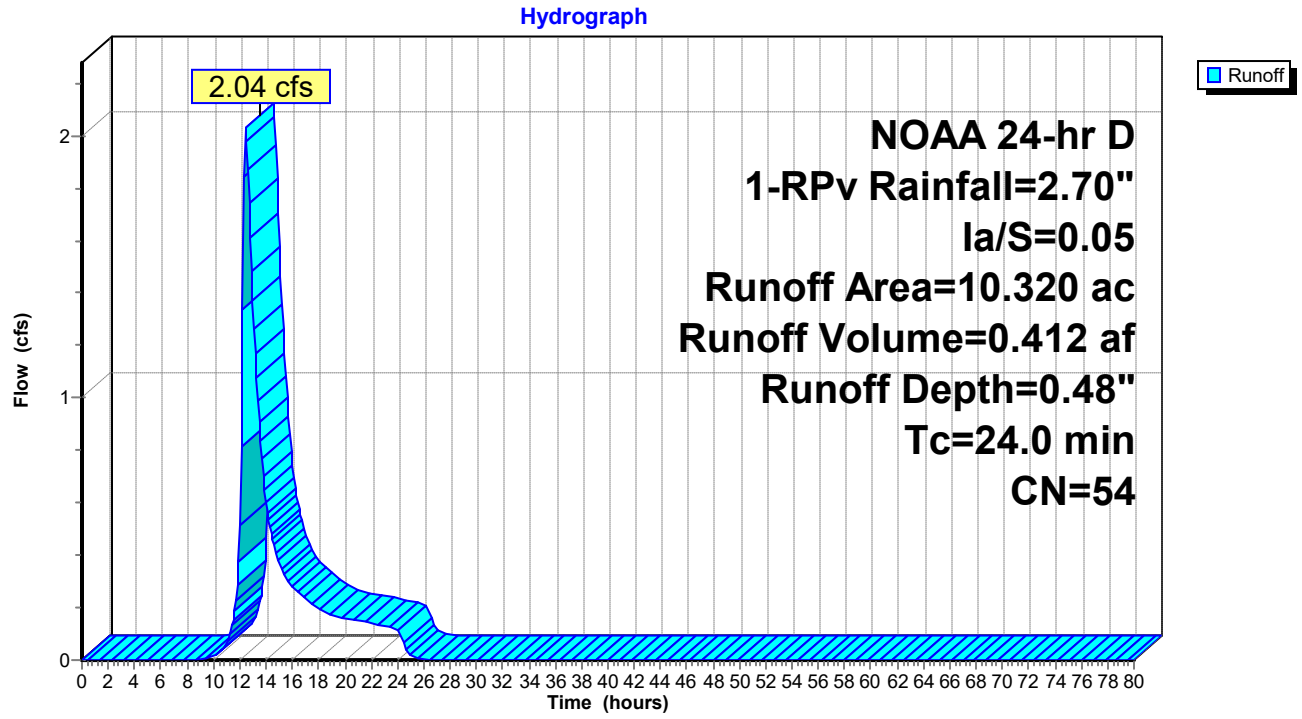
Runoff = 2.04 cfs @ 12.43 hrs, Volume= 0.412 af, Depth= 0.48"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (ac)	CN	Description
2.800	98	Water Surface, HSG A
1.190	30	Woods, Good, HSG A
6.330	39	>75% Grass cover, Good, HSG A
10.320	54	Weighted Average
7.520		72.87% Pervious Area
2.800		27.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0					**Direct Entry, From Approved Report**

Subcatchment 16S: Post 2 and Road D from Approved Report



Summary for Subcatchment DA-1A: DA-1A

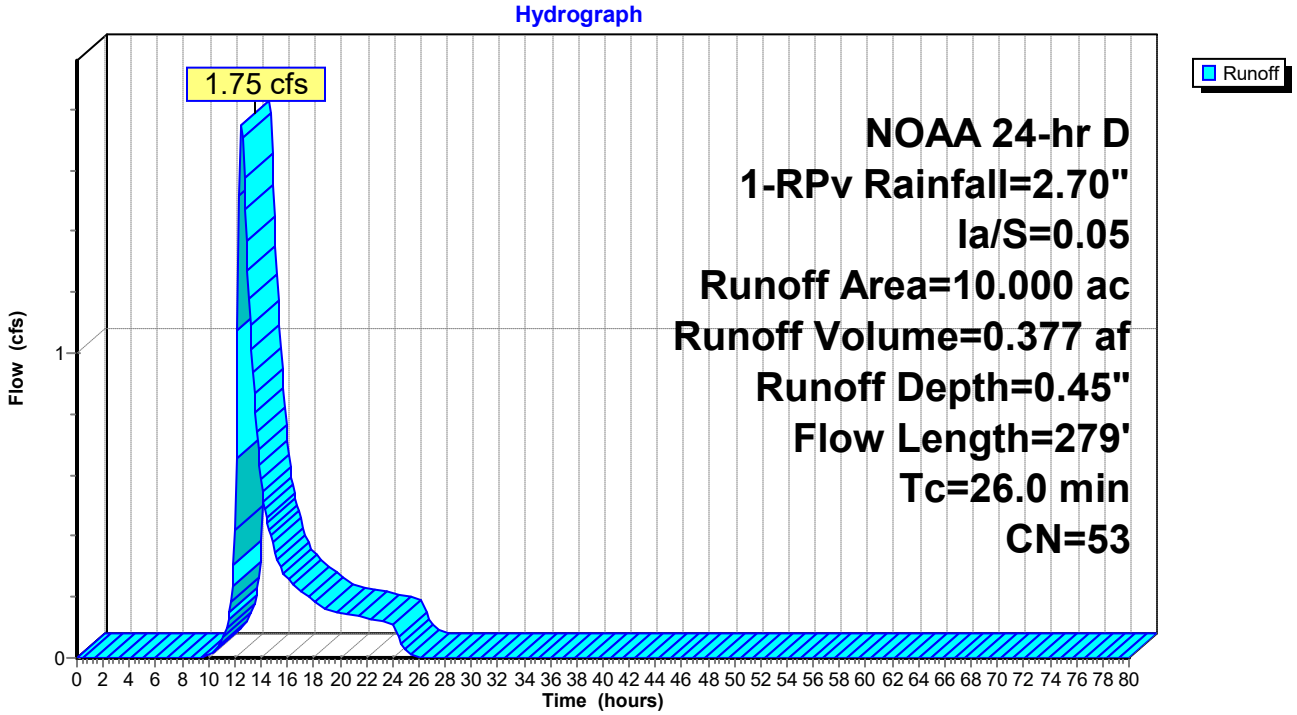
Runoff = 1.75 cfs @ 12.46 hrs, Volume= 0.377 af, Depth= 0.45"
Routed to Pond 1AP : POND 1A

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (ac)	CN	Description
2.330	98	Paved parking, HSG A
7.670	39	>75% Grass cover, Good, HSG A
10.000	53	Weighted Average
7.670		76.70% Pervious Area
2.330		23.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.4	100	0.0060	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.40"
3.6	179	0.0140	0.83		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
26.0	279	Total			

Subcatchment DA-1A: DA-1A



Summary for Subcatchment DA-1B: DA-1B

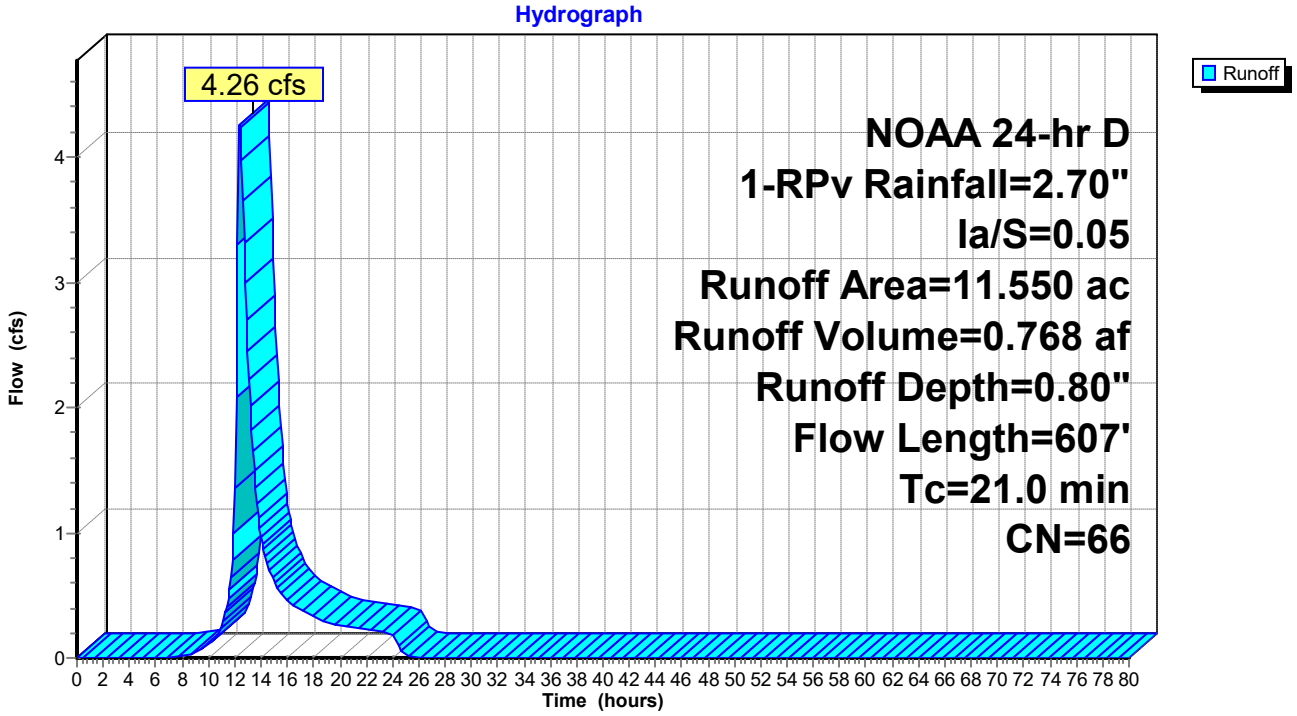
Runoff = 4.26 cfs @ 12.37 hrs, Volume= 0.768 af, Depth= 0.80"
Routed to Pond 1BP : POND 1B

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (ac)	CN	Description
5.380	98	Paved parking, HSG A
6.070	39	>75% Grass cover, Good, HSG A
0.100	30	Woods, Good, HSG A
11.550	66	Weighted Average
6.170		53.42% Pervious Area
5.380		46.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0163	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.40"
4.1	160	0.0086	0.65		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.5	253	0.0025	2.85	3.50	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.4	94	0.0031	3.91	6.91	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011 Concrete pipe, straight & clean
21.0	607	Total			

Subcatchment DA-1B: DA-1B



Summary for Subcatchment DA-1C: DA-1C

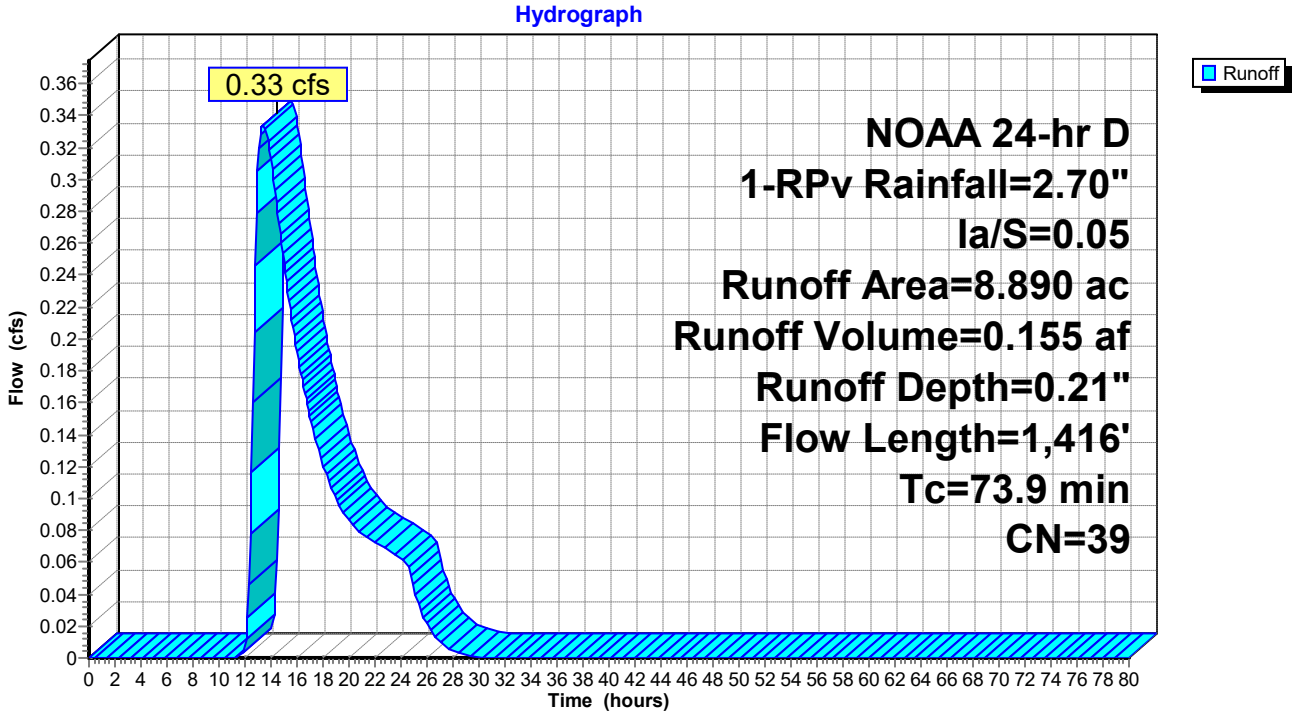
Runoff = 0.33 cfs @ 13.43 hrs, Volume= 0.155 af, Depth= 0.21"
Routed to Link AP-1 : Analysis Point 1

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (ac)	CN	Description
8.630	39	>75% Grass cover, Good, HSG A
0.230	30	Woods, Good, HSG A
0.030	98	Paved parking, HSG A
8.890	39	Weighted Average
8.860		99.66% Pervious Area
0.030		0.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.1	100	0.0050	0.07		**Sheet Flow, Flow Path A** Grass: Dense n= 0.240 P2= 3.40"
11.2	279	0.0035	0.41		**Shallow Concentrated Flow, Flow Path B** Short Grass Pasture Kv= 7.0 fps
13.3	457	0.0067	0.57		**Shallow Concentrated Flow, Flow Path C** Short Grass Pasture Kv= 7.0 fps
9.8	169	0.0017	0.29		**Shallow Concentrated Flow, Flow Path D** Short Grass Pasture Kv= 7.0 fps
12.3	296	0.0033	0.40		**Shallow Concentrated Flow, Flow Path E** Short Grass Pasture Kv= 7.0 fps
3.2	115	0.0071	0.59		**Shallow Concentrated Flow, Flow Path F** Short Grass Pasture Kv= 7.0 fps
73.9	1,416	Total			

Subcatchment DA-1C: DA-1C



Summary for Subcatchment DA-3A: DA-3A

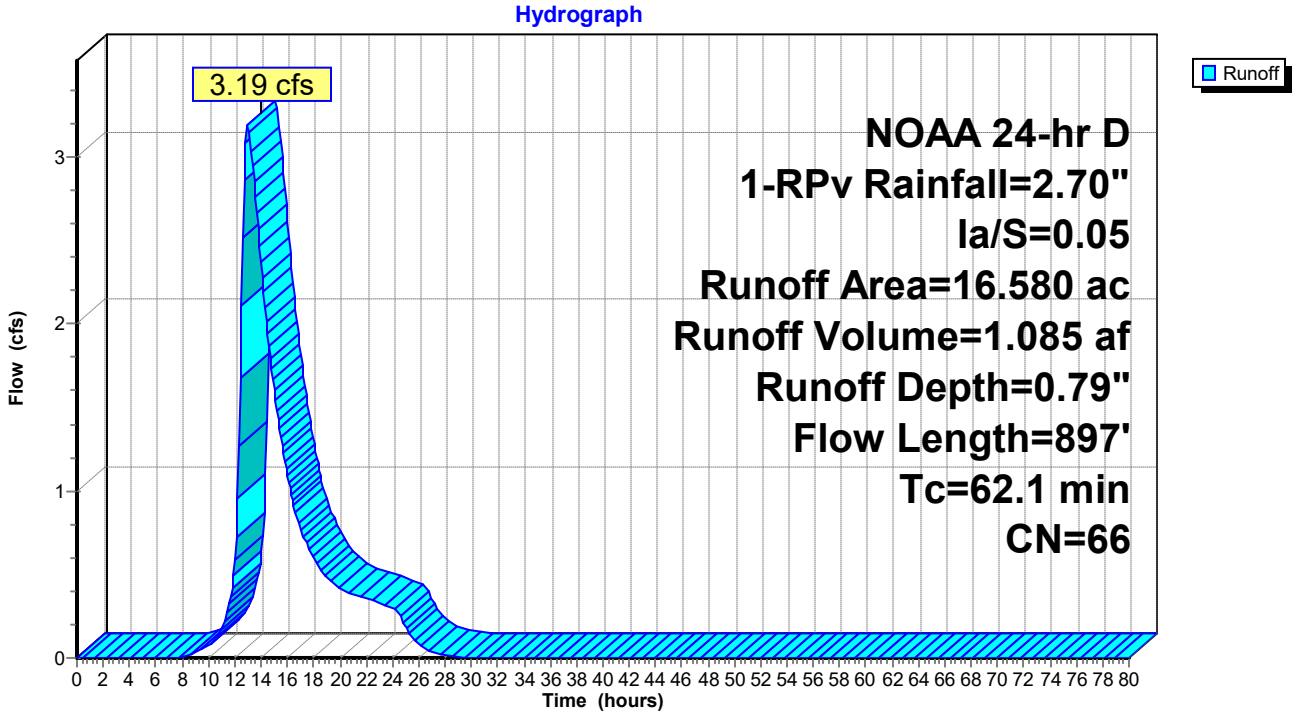
Runoff = 3.19 cfs @ 12.98 hrs, Volume= 1.085 af, Depth= 0.79"
Routed to Pond 4P : STORAGE POND

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (ac)	CN	Description
7.950	98	Paved parking, HSG A
5.550	39	>75% Grass cover, Good, HSG A
3.080	32	Woods/grass comb., Good, HSG A
16.580	66	Weighted Average
8.630		52.05% Pervious Area
7.950		47.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.1	100	0.0080	0.06		**Sheet Flow, Flow Path A** Woods: Light underbrush n= 0.400 P2= 3.40"
29.9	397	0.0010	0.22		**Shallow Concentrated Flow, Flow Path B** Short Grass Pasture Kv= 7.0 fps
2.1	400	0.0076	3.14	31.35	**Trap/Vee/Rect Channel Flow, Flow Path C** Bot.W=4.00' D=1.00' Z= 6.0 '/' Top.W=16.00' n= 0.030 Earth, grassed & winding
62.1	897	Total			

Subcatchment DA-3A: DA-3A



Summary for Subcatchment DA-3B: DA-3B

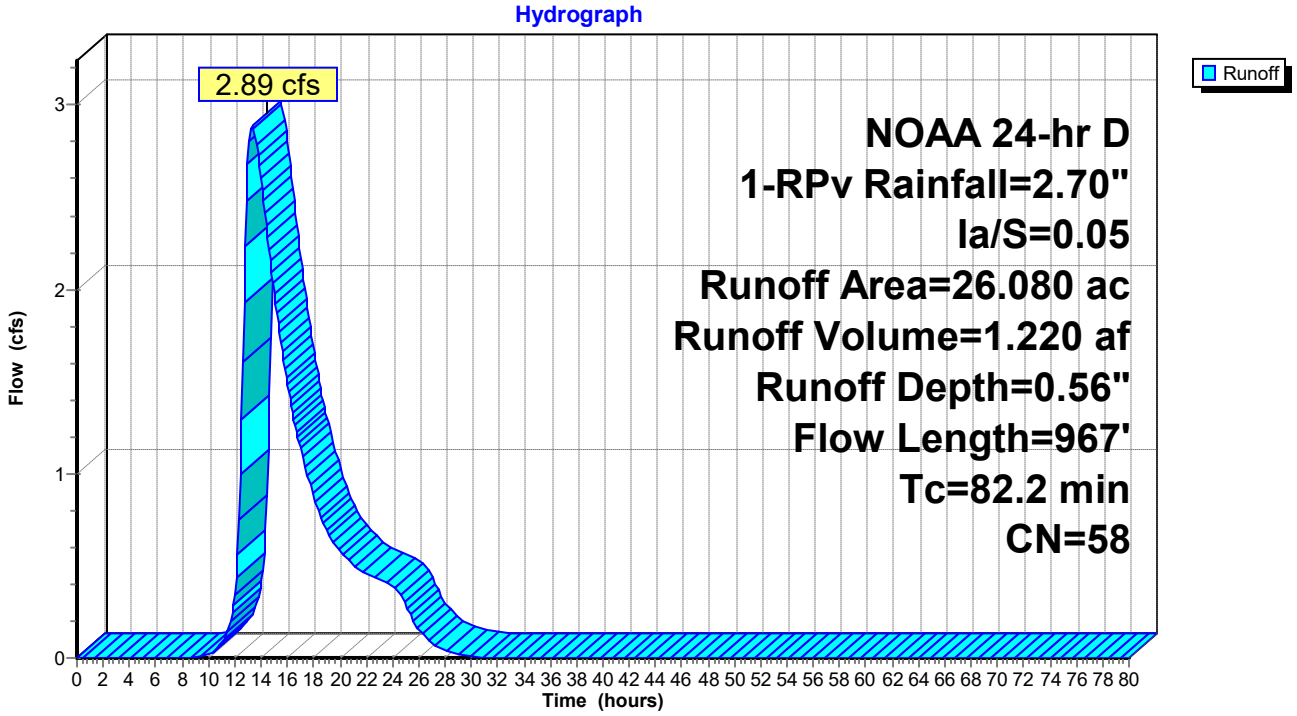
Runoff = 2.89 cfs @ 13.33 hrs, Volume= 1.220 af, Depth= 0.56"
Routed to Pond 3P : EX. SUMP

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (ac)	CN	Description
1.050	98	Paved parking, HSG A
9.900	39	>75% Grass cover, Good, HSG A
15.130	67	Row crops, straight row, Good, HSG A
26.080	58	Weighted Average
25.030		95.97% Pervious Area
1.050		4.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0080	0.12		**Sheet Flow, Flow Path A** Grass: Short n= 0.150 P2= 3.40"
12.1	312	0.0038	0.43		**Shallow Concentrated Flow, Flow Path B** Short Grass Pasture Kv= 7.0 fps
32.4	236	0.0003	0.12		**Shallow Concentrated Flow, Flow Path C** Short Grass Pasture Kv= 7.0 fps
24.0	319	0.0010	0.22		**Shallow Concentrated Flow, Flow Path C** Short Grass Pasture Kv= 7.0 fps
82.2	967	Total			

Subcatchment DA-3B: DA-3B

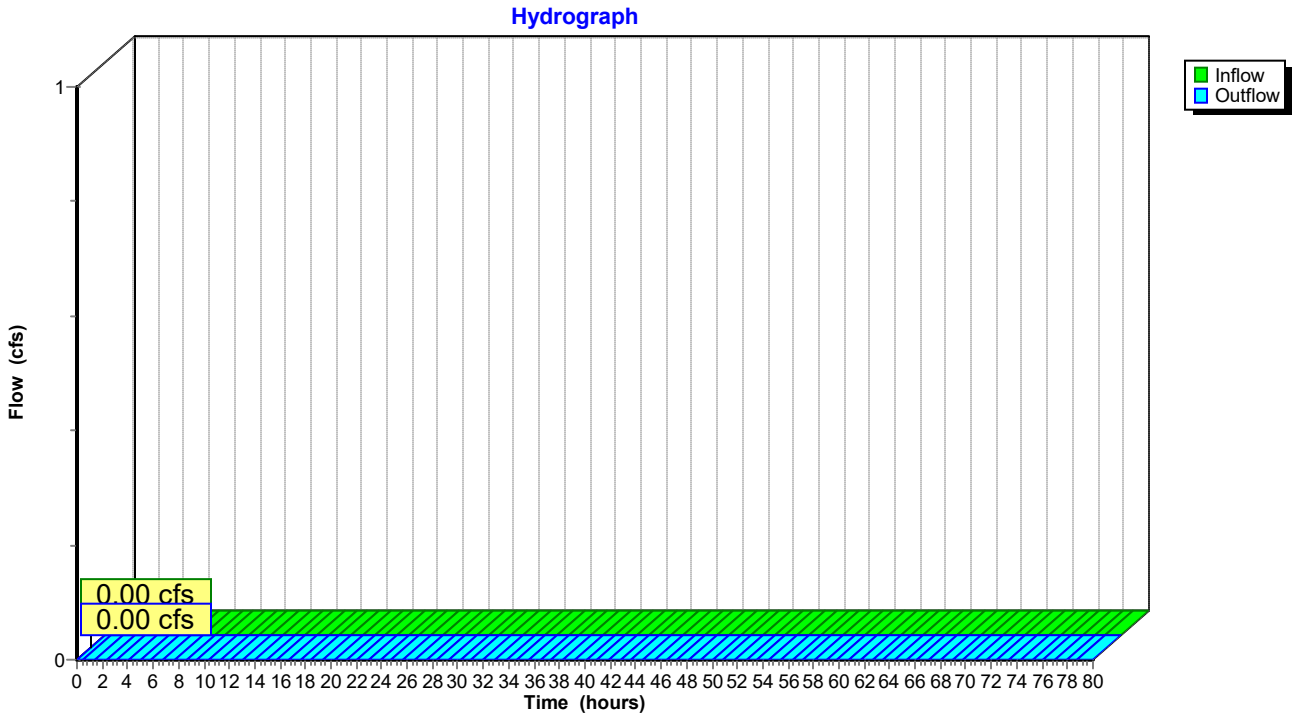


Summary for Reach 2R: ZERO TIME REACH

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 8P : As-Built of Pond 1 DHSS Medical Center

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Reach 2R: ZERO TIME REACH



Summary for Pond 1AP: POND 1A

Inflow Area = 26.580 ac, 38.68% Impervious, Inflow Depth = 0.66" for 1-RPv event
Inflow = 3.34 cfs @ 13.41 hrs, Volume= 1.462 af
Outflow = 2.27 cfs @ 15.10 hrs, Volume= 1.463 af, Atten= 32%, Lag= 101.1 min
Discarded = 0.35 cfs @ 15.10 hrs, Volume= 0.635 af
Primary = 1.92 cfs @ 15.10 hrs, Volume= 0.828 af
Routed to Pond 1BP : POND 1B

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 25.91' @ 15.10 hrs Surf.Area= 11,708 sf Storage= 17,965 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 204.4 min (1,174.1 - 969.6)

Volume	Invert	Avail.Storage	Storage Description
#1	25.00'	53,444 cf	**Custom Stage Data - POND FRONT (Prismatic)** Listed below (Recalc)
#2	25.00'	22,515 cf	**Custom Stage Data - FOREBAY A (Prismatic)** Listed below (Recalc) -Imperv
#3	25.00'	22,839 cf	**Custom Stage Data - Unsuitable Soils SWM-4 (Prismatic)** Listed below (Rec
		98,797 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	10,276	0	0
26.00	11,846	11,061	11,061
27.00	13,340	12,593	23,654
28.00	14,892	14,116	37,770
29.00	16,455	15,674	53,444

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	4,063	0	0
26.00	4,813	4,438	4,438
27.00	5,600	5,207	9,645
28.00	6,426	6,013	15,658
29.00	7,289	6,858	22,515

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	3,913	0	0
26.00	4,768	4,341	4,341
27.00	5,672	5,220	9,561
28.00	6,626	6,149	15,710
29.00	7,632	7,129	22,839

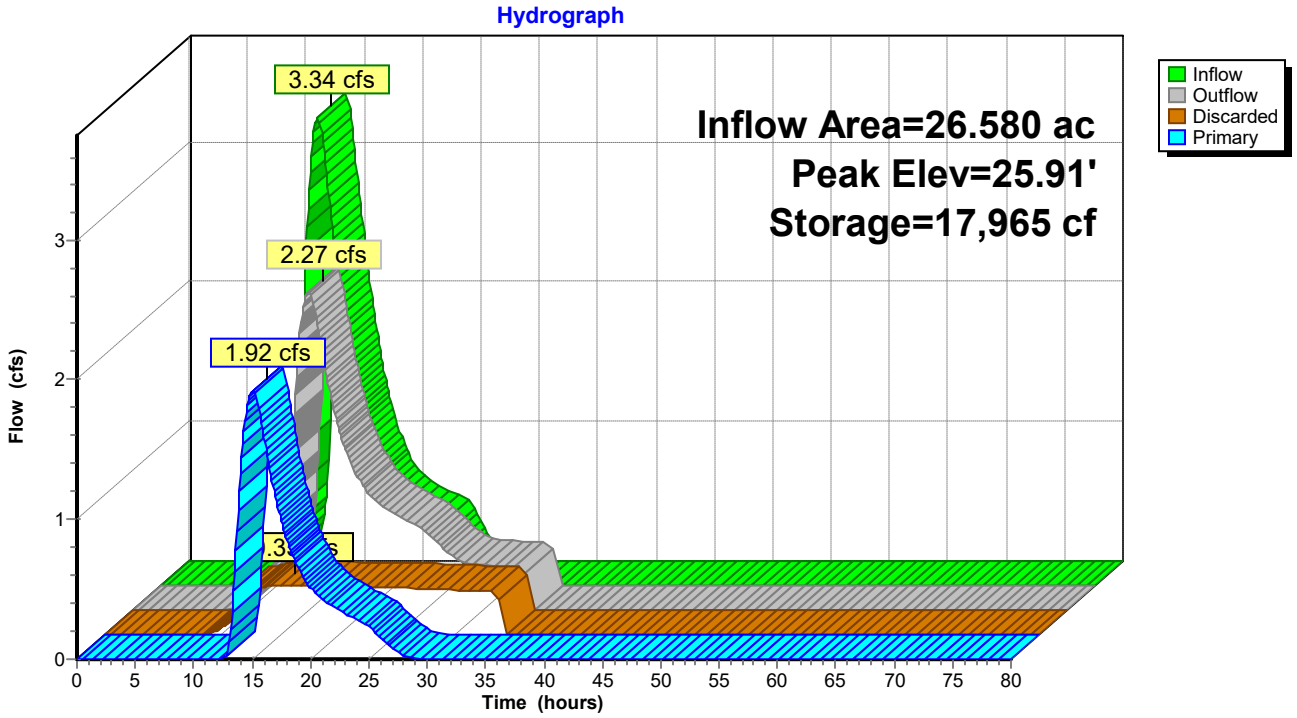
Device	Routing	Invert	Outlet Devices
#1	Discarded	25.00'	**1.300 in/hr Exfiltration over Surface area**
#2	Primary	25.26'	**30.0" Round Culvert**
			L= 105.0' RCP, sq.cut end projecting, Ke= 0.500
			Inlet / Outlet Invert= 25.26' / 25.00' S= 0.0025 '/' Cc= 0.900

n= 0.011 Concrete pipe, straight & clean, Flow Area= 4.91 sf

Discarded OutFlow Max=0.35 cfs @ 15.10 hrs HW=25.91' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.35 cfs)

Primary OutFlow Max=1.92 cfs @ 15.10 hrs HW=25.91' TW=25.46' (Dynamic Tailwater)
2=Culvert (Barrel Controls 1.92 cfs @ 2.84 fps)

Pond 1AP: POND 1A



Summary for Pond 1BP: POND 1B

Inflow Area = 38.130 ac, 41.07% Impervious, Inflow Depth = 0.50" for 1-RPv event
Inflow = 4.26 cfs @ 12.37 hrs, Volume= 1.596 af
Outflow = 1.14 cfs @ 18.11 hrs, Volume= 1.597 af, Atten= 73%, Lag= 344.6 min
Discarded = 1.14 cfs @ 18.11 hrs, Volume= 1.597 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link AP-1 : Analysis Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 25.63' @ 18.11 hrs Surf.Area= 30,741 sf Storage= 24,568 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 227.6 min (1,199.4 - 971.8)

Volume	Invert	Avail.Storage	Storage Description
#1	25.00'	149,049 cf	**Custom Stage Data - POND REAR (Prismatic)** Listed below (Recalc)
#2	25.00'	17,869 cf	**Custom Stage Data - FOREBAY C (Prismatic)** Listed below (Recalc) -Imperv
#3	25.00'	4,471 cf	**Custom Stage Data - FOREBAY D (Prismatic)** Listed below (Recalc) -Imperv
#4	25.00'	28,077 cf	**Custom Stage Data - Unsuitable soils Boring SWM-9 (Prismatic)** Listed belo
		199,465 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	27,738	0	0
26.00	32,484	30,111	30,111
27.00	37,247	34,866	64,977
28.00	42,032	39,640	104,616
29.00	46,834	44,433	149,049

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	3,039	0	0
26.00	3,710	3,375	3,375
27.00	4,429	4,070	7,444
28.00	5,200	4,815	12,259
29.00	6,021	5,611	17,869

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	654	0	0
26.00	865	760	760
27.00	1,099	982	1,742
28.00	1,358	1,229	2,970
29.00	1,643	1,501	4,471

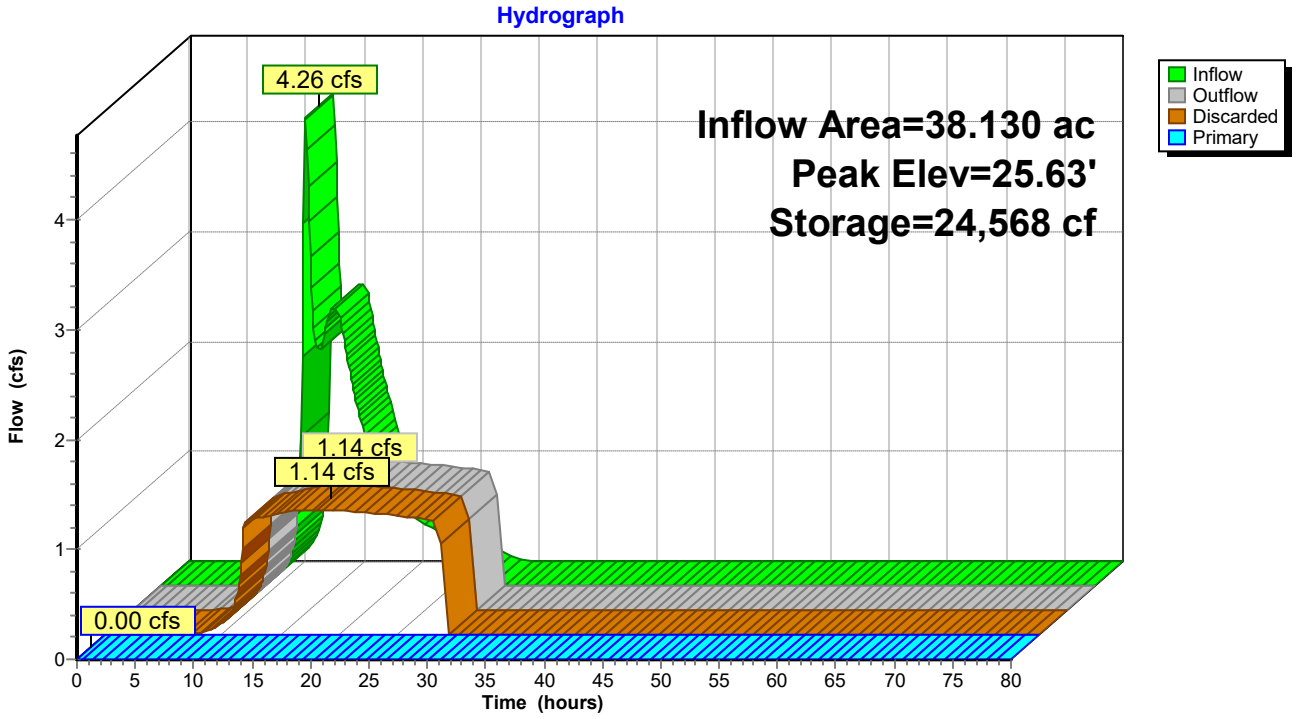
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	5,353	0	0
26.00	6,180	5,767	5,767
27.00	7,015	6,598	12,364
28.00	7,853	7,434	19,798
29.00	8,704	8,279	28,077

Device	Routing	Invert	Outlet Devices
#1	Discarded	25.00'	**1.600 in/hr Exfiltration over Surface area**
#2	Primary	28.00'	**15.0' long + 10.0 '/' SideZ x 24.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Discarded OutFlow Max=1.14 cfs @ 18.11 hrs HW=25.63' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 1.14 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=25.00' TW=0.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1BP: POND 1B



Summary for Pond 3P: EX. SUMP

Inflow Area = 26.080 ac, 4.03% Impervious, Inflow Depth = 0.56" for 1-RPv event
Inflow = 2.89 cfs @ 13.33 hrs, Volume= 1.220 af
Outflow = 2.26 cfs @ 14.54 hrs, Volume= 1.191 af, Atten= 22%, Lag= 72.5 min
Primary = 2.26 cfs @ 14.54 hrs, Volume= 1.191 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 2R : ZERO TIME REACH
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond 1AP : POND 1A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 30.57' @ 14.54 hrs Surf.Area= 68,435 sf Storage= 9,311 cf

Plug-Flow detention time= 85.4 min calculated for 1.190 af (98% of inflow)
Center-of-Mass det. time= 71.8 min (1,062.8 - 991.0)

Volume	Invert	Avail.Storage	Storage Description
#1	30.30'	487,733 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
30.30	0	0	0
31.00	176,057	61,620	61,620
31.50	423,297	149,839	211,458
32.00	681,802	276,275	487,733

Device	Routing	Invert	Outlet Devices
#1	Primary	27.86'	**18.0" Round Culvert** L= 410.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 27.86' / 26.62' S= 0.0030 '/' Cc= 0.900 n= 0.013 Concrete pipe, straight & clean, Flow Area= 1.77 sf
#2	Device 1	30.40'	**34.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	31.55'	**Asymmetrical Weir To DHSS, C= 3.27** Offset (feet) 0.00 31.00 90.00 182.00 292.00 292.10 Elev. (feet) 32.00 31.92 31.82 31.61 31.55 32.00
#4	Tertiary	31.55'	**Asymmetrical Weir To DSP4, C= 3.27** Offset (feet) -0.10 0.00 58.00 114.00 158.00 205.00 263.00 311.00 376.00 455.00 Elev. (feet) 32.00 31.55 31.64 31.65 31.72 31.71 31.80 31.70 31.93 32.00

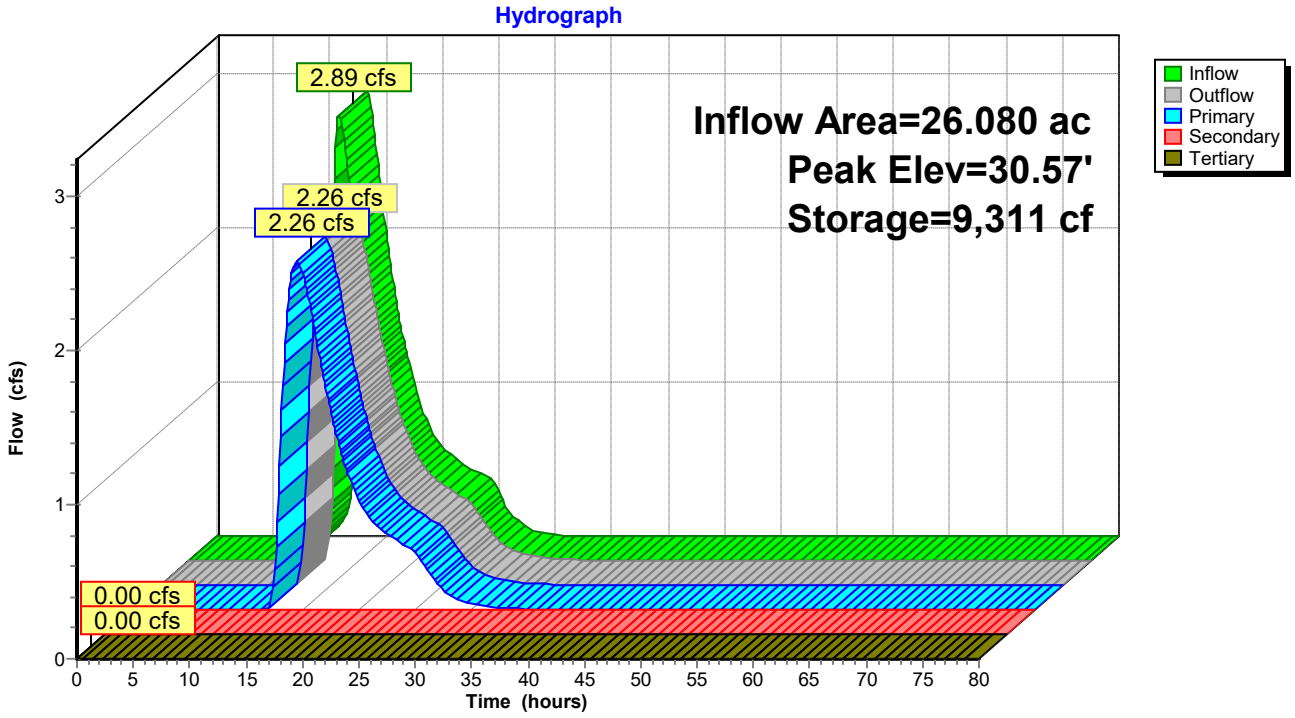
Primary OutFlow Max=2.26 cfs @ 14.54 hrs HW=30.57' (Free Discharge)
└**1=Culvert** (Passes 2.26 cfs of 7.40 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 2.26 cfs @ 1.36 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=30.30' TW=0.00' (Dynamic Tailwater)
└**3=Asymmetrical Weir To DHSS** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=30.30' TW=25.00' (Dynamic Tailwater)
└**4=Asymmetrical Weir To DSP4** (Controls 0.00 cfs)

Pond 3P: EX. SUMP

Hydrograph



Summary for Pond 4P: STORAGE POND

Inflow Area = 16.580 ac, 47.95% Impervious, Inflow Depth = 0.79" for 1-RPv event
Inflow = 3.19 cfs @ 12.98 hrs, Volume= 1.085 af
Outflow = 2.55 cfs @ 13.82 hrs, Volume= 1.085 af, Atten= 20%, Lag= 50.3 min
Primary = 2.55 cfs @ 13.82 hrs, Volume= 1.085 af
Routed to Pond 1AP : POND 1A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 27.70' @ 13.82 hrs Surf.Area= 18,332 sf Storage= 6,388 cf

Plug-Flow detention time= 43.5 min calculated for 1.084 af (100% of inflow)
Center-of-Mass det. time= 43.6 min (989.2 - 945.6)

Volume	Invert	Avail.Storage	Storage Description
#1	27.00'	132,971 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 140,379 cf Overall - 7,408 cf Embedded = 132,971 cf
#2	28.50'	7,408 cf	**FOREBAY - E (Prismatic)** Listed below (Recalc) Inside #1
		140,379 cf	Total Available Storage

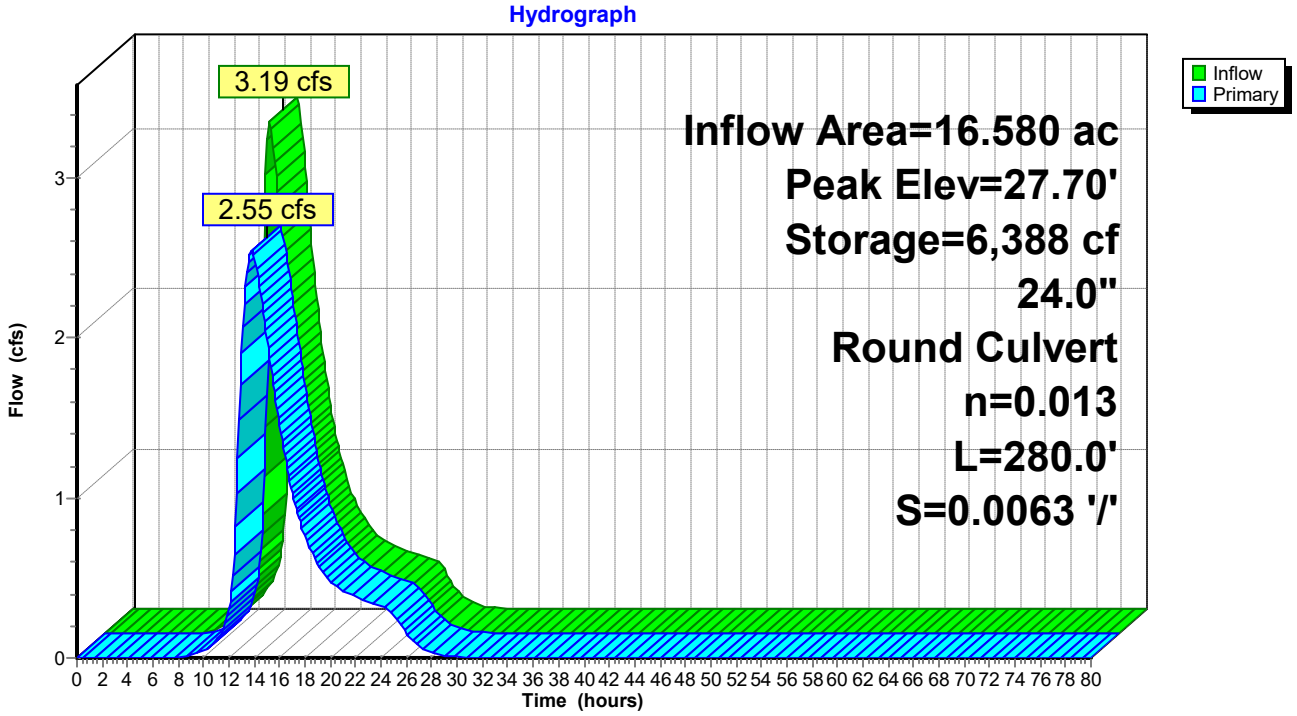
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.00	0	0	0
28.00	26,302	13,151	13,151
29.00	40,810	33,556	46,707
30.00	46,705	43,758	90,465
31.00	53,123	49,914	140,379

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
28.50	0	0	0
29.00	3,008	752	752
30.00	3,328	3,168	3,920
31.00	3,648	3,488	7,408

Device	Routing	Invert	Outlet Devices
#1	Primary	27.00'	**24.0" Round Culvert** L= 280.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 27.00' / 25.23' S= 0.0063 '/' Cc= 0.900 n= 0.013 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=2.55 cfs @ 13.82 hrs HW=27.70' TW=25.75' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 2.55 cfs @ 3.89 fps)

Pond 4P: STORAGE POND



Summary for Pond 8P: As-Built of Pond 1 DHSS Medical Center

Inflow Area = 8.020 ac, 32.79% Impervious, Inflow Depth = 0.58" for 1-RPv event
Inflow = 2.85 cfs @ 12.24 hrs, Volume= 0.387 af
Outflow = 1.23 cfs @ 12.81 hrs, Volume= 0.387 af, Atten= 57%, Lag= 34.0 min
Primary = 1.23 cfs @ 12.81 hrs, Volume= 0.387 af
Routed to Pond 16P : Pond 2 DHSS From approved report

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 27.14' @ 12.81 hrs Surf.Area= 13,854 sf Storage= 4,120 cf

Plug-Flow detention time= 57.4 min calculated for 0.386 af (100% of inflow)
Center-of-Mass det. time= 57.7 min (939.1 - 881.4)

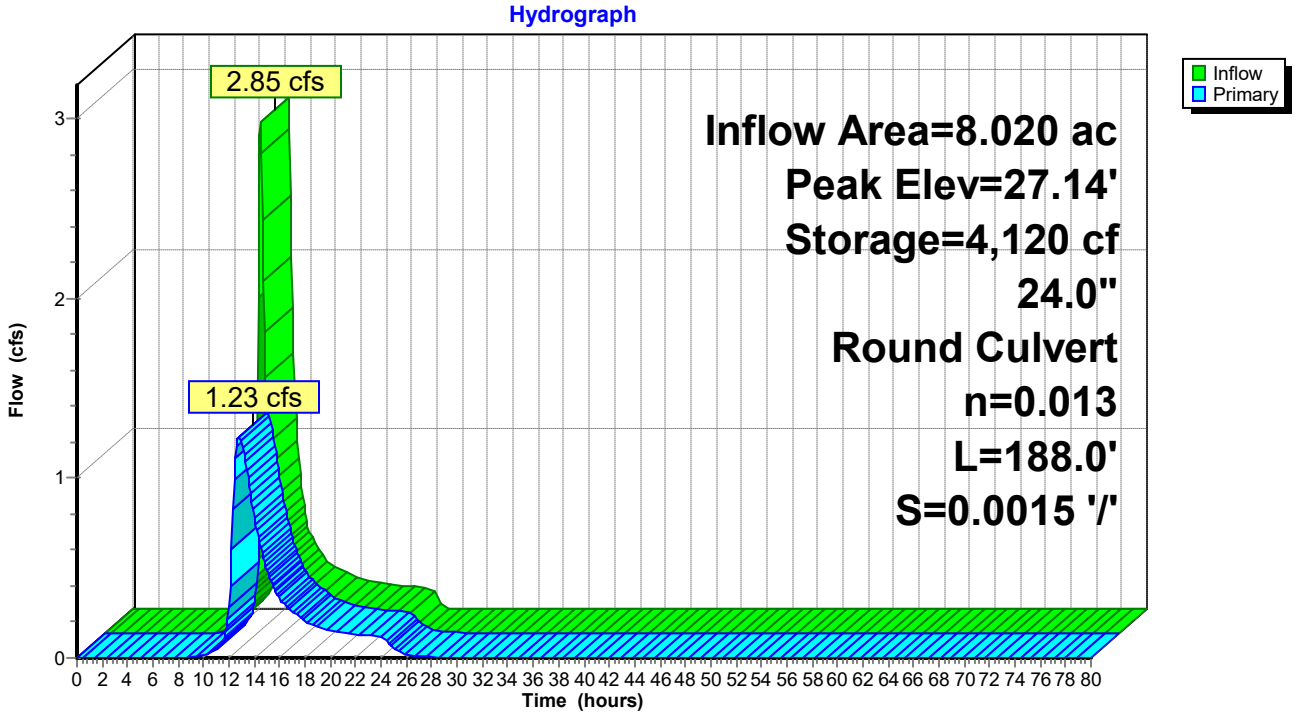
Volume	Invert	Avail.Storage	Storage Description
#1	26.50'	133,824 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.50	0	0	0
27.00	9,831	2,458	2,458
28.00	38,486	24,159	26,616
29.00	50,814	44,650	71,266
30.00	74,302	62,558	133,824

Device	Routing	Invert	Outlet Devices
#1	Primary	26.50'	**24.0" Round RCP_Round 24"** L= 188.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 26.50' / 26.21' S= 0.0015 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=1.23 cfs @ 12.81 hrs HW=27.14' TW=25.26' (Dynamic Tailwater)
↑—**1=RCP_Round 24"** (Barrel Controls 1.23 cfs @ 2.11 fps)

Pond 8P: As-Built of Pond 1 DHSS Medical Center



Summary for Pond 16P: Pond 2 DHSS From approved report

Inflow Area = 20.940 ac, 25.93% Impervious, Inflow Depth = 0.59" for 1-RPv event
Inflow = 4.23 cfs @ 12.37 hrs, Volume= 1.028 af
Outflow = 1.57 cfs @ 14.04 hrs, Volume= 1.028 af, Atten= 63%, Lag= 100.1 min
Primary = 1.57 cfs @ 14.04 hrs, Volume= 1.028 af
Routed to nonexistent node 15L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 25.98' @ 14.04 hrs Surf.Area= 7,929 sf Storage= 16,448 cf

Plug-Flow detention time= 227.9 min calculated for 1.027 af (100% of inflow)
Center-of-Mass det. time= 227.9 min (1,132.8 - 904.9)

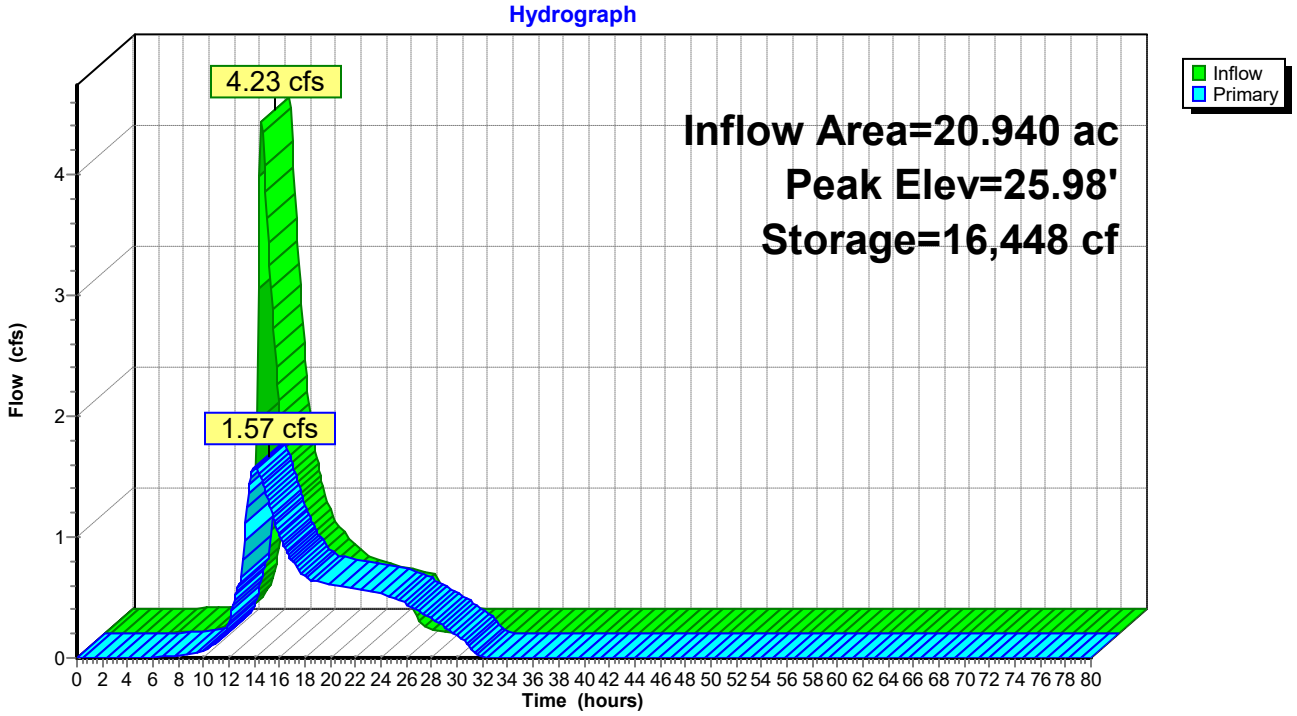
Volume	Invert	Avail.Storage	Storage Description
#1	23.00'	51,194 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
23.00	0	0.0	0	0	0
23.30	4,147	305.8	415	415	7,442
24.00	5,069	337.8	3,220	3,635	9,096
25.00	6,487	371.0	5,763	9,398	11,002
26.00	7,960	402.5	7,211	16,609	12,979
27.00	9,672	439.3	8,802	25,411	15,480
28.00	11,478	469.6	10,562	35,974	17,718
29.00	19,300	1,266.7	15,221	51,194	127,857

Device	Routing	Invert	Outlet Devices
#1	Device 4	23.00'	**4.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	25.47'	**0.8' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.5' Crest Height
#3	Device 4	26.98'	**1.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#4	Primary	23.00'	**24.0" Round RCP_Round 24"** L= 278.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.00' / 22.79' S= 0.0008 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=1.57 cfs @ 14.04 hrs HW=25.98' (Free Discharge)
└**4=RCP_Round 24"** (Passes 1.57 cfs of 13.78 cfs potential flow)
  ├**1=Orifice/Grate** (Orifice Controls 0.70 cfs @ 8.07 fps)
  ├**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.86 cfs @ 2.43 fps)
  └**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 16P: Pond 2 DHSS From approved report

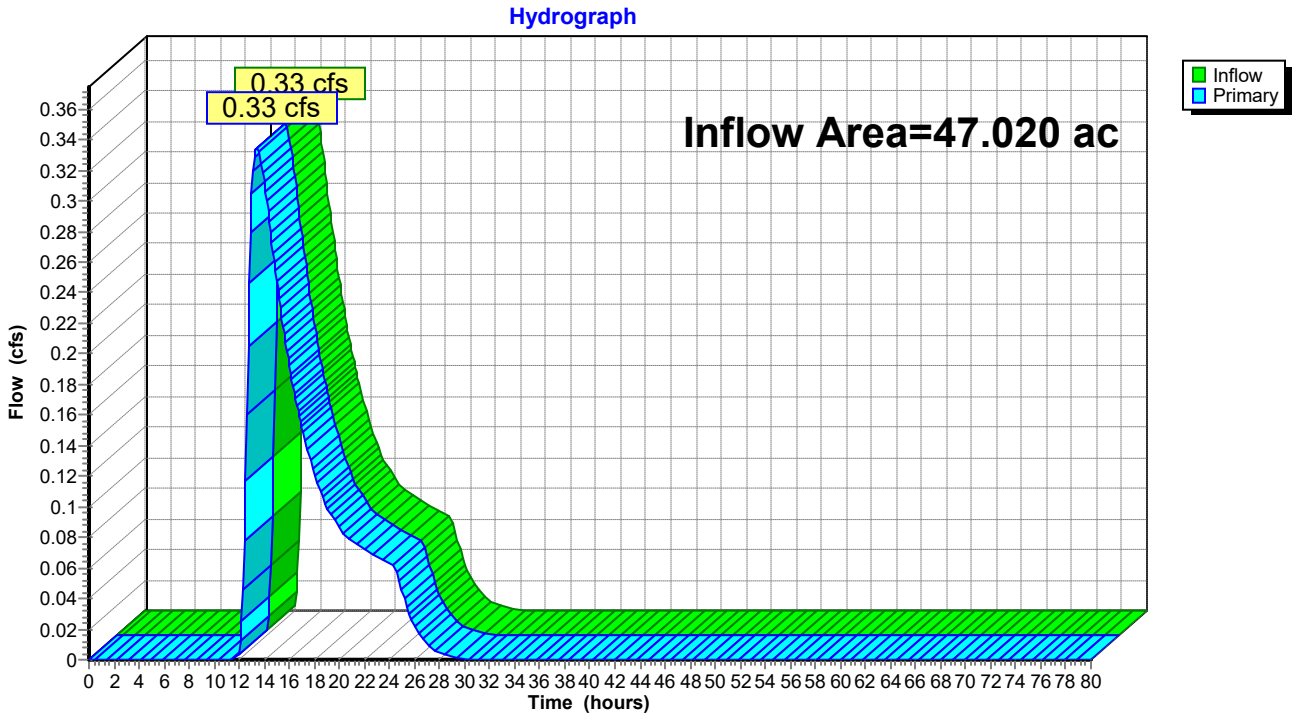


Summary for Link AP-1: Analysis Point 1

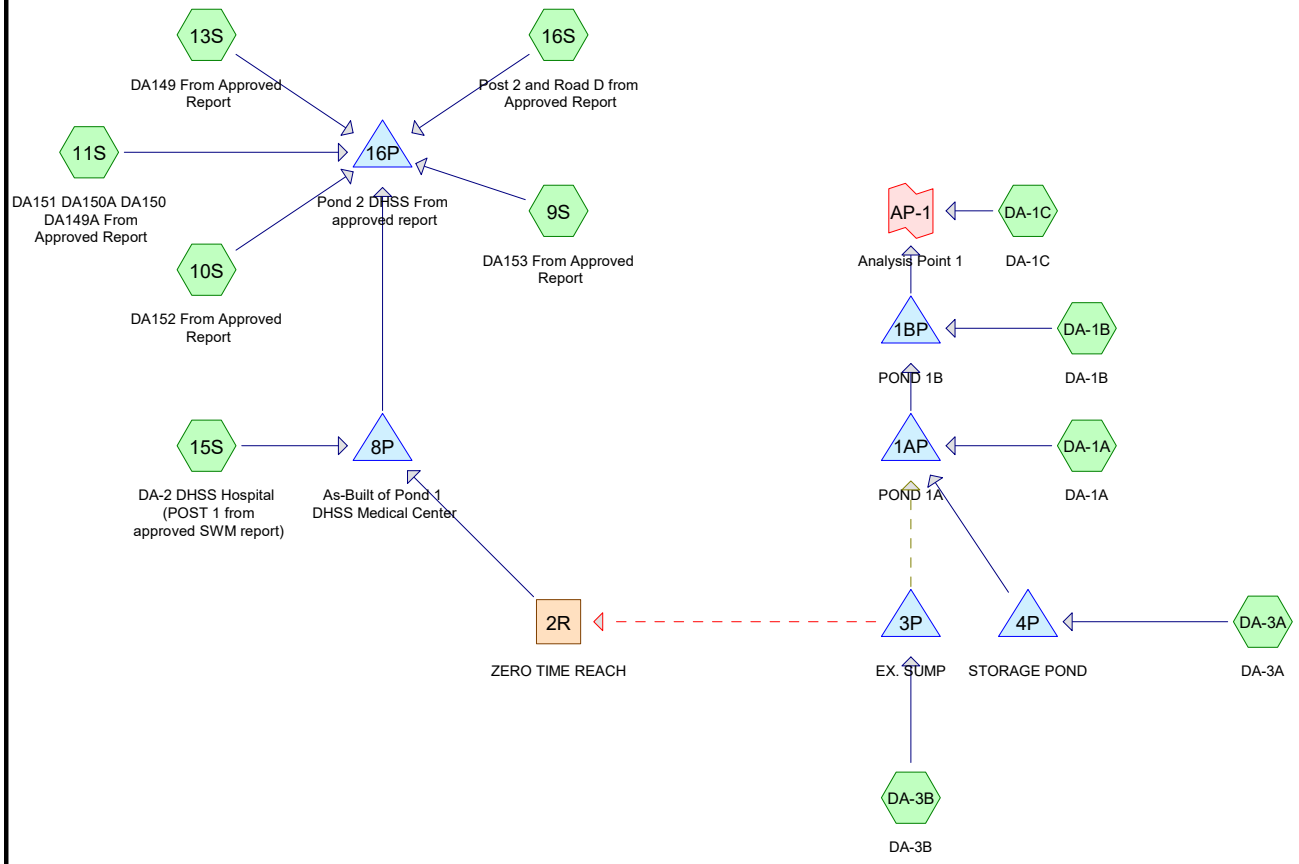
Inflow Area = 47.020 ac, 33.37% Impervious, Inflow Depth = 0.04" for 1-RPv event
Inflow = 0.33 cfs @ 13.43 hrs, Volume= 0.155 af
Primary = 0.33 cfs @ 13.43 hrs, Volume= 0.155 af, Atten= 0%, Lag= 0.0 min

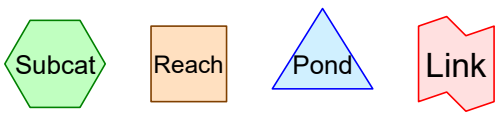
Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-1: Analysis Point 1



Post-Developed
Conveyance & Flooding Events (Cv & Fv) Calculations





Routing Diagram for 202223500-POST-EVOC
Prepared by Becker Morgan Group, Inc, Printed 7/22/2026
HydroCAD® 10.20-9a s/n 01093 © 2026 HydroCAD Software Solutions LLC

Summary for Subcatchment 9S: DA153 From Approved Report

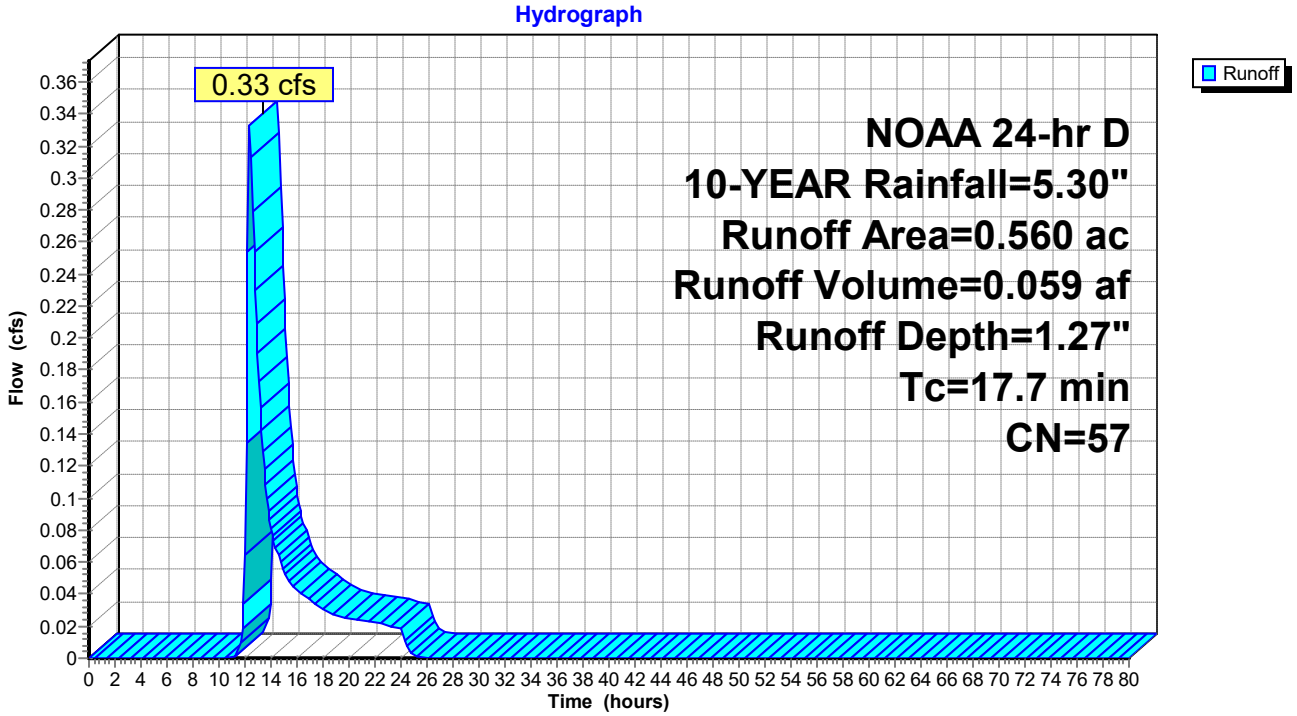
Runoff = 0.33 cfs @ 12.35 hrs, Volume= 0.059 af, Depth= 1.27"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

	Area (ac)	CN	Description
*	0.560	57	DA153
	0.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7					**Direct Entry,**

Subcatchment 9S: DA153 From Approved Report



Summary for Subcatchment 10S: DA152 From Approved Report

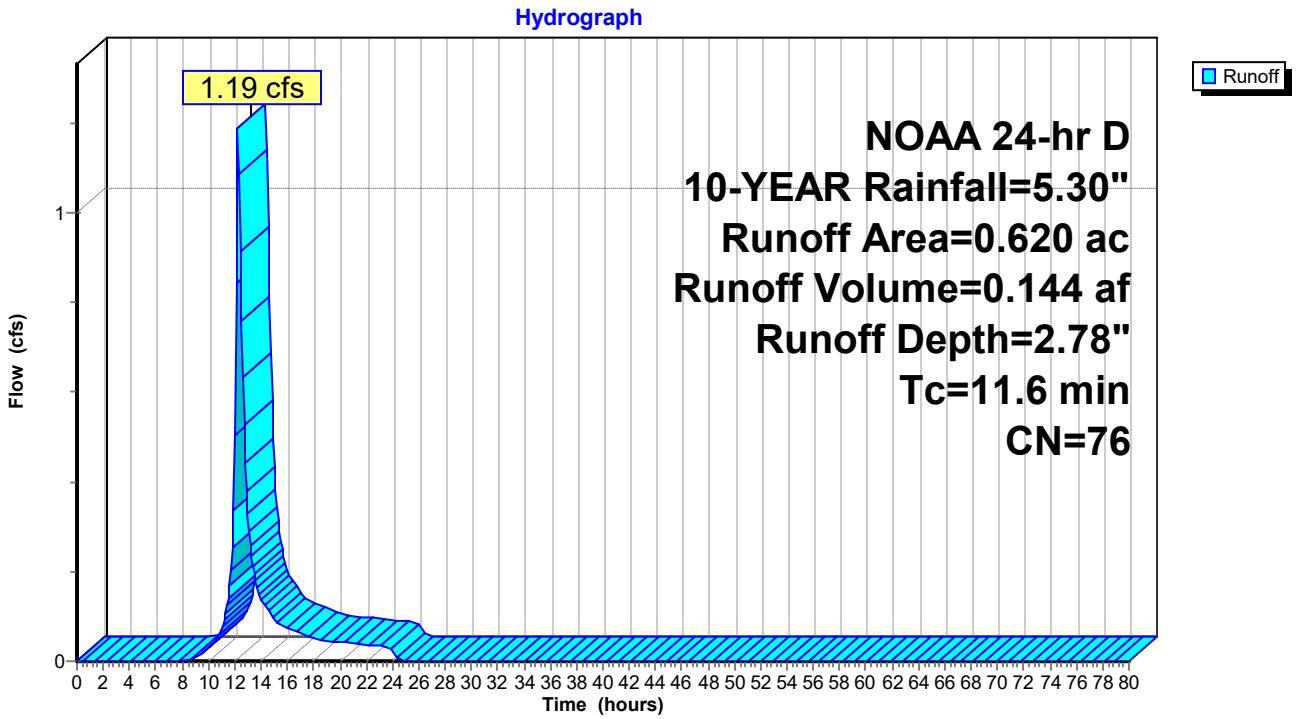
Runoff = 1.19 cfs @ 12.23 hrs, Volume= 0.144 af, Depth= 2.78"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

	Area (ac)	CN	Description
*	0.620	76	
	0.620		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6					**Direct Entry,**

Subcatchment 10S: DA152 From Approved Report



Summary for Subcatchment 11S: DA151 DA150A DA150 DA149A From Approved Report

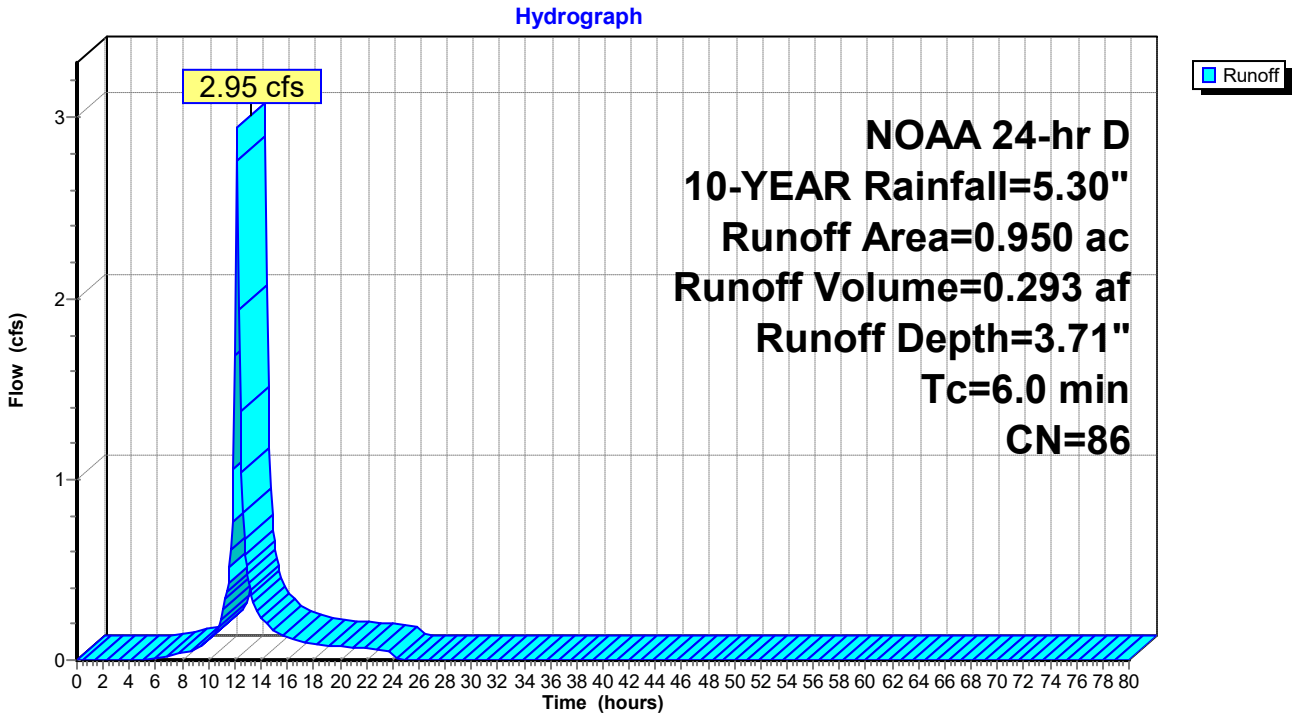
Runoff = 2.95 cfs @ 12.14 hrs, Volume= 0.293 af, Depth= 3.71"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

	Area (ac)	CN	Description
*	0.360	90	DA-151
*	0.150	78	DA-150A
*	0.290	88	DA-150
*	0.150	78	DA-149A
	0.950	86	Weighted Average
	0.950		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: DA151 DA150A DA150 DA149A From Approved Report



Summary for Subcatchment 13S: DA149 From Approved Report

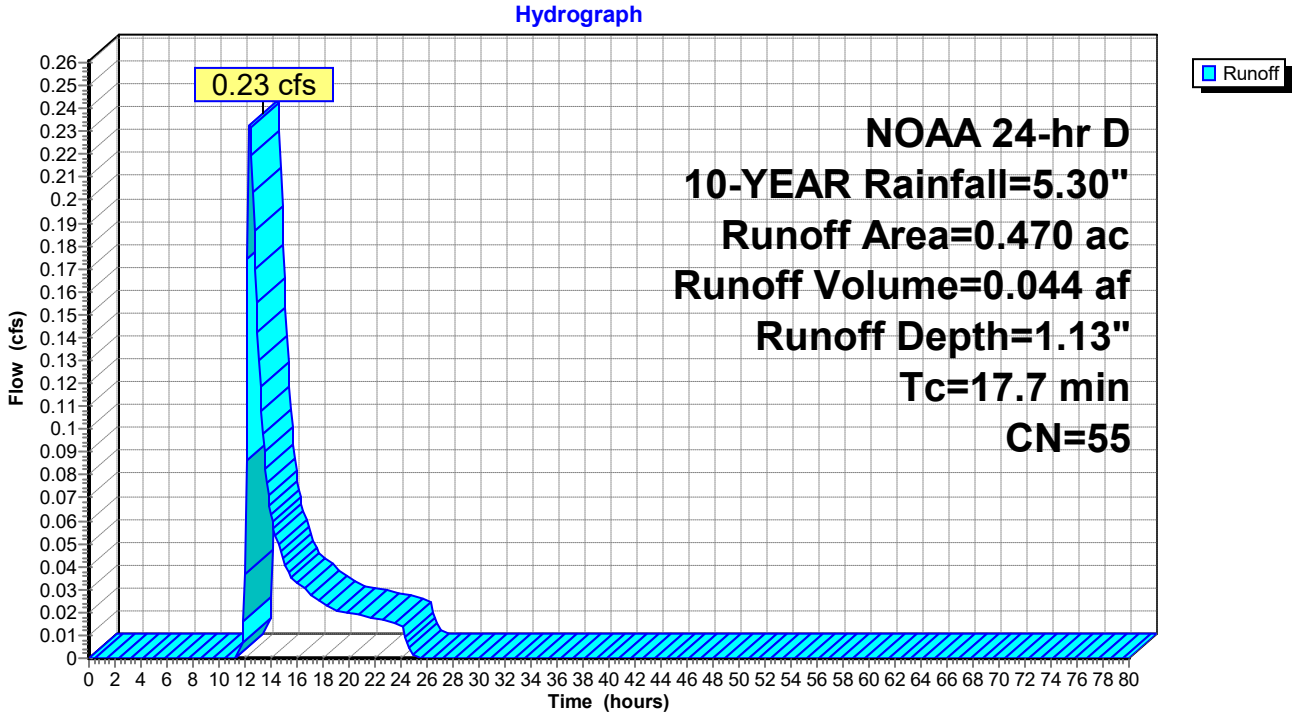
Runoff = 0.23 cfs @ 12.37 hrs, Volume= 0.044 af, Depth= 1.13"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

	Area (ac)	CN	Description
*	0.470	55	
	0.470		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7					**Direct Entry,**

Subcatchment 13S: DA149 From Approved Report



Summary for Subcatchment 15S: DA-2 DHSS Hospital (POST 1 from approved SWM report)

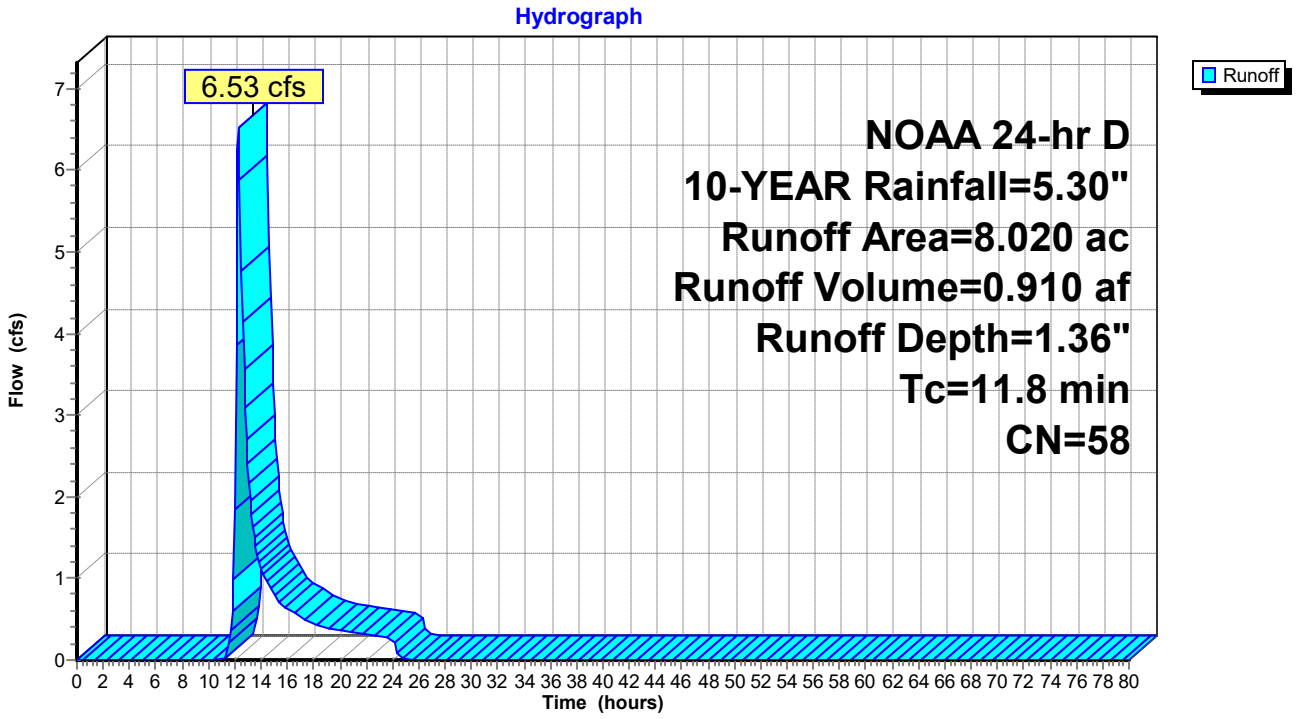
Runoff = 6.53 cfs @ 12.25 hrs, Volume= 0.910 af, Depth= 1.36"
Routed to Pond 8P : As-Built of Pond 1 DHSS Medical Center

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

	Area (ac)	CN	Description
	2.560	98	Paved parking, HSG A
	5.390	39	>75% Grass cover, Good, HSG A
*	0.070	98	PR. Paved parking, HSG A
	8.020	58	Weighted Average
	5.390		67.21% Pervious Area
	2.630		32.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8					**Direct Entry,**

Subcatchment 15S: DA-2 DHSS Hospital (POST 1 from approved SWM report)



Summary for Subcatchment 16S: Post 2 and Road D from Approved Report

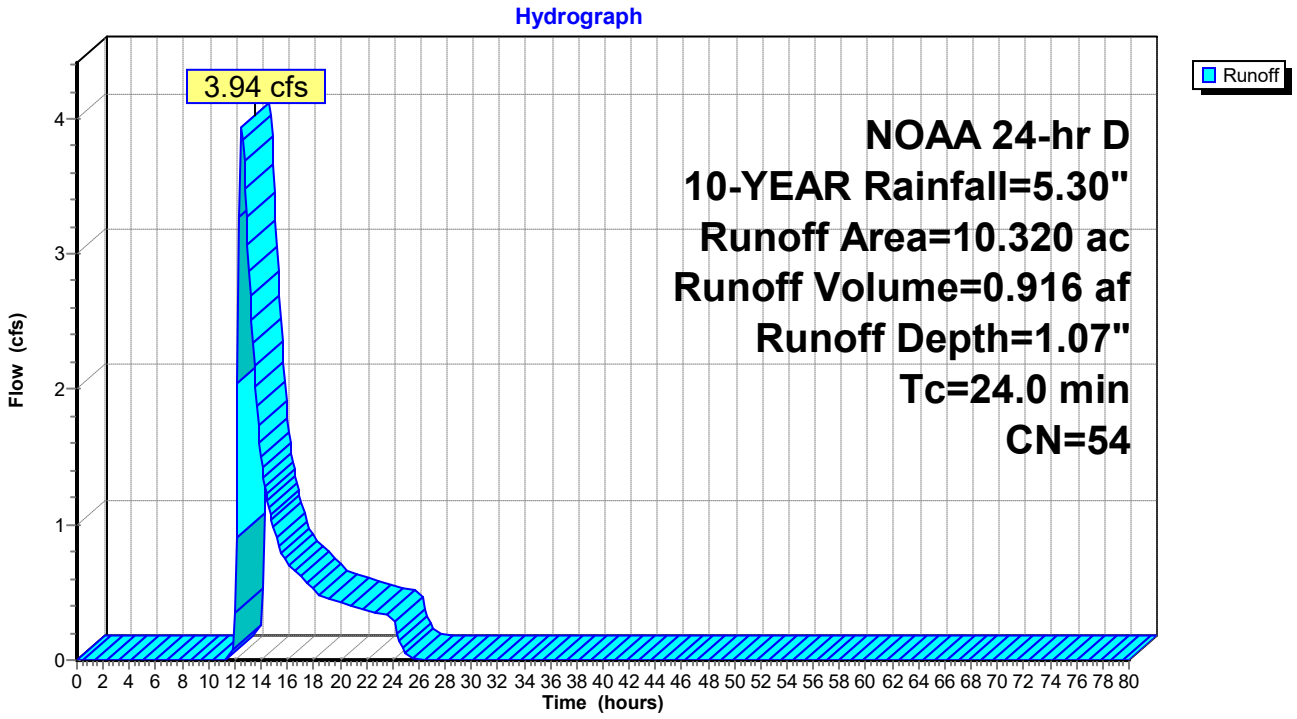
Runoff = 3.94 cfs @ 12.50 hrs, Volume= 0.916 af, Depth= 1.07"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (ac)	CN	Description
2.800	98	Water Surface, HSG A
1.190	30	Woods, Good, HSG A
6.330	39	>75% Grass cover, Good, HSG A
10.320	54	Weighted Average
7.520		72.87% Pervious Area
2.800		27.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0					**Direct Entry, From Approved Report**

Subcatchment 16S: Post 2 and Road D from Approved Report



Summary for Subcatchment DA-1A: DA-1A

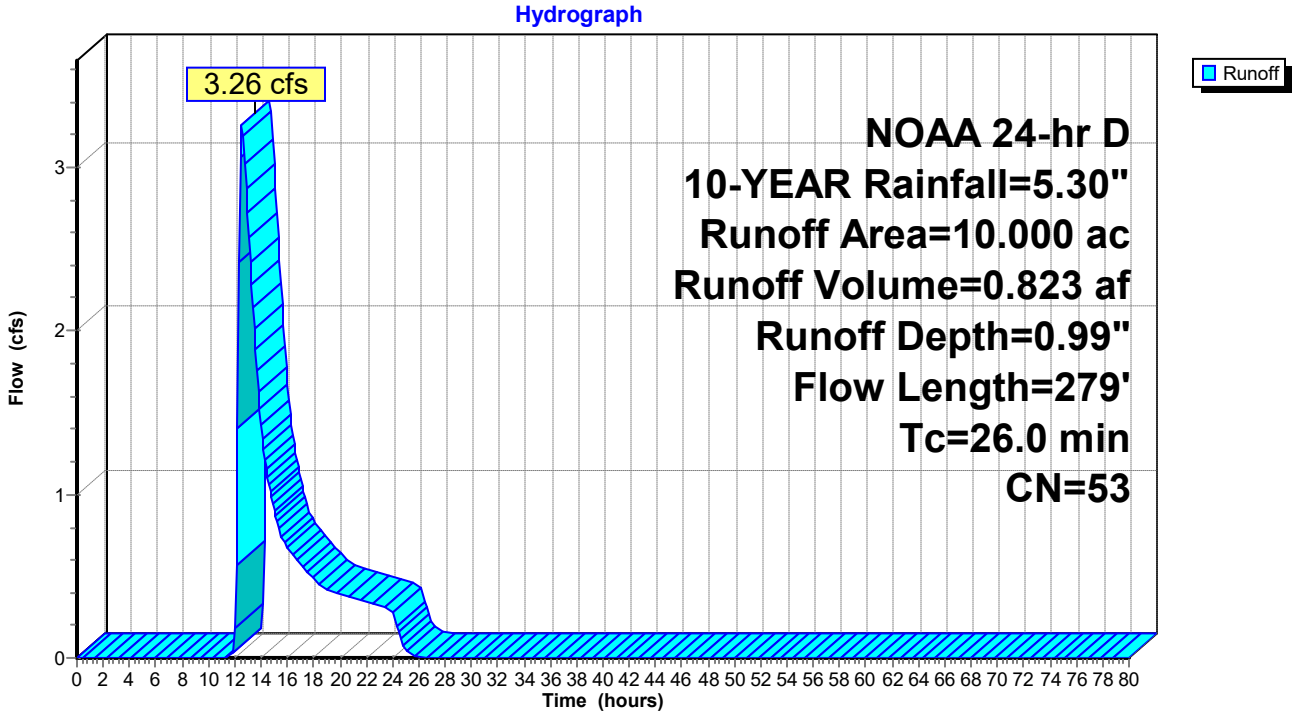
Runoff = 3.26 cfs @ 12.55 hrs, Volume= 0.823 af, Depth= 0.99"
Routed to Pond 1AP : POND 1A

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (ac)	CN	Description
2.330	98	Paved parking, HSG A
7.670	39	>75% Grass cover, Good, HSG A
10.000	53	Weighted Average
7.670		76.70% Pervious Area
2.330		23.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.4	100	0.0060	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.40"
3.6	179	0.0140	0.83		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
26.0	279	Total			

Subcatchment DA-1A: DA-1A



Summary for Subcatchment DA-1B: DA-1B

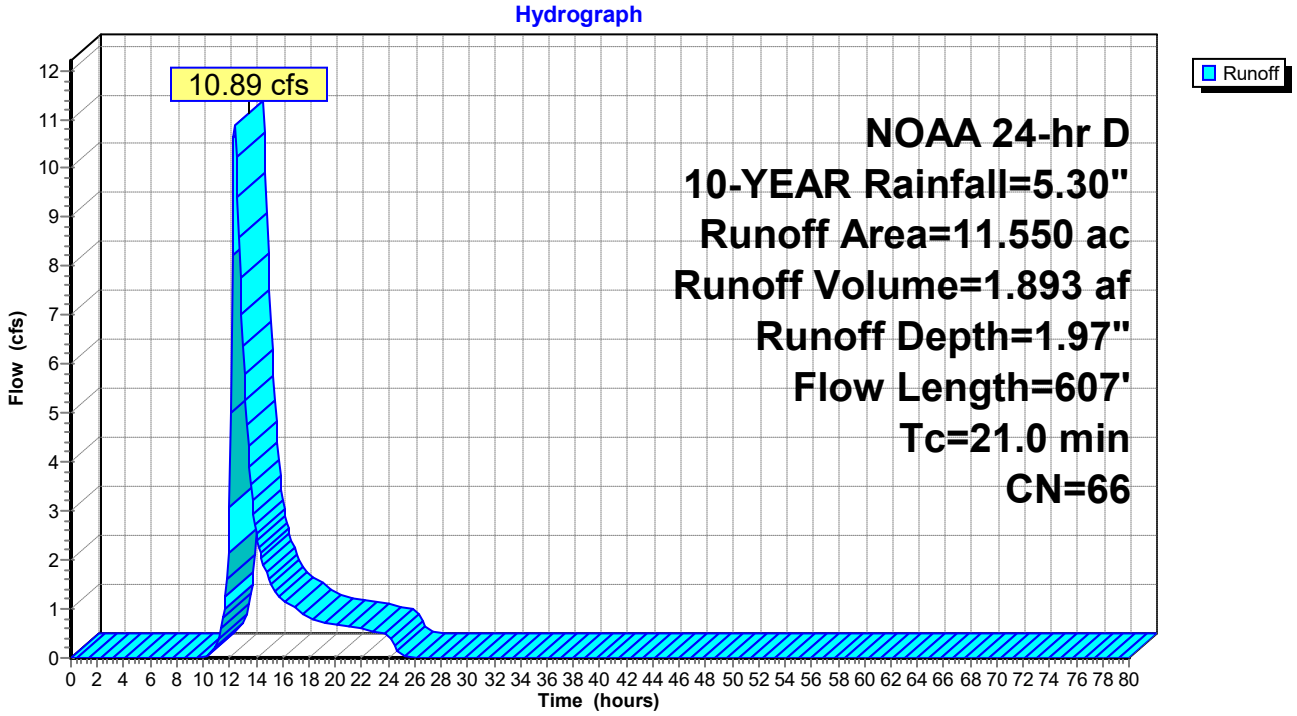
Runoff = 10.89 cfs @ 12.38 hrs, Volume= 1.893 af, Depth= 1.97"
Routed to Pond 1BP : POND 1B

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (ac)	CN	Description
5.380	98	Paved parking, HSG A
6.070	39	>75% Grass cover, Good, HSG A
0.100	30	Woods, Good, HSG A
11.550	66	Weighted Average
6.170		53.42% Pervious Area
5.380		46.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0163	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.40"
4.1	160	0.0086	0.65		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.5	253	0.0025	2.85	3.50	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.4	94	0.0031	3.91	6.91	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011 Concrete pipe, straight & clean
21.0	607	Total			

Subcatchment DA-1B: DA-1B



Summary for Subcatchment DA-1C: DA-1C

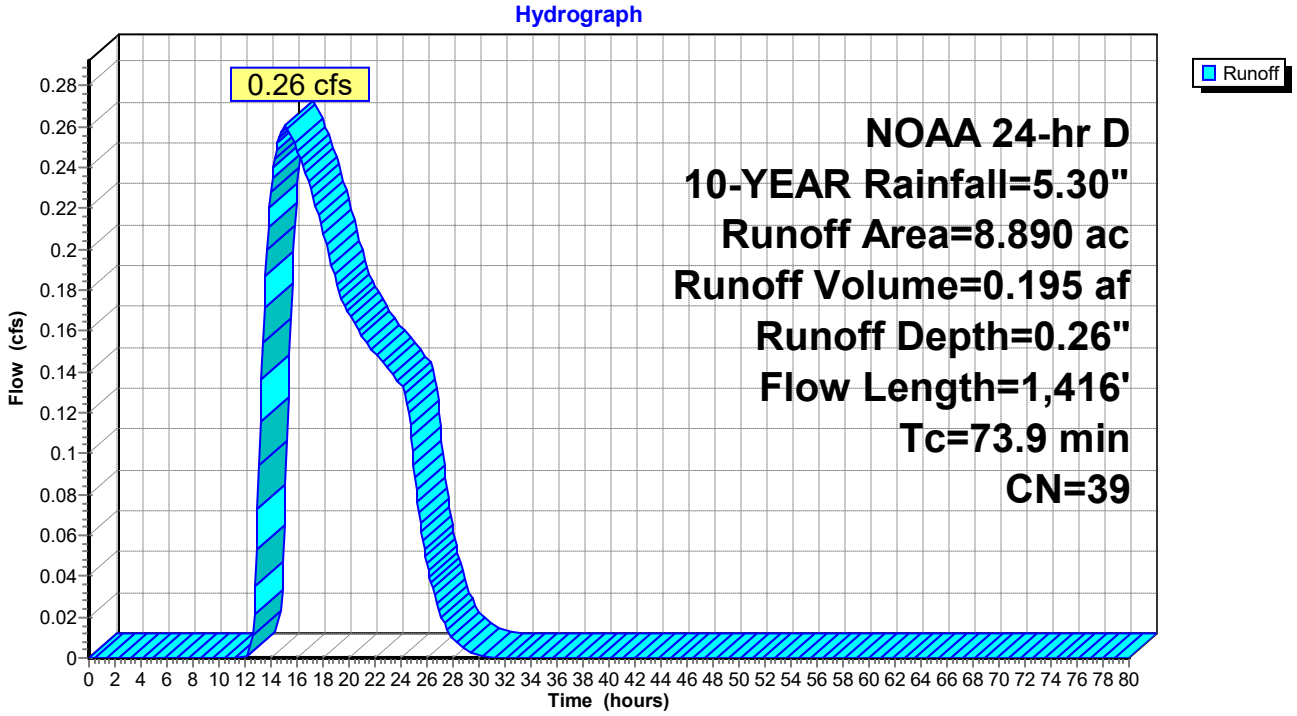
Runoff = 0.26 cfs @ 15.12 hrs, Volume= 0.195 af, Depth= 0.26"
Routed to Link AP-1 : Analysis Point 1

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (ac)	CN	Description
8.630	39	>75% Grass cover, Good, HSG A
0.230	30	Woods, Good, HSG A
0.030	98	Paved parking, HSG A
8.890	39	Weighted Average
8.860		99.66% Pervious Area
0.030		0.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.1	100	0.0050	0.07		**Sheet Flow, Flow Path A** Grass: Dense n= 0.240 P2= 3.40"
11.2	279	0.0035	0.41		**Shallow Concentrated Flow, Flow Path B** Short Grass Pasture Kv= 7.0 fps
13.3	457	0.0067	0.57		**Shallow Concentrated Flow, Flow Path C** Short Grass Pasture Kv= 7.0 fps
9.8	169	0.0017	0.29		**Shallow Concentrated Flow, Flow Path D** Short Grass Pasture Kv= 7.0 fps
12.3	296	0.0033	0.40		**Shallow Concentrated Flow, Flow Path E** Short Grass Pasture Kv= 7.0 fps
3.2	115	0.0071	0.59		**Shallow Concentrated Flow, Flow Path F** Short Grass Pasture Kv= 7.0 fps
73.9	1,416	Total			

Subcatchment DA-1C: DA-1C



Summary for Subcatchment DA-3A: DA-3A

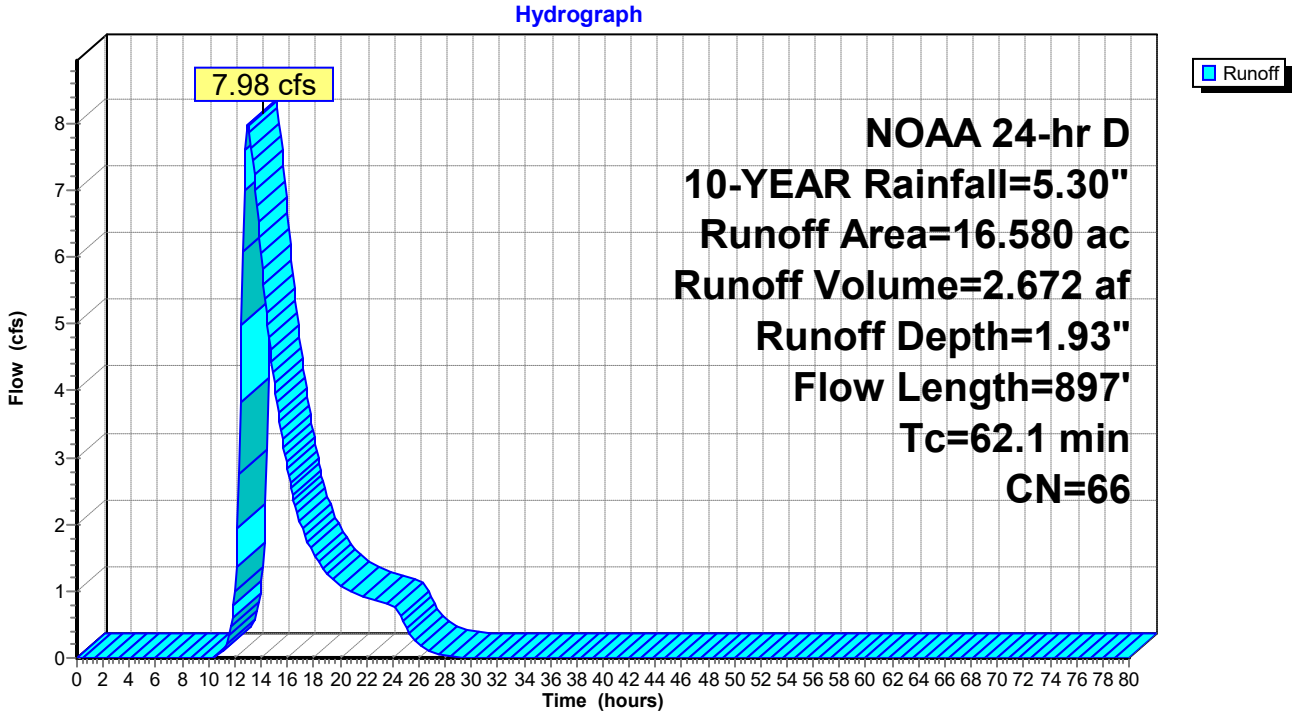
Runoff = 7.98 cfs @ 13.01 hrs, Volume= 2.672 af, Depth= 1.93"
Routed to Pond 4P : STORAGE POND

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (ac)	CN	Description
7.950	98	Paved parking, HSG A
5.550	39	>75% Grass cover, Good, HSG A
3.080	32	Woods/grass comb., Good, HSG A
16.580	66	Weighted Average
8.630		52.05% Pervious Area
7.950		47.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.1	100	0.0080	0.06		**Sheet Flow, Flow Path A** Woods: Light underbrush n= 0.400 P2= 3.40"
29.9	397	0.0010	0.22		**Shallow Concentrated Flow, Flow Path B** Short Grass Pasture Kv= 7.0 fps
2.1	400	0.0076	3.14	31.35	**Trap/Vee/Rect Channel Flow, Flow Path C** Bot.W=4.00' D=1.00' Z= 6.0 '/' Top.W=16.00' n= 0.030 Earth, grassed & winding
62.1	897	Total			

Subcatchment DA-3A: DA-3A



Summary for Subcatchment DA-3B: DA-3B

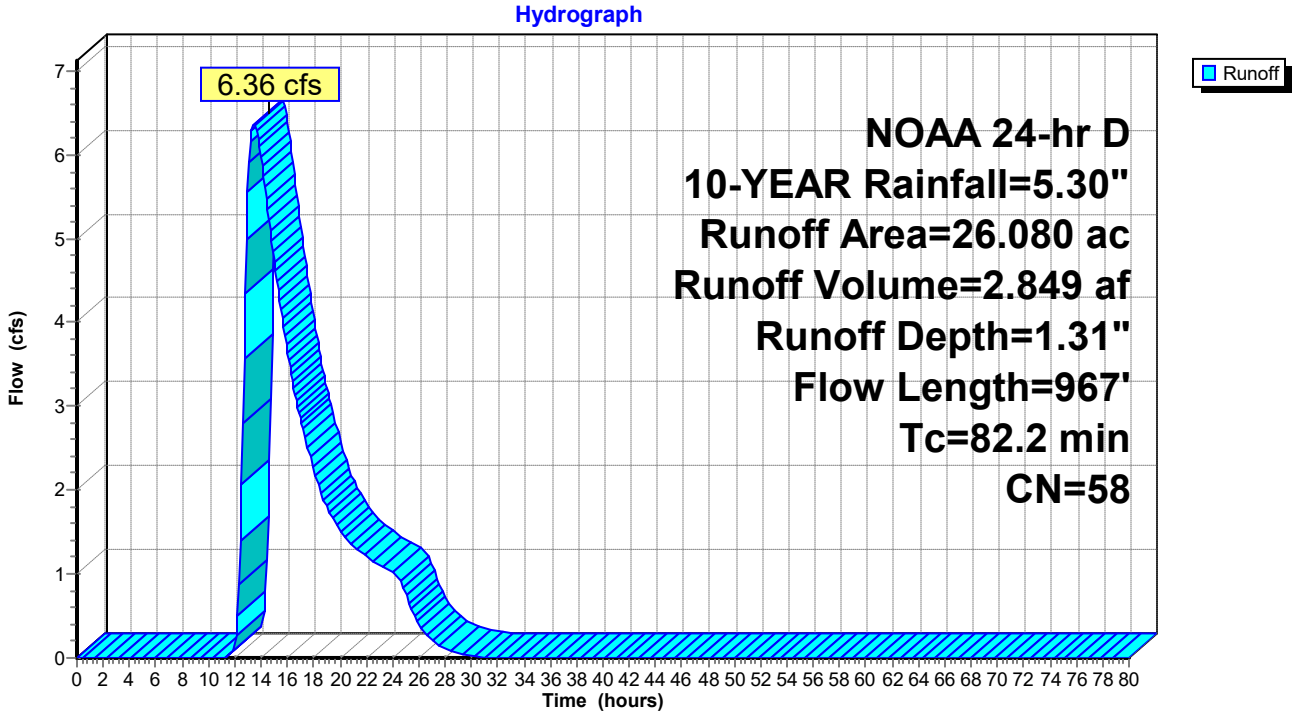
Runoff = 6.36 cfs @ 13.47 hrs, Volume= 2.849 af, Depth= 1.31"
Routed to Pond 3P : EX. SUMP

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (ac)	CN	Description
1.050	98	Paved parking, HSG A
9.900	39	>75% Grass cover, Good, HSG A
15.130	67	Row crops, straight row, Good, HSG A
26.080	58	Weighted Average
25.030		95.97% Pervious Area
1.050		4.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0080	0.12		**Sheet Flow, Flow Path A** Grass: Short n= 0.150 P2= 3.40"
12.1	312	0.0038	0.43		**Shallow Concentrated Flow, Flow Path B** Short Grass Pasture Kv= 7.0 fps
32.4	236	0.0003	0.12		**Shallow Concentrated Flow, Flow Path C** Short Grass Pasture Kv= 7.0 fps
24.0	319	0.0010	0.22		**Shallow Concentrated Flow, Flow Path C** Short Grass Pasture Kv= 7.0 fps
82.2	967	Total			

Subcatchment DA-3B: DA-3B

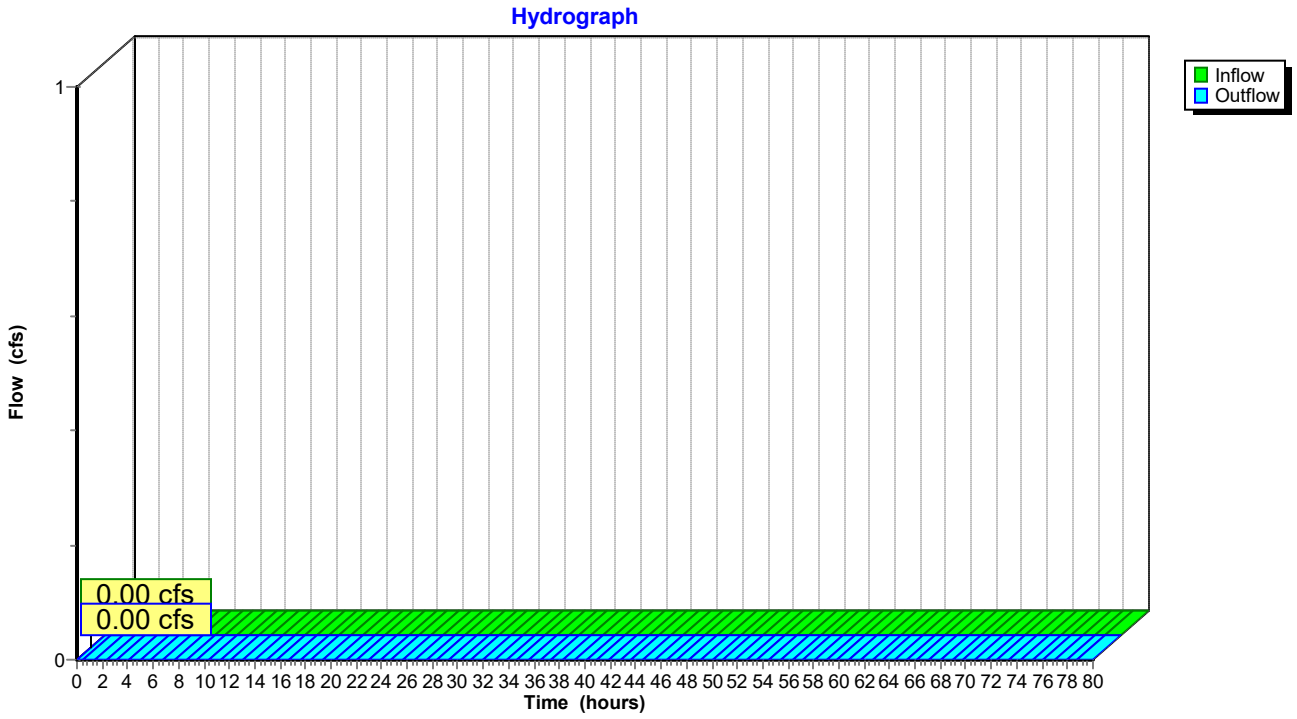


Summary for Reach 2R: ZERO TIME REACH

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 8P : As-Built of Pond 1 DHSS Medical Center

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Reach 2R: ZERO TIME REACH



Summary for Pond 1AP: POND 1A

Inflow Area = 26.580 ac, 38.68% Impervious, Inflow Depth = 1.58" for 10-YEAR event
Inflow = 7.80 cfs @ 13.43 hrs, Volume= 3.495 af
Outflow = 5.13 cfs @ 14.26 hrs, Volume= 3.495 af, Atten= 34%, Lag= 50.2 min
Discarded = 0.41 cfs @ 22.75 hrs, Volume= 1.285 af
Primary = 4.75 cfs @ 14.26 hrs, Volume= 2.210 af
Routed to Pond 1BP : POND 1B

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 27.22' @ 22.75 hrs Surf.Area= 13,681 sf Storage= 48,352 cf

Plug-Flow detention time= 450.8 min calculated for 3.491 af (100% of inflow)
Center-of-Mass det. time= 451.8 min (1,454.7 - 1,002.9)

Volume	Invert	Avail.Storage	Storage Description
#1	25.00'	53,444 cf	**Custom Stage Data - POND FRONT (Prismatic)** Listed below (Recalc)
#2	25.00'	22,515 cf	**Custom Stage Data - FOREBAY A (Prismatic)** Listed below (Recalc) -Imperv
#3	25.00'	22,839 cf	**Custom Stage Data - Unsuitable Soils SWM-4 (Prismatic)** Listed below (Rec
		98,797 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	10,276	0	0
26.00	11,846	11,061	11,061
27.00	13,340	12,593	23,654
28.00	14,892	14,116	37,770
29.00	16,455	15,674	53,444

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	4,063	0	0
26.00	4,813	4,438	4,438
27.00	5,600	5,207	9,645
28.00	6,426	6,013	15,658
29.00	7,289	6,858	22,515

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	3,913	0	0
26.00	4,768	4,341	4,341
27.00	5,672	5,220	9,561
28.00	6,626	6,149	15,710
29.00	7,632	7,129	22,839

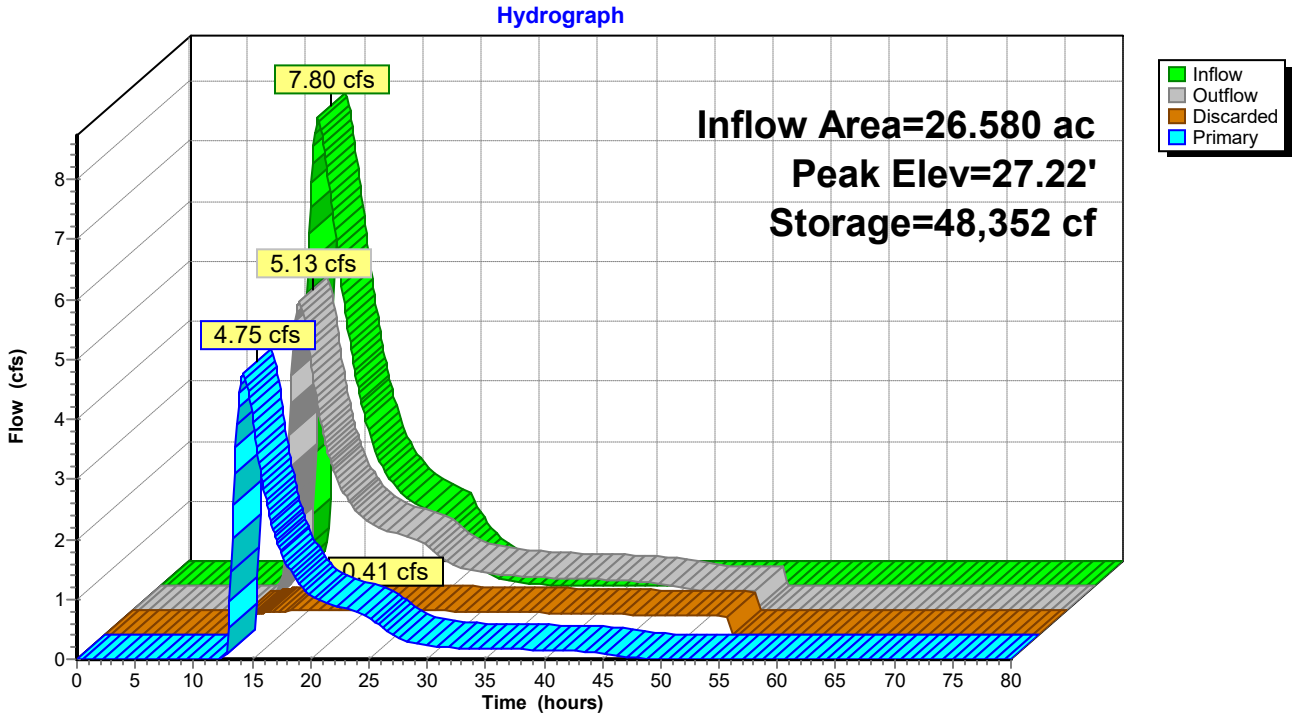
Device	Routing	Invert	Outlet Devices
#1	Discarded	25.00'	**1.300 in/hr Exfiltration over Surface area**
#2	Primary	25.26'	**30.0" Round Culvert**
			L= 105.0' RCP, sq.cut end projecting, Ke= 0.500
			Inlet / Outlet Invert= 25.26' / 25.00' S= 0.0025 '/' Cc= 0.900

n= 0.011 Concrete pipe, straight & clean, Flow Area= 4.91 sf

Discarded OutFlow Max=0.41 cfs @ 22.75 hrs HW=27.22' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.41 cfs)

Primary OutFlow Max=4.34 cfs @ 14.26 hrs HW=26.53' TW=26.30' (Dynamic Tailwater)
└**2=Culvert** (Outlet Controls 4.34 cfs @ 2.52 fps)

Pond 1AP: POND 1A



Summary for Pond 1BP: POND 1B

Inflow Area = 38.130 ac, 41.07% Impervious, Inflow Depth = 1.29" for 10-YEAR event
Inflow = 10.89 cfs @ 12.38 hrs, Volume= 4.104 af
Outflow = 1.42 cfs @ 22.69 hrs, Volume= 4.106 af, Atten= 87%, Lag= 619.0 min
Discarded = 1.42 cfs @ 22.69 hrs, Volume= 4.106 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link AP-1 : Analysis Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 27.22' @ 22.69 hrs Surf.Area= 38,287 sf Storage= 97,500 cf

Plug-Flow detention time= 755.7 min calculated for 4.101 af (100% of inflow)
Center-of-Mass det. time= 756.1 min (1,809.3 - 1,053.2)

Volume	Invert	Avail.Storage	Storage Description
#1	25.00'	149,049 cf	**Custom Stage Data - POND REAR (Prismatic)** Listed below (Recalc)
#2	25.00'	17,869 cf	**Custom Stage Data - FOREBAY C (Prismatic)** Listed below (Recalc) -Imperv
#3	25.00'	4,471 cf	**Custom Stage Data - FOREBAY D (Prismatic)** Listed below (Recalc) -Imperv
#4	25.00'	28,077 cf	**Custom Stage Data - Unsuitable soils Boring SWM-9 (Prismatic)** Listed belo
		199,465 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	27,738	0	0
26.00	32,484	30,111	30,111
27.00	37,247	34,866	64,977
28.00	42,032	39,640	104,616
29.00	46,834	44,433	149,049

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	3,039	0	0
26.00	3,710	3,375	3,375
27.00	4,429	4,070	7,444
28.00	5,200	4,815	12,259
29.00	6,021	5,611	17,869

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	654	0	0
26.00	865	760	760
27.00	1,099	982	1,742
28.00	1,358	1,229	2,970
29.00	1,643	1,501	4,471

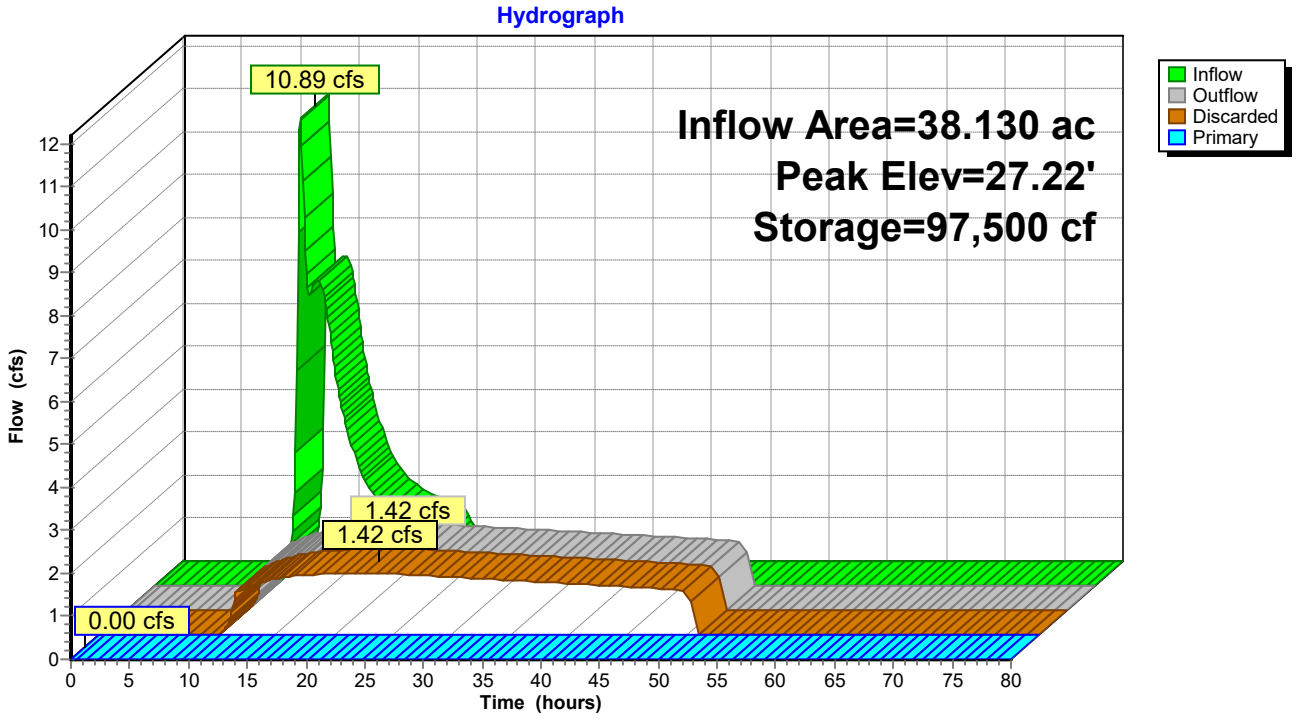
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	5,353	0	0
26.00	6,180	5,767	5,767
27.00	7,015	6,598	12,364
28.00	7,853	7,434	19,798
29.00	8,704	8,279	28,077

Device	Routing	Invert	Outlet Devices
#1	Discarded	25.00'	**1.600 in/hr Exfiltration over Surface area**
#2	Primary	28.00'	**15.0' long + 10.0 '/' SideZ x 24.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Discarded OutFlow Max=1.42 cfs @ 22.69 hrs HW=27.22' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 1.42 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=25.00' TW=0.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1BP: POND 1B



Summary for Pond 3P: EX. SUMP

Inflow Area = 26.080 ac, 4.03% Impervious, Inflow Depth = 1.31" for 10-YEAR event
Inflow = 6.36 cfs @ 13.47 hrs, Volume= 2.849 af
Outflow = 4.99 cfs @ 14.79 hrs, Volume= 2.820 af, Atten= 22%, Lag= 79.0 min
Primary = 4.99 cfs @ 14.79 hrs, Volume= 2.820 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 2R : ZERO TIME REACH
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond 1AP : POND 1A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 30.69' @ 14.79 hrs Surf.Area= 98,589 sf Storage= 19,323 cf

Plug-Flow detention time= 70.1 min calculated for 2.816 af (99% of inflow)
Center-of-Mass det. time= 64.1 min (1,078.0 - 1,013.9)

Volume	Invert	Avail.Storage	Storage Description
#1	30.30'	487,733 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
30.30	0	0	0
31.00	176,057	61,620	61,620
31.50	423,297	149,839	211,458
32.00	681,802	276,275	487,733

Device	Routing	Invert	Outlet Devices
#1	Primary	27.86'	**18.0" Round Culvert** L= 410.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 27.86' / 26.62' S= 0.0030 '/' Cc= 0.900 n= 0.013 Concrete pipe, straight & clean, Flow Area= 1.77 sf
#2	Device 1	30.40'	**34.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	31.55'	**Asymmetrical Weir To DHSS, C= 3.27** Offset (feet) 0.00 31.00 90.00 182.00 292.00 292.10 Elev. (feet) 32.00 31.92 31.82 31.61 31.55 32.00
#4	Tertiary	31.55'	**Asymmetrical Weir To DSP4, C= 3.27** Offset (feet) -0.10 0.00 58.00 114.00 158.00 205.00 263.00 311.00 376.00 455.00 Elev. (feet) 32.00 31.55 31.64 31.65 31.72 31.71 31.80 31.70 31.93 32.00

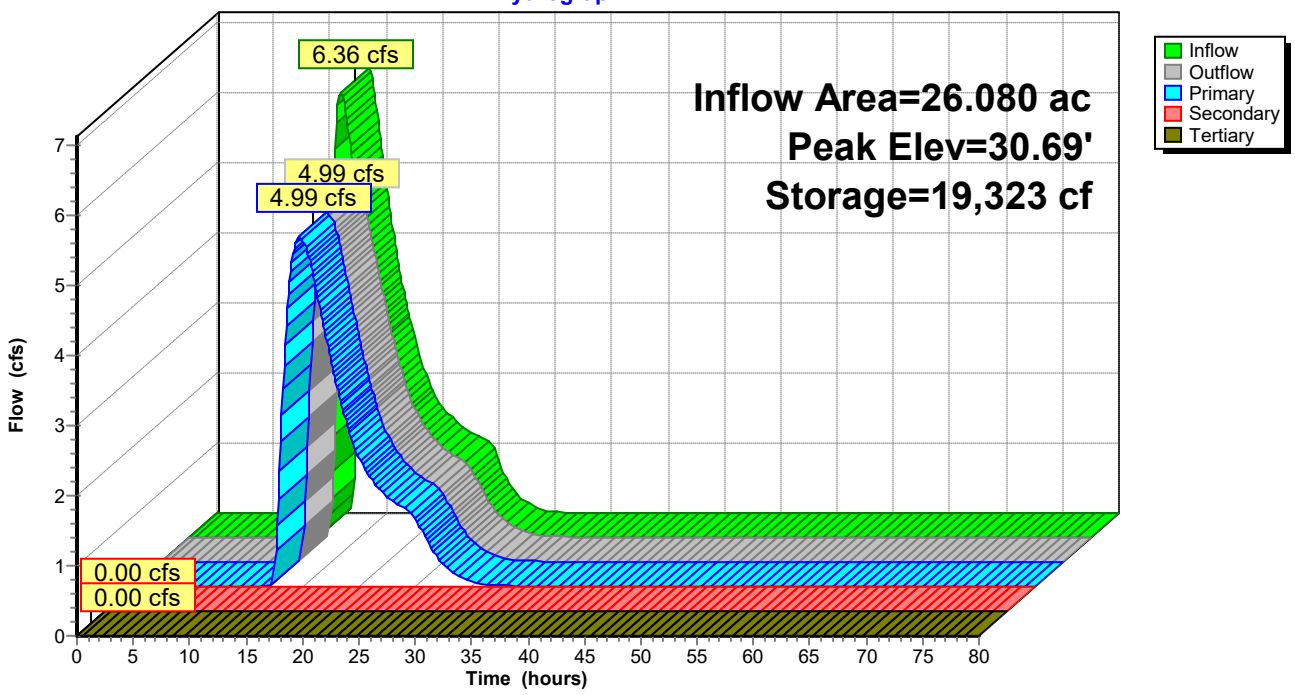
Primary OutFlow Max=4.99 cfs @ 14.79 hrs HW=30.69' (Free Discharge)
└**1=Culvert** (Passes 4.99 cfs of 7.58 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 4.99 cfs @ 1.77 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=30.30' TW=0.00' (Dynamic Tailwater)
└**3=Asymmetrical Weir To DHSS** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=30.30' TW=25.00' (Dynamic Tailwater)
└**4=Asymmetrical Weir To DSP4** (Controls 0.00 cfs)

Pond 3P: EX. SUMP

Hydrograph



Summary for Pond 4P: STORAGE POND

Inflow Area = 16.580 ac, 47.95% Impervious, Inflow Depth = 1.93" for 10-YEAR event
Inflow = 7.98 cfs @ 13.01 hrs, Volume= 2.672 af
Outflow = 5.87 cfs @ 13.80 hrs, Volume= 2.672 af, Atten= 26%, Lag= 47.6 min
Primary = 5.87 cfs @ 13.80 hrs, Volume= 2.672 af
Routed to Pond 1AP : POND 1A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 28.15' @ 14.13 hrs Surf.Area= 28,468 sf Storage= 17,240 cf

Plug-Flow detention time= 62.9 min calculated for 2.669 af (100% of inflow)
Center-of-Mass det. time= 63.3 min (1,020.2 - 957.0)

Volume	Invert	Avail.Storage	Storage Description
#1	27.00'	132,971 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 140,379 cf Overall - 7,408 cf Embedded = 132,971 cf
#2	28.50'	7,408 cf	**FOREBAY - E (Prismatic)** Listed below (Recalc) Inside #1
		140,379 cf	Total Available Storage

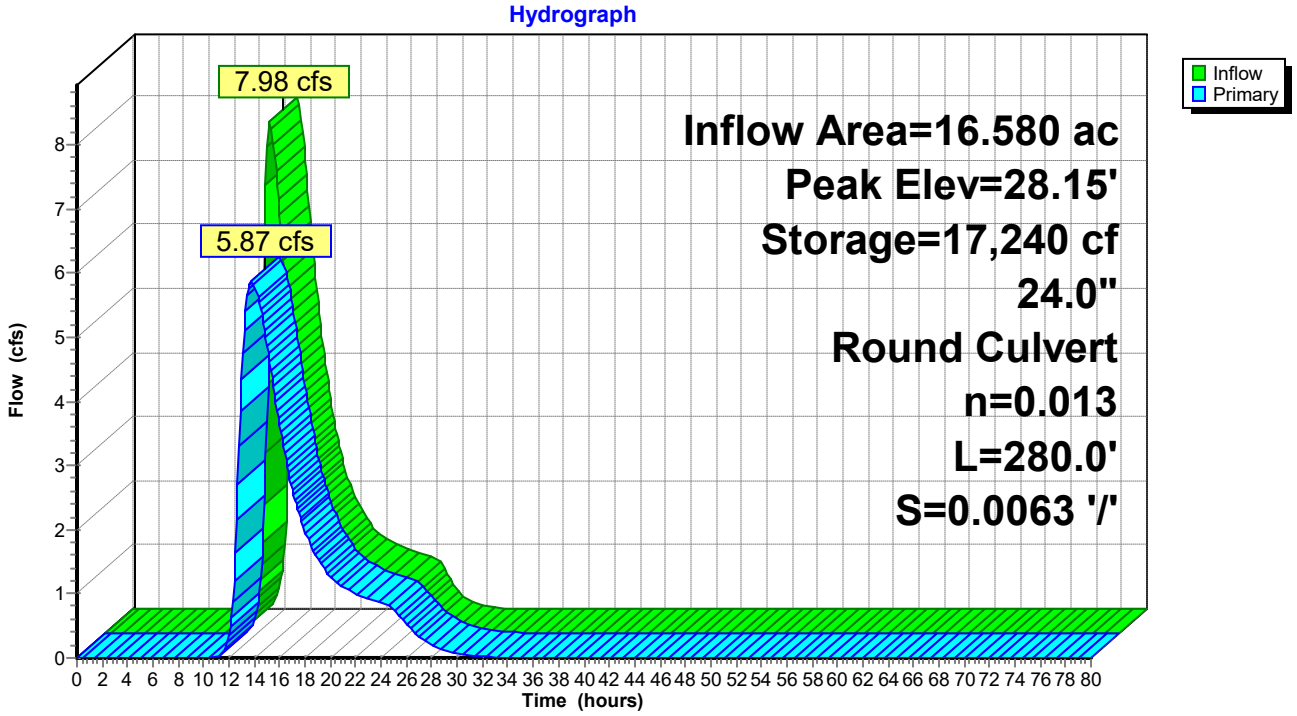
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.00	0	0	0
28.00	26,302	13,151	13,151
29.00	40,810	33,556	46,707
30.00	46,705	43,758	90,465
31.00	53,123	49,914	140,379

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
28.50	0	0	0
29.00	3,008	752	752
30.00	3,328	3,168	3,920
31.00	3,648	3,488	7,408

Device	Routing	Invert	Outlet Devices
#1	Primary	27.00'	**24.0" Round Culvert** L= 280.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 27.00' / 25.23' S= 0.0063 '/' Cc= 0.900 n= 0.013 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=5.79 cfs @ 13.80 hrs HW=28.14' TW=26.37' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 5.79 cfs @ 4.53 fps)

Pond 4P: STORAGE POND



Summary for Pond 8P: As-Built of Pond 1 DHSS Medical Center

Inflow Area = 8.020 ac, 32.79% Impervious, Inflow Depth = 1.36" for 10-YEAR event
Inflow = 6.53 cfs @ 12.25 hrs, Volume= 0.910 af
Outflow = 2.62 cfs @ 12.94 hrs, Volume= 0.910 af, Atten= 60%, Lag= 41.1 min
Primary = 2.62 cfs @ 12.94 hrs, Volume= 0.910 af
Routed to Pond 16P : Pond 2 DHSS From approved report

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 27.44' @ 12.94 hrs Surf.Area= 22,349 sf Storage= 9,486 cf

Plug-Flow detention time= 61.1 min calculated for 0.909 af (100% of inflow)
Center-of-Mass det. time= 61.4 min (964.5 - 903.1)

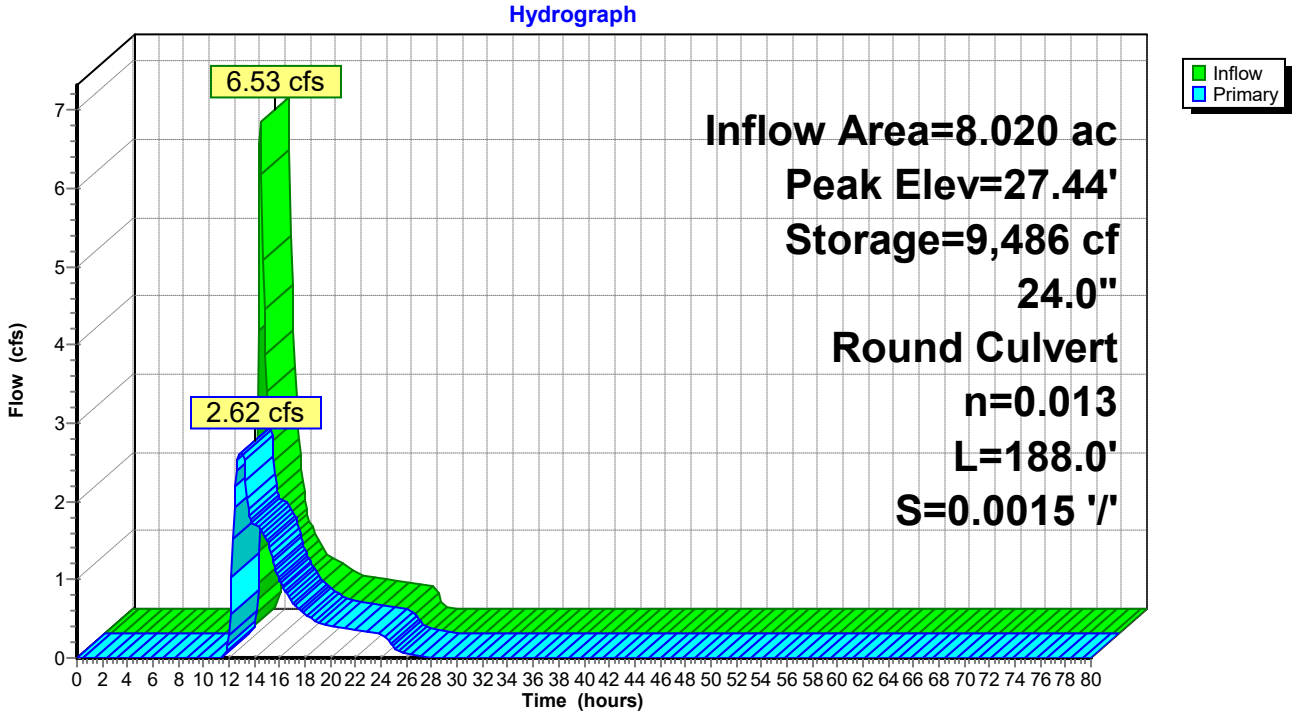
Volume	Invert	Avail.Storage	Storage Description
#1	26.50'	133,824 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.50	0	0	0
27.00	9,831	2,458	2,458
28.00	38,486	24,159	26,616
29.00	50,814	44,650	71,266
30.00	74,302	62,558	133,824

Device	Routing	Invert	Outlet Devices
#1	Primary	26.50'	**24.0" Round RCP_Round 24"** L= 188.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 26.50' / 26.21' S= 0.0015 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=2.61 cfs @ 12.94 hrs HW=27.44' TW=26.72' (Dynamic Tailwater)
↑—**1=RCP_Round 24"** (Barrel Controls 2.61 cfs @ 2.66 fps)

Pond 8P: As-Built of Pond 1 DHSS Medical Center



Summary for Pond 16P: Pond 2 DHSS From approved report

Inflow Area = 20.940 ac, 25.93% Impervious, Inflow Depth = 1.36" for 10-YEAR event
Inflow = 8.63 cfs @ 12.41 hrs, Volume= 2.367 af
Outflow = 4.62 cfs @ 13.56 hrs, Volume= 2.367 af, Atten= 47%, Lag= 69.0 min
Primary = 4.62 cfs @ 13.56 hrs, Volume= 2.367 af
Routed to nonexistent node 15L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 27.10' @ 13.56 hrs Surf.Area= 9,842 sf Storage= 26,365 cf

Plug-Flow detention time= 157.5 min calculated for 2.365 af (100% of inflow)
Center-of-Mass det. time= 157.8 min (1,084.7 - 926.9)

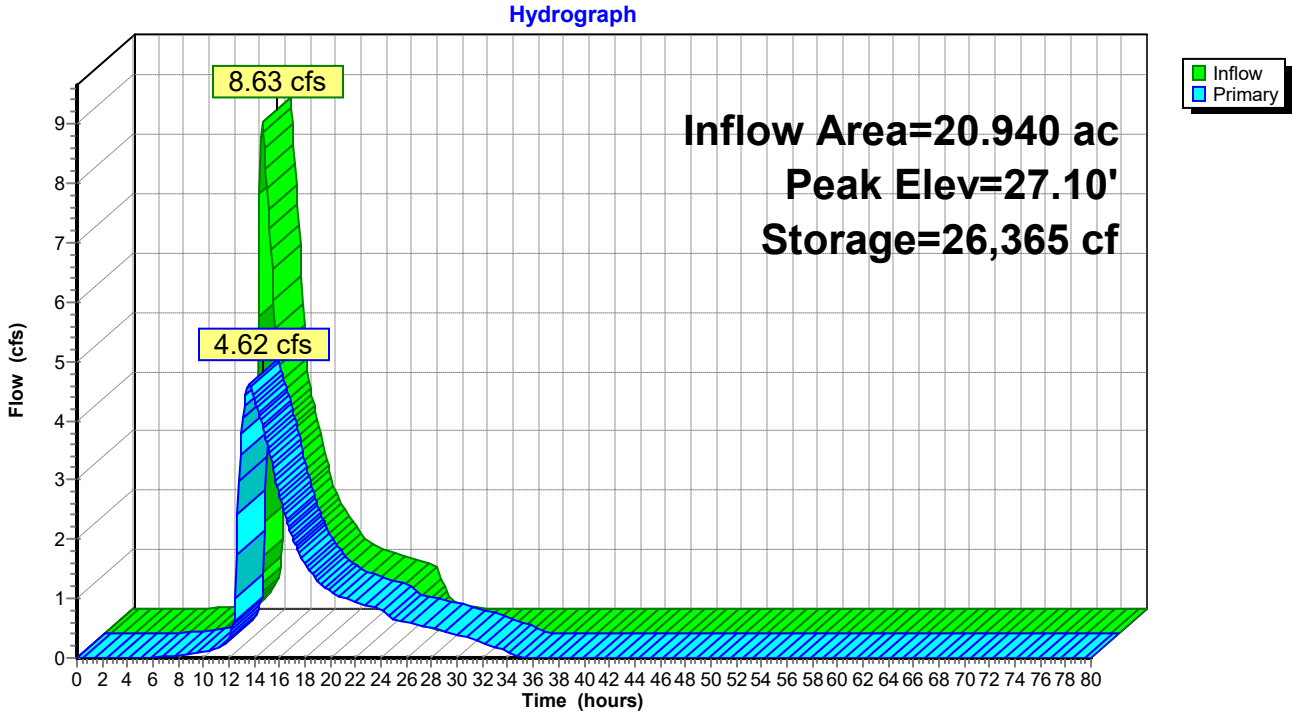
Volume	Invert	Avail.Storage	Storage Description
#1	23.00'	51,194 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
23.00	0	0.0	0	0	0
23.30	4,147	305.8	415	415	7,442
24.00	5,069	337.8	3,220	3,635	9,096
25.00	6,487	371.0	5,763	9,398	11,002
26.00	7,960	402.5	7,211	16,609	12,979
27.00	9,672	439.3	8,802	25,411	15,480
28.00	11,478	469.6	10,562	35,974	17,718
29.00	19,300	1,266.7	15,221	51,194	127,857

Device	Routing	Invert	Outlet Devices
#1	Device 4	23.00'	**4.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	25.47'	**0.8' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.5' Crest Height
#3	Device 4	26.98'	**1.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#4	Primary	23.00'	**24.0" Round RCP_Round 24"** L= 278.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.00' / 22.79' S= 0.0008 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=4.61 cfs @ 13.56 hrs HW=27.10' (Free Discharge)
└**4=RCP_Round 24"** (Passes 4.61 cfs of 19.19 cfs potential flow)
├**1=Orifice/Grate** (Orifice Controls 0.83 cfs @ 9.55 fps)
├**2=Sharp-Crested Rectangular Weir** (Weir Controls 3.65 cfs @ 4.72 fps)
└**3=Sharp-Crested Rectangular Weir** (Weir Controls 0.13 cfs @ 1.15 fps)

Pond 16P: Pond 2 DHSS From approved report

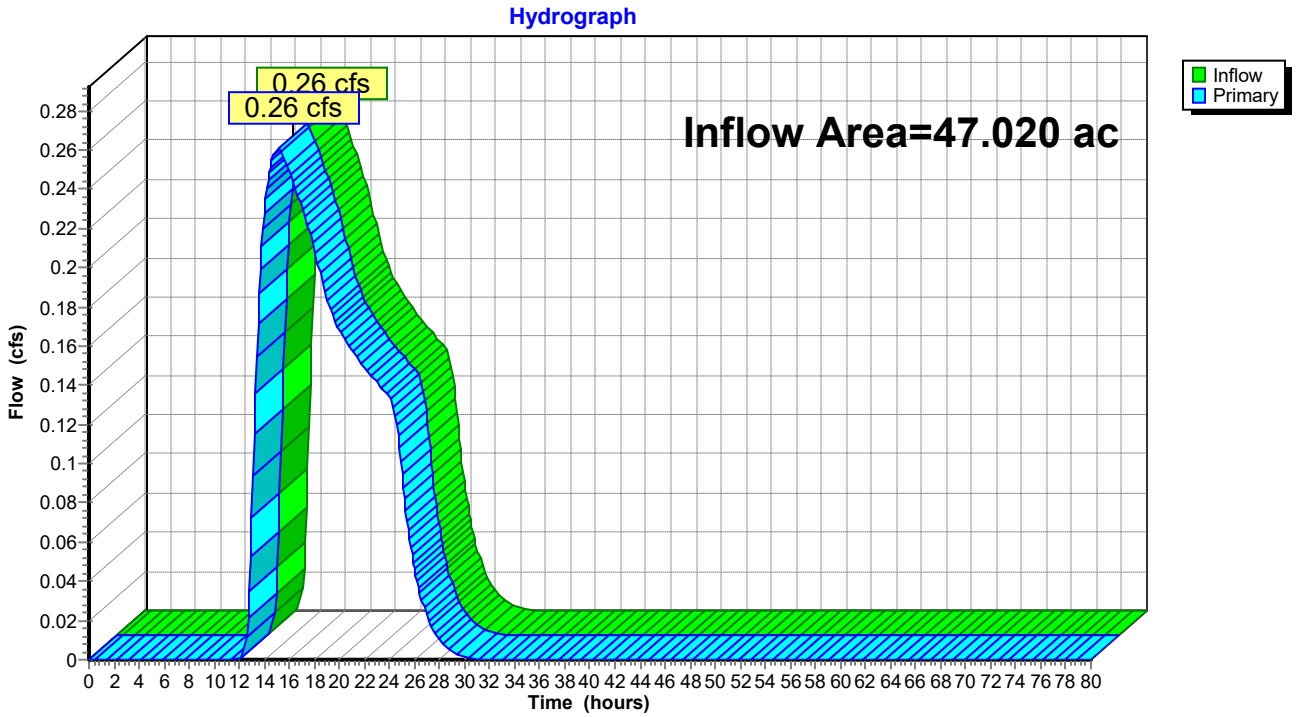


Summary for Link AP-1: Analysis Point 1

Inflow Area = 47.020 ac, 33.37% Impervious, Inflow Depth = 0.05" for 10-YEAR event
Inflow = 0.26 cfs @ 15.12 hrs, Volume= 0.195 af
Primary = 0.26 cfs @ 15.12 hrs, Volume= 0.195 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-1: Analysis Point 1



Summary for Subcatchment 9S: DA153 From Approved Report

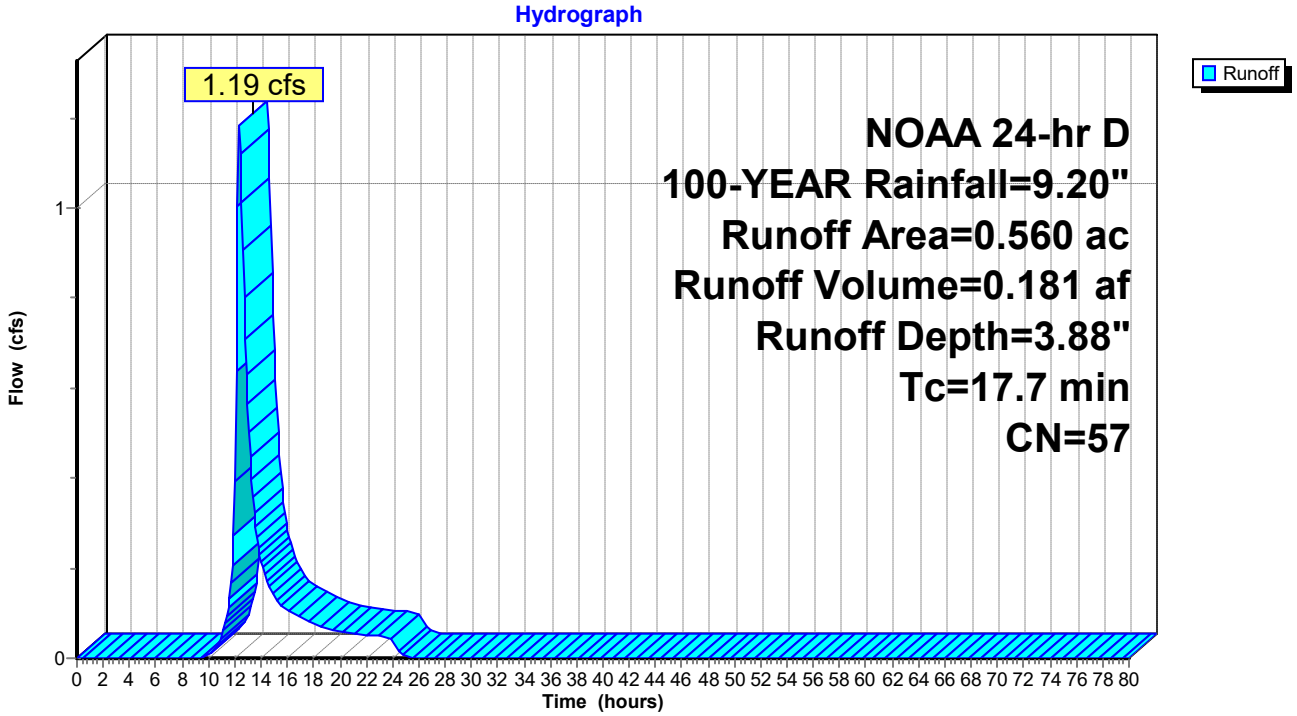
Runoff = 1.19 cfs @ 12.33 hrs, Volume= 0.181 af, Depth= 3.88"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

	Area (ac)	CN	Description
*	0.560	57	DA153
	0.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7					**Direct Entry,**

Subcatchment 9S: DA153 From Approved Report



Summary for Subcatchment 10S: DA152 From Approved Report

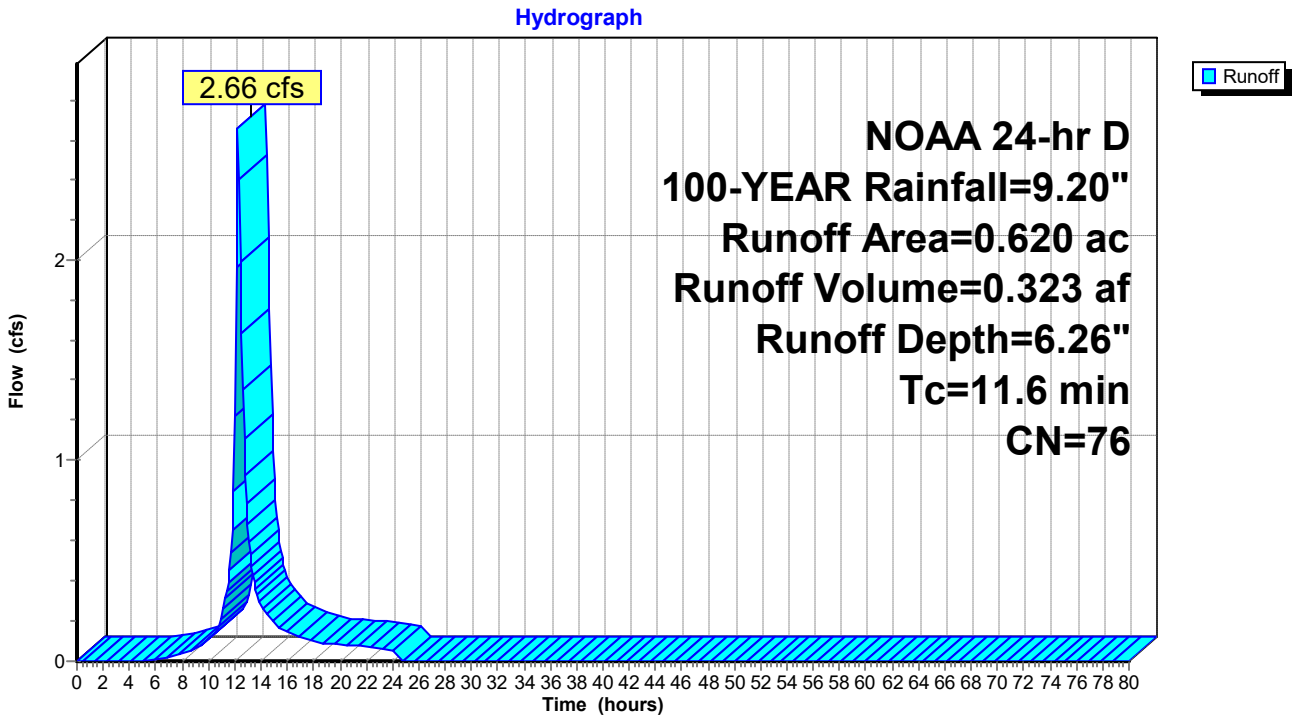
Runoff = 2.66 cfs @ 12.22 hrs, Volume= 0.323 af, Depth= 6.26"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

	Area (ac)	CN	Description
*	0.620	76	
	0.620		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6					**Direct Entry,**

Subcatchment 10S: DA152 From Approved Report



Summary for Subcatchment 11S: DA151 DA150A DA150 DA149A From Approved Report

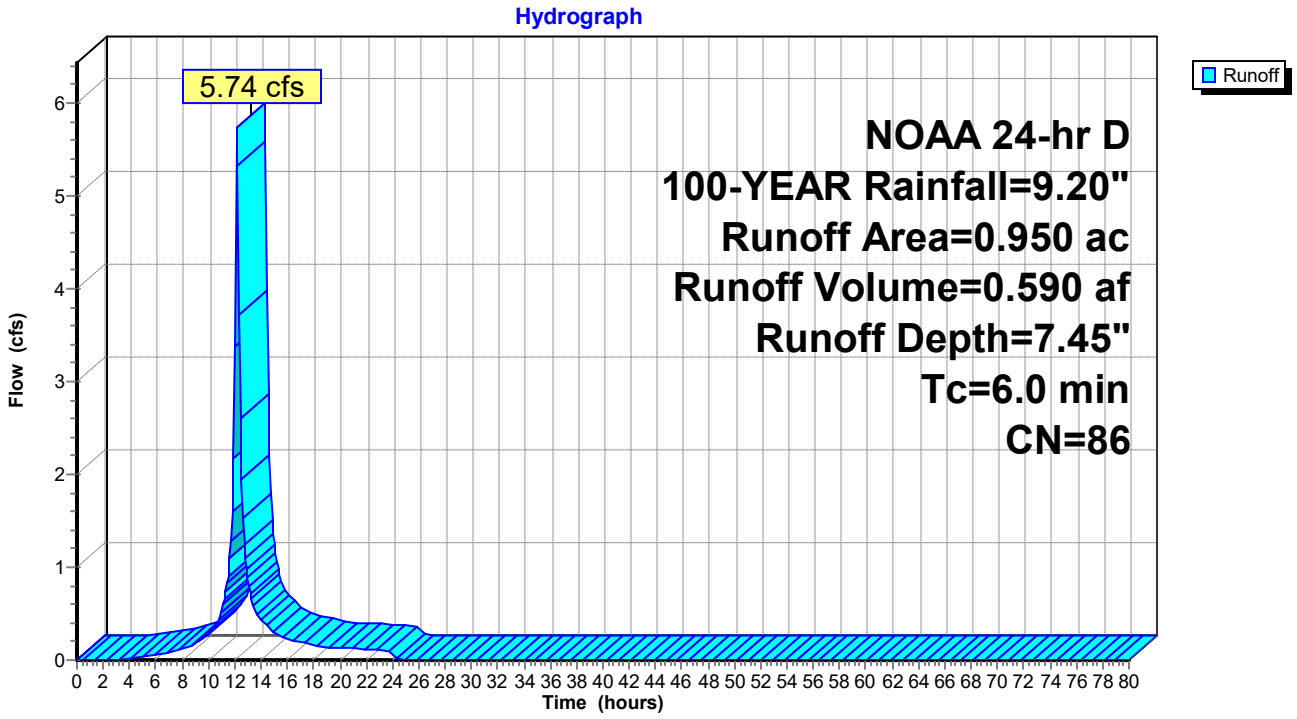
Runoff = 5.74 cfs @ 12.14 hrs, Volume= 0.590 af, Depth= 7.45"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

	Area (ac)	CN	Description
*	0.360	90	DA-151
*	0.150	78	DA-150A
*	0.290	88	DA-150
*	0.150	78	DA-149A
	0.950	86	Weighted Average
	0.950		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: DA151 DA150A DA150 DA149A From Approved Report



Summary for Subcatchment 13S: DA149 From Approved Report

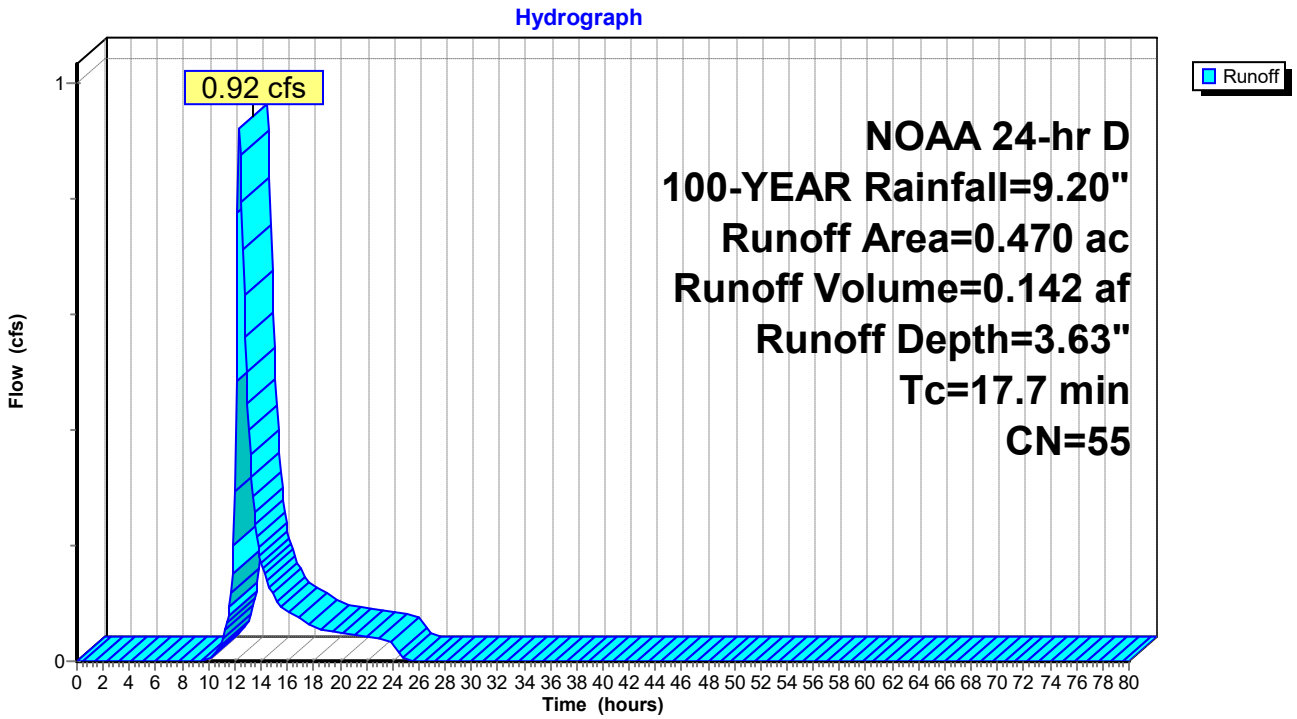
Runoff = 0.92 cfs @ 12.33 hrs, Volume= 0.142 af, Depth= 3.63"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

	Area (ac)	CN	Description
*	0.470	55	
	0.470		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7					**Direct Entry,**

Subcatchment 13S: DA149 From Approved Report



Summary for Subcatchment 15S: DA-2 DHSS Hospital (POST 1 from approved SWM report)

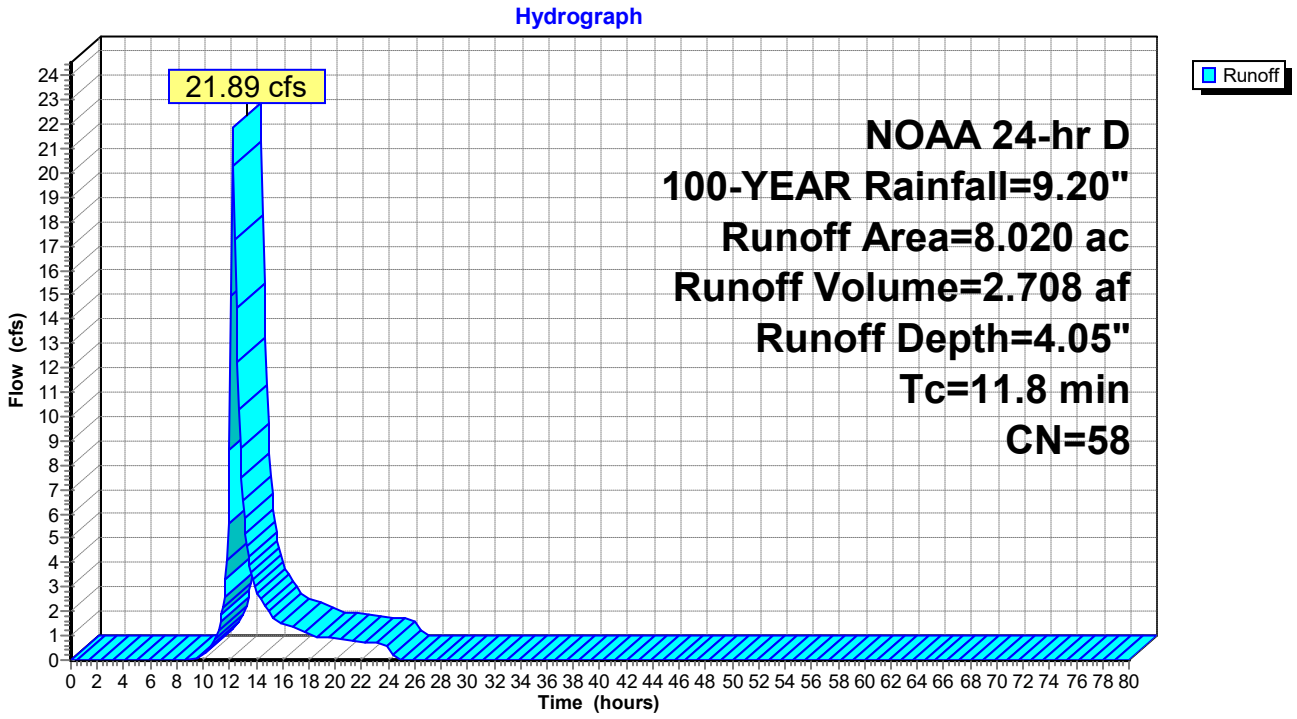
Runoff = 21.89 cfs @ 12.24 hrs, Volume= 2.708 af, Depth= 4.05"
Routed to Pond 8P : As-Built of Pond 1 DHSS Medical Center

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

	Area (ac)	CN	Description
	2.560	98	Paved parking, HSG A
	5.390	39	>75% Grass cover, Good, HSG A
*	0.070	98	PR. Paved parking, HSG A
	8.020	58	Weighted Average
	5.390		67.21% Pervious Area
	2.630		32.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8					**Direct Entry,**

Subcatchment 15S: DA-2 DHSS Hospital (POST 1 from approved SWM report)



Summary for Subcatchment 16S: Post 2 and Road D from Approved Report

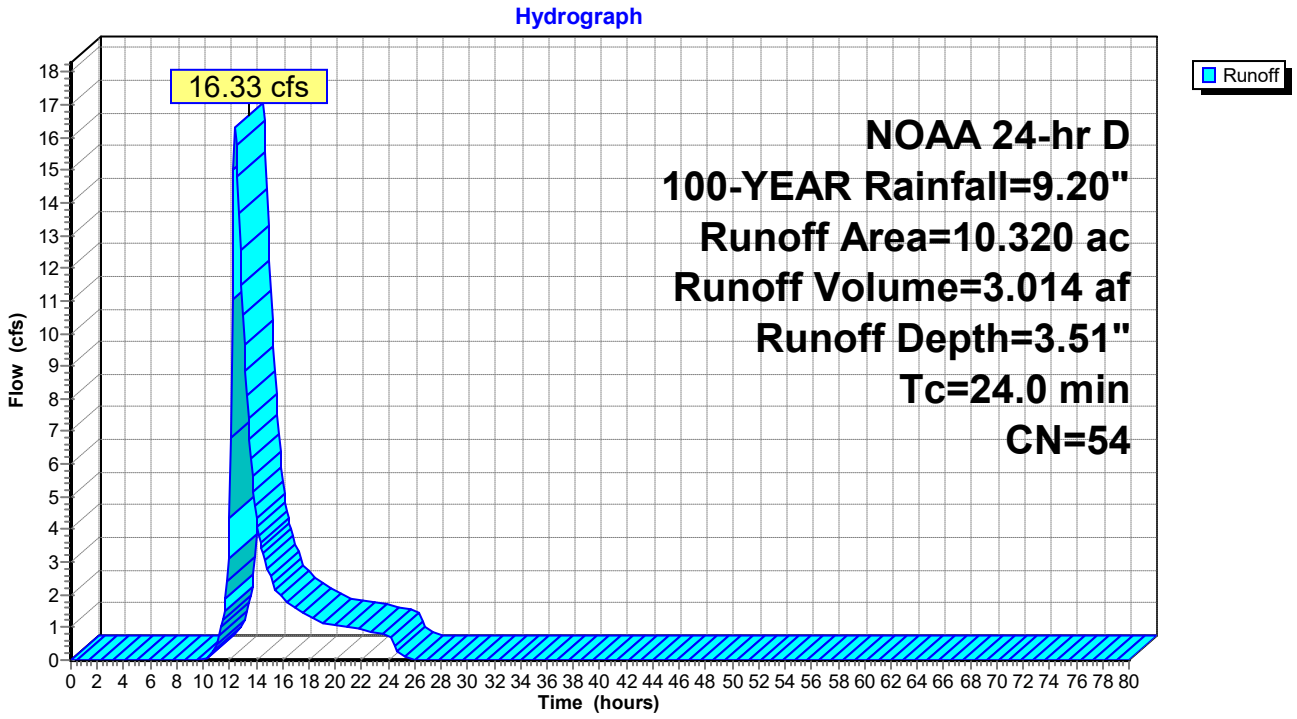
Runoff = 16.33 cfs @ 12.42 hrs, Volume= 3.014 af, Depth= 3.51"
Routed to Pond 16P : Pond 2 DHSS From approved report

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (ac)	CN	Description
2.800	98	Water Surface, HSG A
1.190	30	Woods, Good, HSG A
6.330	39	>75% Grass cover, Good, HSG A
10.320	54	Weighted Average
7.520		72.87% Pervious Area
2.800		27.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0					**Direct Entry, From Approved Report**

Subcatchment 16S: Post 2 and Road D from Approved Report



Summary for Subcatchment DA-1A: DA-1A

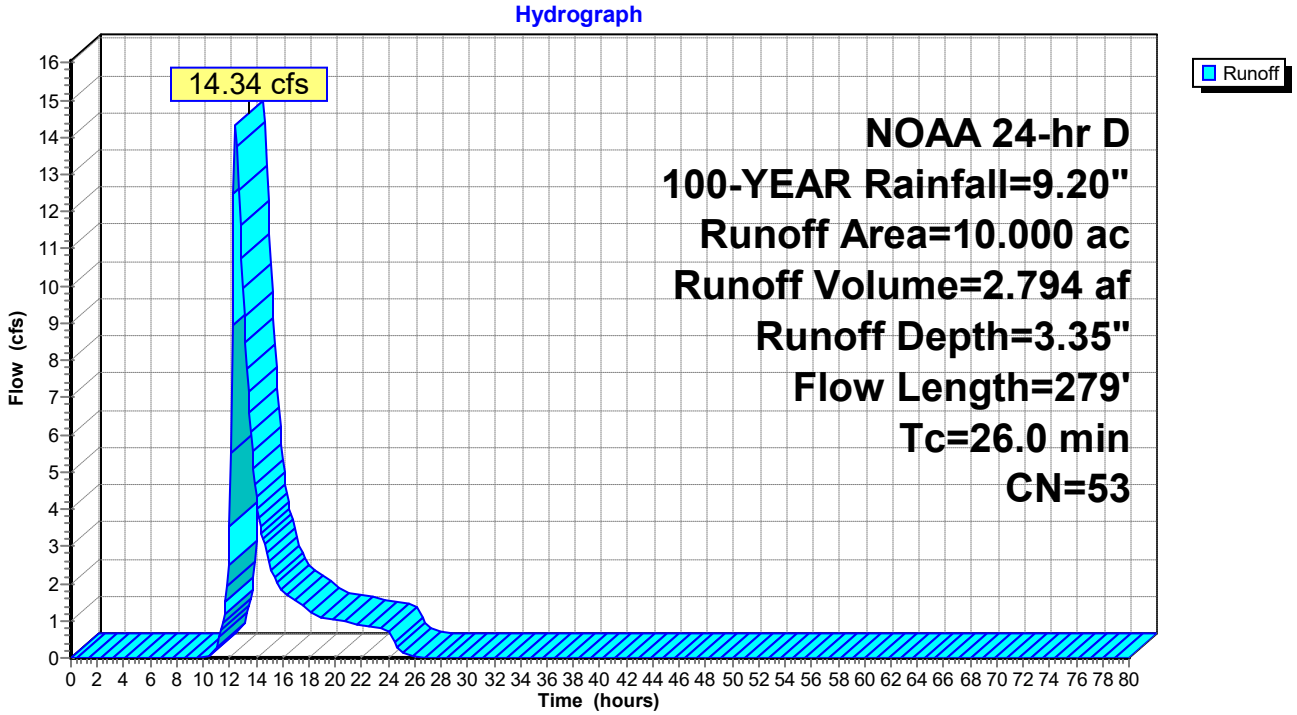
Runoff = 14.34 cfs @ 12.45 hrs, Volume= 2.794 af, Depth= 3.35"
Routed to Pond 1AP : POND 1A

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (ac)	CN	Description
2.330	98	Paved parking, HSG A
7.670	39	>75% Grass cover, Good, HSG A
10.000	53	Weighted Average
7.670		76.70% Pervious Area
2.330		23.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.4	100	0.0060	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.40"
3.6	179	0.0140	0.83		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
26.0	279	Total			

Subcatchment DA-1A: DA-1A



Summary for Subcatchment DA-1B: DA-1B

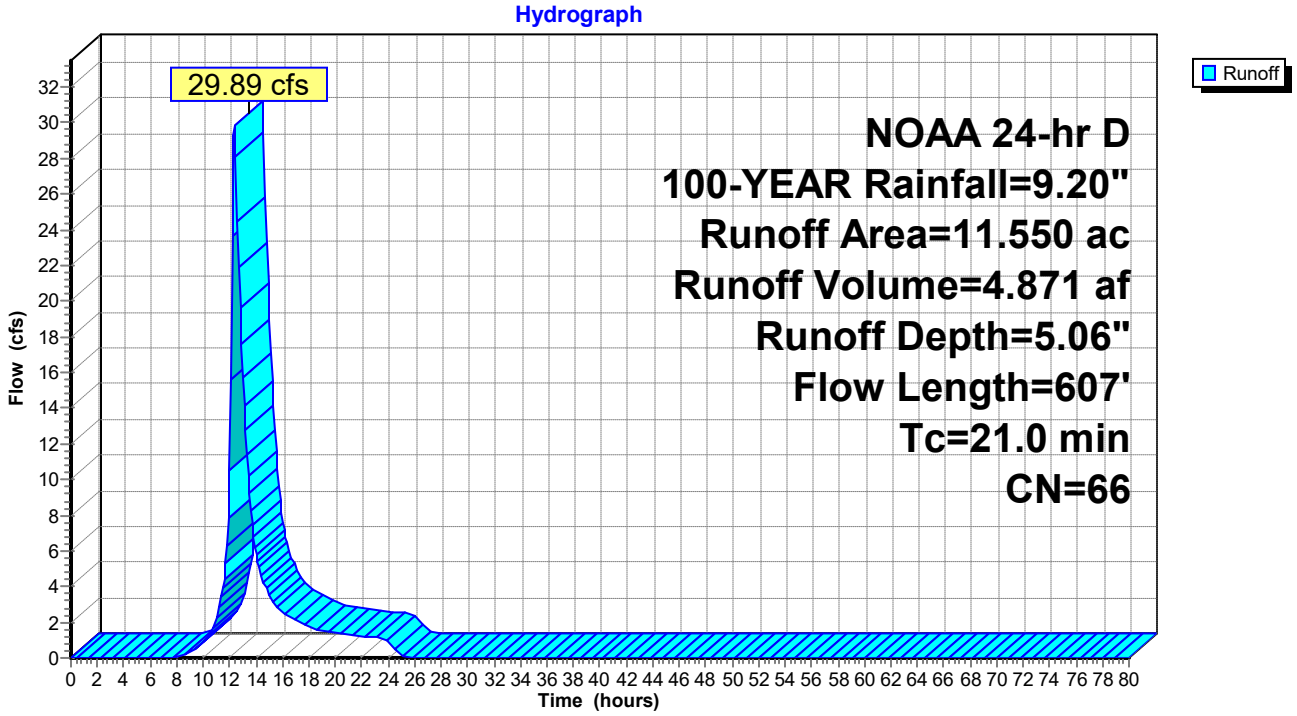
Runoff = 29.89 cfs @ 12.35 hrs, Volume= 4.871 af, Depth= 5.06"
Routed to Pond 1BP : POND 1B

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (ac)	CN	Description
5.380	98	Paved parking, HSG A
6.070	39	>75% Grass cover, Good, HSG A
0.100	30	Woods, Good, HSG A
11.550	66	Weighted Average
6.170		53.42% Pervious Area
5.380		46.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0163	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.40"
4.1	160	0.0086	0.65		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.5	253	0.0025	2.85	3.50	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Corrugated PP, smooth interior
0.4	94	0.0031	3.91	6.91	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.011 Concrete pipe, straight & clean
21.0	607	Total			

Subcatchment DA-1B: DA-1B



Summary for Subcatchment DA-1C: DA-1C

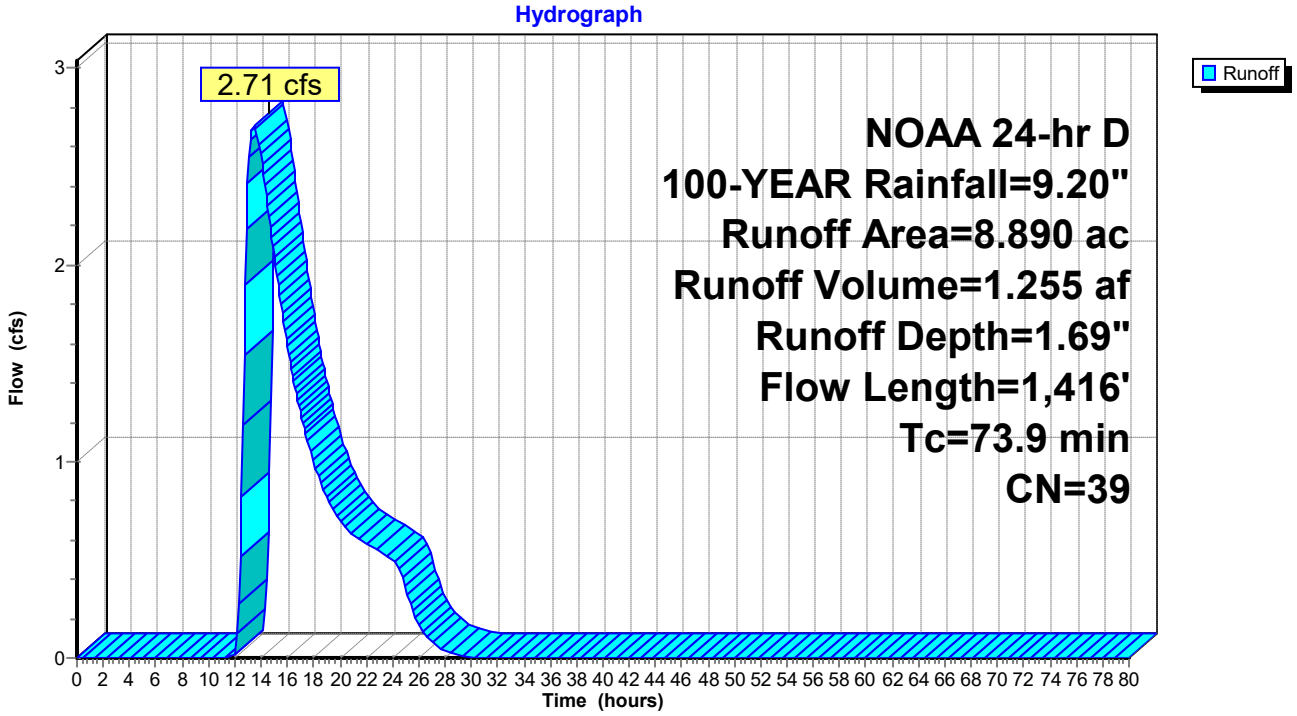
Runoff = 2.71 cfs @ 13.49 hrs, Volume= 1.255 af, Depth= 1.69"
Routed to Link AP-1 : Analysis Point 1

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (ac)	CN	Description
8.630	39	>75% Grass cover, Good, HSG A
0.230	30	Woods, Good, HSG A
0.030	98	Paved parking, HSG A
8.890	39	Weighted Average
8.860		99.66% Pervious Area
0.030		0.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.1	100	0.0050	0.07		**Sheet Flow, Flow Path A** Grass: Dense n= 0.240 P2= 3.40"
11.2	279	0.0035	0.41		**Shallow Concentrated Flow, Flow Path B** Short Grass Pasture Kv= 7.0 fps
13.3	457	0.0067	0.57		**Shallow Concentrated Flow, Flow Path C** Short Grass Pasture Kv= 7.0 fps
9.8	169	0.0017	0.29		**Shallow Concentrated Flow, Flow Path D** Short Grass Pasture Kv= 7.0 fps
12.3	296	0.0033	0.40		**Shallow Concentrated Flow, Flow Path E** Short Grass Pasture Kv= 7.0 fps
3.2	115	0.0071	0.59		**Shallow Concentrated Flow, Flow Path F** Short Grass Pasture Kv= 7.0 fps
73.9	1,416	Total			

Subcatchment DA-1C: DA-1C



Summary for Subcatchment DA-3A: DA-3A

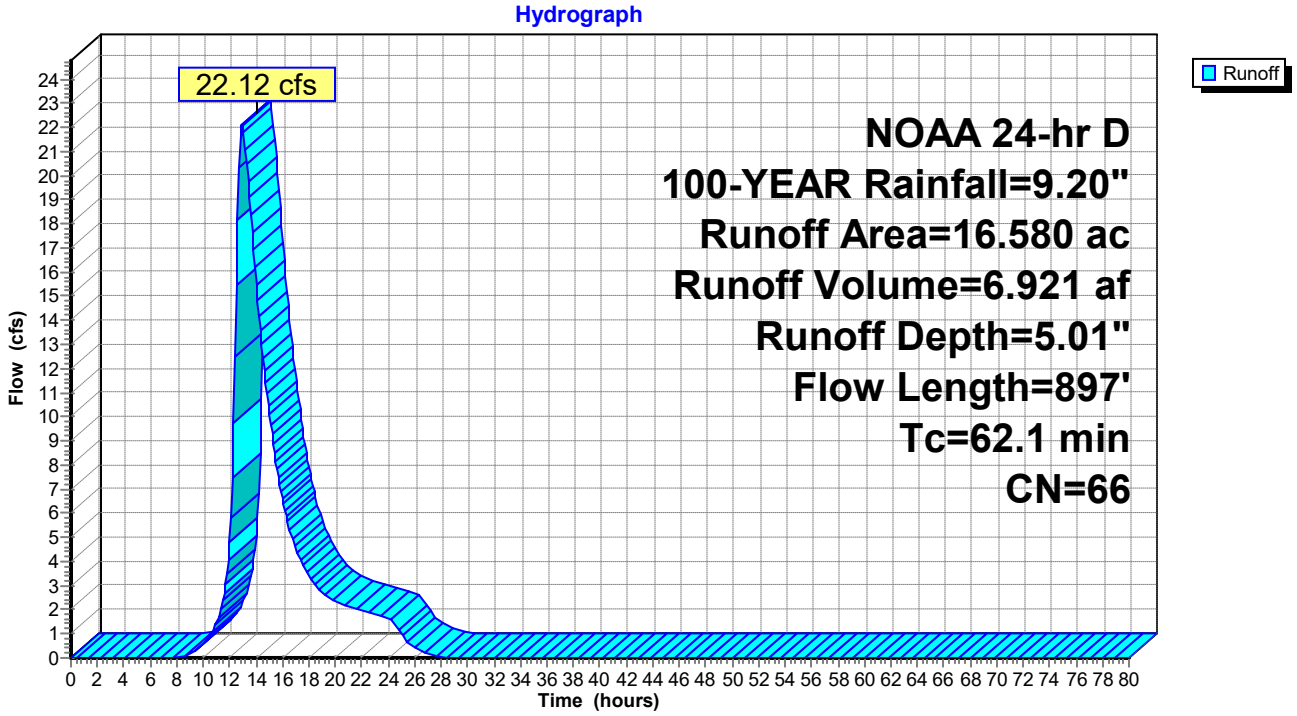
Runoff = 22.12 cfs @ 12.94 hrs, Volume= 6.921 af, Depth= 5.01"
Routed to Pond 4P : STORAGE POND

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (ac)	CN	Description
7.950	98	Paved parking, HSG A
5.550	39	>75% Grass cover, Good, HSG A
3.080	32	Woods/grass comb., Good, HSG A
16.580	66	Weighted Average
8.630		52.05% Pervious Area
7.950		47.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
30.1	100	0.0080	0.06		**Sheet Flow, Flow Path A** Woods: Light underbrush n= 0.400 P2= 3.40"
29.9	397	0.0010	0.22		**Shallow Concentrated Flow, Flow Path B** Short Grass Pasture Kv= 7.0 fps
2.1	400	0.0076	3.14	31.35	**Trap/Vee/Rect Channel Flow, Flow Path C** Bot.W=4.00' D=1.00' Z= 6.0 '/' Top.W=16.00' n= 0.030 Earth, grassed & winding
62.1	897	Total			

Subcatchment DA-3A: DA-3A



Summary for Subcatchment DA-3B: DA-3B

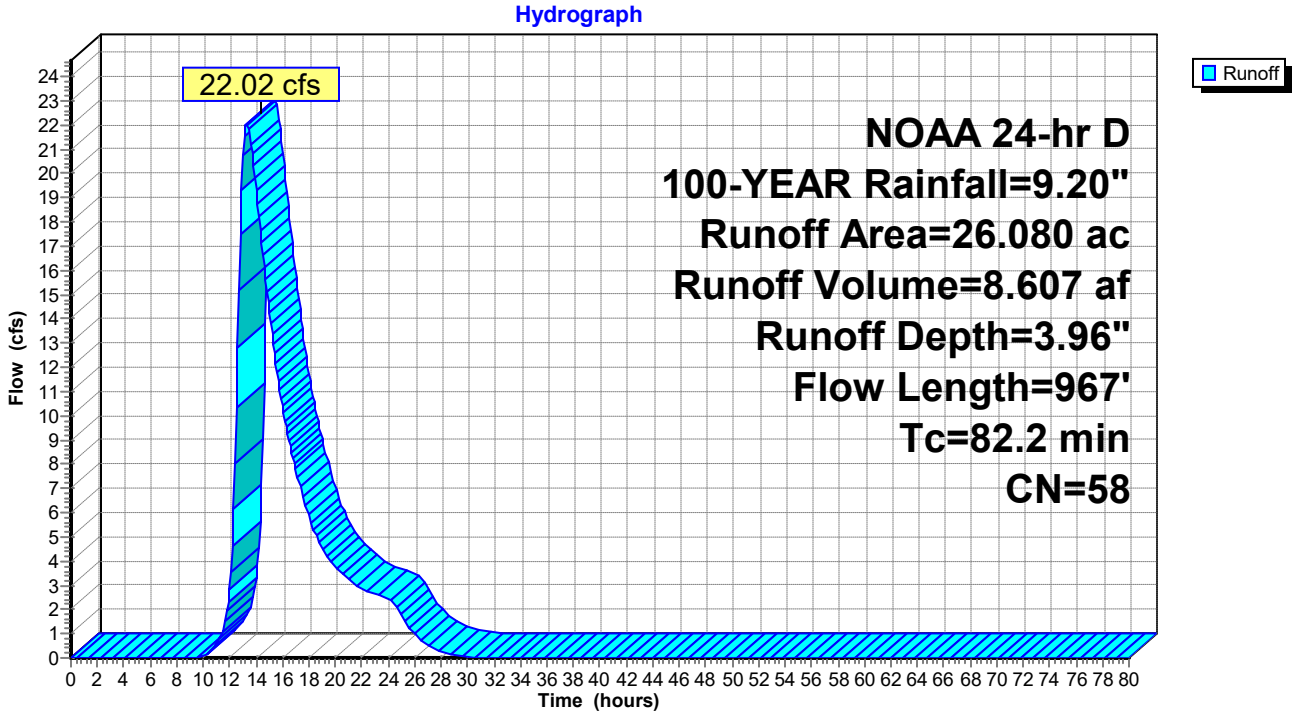
Runoff = 22.02 cfs @ 13.27 hrs, Volume= 8.607 af, Depth= 3.96"
Routed to Pond 3P : EX. SUMP

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (ac)	CN	Description
1.050	98	Paved parking, HSG A
9.900	39	>75% Grass cover, Good, HSG A
15.130	67	Row crops, straight row, Good, HSG A
26.080	58	Weighted Average
25.030		95.97% Pervious Area
1.050		4.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0080	0.12		**Sheet Flow, Flow Path A** Grass: Short n= 0.150 P2= 3.40"
12.1	312	0.0038	0.43		**Shallow Concentrated Flow, Flow Path B** Short Grass Pasture Kv= 7.0 fps
32.4	236	0.0003	0.12		**Shallow Concentrated Flow, Flow Path C** Short Grass Pasture Kv= 7.0 fps
24.0	319	0.0010	0.22		**Shallow Concentrated Flow, Flow Path C** Short Grass Pasture Kv= 7.0 fps
82.2	967	Total			

Subcatchment DA-3B: DA-3B

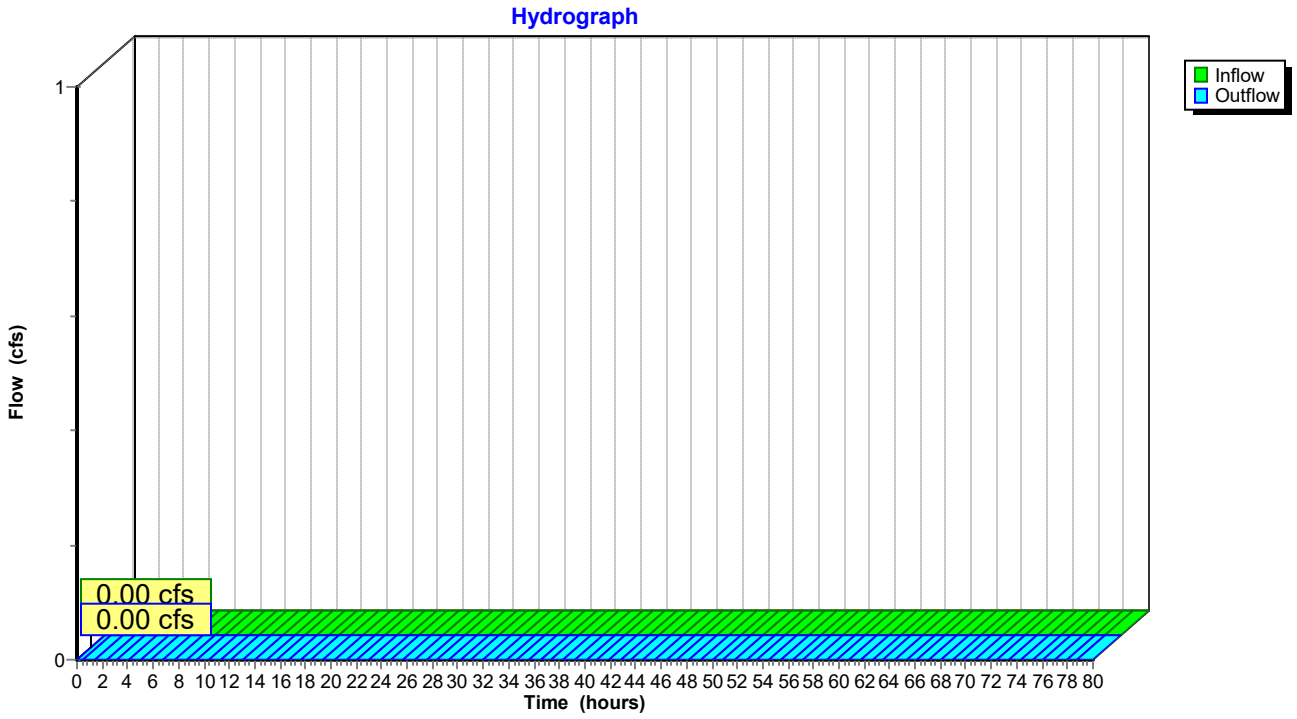


Summary for Reach 2R: ZERO TIME REACH

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 8P : As-Built of Pond 1 DHSS Medical Center

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Reach 2R: ZERO TIME REACH



Summary for Pond 1AP: POND 1A

Inflow Area = 26.580 ac, 38.68% Impervious, Inflow Depth = 4.39" for 100-YEAR event
Inflow = 20.42 cfs @ 12.89 hrs, Volume= 9.715 af
Outflow = 13.12 cfs @ 15.03 hrs, Volume= 9.716 af, Atten= 36%, Lag= 128.3 min
Discarded = 0.48 cfs @ 15.05 hrs, Volume= 1.864 af
Primary = 12.64 cfs @ 15.03 hrs, Volume= 7.852 af
Routed to Pond 1BP : POND 1B

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 28.72' @ 15.05 hrs Surf.Area= 16,025 sf Storage= 90,292 cf

Plug-Flow detention time= 336.7 min calculated for 9.704 af (100% of inflow)
Center-of-Mass det. time= 338.2 min (1,343.7 - 1,005.5)

Volume	Invert	Avail.Storage	Storage Description
#1	25.00'	53,444 cf	**Custom Stage Data - POND FRONT (Prismatic)** Listed below (Recalc)
#2	25.00'	22,515 cf	**Custom Stage Data - FOREBAY A (Prismatic)** Listed below (Recalc) -Imperv
#3	25.00'	22,839 cf	**Custom Stage Data - Unsuitable Soils SWM-4 (Prismatic)** Listed below (Rec
		98,797 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	10,276	0	0
26.00	11,846	11,061	11,061
27.00	13,340	12,593	23,654
28.00	14,892	14,116	37,770
29.00	16,455	15,674	53,444

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	4,063	0	0
26.00	4,813	4,438	4,438
27.00	5,600	5,207	9,645
28.00	6,426	6,013	15,658
29.00	7,289	6,858	22,515

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	3,913	0	0
26.00	4,768	4,341	4,341
27.00	5,672	5,220	9,561
28.00	6,626	6,149	15,710
29.00	7,632	7,129	22,839

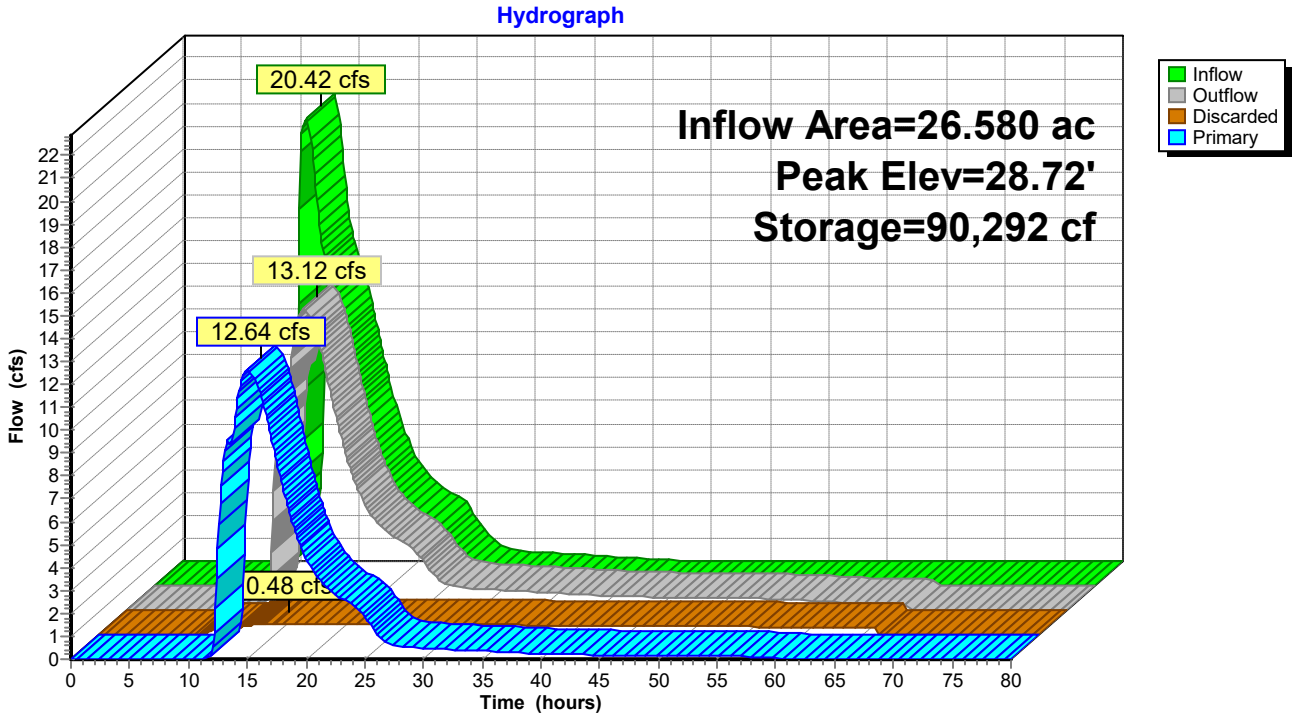
Device	Routing	Invert	Outlet Devices
#1	Discarded	25.00'	**1.300 in/hr Exfiltration over Surface area**
#2	Primary	25.26'	**30.0" Round Culvert**
			L= 105.0' RCP, sq.cut end projecting, Ke= 0.500
			Inlet / Outlet Invert= 25.26' / 25.00' S= 0.0025 '/' Cc= 0.900

n= 0.011 Concrete pipe, straight & clean, Flow Area= 4.91 sf

Discarded OutFlow Max=0.48 cfs @ 15.05 hrs HW=28.72' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.48 cfs)

Primary OutFlow Max=12.63 cfs @ 15.03 hrs HW=28.72' TW=28.44' (Dynamic Tailwater)
2=Culvert (Inlet Controls 12.63 cfs @ 2.57 fps)

Pond 1AP: POND 1A



Summary for Pond 1BP: POND 1B

Inflow Area = 38.130 ac, 41.07% Impervious, Inflow Depth = 4.00" for 100-YEAR event
Inflow = 32.68 cfs @ 12.41 hrs, Volume= 12.723 af
Outflow = 16.17 cfs @ 14.99 hrs, Volume= 12.724 af, Atten= 51%, Lag= 154.9 min
Discarded = 1.63 cfs @ 14.99 hrs, Volume= 6.081 af
Primary = 14.54 cfs @ 14.99 hrs, Volume= 6.643 af
Routed to Link AP-1 : Analysis Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 28.44' @ 14.99 hrs Surf.Area= 44,140 sf Storage= 165,070 cf

Plug-Flow detention time= 507.8 min calculated for 12.708 af (100% of inflow)
Center-of-Mass det. time= 507.6 min (1,545.1 - 1,037.5)

Volume	Invert	Avail.Storage	Storage Description
#1	25.00'	149,049 cf	**Custom Stage Data - POND REAR (Prismatic)** Listed below (Recalc)
#2	25.00'	17,869 cf	**Custom Stage Data - FOREBAY C (Prismatic)** Listed below (Recalc) -Imperv
#3	25.00'	4,471 cf	**Custom Stage Data - FOREBAY D (Prismatic)** Listed below (Recalc) -Imperv
#4	25.00'	28,077 cf	**Custom Stage Data - Unsuitable soils Boring SWM-9 (Prismatic)** Listed belo
		199,465 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	27,738	0	0
26.00	32,484	30,111	30,111
27.00	37,247	34,866	64,977
28.00	42,032	39,640	104,616
29.00	46,834	44,433	149,049

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	3,039	0	0
26.00	3,710	3,375	3,375
27.00	4,429	4,070	7,444
28.00	5,200	4,815	12,259
29.00	6,021	5,611	17,869

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	654	0	0
26.00	865	760	760
27.00	1,099	982	1,742
28.00	1,358	1,229	2,970
29.00	1,643	1,501	4,471

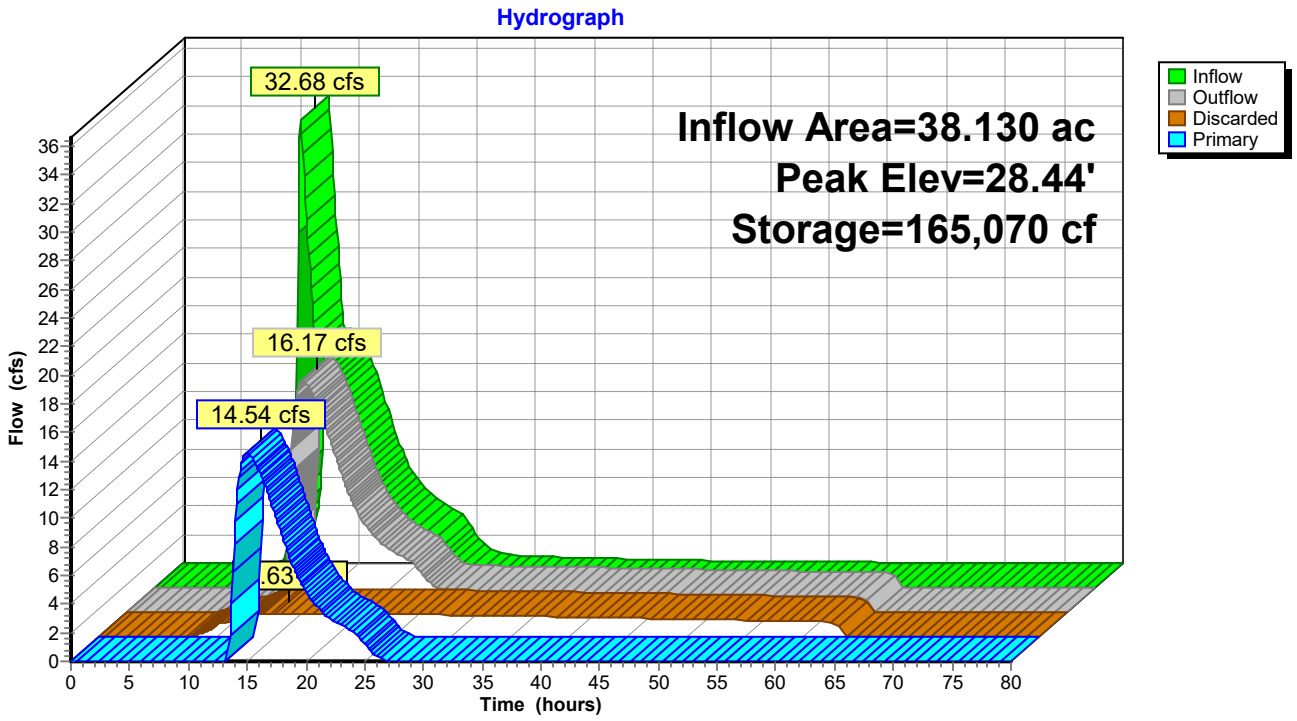
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.00	5,353	0	0
26.00	6,180	5,767	5,767
27.00	7,015	6,598	12,364
28.00	7,853	7,434	19,798
29.00	8,704	8,279	28,077

Device	Routing	Invert	Outlet Devices
#1	Discarded	25.00'	**1.600 in/hr Exfiltration over Surface area**
#2	Primary	28.00'	**15.0' long + 10.0 '/' SideZ x 24.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Discarded OutFlow Max=1.63 cfs @ 14.99 hrs HW=28.44' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 1.63 cfs)

Primary OutFlow Max=14.53 cfs @ 14.99 hrs HW=28.44' TW=0.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 14.53 cfs @ 1.71 fps)

Pond 1BP: POND 1B



Summary for Pond 3P: EX. SUMP

Inflow Area = 26.080 ac, 4.03% Impervious, Inflow Depth = 3.96" for 100-YEAR event
Inflow = 22.02 cfs @ 13.27 hrs, Volume= 8.607 af
Outflow = 8.38 cfs @ 16.74 hrs, Volume= 8.578 af, Atten= 62%, Lag= 207.9 min
Primary = 8.38 cfs @ 16.74 hrs, Volume= 8.578 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 2R : ZERO TIME REACH
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond 1AP : POND 1A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 31.26' @ 16.74 hrs Surf.Area= 306,934 sf Storage= 125,538 cf

Plug-Flow detention time= 164.2 min calculated for 8.567 af (100% of inflow)
Center-of-Mass det. time= 162.0 min (1,138.1 - 976.1)

Volume	Invert	Avail.Storage	Storage Description
#1	30.30'	487,733 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
30.30	0	0	0
31.00	176,057	61,620	61,620
31.50	423,297	149,839	211,458
32.00	681,802	276,275	487,733

Device	Routing	Invert	Outlet Devices
#1	Primary	27.86'	**18.0" Round Culvert** L= 410.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 27.86' / 26.62' S= 0.0030 '/' Cc= 0.900 n= 0.013 Concrete pipe, straight & clean, Flow Area= 1.77 sf
#2	Device 1	30.40'	**34.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	31.55'	**Asymmetrical Weir To DHSS, C= 3.27** Offset (feet) 0.00 31.00 90.00 182.00 292.00 292.10 Elev. (feet) 32.00 31.92 31.82 31.61 31.55 32.00
#4	Tertiary	31.55'	**Asymmetrical Weir To DSP4, C= 3.27** Offset (feet) -0.10 0.00 58.00 114.00 158.00 205.00 263.00 311.00 376.00 455.00 Elev. (feet) 32.00 31.55 31.64 31.65 31.72 31.71 31.80 31.70 31.93 32.00

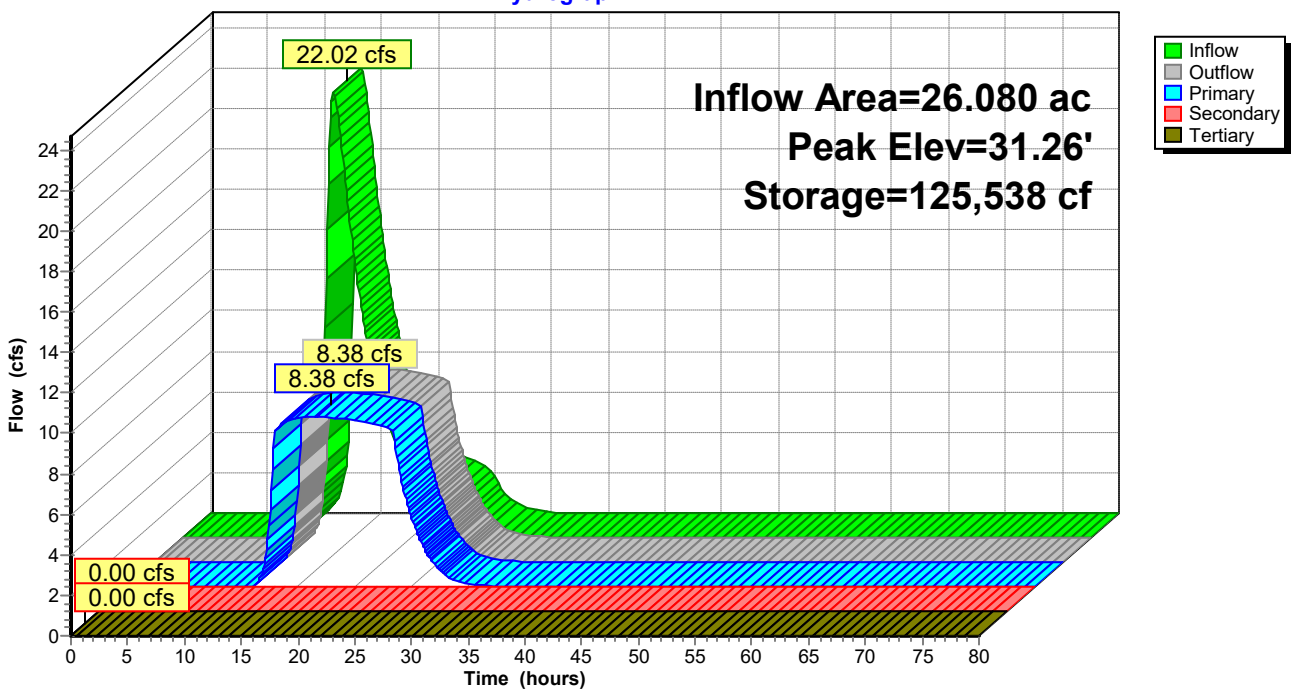
Primary OutFlow Max=8.38 cfs @ 16.74 hrs HW=31.26' (Free Discharge)
└**1=Culvert** (Barrel Controls 8.38 cfs @ 4.74 fps)
└**2=Orifice/Grate** (Passes 8.38 cfs of 25.37 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=30.30' TW=0.00' (Dynamic Tailwater)
└**3=Asymmetrical Weir To DHSS** (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=30.30' TW=25.00' (Dynamic Tailwater)
└**4=Asymmetrical Weir To DSP4** (Controls 0.00 cfs)

Pond 3P: EX. SUMP

Hydrograph



Summary for Pond 4P: STORAGE POND

Inflow Area = 16.580 ac, 47.95% Impervious, Inflow Depth = 5.01" for 100-YEAR event
Inflow = 22.12 cfs @ 12.94 hrs, Volume= 6.921 af
Outflow = 11.95 cfs @ 13.54 hrs, Volume= 6.921 af, Atten= 46%, Lag= 36.1 min
Primary = 11.95 cfs @ 13.54 hrs, Volume= 6.921 af
Routed to Pond 1AP : POND 1A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 29.55' @ 14.84 hrs Surf.Area= 44,041 sf Storage= 69,958 cf

Plug-Flow detention time= 120.3 min calculated for 6.912 af (100% of inflow)
Center-of-Mass det. time= 121.3 min (1,047.5 - 926.3)

Volume	Invert	Avail.Storage	Storage Description
#1	27.00'	132,971 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 140,379 cf Overall - 7,408 cf Embedded = 132,971 cf
#2	28.50'	7,408 cf	**FOREBAY - E (Prismatic)** Listed below (Recalc) Inside #1
		140,379 cf	Total Available Storage

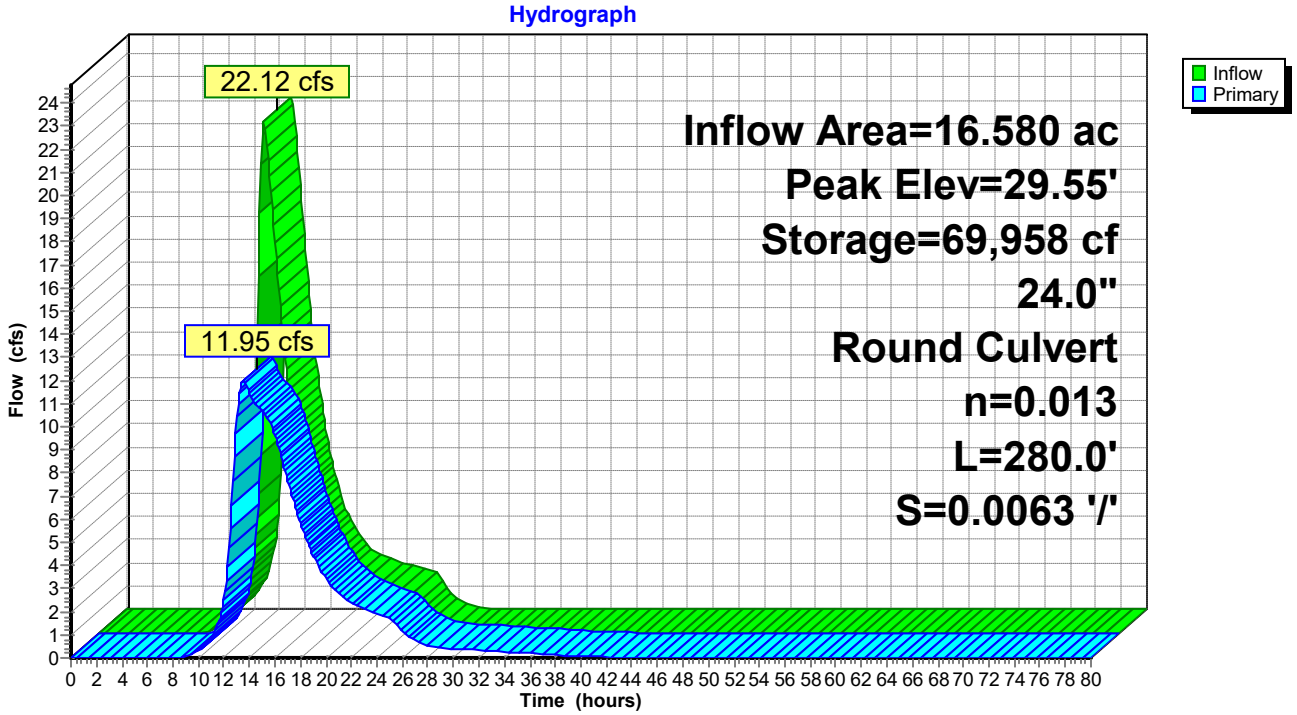
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.00	0	0	0
28.00	26,302	13,151	13,151
29.00	40,810	33,556	46,707
30.00	46,705	43,758	90,465
31.00	53,123	49,914	140,379

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
28.50	0	0	0
29.00	3,008	752	752
30.00	3,328	3,168	3,920
31.00	3,648	3,488	7,408

Device	Routing	Invert	Outlet Devices
#1	Primary	27.00'	**24.0" Round Culvert** L= 280.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 27.00' / 25.23' S= 0.0063 '/' Cc= 0.900 n= 0.013 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=11.37 cfs @ 13.54 hrs HW=29.20' TW=28.11' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 11.37 cfs @ 4.09 fps)

Pond 4P: STORAGE POND



Summary for Pond 8P: As-Built of Pond 1 DHSS Medical Center

Inflow Area = 8.020 ac, 32.79% Impervious, Inflow Depth = 4.05" for 100-YEAR event
Inflow = 21.89 cfs @ 12.24 hrs, Volume= 2.708 af
Outflow = 5.99 cfs @ 14.21 hrs, Volume= 2.708 af, Atten= 73%, Lag= 118.3 min
Primary = 5.99 cfs @ 14.21 hrs, Volume= 2.708 af
Routed to Pond 16P : Pond 2 DHSS From approved report

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 28.63' @ 13.34 hrs Surf.Area= 46,291 sf Storage= 53,455 cf

Plug-Flow detention time= 115.2 min calculated for 2.704 af (100% of inflow)
Center-of-Mass det. time= 115.4 min (981.5 - 866.1)

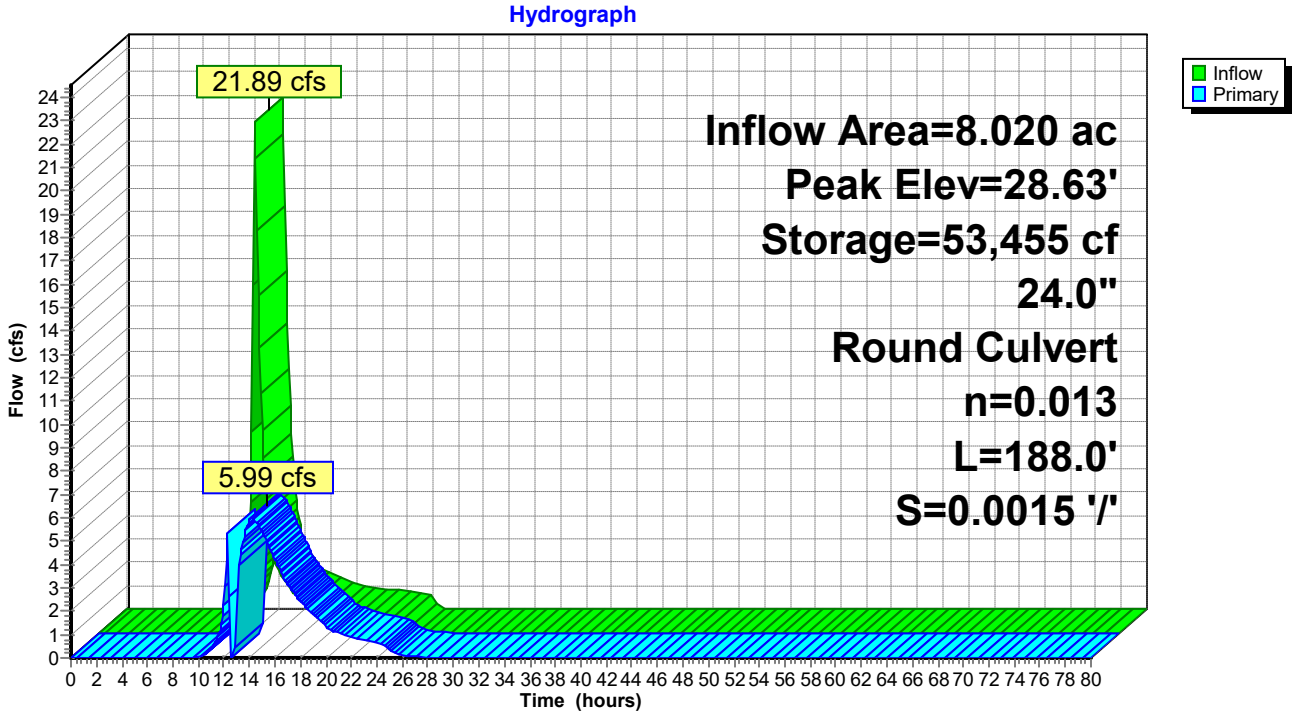
Volume	Invert	Avail.Storage	Storage Description
#1	26.50'	133,824 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.50	0	0	0
27.00	9,831	2,458	2,458
28.00	38,486	24,159	26,616
29.00	50,814	44,650	71,266
30.00	74,302	62,558	133,824

Device	Routing	Invert	Outlet Devices
#1	Primary	26.50'	**24.0" Round RCP_Round 24"** L= 188.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 26.50' / 26.21' S= 0.0015 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=6.34 cfs @ 14.21 hrs HW=28.48' TW=28.15' (Dynamic Tailwater)
↑—**1=RCP_Round 24"** (Outlet Controls 6.34 cfs @ 2.53 fps)

Pond 8P: As-Built of Pond 1 DHSS Medical Center



Summary for Pond 16P: Pond 2 DHSS From approved report

Inflow Area = 20.940 ac, 25.93% Impervious, Inflow Depth = 3.99" for 100-YEAR event
Inflow = 28.54 cfs @ 12.30 hrs, Volume= 6.959 af
Outflow = 17.17 cfs @ 12.73 hrs, Volume= 6.959 af, Atten= 40%, Lag= 25.3 min
Primary = 17.17 cfs @ 12.73 hrs, Volume= 6.959 af
Routed to nonexistent node 15L

Routing by Dyn-Stor-Ind method, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
Peak Elev= 28.67' @ 12.73 hrs Surf.Area= 16,511 sf Storage= 45,325 cf

Plug-Flow detention time= 83.2 min calculated for 6.950 af (100% of inflow)
Center-of-Mass det. time= 83.7 min (999.9 - 916.3)

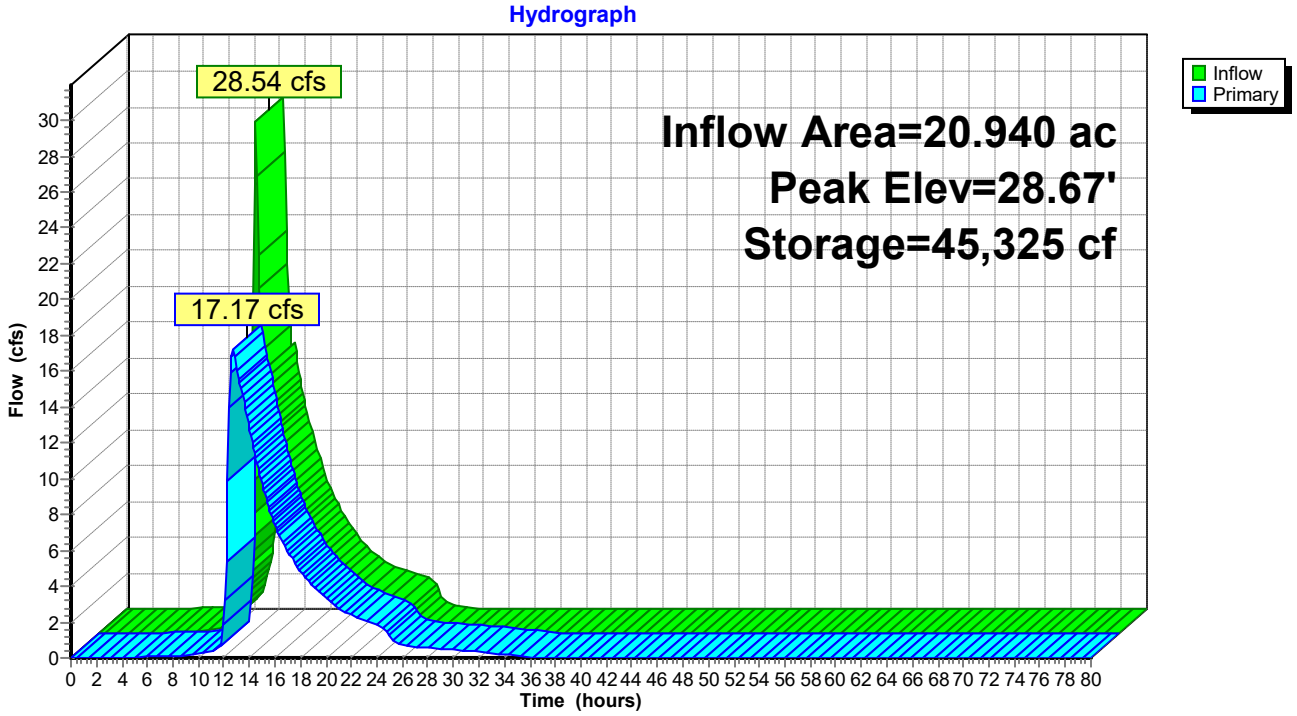
Volume	Invert	Avail.Storage	Storage Description
#1	23.00'	51,194 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
23.00	0	0.0	0	0	0
23.30	4,147	305.8	415	415	7,442
24.00	5,069	337.8	3,220	3,635	9,096
25.00	6,487	371.0	5,763	9,398	11,002
26.00	7,960	402.5	7,211	16,609	12,979
27.00	9,672	439.3	8,802	25,411	15,480
28.00	11,478	469.6	10,562	35,974	17,718
29.00	19,300	1,266.7	15,221	51,194	127,857

Device	Routing	Invert	Outlet Devices
#1	Device 4	23.00'	**4.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	25.47'	**0.8' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.5' Crest Height
#3	Device 4	26.98'	**1.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#4	Primary	23.00'	**24.0" Round RCP_Round 24"** L= 278.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.00' / 22.79' S= 0.0008 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=17.13 cfs @ 12.73 hrs HW=28.67' (Free Discharge)
└**4=RCP_Round 24"** (Passes 17.13 cfs of 24.88 cfs potential flow)
  ├**1=Orifice/Grate** (Orifice Controls 0.99 cfs @ 11.29 fps)
  ├**2=Sharp-Crested Rectangular Weir** (Weir Controls 9.43 cfs @ 7.37 fps)
  └**3=Sharp-Crested Rectangular Weir** (Weir Controls 6.71 cfs @ 6.00 fps)

Pond 16P: Pond 2 DHSS From approved report

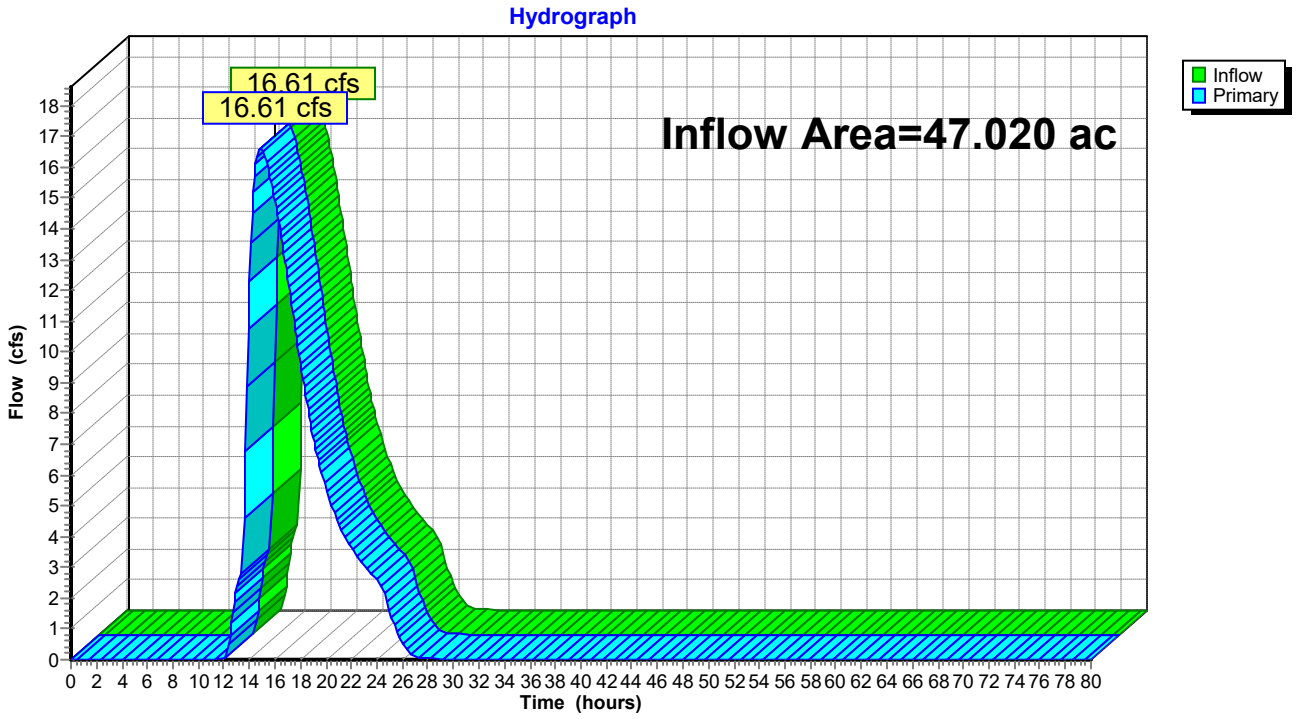


Summary for Link AP-1: Analysis Point 1

Inflow Area = 47.020 ac, 33.37% Impervious, Inflow Depth = 2.02" for 100-YEAR event
Inflow = 16.61 cfs @ 14.89 hrs, Volume= 7.898 af
Primary = 16.61 cfs @ 14.89 hrs, Volume= 7.898 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-1: Analysis Point 1

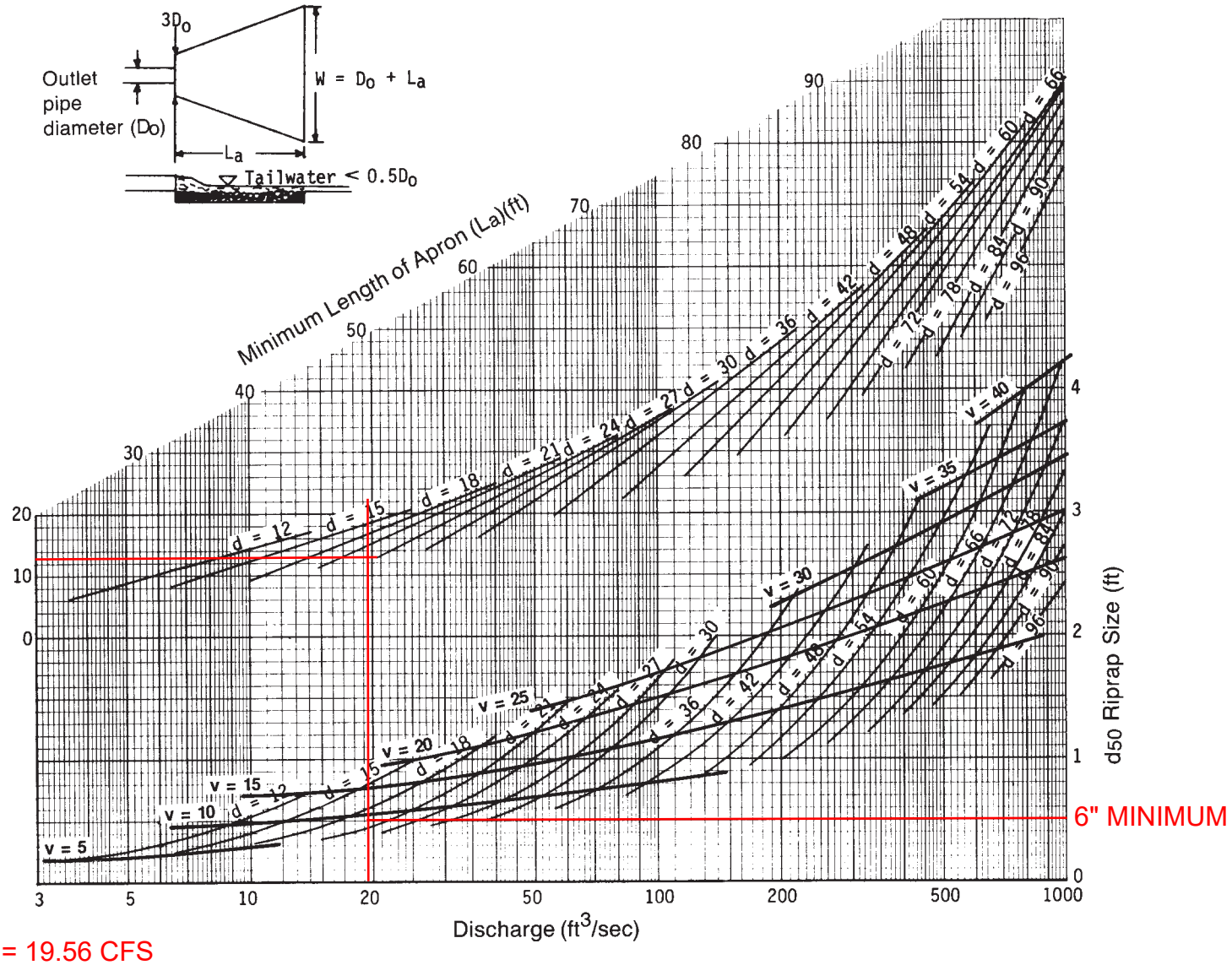


Appendix D: Geotechnical Report

Appendix E: RipRap Nomographs

SD-1A

(Tw < 0.5 Dia.)



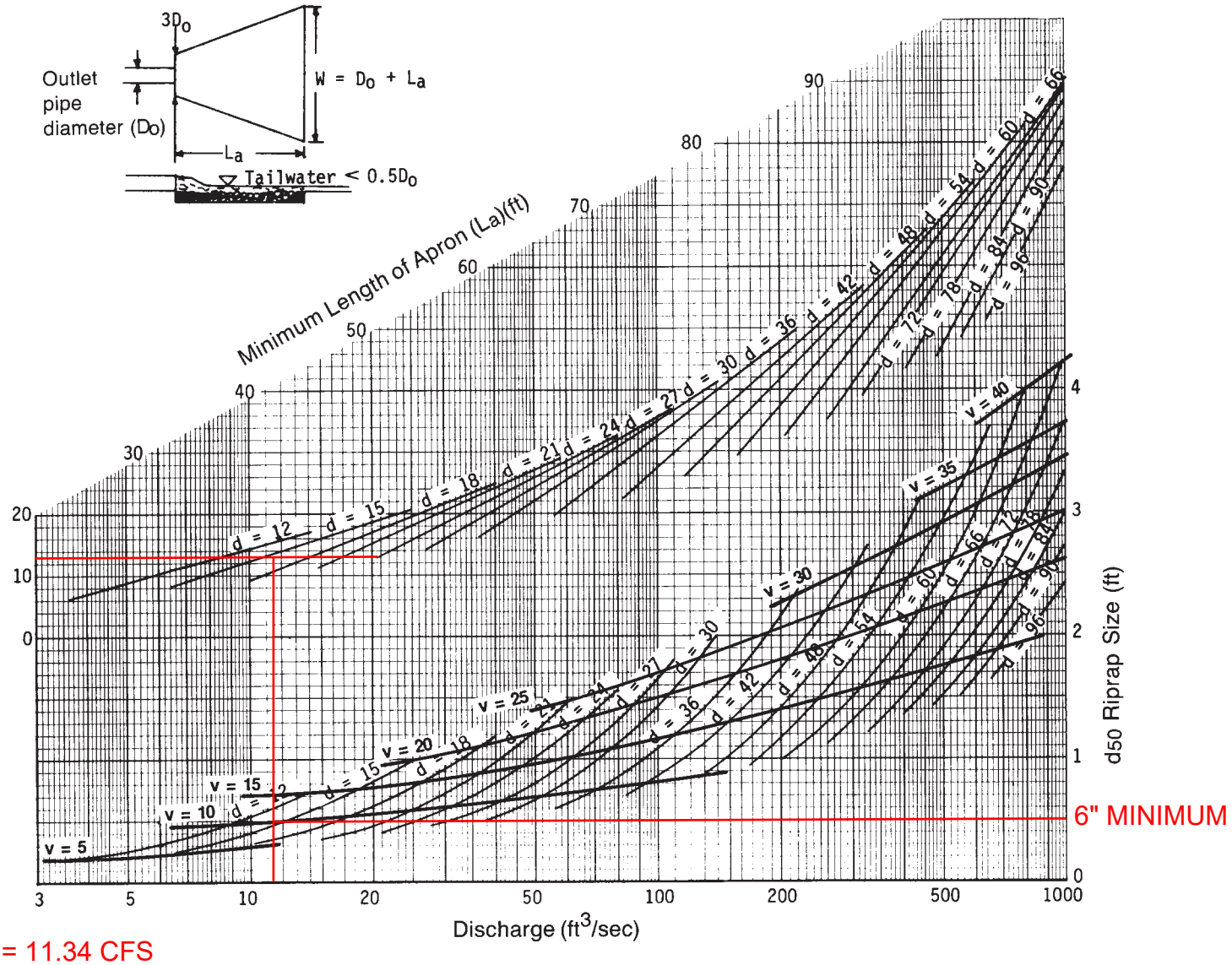
Q 10yr = 19.56 CFS
Do = 2'
La = 13'
W = 15'
d50 = 6" = R-3 18" Thick

NOTE: Curves should not be extrapolated; min. d50 = 6"

Figure 3.3.10a Design of outlet protection from a round pipe flowing full, minimum tailwater condition
Source: USDA-NRCS

Effective January 2026

System SD-3A
(Tw < 0.5 Dia.)



Q 10yr = 11.34 CFS
Do = 2'
La = 13'
W = 15'
d50 = 6" = R-3 18" Thick

NOTE: Curves should not be extrapolated; min. d50 = 6"

Figure 3.3.10a Design of outlet protection from a round pipe flowing full, minimum tailwater condition
Source: USDA-NRCS

Effective January 2026

Appendix F: Tractive Force Analysis

TRACTIVE FORCE ANALYSIS

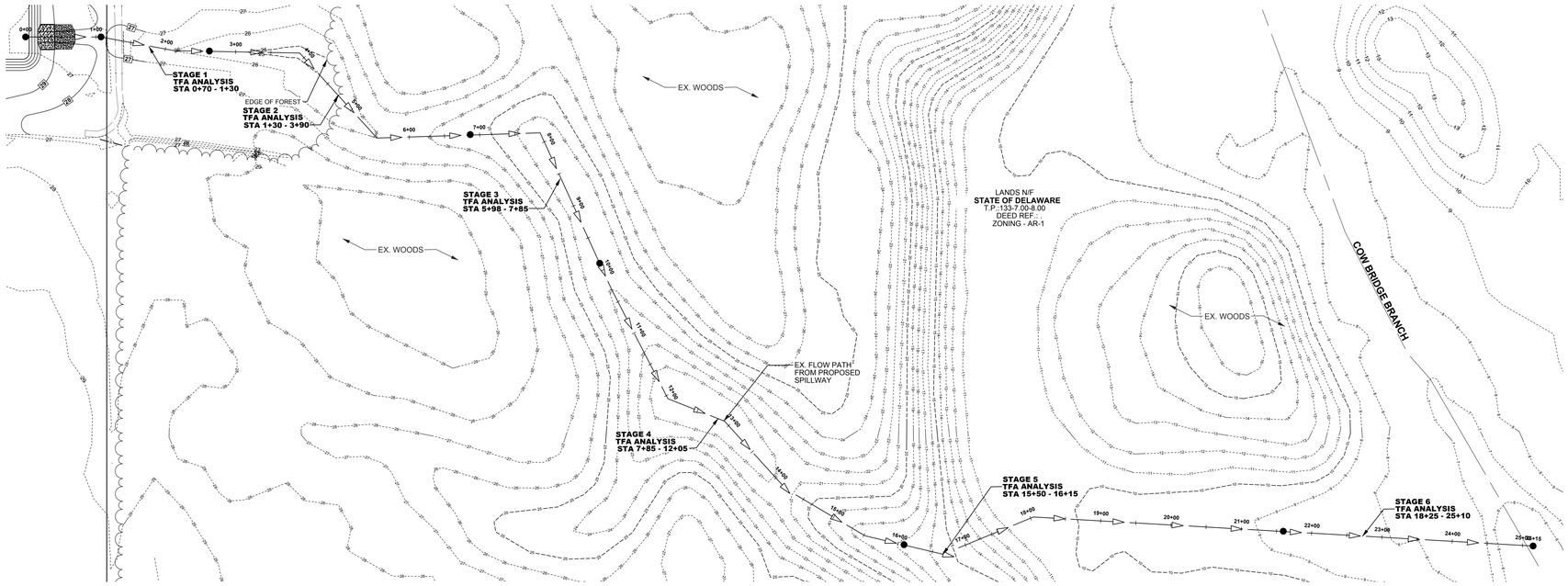
FOR

DELAWARE STATE POLICE TROOP 4 COMPLEX

The following is a tractive force analysis for the runoff generated from the proposed development of the project Troop 4. This analysis encompasses a 2,600 foot run from the BMP emergency spillway to Cow Bridge Branch. We have broken out the tractive force analysis into 7 stages. A map has been provided showing the 7 stages of flow.

Stage 1 encompasses flow beyond the rip rap outlet up to the existing dirt road.
Stage 1A is flows over the dirt road.
Stage 2 is the flow through the shallow drainage swale from the dirt road up to the forest edge.
Stage 3 is the flow through the brushed forest edge.
Stage 4 through 7 are the flows through various slopes through the forest leading to Cow Bridge Branch.

Our calculations utilize the resources provided by the Delaware Erosion and Sediment Control Handbook and other written research to provide shear stress and Mannings numbers for different surface conditions. We have utilized information from the Erosion Assessment Report (FIScH Engineer, 2001) to provide a shear stress value for woodland surface conditions and for the dirt road. The calculations below are a part of this report is indicative of the waterflow in this area being nonerosive.

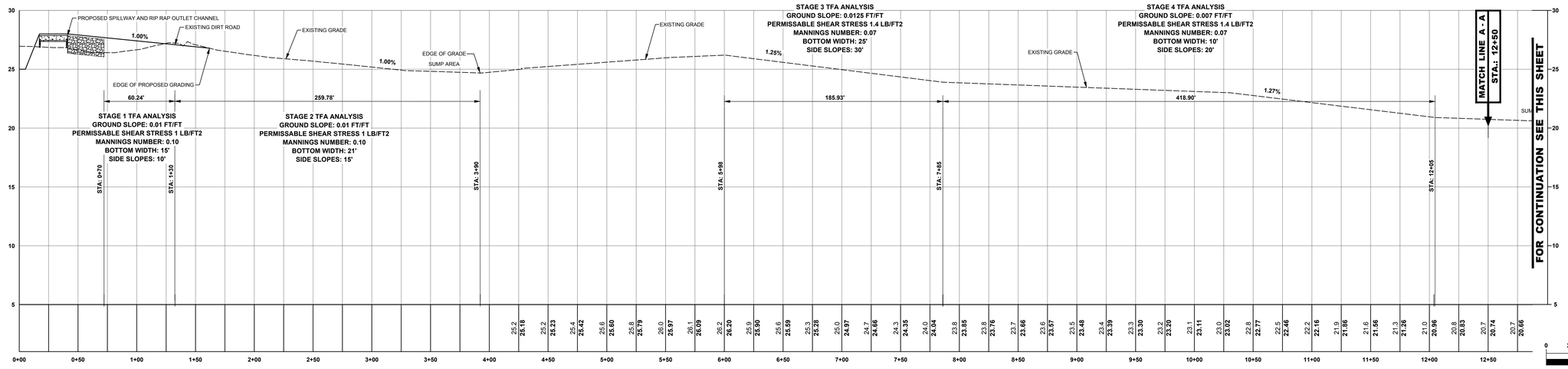


0 40 80 160

SCALE: 1" = 80'

TRACTIVE FORCE ANALYSIS PLAN VIEW

SCALE: 1" = 80'

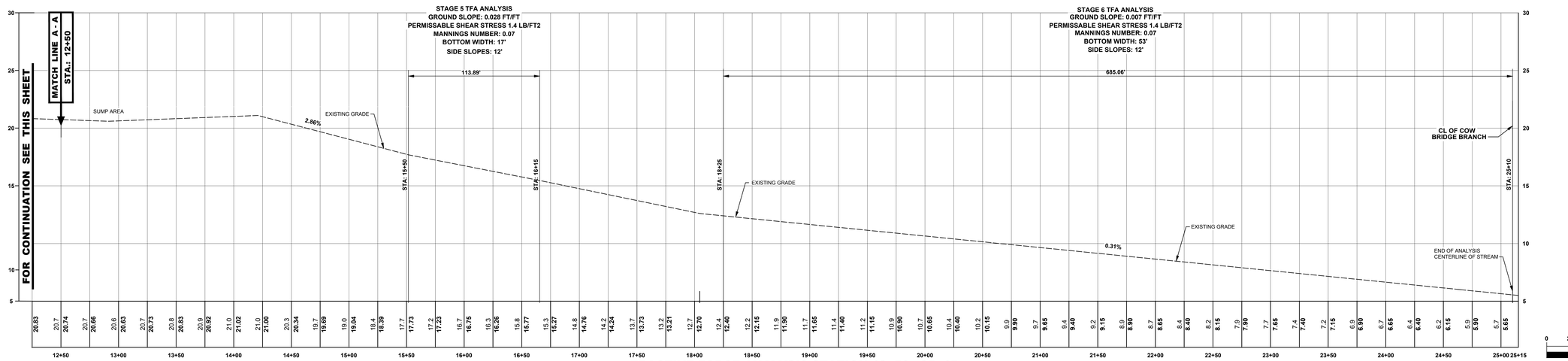


0 20 40 80

SCALE: 1" = 40'

TRACTIVE FORCE ANALYSIS STATION 0+00 - 12+50

SCALE: 1" = 40' HORIZONTAL
: 1" = 4' VERTICAL



0 20 40 80

SCALE: 1" = 40'

TRACTIVE FORCE ANALYSIS STATION 12+50 - 25+15

SCALE: 1" = 40' HORIZONTAL
: 1" = 4' VERTICAL

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ARCHITECTURE
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Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
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100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

BAKER, INGRAM & ASSOCIATES
STRUCTURAL ENGINEER
1050 S. State Street
Dover, Delaware, 19901
302-734-7400 Fax: 302-734-7592

DEDC, LLC
Engineering / Design / Consulting
315 South Chapel Street
Newark, Delaware, 19711
www.dedc-eng.com
302-738-7172

PROJECT TITLE

DELAWARE STATE POLICE
TROOP 4 COMPLEX
BID PACK
PATRIOTS WAY
GEORGETOWN, DELAWARE
19947

SHEET TITLE

TRACTIVE FORCE ANALYSIS EXHIBIT

ISSUE BLOCK		
10.	09/16/24	WATERLINE UPDATES
9.	07/19/24	DNREC STEP 3 SUBMISSION
8.	06/07/24	ADDENDUM 3 | MARK C
7.	04/29/24	BID PACK
6.	04/10/24	BID PACK 1 | ADDENDUM 4
5.	04/05/24	BID PACK 1 | ADDENDUM 3
4.	02/16/24	ISSUED FOR BID
3.	12/18/23	CD SUBMISSION
MARK	DATE	DESCRIPTION

LAND DEVELOPMENT ENGINEERING | LANDSCAPE ARCHITECTURE | PLANNING | SURVEYING

PROJECT NO.: 2022235.00
DATE: 10/16/2024
SCALE: AS SHOWN
DRAWN BY: **J.D.M.** | PROJ. MGR.: **J.D.R.**

SHEET
TFA EXHIBIT

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F:\AutoCAD\Projects\2022\2022235\DWG\2022235-SITE-C3D21.dwg, Oct 29, 2024 - 3:04pm

2022235.00 Delaware State Police Troop 4 - Tractive Force Analysis
POND 1BP OUTFALL Emergency Spillway Stage 1 Before Dirt Road

100 yr storm event channel flow rate =	Q =	29.69	cfs (from HydroCAD)
Channel slope =	S =	0.0084	ft/ft
Channel Characteristics			
Channel bottom width=	b =	15	ft
Side slopes=	z =	10	:1
Flow depth=	d =	1	ft. (assumed)
Retardance Class		C	*Good Standing Mowed Grass
Permissible Shear Stress		1	lb/ft^2
Channel Area (A = (b + z * d) * d	A =	25	sf
Channel Perimeter (P = b + 2d √1 + z^2)	P =	35.10	ft
Hydraulic Radius (R = A / P)	R =	0.71	ft
Manning's number	n =	0.10	From Table 1&2 Retardance Class C
Using Chart 3 for to find d for channel	S =	0.0084	ft/ft
	Q * n =	2.82	cfs
	d/b =	0.071	(from Chart 3)
Channel Depth of flow	d =	1.07	ft
Shear Stress (T = ɣ * d * s)	T =	0.56	lb/ft2
Channel Erosive Check			
Permissible Shear Stress vs. Calculated Shear Stress	1 <	0.56	Channel Non-Erosive

Table 1. Classification of Vegetal Covers as to Degree of Retardance. (4)

Retardance Class	Cover	Condition
A	Weeping lovegrass	Excellent stand, tall (average 30") (76 cm)
	Yellow bluestem Ischaemum	Excellent stand, tall (average 36") (91 cm)
B	Kudzu	Very dense growth, uncut
	Bermuda grass	Good stand, tall (average 12") (30 cm)
	Native grass mixture (little bluestem, bluestem, blue gamma, and other long and short midwest grasses).....	Good stand, unmowed
	Weeping lovegrass	Good stand, tall (average 24") (61 cm)
	Lespedeza sericea	Good stand, not woody, tall (average 19") (48 cm)
	Alfalfa	Good stand, uncut (average 11") (28 cm)
	Weeping lovegrass	Good stand, unmowed (average 13") (33 cm)
	Kudzu	Dense growth, uncut
	Blue gamma	Good stand, uncut (average 13") (28 cm)
C	Crabgrass	Fair stand, uncut (10 to 48") (25 to 120 cm)
	Bermuda grass	Good stand, mowed (average 6") (15 cm)
	Common lespedeza	Good stand, uncut (average 11") (28 cm)
	Grass-legume mixture-- summer (orchard grass, redtop, Italian ryegrass, and common lespedeza)....	Good stand, uncut (6 to 8 inches) (15 to 20 cm)
	Centipedegrass.....	Very dense cover (average 6 inches) (15 cm)
	Kentucky bluegrass.....	Good stand, headed (6 to 12 inches (15 to 30 cm)
D	Bermuda grass.....	Good stand, cut to 2.5-inch height (6 cm)
	Common lespedeza	Excellent stand, uncut (average 4.5") (11 cm)
	Buffalo grass	Good stand, uncut (3 to 6 inches (8 to 15 cm)
	Grass-legume mixture-- fall, spring (orchard grass, redtop, Italian ryegrass, and common lespedeza).....	Good stand, uncut (4 to 5 inches) (10 to 13 cm)
	Lespedeza sericea	After cutting to 2-inch height (5 cm) Very good stand before cutting
E	Bermuda grass	Good stand, cut to 1.5 inch height (4 cm)
	Bermuda grass	Burned stubble

NOTE: Covers classified have been tested in experimental channels. Covers were green and generally uniform.

DSP T4
2022235.00
Stage 1
Tractive Force
Analysis

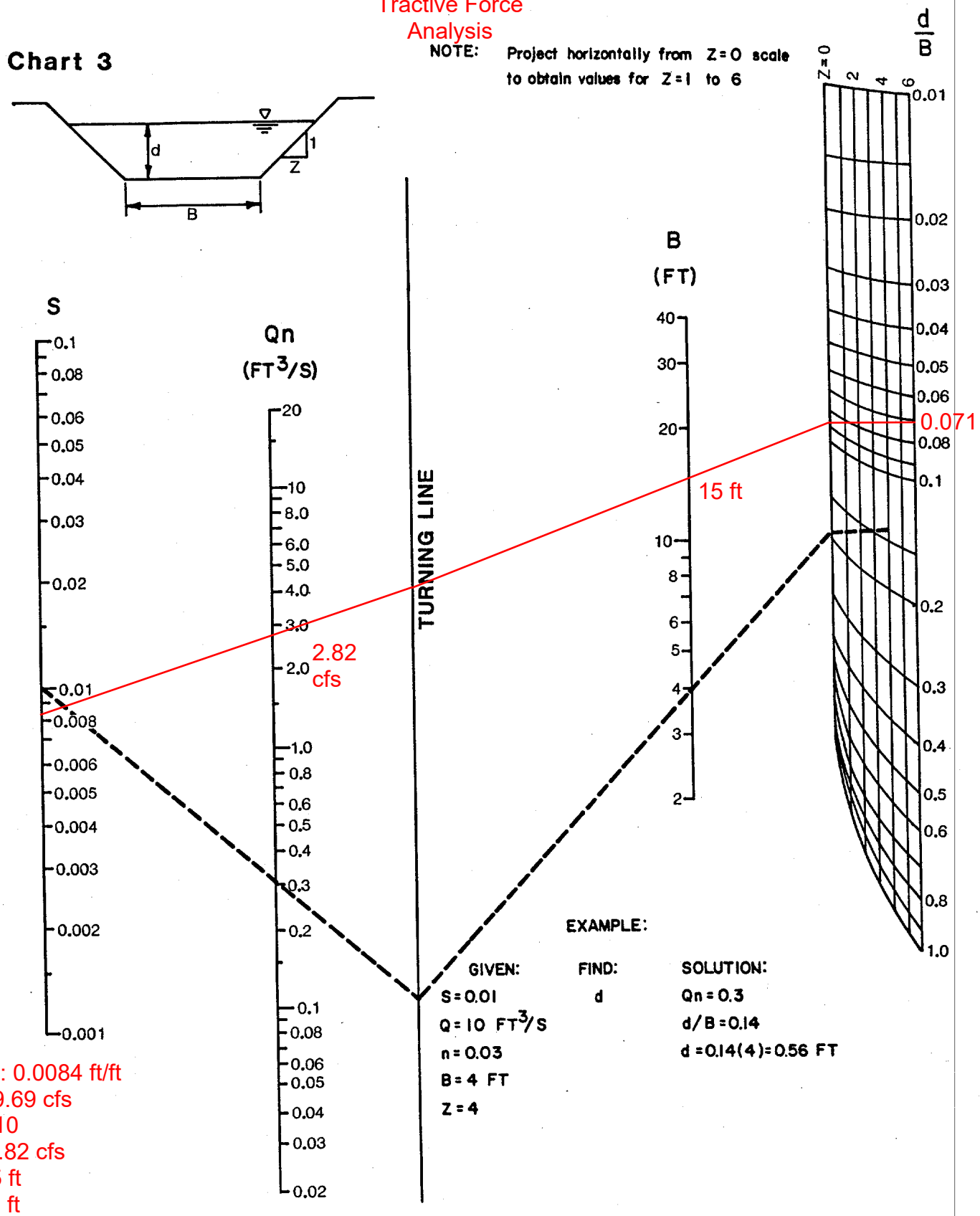
Table 2. Permissible Shear Stresses for Lining Materials.

Lining Category	Lining Type	Permissible Unit Shear Stress[1] (lb/ft^2)	(Kg/m^2)
Temporary*	Woven Paper Net	0.15	0.73
	Jute Net	0.45	2.20
	Fiberglass Roving:		
	Single	0.60	2.93
	Double	0.85	4.15
	Straw with Net	1.45	7.08
	Curled Wood Mat	1.55	7.57
	Synthetic Mat	2.00	9.76
Vegetative	Class A	3.70	18.06
	Class B	2.10	10.25
	Class C	1.00	4.88
	Class D	0.60	2.93
	Class E	0.35	1.71
Gravel Riprap	1-inch	0.33	1.61
	2-inch	0.67	3.22
Rock Riprap	6-inch	2.00	9.76
	12-inch	4.00	19.52
Bare Soil	Non-cohesive	See Chart 1	
	Cohesive	See Chart 2	

[1]Based on data in (5, 8, 13, 14, 15).

*Some "temporary" linings become permanent when buried.

DSP T4
2022235.00
Stage 1
Tractive Force
Analysis

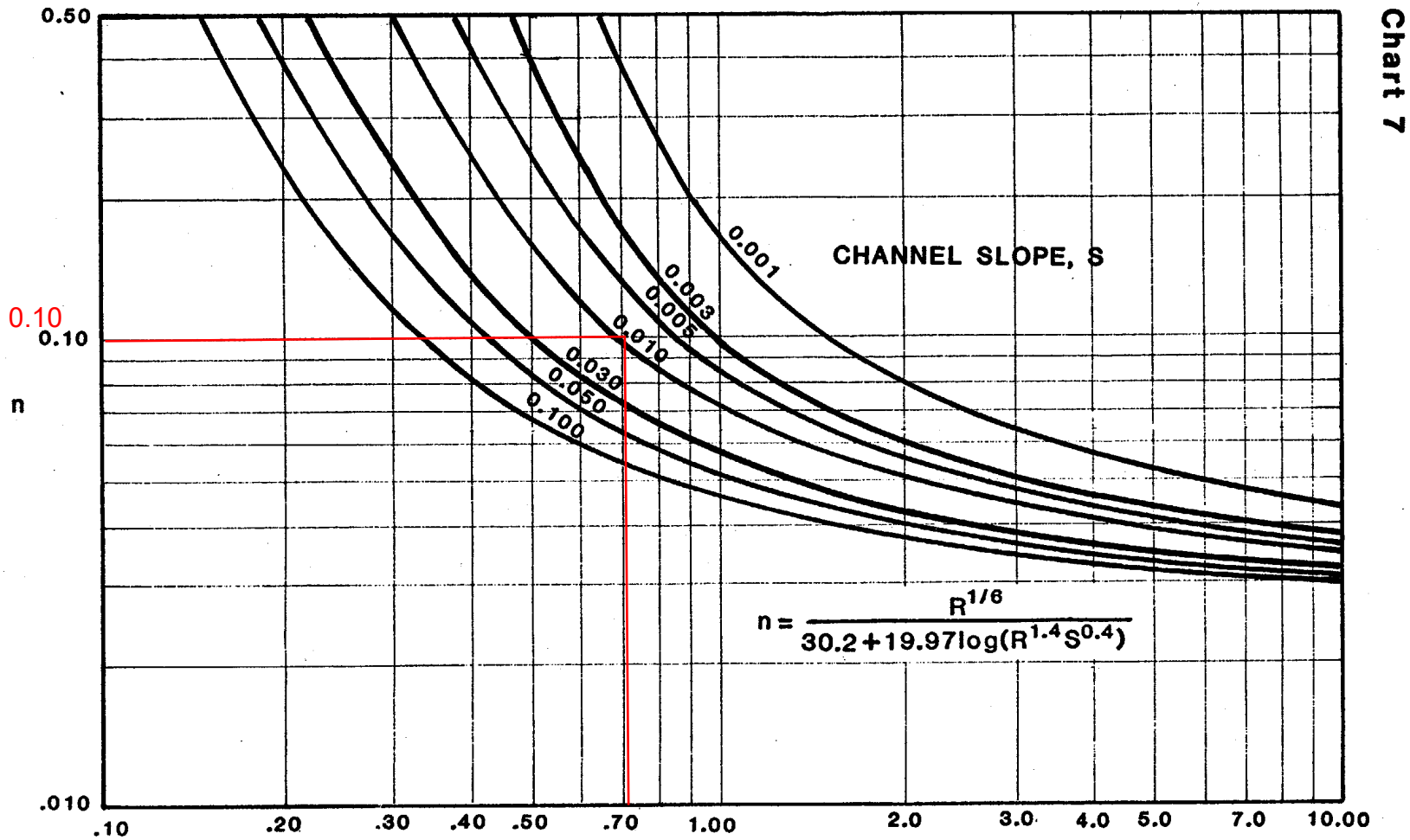


Slope: 0.0084 ft/ft
Q= 29.69 cfs
n= 0.10
Qn: 2.82 cfs
B= 15 ft
Z= 10 ft

d/b= 0.071
d= 0.071(15)= 1.07'

Chart 3. Solution of Manning's equation for channels of various side slopes. (after 17)

DSP T4
2022235.00
Stage 1
Tractive Force
Analysis



0.10

R= 0.71

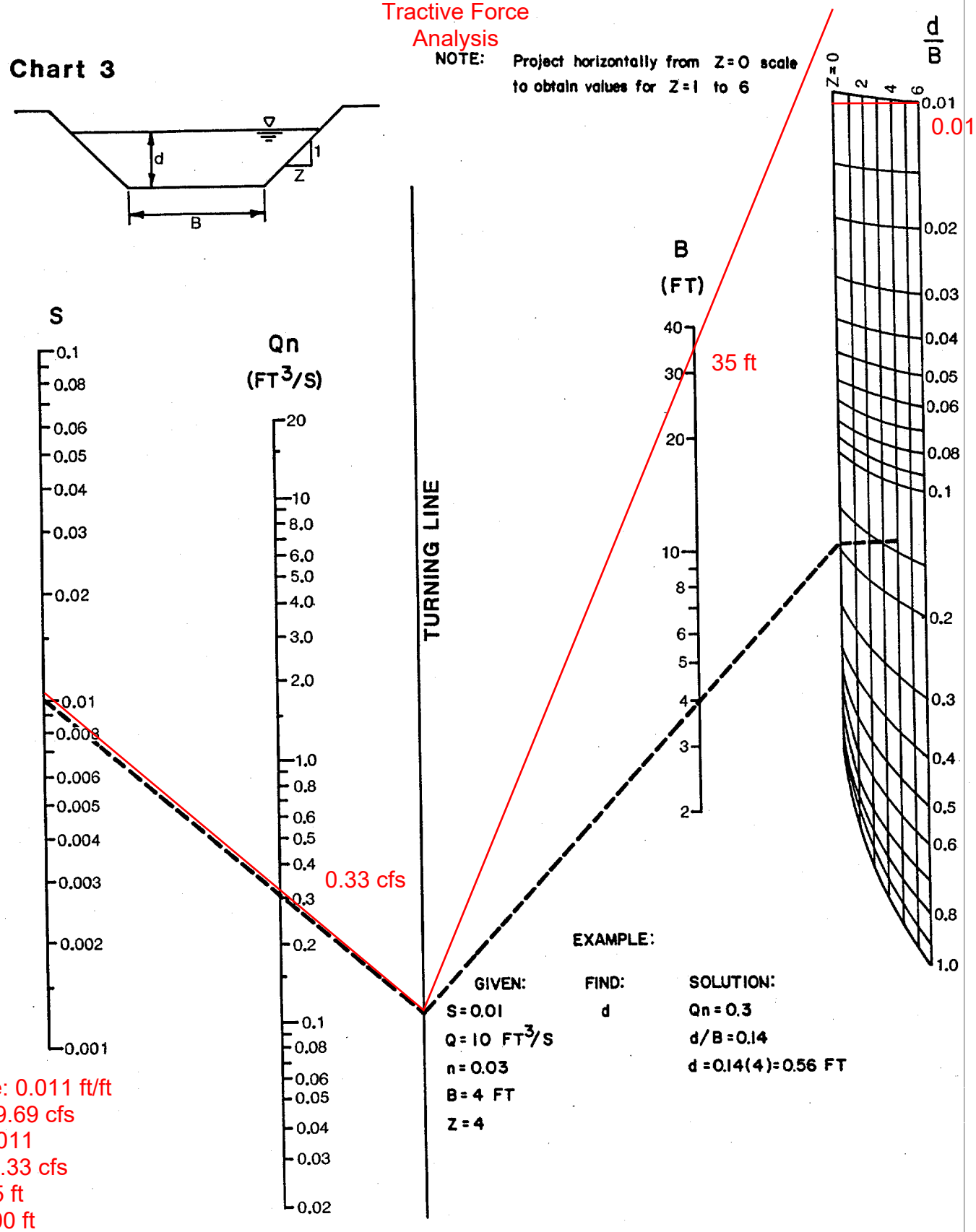
R= 0.71
S= 0.0084

Chart 7. Manning's n versus hydraulic radius, R, for class C vegetation. (after 5)

2022235.00 Delaware State Police Troop 4 - Tractive Force Analysis
POND 1BP OUTFALL Emergency Spillway Stage 1A Dirt Road

100 yr storm event channel flow rate =	Q =	29.69	cfs (from HydroCAD)
Channel slope =	S =	0.011	ft/ft
Channel Characteristics			
Channel bottom width=	b =	35	ft
Side slopes=	z =	100	:1
Flow depth=	d =	0.25	ft. (assumed)
Retardance Class		Alluvial Silt Colloidal	*from FIScH Engineering, Erosion Assessment
Permissible Shear Stress		0.26	lb/ft^2
Channel Area (A = (b + z * d) * d	A =	15	sf
Channel Perimeter (P = b + 2d √1 + z^2)	P =	85.00	ft
Hydraulic Radius (R = A / P)	R =	0.18	ft
Manning's number	n =	0.011	Mannings for a Smooth Surfaces
Using Chart 3 for to find d for channel	S =	0.011	ft/ft
	Q * n =	0.33	cfs
	d/b =	0.010	(from Chart 3)
Channel Depth of flow	d =	0.35	ft
Shear Stress (T = ɣ * d * s)	T =	0.24	lb/ft2
Channel Erosive Check			
Permissible Shear Stress vs. Calculated Shear Stress	0.26 <	0.24	Channel Non-Erosive

DSP T4
2022235.00
Stage 1A
Tractive Force
Analysis



Slope: 0.011 ft/ft
Q= 29.69 cfs
n= 0.011
Qn: 0.33 cfs
B= 35 ft
Z= 100 ft

d/b= 0.01
d= 0.01(35)= 0.35'

Chart 3. Solution of Manning's equation for channels of various side slopes. (after 17)

Table 2. Permissible shear or tractive stresses for selected lining materials[1]

From Erosion Assessment Report (FIScH Engineering, 2001)

Boundary Category	*Boundary Type*	*Permissible Shear Stress (lbs/sq.ft)*	*Permissible Velocity (ft/s)*
Soils	Fine colloidal sand	.02 - .03	1.5
	Sandy loam (noncolloidal)	.03 - .04	1.75
	Alluvial silt (noncolloidal)	.045 - .05	2
	Silt loam (noncolloidal)	.045 - .05	1.75 – 2.25
	Firm loam	.075	2.5
	Fine gravels	.075	2.5
	Stiff clay	.26	3 – 4.5
	Alluvial silt (colloidal)	.26	3.75
	Graded loam to cobbles	.38	3.75
	Graded silts to cobbles	.43	4
	Shales and hardpan	.67	6
Gravel/Cobble	1-inch	0.33	2.5 – 5
	2-inch	0.67	3 – 6
	6-inch	2.0	4 – 7.5
	12-inch	4.0	5.5 – 12
Vegetation	Class A Turf	3.7	6 – 8
	Class B Turf	2.1	4 - 7
	Class C Turf	1.0	3.5
	Long Native Grasses	1.2 – 1.7	4 – 6
	Short Natives & Bunch Grass	0.7 - .95	3 – 4
	Reed Plantings	0.1-0.6	N/A
	Hardwood Tree Plantings	0.41-2.5	N/A
Temporary Degradable RECP's	Jute Net	0.45	1 – 2.5
	Straw with Net	1.5 – 1.65	1 – 3
	Coconut Fiber with Net	2.25	3 – 4
	Fiber Glass Roving	2.00	2.5 – 7
Non-Degradable RECP's	Unvegetated	3.00	5 – 7
	Partial Establish	4.0-6.0	7.5 – 15
	Fully Vegetated	8.00	8 – 21
Riprap	6 – inch d_{50}	2.5	5 – 10
	9 – inch d_{50}	3.8	7 – 11
	12 – inch d_{50}	5.1	10 – 13
	18 – inch d_{50}	7.6	12 – 16
	24 – inch d_{50}	10.1	14 – 18
Soil Bioengineering	Reed fascine	0.6-1.25	5
	Coir Roll	3 - 5	8
	Vegetated Coir Mat	4 - 7	9.5
	Live Brush Mattress (initial)	0.4	4
	Live Brush Mattress (grown)	3.90-4.60	12
	Brush Layering (initial/grown)	1.1-6.25	12
	Live Fascine	1.25-3.10	6 – 8
	Live Willow Stakes	2.10-3.10	3 – 6
Hard Surfacing	Gabions	10	14 – 19
	Concrete	12.5	>18

[1] Ranges of values generally reflect multiple sources of data or different testing conditions.

2022235.00 Delaware State Police Troop 4 - Tractive Force Analysis
POND 1BP OUTFALL Emergency Spillway Stage 2 Grass after Dirt Road

100 yr storm event channel flow rate =	Q =	29.69	cfs (from HydroCAD)
Channel slope =	S =	0.0114	ft/ft
Channel Characteristics			
Channel bottom width=	b =	21	ft
Side slopes=	z =	15	:1
Flow depth=	d =	1	ft. (assumed)
Retardance Class		C	*Good Standing Mowed Grass
Permissible Shear Stress		1	lb/ft^2
Channel Area (A = (b + z * d) * d	A =	36	sf
Channel Perimeter (P = b + 2d √1 + z^2)	P =	51.07	ft
Hydraulic Radius (R = A / P)	R =	0.70	ft
Manning's number	n =	0.10	From Chart 3 Retardance Class C
Using Chart 3 for to find d for channel	S =	0.0114	ft/ft
	Q * n =	2.97	cfs
	d/b =	0.042	(from Chart 3)
Channel Depth of flow	d =	0.88	ft
Shear Stress (T = ɣ * d * s)	T =	0.63	lb/ft2
Channel Erosive Check			
Permissible Shear Stress vs. Calculated Shear Stress	1 <	0.63	Channel Non-Erosive

Table 1. Classification of Vegetal Covers as to Degree of Retardance. (4)

Retardance Class	Cover	Condition
A	Weeping lovegrass	Excellent stand, tall (average 30") (76 cm)
	Yellow bluestem Ischaemum	Excellent stand, tall (average 36") (91 cm)
B	Kudzu	Very dense growth, uncut
	Bermuda grass	Good stand, tall (average 12") (30 cm)
	Native grass mixture (little bluestem, bluestem, blue gamma, and other long and short midwest grasses).....	Good stand, unmowed
	Weeping lovegrass	Good stand, tall (average 24") (61 cm)
	Lespedeza sericea	Good stand, not woody, tall (average 19") (48 cm)
	Alfalfa	Good stand, uncut (average 11") (28 cm)
	Weeping lovegrass	Good stand, unmowed (average 13") (33 cm)
	Kudzu	Dense growth, uncut
	Blue gamma	Good stand, uncut (average 13") (28 cm)
C	Crabgrass	Fair stand, uncut (10 to 48") (25 to 120 cm)
	Bermuda grass	Good stand, mowed (average 6") (15 cm)
	Common lespedeza	Good stand, uncut (average 11") (28 cm)
	Grass-legume mixture-- summer (orchard grass, redtop, Italian ryegrass, and common lespedeza)....	Good stand, uncut (6 to 8 inches) (15 to 20 cm)
	Centipedegrass.....	Very dense cover (average 6 inches) (15 cm)
	Kentucky bluegrass.....	Good stand, headed (6 to 12 inches (15 to 30 cm)
D	Bermuda grass.....	Good stand, cut to 2.5-inch height (6 cm)
	Common lespedeza	Excellent stand, uncut (average 4.5") (11 cm)
	Buffalo grass	Good stand, uncut (3 to 6 inches (8 to 15 cm)
	Grass-legume mixture-- fall, spring (orchard grass, redtop, Italian ryegrass, and common lespedeza).....	Good stand, uncut (4 to 5 inches) (10 to 13 cm)
	Lespedeza sericea	After cutting to 2-inch height (5 cm) Very good stand before cutting
E	Bermuda grass	Good stand, cut to 1.5 inch height (4 cm)
	Bermuda grass	Burned stubble

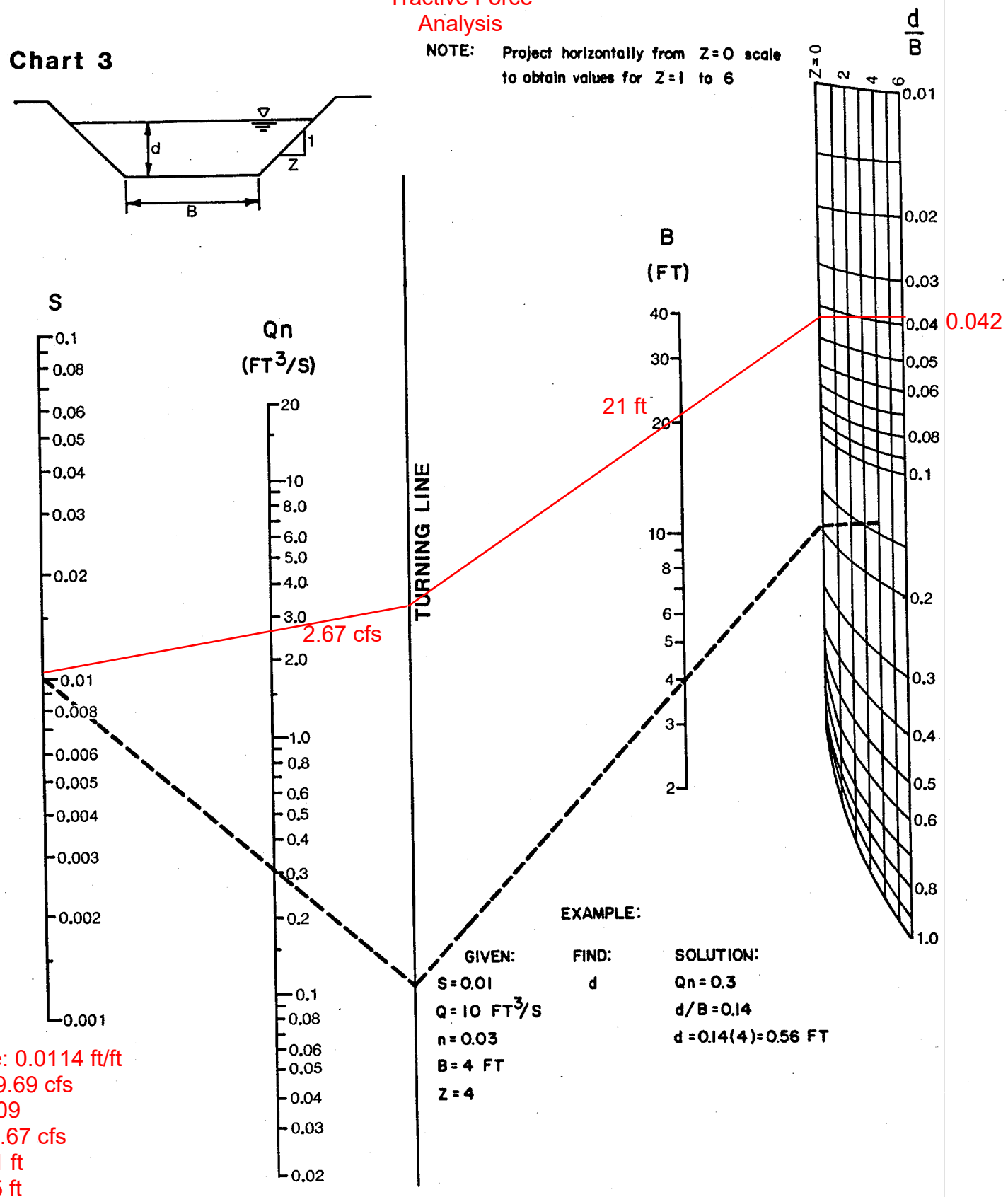
NOTE: Covers classified have been tested in experimental channels. Covers were green and generally uniform.

Table 2. Permissible Shear Stresses for Lining Materials.

Lining Category	Lining Type	Permissible Unit Shear Stress[1] (lb/ft^2)	(Kg/m^2)
Temporary*	Woven Paper Net	0.15	0.73
	Jute Net	0.45	2.20
	Fiberglass Roving:		
	Single	0.60	2.93
	Double	0.85	4.15
	Straw with Net	1.45	7.08
	Curled Wood Mat	1.55	7.57
	Synthetic Mat	2.00	9.76
Vegetative	Class A	3.70	18.06
	Class B	2.10	10.25
	Class C	1.00	4.88
	Class D	0.60	2.93
	Class E	0.35	1.71
Gravel Riprap	1-inch	0.33	1.61
	2-inch	0.67	3.22
Rock Riprap	6-inch	2.00	9.76
	12-inch	4.00	19.52
Bare Soil	Non-cohesive	See Chart 1	
	Cohesive	See Chart 2	

[1]Based on data in (5, 8, 13, 14, 15).

*Some "temporary" linings become permanent when buried.



Slope: 0.0114 ft/ft
Q= 29.69 cfs
n= 0.09
Qn: 2.67 cfs
B= 21 ft
Z= 15 ft

d/B= 0.042
d= 0.042*(21)= 0.88'

Chart 3. Solution of Manning's equation for channels of various side slopes. (after 17)

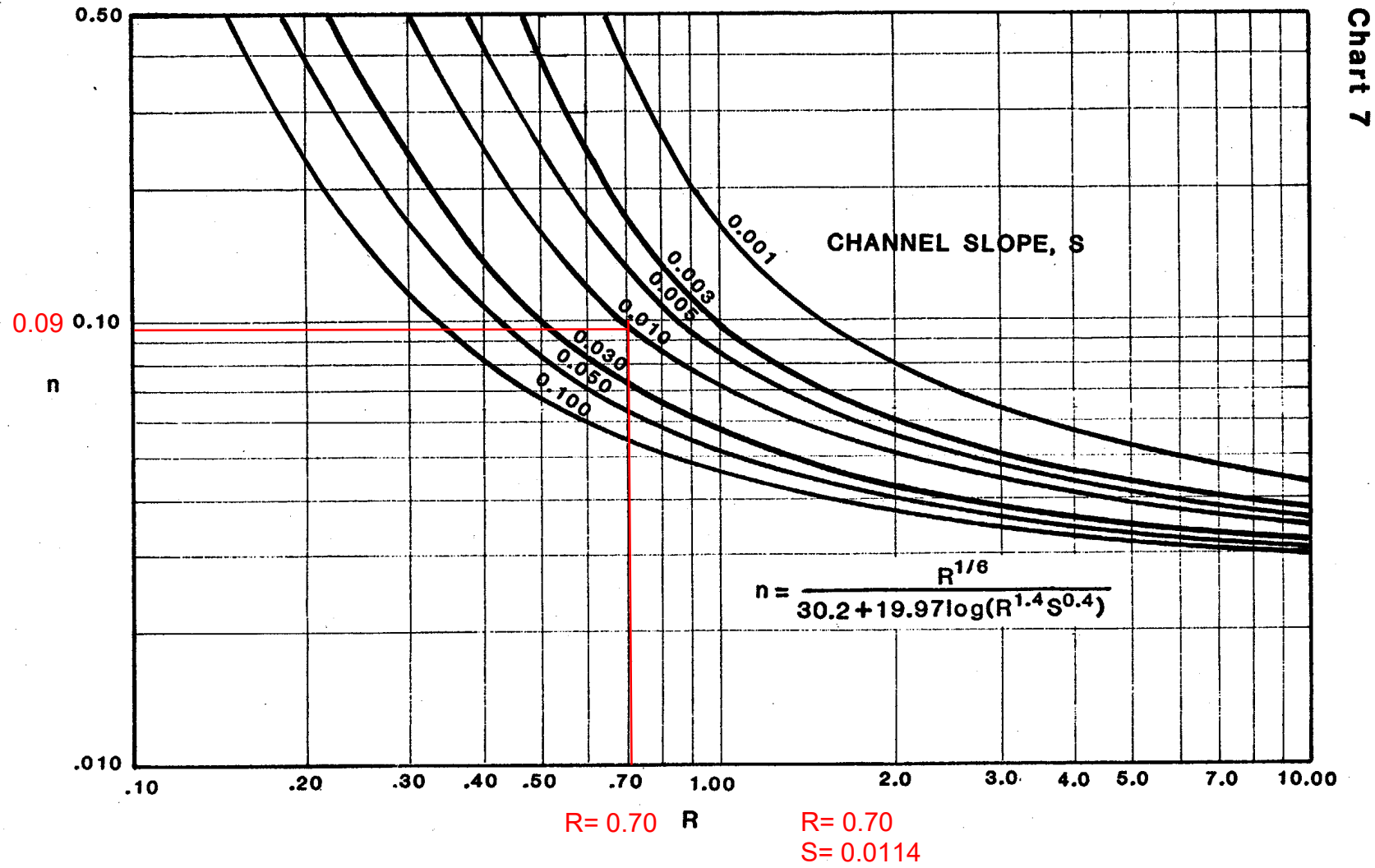
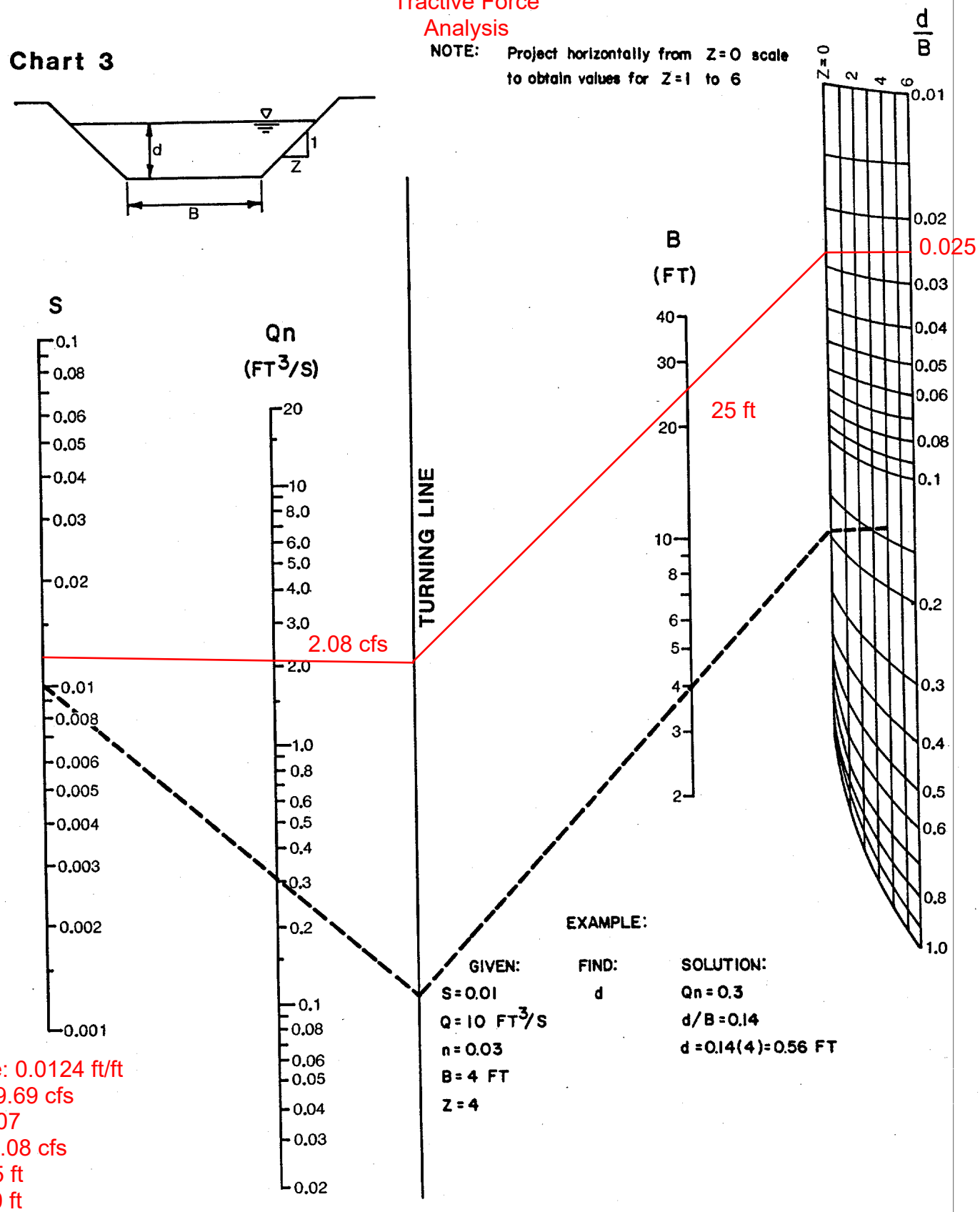


Chart 7. Manning's n versus hydraulic radius, R, for class C vegetation. (after 5)

2022235.00 Delaware State Police Troop 4 - Tractive Force Analysis
POND 1BP OUTFALL Emergency Spillway Stage 3 Forest

100 yr storm event channel flow rate =	Q =	29.69	cfs (from HydroCAD)
Channel slope =	S =	0.0124	ft/ft
Channel Characteristics			
Channel bottom width=	b =	25	ft
Side slopes=	z =	30	:1
Flow depth=	d =	1	ft. (assumed)
Retardance Class		Hardwood Tree Plantings	*from FIScH Engineering, Erosion Assessment Report, 2001
Permissible Shear Stress		1	lb/ft^2
Channel Area (A = (b + z * d) * d	A =	55	sf
Channel Perimeter (P = b + 2d √1 + z^2)	P =	85.03	ft
Hydraulic Radius (R = A / P)	R =	0.65	ft
Manning's number	n =	0.07	Mannings Coefficient (HydroCAD)
			*Medium Dense Brush, Winter
Using Chart 3 for to find d for channel	S =	0.0124	ft/ft
	Q * n =	2.08	cfs
	d/b =	0.025	(from Chart 3)
Channel Depth of flow	d =	0.63	ft
Shear Stress (T = ɣ * d * s)	T =	0.49	lb/ft2
Channel Erosive Check			
Permissible Shear Stress vs. Calculated Shear Stress	1 <	0.49	Channel Non-Erosive

DSP T4
2022235.00
Stage 3
Tractive Force
Analysis



Slope: 0.0124 ft/ft
Q= 29.69 cfs
n= 0.07
Qn: 2.08 cfs
B= 25 ft
Z= 30 ft

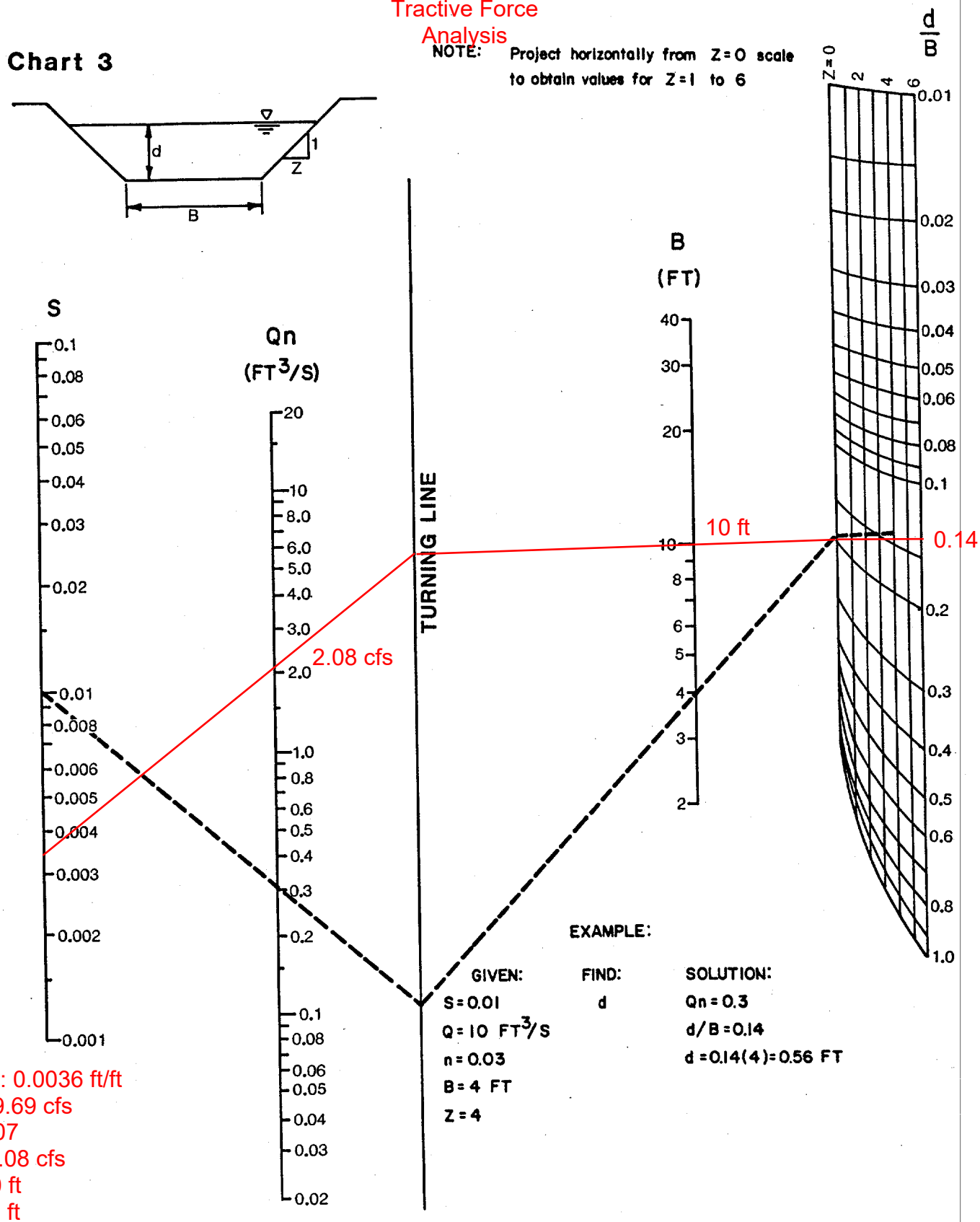
d/b= 0.025
d= 0.025(25)= 0.63'

Chart 3. Solution of Manning's equation for channels of various side slopes. (after 17)

2022235.00 Delaware State Police Troop 4 - Tractive Force Analysis
POND 1BP OUTFALL Emergency Spillway Stage 4 Forest

100 yr storm event channel flow rate =	Q =	29.69	cfs (from HydroCAD)
Channel slope =	S =	0.0036	ft/ft
Channel Characteristics			
Channel bottom width=	b =	10	ft
Side slopes=	z =	20	:1
Flow depth=	d =	1	ft. (assumed)
Retardance Class		Hardwood Tree Plantings	*from FIScH Engineering, Erosion Assessment Report, 2001
Permissible Shear Stress		1	lb/ft^2
Channel Area (A = (b + z * d) * d	A =	30	sf
Channel Perimeter (P = b + 2d √1 + z^2)	P =	50.05	ft
Hydraulic Radius (R = A / P)	R =	0.60	ft
Manning's number	n =	0.07	Mannings Coefficient (HydroCAD) *Medium Dense Brush, Winter
Using Chart 3 for to find d for channel	S =	0.0036	ft/ft
	Q * n =	2.08	cfs
	d/b =	0.14	(from Chart 3)
Channel Depth of flow	d =	1.4	ft
Shear Stress (T = ɣ * d * s)	T =	0.31	lb/ft2
Channel Erosive Check			
Permissible Shear Stress vs. Calculated Shear Stress	1 <	0.31	Channel Non-Erosive

DSP T4
2022235.00
Stage 4
Tractive Force
Analysis



Slope: 0.0036 ft/ft
Q= 29.69 cfs
n= 0.07
Qn: 2.08 cfs
B= 10 ft
Z= 20 ft

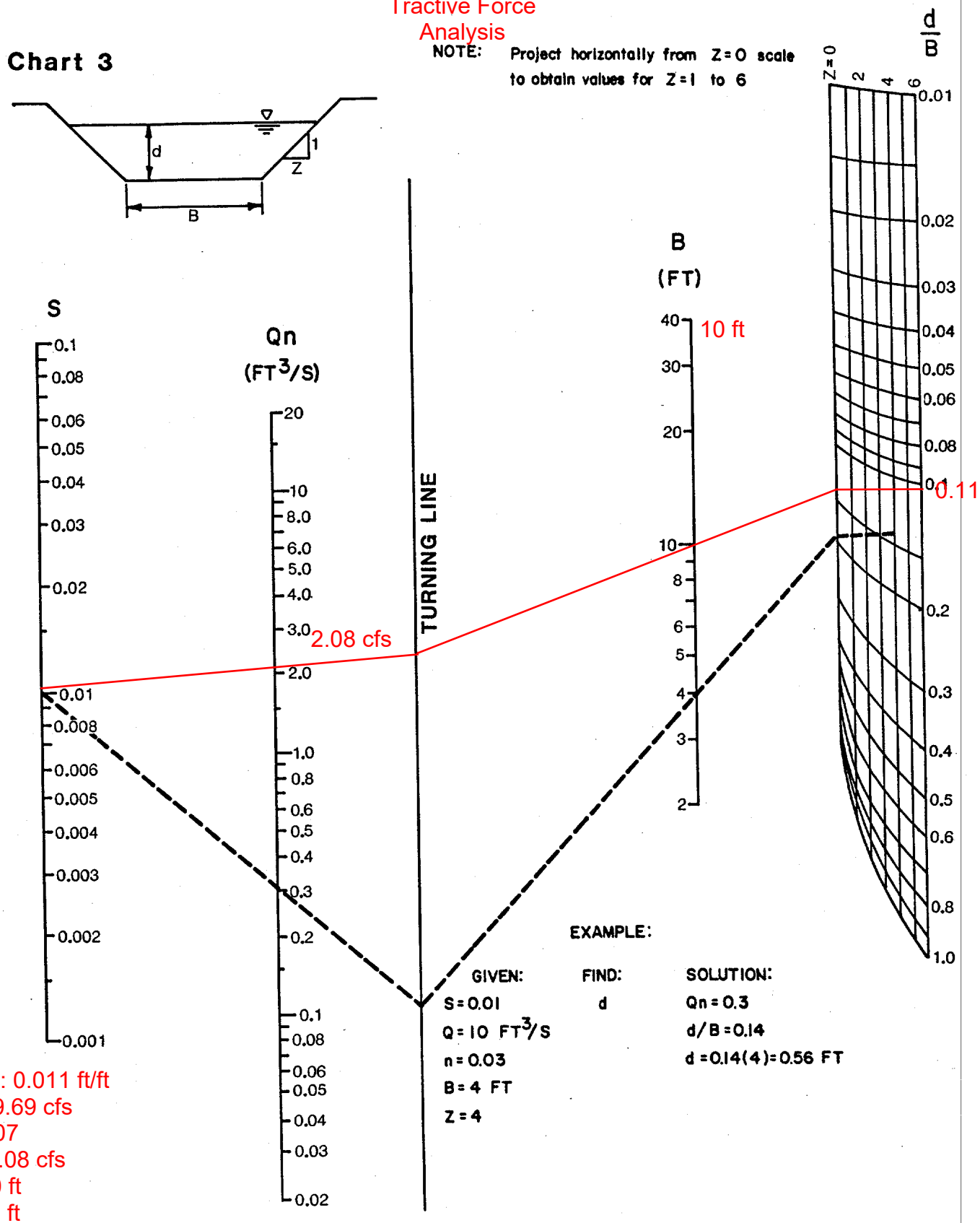
d/b= 0.14
d= 0.14(10)= 1.40'

Chart 3. Solution of Manning's equation for channels of various side slopes. (after 17)

2022235.00 Delaware State Police Troop 4 - Tractive Force Analysis
POND 1BP OUTFALL Emergency Spillway Stage 5 Forest

100 yr storm event channel flow rate =	Q =	29.69	cfs (from HydroCAD)
Channel slope =	S =	0.011	ft/ft
Channel Characteristics			
Channel bottom width=	b =	10	ft
Side slopes=	z =	20	:1
Flow depth=	d =	1	ft. (assumed)
Retardance Class		Hardwood Tree Plantings	*from FIScH Engineering, Erosion Assessment Report, 2001
Permissible Shear Stress		1	lb/ft^2
Channel Area (A = (b + z * d) * d	A =	30	sf
Channel Perimeter (P = b + 2d √1 + z^2)	P =	50.05	ft
Hydraulic Radius (R = A / P)	R =	0.60	ft
Manning's number	n =	0.07	Mannings Coefficient (HydroCAD) *Medium Dense Brush, Winter
Using Chart 3 for to find d for channel	S =	0.011	ft/ft
	Q * n =	2.08	cfs
	d/b =	0.11	(from Chart 3)
Channel Depth of flow	d =	1.1	ft
Shear Stress (T = ɣ * d * s)	T =	0.76	lb/ft2
Channel Erosive Check			
Permissible Shear Stress vs. Calculated Shear Stress	1 <	0.76	Channel Non-Erosive

DSP T4
2022235.00
Stage 5
Tractive Force
Analysis



Slope: 0.011 ft/ft
Q= 29.69 cfs
n= 0.07
Qn: 2.08 cfs
B= 10 ft
Z= 20 ft

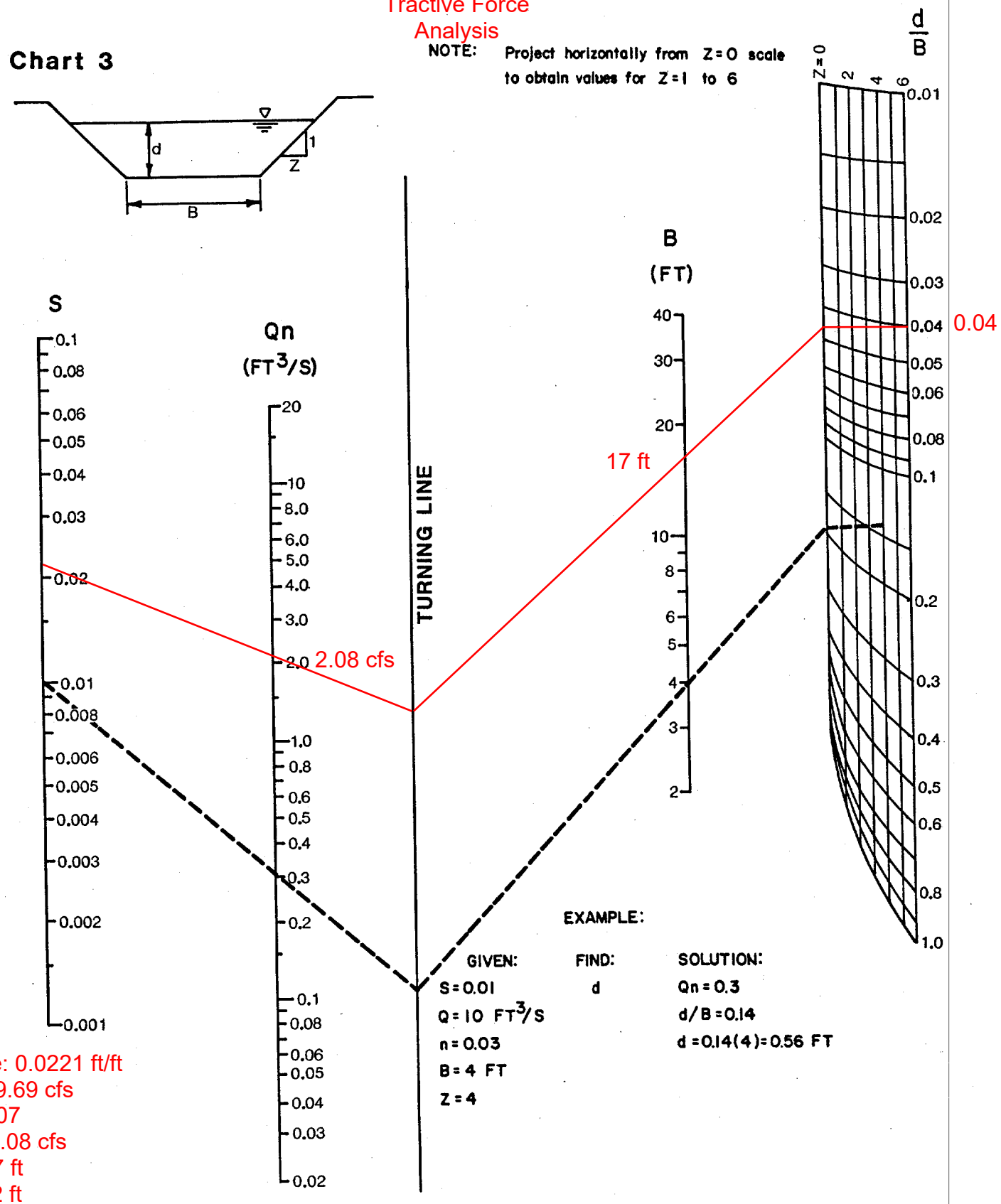
d/b= 0.11
d= 0.11(10)= 1.1'

Chart 3. Solution of Manning's equation for channels of various side slopes. (after 17)

2022235.00 Delaware State Police Troop 4 - Tractive Force Analysis
POND 1BP OUTFALL Emergency Spillway Stage 6 Forest

100 yr storm event channel flow rate =	Q =	29.69	cfs (from HydroCAD)
Channel slope =	S =	0.0221	ft/ft
Channel Characteristics			
Channel bottom width=	b =	17	ft
Side slopes=	z =	12	:1
Flow depth=	d =	1	ft. (assumed)
Retardance Class		C	
Permissible Shear Stress		1	lb/ft^2
Channel Area (A = (b + z * d) * d	A =	29	sf
Channel Perimeter (P = b + 2d √1 + z^2)	P =	41.08	ft
Hydraulic Radius (R = A / P)	R =	0.71	ft
Manning's number	n =	0.07	Mannings Coefficient (HydroCAD)
			*Medium Dense Brush, Winter
Using Chart 3 for to find d for channel	S =	0.0221	ft/ft
	Q * n =	2.08	cfs
	d/b =	0.04	(from Chart 3)
Channel Depth of flow	d =	0.68	ft
Shear Stress (T = ɣ * d * s)	T =	0.94	lb/ft2
Channel Erosive Check			
Permissible Shear Stress vs. Calculated Shear Stress	1 <	0.94	Channel Non-Erosive

DSP T4
2022235.00
Stage 6
Tractive Force
Analysis



Slope: 0.0221 ft/ft
Q= 29.69 cfs
n= 0.07
Qn: 2.08 cfs
B= 17 ft
Z= 12 ft

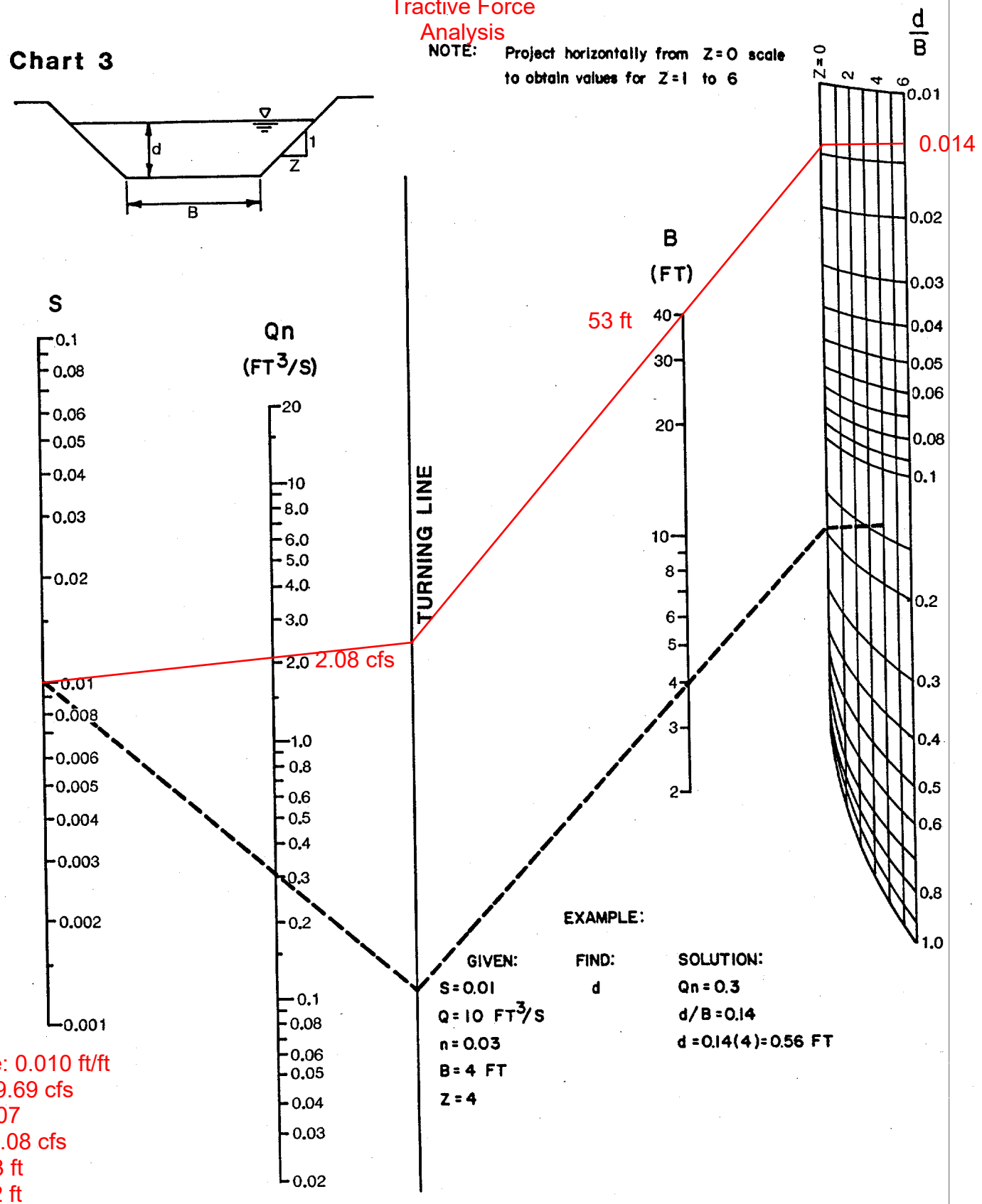
d/b= 0.04
d= 0.04(17)= 0.68'

Chart 3. Solution of Manning's equation for channels of various side slopes. (after 17)

2022235.00 Delaware State Police Troop 4 - Tractive Force Analysis
POND 1BP OUTFALL Emergency Spillway Stage 7 Forest

100 yr storm event channel flow rate =	Q =	29.69	cfs (from HydroCAD)
Channel slope =	S =	0.01	ft/ft
Channel Characteristics			
Channel bottom width=	b =	53	ft
Side slopes=	z =	12	:1
Flow depth=	d =	1	ft. (assumed)
Retardance Class		Hardwood Tree Plantings	*from FIScH Engineering, Erosion Assessment Report, 2001
Permissible Shear Stress		1	lb/ft^2
Channel Area (A = (b + z * d) * d	A =	65	sf
Channel Perimeter (P = b + 2d √1 + z^2)	P =	77.08	ft
Hydraulic Radius (R = A / P)	R =	0.84	ft
Manning's number	n =	0.07	Mannings Coefficient (HydroCAD) *Medium Dense Brush, Winter
Using Chart 3 for to find d for channel	S =	0.01	ft/ft
	Q * n =	2.08	cfs
	d/b =	0.014	(from Chart 3)
Channel Depth of flow	d =	0.74	ft
Shear Stress (T = ɣ * d * s)	T =	0.46	lb/ft2
Channel Erosive Check			
Permissible Shear Stress vs. Calculated Shear Stress	1 <	0.46	Channel Non-Erosive

DSP T4
2022235.00
Stage 7
Tractive Force
Analysis



Slope: 0.010 ft/ft
Q= 29.69 cfs
n= 0.07
Qn: 2.08 cfs
B= 53 ft
Z= 12 ft

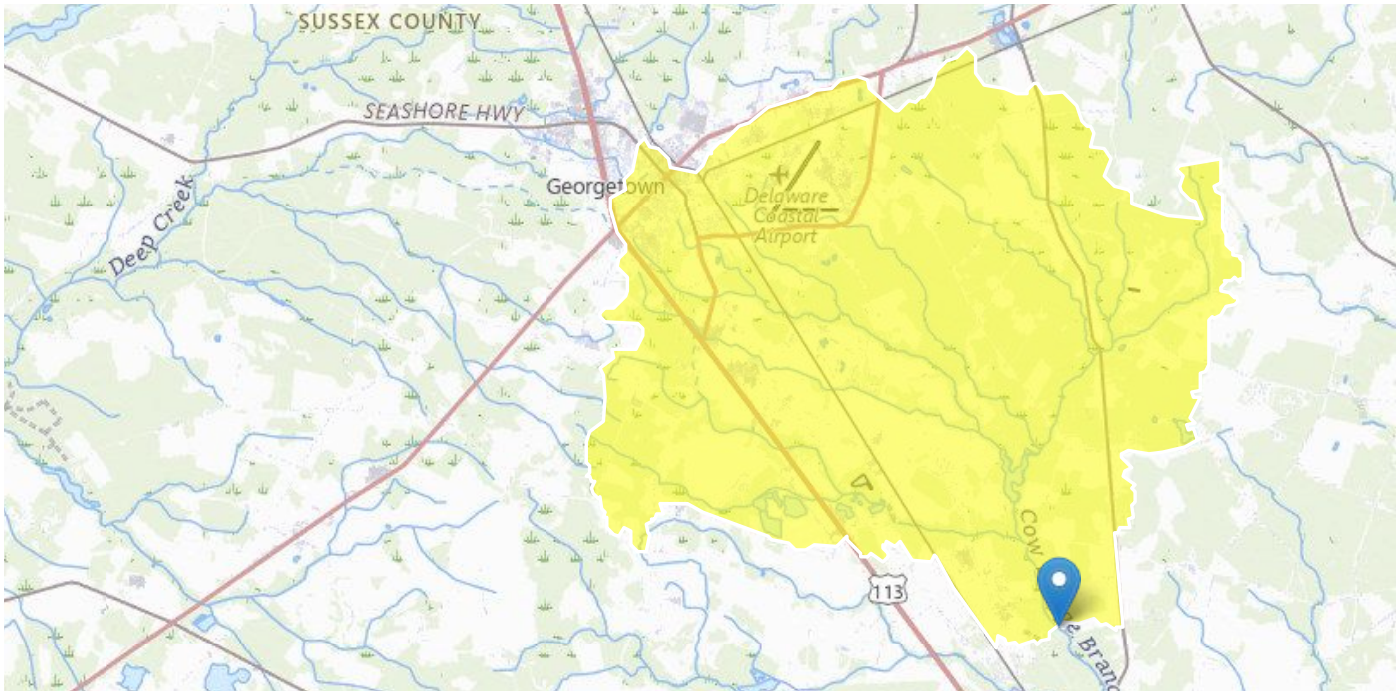
d/b= 0.014
d= 0.014(53)= 0.74'

Chart 3. Solution of Manning's equation for channels of various side slopes. (after 17)

Appendix G: StreamStats Report for Upstream Area

Cow Bridge Branch

Region ID: DE
Workspace ID: DE20251002131801651000
Clicked Point (Latitude, Longitude): 38.61969, -75.30731
NHD Stream GNIS Name of Click Point: Cow Bridge Branch
Time: 2025-10-02 09:18:28 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM3M	Mean basin slope computed from 3 meter digital elevation model, in percent	2.12	percent
DRNAREA	Area that drains to a point on a stream	30	square miles
SOILA	Percentage of area of Hydrologic Soil Type A	54.5924	percent

Peak-Flow Statistics

Peak-Flow Statistics Parameters [DE Peakflow Coastal Plain 2022 5005]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM3M	Mean basin slope from 3 meter dem	2.12	percent	1.4	6.5
DRNAREA	Drainage Area	30	square miles	0.5	112.3
SOILA	Percent Hydrologic Soil Type A	54.5924	percent	0	82.4

Peak-Flow Statistics Flow Report [DE Peakflow Coastal Plain 2022 5005]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
50-percent AEP flood	292	ft^3/s	101	846	60.6
20-percent AEP flood	511	ft^3/s	185	1410	55.8
10-percent AEP flood	694	ft^3/s	252	1910	55.3
4-percent AEP flood	972	ft^3/s	338	2790	57.3
2-percent AEP flood	1220	ft^3/s	404	3680	59.6
1-percent AEP flood	1500	ft^3/s	467	4820	63.3
0.5-percent AEP flood	1810	ft^3/s	524	6250	67.3
0.2-percent AEP flood	2280	ft^3/s	597	8710	73.5

Peak-Flow Statistics Citations

John C. Hammond, Edward J. Doheny, Jonathan J.A. Dillow, Mark R. Nardi, Peter A. Steeves, and Daniel L. Warner2021, Peak-Flow and Low-Flow Magnitude Estimates at Defined Frequencies and Durations for Nontidal Streams in Delaware, U.S. Geological Survey Scientific Ivestigations Report 2022-5005 (https://pubs.er.usgs.gov/publication/sir20225005)

NHD Features of Delineated Basin

NHD Streams Intersecting Basin Delineation Boundary

This functionality attempts to find the stream name at the delineation point. The name of the nearest intersecting National Hydrography Dataset (NHD) stream is selected by default to appear in the report above. NHD streams do not correspond to the StreamStats stream grid and may not be accurate. If you would like a different stream to appear in the above section, please make a selection below.

GNIS ID	GNIS Name	Distance from Clicked Point (ft)	Feature Type	Selected Stream Name
00213544	Cow Bridge Branch	3.94	Artificial Path	◉ Cow Bridge Branch
00213557	Alms House Ditch	24,918.16	Canal Ditch	○ Alms House Ditch

Watershed Boundary Dataset (WBD) HUC 8 Intersecting Basin Delineation Boundary

This functionality attempts to find the intersecting HUC 8 of the delineated watershed. HUC boundaries do not correspond to the StreamStats data and may not be accurate.

HUC 8	Name
02040207	Broadkill-Smyrna
02080109	Nanticoke
02040303	Chincoteague

NHD Hydrologic Features Citations

U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6. (https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6) U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4. (https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4)

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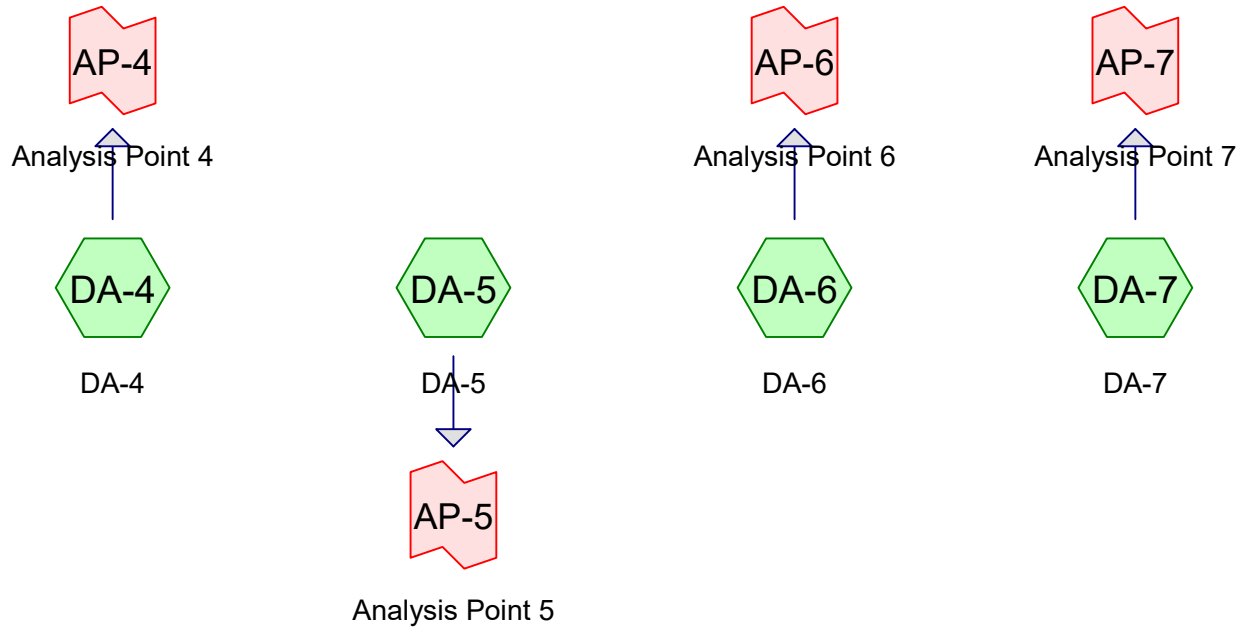
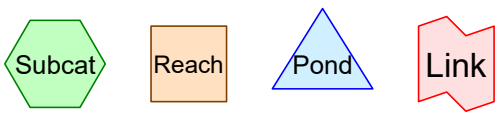
Application Version: 4.29.3
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Appendix H: RGM-4 Compliance Pre-Post Rates





Routing Diagram for 202223500-PRE
Prepared by Becker Morgan Group, Inc, Printed 5/8/2026
HydroCAD® 10.20-8a s/n 01093 © 2025 HydroCAD Software Solutions LLC

Summary for Subcatchment DA-4: DA-4

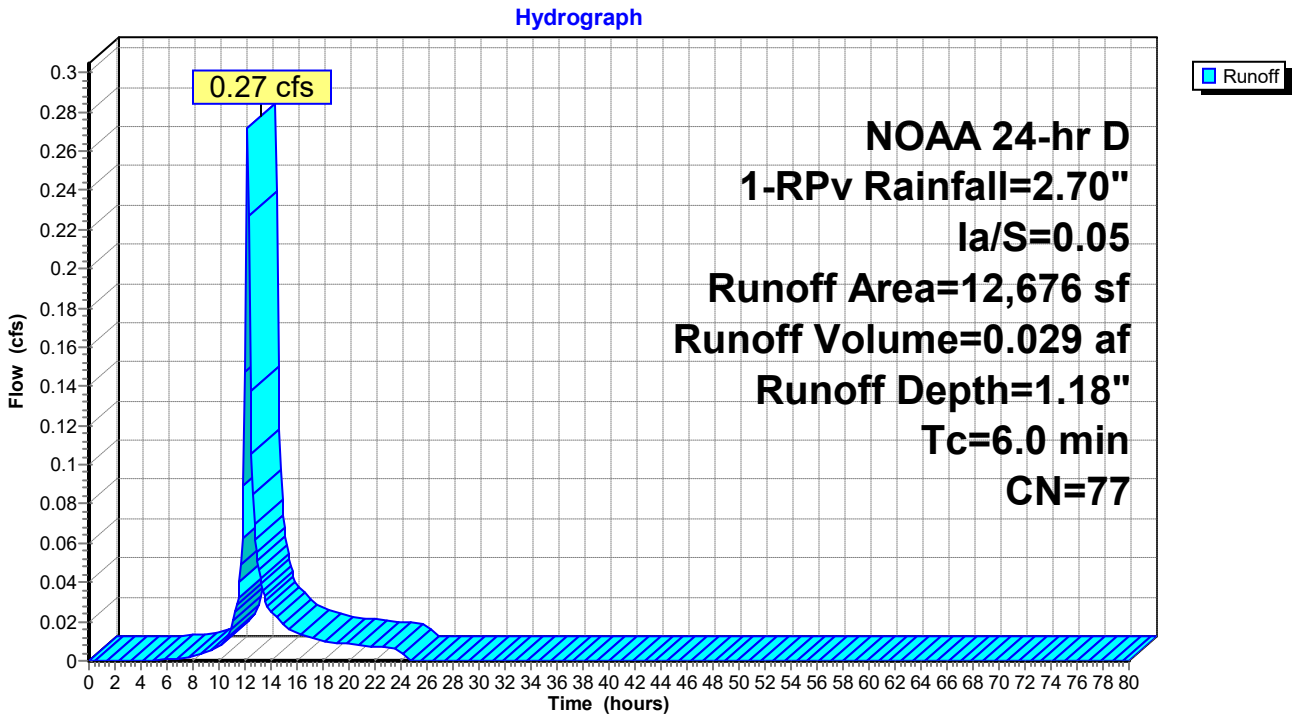
Runoff = 0.27 cfs @ 12.15 hrs, Volume= 0.029 af, Depth= 1.18"
Routed to Link AP-4 : Analysis Point 4

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (sf)	CN	Description
8,189	98	Paved parking, HSG A
4,487	39	>75% Grass cover, Good, HSG A
12,676	77	Weighted Average
4,487		35.40% Pervious Area
8,189		64.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-4: DA-4



Summary for Subcatchment DA-5: DA-5

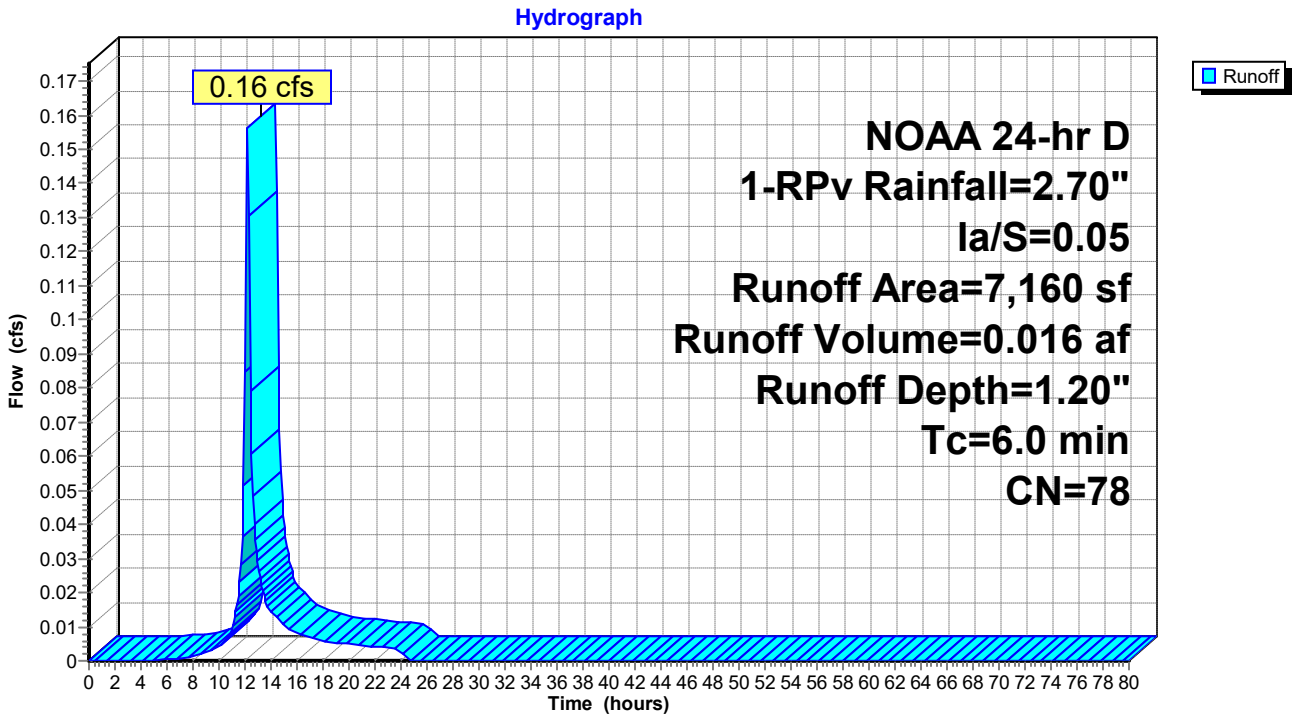
Runoff = 0.16 cfs @ 12.15 hrs, Volume= 0.016 af, Depth= 1.20"
Routed to Link AP-5 : Analysis Point 5

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (sf)	CN	Description
4,683	98	Paved parking, HSG A
2,477	39	>75% Grass cover, Good, HSG A
7,160	78	Weighted Average
2,477		34.59% Pervious Area
4,683		65.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-5: DA-5



Summary for Subcatchment DA-6: DA-6

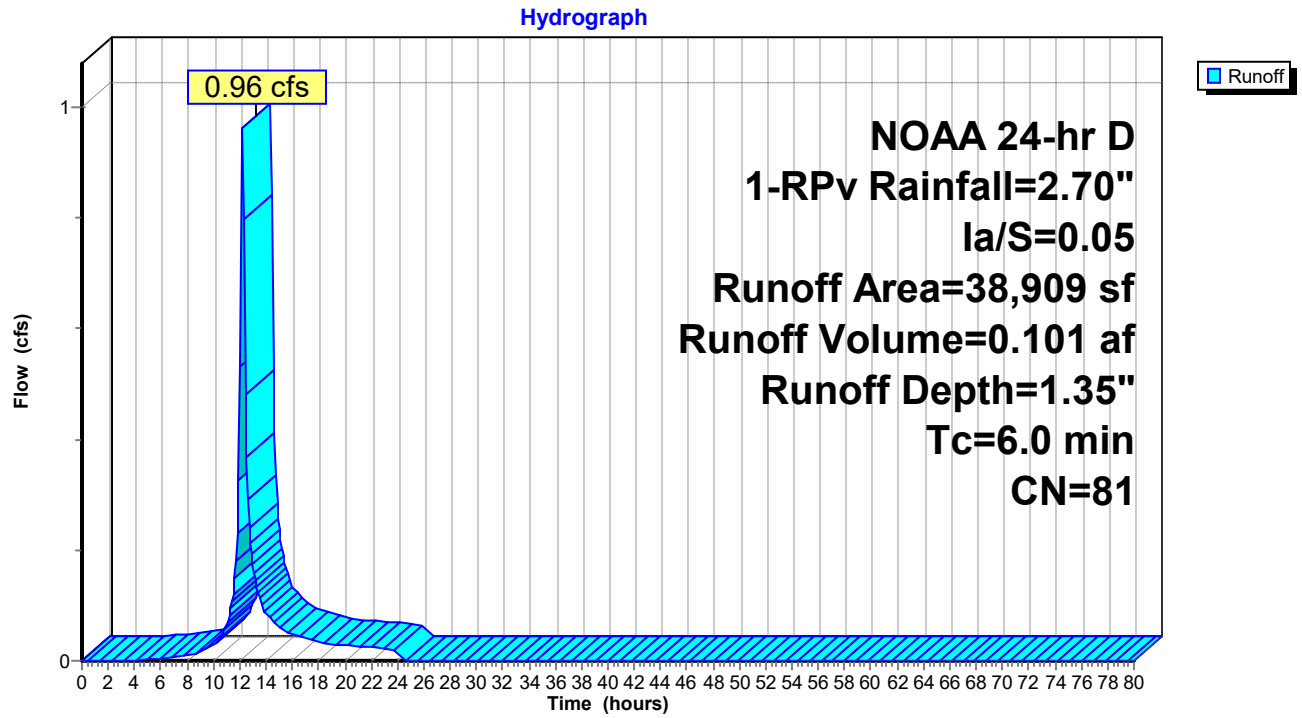
Runoff = 0.96 cfs @ 12.15 hrs, Volume= 0.101 af, Depth= 1.35"
Routed to Link AP-6 : Analysis Point 6

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (sf)	CN	Description
27,699	98	Paved parking, HSG A
11,210	39	>75% Grass cover, Good, HSG A
38,909	81	Weighted Average
11,210		28.81% Pervious Area
27,699		71.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-6: DA-6



Summary for Subcatchment DA-7: DA-7

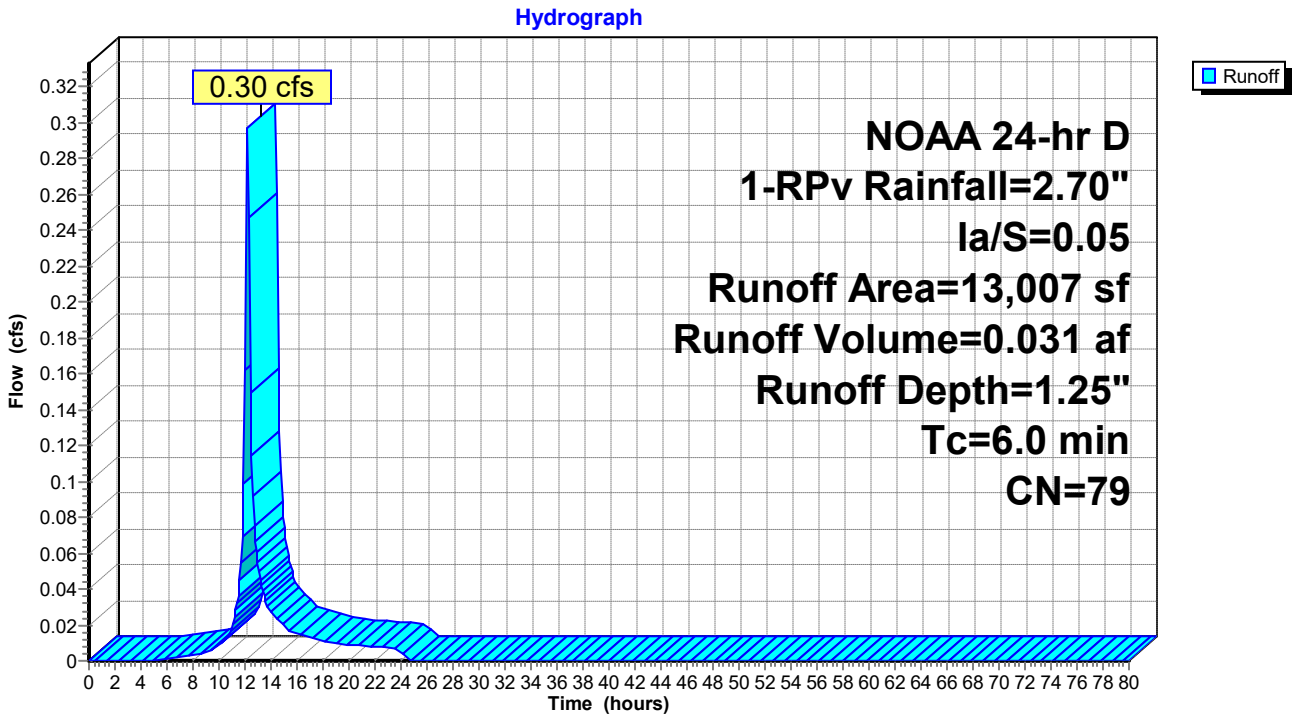
Runoff = 0.30 cfs @ 12.15 hrs, Volume= 0.031 af, Depth= 1.25"
Routed to Link AP-7 : Analysis Point 7

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (sf)	CN	Description
8,777	98	Paved parking, HSG A
4,230	39	>75% Grass cover, Good, HSG A
13,007	79	Weighted Average
4,230		32.52% Pervious Area
8,777		67.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-7: DA-7

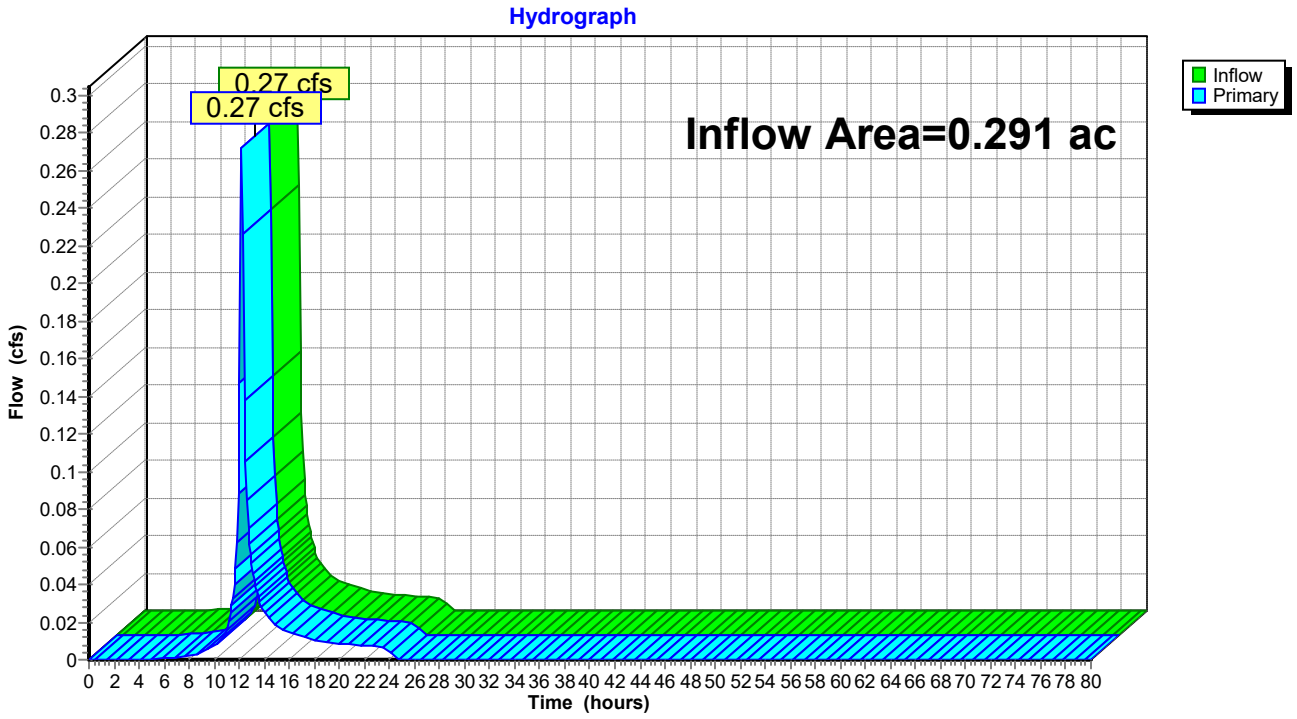


Summary for Link AP-4: Analysis Point 4

Inflow Area = 0.291 ac, 64.60% Impervious, Inflow Depth = 1.18" for 1-RPv event
Inflow = 0.27 cfs @ 12.15 hrs, Volume= 0.029 af
Primary = 0.27 cfs @ 12.15 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-4: Analysis Point 4

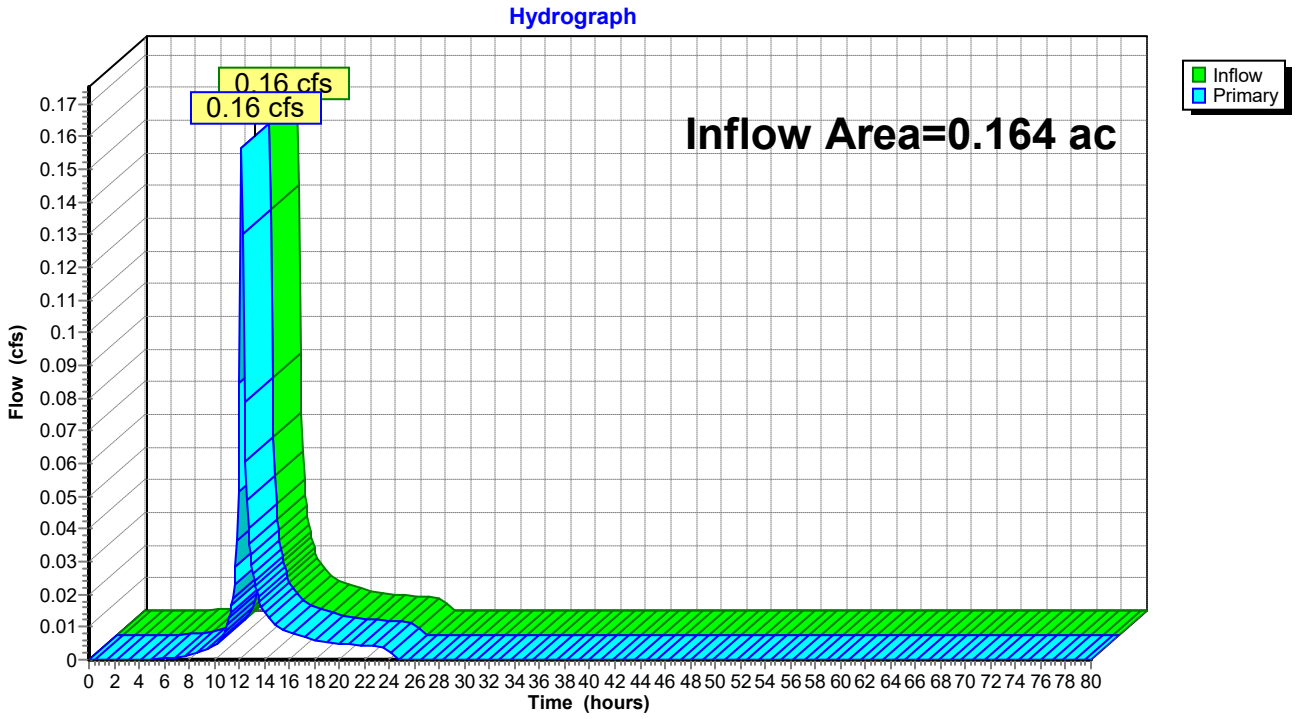


Summary for Link AP-5: Analysis Point 5

Inflow Area = 0.164 ac, 65.41% Impervious, Inflow Depth = 1.20" for 1-RPv event
Inflow = 0.16 cfs @ 12.15 hrs, Volume= 0.016 af
Primary = 0.16 cfs @ 12.15 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-5: Analysis Point 5

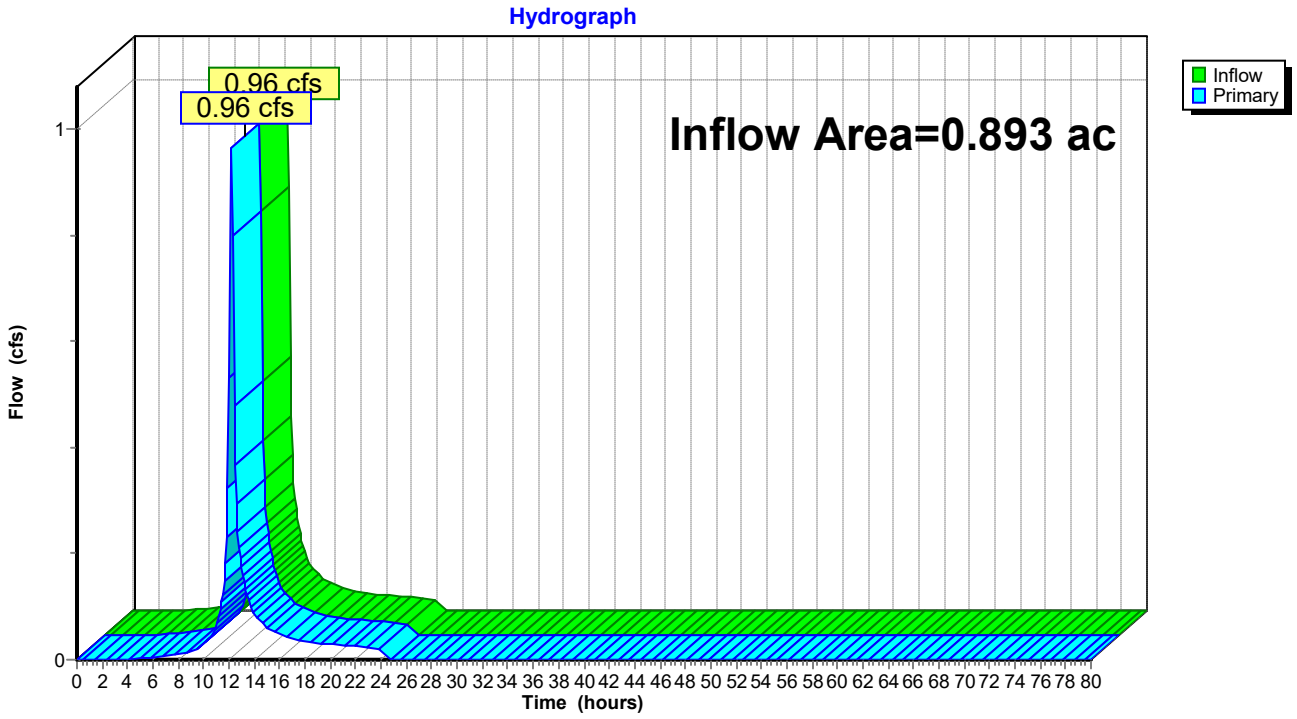


Summary for Link AP-6: Analysis Point 6

Inflow Area = 0.893 ac, 71.19% Impervious, Inflow Depth = 1.35" for 1-RPv event
Inflow = 0.96 cfs @ 12.15 hrs, Volume= 0.101 af
Primary = 0.96 cfs @ 12.15 hrs, Volume= 0.101 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-6: Analysis Point 6

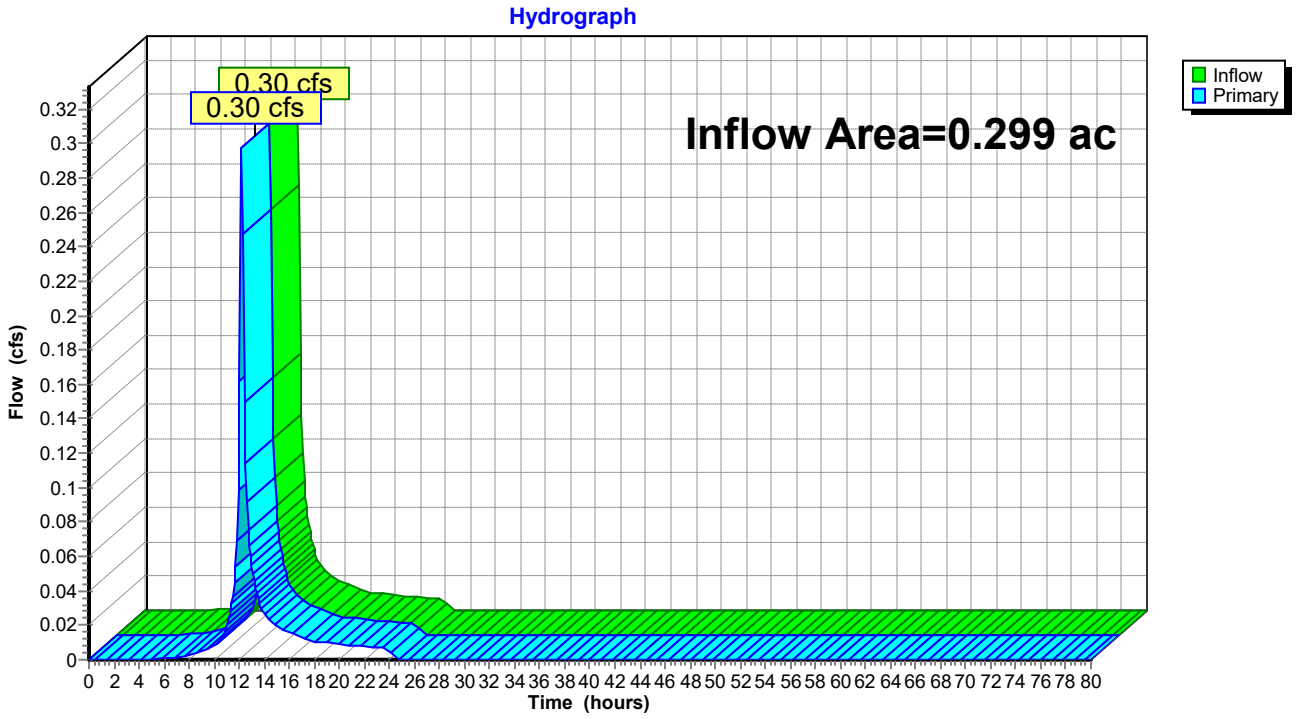


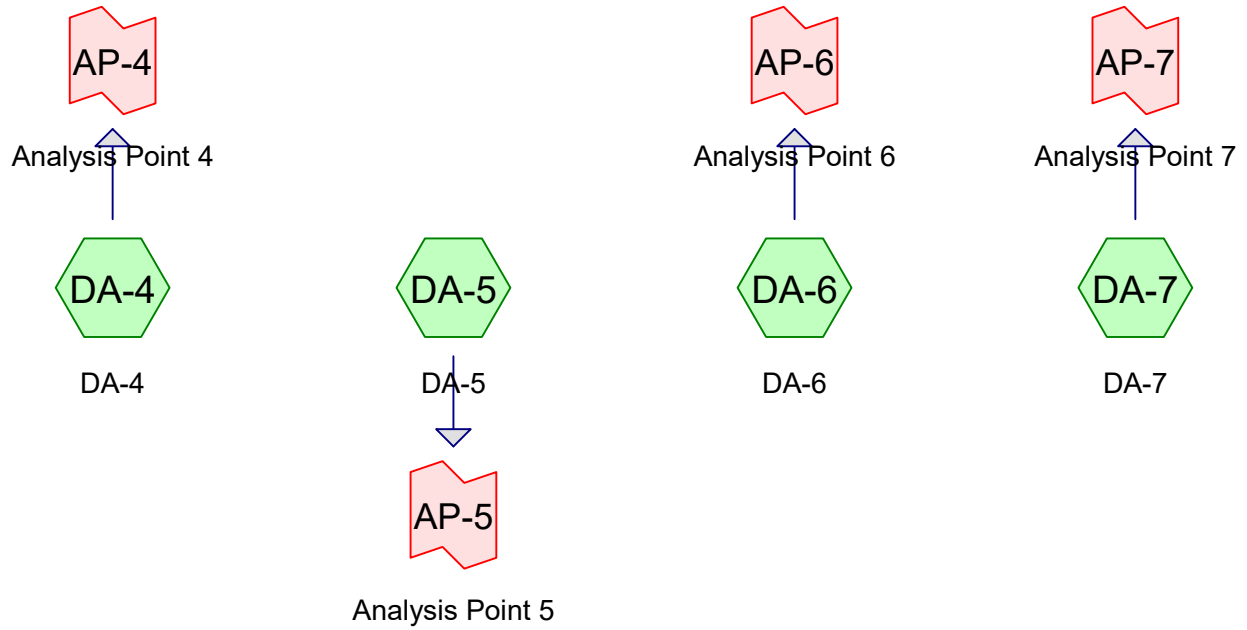
Summary for Link AP-7: Analysis Point 7

Inflow Area = 0.299 ac, 67.48% Impervious, Inflow Depth = 1.25" for 1-RPv event
Inflow = 0.30 cfs @ 12.15 hrs, Volume= 0.031 af
Primary = 0.30 cfs @ 12.15 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-7: Analysis Point 7





Subcat Reach Pond Link

Routing Diagram for 202223500-PRE
Prepared by Becker Morgan Group, Inc, Printed 5/8/2026
HydroCAD® 10.20-8a s/n 01093 © 2025 HydroCAD Software Solutions LLC

Summary for Subcatchment DA-4: DA-4

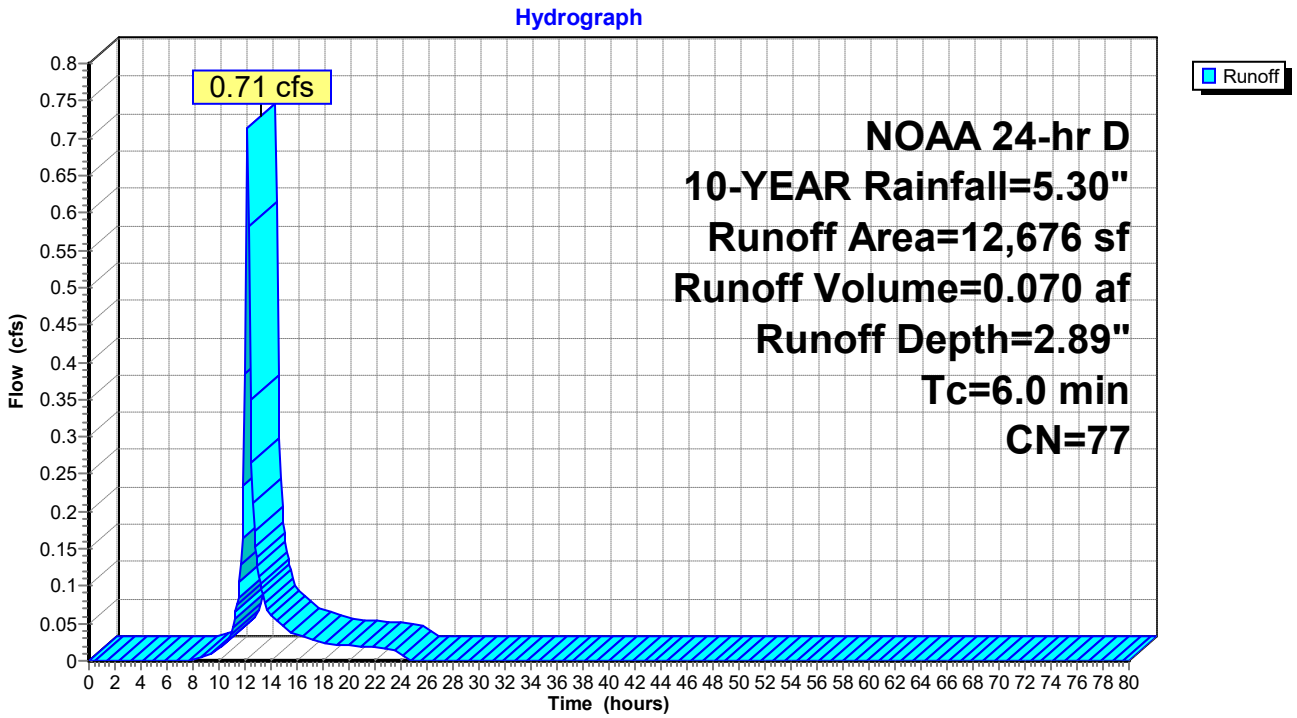
Runoff = 0.71 cfs @ 12.15 hrs, Volume= 0.070 af, Depth= 2.89"
Routed to Link AP-4 : Analysis Point 4

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (sf)	CN	Description
8,189	98	Paved parking, HSG A
4,487	39	>75% Grass cover, Good, HSG A
12,676	77	Weighted Average
4,487		35.40% Pervious Area
8,189		64.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-4: DA-4



Summary for Subcatchment DA-5: DA-5

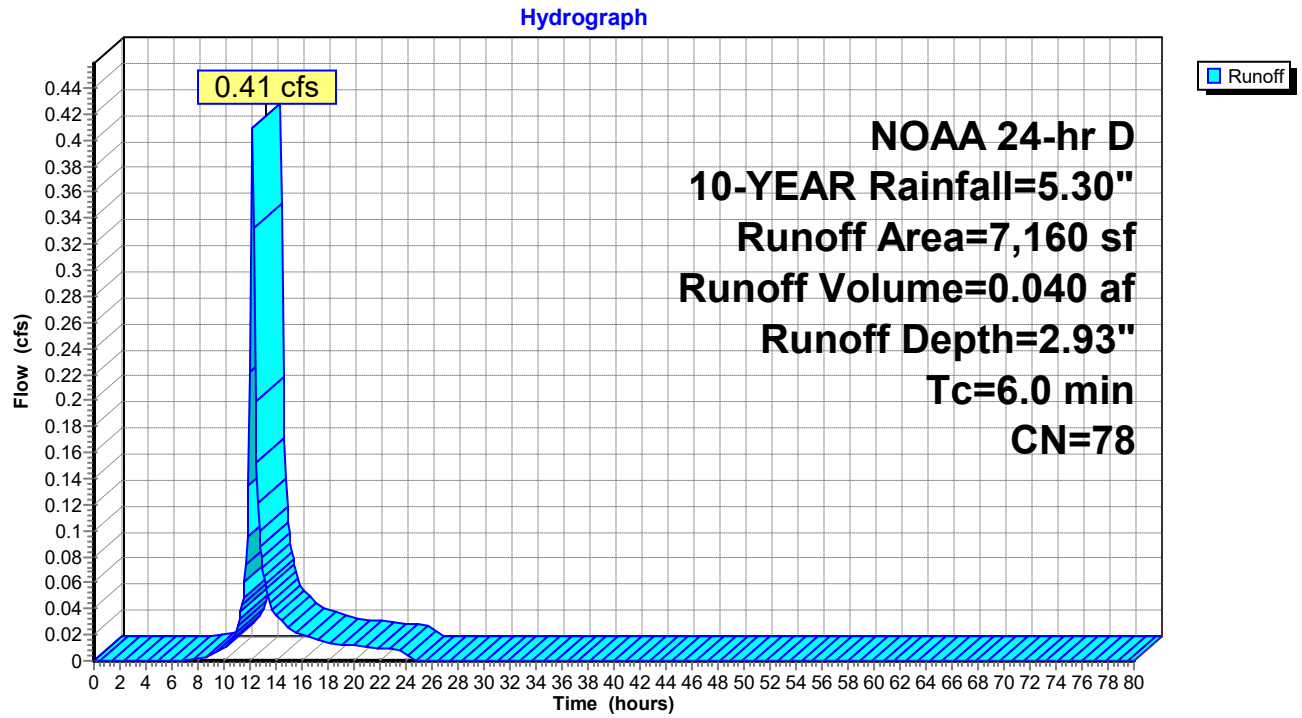
Runoff = 0.41 cfs @ 12.15 hrs, Volume= 0.040 af, Depth= 2.93"
Routed to Link AP-5 : Analysis Point 5

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (sf)	CN	Description
4,683	98	Paved parking, HSG A
2,477	39	>75% Grass cover, Good, HSG A
7,160	78	Weighted Average
2,477		34.59% Pervious Area
4,683		65.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-5: DA-5



Summary for Subcatchment DA-6: DA-6

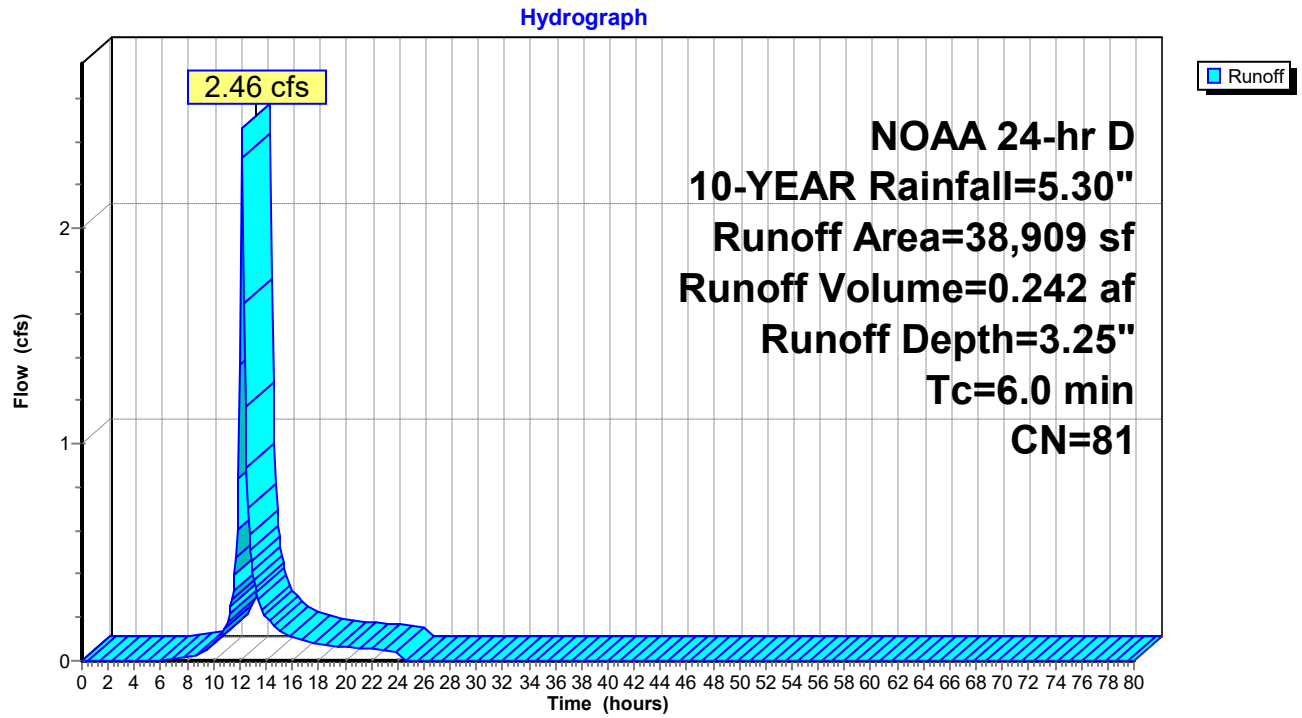
Runoff = 2.46 cfs @ 12.15 hrs, Volume= 0.242 af, Depth= 3.25"
Routed to Link AP-6 : Analysis Point 6

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (sf)	CN	Description
27,699	98	Paved parking, HSG A
11,210	39	>75% Grass cover, Good, HSG A
38,909	81	Weighted Average
11,210		28.81% Pervious Area
27,699		71.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-6: DA-6



Summary for Subcatchment DA-7: DA-7

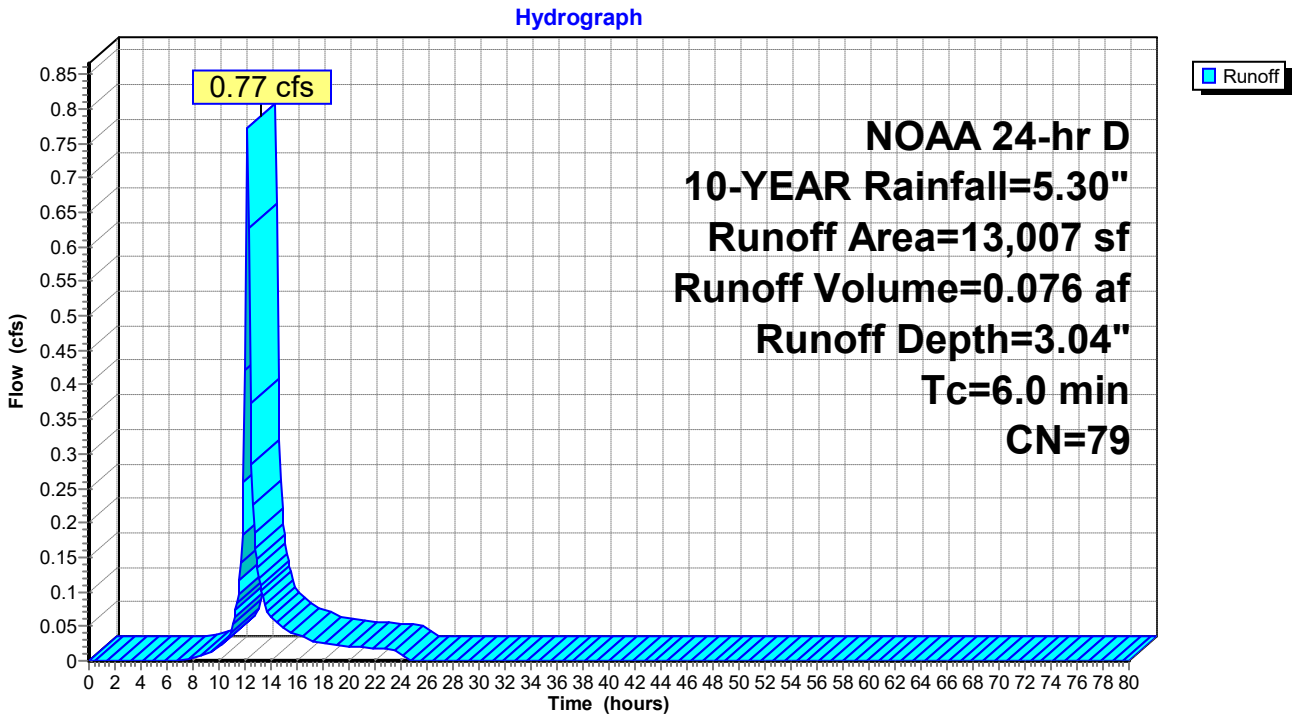
Runoff = 0.77 cfs @ 12.15 hrs, Volume= 0.076 af, Depth= 3.04"
Routed to Link AP-7 : Analysis Point 7

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (sf)	CN	Description
8,777	98	Paved parking, HSG A
4,230	39	>75% Grass cover, Good, HSG A
13,007	79	Weighted Average
4,230		32.52% Pervious Area
8,777		67.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-7: DA-7

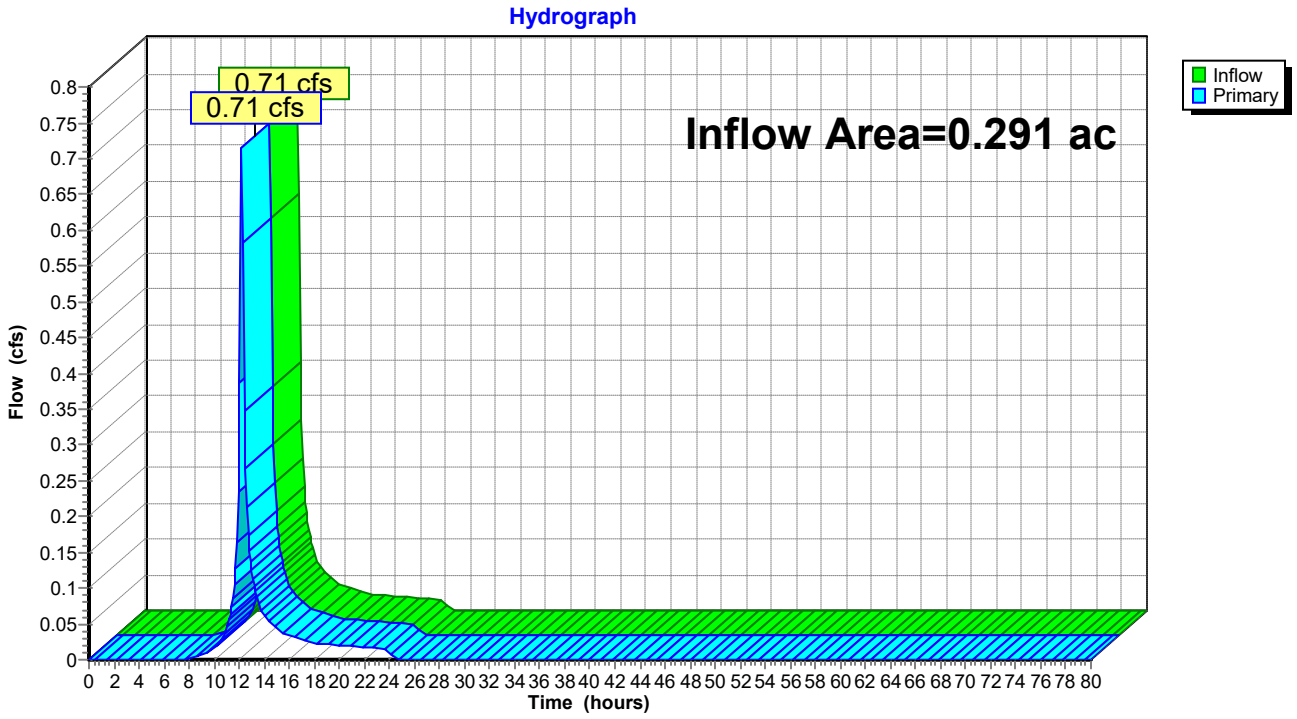


Summary for Link AP-4: Analysis Point 4

Inflow Area = 0.291 ac, 64.60% Impervious, Inflow Depth = 2.89" for 10-YEAR event
Inflow = 0.71 cfs @ 12.15 hrs, Volume= 0.070 af
Primary = 0.71 cfs @ 12.15 hrs, Volume= 0.070 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-4: Analysis Point 4

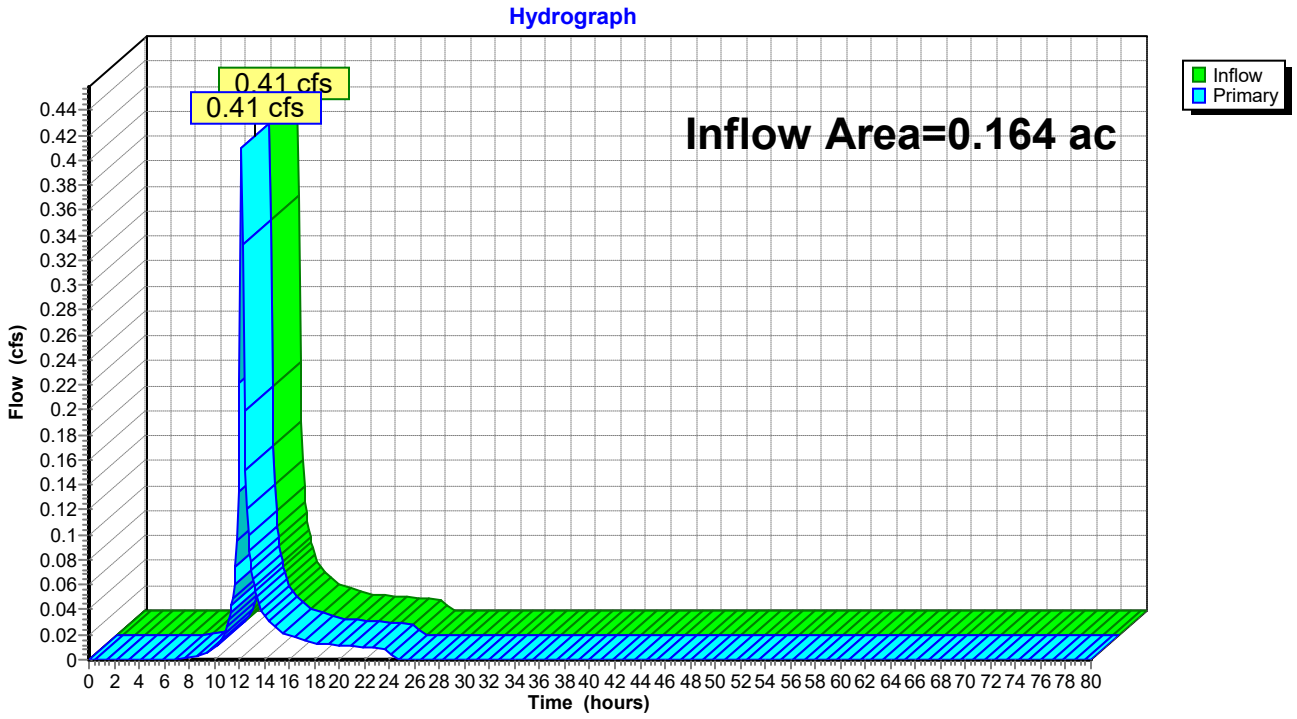


Summary for Link AP-5: Analysis Point 5

Inflow Area = 0.164 ac, 65.41% Impervious, Inflow Depth = 2.93" for 10-YEAR event
Inflow = 0.41 cfs @ 12.15 hrs, Volume= 0.040 af
Primary = 0.41 cfs @ 12.15 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-5: Analysis Point 5

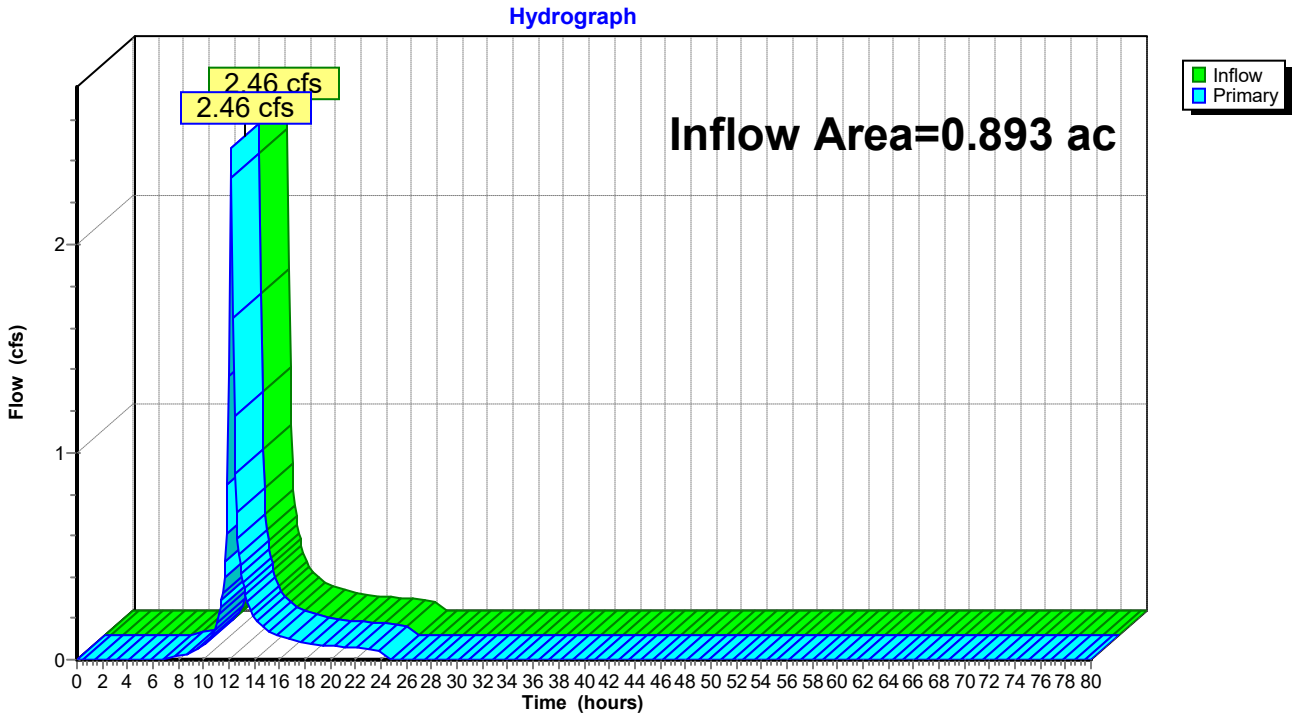


Summary for Link AP-6: Analysis Point 6

Inflow Area = 0.893 ac, 71.19% Impervious, Inflow Depth = 3.25" for 10-YEAR event
Inflow = 2.46 cfs @ 12.15 hrs, Volume= 0.242 af
Primary = 2.46 cfs @ 12.15 hrs, Volume= 0.242 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-6: Analysis Point 6

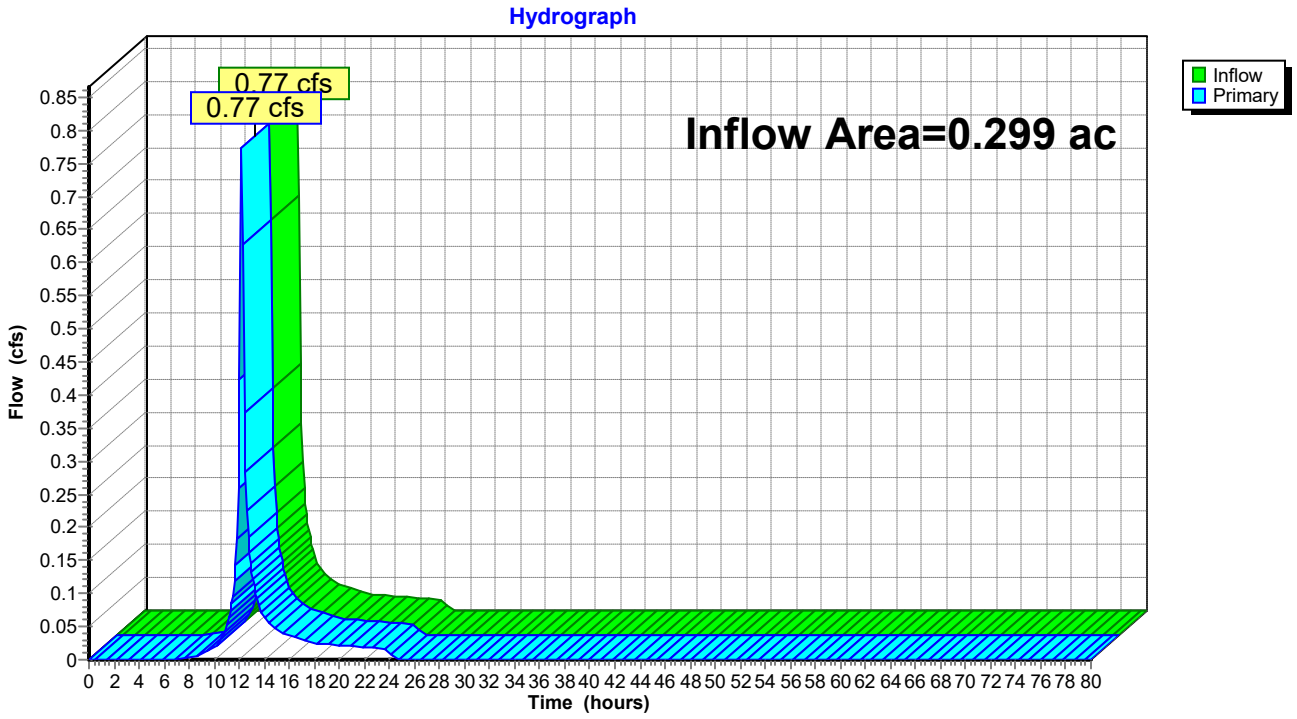


Summary for Link AP-7: Analysis Point 7

Inflow Area = 0.299 ac, 67.48% Impervious, Inflow Depth = 3.04" for 10-YEAR event
Inflow = 0.77 cfs @ 12.15 hrs, Volume= 0.076 af
Primary = 0.77 cfs @ 12.15 hrs, Volume= 0.076 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-7: Analysis Point 7



Summary for Subcatchment DA-4: DA-4

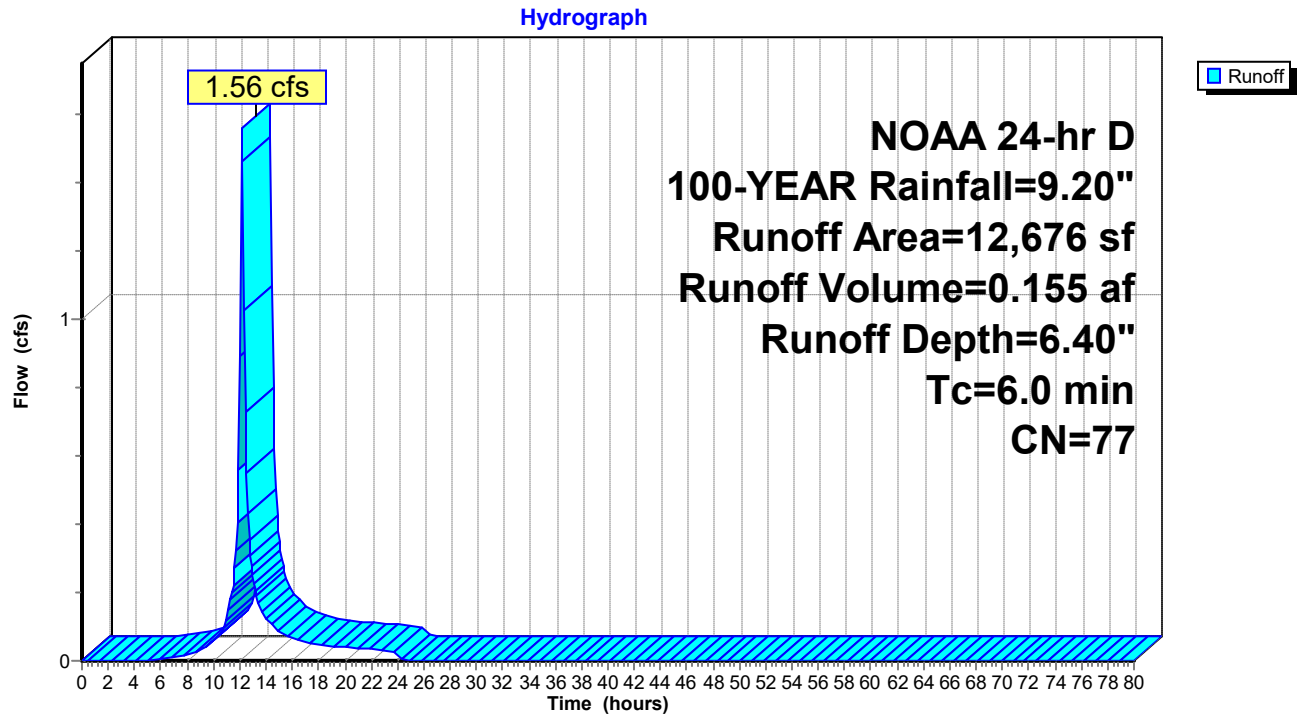
Runoff = 1.56 cfs @ 12.14 hrs, Volume= 0.155 af, Depth= 6.40"
Routed to Link AP-4 : Analysis Point 4

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (sf)	CN	Description
8,189	98	Paved parking, HSG A
4,487	39	>75% Grass cover, Good, HSG A
12,676	77	Weighted Average
4,487		35.40% Pervious Area
8,189		64.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-4: DA-4



Summary for Subcatchment DA-5: DA-5

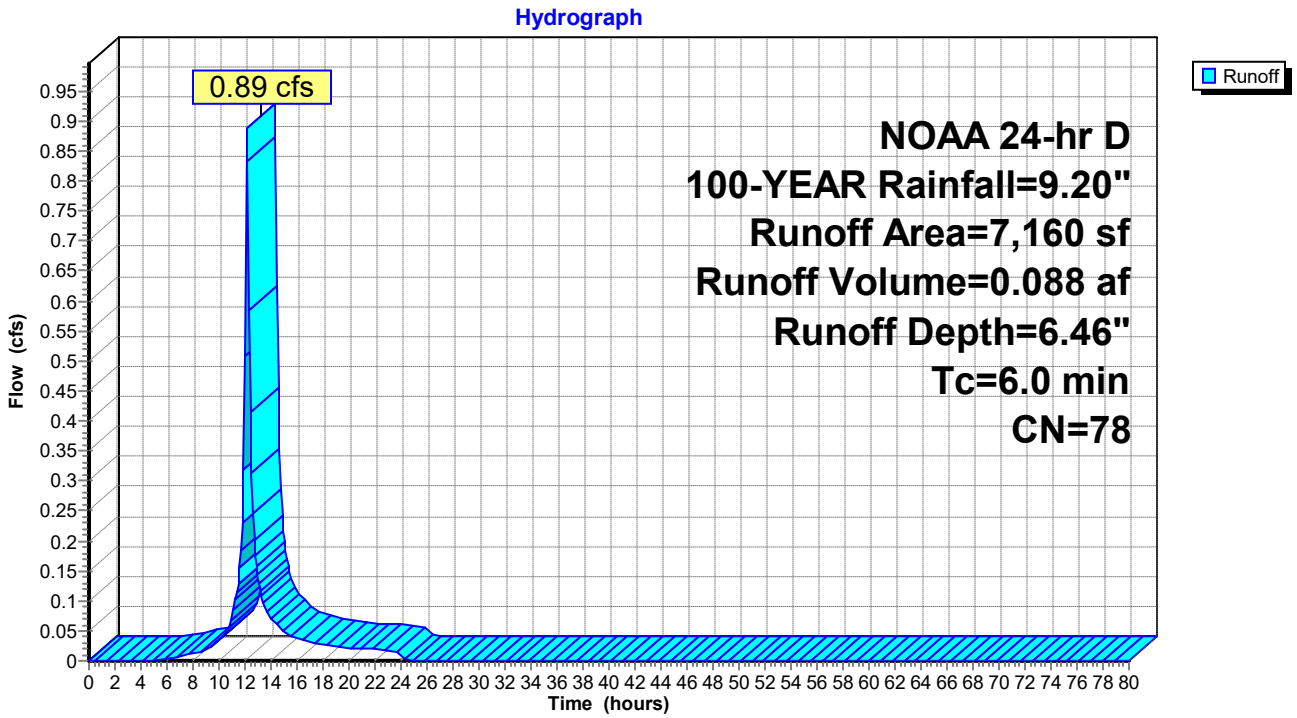
Runoff = 0.89 cfs @ 12.14 hrs, Volume= 0.088 af, Depth= 6.46"
Routed to Link AP-5 : Analysis Point 5

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (sf)	CN	Description
4,683	98	Paved parking, HSG A
2,477	39	>75% Grass cover, Good, HSG A
7,160	78	Weighted Average
2,477		34.59% Pervious Area
4,683		65.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-5: DA-5



Summary for Subcatchment DA-6: DA-6

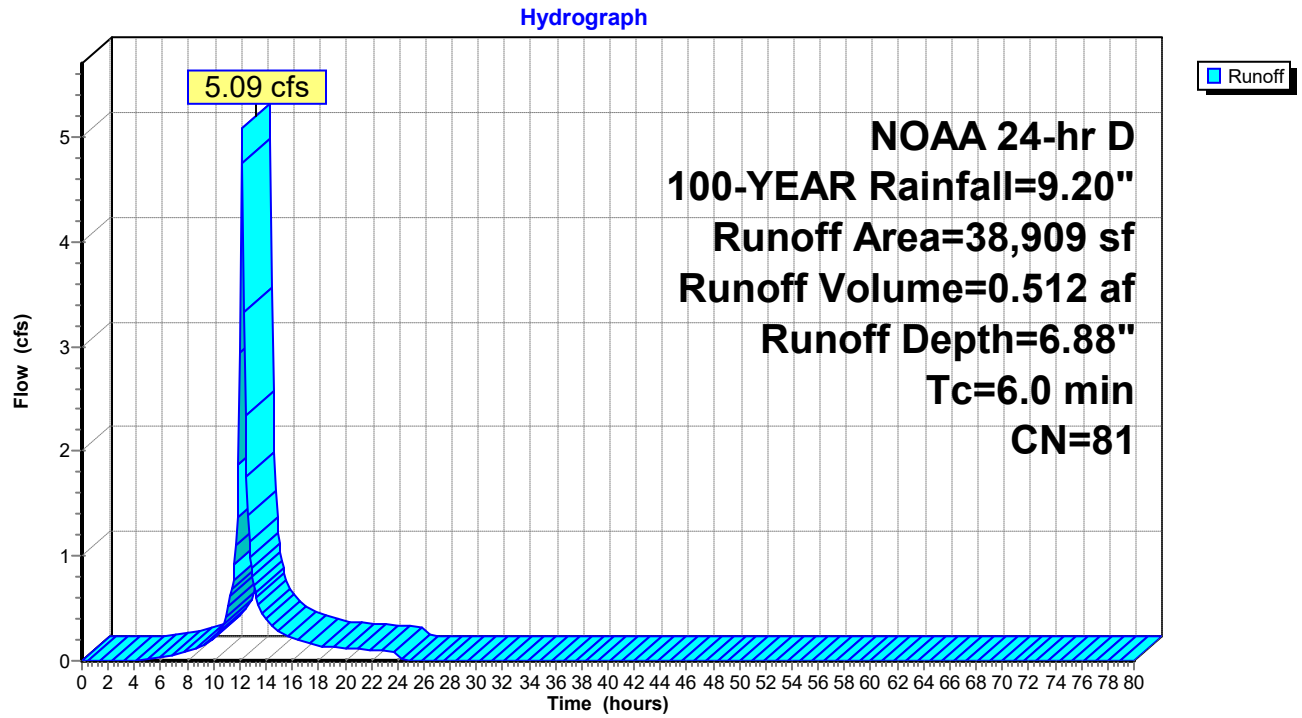
Runoff = 5.09 cfs @ 12.14 hrs, Volume= 0.512 af, Depth= 6.88"
Routed to Link AP-6 : Analysis Point 6

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (sf)	CN	Description
27,699	98	Paved parking, HSG A
11,210	39	>75% Grass cover, Good, HSG A
38,909	81	Weighted Average
11,210		28.81% Pervious Area
27,699		71.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-6: DA-6



Summary for Subcatchment DA-7: DA-7

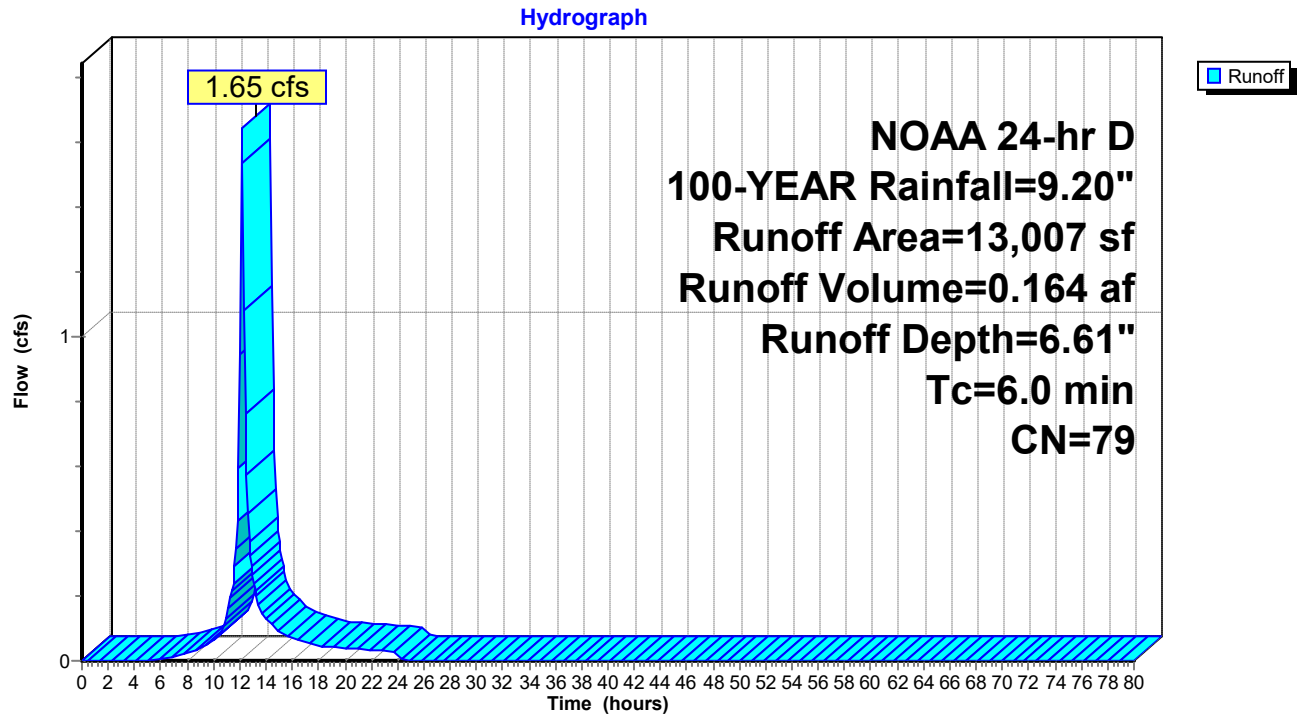
Runoff = 1.65 cfs @ 12.14 hrs, Volume= 0.164 af, Depth= 6.61"
Routed to Link AP-7 : Analysis Point 7

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (sf)	CN	Description
8,777	98	Paved parking, HSG A
4,230	39	>75% Grass cover, Good, HSG A
13,007	79	Weighted Average
4,230		32.52% Pervious Area
8,777		67.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-7: DA-7

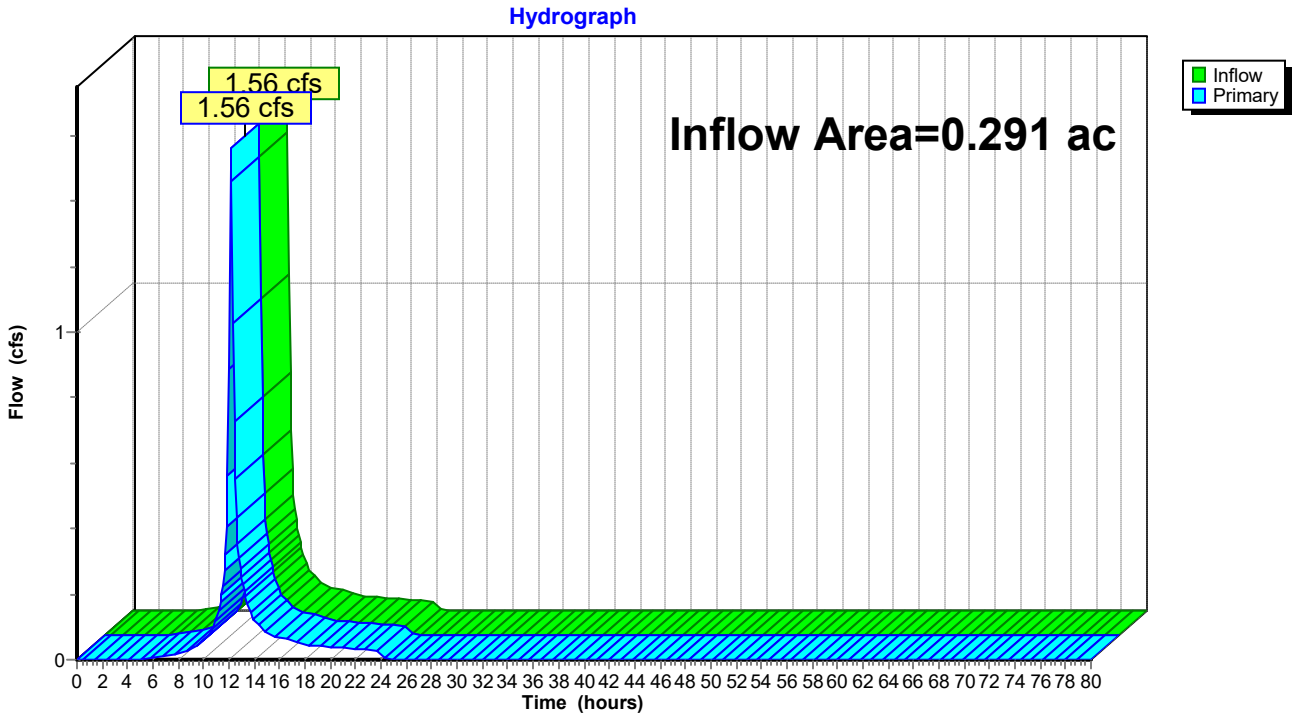


Summary for Link AP-4: Analysis Point 4

Inflow Area = 0.291 ac, 64.60% Impervious, Inflow Depth = 6.40" for 100-YEAR event
Inflow = 1.56 cfs @ 12.14 hrs, Volume= 0.155 af
Primary = 1.56 cfs @ 12.14 hrs, Volume= 0.155 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-4: Analysis Point 4

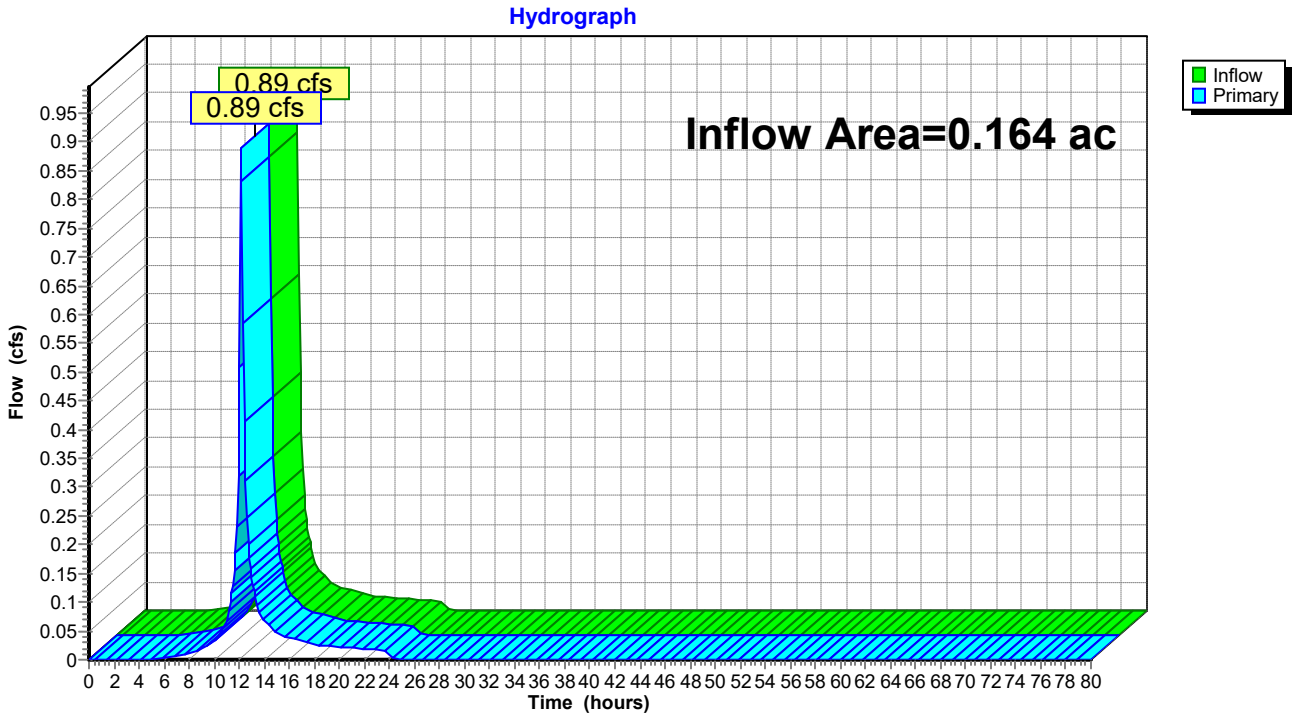


Summary for Link AP-5: Analysis Point 5

Inflow Area = 0.164 ac, 65.41% Impervious, Inflow Depth = 6.46" for 100-YEAR event
Inflow = 0.89 cfs @ 12.14 hrs, Volume= 0.088 af
Primary = 0.89 cfs @ 12.14 hrs, Volume= 0.088 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-5: Analysis Point 5

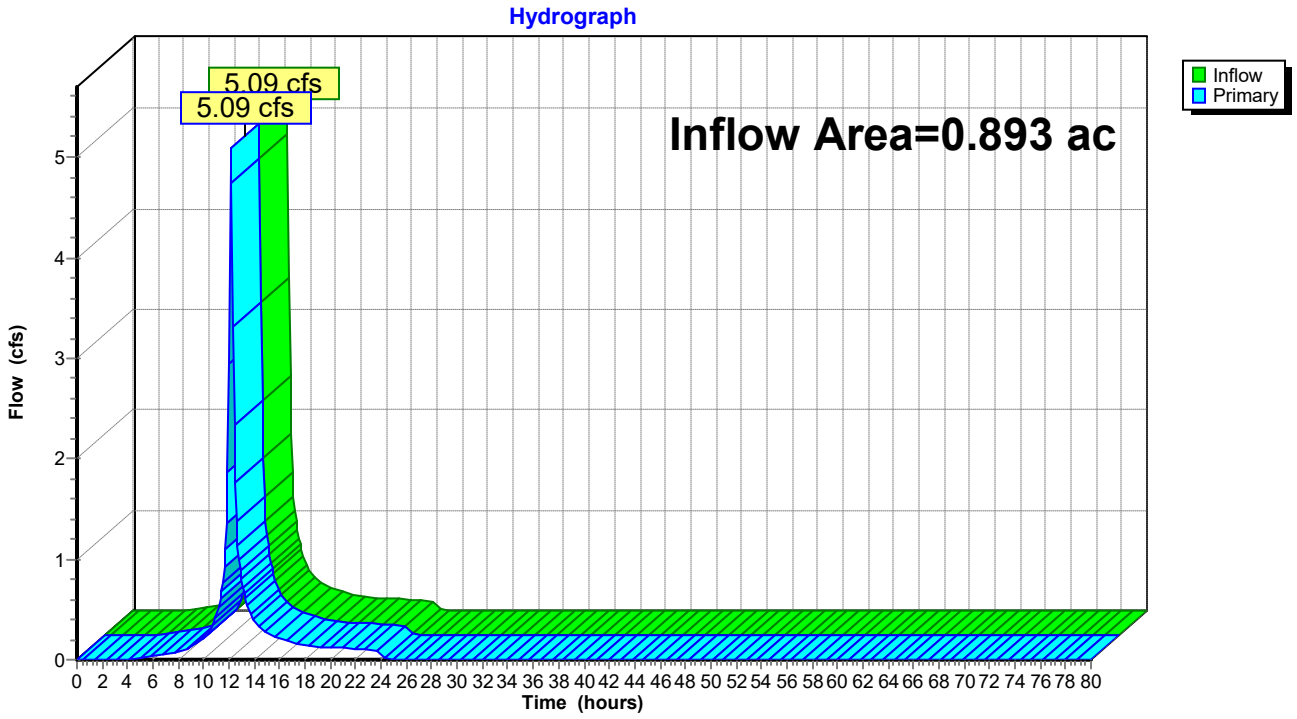


Summary for Link AP-6: Analysis Point 6

Inflow Area = 0.893 ac, 71.19% Impervious, Inflow Depth = 6.88" for 100-YEAR event
Inflow = 5.09 cfs @ 12.14 hrs, Volume= 0.512 af
Primary = 5.09 cfs @ 12.14 hrs, Volume= 0.512 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-6: Analysis Point 6

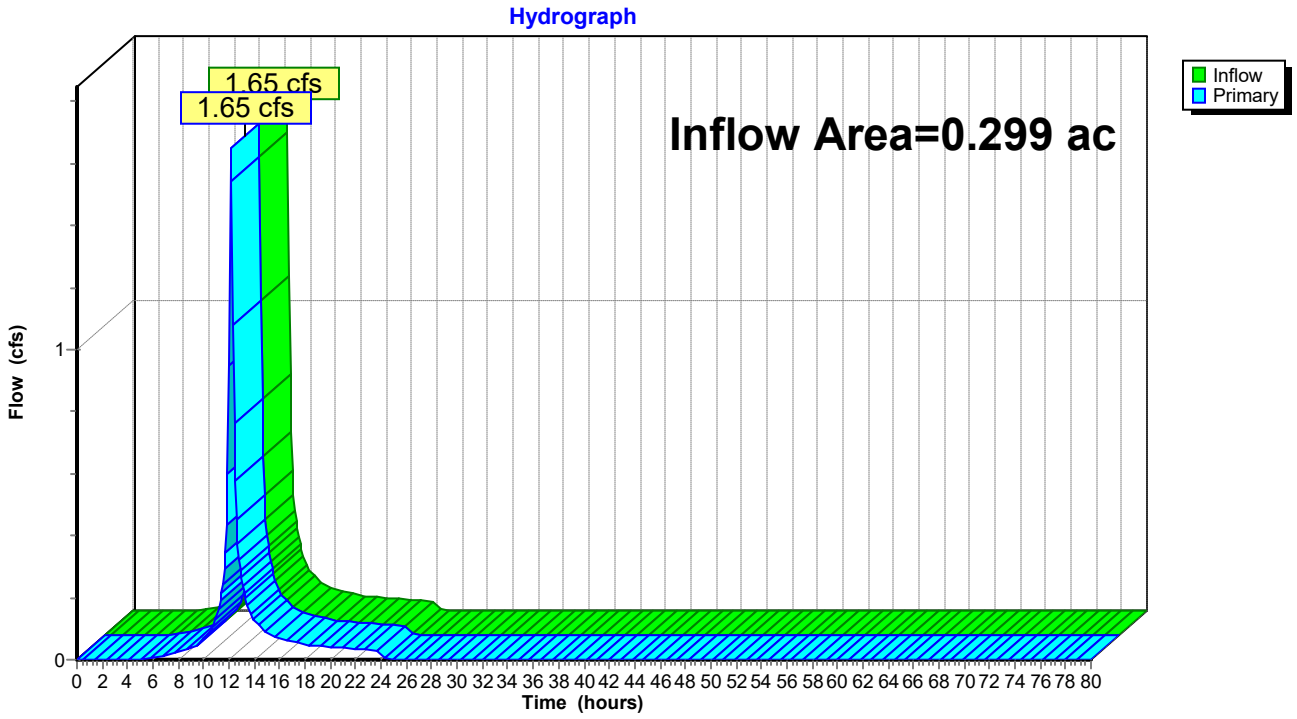


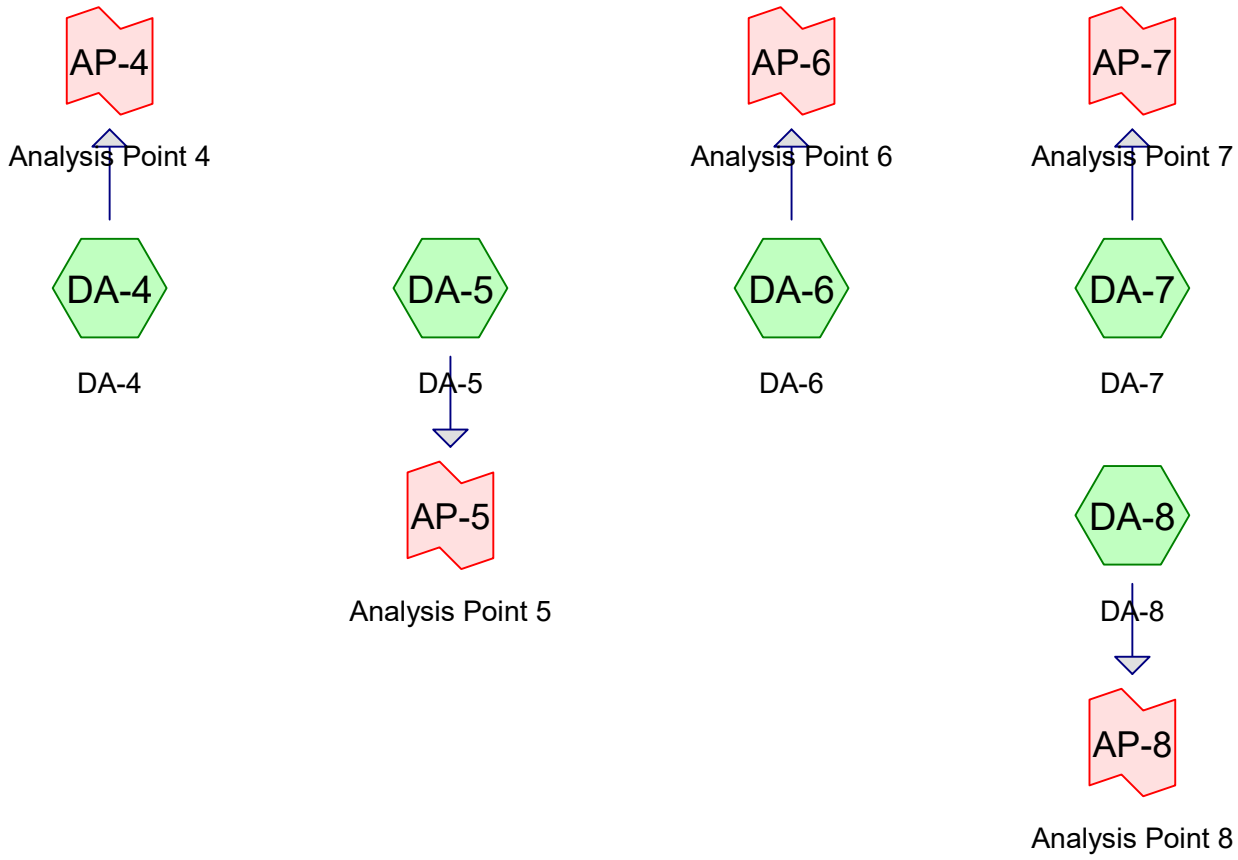
Summary for Link AP-7: Analysis Point 7

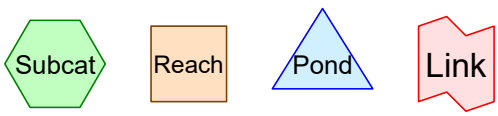
Inflow Area = 0.299 ac, 67.48% Impervious, Inflow Depth = 6.61" for 100-YEAR event
Inflow = 1.65 cfs @ 12.14 hrs, Volume= 0.164 af
Primary = 1.65 cfs @ 12.14 hrs, Volume= 0.164 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-7: Analysis Point 7







Routing Diagram for 202223500-POST-EVOC
Prepared by Becker Morgan Group, Inc, Printed 5/8/2026
HydroCAD® 10.20-8a s/n 01093 © 2025 HydroCAD Software Solutions LLC

Summary for Subcatchment DA-4: DA-4

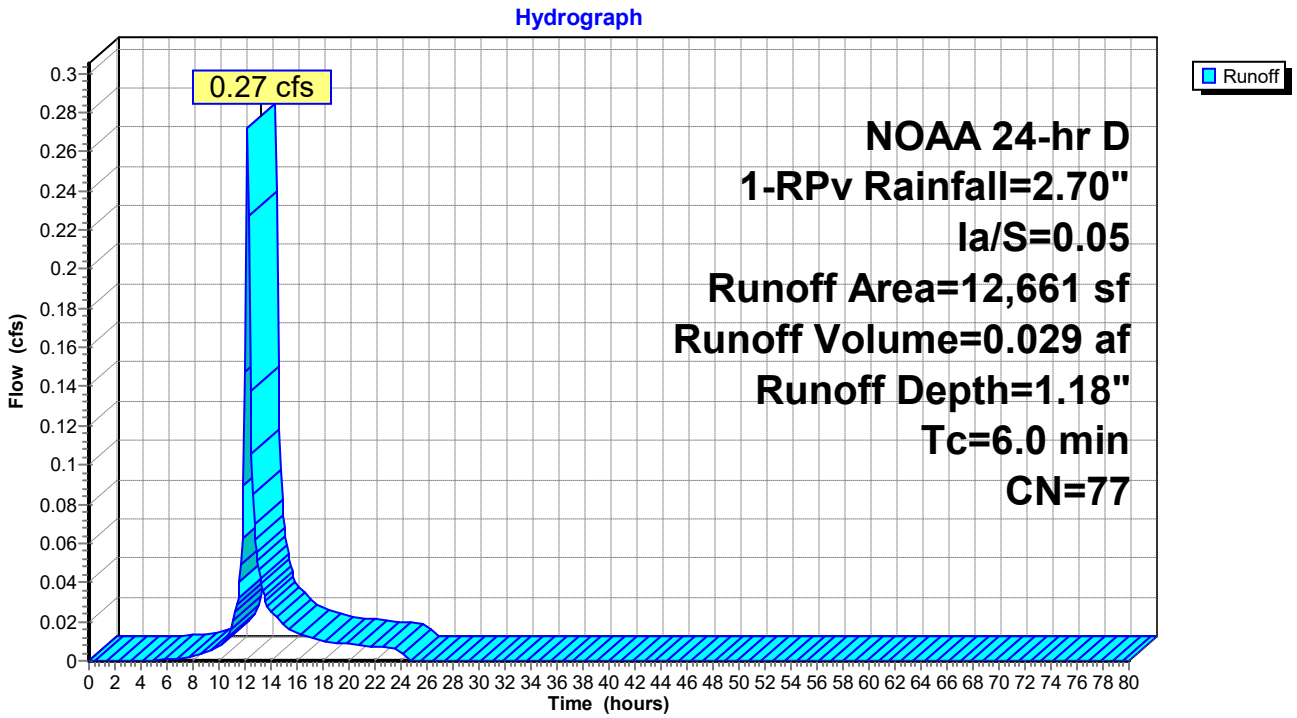
Runoff = 0.27 cfs @ 12.15 hrs, Volume= 0.029 af, Depth= 1.18"
Routed to Link AP-4 : Analysis Point 4

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (sf)	CN	Description
8,192	98	Paved parking, HSG A
4,469	39	>75% Grass cover, Good, HSG A
12,661	77	Weighted Average
4,469		35.30% Pervious Area
8,192		64.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-4: DA-4



Summary for Subcatchment DA-5: DA-5

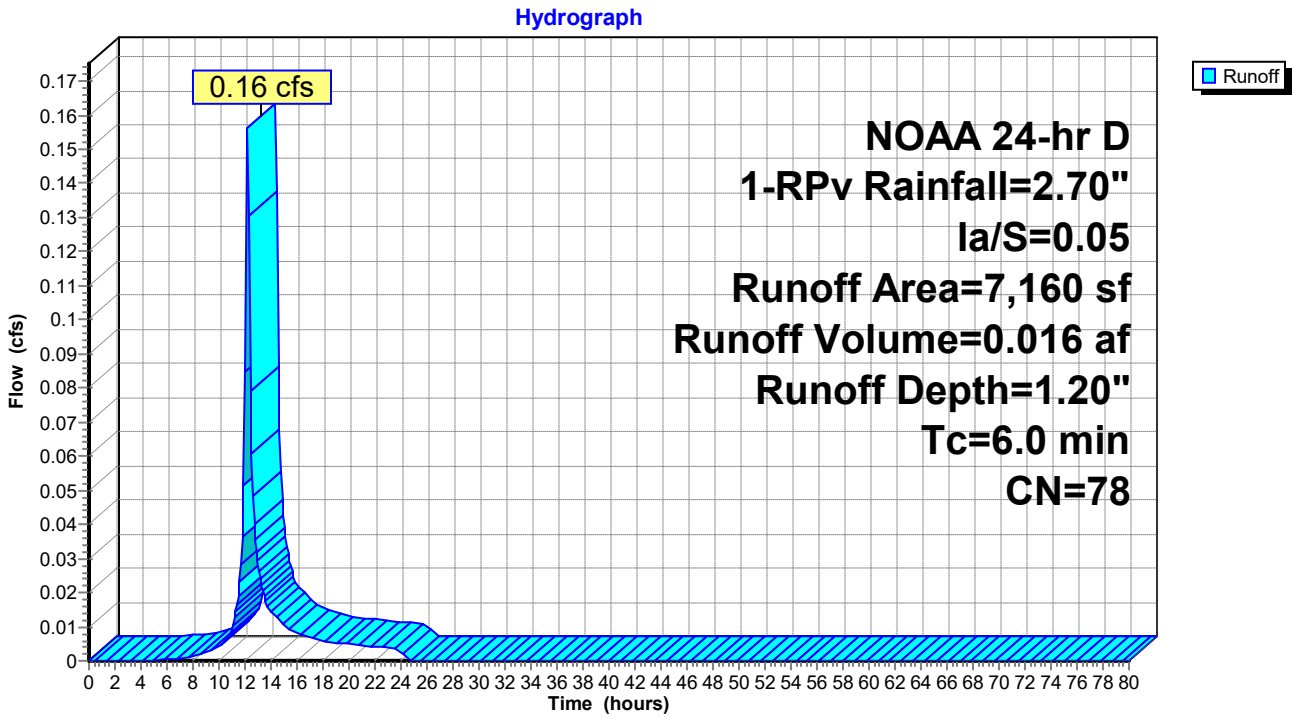
Runoff = 0.16 cfs @ 12.15 hrs, Volume= 0.016 af, Depth= 1.20"
Routed to Link AP-5 : Analysis Point 5

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (sf)	CN	Description
4,683	98	Paved parking, HSG A
2,477	39	>75% Grass cover, Good, HSG A
7,160	78	Weighted Average
2,477		34.59% Pervious Area
4,683		65.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-5: DA-5



Summary for Subcatchment DA-6: DA-6

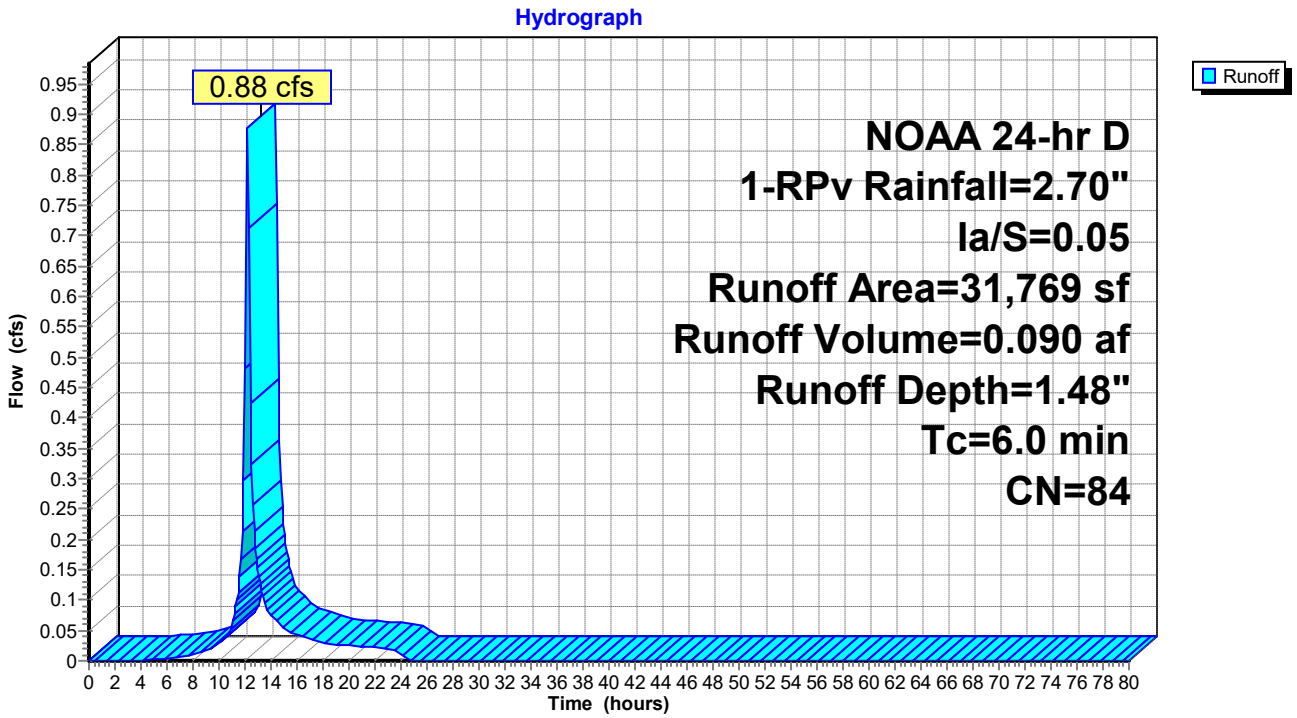
Runoff = 0.88 cfs @ 12.15 hrs, Volume= 0.090 af, Depth= 1.48"
Routed to Link AP-6 : Analysis Point 6

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (sf)	CN	Description
23,985	98	Paved parking, HSG A
7,784	39	>75% Grass cover, Good, HSG A
31,769	84	Weighted Average
7,784		24.50% Pervious Area
23,985		75.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-6: DA-6



Summary for Subcatchment DA-7: DA-7

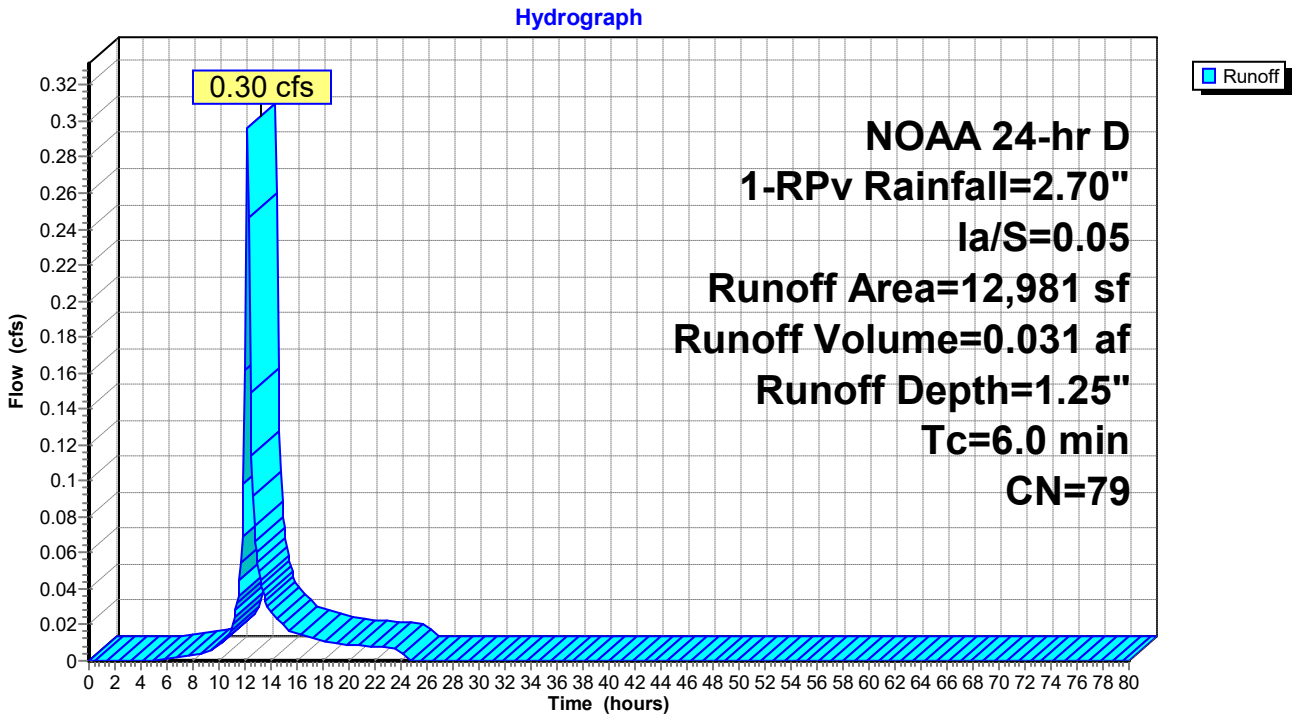
Runoff = 0.30 cfs @ 12.15 hrs, Volume= 0.031 af, Depth= 1.25"
Routed to Link AP-7 : Analysis Point 7

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (sf)	CN	Description
8,756	98	Paved parking, HSG A
4,225	39	>75% Grass cover, Good, HSG A
12,981	79	Weighted Average
4,225		32.55% Pervious Area
8,756		67.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-7: DA-7



Summary for Subcatchment DA-8: DA-8

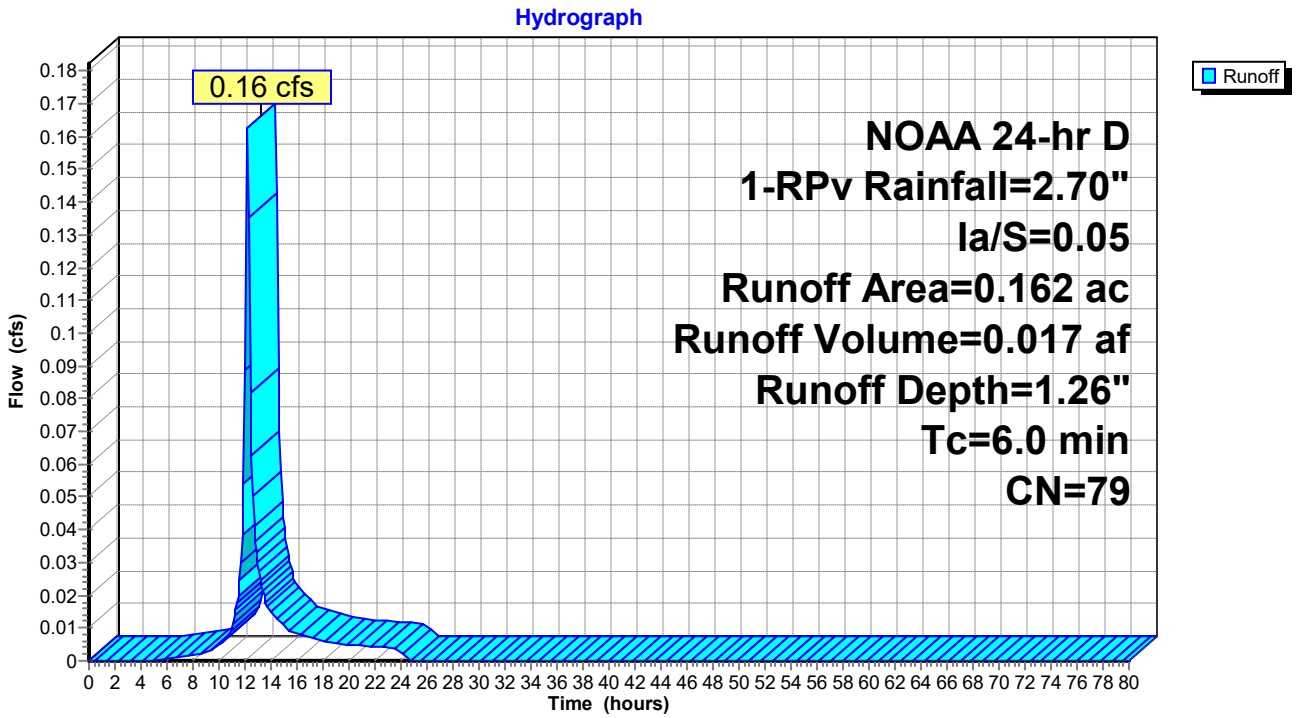
Runoff = 0.16 cfs @ 12.15 hrs, Volume= 0.017 af, Depth= 1.26"
Routed to Link AP-8 : Analysis Point 8

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 1-RPv Rainfall=2.70", Ia/S=0.05

Area (ac)	CN	Description
0.110	98	Paved parking, HSG A
0.052	39	>75% Grass cover, Good, HSG A
0.162	79	Weighted Average
0.052		32.10% Pervious Area
0.110		67.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-8: DA-8

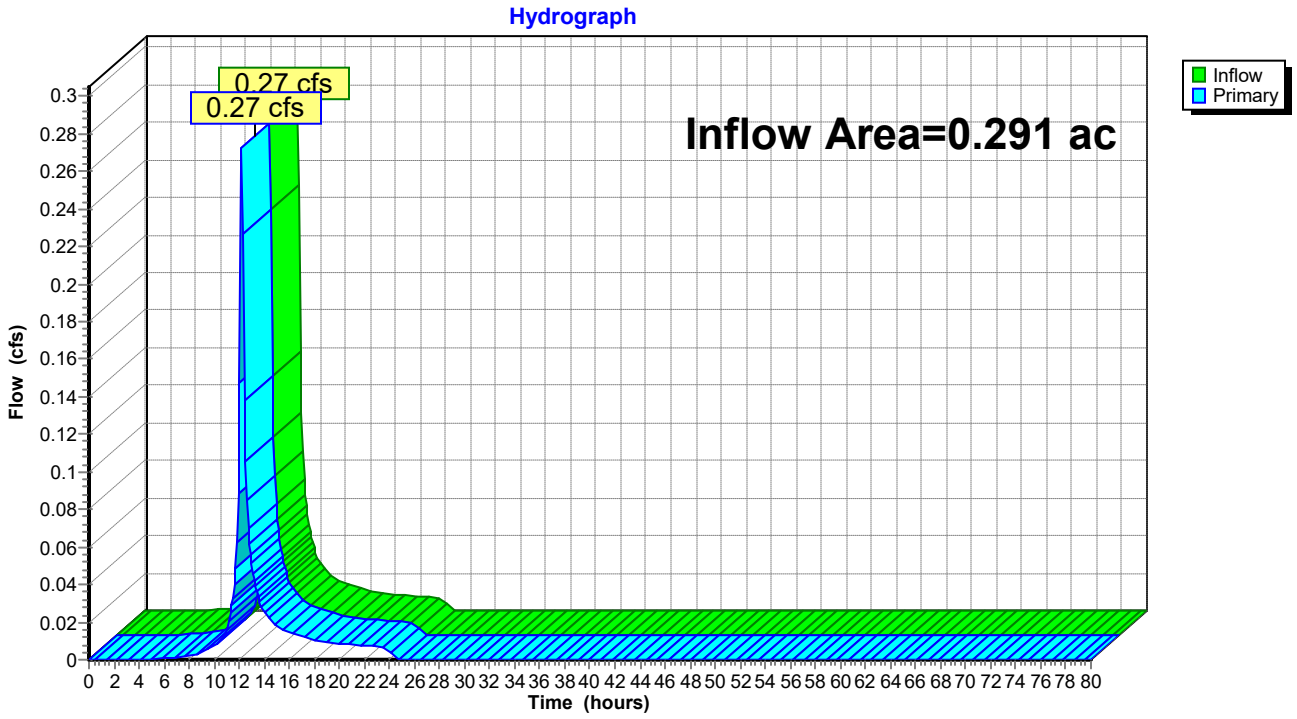


Summary for Link AP-4: Analysis Point 4

Inflow Area = 0.291 ac, 64.70% Impervious, Inflow Depth = 1.18" for 1-RPv event
Inflow = 0.27 cfs @ 12.15 hrs, Volume= 0.029 af
Primary = 0.27 cfs @ 12.15 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-4: Analysis Point 4

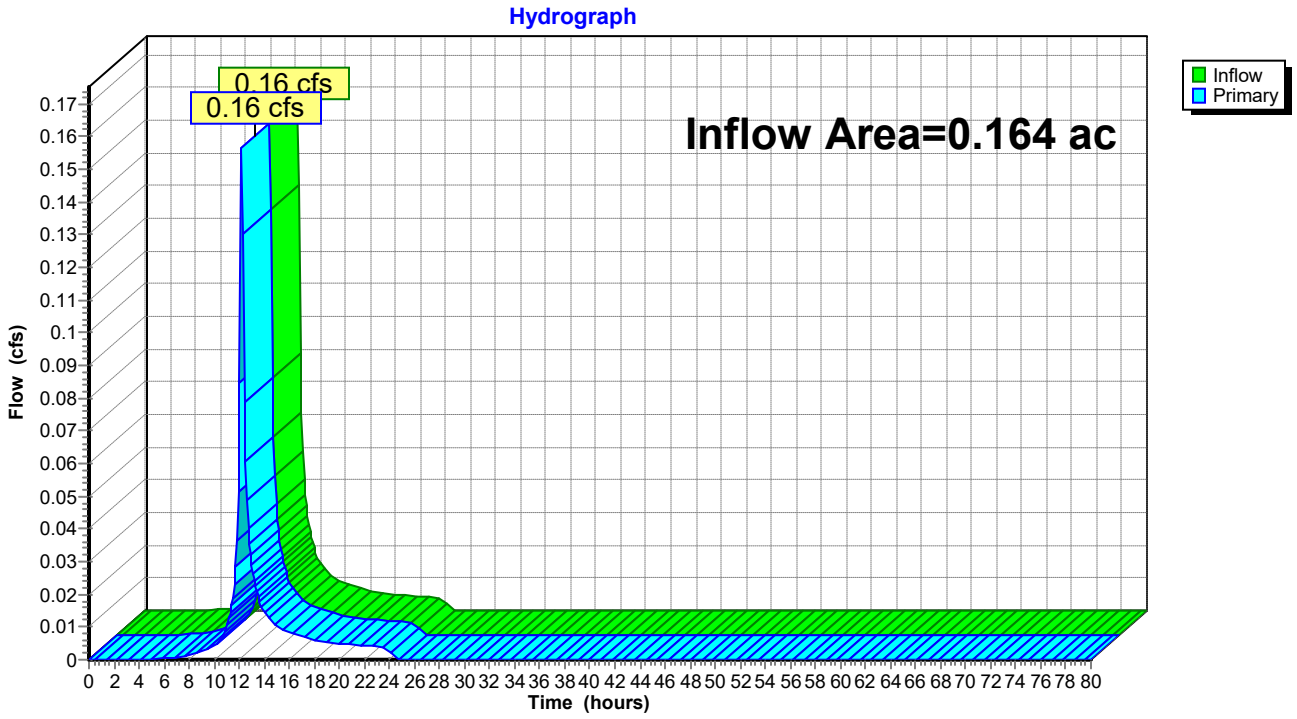


Summary for Link AP-5: Analysis Point 5

Inflow Area = 0.164 ac, 65.41% Impervious, Inflow Depth = 1.20" for 1-RPv event
Inflow = 0.16 cfs @ 12.15 hrs, Volume= 0.016 af
Primary = 0.16 cfs @ 12.15 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-5: Analysis Point 5

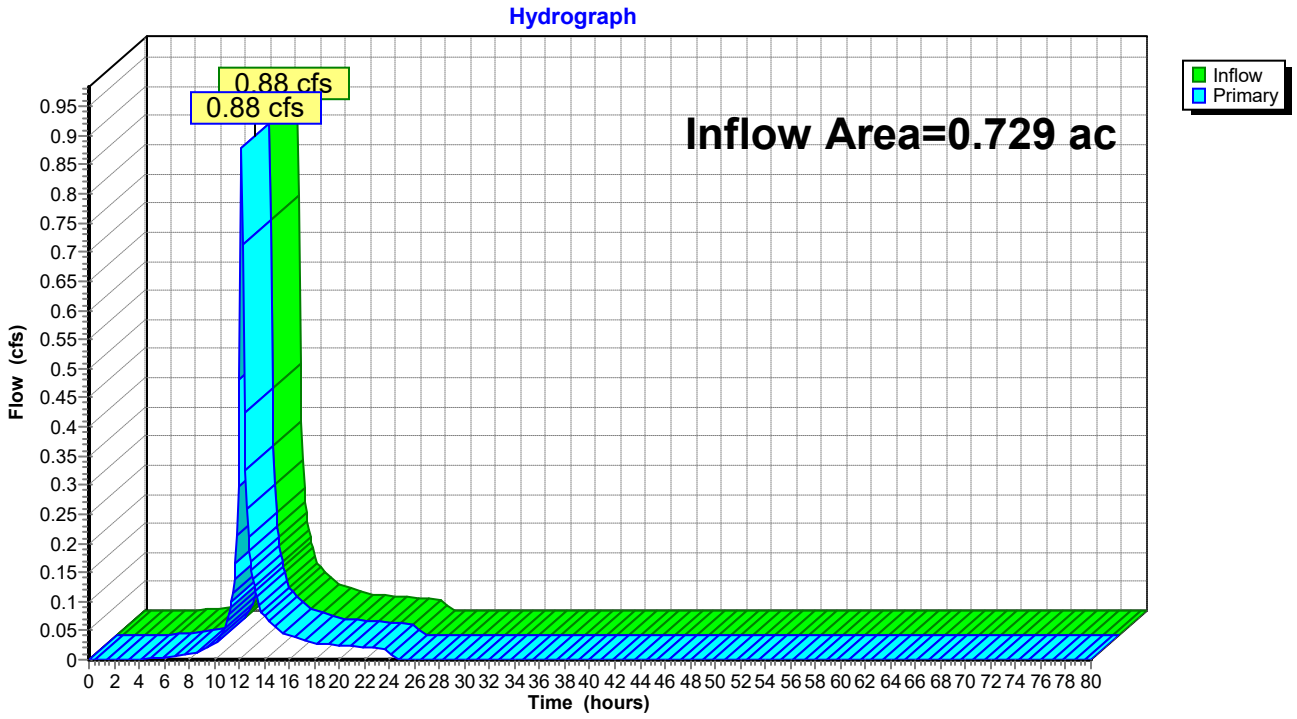


Summary for Link AP-6: Analysis Point 6

Inflow Area = 0.729 ac, 75.50% Impervious, Inflow Depth = 1.48" for 1-RPv event
Inflow = 0.88 cfs @ 12.15 hrs, Volume= 0.090 af
Primary = 0.88 cfs @ 12.15 hrs, Volume= 0.090 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-6: Analysis Point 6

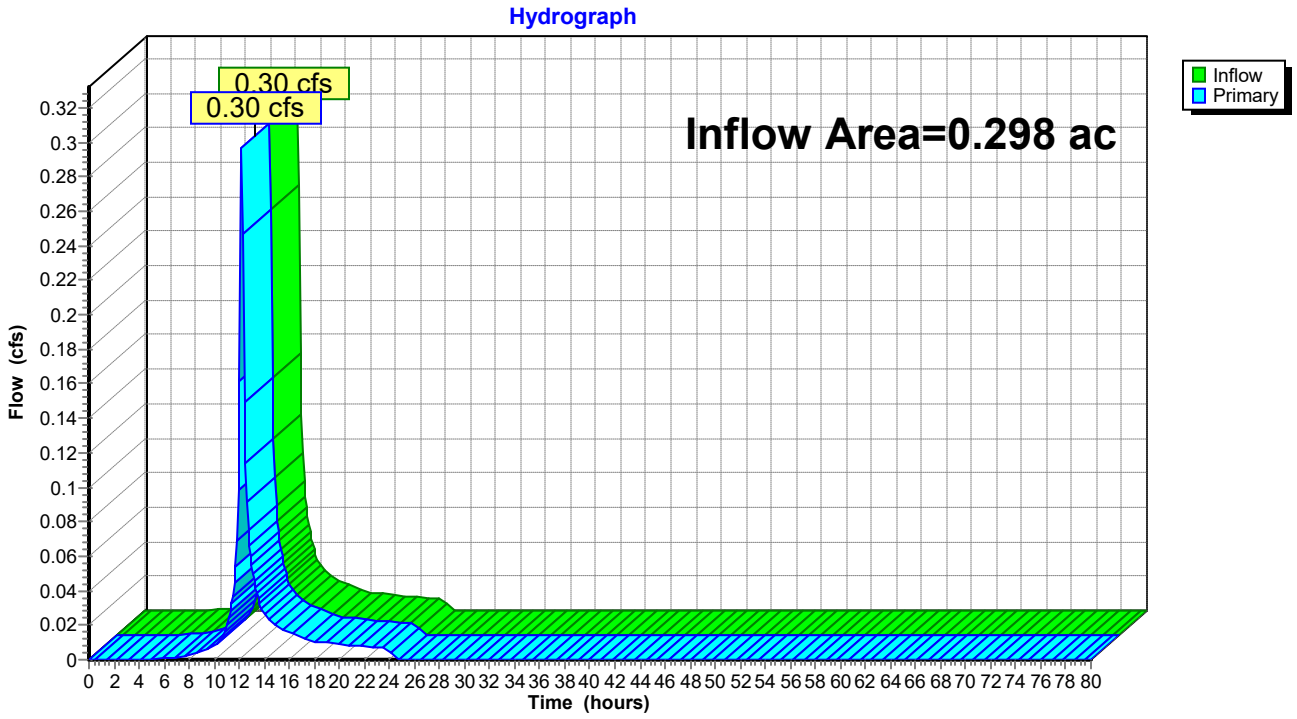


Summary for Link AP-7: Analysis Point 7

Inflow Area = 0.298 ac, 67.45% Impervious, Inflow Depth = 1.25" for 1-RPv event
Inflow = 0.30 cfs @ 12.15 hrs, Volume= 0.031 af
Primary = 0.30 cfs @ 12.15 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-7: Analysis Point 7

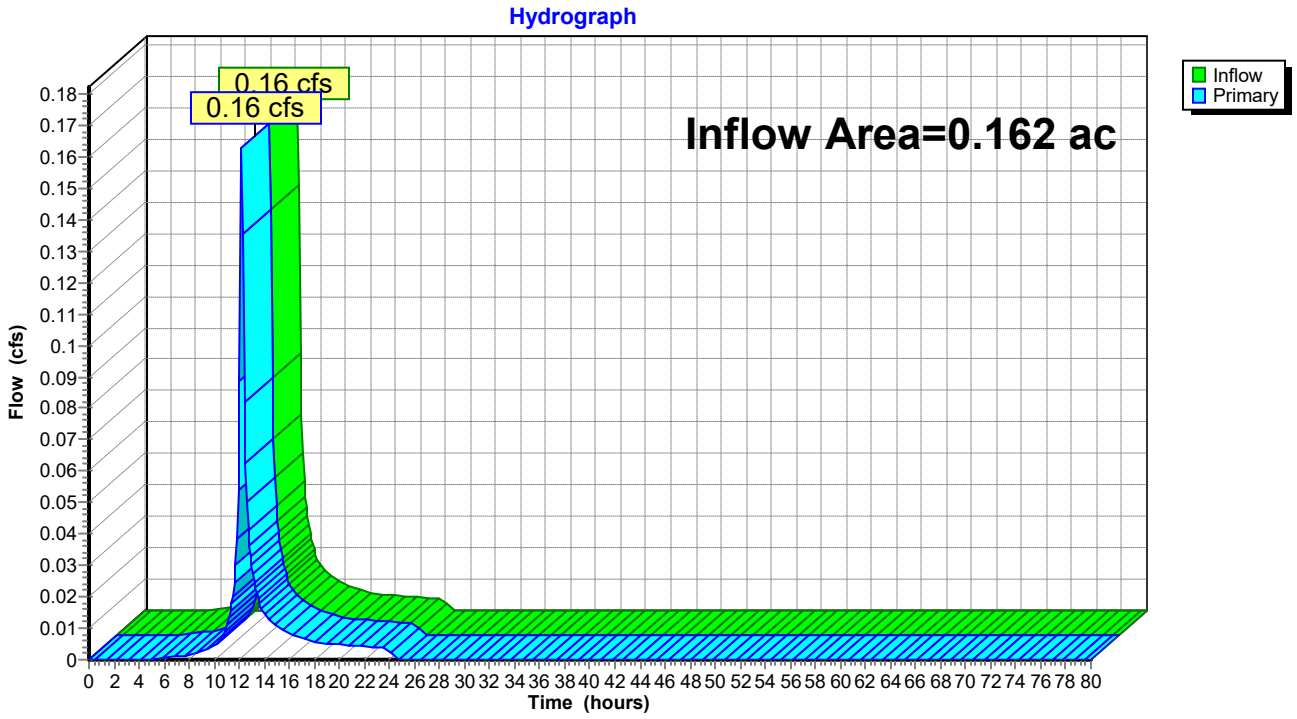


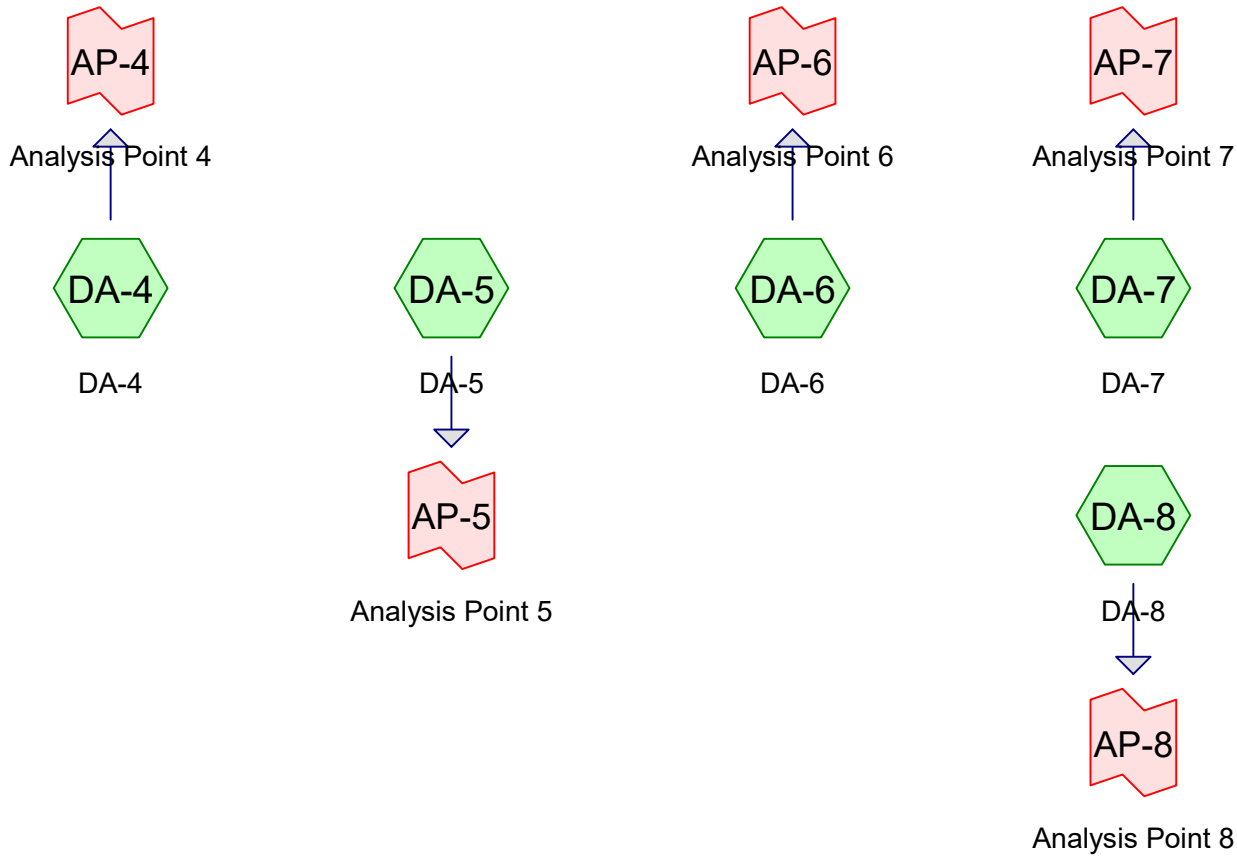
Summary for Link AP-8: Analysis Point 8

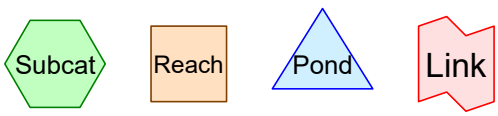
Inflow Area = 0.162 ac, 67.90% Impervious, Inflow Depth = 1.26" for 1-RPv event
Inflow = 0.16 cfs @ 12.15 hrs, Volume= 0.017 af
Primary = 0.16 cfs @ 12.15 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-8: Analysis Point 8







Routing Diagram for 202223500-POST-EVOC
Prepared by Becker Morgan Group, Inc, Printed 5/8/2026
HydroCAD® 10.20-8a s/n 01093 © 2025 HydroCAD Software Solutions LLC

Summary for Subcatchment DA-4: DA-4

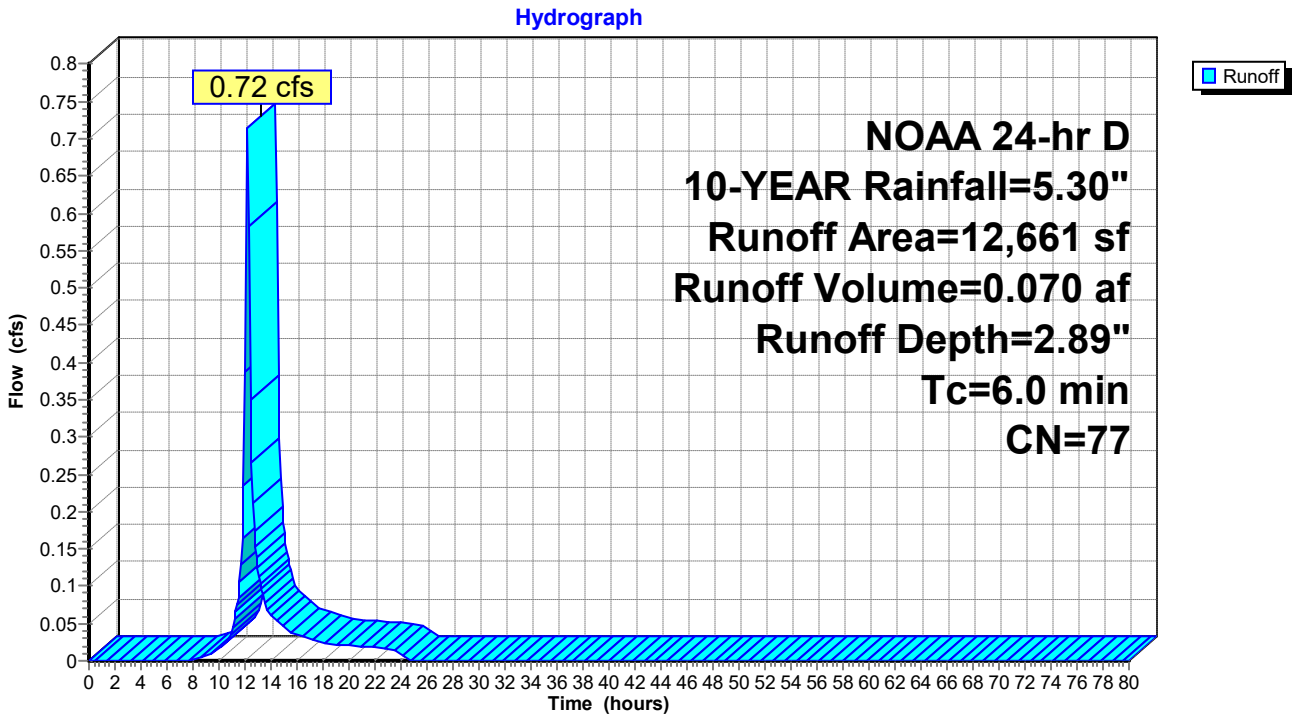
Runoff = 0.72 cfs @ 12.15 hrs, Volume= 0.070 af, Depth= 2.89"
Routed to Link AP-4 : Analysis Point 4

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (sf)	CN	Description
8,192	98	Paved parking, HSG A
4,469	39	>75% Grass cover, Good, HSG A
12,661	77	Weighted Average
4,469		35.30% Pervious Area
8,192		64.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-4: DA-4



Summary for Subcatchment DA-5: DA-5

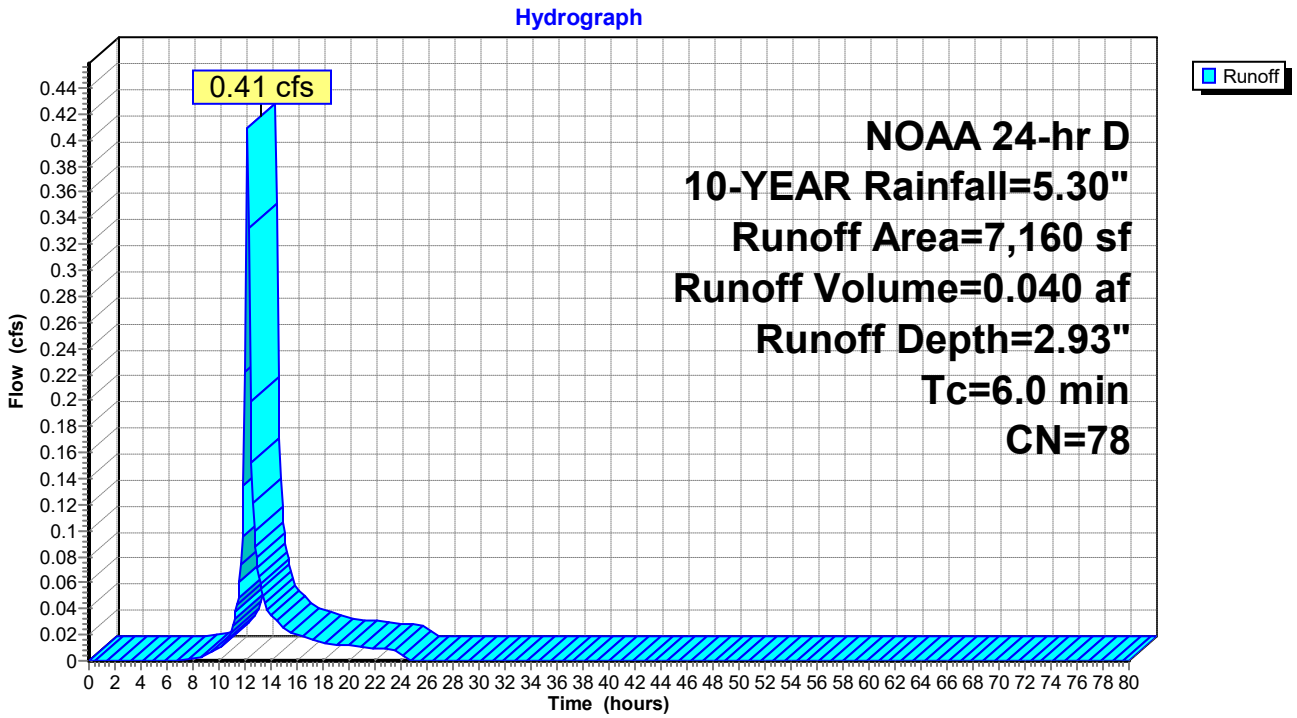
Runoff = 0.41 cfs @ 12.15 hrs, Volume= 0.040 af, Depth= 2.93"
Routed to Link AP-5 : Analysis Point 5

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (sf)	CN	Description
4,683	98	Paved parking, HSG A
2,477	39	>75% Grass cover, Good, HSG A
7,160	78	Weighted Average
2,477		34.59% Pervious Area
4,683		65.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-5: DA-5



Summary for Subcatchment DA-6: DA-6

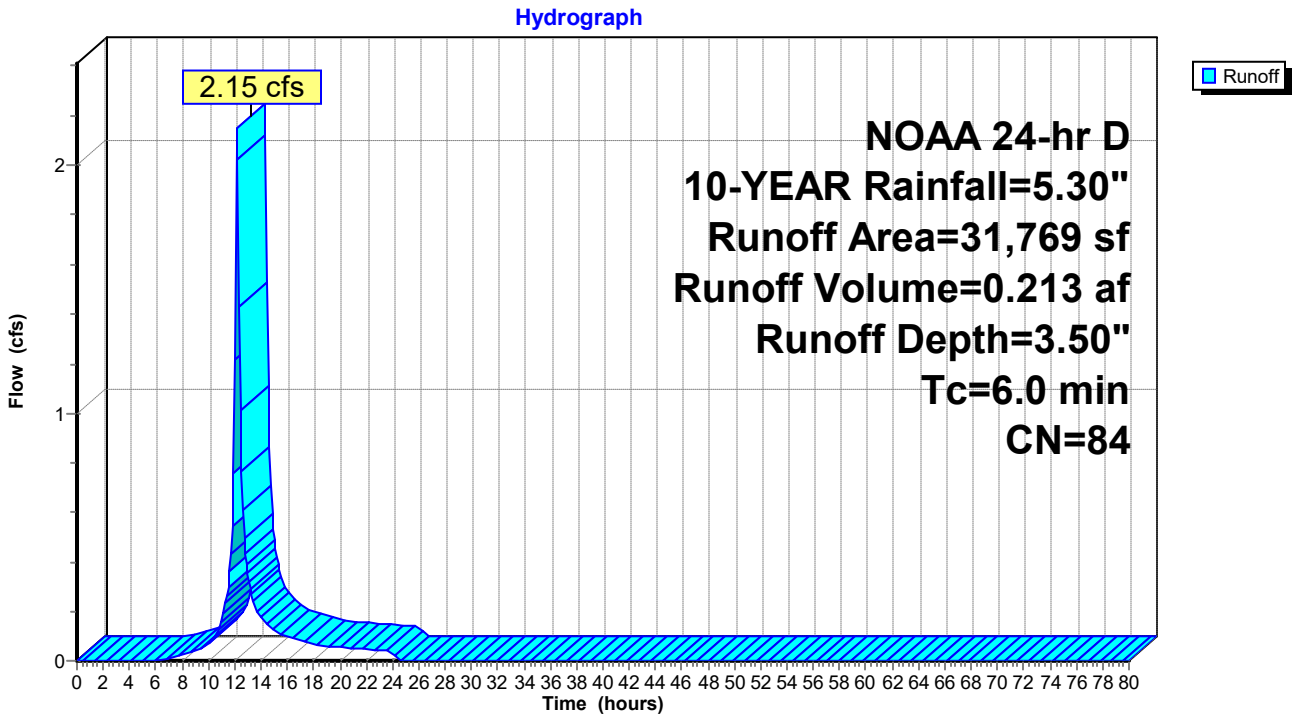
Runoff = 2.15 cfs @ 12.15 hrs, Volume= 0.213 af, Depth= 3.50"
Routed to Link AP-6 : Analysis Point 6

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (sf)	CN	Description
23,985	98	Paved parking, HSG A
7,784	39	>75% Grass cover, Good, HSG A
31,769	84	Weighted Average
7,784		24.50% Pervious Area
23,985		75.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-6: DA-6



Summary for Subcatchment DA-7: DA-7

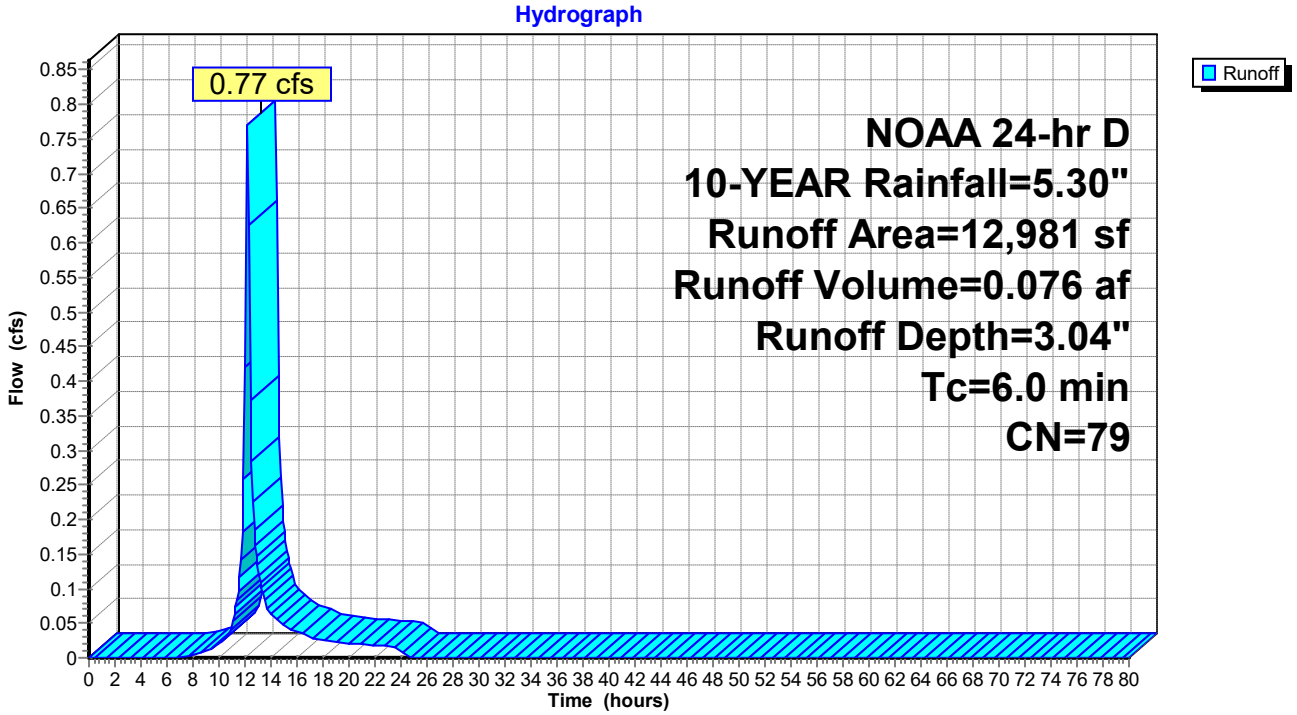
Runoff = 0.77 cfs @ 12.15 hrs, Volume= 0.076 af, Depth= 3.04"
Routed to Link AP-7 : Analysis Point 7

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (sf)	CN	Description
8,756	98	Paved parking, HSG A
4,225	39	>75% Grass cover, Good, HSG A
12,981	79	Weighted Average
4,225		32.55% Pervious Area
8,756		67.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-7: DA-7



Summary for Subcatchment DA-8: DA-8

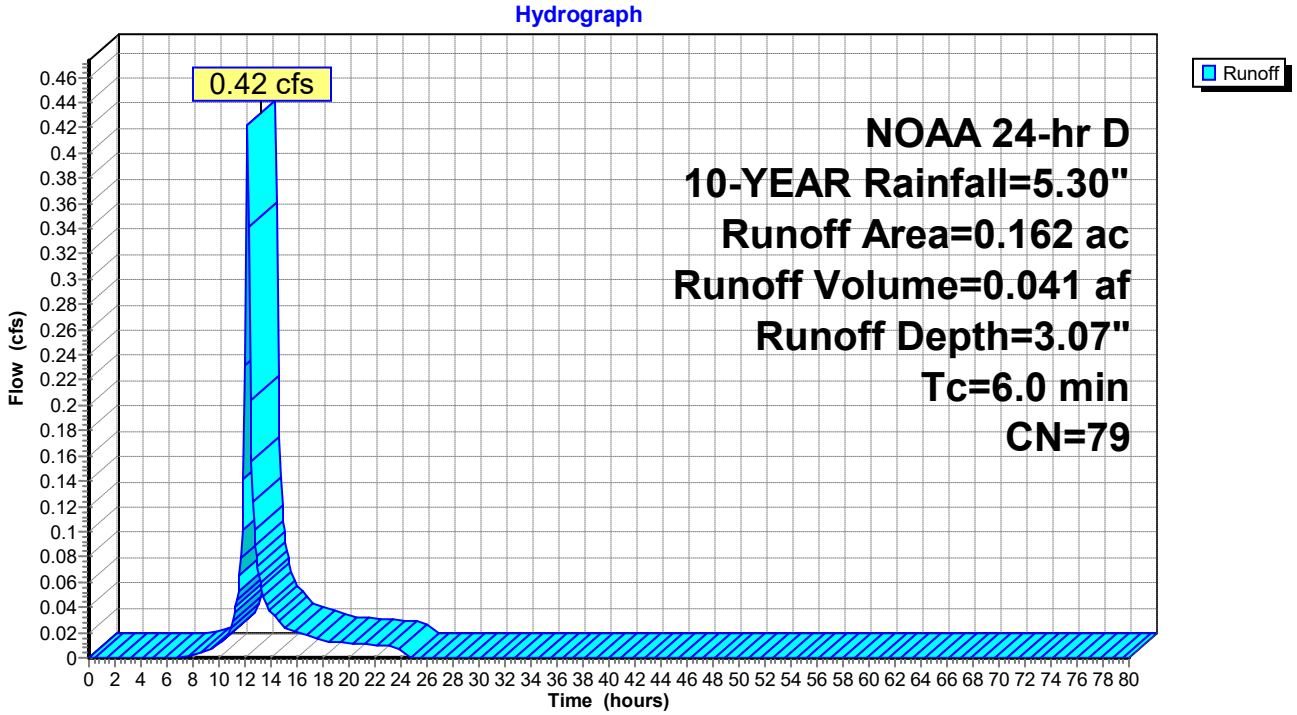
Runoff = 0.42 cfs @ 12.15 hrs, Volume= 0.041 af, Depth= 3.07"
Routed to Link AP-8 : Analysis Point 8

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 10-YEAR Rainfall=5.30"

Area (ac)	CN	Description
0.110	98	Paved parking, HSG A
0.052	39	>75% Grass cover, Good, HSG A
0.162	79	Weighted Average
0.052		32.10% Pervious Area
0.110		67.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-8: DA-8

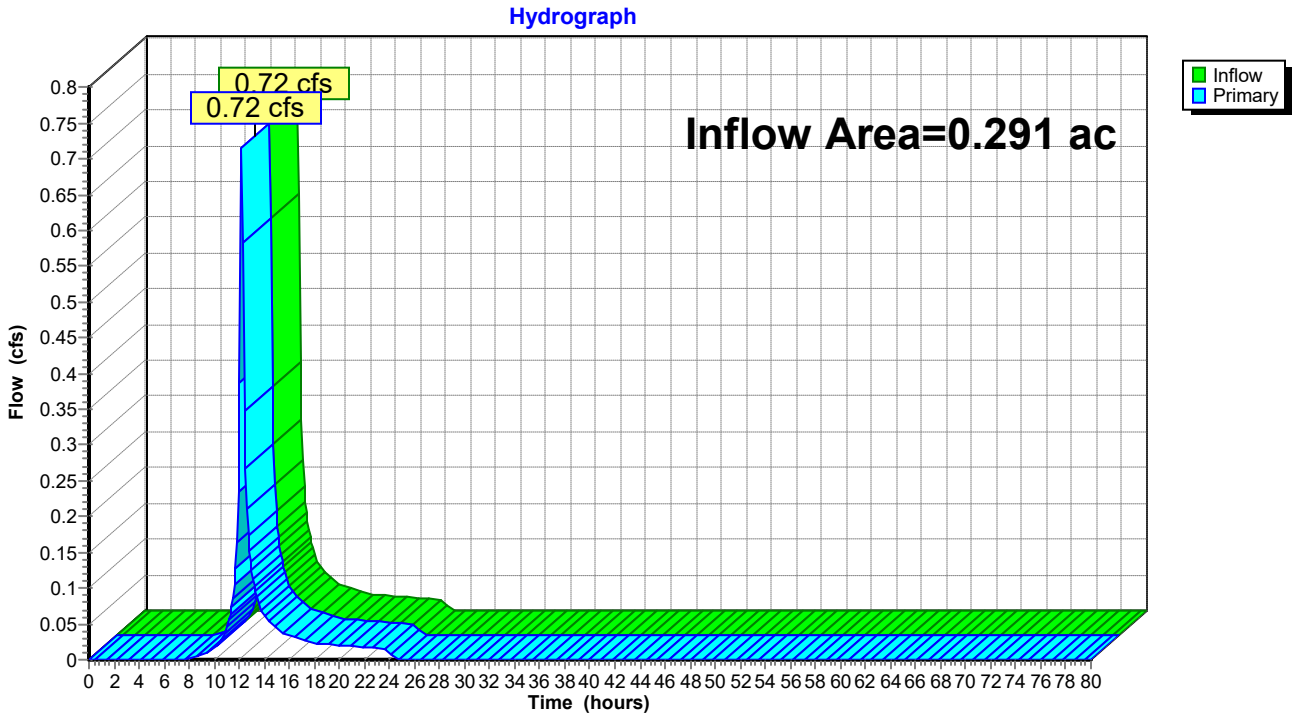


Summary for Link AP-4: Analysis Point 4

Inflow Area = 0.291 ac, 64.70% Impervious, Inflow Depth = 2.89" for 10-YEAR event
Inflow = 0.72 cfs @ 12.15 hrs, Volume= 0.070 af
Primary = 0.72 cfs @ 12.15 hrs, Volume= 0.070 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-4: Analysis Point 4

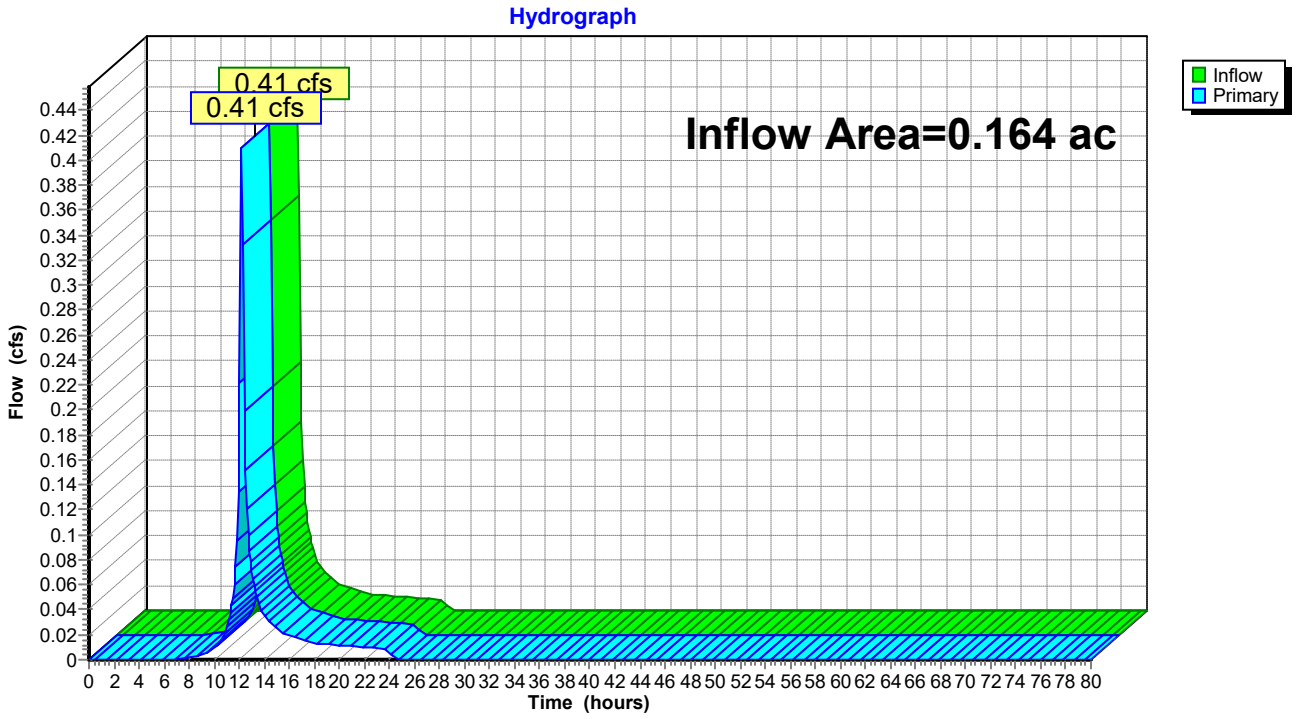


Summary for Link AP-5: Analysis Point 5

Inflow Area = 0.164 ac, 65.41% Impervious, Inflow Depth = 2.93" for 10-YEAR event
Inflow = 0.41 cfs @ 12.15 hrs, Volume= 0.040 af
Primary = 0.41 cfs @ 12.15 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-5: Analysis Point 5

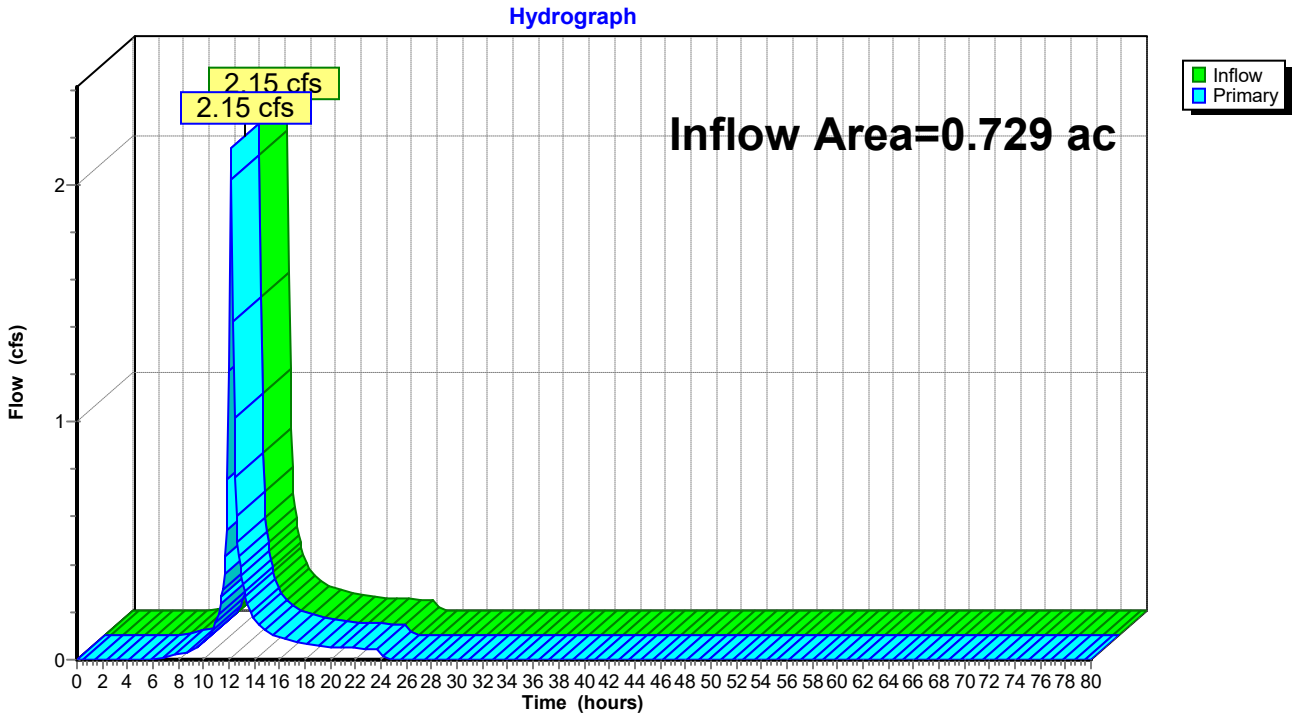


Summary for Link AP-6: Analysis Point 6

Inflow Area = 0.729 ac, 75.50% Impervious, Inflow Depth = 3.50" for 10-YEAR event
Inflow = 2.15 cfs @ 12.15 hrs, Volume= 0.213 af
Primary = 2.15 cfs @ 12.15 hrs, Volume= 0.213 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-6: Analysis Point 6

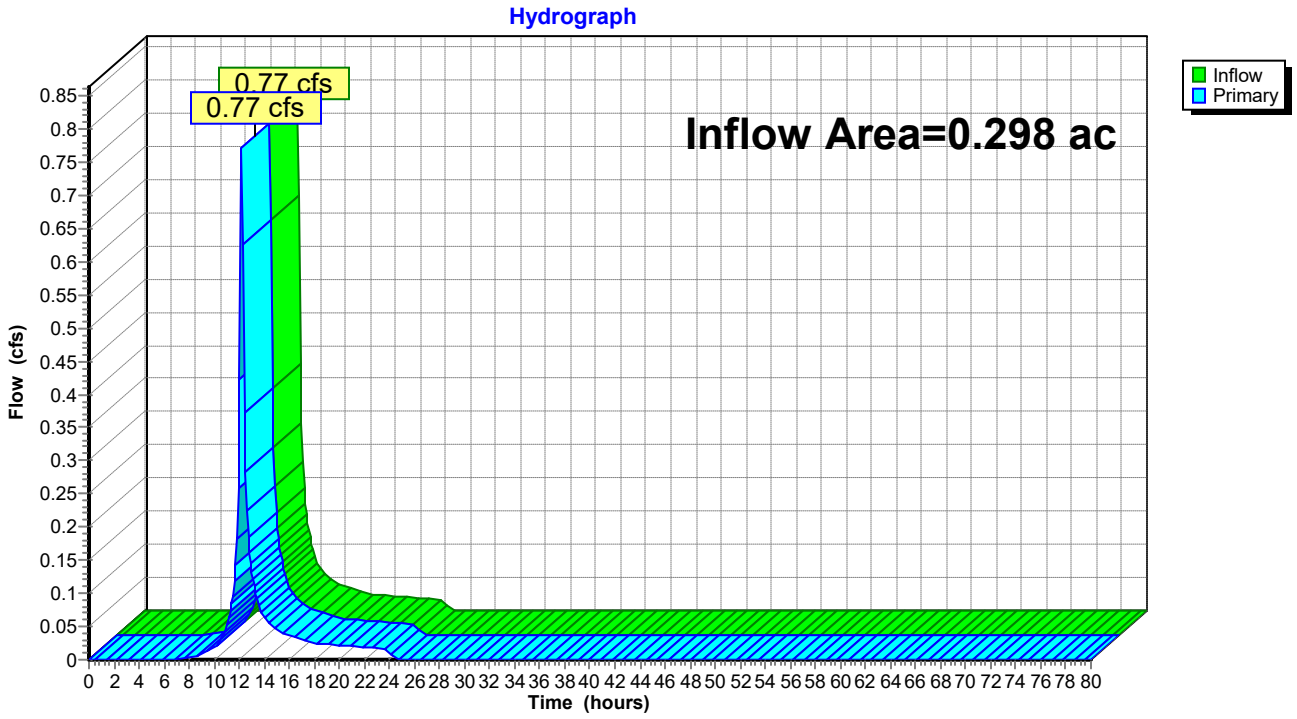


Summary for Link AP-7: Analysis Point 7

Inflow Area = 0.298 ac, 67.45% Impervious, Inflow Depth = 3.04" for 10-YEAR event
Inflow = 0.77 cfs @ 12.15 hrs, Volume= 0.076 af
Primary = 0.77 cfs @ 12.15 hrs, Volume= 0.076 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-7: Analysis Point 7

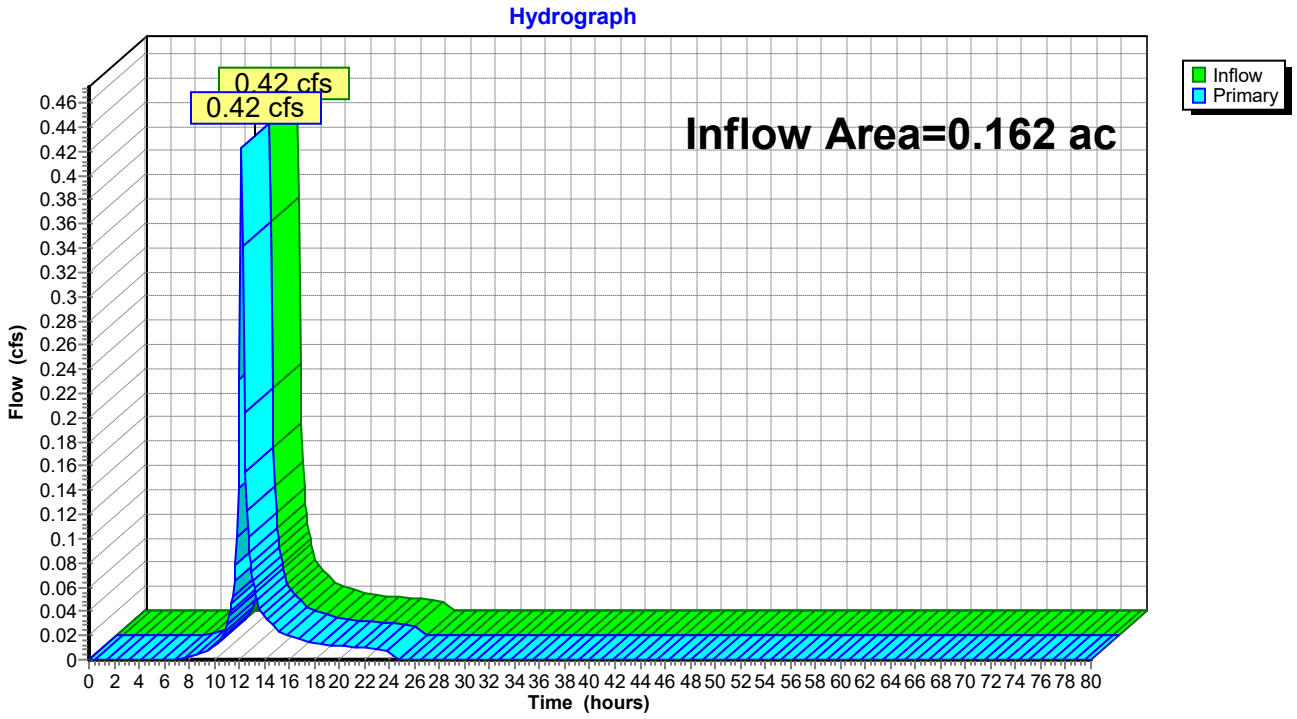


Summary for Link AP-8: Analysis Point 8

Inflow Area = 0.162 ac, 67.90% Impervious, Inflow Depth = 3.07" for 10-YEAR event
Inflow = 0.42 cfs @ 12.15 hrs, Volume= 0.041 af
Primary = 0.42 cfs @ 12.15 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-8: Analysis Point 8



Summary for Subcatchment DA-4: DA-4

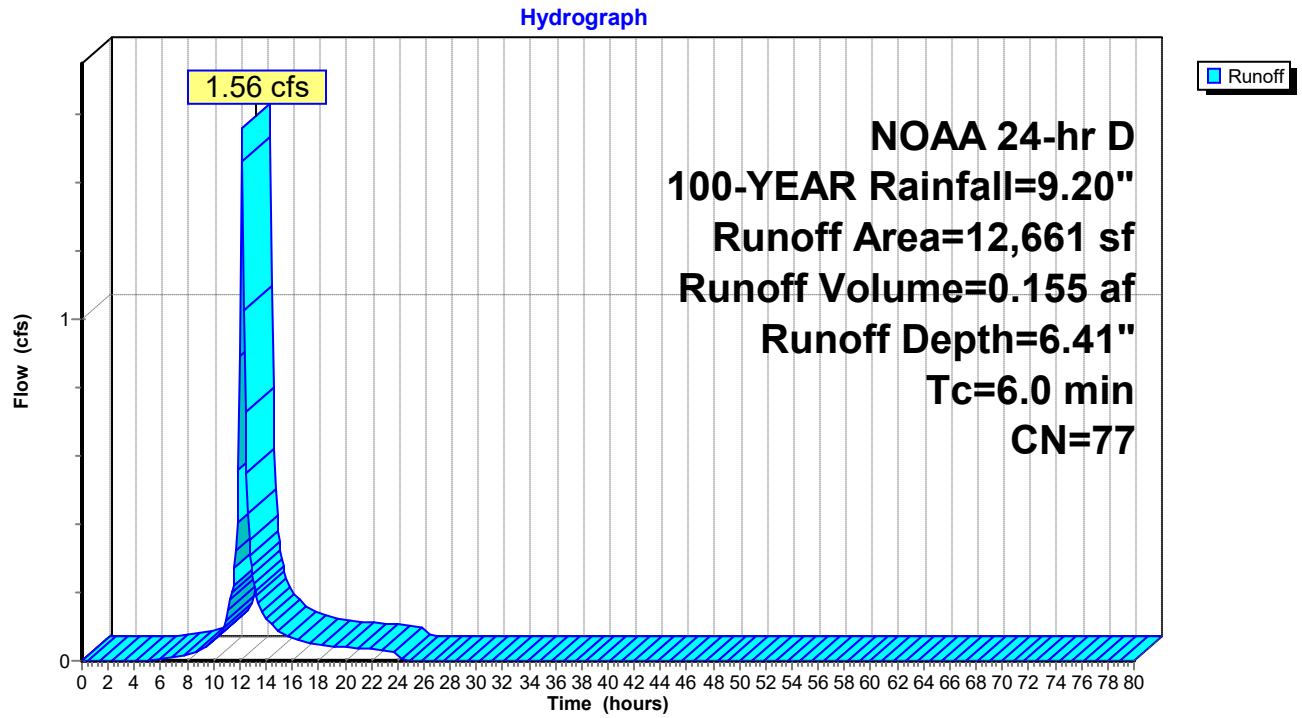
Runoff = 1.56 cfs @ 12.14 hrs, Volume= 0.155 af, Depth= 6.41"
Routed to Link AP-4 : Analysis Point 4

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (sf)	CN	Description
8,192	98	Paved parking, HSG A
4,469	39	>75% Grass cover, Good, HSG A
12,661	77	Weighted Average
4,469		35.30% Pervious Area
8,192		64.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-4: DA-4



Summary for Subcatchment DA-5: DA-5

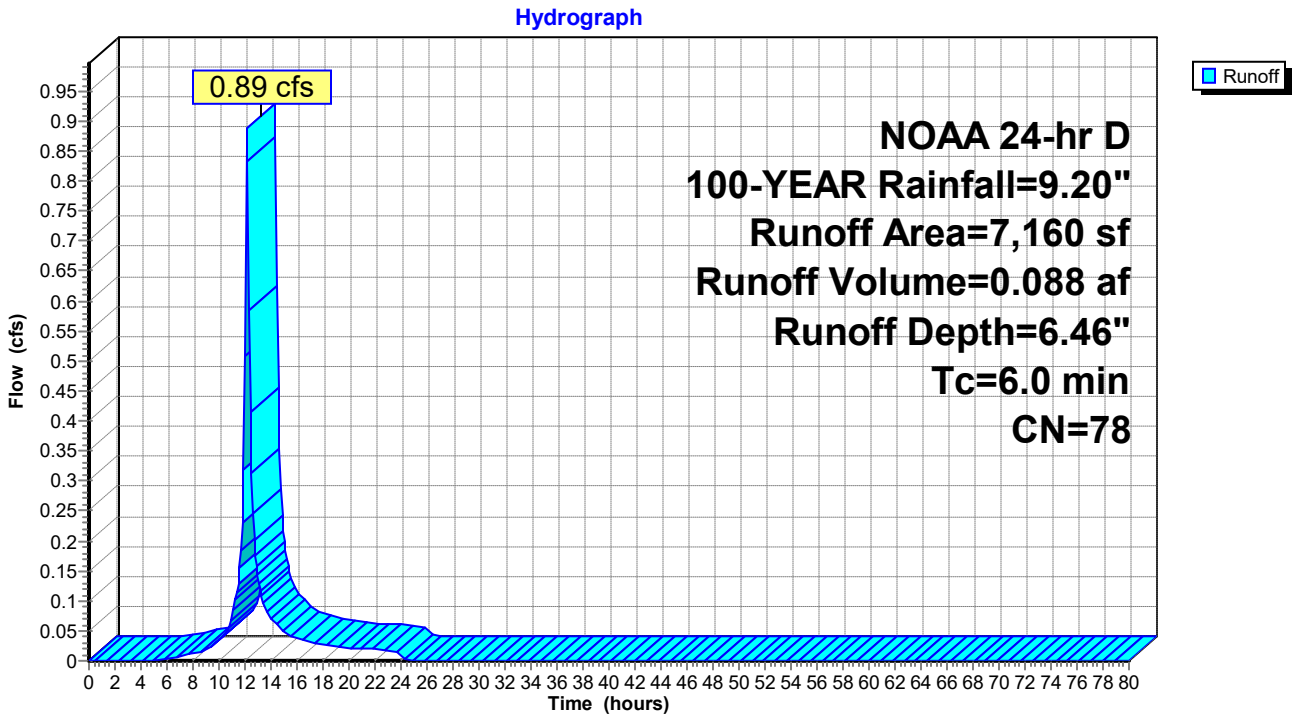
Runoff = 0.89 cfs @ 12.14 hrs, Volume= 0.088 af, Depth= 6.46"
Routed to Link AP-5 : Analysis Point 5

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (sf)	CN	Description
4,683	98	Paved parking, HSG A
2,477	39	>75% Grass cover, Good, HSG A
7,160	78	Weighted Average
2,477		34.59% Pervious Area
4,683		65.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-5: DA-5



Summary for Subcatchment DA-6: DA-6

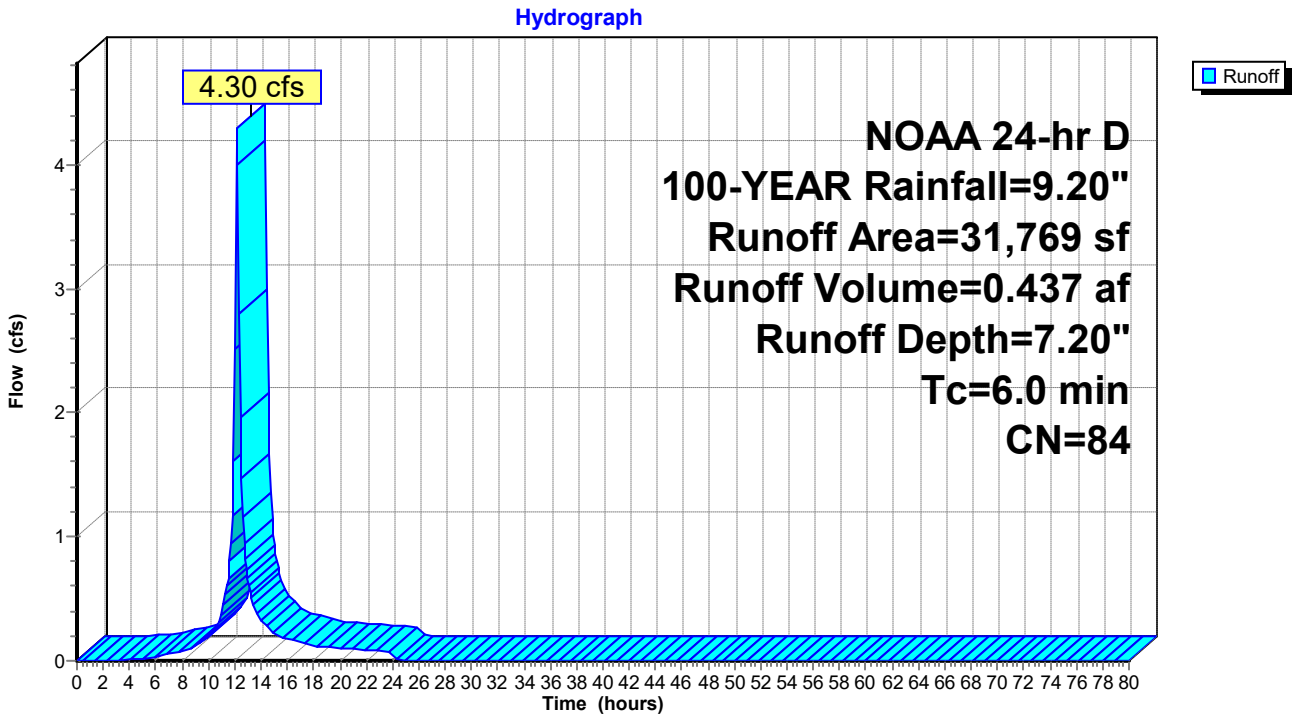
Runoff = 4.30 cfs @ 12.14 hrs, Volume= 0.437 af, Depth= 7.20"
Routed to Link AP-6 : Analysis Point 6

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (sf)	CN	Description
23,985	98	Paved parking, HSG A
7,784	39	>75% Grass cover, Good, HSG A
31,769	84	Weighted Average
7,784		24.50% Pervious Area
23,985		75.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-6: DA-6



Summary for Subcatchment DA-7: DA-7

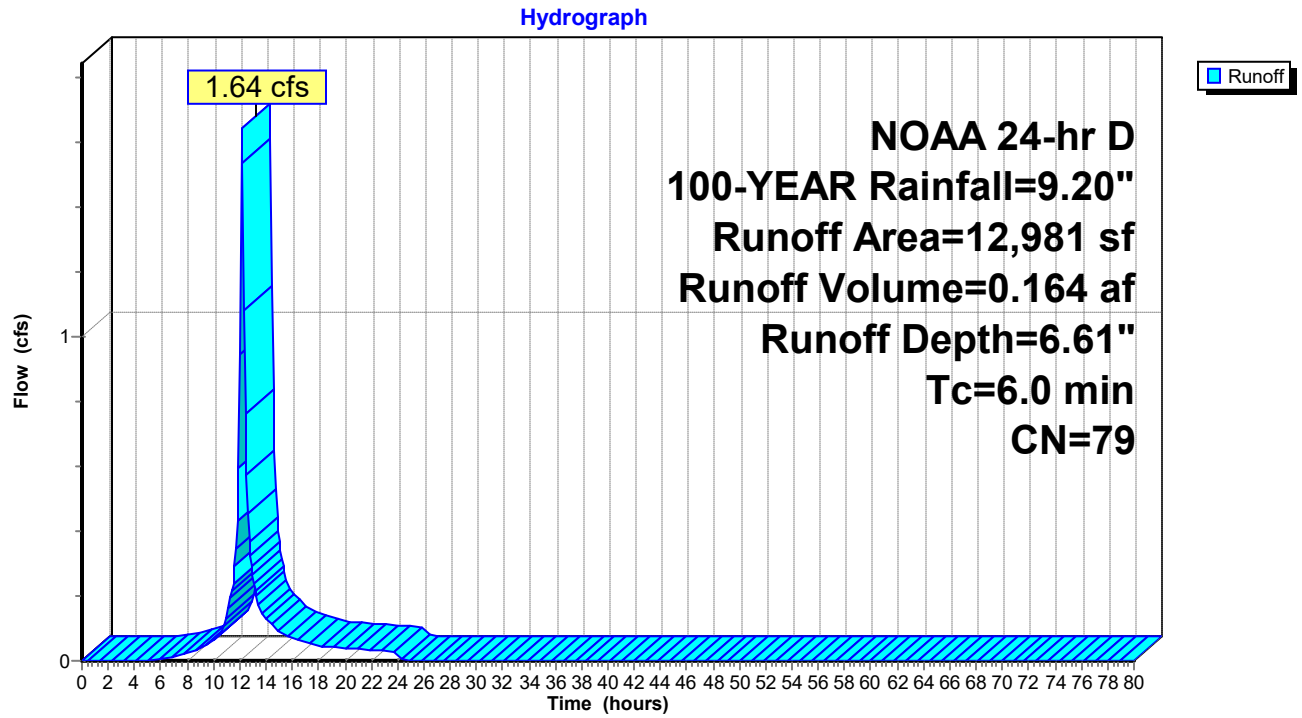
Runoff = 1.64 cfs @ 12.14 hrs, Volume= 0.164 af, Depth= 6.61"
Routed to Link AP-7 : Analysis Point 7

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (sf)	CN	Description
8,756	98	Paved parking, HSG A
4,225	39	>75% Grass cover, Good, HSG A
12,981	79	Weighted Average
4,225		32.55% Pervious Area
8,756		67.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-7: DA-7



Summary for Subcatchment DA-8: DA-8

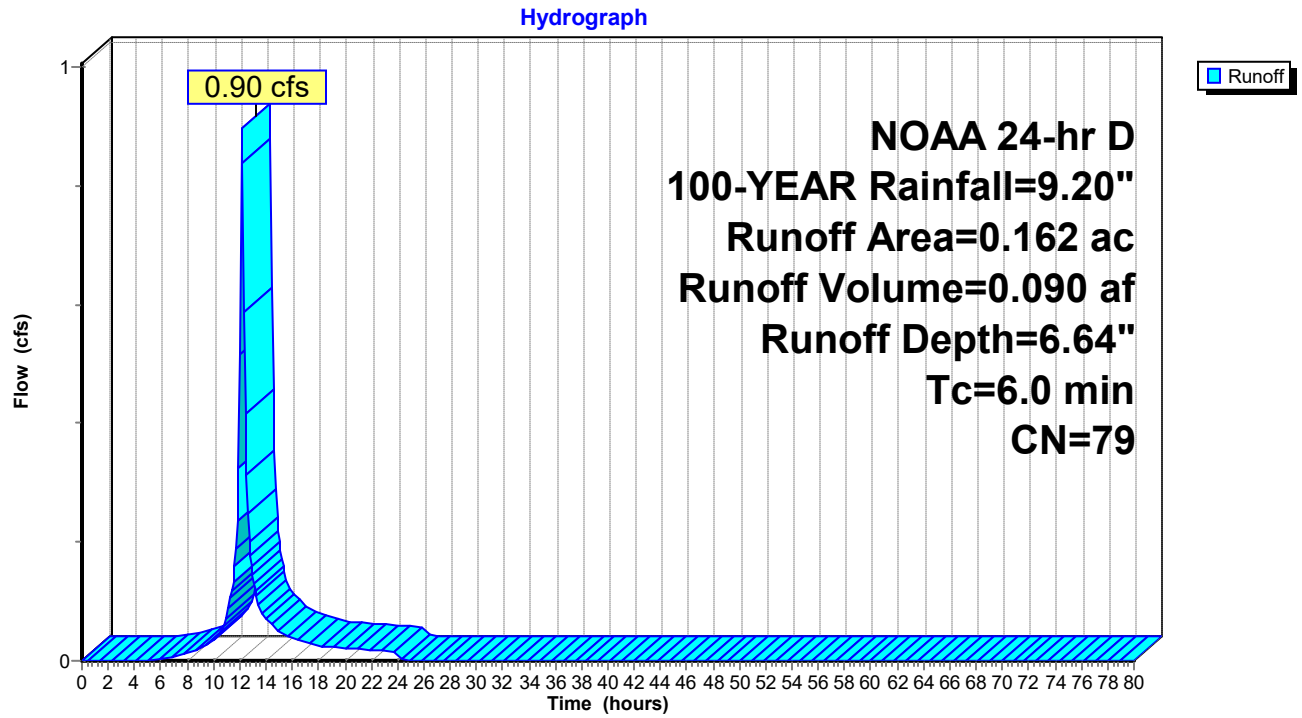
Runoff = 0.90 cfs @ 12.14 hrs, Volume= 0.090 af, Depth= 6.64"
Routed to Link AP-8 : Analysis Point 8

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs
NOAA 24-hr D 100-YEAR Rainfall=9.20"

Area (ac)	CN	Description
0.110	98	Paved parking, HSG A
0.052	39	>75% Grass cover, Good, HSG A
0.162	79	Weighted Average
0.052		32.10% Pervious Area
0.110		67.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment DA-8: DA-8

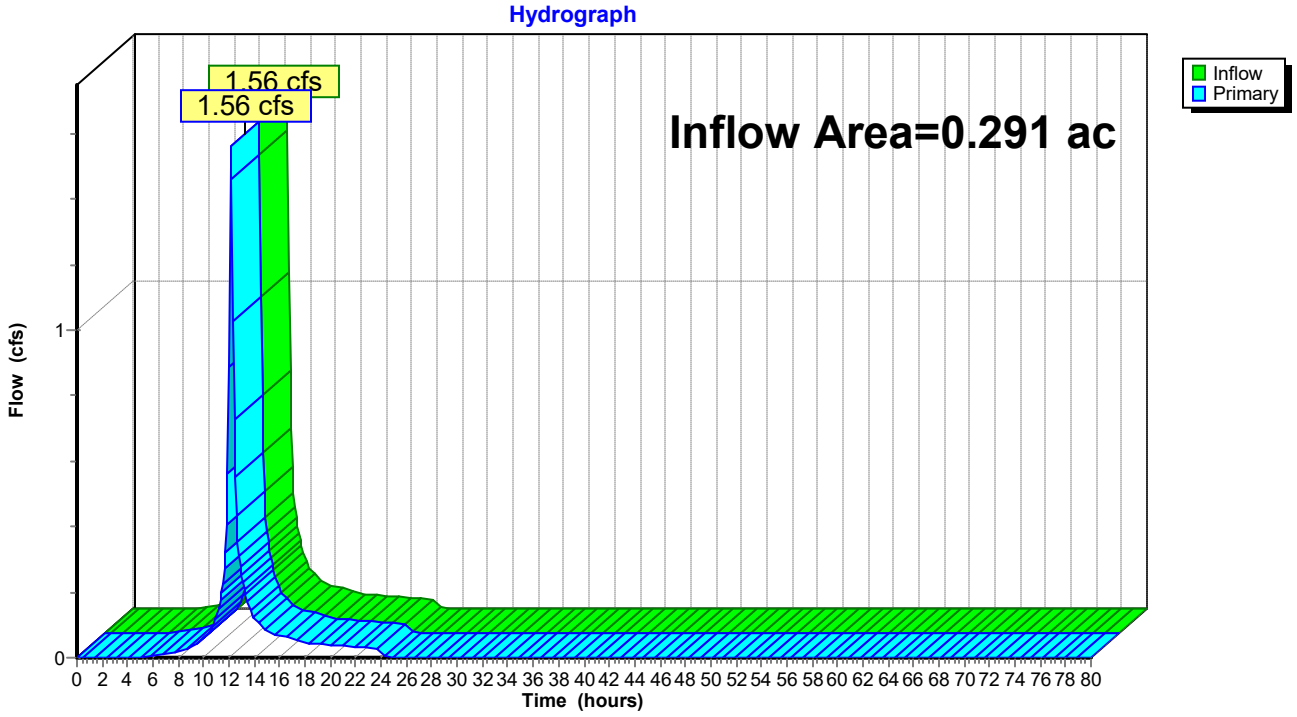


Summary for Link AP-4: Analysis Point 4

Inflow Area = 0.291 ac, 64.70% Impervious, Inflow Depth = 6.41" for 100-YEAR event
Inflow = 1.56 cfs @ 12.14 hrs, Volume= 0.155 af
Primary = 1.56 cfs @ 12.14 hrs, Volume= 0.155 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-4: Analysis Point 4

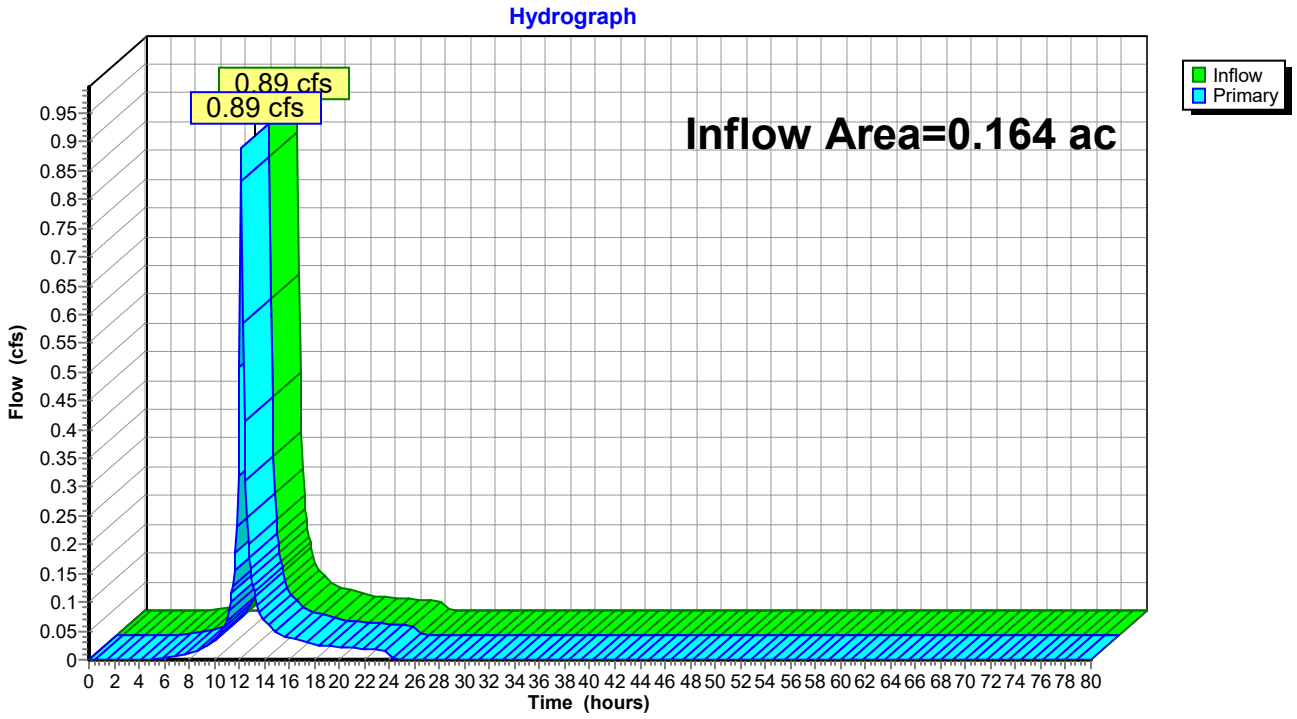


Summary for Link AP-5: Analysis Point 5

Inflow Area = 0.164 ac, 65.41% Impervious, Inflow Depth = 6.46" for 100-YEAR event
Inflow = 0.89 cfs @ 12.14 hrs, Volume= 0.088 af
Primary = 0.89 cfs @ 12.14 hrs, Volume= 0.088 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-5: Analysis Point 5

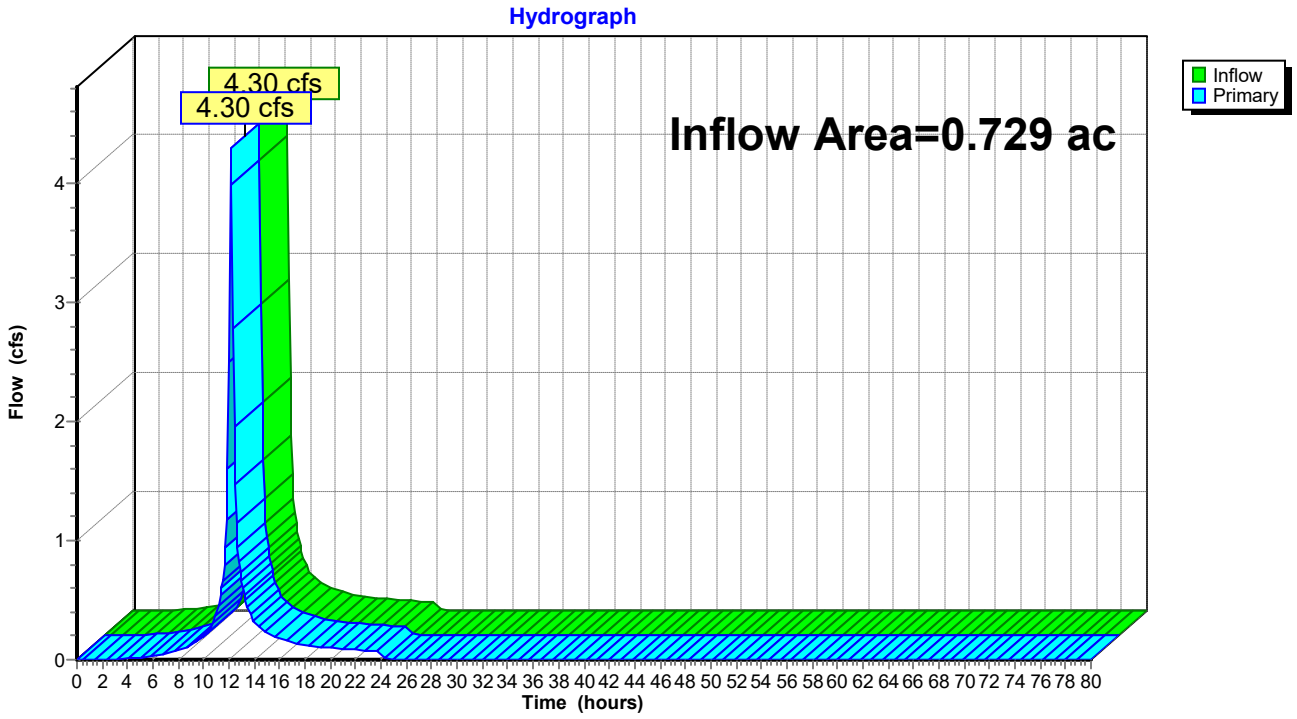


Summary for Link AP-6: Analysis Point 6

Inflow Area = 0.729 ac, 75.50% Impervious, Inflow Depth = 7.20" for 100-YEAR event
Inflow = 4.30 cfs @ 12.14 hrs, Volume= 0.437 af
Primary = 4.30 cfs @ 12.14 hrs, Volume= 0.437 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-6: Analysis Point 6

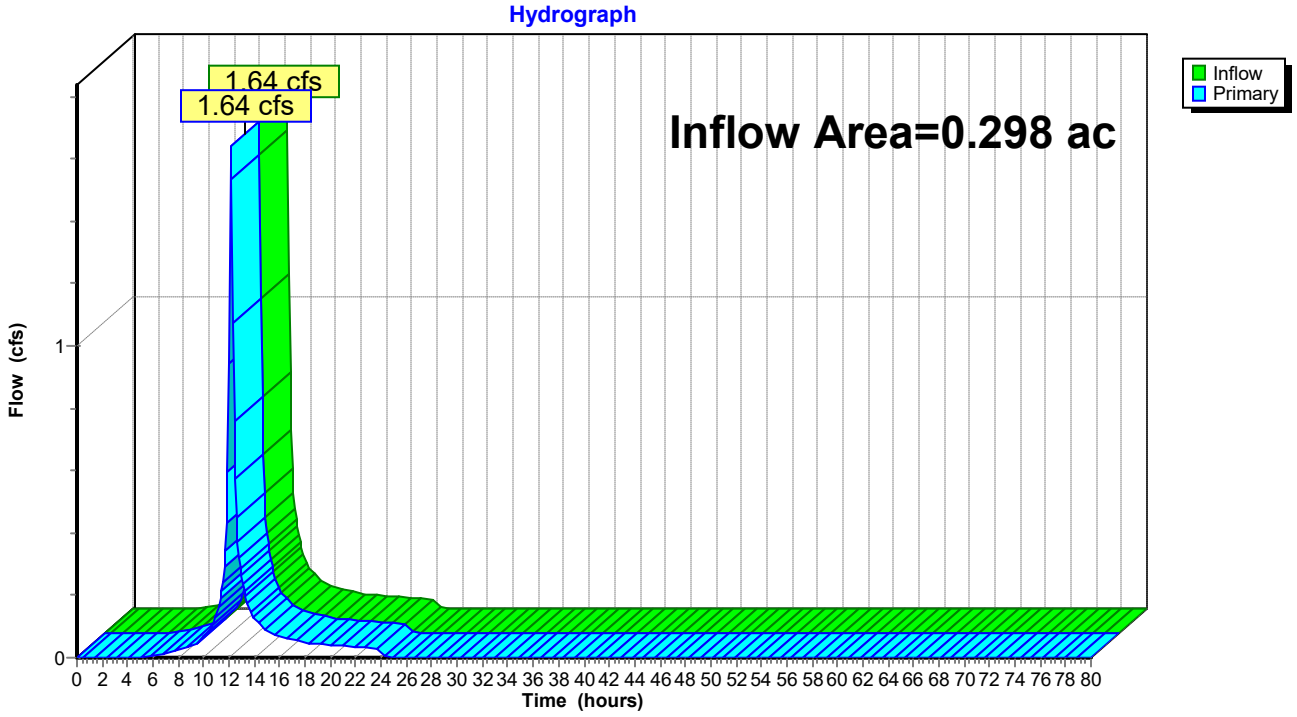


Summary for Link AP-7: Analysis Point 7

Inflow Area = 0.298 ac, 67.45% Impervious, Inflow Depth = 6.61" for 100-YEAR event
Inflow = 1.64 cfs @ 12.14 hrs, Volume= 0.164 af
Primary = 1.64 cfs @ 12.14 hrs, Volume= 0.164 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

Link AP-7: Analysis Point 7

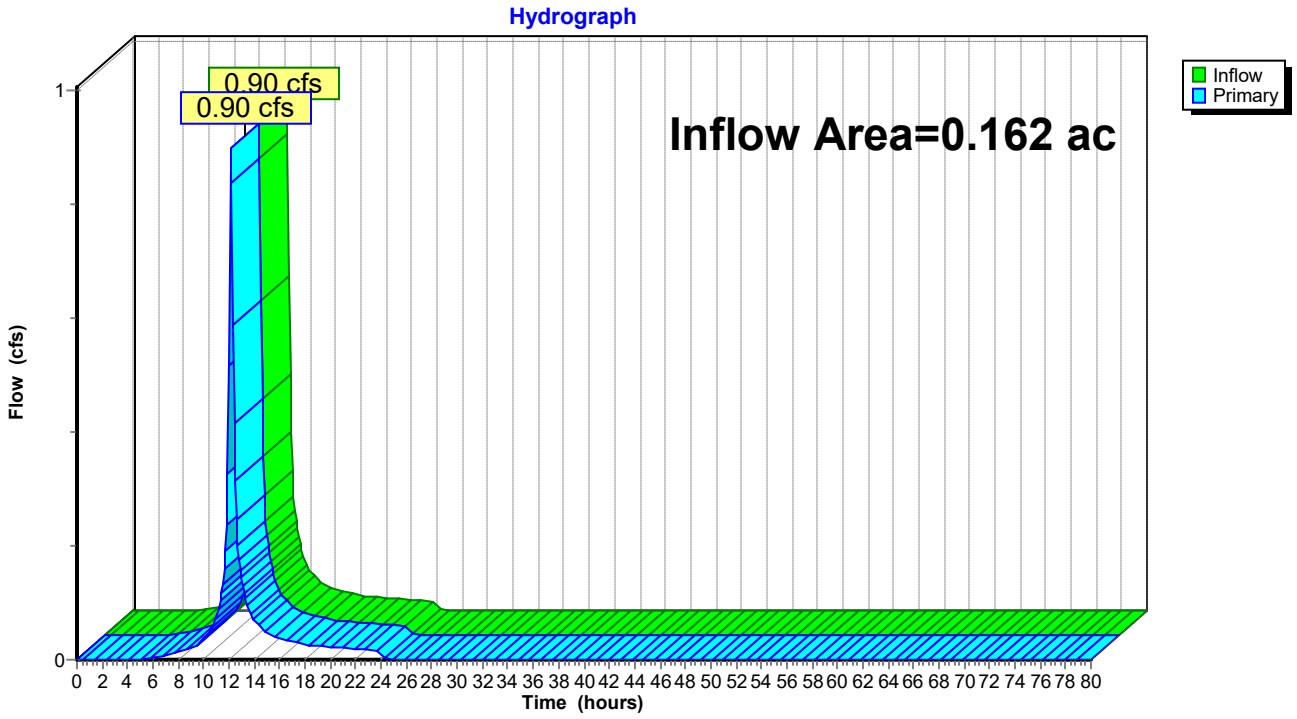


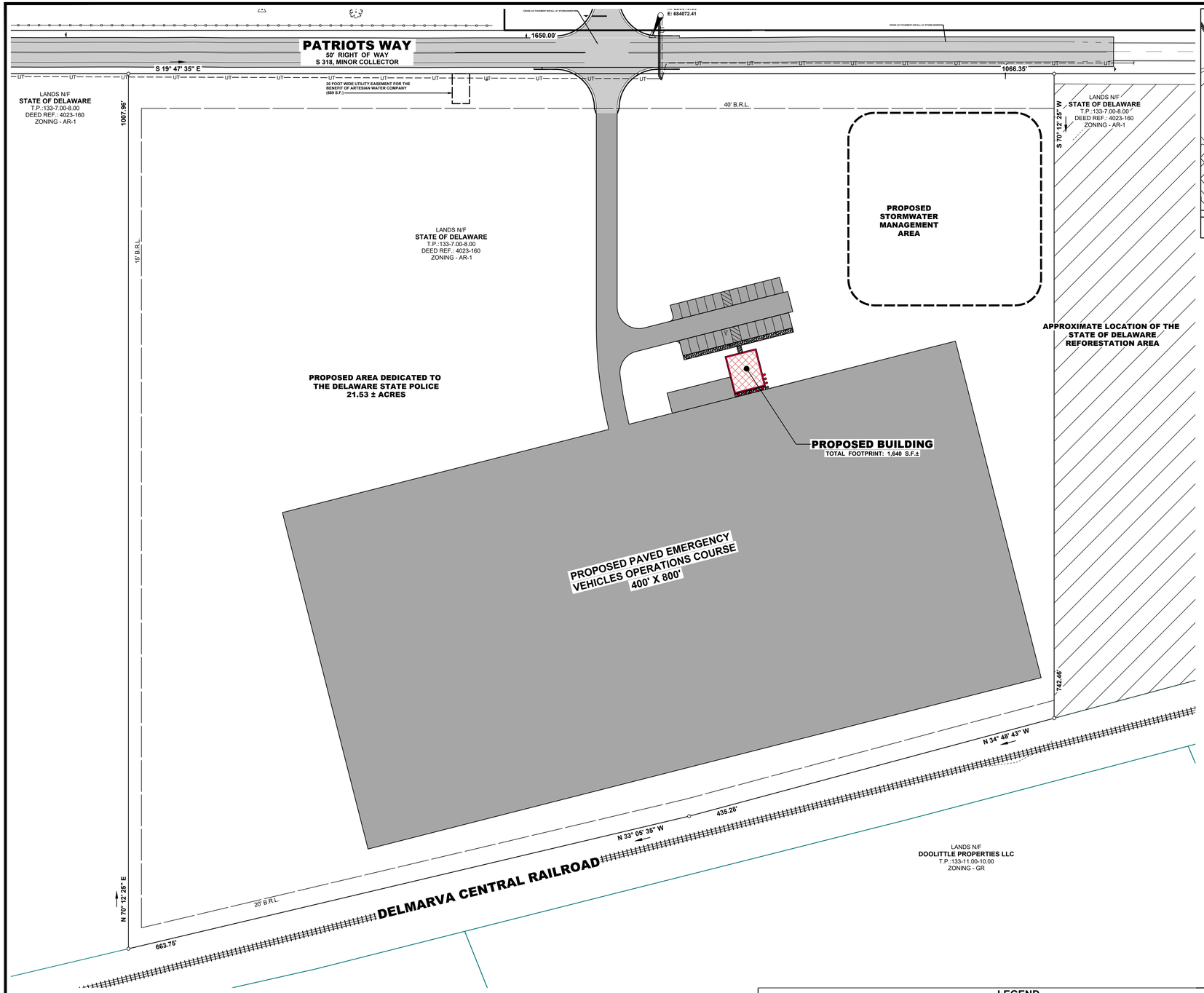
Summary for Link AP-8: Analysis Point 8

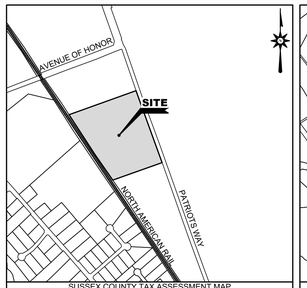
Inflow Area = 0.162 ac, 67.90% Impervious, Inflow Depth = 6.64" for 100-YEAR event
Inflow = 0.90 cfs @ 12.14 hrs, Volume= 0.090 af
Primary = 0.90 cfs @ 12.14 hrs, Volume= 0.090 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-80.00 hrs, dt= 0.10 hrs

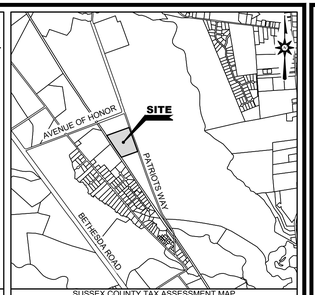
Link AP-8: Analysis Point 8







LOCATION MAP SCALE: 1" = 1000'



VICINITY MAP SCALE: 1" = 3000'

SHEET INDEX

C-001	COVER SHEET
C-101	EXISTING CONDITIONS & DEMOLITION PLAN
C-201	SITE PLAN, UTILITY PLAN, & GRADING PLAN
C-202	SITE PLAN, UTILITY PLAN, & GRADING PLAN
C-500	COVER SHEET AND GENERAL NOTES
C-501 - C-502	PRE - CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-503 - C-504	CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-505 - C-506	POST - CONSTRUCTION STORMWATER MANAGEMENT PLAN B.M.P.
C-507 - C-510	CONSTRUCTION SITE DETAILS AND NOTES
C-701	WATER MAIN PROFILE
C-901	CONSTRUCTION DETAILS
C-902	WATER MAIN PROFILE
L-101	LANDSCAPE PLAN

SITE DATA

1.	OWNER OF RECORD:	STATE OF DELAWARE C/O JENNIFER COVERDALE PO BOX 778 DOVER, DE 19903 (302) 744-1166
2.	PROPERTY ADDRESS	PATRIOTS WAY GEORGETOWN, DE 19947
3.	ENGINEER / SURVEYOR:	BECKER MORGAN GROUP INC. 309 SOUTH GOVERNORS AVE. DOVER, DELAWARE 19904 302-734-7950
4.	PROPERTY MAP NUMBER:	133-7.00-8.00
5.	ZONING CLASSIFICATION:	EXISTING: AR-1 AGRICULTURAL RESIDENTIAL / (SUSSEX COUNTY) PROPOSED: AR-1 AGRICULTURAL RESIDENTIAL / (SUSSEX COUNTY)
6.	DEED SUMMARY:	DEED BOOK: 4023 PAGE: 160
7.	BUILDING TYPE:	TYPE V
8.	PLAT REFERENCE:	-
9.	PRESENT USE:	OPEN LOT / FARMLAND
10.	PROPOSED USE:	EMERGENCY VEHICLE OPERATOR COURSE (E.V.O.C.)
11.	TOTAL SITE AREA:	21.53 ACRES
12.	IMPERVIOUS COVERAGE:	EXISTING: 0 S.F. (0.0 A.C.) (0.00%) PROPOSED: 348.969 S.F. (8.01 A.C.) (37.20%) (WITHIN C/U AREA)
13.	PARKING CALCULATIONS:	OFFICE: 1 SPACE PER 200 S.F. OF FLOOR AREA FLOOR SPACE PROVIDED: 840 S.F. PARKING SPACES REQUIRED: 5 PARKING SPACES PROVIDED: 24 ACCESSIBLE PARKING SPACES PROVIDED: 1 LOADING SPACE USE CATEGORY: OFFICE BUILDING THE 5,000 S.F. THRESHOLD IS NOT MET FOR REQUIRING A LOADING SPACE REQUIRED LOADING SPACES: 0
14.	SETBACKS:	FRONT: 40 FT. SIDE: 15 FT. REAR: 20 FT.
15.	SIGNAGE	FUTURE PERMIT SUBMISSION
16.	BUILDING HEIGHT:	PERMITTED: 42 FEET PROPOSED: 15 FEET
17.	UTILITIES:	ELECTRIC: DELMARVA POWER WATER: ARTESIAN WATER COMPANY SEWER: SUSSEX COUNTY SEWER
18.	SURVEY DATUM:	NGS MONUMENTS VERTICAL: NAVD 88 - CORS HORIZONTAL: NAD 83 DSP - CORS
19.	PROJECT LOCATION:	LATITUDE: 38.619602 LONGITUDE: -75.316975
20.	DISCHARGE LOCATION:	COW BRIDGE BRANCH
21.	SC. EX. LAND USE MAP:	LOW DENSITY
22.	SC. PR. LAND USE MAP:	LOW DENSITY
23.	NET DEVELOPMENT AREA:	± 13.47 A.C.
24.	CUT / FILL VOLUME:	FILL: 15,389 C.Y.

GENERAL NOTES:

1. THE TOPOGRAPHIC DATA SHOWN HEREON WAS COMPILED FROM A FIELD SURVEY PERFORMED BY BECKER MORGAN GROUP, INC., DOVER, DE., IN JULY OF 2025.
2. SUBJECT AREA WITHIN ZONE "X", AREA OF MINIMAL FLOOD HAZARD, BASED ON FEMA FLOOD MAP 1005C0452K, EFFECTIVE JUNE 6, 2018.
3. BECKER MORGAN GROUP CERTIFIES THAT THERE ARE NO FRESH WATER WETLANDS LOCATED WITHIN THE IMPROVED AREA.
4. ALL ROADS, PARKING AND OTHER PAVED AREAS WILL BE PRIVATELY OWNED AND MAINTAINED AND ARE NOT INTENDED FOR DEDICATION.
5. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
6. ALL HANDICAPPED PARKING DEMARCATION, STALLS, AND BUILDING ACCESSIBLE ROUTES SHALL COMPLY WITH THE "AMERICAN WITH DISABILITIES ACT".
7. THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENT FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
8. BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION HE MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM SUSSEX COUNTY PLANNING, SUSSEX COUNTY ENGINEERING DEPARTMENT, DELAWARE DEPARTMENT OF NATURAL RESOURCES (D.N.R.E.C.), DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT), AND APPROPRIATE STATE AND COUNTY AGENCIES.
9. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO SUSSEX COUNTY ENGINEERING CONSTRUCTION STANDARD AND SPECIFICATIONS AND THE STATE OF DELAWARE CONSTRUCTION STANDARDS AND SPECIFICATIONS.
10. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
11. IT IS HIGHLY RECOMMENDED TO TEST PIT FOR ALL EXISTING UTILITIES PRIOR TO MAJOR EARTHWORK. ESPECIALLY AT POTENTIAL CONFLICT POINTS SUCH AS UTILITY CROSSINGS OR STRUCTURAL LOCATIONS.

OWNERS CERTIFICATION

WE, THE STATE OF DELAWARE, HEREBY CERTIFY THAT WE ARE THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

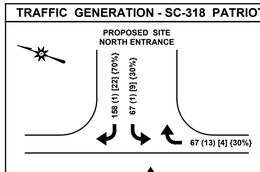
SIGNATURE DATE

ENGINEERS CERTIFICATION

I, JONATHAN D. RICHARD, HEREBY CERTIFY THAT I AM A REGISTERED 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.

JONATHAN D. RICHARD, P.E. P.E. NO. 18832 08/27/2026 DATE

TRAFFIC GENERATION - SC-318 PATRIOTS WAY (SC-00318-F)



TRAFFIC GENERATION DIAGRAM
ADT (A.M. PEAK HOUR) [P.M. PEAK HOUR]

ROAD TRAFFIC DATA

FUNCTIONAL CLASSIFICATION - MINOR COLLECTOR
POSTED SPEED LIMIT: 35 MPH
ROADWAY AADT = 2,038 TRIPS (2024 DELDOT TRAFFIC SUMMARY)
10 YEAR PROJECTED AADT: 1.16 X 2,038 = 2,364TRIPS
TRAFFIC PATTERN GROUP: 7
K FACTOR: 13.5
D FACTOR: 59.1
COMBO-UNIT TRUCK: N/A

SITE TRIPS GENERATED:

SOURCE: SIMILAR FACILITY DSP- TROOP 3
SOURCE: OPERATIONS AT SIMILAR FACILITY
DESIGN VEHICLE - WB-40
48,000 S.F. OF POLICE BARRACKS
15,700 S.F. OF MAINTENANCE FACILITY
2,600 S.F. OF OTHER SUPPORTING INFRASTRUCTURE
TOTAL SITE ADT = 450 ADT (225 ENTER / 225 EXIT)
45 AM PK (43 ENTER / 2 EXIT)
45 PM PK (14 ENTER / 31 EXIT)
DIRECTIONAL DISTRIBUTION:
70% TO AND FROM THE NORTH
30% TO AND FROM THE SOUTH
PEAK HOUR HV: 12.14%

LEGEND

ITEM	EXISTING	PROPOSED
CONCRETE CURB & GUTTER		
CONCRETE SIDEWALK, SLAB / PAVING		
IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT		N/A
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	
WIRE FENCE	x x x	x x x
CHAINLINK FENCE		
STOCKADE FENCE		
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)		
DRAINAGE DITCH OR SWALE		
WETLAND BOUNDARY LINE		N/A
CONTOUR	49	55
ELEVATION SPOT SHOT	43.55	25.15
BENCH MARK		25.50 T.C. 25.00 B.C.
PROPERTY OR RIGHT-OF-WAY LINE		N/A
CENTERLINE		
LIGHT POLE		

ITEM	EXISTING	PROPOSED
SANITARY GRAVITY SEWER LINE (**S**) SIZE & FLOW DIRECTION	EX. 10"S	10" S
SANITARY SEWER FORCE MAIN (**F.M.**) SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
SANITARY SEWER MANHOLE (**S.S.M.H.**)		
SANITARY SEWER CLEANOUT (**C.O.**)		
WATER MAIN & SIZE	EX. 10" W	12" W
FIRE HYDRANT (**F.H.**)	F.H.	F.H.
WATER VALVE (**W.V.**) OR METER (**W.M.**)	W.M. W.V.	W.M. W.V.
STORM DRAIN MANHOLE (**S.D.M.H.**)		
STORM DRAIN LINE (**CMP**, **RCP**, **HDPE**)		
CATCH BASIN (**C.B.**)		
UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (**O.T.**), ELECTRIC (**O.E.**)		
UNDERGROUND ELECTRIC (**U.E.**)	U.E.	U.E.
UNDERGROUND TELEPHONE (**U.T.**)	U.T.	U.T.
UNDERGROUND GAS MAIN (**G**)	EX. 2" G	2" G

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950

The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

COVER SHEET

0 30 60 120

SCALE: 1" = 60'

ISSUE	BLOCK	
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C-001

PROJECT NO.: 2022235.00
DATE: 11/05/2025
SCALE: 1" = 60'
DRAWN BY: J.N.K. PROJ. MGR.: J.D.R.

SHEET
C-001

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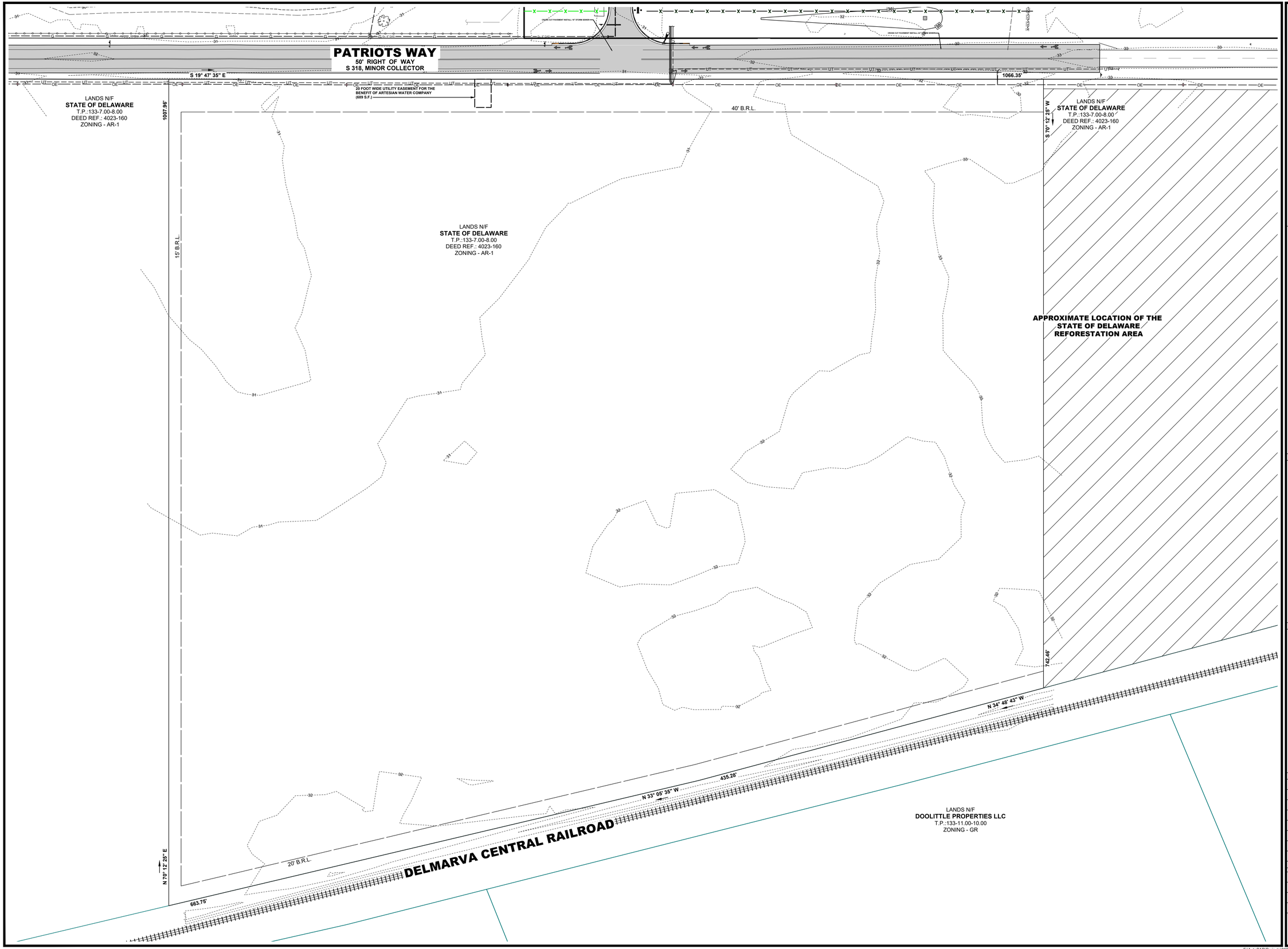

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ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950

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100 Discovery Boulevard, Suite 102
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3333 Jaeckle Drive, Suite 120
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www.beckermorgan.com

JONATHAN D. RICHARDS LICENSE No. 18832 DELAWARE PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE

EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

EXISTING CONDITIONS & DEMOLITION PLAN

0 25 50 100

SCALE: 1" = 50'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C-101

PROJECT NO.:	**2022235.00**
DATE:	**12/18/2025**
SCALE:	**1" = 50'**
DRAWN BY: **J.N.K.**	PROJ. MGR.: **J.D.R.**

SHEET

C-101

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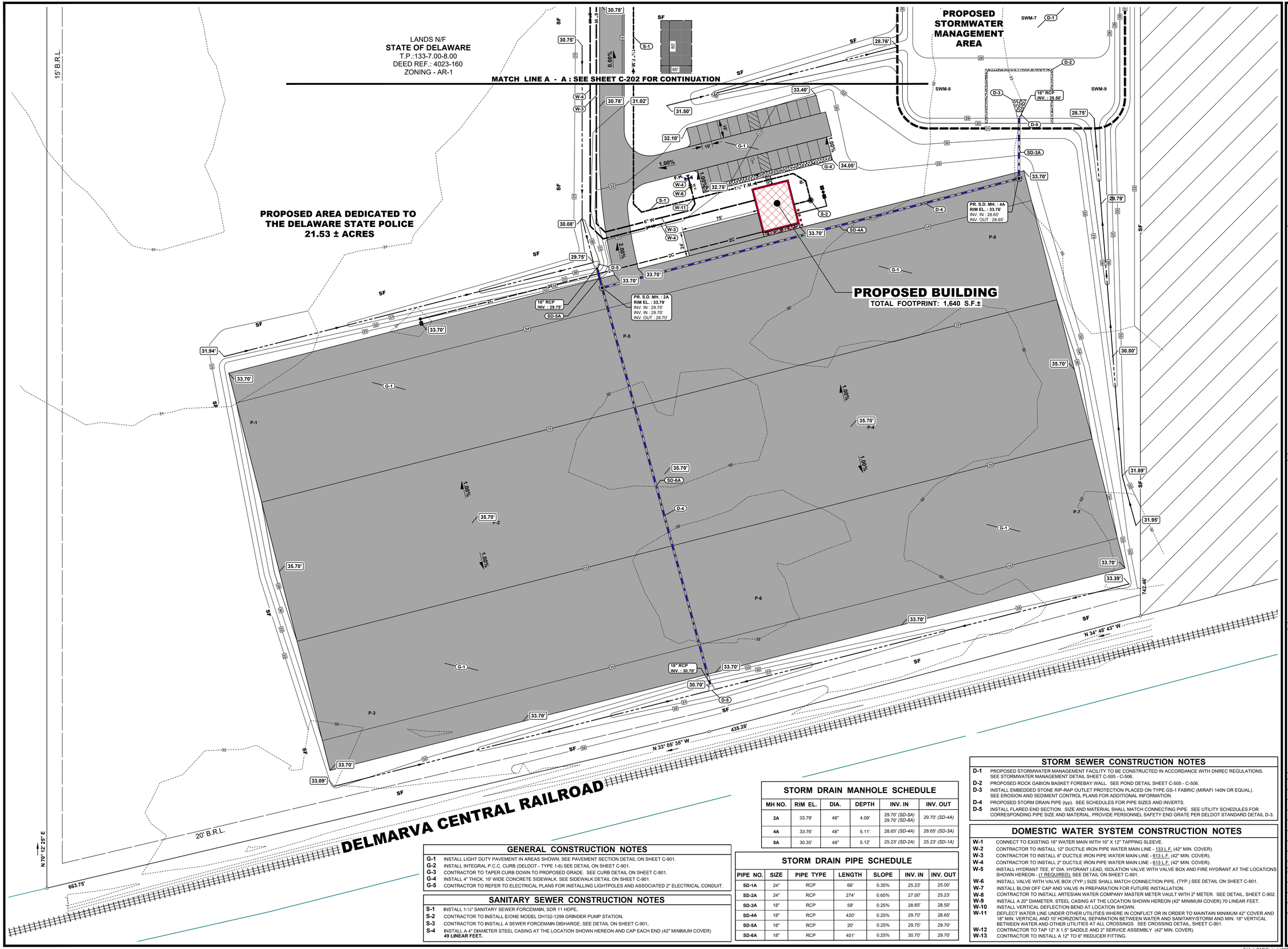

GENERAL CONSTRUCTION NOTES

- **G-1** INSTALL LIGHT DUTY PAVEMENT IN AREAS SHOWN, SEE PAVEMENT SECTION DETAIL ON SHEET C-901.
- **G-2** INSTALL INTEGRAL P.C.C. CURB (DELDOT - TYPE 1-6) SEE DETAIL ON SHEET C-901.
- **G-3** CONTRACTOR TO TAPER CURB DOWN TO PROPOSED GRADE. SEE CURB DETAIL ON SHEET C-901.
- **G-4** INSTALL 4" THICK, 10' WIDE CONCRETE SIDEWALK. SEE SIDEWALK DETAIL ON SHEET C-901.
- **G-5** CONTRACTOR TO REFER TO ELECTRICAL PLANS FOR INSTALLING LIGHTPOLES AND ASSOCIATED 2" ELECTRICAL CONDUIT.

SANITARY SEWER CONSTRUCTION NOTES

- **S-1** INSTALL 1-¼" SANITARY SEWER FORCEMAIN, SDR 11 HDPE.
- **S-2** CONTRACTOR TO INSTALL E/ONE MODEL DH152-1299 GRINDER PUMP STATION.
- **S-3** CONTRACTOR TO INSTALL A SEWER FORCEMAIN DISHARGE, SEE DETAIL ON SHEET C-901.
- **S-4** INSTALL A 4" DIAMETER STEEL CASING AT THE LOCATION SHOWN HEREON AND CAP EACH END (42" MINIMUM COVER) **49 LINEAR FEET.**

STORM DRAIN MANHOLE SCHEDULE

MH NO.	RIM EL.	DIA.	DEPTH	INV. IN	INV. OUT
2A	33.79'	48"	4.09'	29.70' *(SD-5A)* 29.70' *(SD-6A)*	29.70' *(SD-4A)*
4A	33.76'	48"	5.11'	28.65' *(SD-4A)*	28.65' *(SD-3A)*
8A	30.35'	48"	5.12'	25.23' *(SD-2A)*	25.23' *(SD-1A)*

STORM DRAIN PIPE SCHEDULE

PIPE NO.	SIZE	PIPE TYPE	LENGTH	SLOPE	INV. IN	INV. OUT
SD-1A	24"	RCP	66'	0.35%	25.23'	25.00'
SD-2A	24"	RCP	274'	0.65%	27.00'	25.23'
SD-3A	18"	RCP	59'	0.25%	28.65'	28.50'
SD-4A	18"	RCP	420'	0.25%	29.70'	28.65'
SD-5A	18"	RCP	20'	0.25%	29.75'	29.70'
SD-6A	18"	RCP	401'	0.25%	30.70'	29.70'

STORM SEWER CONSTRUCTION NOTES

- **D-1** PROPOSED STORMWATER MANAGEMENT FACILITY TO BE CONSTRUCTED IN ACCORDANCE WITH DNREC REGULATIONS. SEE STORMWATER MANAGEMENT DETAIL SHEET C-505 - C-506.
- **D-2** PROPOSED ROCK GABION BASKET FOREBAY WALL. SEE POND DETAIL SHEET C-505 - C-506.
- **D-3** INSTALL EMBEDDED STONE RIP-RAP OUTLET PROTECTION PLACED ON TYPE GS-1 FABRIC (MIRAFI 140N OR EQUAL). SEE EROSION AND SEDIMENT CONTROL PLANS FOR ADDITIONAL INFORMATION.
- **D-4** PROPOSED STORM DRAIN PIPE (typ). SEE SCHEDULES FOR PIPE SIZES AND INVERTS.
- **D-5** INSTALL FLARED END SECTION. SIZE AND MATERIAL SHALL MATCH CONNECTING PIPE. SEE UTILITY SCHEDULES FOR CORRESPONDING PIPE SIZE AND MATERIAL. PROVIDE PERSONNEL SAFETY END GRATE PER DELDOT STANDARD DETAIL D-3.

DOMESTIC WATER SYSTEM CONSTRUCTION NOTES

- **W-1** CONNECT TO EXISTING 16" WATER MAIN WITH 16" X 12" TAPPING SLEEVE.
- **W-2** CONTRACTOR TO INSTALL 12" DUCTILE IRON PIPE WATER MAIN LINE - 133 L.F. (42" MIN. COVER).
- **W-3** CONTRACTOR TO INSTALL 6" DUCTILE IRON PIPE WATER MAIN LINE - 613 L.F. (42" MIN. COVER).
- **W-4** CONTRACTOR TO INSTALL 2" DUCTILE IRON PIPE WATER MAIN LINE - 613 L.F. (42" MIN. COVER).
- **W-5** INSTALL HYDRANT TEE, 6" DIA. HYDRANT LEAD, ISOLATION VALVE WITH VALVE BOX AND FIRE HYDRANT AT THE LOCATIONS SHOWN HEREON - (1 REQUIRED). SEE DETAIL ON SHEET C-901.
- **W-6** INSTALL VALVE WITH VALVE BOX (TYP.) SIZE SHALL MATCH CONNECTION PIPE. (TYP.) SEE DETAIL ON SHEET C-901.
- **W-7** INSTALL BLOW OFF CAP AND VALVE IN PREPARATION FOR FUTURE INSTALLATION.
- **W-8** CONTRACTOR TO INSTALL ARTESIAN WATER COMPANY MASTER METER VAULT WITH 2" METER. SEE DETAIL, SHEET C-902.
- **W-9** INSTALL A 20" DIAMETER. STEEL CASING AT THE LOCATION SHOWN HEREON (42" MINIMUM COVER) 70 LINEAR FEET.
- **W-10** INSTALL VERTICAL DEFLECTION BEND AT LOCATION SHOWN.
- **W-11** DEFLECT WATER LINE UNDER OTHER UTILITIES WHERE IN CONFLICT OR IN ORDER TO MAINTAIN MINIMUM 42" COVER AND 18" MIN. VERTICAL AND 10' HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY/STORM AND MIN. 18" VERTICAL BETWEEN WATER AND OTHER UTILITIES AT ALL CROSSINGS. SEE CROSSING DETAIL, SHEET C-901.
- **W-12** CONTRACTOR TO TAP 12" X 1.5" SADDLE AND 2" SERVICE ASSEMBLY (42" MIN. COVER).
- **W-13** CONTRACTOR TO INSTALL A 12" TO 6" REDUCER FITTING.

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
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312 West Main Street, Suite 300
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www.beckermorgan.com

JONATHAN D. RICHARDS
LICENSE
No. 18832
DELAWARE
PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

SITE PLAN, UTILITY PLAN, & GRADING PLAN

0 20 40 80
SCALE: 1" = 40'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER/STATE: C-201

PROJECT NO.:	2022235.00
DATE:	12/18/2025
SCALE:	1" = 40'
DRAWN BY: J.N.K.	PROJ. MGR.: J.D.R.

SHEET
C-201

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STORM DRAIN MANHOLE SCHEDULE

MH NO.	RIM EL.	DIA.	DEPTH	INV. IN	INV. OUT
2A	33.79'	48"	4.09'	29.70' *(SD-5A)* 29.70' *(SD-6A)*	29.70' *(SD-4A)*
4A	33.76'	48"	5.11'	28.65' *(SD-4A)*	28.65' *(SD-3A)*
8A	30.35'	48"	5.12'	25.23' *(SD-2A)*	25.23' *(SD-1A)*

STORM DRAIN PIPE SCHEDULE

PIPE NO.	SIZE	PIPE TYPE	LENGTH	SLOPE	INV. IN	INV. OUT
SD-1A	24"	RCP	66'	0.35%	25.23'	25.00'
SD-2A	24"	RCP	274'	0.65%	27.00'	25.23'
SD-3A	18"	RCP	59'	0.25%	28.65'	28.50'
SD-4A	18"	RCP	420'	0.25%	29.70'	28.65'
SD-5A	18"	RCP	20'	0.25%	29.75'	29.70'
SD-6A	18"	RCP	401'	0.25%	30.70'	29.70'

PROPOSED BUILDING 2
MAINTENANCE BUILDING
TOTAL FOOTPRINT: 15,700 S.F.±

PROPOSED BUILDING 1
DELAWARE STATE POLICE TROOP 4
TOTAL FOOTPRINT: 46,000 S.F.±
BUILDING HEIGHT: 37'6"±
F.F. EL.: 31.00'
BID PACK 2

HVAC OUTDOOR EQUIPMENT AREA (1,770 S.F.)

REMOVAL OF BUILDING NOT IN THE CONTRACT

PATRIOTS WAY
50' RIGHT OF WAY
S 318, MINOR COLLECTOR

S 19° 47' 35" E — 1007.96'

N 70° 12' 25" E — 1650.00'

S 70° 12' 25" W — 1066.35'

15' B.R.L.

40' B.R.L.

LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

20 FOOT WIDE UTILITY EASEMENT FOR THE BENEFIT OF ARTESIAN WATER COMPANY (689 S.F.)

PROPOSED STORMWATER MANAGEMENT AREA

SWM-5 | SWM-6 | SWM-7 | SWM-8 | SWM-9

PROPOSED IMPROVEMENTS PREVIOUSLY APPROVED. SEE PLANS ENTITLED "DELAWARE STATE POLICE TROOP 4 COMPLEX" BY BECKER MORGAN GROUP

MATCH LINE A - A : SEE SHEET C-201 FOR CONTINUATION

STORM SEWER CONSTRUCTION NOTES

D-1 PROPOSED STORMWATER MANAGEMENT FACILITY TO BE CONSTRUCTED IN ACCORDANCE WITH DNREC REGULATIONS. SEE STORMWATER MANAGEMENT DETAIL SHEET C-505 - C-506.
D-2 PROPOSED ROCK GABION BASKET FOREBAY WALL. SEE POND DETAIL SHEET C-505 - C-506.
D-3 INSTALL EMBEDDED STONE RIP-RAP OUTLET PROTECTION PLACED ON TYPE GS-1 FABRIC (MIRAFI 140N OR EQUAL). SEE EROSION AND SEDIMENT CONTROL PLANS FOR ADDITIONAL INFORMATION.
D-4 PROPOSED STORM DRAIN PIPE (typ). SEE SCHEDULES FOR PIPE SIZES AND INVERTS.
D-5 INSTALL FLARED END SECTION. SIZE AND MATERIAL SHALL MATCH CONNECTING PIPE. SEE UTILITY SCHEDULES FOR CORRESPONDING PIPE SIZE AND MATERIAL. PROVIDE PERSONNEL SAFETY END GRATE PER DELDOT STANDARD DETAIL D-3.

DOMESTIC WATER SYSTEM CONSTRUCTION NOTES

W-1 CONNECT TO EXISTING 16" WATER MAIN WITH 16" X 12" TAPPING SLEEVE.
W-2 CONTRACTOR TO INSTALL 12" DUCTILE IRON PIPE WATER MAIN LINE - 133 L.F. (42" MIN. COVER).
W-3 CONTRACTOR TO INSTALL 6" DUCTILE IRON PIPE WATER MAIN LINE - 613 L.F. (42" MIN. COVER).
W-4 CONTRACTOR TO INSTALL 2" DUCTILE IRON PIPE WATER MAIN LINE - 613 L.F. (42" MIN. COVER).
W-5 INSTALL HYDRANT TEE, 6" DIA. HYDRANT LEAD, ISOLATION VALVE WITH VALVE BOX AND FIRE HYDRANT AT THE LOCATIONS SHOWN HEREON - (1 REQUIRED). SEE DETAIL ON SHEET C-901.
W-6 INSTALL VALVE WITH VALVE BOX (TYP.) SIZE SHALL MATCH CONNECTION PIPE. (TYP.) SEE DETAIL ON SHEET C-901.
W-7 INSTALL BLOW OFF CAP AND VALVE IN PREPARATION FOR FUTURE INSTALLATION.
W-8 CONTRACTOR TO INSTALL ARTESIAN WATER COMPANY MASTER METER VAULT WITH 2" METER. SEE DETAIL, SHEET C-902.
W-9 INSTALL A 20" DIAMETER. STEEL CASING AT THE LOCATION SHOWN HEREON (42" MINIMUM COVER) 70 LINEAR FEET.
W-10 INSTALL VERTICAL DEFLECTION BEND AT LOCATION SHOWN.
W-11 DEFLECT WATER LINE UNDER OTHER UTILITIES WHERE IN CONFLICT OR IN ORDER TO MAINTAIN MINIMUM 42" COVER AND 18" MIN. VERTICAL AND 10' HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY/STORM AND MIN. 18" VERTICAL BETWEEN WATER AND OTHER UTILITIES AT ALL CROSSINGS. SEE CROSSING DETAIL, SHEET C-901.
W-12 CONTRACTOR TO TAP 12" X 1.5" SADDLE AND 2" SERVICE ASSEMBLY (42" MIN. COVER).
W-13 CONTRACTOR TO INSTALL A 12" TO 6" REDUCER FITTING.

GENERAL CONSTRUCTION NOTES

G-1 INSTALL LIGHT DUTY PAVEMENT IN AREAS SHOWN, SEE PAVEMENT SECTION DETAIL ON SHEET C-901.
G-2 INSTALL INTEGRAL P.C.C. CURB (DELDOT - TYPE 1-6) SEE DETAIL ON SHEET C-901.
G-3 CONTRACTOR TO TAPER CURB DOWN TO PROPOSED GRADE. SEE CURB DETAIL ON SHEET C-901.
G-4 INSTALL 4" THICK, 10' WIDE CONCRETE SIDEWALK. SEE SIDEWALK DETAIL ON SHEET C-901.
G-5 CONTRACTOR TO REFER TO ELECTRICAL PLANS FOR INSTALLING LIGHTPOLES AND ASSOCIATED 2" ELECTRICAL CONDUIT.

SANITARY SEWER CONSTRUCTION NOTES

S-1 INSTALL 1-¼" SANITARY SEWER FORCEMAIN, SDR 11 HDPE.
S-2 CONTRACTOR TO INSTALL E/ONE MODEL DH152-1299 GRINDER PUMP STATION.
S-3 CONTRACTOR TO INSTALL A SEWER FORCEMAIN DISHARGE, SEE DETAIL ON SHEET C-901.
S-4 INSTALL A 4" DIAMETER STEEL CASING AT THE LOCATION SHOWN HEREON AND CAP EACH END (42" MINIMUM COVER) **49 LINEAR FEET.**

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950

The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS — LICENSE — No. 18832 — DELAWARE PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

SITE PLAN, UTILITY PLAN, & GRADING PLAN

0 20 40 80
SCALE: 1" = 40'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C-201

PROJECT NO.:	2022235.00
DATE:	12/18/2025
SCALE:	1" = 40'
DRAWN BY: J.N.K.	PROJ. MGR.: J.D.R.

SHEET
C-202

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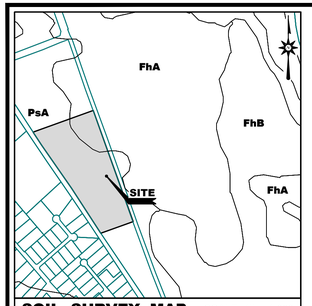
F:\AutoCAD\Projects\2022\2022235\DWG\2022235-SITE-EVOC.dwg, Aug 27, 2026 - 3:42pm



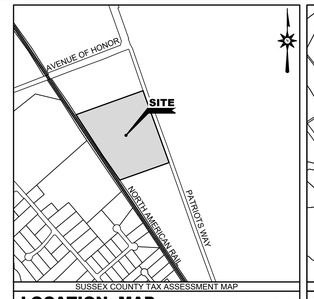
SOIL SURVEY MAP SCALE: 1" = 1,000

SOIL MAP TAKEN FROM "WEB SOIL SURVEY"
https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx
FhA : FORT MOTT HENLOPEN COMPLEX, 0 TO 2 PERCENT SLOPES
FhB : FOR MOTT HENLOPEN COMPLEX, 2 TO 5 PERCENT SLOPES
PsA : PEPPERBOX ROSEDALE COMPLEX, 0 TO 2 PERCENT SLOPES

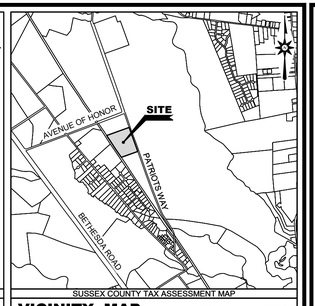
DELAWARE STATE POLICE EMERGENCY VEHICLE OPERATIONS COURSE

SEDIMENT AND STORMWATER MANAGEMENT PLANS

INDIAN RIVER BAY | DAGSBORO HUNDRED
TAX PARCEL: 133-7.00-8.00
SUSSEX COUNTY, DELAWARE



SUSSEX COUNTY TAX ASSESSMENT MAP
LOCATION MAP SCALE: 1" = 1000'



SUSSEX COUNTY TAX ASSESSMENT MAP
VICINITY MAP SCALE: 1" = 3000'

LEGEND

ITEM	EXISTING	PROPOSED
SANITARY GRAVITY SEWER LINE, SIZE & FLOW DIRECTION	EX. 10"S	10" S
SANITARY SEWER FORCE MAIN, SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
SANITARY SEWER MANHOLE (S.M.H.)		
SANITARY SEWER CLEANOUT		
WATER MAIN & SIZE	EX. 10" W	12" W
FIRE HYDRANT	F.H.	F.H.
WATER VALVE (W.V.) OR METER (W.M.)	W.M. W.V.	W.M. W.V.
STORM DRAIN MANHOLE (S.D.M.H.)		
STORM DRAIN LINE (CMP OR RCP)		
CATCH BASIN		
UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE OR ELECTRIC OR BOTH)		
UNDERGROUND ELECTRIC	U.E.	U.E.
UNDERGROUND TELEPHONE	U.T.	U.T.
UNDERGROUND GAS MAIN	EX. 2" G	2" G
CONCRETE CURB & GUTTER		
CONCRETE SIDEWALK, SLAB / PAVING		
IMPERVIOUS SURFACED ROAD, DRIVE OR LOT		
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	N/A
WIRE FENCE	X X X	X X X
CHAINLINK FENCE		
STOCKADE FENCE		
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)		
DRAINAGE DITCH OR SWALE		
CONTOUR	49	55
ELEVATION SPOT SHOT	43.55	25.15 25.50 T.C. 25.00 B.C.
BENCH MARK		N/A
PROPERTY OR RIGHT-OF-WAY LINE		
CENTERLINE		
LIGHT POLE		
DRAINAGE AREA BOUNDARY LINE		
SOIL BOUNDARY LINE		N/A
TIME OF CONCENTRATION FLOW PATH		

SHEET INDEX

SEDIMENT AND STORMWATER MANAGEMENT PLANS

C-500	COVER SHEET AND GENERAL NOTES
C-501 - C-502	PRE - CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-503 - C-504	CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
C-505 - C-506	POST - CONSTRUCTION STORMWATER MANAGEMENT PLAN B.M.P.
C-507 - C-510	CONSTRUCTION SITE DETAILS AND NOTES

SITE DATA

1.	OWNER OF RECORD:	STATE OF DELAWARE C/O JENNIFER COVERDALE PO BOX 778 DOVER, DE 19903 (302) 744-1166
2.	PROPERTY ADDRESS	PATRIOTS WAY GEORGETOWN, DE 19947
3.	ENGINEER / SURVEYOR:	BECKER MORGAN GROUP INC. 309 SOUTH GOVERNORS AVE. DOVER, DELAWARE 19904 302-734-7950
4.	PROPERTY MAP NUMBER:	133-7.00-8.00
5.	ZONING CLASSIFICATION:	EXISTING: AR-1 AGRICULTURAL RESIDENTIAL / (SUSSEX COUNTY) PROPOSED: AR-1 AGRICULTURAL RESIDENTIAL / (SUSSEX COUNTY)
6.	DEED SUMMARY:	DEED BOOK: 4023 PAGE: 160
7.	BUILDING TYPE:	TYPE V
8.	PLAT REFERENCE:	.
9.	PRESENT USE:	OPEN LOT / FARMLAND
10.	PROPOSED USE:	EMERGENCY VEHICLE OPERATOR COURSE (E.V.O.C.)
11.	TOTAL SITE AREA:	21.53 ACRES
12.	IMPERVIOUS COVERAGE:	EXISTING: 0 S.F. (0.0 A.C.) (0.00%) PROPOSED: 348.969 S.F. (8.01 A.C.) (37.20%) (WITHIN C/U AREA)
13.	PARKING CALCULATIONS:	OFFICE: 1 SPACE PER 200 S.F. OF FLOOR AREA FLOOR SPACE PROVIDED: 840 S.F. PARKING SPACES REQUIRED: 5 PARKING SPACES PROVIDED: 24 ACCESSIBLE PARKING SPACES PROVIDED: 1 LOADING SPACE USE CATEGORY: OFFICE BUILDING THE 5,000 S.F. THRESHOLD IS NOT MET FOR REQUIRING A LOADING SPACE REQUIRED LOADING SPACES: 0
14.	SETBACKS:	FRONT: 40 FT. SIDE: 15 FT. REAR: 20 FT.
15.	SIGNAGE	FUTURE PERMIT SUBMISSION
16.	BUILDING HEIGHT:	PERMITTED: 42 FEET PROPOSED: 15 FEET
17.	UTILITIES:	ELECTRIC: DELMARVA POWER WATER: ARTESIAN WATER COMPANY SEWER: SUSSEX COUNTY SEWER
18.	SURVEY DATUM:	NGS MONUMENTS VERTICAL: NAVD 88 - CORS HORIZONTAL: NAD 83 DSP - CORS
19.	PROJECT LOCATION:	LATITUDE: 38.619602 LONGITUDE: -75.316975
20.	DISCHARGE LOCATION:	COW BRIDGE BRANCH
21.	SC. EX. LAND USE MAP:	LOW DENSITY
22.	SC. PR. LAND USE MAP:	LOW DENSITY
23.	NET DEVELOPMENT AREA:	± 13.47 A.C.
24.	CUT / FILL VOLUME:	FILL: 15,388 C.Y.

ENGINEERS CERTIFICATION

I, JONATHAN D. RICHARD P.E., HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES.

JONATHAN D. RICHARD — No. 18832 — DELAWARE — PROFESSIONAL ENGINEER

JONATHAN D. RICHARD P.E. — P.E. NO. 18832 — 08/27/2026 DATE

BECKER MORGAN GROUP
309 S. GOVERNORS AVE.
DOVER, DELAWARE 19904
(302) 734-7950

OWNER CERTIFICATION

WE, STATE OF DELAWARE, CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN AND THAT RESPONSIBLE PERSONNEL (I.E., BLUE CARD HOLDER) INVOLVED IN THE LAND DISTURBANCE WILL HAVE A CERTIFICATION OF TRAINING PRIOR TO INITIATION OF THE PROJECT, AT A DNREC SPONSORED OR APPROVED TRAINING COURSE FOR THE CONTROL OF EROSION AND SEDIMENT DURING CONSTRUCTION. IN ADDITION I GRANT THE DNREC SEDIMENT AND STORMWATER PROGRAM AND/OR THE RELEVANT DELEGATED AGENCY THE RIGHT TO CONDUCT ON-SITE REVIEWS, AND I UNDERSTAND MY RESPONSIBILITIES UNDER THE NPDES CONSTRUCTION GENERAL PERMIT, AS REFERENCED ON THIS COVERSHEET.

ROBBIE MULLIN — DATE
STATE OF DELAWARE OFFICE OF MANAGEMENT AND BUDGET
540 S. DUPONT HIGHWAY SUITE 1
DOVER DELAWARE 19901

SEDIMENT AND STORMWATER APPROVAL STAMP

SEDIMENT AND STORMWATER: SEQUENCE OF CONSTRUCTION

1. NOTIFY THE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL IN WRITING AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
2. OBTAIN ALL CITY, COUNTY, AND STATE PERMITS PRIOR TO THE START OF CONSTRUCTION.
3. PRIOR TO ANY CLEARING, INSTALLATION OF SEDIMENT CONTROL MEASURES OR GRADING, A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED AND CONDUCTED WITH THE AGENCY CONSTRUCTION SITE REVIEWER. THE LANDOWNER/DEVELOPER, CONTRACTOR, AND CERTIFIED CONSTRUCTION REVIEWER ARE REQUIRED TO BE IN ATTENDANCE AT THE PRE-CONSTRUCTION MEETING; THE DESIGNER IS RECOMMENDED TO ATTEND.
4. CLEAR AND GRUB AREAS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS.
5. INSTALL PERIMETER CONTROLS AT THE LOCATIONS SHOWN ON THE SITE CONSTRUCTION STORMWATER MANAGEMENT PLAN, SHEET C-501. CONTACT THE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC) INSPECTOR FOR INSPECTION PRIOR TO PROCEEDING TO STEP No. 7.
6. ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY THE AGENCY CONSTRUCTION SITE REVIEWER AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.
7. CLEAR AND GRUB VEGETATED AREAS NECESSARY FOR CONSTRUCTION. STRIP TOPSOIL AND STOCKPILE IN DESIGNATED STOCKPILE LOCATION ENCLOSED BY SILT FENCE.
8. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHOULD BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENTATION ON THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR REPAIR MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
9. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAINTAIN AND REPAIR ALL EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PRACTICES DURING CONSTRUCTION AND UTILITY INSTALLATION.
10. INSTALL UNDERGROUND UTILITIES INCLUDING ELECTRIC, TELEPHONE, CABLE, GAS, WATER AND SEWER. INSTALL SOIL STABILIZATION PER PLAN.
11. NOTIFY THE PERSON RESPONSIBLE FOR STORMWATER SYSTEM CONSTRUCTION REVIEW AT LEAST 3 DAYS PRIOR TO THE START OF THE STORMWATER SYSTEM CONSTRUCTION; STORMWATER FACILITIES MUST BE REVIEWED THROUGHOUT THEIR CONSTRUCTION
12. EXCAVATE STORMWATER MANAGEMENT POND AND INSTALL RESPECTIVE SPILLWAY AND OUTFALL PROTECTION. THE POND SHOULD BE UTILITIZED AS TEMPORARY PIPE OUTLET SEDIMENT TRAP DURING CONSTRUCTION. REFER TO POND SPECIFIC SEQUENCE OF CONSTRUCTION ON SHEET C-505.
12.1. INSTALL CONCRETE FLARED END SECTION AND OUTFALL PIPE IN ACCORDANCE WITH DETAIL SHEETS AND PLANS
12.2. EXCAVATE STORMWATER MANAGEMENT POND AS PER APPROVED PLANS. STORE EXCAVATED MATERIAL AT APPROVED TEMPORARY SOIL STOCKPILE LOCATIONS. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL USE A GEOTEXTILE DEWATERING BAG (ACF DIRTBAG OR APPROVED EQUIVALENT). CONTRACTOR SHALL USE STABILIZATION MEASURES AS NECESSARY TO ENSURE SLOPE STABILITY.
12.3. INSTALL TEMPORARY DEWATERING DEVICES AND BERM ASSOCIATED WITH THE POND. INSTALL SEDIMENT AND EROSION CONTROL MEASURES AS SHOWN. (I.E. INLET PROTECTION AND SILT FENCE) THE CONTRACTOR SHALL IMMEDIATELY BACKFILL, COMPACT, SEED, MULCH, AND OTHERWISE STABILIZE AT THE END OF EACH DAY.
12.4. FINAL GRADE POND SLOPES AND LEAVE 1 FT OF SOIL IN BOTTOM OF THE TEMPORARY PIPE SEDIMENT TRAP AND INSTALL EROSION CONTROL MATTING ON SIDE SLOPES AS REQUIRED.
12.5. PROVIDE SEEDING AND STABILIZATION AS PER SEEDING AND STABILIZATION SCHEDULE.
13. INSTALL SYSTEM PER MANUFACTURERS SPECIFICATIONS CONTRACTOR TO PROVIDE AS-BUILT AS REQUIRED BY CODE.
14. PLACE SELECT FILL FOR BUILDING PAD AND BRING TO APPROPRIATE GRADE. INSTALL BUILDING FOUNDATIONS.
15. INSTALL UTILITIES TO BUILDING PAD INCLUDING WATER SERVICE, SEWER, ELECTRIC, AND GAS.
16. ROUGH GRADE PROPOSED PAVED AREAS.
17. INSTALL CURB AND CRUSHER RUN/STONE BASE IN PAVED AREAS AS SPECIFIED.
18. INSTALL BUILDING SLAB AND BEGIN CONSTRUCTION OF BUILDING.
19. ROUGH GRADE ALL NON-PAVED AREAS ON THE PROJECT SITE. INSTALL SIDEWALKS, HANDICAPPED CURB RAMPS AND OTHER SITE FEATURES.
20. FINE GRADE G.A.B.C. IN PROPOSED PAVED AREAS.
21. INSTALL BITUMINOUS PAVING PER PAVEMENT SECTION.
22. FINAL GRADE ALL NON-PAVED AREAS. INSTALL LANDSCAPING. PERFORM INSPECTION OF STORMWATER MANAGEMENT FACILITIES. CORRECT ANY DEFICIENCIES, AS NECESSARY (EROSION, SCOUR, FOREBAYS, ETC.).
23. TOPSOIL SEED AND STABILIZE ALL DISTURBED AREAS, AS PER SEEDING NOTES PRIOR TO PROCEEDING WITH PHASE 2. AN INSPECTION OF PERIMETER CONTROLS WILL BE REQUIRED PRIOR TO COMMENCEMENT OF PHASE 2. E&S CONTROLS MUST BE REPLACED INDEPENDENTLY OF PHASE 1 CONTROLS. APPROVAL OF SUFFICIENT STABILIZATION FROM THE AGENCY CONSTRUCTION SITE REVIEWER MUST BE ACQUIRED BEFORE PROCEEDING TO PHASE 2.
24. PROVIDE FINAL SEEDING AND STABILIZATION AS PER SEEDING AND STABILIZATION SCHEDULE.
25. PROVIDE THREE (3) DAYS NOTICE TO DNREC SEDIMENT AND STORMWATER INSPECTOR AND CCR PRIOR TO SEDIMENT TRAP CONVERSION. EXCAVATE STORMWATER MANAGEMENT BASINS TO FINAL GRADE. VEHICLES ARE PROHIBITED FROM DRIVING ON THE BOTTOM OF THE POND.
26. FOLLOWING CONSTRUCTION AND STABILIZATION OF THE UPSTREAM AREAS, THE REMAINING 1 FOOT OF MATERIAL SHALL BE EXCAVATED AND THE SEDIMENT TRAP SHALL BE CONVERTED TO THE FINAL INFILTRATION POND PER THE APPROVED PLANS. THE TRAP SHALL BE EXCAVATED FROM THE SIDES AND NO HEAVY EQUIPMENT SHALL BE USED IN THE BOTTOM OF THE BASIN.
27. POST CONSTRUCTION VERIFICATION DOCUMENTS OF THE INFILTRATION POND MUST BE PREPARED AND SUBMITTED TO DNREC FOR APPROVAL. CONTRACTOR IS RESPONSIBLE FOR HAVING THESE DOCUMENTS PREPARED AND SUBMITTED AT AT COSTS ASSOCIATED WITH APPROVAL OF THESE DOCUMENTS ARE INCIDENTAL TO THE CONTRACT.
28. FINAL GRADE POND AND INSTALL EROSION CONTROL MATTING, RIP-RAP OUTLET PROTECTION AND FOREBAY AS SHOWN.
29. EROSION AND SEDIMENT CONTROL DEVICES SHOULD BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH WRITTEN APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.
30. NOTIFY DNREC FOR FINAL INSPECTION PRIOR TO REMOVING ANY PERIMETER CONTROLS. REMOVE ANY REMAINING PERIMETER CONTROLS AFTER STABILIZATION IS COMPLETED AND APPROVAL FROM DNREC INSPECTOR IS OBTAINED.
31. THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF THE POST CONSTRUCTION VERIFICATION DOCUMENTS, INCLUDING FINAL STABILIZATION THROUGHOUT THE SITE. ALL ELEMENTS OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.

AREA OF DISTURBANCE

TOTAL: 13.47 ± ACRES

SEDIMENT AND STORMWATER CONSTRUCTION NOTES:

1. THE DNREC SEDIMENT AND STORMWATER PROGRAM SHALL BE NOTIFIED IN WRITING 5 DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
2. REVIEW AND/OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
3. IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC.
4. FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN 14 CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.
5. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
6. AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHOULD BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
7. APPROVED PLANS REMAIN VALID FOR 5 YEARS FROM THE DATE OF APPROVAL.
8. POST CONSTRUCTION VERIFICATION DOCUMENTS SHALL BE SUBMITTED TO DNREC WITHIN 60-DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION.
9. APPROVAL OF A SEDIMENT AND STORMWATER MANAGEMENT PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
10. THE NOTICE OF INTENT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT FOR THIS PROJECT IS # (7360). THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITIES UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY THE DEPARTMENT.
11. THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT.
12. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
13. BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE, THE CONTRACTOR SHOULD CALL MISS UTILITY AT 811 OR 1-800-282-8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITIES MARKED ONSITE.
14. BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF 7 DEL.C. CH. 60 AND THE CURRENT DELAWARE CONSTRUCTION GENERAL PERMIT (CGP).
15. DOCUMENTATION OF SOIL TESTING AND MATERIALS USED FOR TEMPORARY OR PERMANENT STABILIZATION INCLUDING BUT NOT LIMITED TO SOIL TEST RESULTS, SEED TAGS, SOIL AMENDMENT TAGS, ETC. SHALL BE PROVIDED TO DNREC TO VERIFY THAT THE PERMANENT OR TEMPORARY STABILIZATION HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLAN.
16. DNREC MAY REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, OR ALTERNATIVE MEASURES THAT PROVIDE FUNCTIONAL EQUIVALENCY.
17. WHEN DIRECTED BY DNREC THE OWNER SHALL ACQUIRE THE SERVICES OF A THIRD PARTY CERTIFIED CONSTRUCTION REVIEWER (CCR) TO PERFORM WEEKLY CONSTRUCTION REVIEWS. SEDIMENT AND STORMWATER MANAGEMENT PLANS APPROVED BY THE DEPARTMENT SHALL HAVE A THIRD PARTY CCR.

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEVELOP AND CONSTRUCT A NEW POLICE SKID PAD.
2. TOPOGRAPHIC SURVEY PLAN SHOWN HEREON WAS PREPARED BY BECKER MORGAN GROUP, DOVER DE, IN FEBRUARY 2023. HORIZONTAL DATUM IS BASED ON NAD 83 2011. VERTICAL DATUM IS BASED ON NAVD 88.
3. THE EXISTING UTILITIES SHOWN WERE TAKEN FROM THE BEST AVAILABLE RECORDS. THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELMARVA (1-800-282-8555) TO VERIFY THEIR EXACT LOCATION PRIOR TO THE START OF ANY CONSTRUCTION. ANY DAMAGE INCURRED TO ANY UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE. IF THE CONTRACTOR RELIES ON THE UTILITY LOCATIONS SHOWN HEREON, HE DOES SO AT HIS OWN RISK AND WILL NOT BE ENTITLED TO ADDITIONAL COMPENSATION DUE TO TIME DELAYS FROM SAID RELIANCE.
4. THIS AREA OF DEVELOPMENT IS NOT IMPACTED BY THE 100 YEAR FLOOD PLAN AS SHOWN ON FIRM 10005C0452K EFF. 6/20/2018.
5. BECKER MORGAN GROUP CERTIFIES THAT THERE ARE NO FRESH WATER WETLANDS LOCATED WITHIN THE IMPROVED AREA.
6. ALL ROADS, PARKING AND OTHER PAVED AREAS WILL BE PRIVATELY OWNED AND MAINTAINED AND ARE NOT INTENDED FOR DEDICATION.
7. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
8. ALL HANDICAPPED PARKING DEMARCATION, STALLS, AND BUILDING ACCESSIBLE ROUTES SHALL COMPLY WITH THE "AMERICAN WITH DISABILITIES ACT".
9. THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENT FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
10. BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION THEY MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM SUSSEX COUNTY, DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC) DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT) AND APPROPRIATE STATE AND COUNTY AGENCIES.

STABILIZATION AND SEEDING NOTES :

1. PERMANENT SEEDING :
   - A. SHALL BE CONDUCTED YEAR AROUND.
   - B. SEED BED PREPARATION : SHALL BE IN ACCORDANCE WITH DE-ESC-3.4.3, SHEET 2 OF 4.
   - C. SOIL AMENDMENTS : FERTILIZER AND LIME APPLICATION SHALL BE IN ACCORDANCE WITH DE-ESC-3.4.3, SHEET 2 OF 4.
   - D. SEEDING : APPLY PERMANENT SEEDING MIX #7. APPLY SEED UNIFORMLY WITH A BROADCAST SEEDER, DRILL, CULTIPACKER SEEDER OR HYDROSEEDER. ALL SEED WILL BE APPLIED AT THE RECOMMENDED RATE AND PLANTING DEPTH, IN ACCORDANCE WITH DE-ESC-3.4.3.
   - E. MULCH : IMMEDIATELY AFTER SEEDING, UNIFORMLY MULCH ENTIRE AREA WITH STRAW AT A RATE OF 2 TONS PER ACRE MINIMUM. ALL MULCHING SHALL BE DONE IN ACCORDANCE WITH DETAIL DE-ESC-3.4.5.
   - F. TOPSOIL : ALL AREAS TO BE PERMANENTLY SEEDED SHALL HAVE A MINIMUM OF 6" OF TOPSOIL.
2. TEMPORARY STABILIZATION :
   - A. PROVIDE SEED BED SAME AS 1-B ABOVE.
   - B. APPLY MIX NO. 5 (ANNUAL RYEGRASS) IN ACCORDANCE WITH DETAIL DE-ESC-3.4.3, SHEET 2 OF 4.
   - C. MULCH SAME AS 1-E ABOVE.
3. IF TEMPORARY STABILIZATION IS REQUIRED, PERMANENT SEEDING SHALL BE PERFORMED AS SOON AS POSSIBLE.
4. ALL FILL SLOPE AREAS SHOWN ON PLAN ARE TO BE STABILIZED AS PER STATEMENT 1 OR 2 ABOVE IMMEDIATELY AFTER COMPLETION OF GRADING OPERATIONS FOR THESE SLOPES.
5. EROSION CONTROL MATTING IS REQUIRED ON ALL SLOPES OF 3:1 OR GREATER.

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

COVER SHEET GENERAL NOTES

ISSUE BLOCK

MARK	DATE	DESCRIPTION
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED

LAYER STATE: C-500

PROJECT NO.: 2022235.00
DATE: 12/18/2025
SCALE: NONE
DRAWN BY: J.N.K. PROJ. MGR.: J.D.R.

SHEET
C-500

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LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

15' B.R.L.

LAY DOWN / STAGING AREA
(80' x 60') = 4,800 S.F.

PROPOSED LIMITS OF DISTURBANCE - 13.47 AC.

MATCH LINE A - A : SEE SHEET C-502 FOR CONTINUATION

TYPE: B
BOTTOM WIDTH: 6'
FLOW DEPTH: 1'

INSTALL SILT FENCE
SEE DETAIL, SHEET C-507

APPROXIMATE LOCATION OF THE STATE OF DELAWARE REFORESTATION AREA

742.46'

N 34° 48' 43" W

435.28'

N 33° 05' 35" W

20' B.R.L.

N 70° 12' 25" E

663.75'

DELMARVA CENTRAL RAILROAD

LANDS N/F
DOOLITTLE PROPERTIES LLC
T.P.:133-11.00-10.00
ZONING - GR

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS — LICENSE — No. 18832 — DELAWARE PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE

EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

OVERALL PRE - CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN

0 20 40 80

SCALE: 1" = 40'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C-501

PROJECT NO.:	2022235.00
DATE:	12/18/2025
SCALE:	1" = 40'
DRAWN BY: J.N.K.	PROJ. MGR.: J.D.R.

SHEET
C-501

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MAINTENANCE BUILDING
TOTAL FOOTPRINT: 15,700 S.F.±

PROPOSED BUILDING 1
DELAWARE STATE POLICE TROOP 4
TOTAL FOOTPRINT: 48,000 S.F.±
BUILDING HEIGHT: 37.9'±
BID PACK 2

HVAC OUTDOOR EQUIPMENT AREA (1,770 S.F.)

EX. 6" WATER

EX. 8" WATER

18" R.C.P. (2) INV: 30.20'

18" R.C.P. (2) INV: 30.10'

PATRIOTS WAY
50' RIGHT OF WAY
S 318, MINOR COLLECTOR

S 19° 47' 35" E

N 70° 12' 25" E

1650.00

S 70° 12' 25" W

1066.35'

1007.36'

20 FOOT WIDE UTILITY EASEMENT FOR THE BENEFIT OF ARTESIAN WATER COMPANY (689 S.F.)

STABILIZED CONSTRUCTION ENTRANCE

CMO
L: 10'
W: 10'
D: 3'

CW
L: 10'
W: 10'
D: 3'

SOIL STOCKPILE
MAX HEIGHT: 20'
50' X 50'

POLLUTION PREVENTION PRACTICES

LAY DOWN / STAGING AREA
(80' x 60') = 4,800 S.F.

PROPOSED LIMITS OF DISTURBANCE - 13.47 AC.

TEMPORARY SEDIMENT BASIN

SWM-5
SWM-6
SWM-7
SWM-8
SWM-9

LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

40' B.R.L.

15' B.R.L.

L.O.D.

SF

SAP

TS-B-1

B-1

IP-1

MATCH LINE A - A : SEE SHEET C-501 FOR CONTINUATION

APPROXIMATE LOCATION OF THE STATE OF DELAWARE REFORESTATION AREA

CROSS CUT PAVEMENT INSTALL 18" STORM SEWER

CROSS CUT PAVEMENT INSTALL 24" STORM SEWER

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS
LICENSE
No. 18832
DELAWARE
PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

OVERALL PRE - CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN

0 20 40 80
SCALE: 1" = 40'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER/STATE: C-501

PROJECT NO.:	2022235.00
DATE:	12/18/2025
SCALE:	1" = 40'
DRAWN BY: J.N.K.	PROJ. MGR.: J.D.R.

SHEET
C-502

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POLLUTION PREVENTION PRACTICES

SOIL STOCKPILE
MAX HEIGHT: 20'
50' X 50'

PROPOSED LIMITS OF DISTURBANCE - 13.47 AC.

SKIMMER DEWATERING DEVICE
SEE DETAIL, DE-ESC.3.2.3.1

PROPOSED STORMWATER MANAGEMENT AREA

18"
LA: 12.0'
W PIPE: 4.5'
W BOT: 14'
R No.: R-4
T: 18"

ROP-1

MATCH LINE A - A : SEE SHEET C-504 FOR CONTINUATION

LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

15' B.R.L.

SWALE 2
SEE CROSS SECTION ON C-506

SWM-7
SWM-8
SWM-9

18" RCP
INV. : 28.50'

SAP

APPROXIMATE LOCATION OF THE STATE OF DELAWARE REFORESTATION AREA

SD-3A

B-1

PR. S.D. MH. : 4A
RIM EL. : 33.76'
INV. IN : 28.65'
INV. OUT : 28.65'

P-8

SD-4A

SWALE 3
SEE CROSS SECTION ON C-506

SWALE 1
SEE CROSS SECTION ON C-506

PROPOSED LIMITS OF DISTURBANCE - 13.47 AC.

18" RCP
INV. : 29.75'

SD-5A

PR. S.D. MH. : 2A
RIM EL. : 33.79'
INV. IN : 29.70'
INV. IN : 29.70'
INV. OUT : 29.70'

P-5

P-1

P-4

SD-6A

P-2

P-7

INSTALL SILT FENCE
SEE DETAIL, SHEET C-507

P-6

742.46'

SWALE 4
SEE CROSS SECTION ON C-506

18" RCP
INV. : 30.70'

P-3

N 34° 48' 43" W

435.28'

N 33° 05' 35" W

LANDS N/F
DOOLITTLE PROPERTIES LLC
T.P.:133-11.00-10.00
ZONING - GR

DELMARVA CENTRAL RAILROAD

20' B.R.L.

N 70° 12' 25" E

663.75'

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS
LICENSE
No. 18832
DELAWARE
PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE

EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN

0 20 40 80

SCALE: 1" = 40'

ISSUE	BLOCK	
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C-503

PROJECT NO.:	2022235.00
DATE:	12/18/2025
SCALE:	1" = 40'
DRAWN BY: J.N.K.	PROJ. MGR.: J.D.R.

SHEET

C-503

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MAINTENANCE BUILDING
TOTAL FOOTPRINT: 15,700 S.F.±

PROPOSED BUILDING 1
DELAWARE STATE POLICE TROOP 4
TOTAL FOOTPRINT: 46,000 S.F.±
BUILDING HEIGHT: 37.6'±
BID PACK 2

HVAC OUTDOOR EQUIPMENT AREA (1,775 S.F.)

EX. 6" WATER

REMOVAL OF BUILDING NOT IN THE CONTRACT

18" R.C.P. (2)
INV. 30.25'

18" R.C.P. (2)
INV. 30.10'

24" RCP
INV. : 25.00'

24" RCP
INV. : 25.00'

24" RCP
INV. : 25.00'

18" RCP
INV. : 26.75'

SD-1A

PR. S.D. MH. : 8A
RIM EL. : 30.35'
INV. IN : 25.23'
INV. OUT : 25.23'

L.O.D.

40' B.R.L.

LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

CROSS CUT PAVEMENT INSTALL 18" STORM SEWER

N 70° 12' 25" E
1650.00'

PATRIOTS WAY
50' RIGHT OF WAY
S 318, MINOR COLLECTOR

S 70° 12' 25" W
1066.35'

S 19° 47' 35" E
1007.96'

15' B.R.L.

SD-27

SD-29

SD-28

SD-30

SD-31

SD-2A

SD-3A

IP-1

IP-2

PR. C.B. : 29
GRATE : 30.50'
INV. OUT : 27.86'

20 FOOT WIDE UTILITY EASEMENT FOR THE BENEFIT OF ARTESIAN WATER COMPANY (689 S.F.)

PR. C.B. : 31
GRATE : 30.45'
INV. OUT : 27.10'

PR. C.B. : 30
GRATE : 30.40'
INV. IN : 27.04'
INV. OUT : 27.04'

PR. C.B. : 28
GRATE : 31.03'
INV. IN : 27.33'
INV. OUT : 27.33'

PR. C.B. : 27
GRATE : 30.56'
INV. IN : 26.85'
INV. IN : 26.85'
INV. OUT : 26.85'

STABILIZED CONSTRUCTION ENTRANCE

CMO
L: 10'
W: 10'
D: 3'

CW
L: 10'
W: 10'
D: 3'

SOIL STOCKPILE
MAX HEIGHT: 20'
50' X 50'

POLLUTION PREVENTION PRACTICES

PROPOSED LIMITS OF DISTURBANCE - 13.47 AC.

PROVIDE DELDOT SAFETY END GRATE
SEE DELDOT STANDARD DETAIL D-3

PIPE OUTLET SEDIMENT TRAP
SEE DETAIL, DE-ESC.3.1.3.1

SKIMMER DEWATERING DEVICE
SEE DETAIL, DE-ESC.3.2.3.1

SWM-5
SWM-6
SWM-7
SWM-8
SWM-9

18"
LA: 15.0'
W PIPE: 10'
W BOT: 10'
R No.: R-4
T: 18"
ROP-1

18"
LA: 12.0'
W PIPE: 4.5'
W BOT: 14'
R No.: R-4
T: 18"
ROP-1

18" RCP
INV. : 28.50'

PROPOSED
STORMWATER
MANAGEMENT
AREA

SAP

MATCH LINE A - A : SEE SHEET C-503 FOR CONTINUATION

LANDS N/F
STATE OF DELAWARE
T.P.:133-7.00-8.00
DEED REF.: 4023-160
ZONING - AR-1

SWALE 2
SEE CROSS SECTION ON C-506

80'
60'

B-1

APPROXIMATE LOCATION OF THE STATE OF DELAWARE REFORESTATION AREA

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS
LICENSE
No. 18832
DELAWARE
PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN

0 20 40 80
SCALE: 1" = 40'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C-503

PROJECT NO.:	2022235.00
DATE:	12/18/2025
SCALE:	1" = 40'
DRAWN BY: J.N.K.	PROJ. MGR.: J.D.R.

SHEET
C-504

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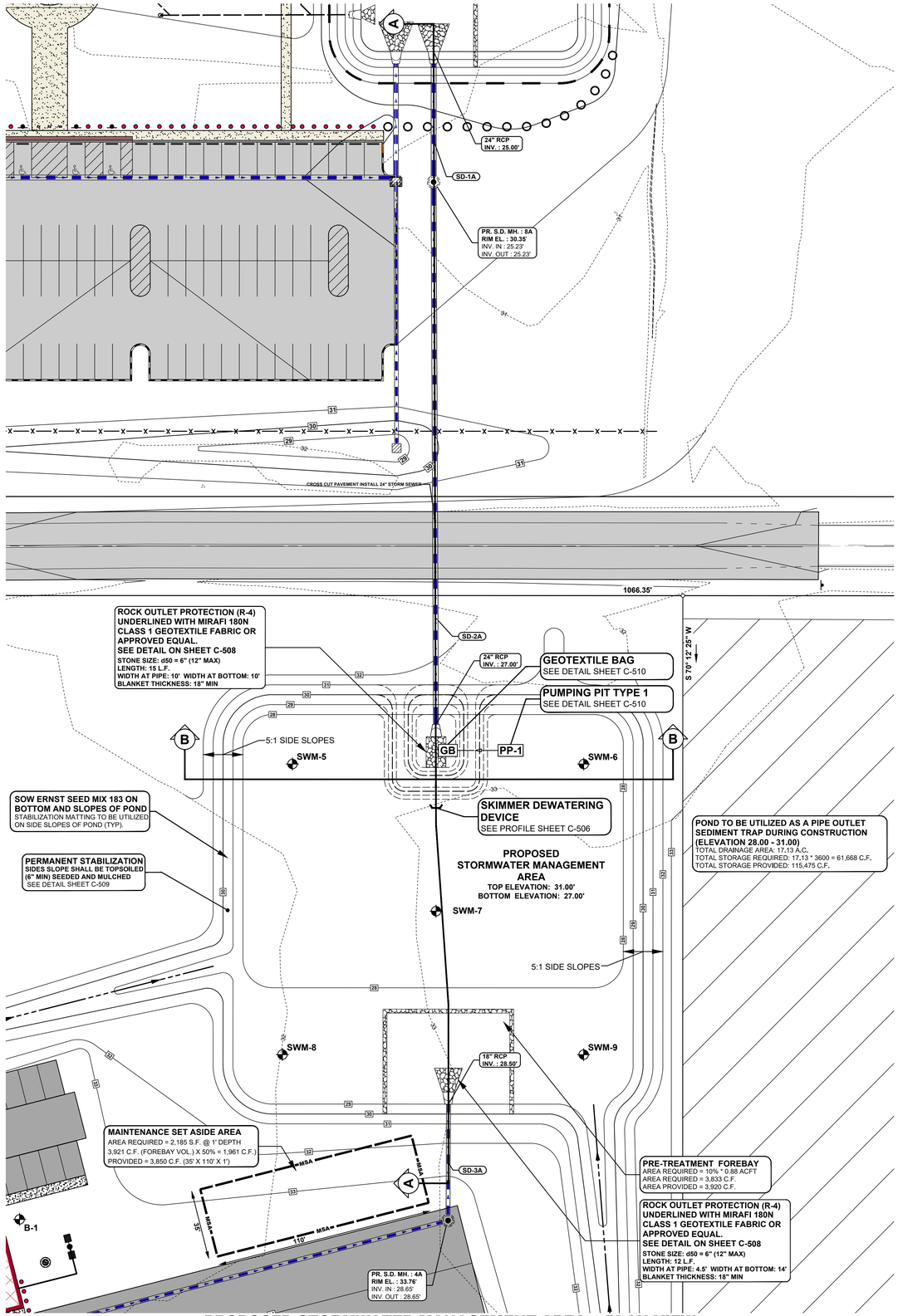

PROPOSED STORMWATER MANAGEMENT AREA - PLAN VIEW

SCALE : 1" = 30'

OPERATION AND MAINTENANCE NOTES

1. SPECIFY WHOSE RESPONSIBILITY IT WILL BE TO OPERATE AND MAINTAIN EACH POST CONSTRUCTION STORMWATER MANAGEMENT FACILITY.
2. THE DNREC SEDIMENT AND STORMWATER PROGRAM AND /OR THE RELEVANT DELEGATED AGENCY RESERVES THE RIGHT TO ENTER PRIVATE PROPERTY FOR PURPOSES OF PERIODIC SITE REVIEW.
3. THE DNREC SEDIMENT AND STORMWATER PROGRAM SHALL BE NOTIFIED WITHIN 30 BUSINESS DAYS IF THE PROPERTY OWNERSHIP IS TRANSFERRED TO A NEW PERSON OR ENTITY.
4. THE DNREC SEDIMENT ANDS STORMWATER PROGRAM MAY SEEK ENFORCEMENT ACTION AGAINST ANY OWNER DEEMED NEGLIGENT IN FULFILLING THE OPERATION AND MAINTENANCE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
5. THE DNREC SEDIMENT AND STORMWATER PROGRAM SHALL BE CONTACTED WHEN A CONCERN ARISES REGARDING ANY STORMWATER MANAGEMENT FACILITIES, BEFORE ANY NON-ROUTINE MAINTENANCE, OR IF MODIFICATIONS TO THE FACILITY ARE DESIRED.
6. ANY DESIGNED MODIFICATIONS MADE TO THE STORMWATER SYSTEM SHALL REQUIRE THE CREATION OF A NEW POST CONSTRUCTION STORMWATER MANAGEMENT PLAN AND/OR OPERATIONS AND MAINTENANCE PLAN, WITH APPROVAL OF THE PLAN(S) BY DNREC.
7. FOR ALL STORMWATER EASEMENT AREAS (I.E., ACCESS, MAINTENANCE, OR OFFSITE) AND MINIMUM 15-FOOT ACCESSWAYS TO STORMWATER FACILITIES AND THEIR STRUCTURAL COMPONENTS, REGULAR MOWING SHALL BE PREFORMED TO KEEP THE GRASS 6" TOR LESS; NO TREES OR SHRUBS SHALL BE PLANTED, AND ANY FOUND GROWING SHALL BE REMOVED; AND NO PERMANENT STRUCTURES, SUCH AS FENCES OR SHEDS, SHALL BE LOCATED WITHIN THE EASEMENT OR ACCESSWAY.
8. TREES SHALL NOT BE PLANTED, AND SHALL BE REMOVED IF FOUND GROWING, ON OR WITHIN 15 FEET OF ALL POND EMBANKMENTS, ON POND SLOPES OR SAFETY BENCHES, AND WITHIN 10 FEET OF STRUCTURAL COMPONENTS, SUCH AS PIPE INLETS.
9. WHEN THE FACILITY IS EXCAVATED TO REMOVE ACCUMULATED SEDIMENT, THE DISPOSAL AREA SHALL BE PERMANENTLY STABILIZED SO THAT IT DOES NOT RECREATE AN EROSION PROBLEM. ANY MATERIAL TAKEN OFF-SITE SHALL STILL BE UTILIZED OR DISPOSED OF IN AN APPROVED DNREC MANNER.
10. BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE, THE CONTRACTOR SHALL CALL MISS UTILITY AT 811 OR 1.800.282.8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITIES MARKED ONSITE.
11. INCLUDE ANY FACILITY SPECIFIC ROUTINE OR NON-ROUTINE MAINTENANCE, AND/OR OPERATIONAL REQUIREMENTS NOT LISTED IN THE ABOVE-MENTIONED STANDARD REQUIREMENTS FOR THE TYPE OF FACILITY. MAY INCLUDE, BUT IS NOT LIMITED TO ANY MOWING, SEDIMENT REMOVAL, PIPE INSPECTIONS, WATERING, RE-SEEDING/PLANTING, TRASH REMOVAL, ETC.
    - 11.1. THE NOTES SHALL INDICATED THE FREQUENCY OF THE MAINTENANCE INSPECTIONS.
    - 11.2. O&M SPECIFICATIONS FOR PROPRIETARY SYSTEMS MUST BE INCLUDED ON THE PLANS.
    - 11.3. ANY DETAILS NECESSARY TO COMPLETE THE O&M PROCEDURES MUST BE INCLUDED.

OPERATION AND MAINTENANCE PLAN: DRY POND

FREQUENCY	MAINTENANCE ITEMS
DURING ESTABLISHMENT, AS NEEDED (FIRST YEAR)	• INSPECT THE SITE AFTER STORM EVENT THAT EXCEEDS 0.5 INCHES OF RAINFALL. • STABILIZE ANY BARE OR ERODING AREAS IN THE CONTRIBUTING DRAINAGE AREA INCLUDING THE WET POND PERIMETER AREA • WATER TREES AND SHRUBS PLANTED IN THE WET POND VEGETATED PERIMETER AREA DURING THE FIRST GROWING SEASON. IN GENERAL, WATER EVERY 3 DAYS FOR FIRST MONTH, AND THEN WEEKLY DURING THE REMAINDER OF THE FIRST GROWING SEASON (APRIL-OCTOBER), DEPENDING ON RAINFALL.
QUARTERLY OR AFTER MAJOR STORMS (>1 INCH OF RAINFALL)	• REMOVE DEBRIS AND BLOCKAGES. • REPAIR UNDERCUT, ERODED, AND BARE SOIL AREAS
TWICE A YEAR	• MOWING OF THE DRY POND VEGETATED PERIMETER AREA AND EMBANKMENT
ANNUALLY	• SHORELINE CLEANUP TO REMOVE TRASH, DEBRIS AND FLOATABLES • A FULL MAINTENANCE REVIEW • OPEN UP THE RISER TO ACCESS AND TEST THE VALVES • REPAIR BROKEN MECHANICAL COMPONENTS, IF NEEDED.
ONE TIME - DURING THE SECOND YEAR FOLLOWING CONSTRUCTION	• DRY POND VEGETATED PERIMETER AND AQUATIC BENCH REINFORCEMENT PLANTINGS.
EVERY 5 TO 7 YEARS	• FOREBAY SEDIMENT REMOVAL
EVERY 5 TO 25 YEAR	• REPAIR PIPES, THE RISER AND SPILLWAYS, AS NEEDED • REMOVE SEDIMENT FROM WET POND AREA OUTSIDE OF FOREBAYS

SEQUENCE OF CONSTRUCTION: DRY DETENTION

1. NOTIFY THE PERSON RESPONSIBLE FOR STORMWATER SYSTEM CONSTRUCTION REVIEW AT LEAST THREE (3) DAYS PRIOR TO THE START OF STORMWATER SYSTEM CONSTRUCTION; STORMWATER FACILITIES MUST BE REVIEWED THROUGHOUT THEIR CONSTRUCTION
2. INSTALL PIPE OUTLET SEDIMENT TRAP (AS SHOWN ON C-504).
    - 2.1. CONSTRUCT PIPE OUTLET SEDIMENT TRAP TO SPECIFIED ELEVATIONS SHOWN ON THIS SHEET. AS THE FACILITY IS A STORMWATER MANAGEMENT PRACTICE, THE SITE CCR MUST BE PRESENT DURING CONSTRUCTION OF THE OUTFALL AND ALL ASSOCIATED PIPES PERTAINING TO THE OUTFALL OF THE FACILITY. UTILIZE APPROVED DEWATERING DEVICES, AS NECESSARY, (SEE SKIMMER CONNECTION TO THE OUTFALL STRUCTURE SHEET C-510.)
    - 2.2. CONSTRUCT PIPE OUTLET SEDIMENT TRAP TO SPECIFIED ELEVATIONS SHOWN ON SHEET C-506. UTILIZE APPROVED DEWATERING DEVICES, AS NECESSARY. (SEE SKIMMER CONNECTION TO THE OUTFALL STRUCTURE SHEET C-506.)
    - 2.3. INSTALL ROCK OUTLET PROTECTION ON ALL PIPES DISCHARGING FROM THE FACILITY.
    - 2.4. INSTALL OUTLET STRUCTURE, DISCHARGE PIPE & ROCK OUTLET PROTECTION IN ACCORDANCE WITH THE APPROVED PLANS. INSTALL TEMPORARY SKIMMER IN LOW-FLOW OUTLET ORIFICE.
    - 2.5. ALL OF THE SIDE SLOPES AND DISTURBED AREAS IN AND AROUND THE SEDIMENT TRAP SHALL BE STABILIZED IMMEDIATELY. INSTALL SEED MIX AND STABILIZATION MATTING ON ALL BASIN SIDE SLOPES (SEE SHEET C-505).
    - 2.6. INSTALL SEDIMENT AND EROSION CONTROL MEASURES AS SHOWN (I.E. INLET PROTECTION AND SILT FENCE) THE CONTRACTOR SHALL IMMEDIATELY BACKFILL, COMPACT, SEED, MULCH AND OTHERWISE STABILIZE DISTURBED AREAS WITHIN 14 DAYS OF INACTIVITY.
3. ONCE THE CONTRIBUTORY AREA IS STABILIZED, CONVERSION OF THE SEDIMENT TRAP TO A DRY POND MAY COMMENCE:
    - 3.1. A CCR MUST BE PRESENT DURING CONSTRUCTION OF THE FACILITY.
    - 3.2. EXCAVATE TO FINAL DESIGN ELEVATIONS. DEWATER AREA AS NECESSARY PER APPLICABLE REGULATIONS.
    - 3.3. INSTALL ALL APPURTENANCES, INCLUDING FOREBAYS AND REMAINING RIP-RAP.
    - 3.4. ENSURE FINAL OUTLET STRUCTURE IS INSTALLED PER THE APPROVED DESIGN.
4. SEED AND STABILIZE THE FACILITY AND ADJACENT AREAS. SEE SHEET C-500 FOR SEED MIXTURES. OVERSEED POND SIDE SLOPES WITH PERMANENT SEEDING MIXTURES.
5. TEMPORARY SKIMMER DEVICE SHOULD ONLY BE REMOVED WITH DNREC APPROVAL.
6. THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF THE POST CONSTRUCTION VERIFICATION DOCUMENTS, INCLUDING FINAL STABILIZATION THROUGHOUT THE SITE, ALL ELEMENTS OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.
7. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING AS-BUILT PLANS TO DNREC WITHIN 30 DAYS OF COMPLETION.

SWM POND 1 DATA	
POND ELEVATION	AREA (S.F.)
BOTTOM EL. : 27.00'	0 S.F.
EL. : 28.00'	26,302 S.F.
EL. : 29.00'	40,810 S.F.
EL. : 30.00'	46,705 S.F.
TOP EL. : 31.00'	53,123 S.F.

SWM POND 1 STORAGE DATA		
STORM	DESIGN ELEV.	STORAGE
RPV - 2.7"	27.70'	6,388 C.F.
CV - 5.2"	28.15'	17,232 C.F.
FV - 8.9"	29.55'	69,892 C.F.

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS LICENSE No. 18832 DELAWARE PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

POST - CONSTRUCTION STORMWATER MANAGEMENT PLAN B.M.P.

0 10 20 40

SCALE: 1" = 20'

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C-505

PROJECT NO.: 2022235.00
DATE: 02-17-2026
SCALE: 1" = 20'

DRAWN BY: **J.N.K.** | PROJ. MGR.: **J.D.R.**

SHEET

C-505

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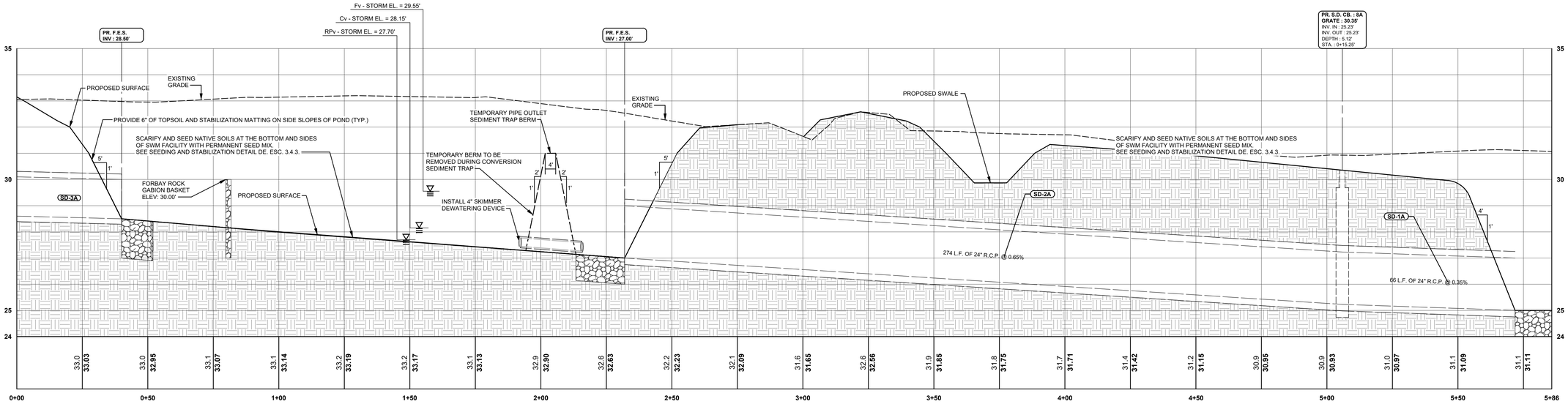
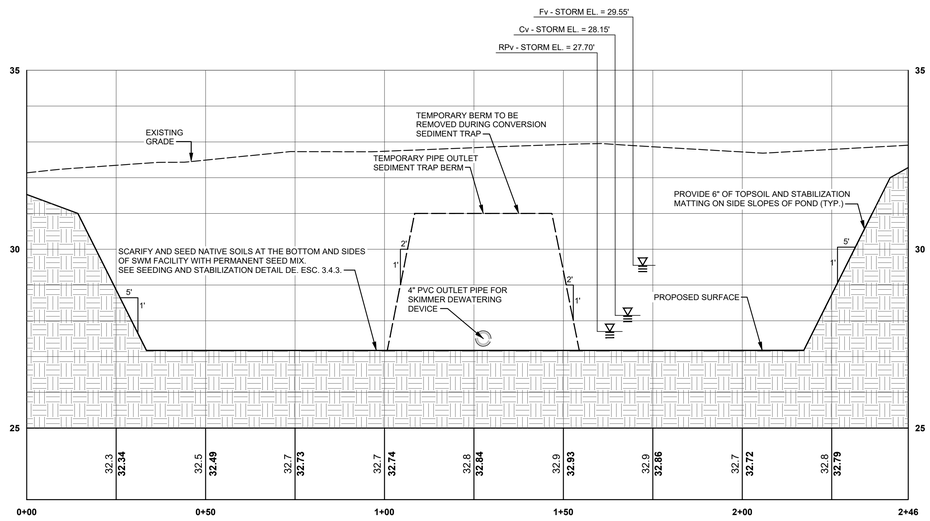


PROPOSED STORMWATER MANAGEMENT AREA - SECTION A-A 0+00.00 - 5+85.81

SCALE : 1" = 20'
VERTICAL SCALE : 1" = 2'

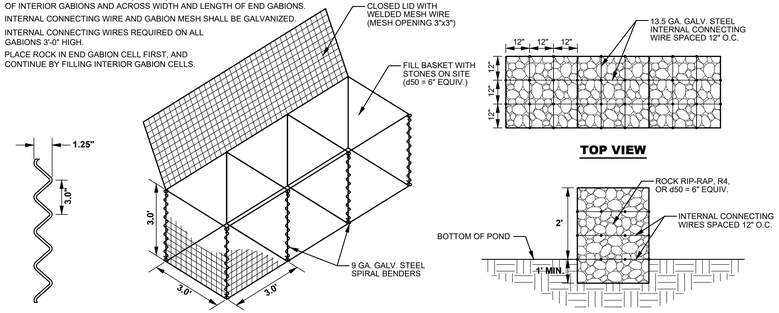


PROPOSED STORMWATER MANAGEMENT AREA - SECTION B-B

SCALE : 1" = 20'
VERTICAL SCALE : 1" = 2'

NOTES :

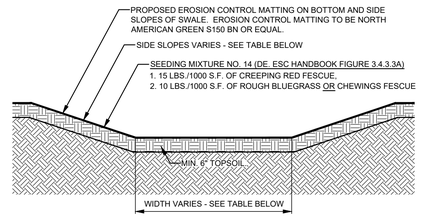
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. INTERNAL CONNECTING WIRES (13.5-GA.) TO BE INSTALLED ACROSS WIDTH OF INTERIOR GABIONS AND ACROSS WIDTH AND LENGTH OF END GABIONS.
3. INTERNAL CONNECTING WIRE AND GABION MESH SHALL BE GALVANIZED.
4. INTERNAL CONNECTING WIRES REQUIRED ON ALL GABIONS 3'-0" HIGH.
5. PLACE ROCK IN END GABION CELL FIRST, AND CONTINUE BY FILLING INTERIOR GABION CELLS.



SPIRAL BENDER **ISOMETRIC** **TOP VIEW** **CROSS-SECTION**

ROCK GABION BASKET FOREBAY WALL (TYP.)

NO SCALE



DITCH PARAMETERS

DITCH #	BTM. WIDTH	SIDE SLOPES	LENGTH	SLOPE
1	4 FT.	4:1	585 L.F.	0.75 %
2	4 FT.	6:1	232 L.F.	0.75 %
3	4 FT.	5:1	400 L.F.	1.00 %
4	4 FT.	4:1	800 L.F.	0.75 %

DITCH CROSS SECTION DETAIL

NO SCALE

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ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
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1	05/08/26	AGENCY COMMENTS ADDRESSED

LAYER STATE: C-505

PROJECT NO.: 2022235.00
DATE: 02-16-2026
SCALE: 1" = 20'
DRAWN BY: **J.N.K.** PROJ. MGR.: **J.D.R.**

SHEET
C-506

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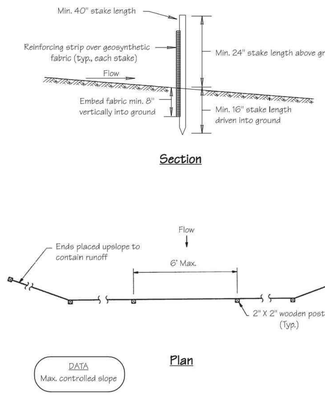
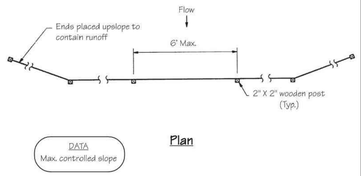
Standard Detail & Specifications

Silt Fence



Section



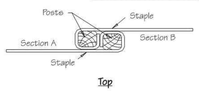
Plan

Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	SF	DE-ESC-3.1.2.1 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Silt Fence

Construction Detail



Method for joining continuous sections

Top

Construction Notes:

1. Geosynthetic fabric to be fastened securely to fence posts with wire ties or staples.
2. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
3. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

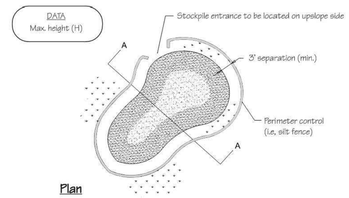
Materials:

1. Stakes: Steel (either T or U) or 2" x 2" hardwood
2. Geosynthetic Fabric: Type GD-I
3. Reinforcing strip: Wooden lath or plastic strip

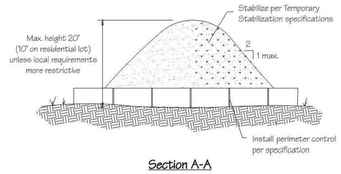
Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	SF	DE-ESC-3.1.2.1 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Soil Stockpile



Plan



Section A-A

Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	SP	DE-ESC-3.7.3 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Soil Stockpile

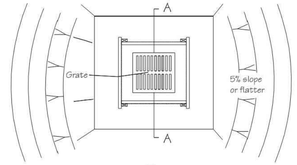
Construction Notes:

1. Locate stockpiles so that they are 50 feet from any storm drain inlet, open channel, wetland or waterbody. Redirect any concentrated flow around the stockpile using an approved erosion and sediment control measure.
2. Secure the perimeter of the stockpile with an approved erosion and sediment control perimeter device.
3. If stockpile is to remain inactive for more than 14 calendar days, the stockpile must be vegetated. Follow the temporary vegetation specifications. The vegetation chosen shall last the duration of the stockpile; the stockpile shall be restabilized if the temporary vegetation dies or erosion results.

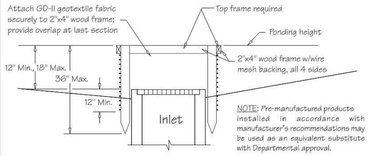
Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	SP	DE-ESC-3.7.3 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Inlet Protection - Type 1



Plan



Section A-A

Source:	Symbol:	Detail No.
Adapted from Erosion Draw Manual J. McCullah & Assoc.	IP-1	DE-ESC-3.1.5.1 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Inlet Protection - Type 1

Construction Notes:

1. Excavate completely around inlet to a depth of 18" below grate elevation.
2. Drive 2" x 4" post 1' into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2" x 4" frame using overlap joint shown. Top of frame (weir) must be 6" below edge of roadway adjacent to inlet.
3. Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
4. Stretch geotextile fabric tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet grate elevation. Fasten securely to frame. Ends must meet at post, be overlapped and folded, then fastened down.
5. Backfill around inlet in compacted 6" layers until at least 12" of geotextile fabric is buried.
6. If the inlet is not in a low point, construct a compacted earth dike in the ditchline below it. The top of this dike is to be at least 6" higher than the top of frame (weir).
7. This structure must be inspected frequently and the filter fabric replaced when clogged.

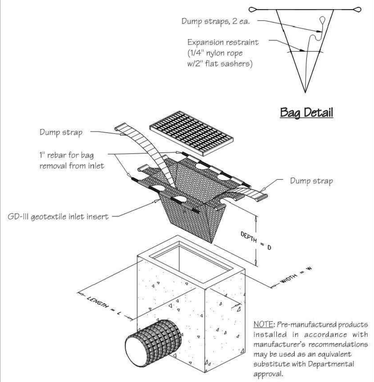
Materials:

1. Wooden frame is to be constructed of 2" x 4" construction grade lumber.
2. Wire mesh must be of sufficient strength to support filter fabric with water fully impounded against it.
3. Geotextile fabric: Type GD-II

Source:	Symbol:	Detail No.
Adapted. from Erosion Draw Manual J. McCullah & Assoc.	IP-1	DE-ESC-3.1.5.1 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Inlet Protection - Type 2



Bag Detail

Perspective

Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	IP-2	DE-ESC-3.1.5.2 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Inlet Protection - Type 2

Notes:

1. This practice shall only be used in situations in which Inlet Protection - Type 1 cannot be used due to site constraints. These include, but are not limited to partially completed parking areas, streets, roads, etc.
2. It may be necessary to transition from Type 1 to Type 2 Inlet Protection as construction proceeds.
3. For areas where there is a concern for oil run-off or spills, insert shall meet one of the above specifications with an oil-absorbant pillow or shall be made completely from an oil-absorbant material with a woven pillow.

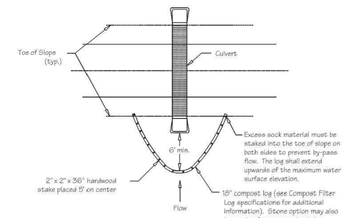
Materials:

The geotextile inlet insert shall meet or exceed the specifications of Type GD-III geotextile in accordance with Appendix A-3 of the Delaware Erosion & Sediment Control Handbook.

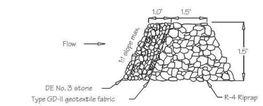
Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	IP-2	DE-ESC-3.1.5.2 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Culvert Inlet Protection



Plan View - Compost Log Option



Section View - Stone Option

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook & Filtrexx™ International	CIP	DE-ESC-3.1.6 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Culvert Inlet Protection

Construction Notes

1. Compost logs shall be designed and installed in accordance with the Standard Detail and Specifications for Compost Logs (DE-ES-3.1.7).
2. If compost logs can not be installed properly or flow conditions exceed the design capabilities of the compost logs, the stone option shall be employed. Additional filtration may be provided by using a Type GD-II geotextile incorporated into the design as an option.
3. Placement of the compost log or stone barrier should be in a "horseshoe" shape and provide a minimum of 6 feet of clearance from the culvert inlet.

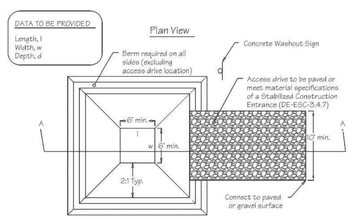
Materials

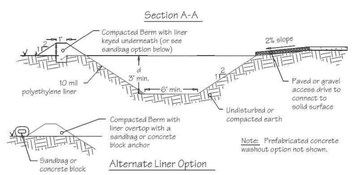
1. Stakes: 2" x 2" x 36" hardwood.
2. Compost media : See requirements in Standard Detail and Specifications for Compost Logs (DE-ES-3.1.7).
3. Filter sock: See requirements in Standard Detail and Specifications for Compost Logs (DE-ES-3.1.7).
4. Geotextile: Type GD-II for stone/riprap option.
5. Stone: DE No. 3 for stone/riprap option.
6. Riprap: R-6 for stone/riprap option.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook & Filtrexx™ International	CIP	DE-ESC-3.1.6 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Concrete Washout





Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	CW	DE-ESC-3.6.2 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Concrete Washout

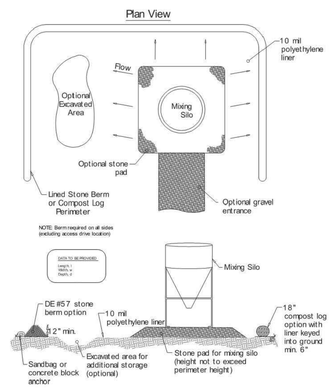
Construction Notes:

1. Locate washout area a minimum of 50 feet from open channels, stormdrain inlets, wetlands or waterbodies.
2. Locate washout area so that it is accessible to concrete equipment (service with a minimum 10 foot wide gravel accessway), but so it is not in a highly active construction area causing accidental damage.
3. Minimum dimensions for prefabricated units are 4 feet by 4 feet by 1 foot deep with a minimum 4mil polyethylene plastic liner. Minimum dimensions for constructed concrete washout areas are 6 feet by 6 feet by 3 feet deep, with a minimum 10mil polyethylene liner, 2:1 side slopes, and a 1 foot high by 1 foot wide compacted fill berm.
4. The liner must be free of tears or holes and placed over smooth surfaces to prevent puncturing. For excavated washouts, anchor the liner underneath the berm or overtop with sandbags or concrete blocks to hold in place.
5. Provide a sign designating the washout area, and for large construction sites, provide signs throughout directing traffic to its location.
6. Allow washed out concrete mixture to harden through evaporation of the wastewater. Once the facility has reached 75 percent of its capacity, remove the hardened concrete by reusing the broken aggregate onsite, recycling, or disposing of offsite. The hardened material can be buried on site with minimum of 1 foot of clean, compacted fill.
7. Apply a new liner before reusing the station for additional washouts after maintenance has occurred.

Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drainage Criteria Manual, Vol 3	CW	DE-ESC-3.6.2 Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Concrete Mixing Operation



Section View

Source:	Symbol:	Detail No.
Adapted from MN/DOT Concrete Manual, Chap. 4	CMO	DE-ESC-3.6.3 Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Concrete Mixing Operation

Construction Notes:

1. Locate concrete mixing and containment area a minimum of 50 feet from open channels, stormdrain inlets, wetlands or waterbodies.
2. Locate concrete mixing and containment area so that it is accessible to telescopic lifts (service with a minimum 10 foot wide gravel or paved accessway), but so it is not in a highly active construction area causing accidental damage.
3. Minimum volume for installed containment areas are 3.5 cubic feet per cubic foot of mixing capacity. The installed containment area must encompass the storage silo and mixing unit, and be surround on three sides minimum by a 12" high stone berm (DE #57) or 18" compost log
4. The 10-mil poly liner must be free of tears or holes and placed over smooth surfaces to prevent puncturing. The liner shall cover the perimeter control and be secured on the backside using cement or sandbags, or keyed into the ground a minimum of 6".
5. Allow cementitious waste to harden through evaporation of the wastewater. Once the facility has reached 75 percent of its capacity, remove the hardened concrete by reusing the broken aggregate onsite, recycling, or disposing of offsite. The hardened material can be buried on site with minimum of 1 foot of clean, compacted fill.
6. Apply a new liner before reusing the station for additional mixing after maintenance has occurred.

Source:	Symbol:	Detail No.
Adapted from MN/DOT Concrete Manual, Chap. 4	CMO	DE-ESC-3.6.3 Sheet 2 of 2 Effective January 2026

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS LICENSE No. 18832 DELAWARE PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE

EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONSTRUCTION SITE DETAILS AND NOTES

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C507

PROJECT NO.: 2022235.00
DATE: 02/17/2026
SCALE: NONE
DRAWN BY: **J.N.K.** PROJ. MGR.: **J.D.R.**

SHEET

C-507

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F:\AutoCAD\Projects\2022\2022235\DWG\2022235-DETAILS-EVOC.dwg, Aug 27, 2026 - 4:06pm

Standard Detail & Specifications

Construction Site Pollution Prevention

Delaware NPDES Discharge Permit
General Permit for Discharge of Stormwater from Construction Activities

((Project Name))

((NOI Permit Number))

((Agency Plan Approval ID))

((Contact Name & Number for Additional Site Information))

((Contact Name & Number to Obtain Copy of Approved Plan))

If you observe indicators of stormwater pollutants in the discharge or in the receiving waterbody, call the DNREC Spill Notification 24 HR Hotline at

1-800-662-8802

Example Construction General Permit (CGP) Signage

NOTES:

1. Minimum sign size 2' x 2'
2. Minimum text size 1"
3. Sign must be posted at a safe, publicly accessible location close to construction site
4. Sign must be visible from the public road nearest the active construction site
5. Signs posted within a DelDOT or other public road right-of-way (ROW) must be in accordance with all local and/or State requirements in regards to safety, location, orientation, etc.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.1** Sheet 1 of 3 Effective January 2026

Standard Detail & Specifications

Construction Site Pollution Prevention

1) Equipment and Vehicle Fueling and Maintenance

a. Minimize spills and leaks of fuels and oils.
   i. Fuel only in marked areas a minimum of 50 feet away from drains and watercourses. Use automatic shut-off nozzles and do not top off tanks. Provide lighting if fueling at night.
   ii. Use berms or other barriers around fueling, maintenance, and parking areas to prevent stormwater from running through and to contain spills. Use drip pans during maintenance.
   iii. Take equipment and vehicles to off-site facilities for maintenance when possible.
   iv. Check vehicles and equipment daily for leaks. Repair immediately or remove from site.
   v. Clean up any spills right away. Do not hose them down.
b. Keep absorbent materials and spill kits on site, especially in fueling and storage areas.
c. Dispose of or recycle used oil, fluids, lubricants, and cleanup materials according to manufacturer instructions and all local, state, and federal regulations.

2) Equipment and Vehicle Washing

a. Minimize discharge of pollutants from wash water.
   i. Use off-site commercial wash facilities when possible.
   ii. If washing on-site, use high-pressure water without detergents in a contained area with an impervious berm.
   iii. Dispose of concrete washout water only in designated washout areas for hardening and proper disposal.
b. Do not discharge soaps, solvents, or detergents.
c. Store soaps, detergents, and solvents under cover (e.g., plastic sheeting, temporary roofs) or use another effective method to prevent contact with stormwater.

3) Storage, Handling, and Disposal of Building Products, Materials, and Waste

a. Minimize exposure of materials, products, and waste to rain, stormwater, and wind.
b. Building materials and products:
   i. Cover materials (e.g., plastic sheeting, tarp, or roof) to prevent contact with rain and stormwater. Final building materials and products intended for outdoor use do not require cover.
   ii. Secure materials (e.g., tarp, mesh, or lidded dumpster) to protect from wind.

Source:	Symbol:	Detail No.
Adapted from USEPA CGP 2022 (as modified)		**DE-ESC-3.6.1** Sheet 2 of 3 Effective January 2026

Standard Detail & Specifications

Construction Site Pollution Prevention

c. Construction and domestic waste:
   i. Provide enough containers (e.g., dumpsters, trash bins) to hold all waste.
   ii. Keep container lids closed when not in use and during storms.
   iii. For containers without lids, cover with a tarp or temporary roof to prevent exposure to rain and wind.
   iv. Do not dump or allow liquid wastes (e.g., paint, solvents, chemicals) to enter the ground, drains, or waterways.
d. Dispose of waste in designated containers and clean up loose trash immediately.
e. Empty dumpsters when at 80% capacity by volume.
f. Waste containers are not required for final building materials and products if stored separately from other construction, domestic or other waste. If mixed, the waste must be managed as construction and domestic waste in Section 3(c).

4) Hazardous Materials, Other Chemicals and Sanitary Waste:

a. Store hazardous materials and chemicals under cover or in secondary containment, at least 50 feet from drains or waterways.
b. Keep containers labeled, sealed, watertight, and closed when not in use.
c. Store contaminated waste in sealed, labeled containers made of suitable material.
d. Dispose of hazardous materials according to Delaware laws and regulations.
e. Post spill reporting contact information clearly on site.

5) Pesticides, Herbicides, Fertilizers, and Landscape Material:

a. Keep all products labeled and covered (e.g., plastic sheeting or temporary roofs) to prevent contact with rain and stormwater.
b. Provide similarly effective protection methods, such as storing fertilizer in a weatherproof area or on a covered pallet, to minimize polluted run-off.
c. Apply all products according to state and federal regulations.

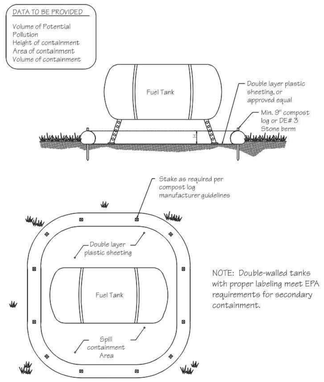
CONTACT INFORMATION

DNREC 24-Hour Toll Free Number	**800-662-8802**
DNREC Solid & Hazardous Waste Management Section	**302-739-9403**

Source:	Symbol:	Detail No.
Adapted from USEPA CGP 2022 (as modified)		**DE-ESC-3.6.1** Sheet 3 of 3 Effective January 2026

Standard Detail & Specifications

Fueling & Spill Control



Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.4** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Fueling & Spill Control

Pollution Prevention – Fueling & Spill Control

1. Fueling should only take place in signed designated areas, away from downstream drainage facilities and watercourses.
2. Fueling must be with nozzles equipped with automatic shut-off to control drips. Do not top off.
3. Protect the areas where equipment or vehicles are being repaired, maintained, fueled or parked from storm water run-on and runoff.
4. Use barriers such as berms to prevent storm water run-on and runoff, and to contain spills.
5. Place a "Fueling Area" sign next to each fueling area.
6. Store hazardous materials such as fuel, solvents, oil and chemicals in secondary containment.
7. Inspect vehicles and equipment for leaks on each day of use. Repair fluid and oil leaks immediately.
8. Absorbent spill clean-up materials and spill kits must be available in fueling areas and on fuel trucks.
9. If fueling is to take place at night, make sure the fueling area is sufficiently illuminated.
10. Properly dispose of used oil, fluids, lubricants and spill clean-up materials.

CLEAN UP SPILLS

1. If it is safe to do so, immediately contain and clean up any chemical and/or hazardous material spills.
2. Properly dispose of used oil, fluids, lubricants and spill clean-up materials.
3. Do not bury spills or wash them down with water.

LEAKS AND DRIPS

1. Use drip pans or absorbent pads at all times. Place under and around leaky equipment.
2. Do not allow oil, grease, fuel or chemicals to drip onto the ground.
3. Have spill kits and clean up material on-site.
4. Repair leaky equipment promptly or remove problem vehicles and equipment from the site. Clean up contaminated soil immediately.
5. Store contaminated waste in sealed containers constructed of suitable material. Label these containers properly.
6. Clean up all spills and leaks. Promptly dispose of waste and spent clean up materials.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.4** Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Fueling & Spill Control

Pollution Prevention – Fueling & Spill Control

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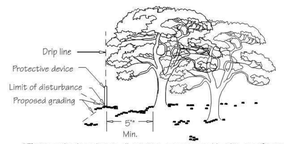
Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.6.4** Sheet 2 of 2 Effective January 2026

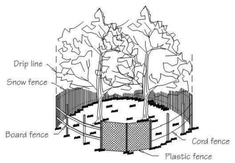
Standard Detail & Specifications

Sensitive Area Protection



"5' min. setback applies to all sensitive areas covered by this specification.

Location of Sensitive Area Protection



Methods of Sensitive Area Protection

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SAP	**DE-ESC-3.7.2** Sheet 1 of 3 Effective January 2026

Standard Detail & Specifications

Sensitive Area Protection

Construction Notes:

Fencing shall be installed at the extents of all sensitive areas. For trees, the fencing shall be installed outside the dripline (mature canopy) and at no time within 5 feet of the trunk. Personnel must be instructed to honor protective devices. The devices described are suggested only, and are not intended to exclude the use of other devices which will protect the trees to be retained. If silt fence is to be used for demarcation purposes, appropriate signage shall be provided a minimum of every 20 feet denoting the area as a sensitive area protection zone.

Materials:

1. Snow Fence - Standard 40-inch high snow fence shall be placed at the limits of clearing or construction on standard steel posts set 6 feet apart.
2. Board Fence - Board fencing consisting of 4-inch square posts set securely in the ground and protruding at least 4 feet above the ground shall be placed at the limits of clearing with a minimum of two horizontal boards between posts. For tree protection, if it is not practical to erect a fence at the drip line, construct a triangular fence nearer the trunk. The limits of clearing will still be located at the drip line, since the root zone within the drip line will still require protection.
3. Plastic Fencing - 40-inch high "international orange" plastic (polyethylene) web fencing secured to conventional metal "T" or "U" posts driven to a minimum depth of 18 inches on 6-foot minimum centers shall be installed at the limits of clearing. The fence should have the following minimum physical qualities:

a.	Tensile yield:	Average 2,000 lbs. per 4-foot width (ASTM D638)
b.	Ultimate tensile yield:	Average 2,900 lbs. per 4-foot width (ASTM D638)
c.	Elongation at break (%):	Greater than 1000% (ASTM D638)
d.	Chemical resistance:	Inert to most chemicals and acids

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SAP	**DE-ESC-3.7.2** Sheet 2 of 3 Effective January 2026

Standard Detail & Specifications

Sensitive Area Protection

4. Cord Fence - Posts with a minimum size of 2 inches square or 2 inches in diameter set securely in the ground and protruding at least 4 feet above the ground shall be placed at the limits of clearing with two rows of cord 1/4-inch or thicker at least 2 feet apart running between posts with strips of colored surveyor's flagging tied securely to the string at intervals no greater than 3 feet.
5. Earth Berms - Temporary earth berms shall be constructed according to specifications for a Temporary Earth Dike with the base of the berm on the sensitive area side located along the limits of clearing. Earth berms may not be used for this purpose if their presence will conflict with drainage patterns.
6. Trunk Armoring (Tree Protection Only) - As a last resort, a tree trunk can be armored with burlap wrapping and 2-inch studs wired vertically no more than 2 inches apart to a height of 5 feet encircling the trunk. If this alternative is used, the root zone within the drip line will still require protection. Nothing should ever be nailed to a tree.

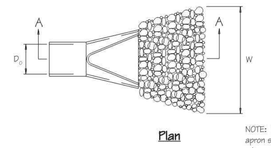
Maintenance:

Fencing and armoring devices shall be in place before any excavation or grading is begun, shall be kept in good repair for the duration of construction activities, and shall be the last items removed during the final cleanup after the completion of the project.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SAP	**DE-ESC-3.7.2** Sheet 3 of 3 Effective January 2026

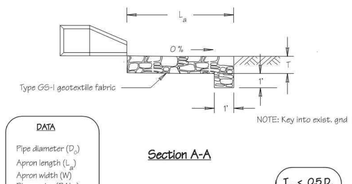
Standard Detail & Specifications

Riprap Outlet Protection - 1



Plan

NOTE: Depress centerline of apron slightly to prevent edge-cutting



DATA
Pipe diameter (D_o)
Apron length (L_a)
Apron width (W)
Riprap size (R No.)
Riprap thickness (T)

Section A-A

$T_W < 0.5\,D_o$

Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	ROP-1	**DE-ESC-3.3.10.1** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Riprap Outlet Protection - 1

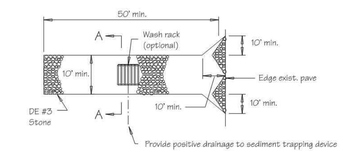
Construction Notes:

1. The subgrade for the riprap shall be prepared to the required lines and grades as shown on the plan. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
2. The riprap shall conform to the grading limits as shown on the plan.
3. Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged area. All connecting joints should overlap a minimum of 1 ft. If the damage is extensive, replace the entire filter cloth.
4. Stone for the riprap or gabion outlets may be placed by equipment. Riprap shall be placed in a manner to prevent damage to the filter cloth. Hand placement will be required to the extent necessary to prevent damage to the conduits, structures, etc.

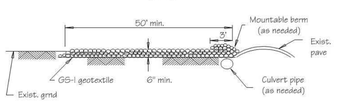
Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	ROP-1	**DE-ESC-3.3.10.1** Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

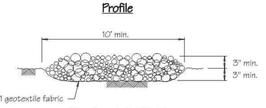
Stabilized Construction Entrance



Plan



Profile

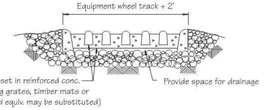


Section A-A (Std.)

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SCE	**DE-ESC-3.4.7** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Stabilized Construction Entrance



Section A-A (Opt.)

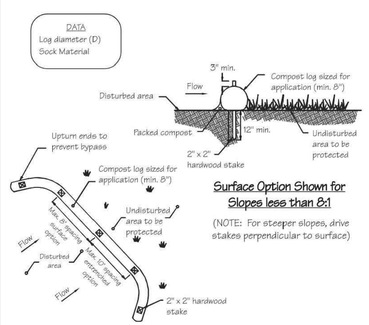
Construction Notes:

1. Stone size - Use DE #3 stone.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than size (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Geotextile - Type GS-I; placed over the entire area prior to placing of stone.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Vehicle wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Inspection - Periodic inspection and needed maintenance shall be provided after each rain.

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SCE	**DE-ESC-3.4.7** Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Compost Filter Log



Surface Option Shown for Slopes less than 8:1

(NOTE: For steeper slopes, drive stakes perpendicular to surface)

Plan

NOTE: Manufacturer's recommendations supersede any installation details shown for this practice

Source:	Symbol:	Detail No.
Adapted from MD Stds & Specs for ESC & Filtrexx™ International	CFL	**DE-ESC-3.1.7** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Compost Filter Log

Construction Notes:

1. Prior to installation, clear bedding area of obstructions including rocks or debris larger than 1 inch and fill in any sharp depression areas.
2. If socks are prepared on-site, fill the sock fabric using a pneumatic blower so that the logs are rigid and do not deform. Terminate at the desired length.
3. For trenched applications, excavate 2 to 4 inches below grade along the width and length of the compost filter log.
4. Install the compost filter logs perpendicular to the flow direction and parallel to the slope with the beginning and end of the installation pointing up the slope a minimum of 1 foot elevation difference. On sites where this is not possible, upturn at a minimum length of 10' at a 30 degree angle to prevent runoff bypass.
5. For untrenched applications, blow or hand pack soil, mulch, or compost on the upslope side of the log, filling the bottom void area.
6. Stake the filled log every 10 feet maximum through the center of the sock for trenched applications, or every 8 feet for untrenched. The stake shall be a 2" by 2" hardwood. It should extend 12" below grade and protrude at least 3" above the top of the sock. If located on a slope greater than 8:1, the stake shall be angled downslope at a 45 degree angle to prevent the force of the water from dislodging to log.
7. When the length of the compost filter log needed exceeds the available compost filter sock length, the next sock shall be overlapped a minimum of 12" before being filled, and a stake placed through both socks at the overlap.
8. Remove accumulated sediment when it has reached half of the effective height of the log.
9. Inspect weekly and after rain event. If sock is degrading or the sock is failing, vegetate to secure the compost, replace the log, or reinforce with an additional log. If the log has been crushed due to construction equipment, it can be "fluffed" back to its effective height. If the effective height can no longer be restored, the log shall be replaced or reinforced with an additional compost filter log.

Source:	Symbol:	Detail No.
Adapted from MD Stds & Specs for ESC & Filtrexx™ International	CFL	**DE-ESC-3.1.7** Sheet 2 of 2 Effective January 2026

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950

The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS — LICENSE — No. 18832 — DELAWARE PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE
EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONSTRUCTION SITE DETAILS AND NOTES

ISSUE BLOCK

MARK	DATE	DESCRIPTION
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED

LAYER STATE: C-507

PROJECT NO.: 2022235.00
DATE: 02/17/2026
SCALE: NONE
DRAWN BY: **J.N.K.** PROJ. MGR.: **J.D.R.**

SHEET
C-508

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Standard Detail & Specifications

Topsoiling

Construction Notes:

1. **Site Preparation** (Where Topsoil is to be added)

   Note: When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, waterways and sediment basins.

   a. Grading - Grades on the areas to be topsoiled which have been previously established shall be maintained.

   b. Liming - Where the topsoil is either highly acid or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet). Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

   c. Tilling - After the areas to be topsoiled have been brought to grade, and immediately prior to dumping and spreading the topsoil, the subgrade shall be loosened by discing or by scarifying to a depth of a least 3 inches to permit bonding of the topsoil to the subsoil. Pack by passing a bulldozer up and down over the entire surface area of the slope to create horizontal erosion check slots to prevent topsoil from sliding down the slope.

2. **Topsoil Material and Application**

   Note:Topsoil salvaged from the existing site may often be used but it should meet the same standards as set forth in these specifications. The depth of topsoil to be salvaged shall be no more than the depth described as a representative profile for that particular soil type as described in the soil survey published by USDA-SCS in cooperation with Delaware Agricultural Experimental Station.

Source:	Symbol:	Detail No.
USDA - NRCS		**DE-ESC-3.4.1** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Topsoiling

Construction Notes (cont.)

a. Materials - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand or other soil as approved by an agronomist or soil scientist. It shall not have a mixture of contrasting textured subsoil and contain no more than 5 percent by volume of cinders, stones, slag, coarse fragment, gravel, sticks, roots, trash or other extraneous materials larger than 1-1/2 inches in diameter. Topsoil must be free of plants or plant parts of bermudagrass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistles, or others as specified. All topsoil shall be tested by a reputable laboratory for organic matter content, pH and soluble salts. A pH of 6.0 to 7.5 and an organic content of not less than 1.5 percent by weight is required. If pH value is less than 6.0 lime shall be applied and incorporated with the topsoil to adjust the pH to 6.5 or higher. Topsoil containing soluble salts greater than 500 parts per million shall not be used.

Note: No sod or seed shall be placed on soil which has been treated with soil sterilant or chemicals used for weed control until sufficient time has elapsed to permit dissipation of toxic materials.

b. Grading - The topsoil shall be uniformly distributed and compacted to a minimum of four (4) inches. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets. Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

Note:Topsoil substitutes or amendments as approved by a qualified agronomist or soil scientist, may be used in lieu of natural topsoil. Compost material used to improve the percentage of organic matter shall be provided by a certified supplier.

Compost amendments that are intended to meet specific post-construction stormwater management goals shall further meet the requirements of **Appendix 3.06.2 Post Construction Stormwater Management BMP Standards and Specifications, Section 14.0 Soil Amendments.**

Source:	Symbol:	Detail No.
USDA - NRCS		**DE-ESC-3.4.1** Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Vegetative Stabilization

TEMPORARY SEEDING BY RATES, DEPTHS AND DATES

Mix #	Species[5]	Seeding Rate		Optimum Seeding Dates [1] O = Optimum Planting Period. A = Acceptable Planting Period								Planting Depth[7]
				Coastal Plain			Piedmont			All		
	Certified Seed	lb/Ac.[4]	lb/1000 sq.ft.	2/1-4/30	3/1-8/14	8/15-10/31	3/1-4/30	5/1-7/31	8/1-10/31	10/31-2/1		
1	Barley	125	4	O	A	O	O	A	O			1-2 inches 2-3" sandy soils
2	Oats	125	4	O	A	A	O	A	A			1-2 inches 2-3" sandy soils
3	Rye	125	4	O	A	O	O	A	O	A		1-2 inches 2-3" sandy soils
4	Perennial Ryegrass	125	4	O	A	A	O	A	O			0.5 inches 1-2" sandy soils
5	Annual Ryegrass	125	4	O	A	A	O	A	O	A		0.5 inches 1-2" sandy soils
6	Winter Wheat	125	4	O	A	A	O	A	O	A		1-2 inches 2-3" sandy soils
7	Foxtail Millet	30 PLS	0.7			O			O			0.5 inches 1-2" sandy soils
8	Pearl Millet	20 PLS	0.5			O			O			0.5 inches 1-2" sandy soils

1. Winter seeding requires 3 tons per acre of straw mulch for proper stabilization.
2. May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
3. Applicable on slopes 3:1 or less.
4. Use varieties currently recommended for Delaware. Contact a County Extension Office for information.
5. Warm season grasses such as Millet may be used between 5/1 and 9/1 if desired. Seed at 3-5 lbs. per acre. Good on low fertility and acid areas. Seed after frost through summer at a depth of 0.5".

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 1 of 4 Effective January 2026

Standard Detail & Specifications

Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES

Mix No.	Seeding Mixtures: Certified Seed[6] / Well Drained Soils	Seeding Rate[1] lb/Ac	lb/1000 sq.ft.	Optimum Seeding Dates [2] O = Optimum Planting Period. A = Acceptable Planting Period. Coastal Plain 2/1-4/30	Coastal Plain 5/1-8/14	Piedmont 8/15-10/31	Piedmont 3/1-4/30	Piedmont 5/1-7/31	All[3] 8/1-10/31	All[3] 10/31-2/1	Remarks
1	Tall Fescue Canada Wild Rye	140 10	3.2 0.23	A	O	A	A	O	A	Add 100 lbs./ac. Winter Rye	Good erosion control mix Tolerant of low fertility soils Good for droughty sites
2	Deertongue Sheep Fescue White Clover	30 30 10	0.69 0.69 0.35	A	O	A	A	O	A	Add 100 lbs./ac. Winter Rye	Good erosion control mix Tolerant of low fertility soils Legume that fixes atmospheric N into soil
3	Tall Fescue (Turf-type) **or** Strong Creeping Red Fescue **or** Perennial Ryegrass plus Fixlizer[3]	50 50 50 15	1.15 1.15 1.15 0.34	O	A*	O	O	A*	O	Add 100 lbs./ac. Winter Rye	Good erosion control mix Tall Fescue for droughty conditions. Creeping Red Fescue for heavy shade. Fixlizer to suppress woody vegetation.
4	Strong Creeping Red Fescue Kentucky Bluegrass Perennial Ryegrass **or** Redtop plus White Clover[3]	100 70 15 5 3	2.3 1.61 0.35 0.11 0.07	O	A*	O	O	A*	O	Add 100 lbs./ac. Winter Rye	Suitable waterway mix. Canada Bluegrass more drought tolerant. Use Redtop for increased drought tolerance.
5	Switchgrass[4] **or** Coastal Panicgrass Big Bluestem Little Bluestem Indian Grass	10 10 5 5 5	0.23 0.23 0.11 0.11 0.11		O			O			Native warm-season mixture. Tolerant of low fertility soils. Drought tolerant. Poor shade tolerance. N fertilizer discouraged - weeds
6	Tall Fescue (turf-type) (Blend of 3 cultivars)	150	3.5	O	A*	O	O	A*	O		Managed filter strip for nutrient uptake.
7	Tall Fescue Ky. Bluegrass (Blend) Perennial Ryegrass	150 20 20	3.5 0.46 0.46	O	A*	O	O	A*	O		Three cultivars of Kentucky Bluegrass. Traffic tolerant.
8	Big Bluestem[3] Indian Grass[3] Little Bluestem[3] Creeping Red Fescue **plus one of:** Partridge Pea Bush Clover Wild Indigo Showy Tick-Trefoil	10 10 8 30 5 3 3 2	0.23 0.23 0.18 0.69 0.11 0.07 0.07 0.05	O	A*		O	A*			All species are native. Indian Grass and Bluestem have fluffy seeds. Plant with a specialized native seed drill. Creeping Red Fescue will provide erosion protection while the warm season grasses get established.

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 2 of 4 Effective January 2026

Standard Detail & Specifications

Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES (cont.)

Mix No.	Seeding Mixtures: Certified Seed[6] / Poorly Drained Soils	Seeding Rate[1] lb/Ac	lb/1000 sq.ft.	Optimum Seeding Dates [2] O = Optimum Planting Period. A = Acceptable Planting Period. Coastal Plain 2/1-4/30	Coastal Plain 5/1-8/14	Piedmont 8/15-10/31	Piedmont 3/1-4/30	Piedmont 5/1-7/31	All[3] 8/1-10/31	All[3] 10/31-2/1	Remarks
9	Redtop Creeping Bentgrass Sheep Fescue Rough Bluegrass	75 35 30 45	1.72 0.8 0.69 1	O	A*	O	O	A*	O	Add 100 lbs./ac. Winter Rye	Quick stabilization of disturbed sites and waterways
10	Switchgrass[4]	10	0.23	A		O	A		O		Good erosion control, wildlife cover and wetland revegetation.
	Residential Lawns										
11	Tall Fescue Perennial Ryegrass Kentucky Bluegrass Blend	100 25 30	2.3 0.57 0.69	O	A*	O	O	A*	O		High value, high maintenance, light traffic, irrigation necessary. Well drained soils, full sun.
12	Tall Fescue Perennial Ryegrass Sheep Fescue	100 25 25	2.3 0.57 0.57	O	A*	O	O	A*	O		Moderate value, low maintenance, traffic tolerant
13	Creeping Red Fescue Chewings Fescue Rough Bluegrass Kentucky Bluegrass	50 50 20 20	1.15 1.15 0.4 0.4	O	A*	O	O	A*	O		Shade tolerant, moderate traffic tolerance, moderate maintenance.
14	Creeping Red Fescue Rough Bluegrass **or** Chewings Fescue	50 90	1.15 2.1	O	A*	O	O	A*	O		Shade tolerant, moisture tolerant.
15	K-31 Tall Fescue	150	3.5	O	A*	O	O	A*	O		Monoculture, but performs well alone in lawns. Discouraged.

1. When hydroseeding is the chosen method of application, the total rate of seed should be increased by 25%.
2. Winter seeding requires 3 tons per acre of straw mulch. Planting dates listed above are average for Delaware. These dates may require adjustment to reflect local conditions.
3. All seed shall meet the minimum purity and minimum germination percentages recommended by the Delaware Department of Agriculture. The maximum % of weed seeds shall be in accordance with Chapter 15, Title 3 of the Delaware Code.
4. Turf-type species may be planted throughout summer if adequate moisture is adequate or seeded area can be irrigated.
5. It is recommended that all leguminous seed be inoculated.
6. Warm season grass mix and Switchgrass cannot be mowed more than 4 times per year.
7. Warm season grasses require a soil temperature of at least 50 degrees in order to germinate and will remain dormant until then.

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 3 of 4 Effective January 2026

Standard Detail & Specifications

Vegetative Stabilization

PERMANENT SEEDING AND SEEDING DATES (cont.)

Mix No.	Seeding Mixtures: Certified Seed[6] / Residential Lawns	Seeding Rate[1] lb/Ac	lb/1000 sq.ft.	Optimum Seeding Dates [2] O = Optimum Planting Period. A = Acceptable Planting Period. Coastal Plain 2/1-4/30	Coastal Plain 5/1-8/14	Piedmont 8/15-10/31	Piedmont 3/1-4/30	Piedmont 5/1-7/31	All[3] 8/1-10/31	All[3] 10/31-2/1	Remarks
16	Tall Fescue Perennial Ryegrass Kentucky Bluegrass	100 25 25	2.3 0.57 0.57	O	A*	O	O	A*	O		Suitable for shade, moderate traffic tolerance
17	Tall Fescue Perennial Ryegrass Kentucky Bluegrass	100 25 25	2.3 0.57 0.57	O	A*	O	O	A*	O		Suitable for sun, moderate traffic tolerance
18	Tall Fescue Creeping Red Fescue Kentucky Bluegrass	100 50 25	2.3 1.15 0.57	O	A*	O	O	A*	O		Suitable for sun or shade, moderate traffic tolerance
19	Tall Fescue Creeping Red Fescue Kentucky Bluegrass	100 50 25	2.3 1.15 0.57	O	A*	O	O	A*	O		Suitable for sun or shade, moderate traffic tolerance
20	Tall Fescue Creeping Red Fescue Kentucky Bluegrass	100 50 25	2.3 1.15 0.57	O	A*	O	O	A*	O		Suitable for sun or shade, moderate traffic tolerance
21	Tall Fescue Creeping Red Fescue Kentucky Bluegrass	100 50 25	2.3 1.15 0.57	O	A*	O	O	A*	O		Suitable for sun or shade, moderate traffic tolerance

1. When hydroseeding is the chosen method of application, the total rate of seed should be increased by 25%.
2. Winter seeding requires 3 tons per acre of straw mulch. Planting dates listed above are average for Delaware. These dates may require adjustment to reflect local conditions.
3. All seed shall meet the minimum purity and minimum germination percentages recommended by the Delaware Department of Agriculture. The maximum % of weed seeds shall be in accordance with Chapter 15, Title 3 of the Delaware Code.
4. Turf-type species may be planted throughout summer if adequate moisture is adequate or seeded area can be irrigated.
5. It is recommended that all leguminous seed be inoculated.
6. Warm season grass mix and Switchgrass cannot be mowed more than 4 times per year.
7. Warm season grasses require a soil temperature of at least 50 degrees in order to germinate and will remain dormant until then.

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 4 of 4 Effective January 2026

Standard Detail & Specifications

Vegetative Stabilization

Construction Notes:

1. Site Preparation
   a. Prior to seeding, install needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, grassed waterways, and sediment basins.
   b. Final grading and shaping is not necessary for temporary seedings.
2. Seedbed Preparation

   It is important to prepare a good seedbed to ensure the success of establishing vegetation. The seedbed should be well prepared, loose, uniform, and free of large clods, rocks, and other objectionable material. The soil surface should not be compacted or crusted.
3. Soil Amendments
   a. Lime - Apply liming materials based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply dolomitic limestone at the rate of 1 to 2 tons per acre. Apply limestone uniformly and incorporate into the top 4 to 6 inches of soil.
   b. Fertilizer - Apply fertilizer based on the recommendations of a **soil test** in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply a formulation of 10-10-10 at the rate of 600 pounds per acre. Apply fertilizer uniformly and incorporate into the top 4 to 6 inches of soils.
4. Seeding
   a. For **temporary stabilization**, select a mixture from **Sheet 1** . For a **permanent stabilization**, select a mixture from **Sheet 2** or **Sheet 3** depending on the conditions. Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.
   b. Apply seed uniformly with a broadcast seeder, drill, cultipacker seeder or hydroseeder. All seed will be applied at the recommended rate and planting depth.
   c. Seed that has been broadcast should be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used and the seed and fertilizer is mixed, they will be mixed on site and the seeding shall be done immediately and without interruption.
5. Mulching

   All mulching shall be done in accordance with detail **DE-ESC-3.4.5**.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		**DE-ESC-3.4.3** Sheet 4 of 4 Effective January 2026

Standard Detail & Specifications

Mulching

1. Materials and Amounts

a. *Straw* - Straw shall be unrotted small grain straw applied at the rate of 1-1/2 to 2 tons per acre, or 70 to 90 pounds (two bales) per 1,000 square feet. Mulch materials shall be relatively free of weeds and shall be free of noxious weeds such as; thistles, Johnsongrass, and quackgrass. Spread mulch uniformly by hand or mechanically. For uniform distribution of hand spread mulch, divide area into approximately 1,000 square feet sections and place 70-90 pounds (two bales) of mulch in each section.

b. *Wood chips* - Apply at the rate of approximately 6 tons per acre or 275 pounds per 1,000 square feet when available and when feasible. These are particularly well suited for utility and road rights-of-way. If wood chips are used, increase the application rate of nitrogen fertilizer by 20 pounds of N per acre (200 pounds of 10-10-10 or 66 pounds of 30-0-0 per acre).

c. *Hydraulically applied mulch* -The following conditions apply to hydraulically applied mulch:
   i. Definitions:
      a. Wood fiber mulch shall consist of specially prepared wood that has been processed to a uniform state, is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment, and consists of a minimum of 70% virgin or recycled wood fiber combined with 30% paper fiber and additives.
      b. Blended fiber mulch shall consist of any hydraulic mulch that contains greater than 30% paper fiber. The paper component must consist of specially prepared paper that has been processed to a uniform fibrous state and is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment.
      c. A bonded fiber matrix (BFM) consists of long strand, specially prepared wood fibers that have been processed to a uniform state held together by a water resistant bonding agent. BFMs shall contain no paper (cellulose) mulch but may contain small percentages of synthetic fibers to enhance performance.
      d. Refer to **Figure 3.4.5a** for conditions and limitations of use for each of the above categories of hydraulic mulch.
   ii. All components of the hydraulically applied mulches shall be pre-packaged by the manufacturer to assure material performance. Field mixing of the mulch components is acceptable, but must be done per manufacturers recommendations to ensure the proper results.
   iii. Hydraulic mulches shall be applied with a viable seed and at manufacturer's recommended rates. Increased rates may be necessary based on site conditions.
   iv. Hydraulically applied mulches and additives shall be mixed according to manufacturers recommendations.
   iv. Materials within this category shall only be used when hydraulically applied mulch has been specified for use on the approved Sediment and Stormwater Plan, or supplemental approval from the plan approval agency has been obtained in writing for a specific area.

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrexx™ International		**DE-ESC-3.4.5** Sheet 1 of 3 Effective January 2026

Standard Detail & Specifications

Mulching

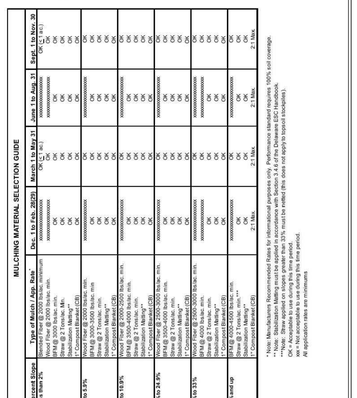
v. Application:
   a. Apply product to geotechnically stable slopes that have been designed and constructed to divert runoff away from the face of the slope.
   b. Do not apply to saturated soils, or if precipitation is anticipated within 24-48 hours.
   c. During the spring (March 1 to May 31) and fall (September 1 to November 30) seasons, hydraulic mulches may be applied in a one-step process where all components are mixed together in single-tank loads. It is recommended that the product be applied from opposing directions to achieve optimum soil coverage.
   d. During the summer (June 1 to August 31) and winter (December 1 to February 28) seasons, the following two-step process is required:
      Step One– Mix and apply seed and soil amendments with a small amount of mulch for visual metering.
      Step Two – Mix and apply mulch at manufacturers recommended rates over freshly seeded surfaces. Apply from opposing directions to achieve optimum soil coverage.
   e. Minimum curing temperature is 40° F (4° C). The best results and more rapid curing are achieved at temperatures exceeding 60°F (15°C). Curing times may be accelerated in high temperature, low humidity conditions on dry soils.
   vi. Recommended application rates are for informational purposes only. Conformance with this standard and specification shall be performance-based and requires **100% soil coverage**. Any areas with bare soil showing shall be top dressed until full coverage is achieved.
   d. *Compost blanket (CB)* - **Loosely applied** with a pneumatic blower so that a 1" compost blanket uniformly covers **the soil with 100% coverage**. This application can be **used with seed** to promote germination by applying the approved seed mix directly into the loosely blown compost. The compost blanket performs best on slopes less than 2:1 and requires no mulch anchoring.

2. Anchoring mulch - Mulch must be anchored immediately to minimize loss by wind or water. This may be done by one of the following methods, depending upon size of area, erosion hazard, and cost.
   a. *Crimping* - A crimper is a tractor drawn implement designed to punch and anchor mulch into the top two (2) inches of soil. This practice affords maximum erosion control but is limited to flatter slopes where equipment can operate safely. On sloping land, crimping should be done on the contour whenever possible.
   b. *Tracking* - Tracking is the process of cutting mulch (usually straw) into the soil using a bulldozer or other equipment that runs on cleated tracks. Tracking is used primarily on slopes 3:1 or steeper and should be done up and down the slope with cleat marks running across the slope.
   c. *Liquid mulch binders* - Applications of liquid mulch binders should be heavier at edges, in valleys, and at crests of banks and other areas where the mulch will be moved by wind or water. All other areas should have a uniform application of binder. The use of synthetic binders is the preferred method of mulch binding and should be applied at the rates recommended by the manufacturer.
   d. *Paper fiber* - The fiber binder shall be applied at a net dry weight of 750 lbs/ac. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons.
   e. *Nettings* - Biodegradable nettings may be used to secure straw mulch. Install and secure according to the manufacturer's recommendations. Photodegradable or synthetic nettings are not acceptable.

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrexx™ International		**DE-ESC-3.4.5** Sheet 2 of 3 Effective January 2026

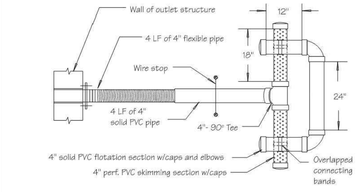
Standard Detail & Specifications

Mulching

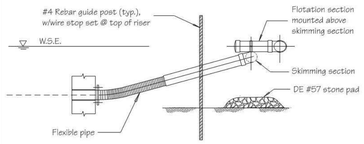

MULCHING MATERIAL SELECTION GUIDE
Type of Mulch / App. Rate
Percent Slope
Less than 5%
Mulch: 1 to May 31
June 1 to Aug. 31
Sept. 1 to Nov. 30
Dec. 1 to Feb. 28(29)
Hydraulic Mulch (Wood Fiber @ 2000 lbs/ac. min. plus Tackifier @ 150 lbs/ac. min.)
Hydraulic Mulch (Wood Fiber @ 2000 lbs/ac. min. plus Tackifier @ 150 lbs/ac. min. plus Straw @ 2 Tons/ac. min. Crimped) (Tracked (CB))
Hydraulic Mulch (Wood Fiber @ 2500-3000 lbs/ac. min. plus Tackifier @ 150 lbs/ac. min.)
Hydraulic Mulch (Wood Fiber @ 2500-3000 lbs/ac. min. plus Tackifier @ 150 lbs/ac. min. plus Straw @ 2 Tons/ac. min. Crimped) (Tracked (CB))
Hydraulic Mulch (Wood Fiber @ 2500-3000 lbs/ac. min. plus Tackifier @ 150 lbs/ac. min. plus Straw @ 2 Tons/ac. min.**

Standard Detail & Specifications

Skimmer Dewatering Device



Plan



Profile thru ℄ of Pipe

Source:	Symbol:	Detail No.
Adapted from drawing by Vandemark & Lynch, Inc.	SDD	**DE-ESC-3.2.3.1** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Skimmer Dewatering Device

Construction Notes:

1. Pipe flotation section shall be solvent welded to ensure an airtight assembly. Contractor to conduct a test to check for leaks prior to installation.
2. Skimmer section shall have (12) rows of 1/2" dia. holes, 1-1/4" on center. If additional filtration is necessary, the filtering media shall consist of a Type GD-II geotextile fabric wrapped around the perforated portion of the skimmer and attached with plastic snap ties, bands, etc.
3. Flexible pipe shall be inserted into solid pipe and fastened with (2) #8 wood screws.
4. At a minimum, the structure shall be inspected after each rain and repairs made as needed. If vandalism is a problem, more frequent inspection may be necessary.
5. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
6. The structure shall only be removed when the contributing drainage area has been properly stabilized.

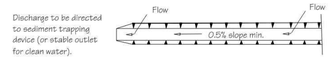
Materials:

1. Solid pipe - 4" Sched. 40 PVC
2. Perforated pipe - 4" Sched. 40 PVC
3. 90° Tee (1 ea.) - 4" Sched. 40 PVC
4. 90° Elbow (2 ea.) - 4" Sched. 40 PVC
5. Cap (4 ea.) - 4" Sched. 40 PVC, solid
6. Flexible pipe - 4" corrugated plastic tubing (non-perforated)

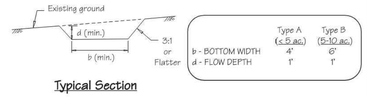
Source:	Symbol:	Detail No.
Delaware ESC Handbook	SDD	**DE-ESC-3.2.3.1** Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Temporary Swale



Plan



Typical Section

FLOW CHANNEL STABILIZATION CHART

Stabilization Method	Channel Grade	Type A	Type B
1	0.5-3.0%	Seed with stab. blanket	Seed with stab. blanket
2	3.1-5.0%	Seed with stab. blanket	Seed using stab. blanket; sod; DE #2 stone
3	5.1-8.0%	Seed with stab. blanket; sod; DE #2 stone	Lined R-4 riprap
4	8.1-20%	Lined R-4 riprap	Engineering design

a. Stone to be DE #2 inch stone in a layer at least 3 inches in thickness and underlain with GS-I geotextile.
b. Riprap to be R-4 in a layer at least 8 inches thickness and and underlain with GS-I geotextile.

Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	TS- (A/B)(1-4)	**DE-ESC-3.3.1** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Temporary Swale

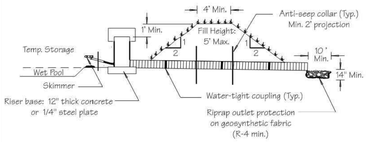
Construction Notes:

1. All temporary swales shall have uninterrupted positive grade to an outlet with a minimum of erosion.
2. Diverted runoff from a disturbed area shall be conveyed to a sediment trapping device.
3. Diverted runoff from an undisturbed area shall outlet directly into an undisturbed stabilized area at a non-erosive velocity.
4. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.
5. The swale shall be excavated or shaped to line, grade, and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fills shall be compacted by earth moving equipment.
7. All earth removed and not needed on construction shall be placed so that it will not interfere with the functioning of the swale.
8. Inspection and required maintenance shall be provided after each rain event.

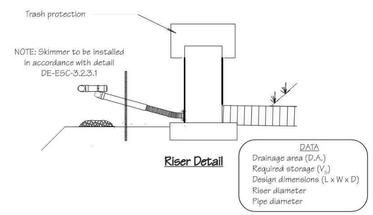
Source:	Symbol:	Detail No.
Adapted from MD Stds. & Specs. for ESC	TS- (A/B)(1-4)	**DE-ESC-3.3.1** Sheet 2 of 2 Effective January 2026

Standard Detail & Specifications

Pipe Outlet Sediment Trap



Profile thru Pipe Outlet



Riser Detail

DATA
Drainage area (D.A.)
Required storage (V_s)
Design dimensions (L x W x D)
Riser diameter
Pipe diameter

Source:	Symbol:	Detail No.
DE ESC Handbook	PST	**DE-ESC-3.1.3.1** Sheet 1 of 2 Effective January 2026

Standard Detail & Specifications

Pipe Outlet Sediment Trap

Construction Notes

1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material, or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
4. All pipe connections shall be watertight.
5. Fill material around the pipe spillway shall be hand compacted in four (4) inch layers. A minimum of two (2) feet of hand-compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment.
6. The riser shall be anchored with either a concrete base or steel plate base to prevent flotation. Concrete bases shall be 12 inches thick with the riser embedded nine (9) inches. Steel plate bases will be 1/4 inch minimum thickness attached to the riser by a continuous weld around the bottom to form a watertight connection. The plate shall have 2.5 feet of stone, gravel or tamped earth placed on it.
7. Volume of temporary storage shall be 3,600 cubic feet per acre of drainage area. Wet pool storage should be provided whenever practicable, but shall not be used to fulfill the temporary storage volume requirement.
8. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
9. The structure shall be inspected after each rain and repairs made as needed.
10. **A skimmer dewatering device shall be considered an integral part of the trap. Any additional dewatering operations for the wet pool shall be conducted in accordance with any and all regulatory requirements.**
11. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized. Disturbed areas shall be stabilized in accordance with the Standards and Specifications for Vegetative Stabilization contained in this Handbook.
12. The structure shall be removed and area stabilized when the drainage area has been properly stabilized.

MAXIMUM DRAINAGE AREA: 5 ACRES

Source:	Symbol:	Detail No.
DE ESC Handbook	PST	**DE-ESC-3.1.3.1** Sheet 2 of 2 Effective January 2026

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Delaware
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302.734.7950

The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
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410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

JONATHAN D. RICHARDS LICENSE No. 18832 DELAWARE PROFESSIONAL ENGINEER

08/27/2026

PROJECT TITLE

DELAWARE STATE POLICE

EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONSTRUCTION SITE DETAILS AND NOTES

ISSUE BLOCK

MARK	DATE	DESCRIPTION
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED

LAYER STATE: C-507

PROJECT NO.: 2022235.00
DATE: 02/17/2026
SCALE: NONE
DRAWN BY: **J.N.K.** PROJ. MGR.: **J.D.R.**

SHEET

C-510

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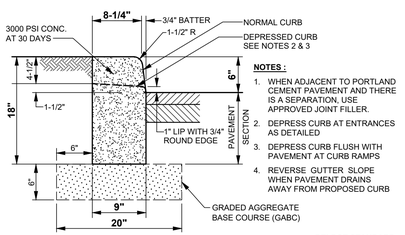


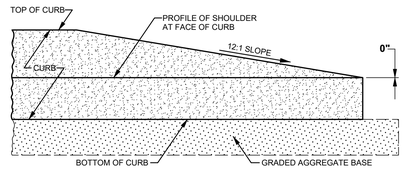
NOTES :

1. WHEN ADJACENT TO PORTLAND CEMENT PAVEMENT AND THERE IS A SEPARATION, USE APPROVED JOINT FILLER.
2. DEPRESS CURB AT ENTRANCES AS DETAILED
3. DEPRESS CURB FLUSH WITH PAVEMENT AT CURB RAMPS
4. REVERSE GUTTER SLOPE WHEN PAVEMENT DRAINS AWAY FROM PROPOSED CURB

P.C.C. CURB - TYPE 1 - 6

DELDOT STANDARD NO.: C-1 (2017)

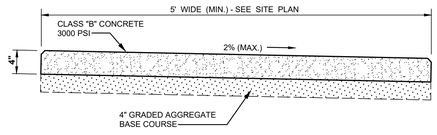
NO SCALE — SHOWN FOR REFERENCE ONLY - SEE DELDOT STANDARDS — BMG NO. : SW-011-A



CURB TAPER DETAIL

DELDOT ACCESS MANUAL - PAGE 4-3

NO SCALE — BMG NO. : SW-1C

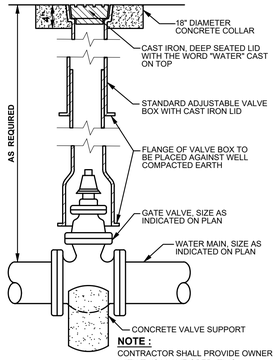


NOTES:

1. MARK IN 5' SQUARES, USE PREMOLDED EXPANSION JOINTS AT INTERVALS NOT GREATER THAN 20'
2. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED AS PER SPECIFICATIONS.

CONCRETE SIDEWALK

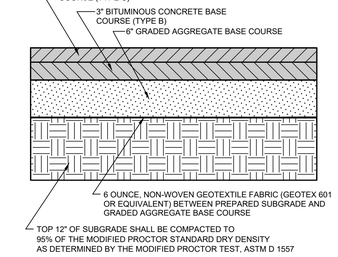
NO SCALE — BMG NO. : SW-3C



NOTE :
CONTRACTOR SHALL PROVIDE OWNER WITH TWO VALVE OPERATING WRENCHES

GATE VALVE DETAIL

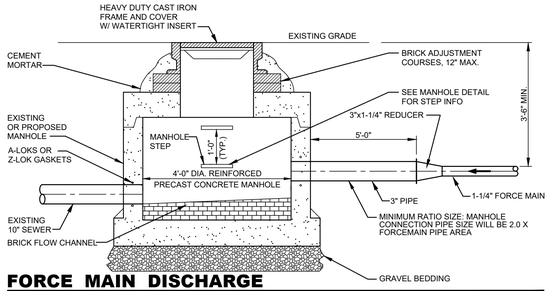
NO SCALE — BMG NO.: W-03A



PAVEMENT SECTION FOR :
PASSENGER CARS - LIGHT DUTY

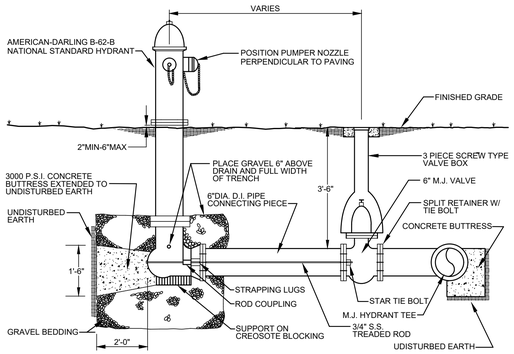
PAVEMENT SECTION DETAIL

NO SCALE



FORCE MAIN DISCHARGE

NO SCALE — BMG NO. : SS-1E



FIRE HYDRANT DETAIL

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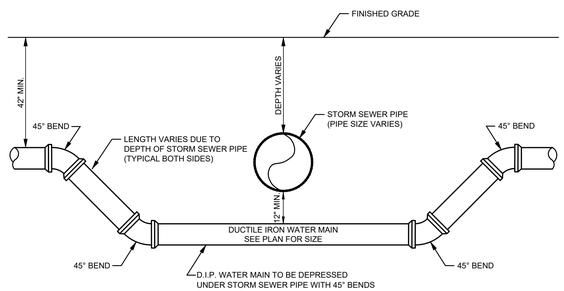
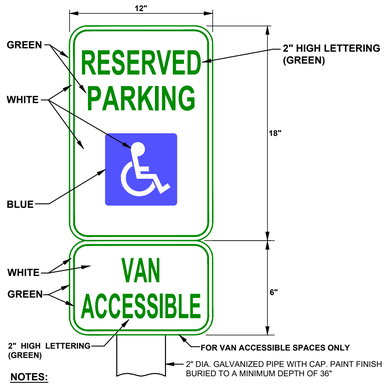


WATER MAIN / STORM SEWER CROSSING DETAIL

NO SCALE — BMG NO. : W-12

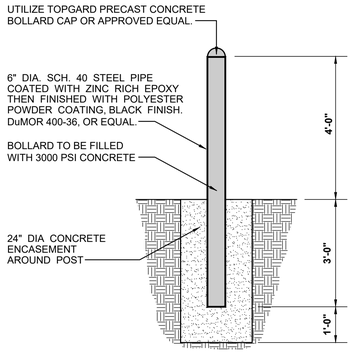


NOTES:

1. THE BOTTOM EDGE OF SIGN SHALL BE A MINIMUM OF 5.0' AND A MAXIMUM OF 7.0' ABOVE FINISHED GRADE. CONTRACTOR SHALL INSTALL ONE SIGN PER ACCESSIBLE PARKING SPACE. SIGNS ARE TO BE CENTERED ON STALL WIDTH, FACING PARKING.
2. THE SIGN BE INACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS AS DEFINED BY THE CURRENT AMERICANS WITH DISABILITIES ACT (ADA) REGULATIONS.

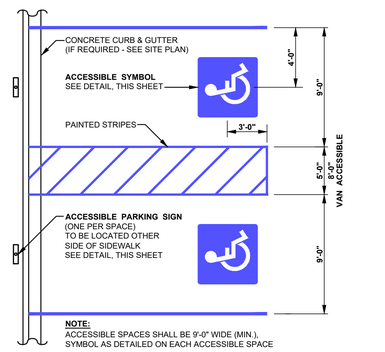
ACCESSIBLE PARKING SIGN DETAIL

NO SCALE — BMG NO.: SW-4CB-VAN



PIPE BOLLARD DETAIL

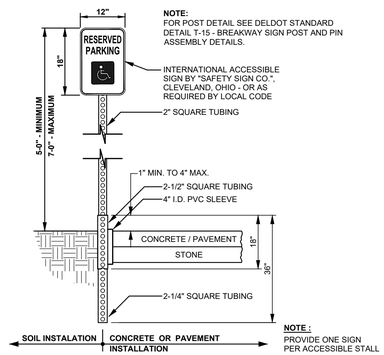
NO SCALE — BMG NO. : SW-9A



NOTE:
ACCESSIBLE SPACES SHALL BE 9'-0" WIDE (MIN.). SYMBOL AS DETAILED ON EACH ACCESSIBLE SPACE

ACCESSIBLE PARKING SPACE PLAN

NO SCALE — BMG NO. : SW-4B1



NOTE:
FOR POST DETAIL SEE DELDOT STANDARD DETAIL T-15 - BREAKWAY SIGN POST AND PIN ASSEMBLY DETAILS.

NOTE :
PROVIDE ONE SIGN PER ACCESSIBLE STALL

ACCESSIBLE PARKING SIGN & POLE

NO SCALE — BMG NO. : SW-4D

NOTE:

1. PROVIDE PREFORMED THERMOPLASTIC (90 MIL) ACCESSIBLE SYMBOL COLOR: WHITE SYMBOL ON BLUE BACKGROUND. SIZE: 48" X 48".

ACCESSIBLE THERMO SYMBOL

NO SCALE — BMG NO. : SW-4E-2

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The Tower at STAR Campus
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08/27/2026

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EMERGENCY VEHICLE OPERATIONS COURSE

PATRIOTS WAY
GEORGETOWN
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONSTRUCTION DETAILS

ISSUE BLOCK		
4	08/27/26	FINAL PLAN SUBMISSION
3	08/07/26	AGENCY COMMENTS ADDRESSED
2	06/26/26	AGENCY COMMENTS ADDRESSED
1	05/08/26	AGENCY COMMENTS ADDRESSED
MARK	DATE	DESCRIPTION

LAYER STATE: C901

PROJECT NO.: 2022235.00
DATE: 12/22/2025
SCALE: NONE
DRAWN BY: **J.N.K.** | PROJ. MGR.: **J.D.R.**

SHEET
C-901

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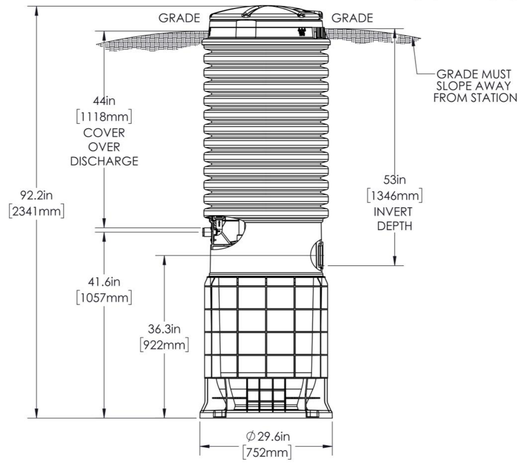
NA0050P06

DH071-93



NOTE: DIMENSIONS ARE FOR REF ONLY

CONCRETE BALLAST NOT REQUIRED

DISCHARGE: 1-1/4in FEMALE PIPE THREAD

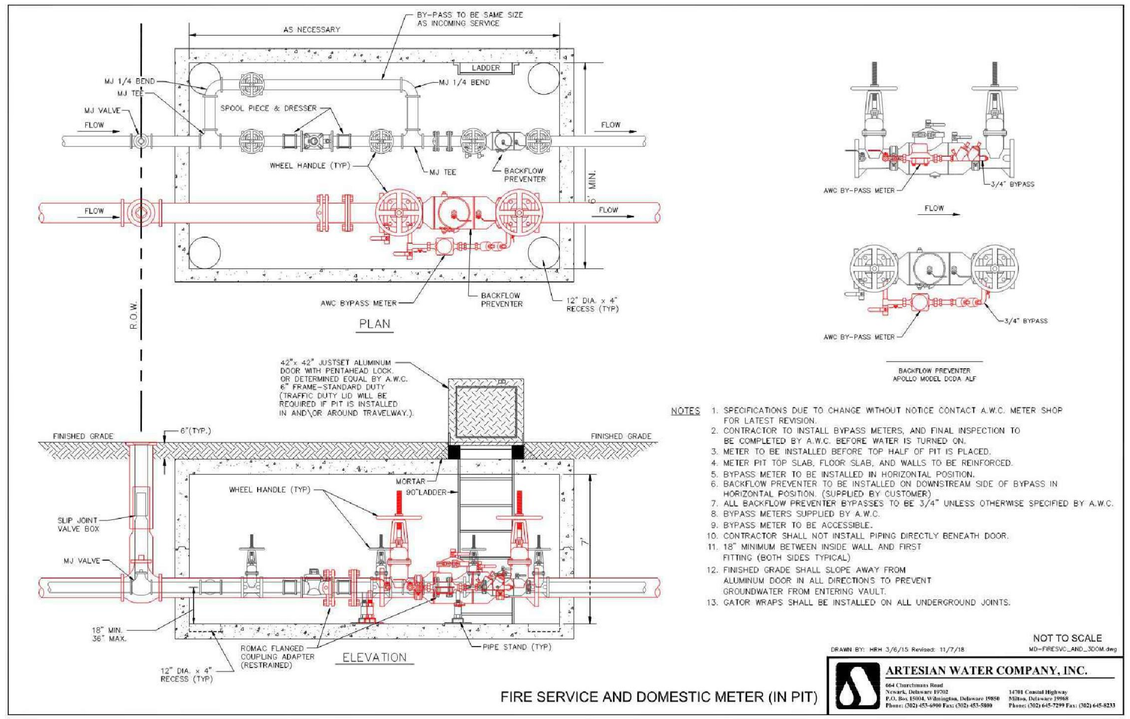
INLET: EPDM GROMMET FOR 4in DWV PIPE (STANDARD)

BK	JG	10/13/2023	D	1:16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH071-93
CUT SHEET

NA0050P06

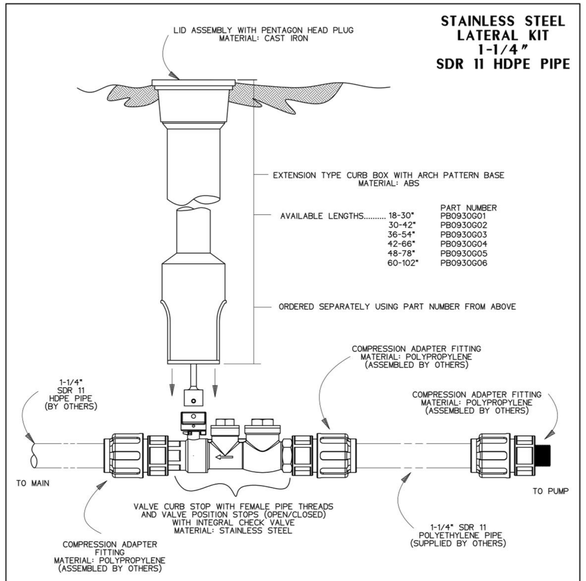


NOT TO SCALE
DRAWN BY: HRH 3/6/15 Revised: 11/7/18 WG-FIRESVC_AND_3004.dwg

ARTESIAN WATER COMPANY, INC.
664 Churchmans Road, Newark, Delaware 19702, P.O. Box 15004, Wilmington, Delaware 19850, Phone: (302) 453-6900 Fax: (302) 453-5889
14701 Coastal Highway, Milton, Delaware 19968, Phone: (302) 645-7299 Fax: (302) 645-8233

FIRE SERVICE AND DOMESTIC METER (IN PIT)

STAINLESS STEEL LATERAL KIT 1-1/4" SDR 11 HDPE PIPE



KIT PARTS ARE NOT ASSEMBLED

NOTES:

1. SS CURB STOP/CHECK VALVE AND FITTINGS ARE PROVIDED SEPARATELY, TO BE ASSEMBLED BY OTHERS
2. TO ASSEMBLE, APPLY A DOUBLE LAYER OF TEFLON TAPE, AND A LAYER OF PIPE DOPE (SUPPLIED BY OTHERS) TO THE THREADS ON THE PLASTIC FITTINGS AND INSTALL PER THE MANUFACTURER'S INSTRUCTIONS
3. ASSEMBLY IS TO BE PRESSURE TESTED (BY OTHERS)
4. ASSEMBLY IS TO BE USED WITH SDR11 HDPE PIPE
5. TO ORDER SS LATERAL KIT, USE PART NUMBER NC0193G01
6. CURB BOX IS TO BE ORDERED SEPARATELY, SEE ABOVE

SGS	DN	11/02/11	A	3/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

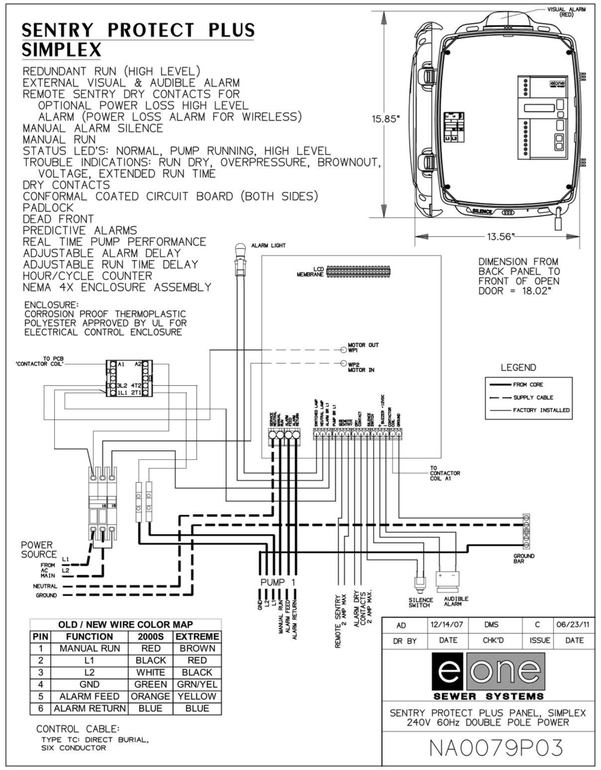
STAINLESS STEEL LATERAL KIT
1-1/4" SDR 11 HDPE PIPE

NA0330P02

SENTRY PROTECT PLUS SIMPLEX

REDUNDANT RUN (HIGH LEVEL)
EXTERNAL VISUAL & AUDIBLE ALARM
REMOTE SENTRY DRY CONTACTS FOR
OPTIONAL POWER LOSS HIGH LEVEL ALARM (POWER LOSS ALARM FOR WIRELESS)
MANUAL ALARM SILENCE
MANUAL RUN
STATUS LED'S: NORMAL, PUMP RUNNING, HIGH LEVEL
TROUBLE INDICATIONS: RUN DRY, OVERPRESSURE, BROWNOUT, VOLTAGE, EXTENDED RUN TIME
DRY CONTACTS
CONFORMAL COATED CIRCUIT BOARD (BOTH SIDES)
PADLOCK
DEAD FRONT
PREDICTIVE ALARMS
REAL TIME PUMP PERFORMANCE
ADJUSTABLE ALARM DELAY
ADJUSTABLE RUN TIME DELAY
HOUR/CYCLE COUNTER
NEMA 4X ENCLOSURE ASSEMBLY

ENCLOSURE:
CORROSION PROOF THERMOPLASTIC POLYESTER APPROVED BY UL FOR ELECTRICAL CONTROL ENCLOSURE



OLD / NEW WIRE COLOR MAP			
PIN	FUNCTION	2000S	EXTREME
1	MANUAL RUN	RED	BROWN
2	L1	BLACK	RED
3	L2	WHITE	BLACK
4	GND	GREEN	GRN/YEL
5	ALARM FEED	ORANGE	YELLOW
6	ALARM RETURN	BLUE	BLUE

CONTROL CABLE:
TYPE TC: DIRECT BURIAL, SIX CONDUCTOR

AD	12/14/07	DMS	C	06/23/11
DR BY	DATE	CHK'D	ISSUE	DATE

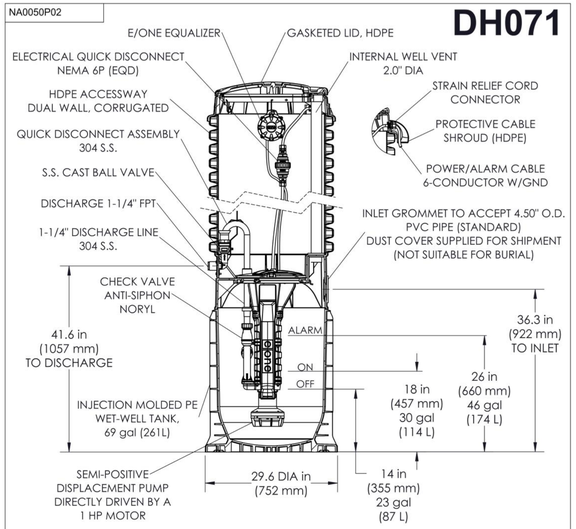
e/one SEWER SYSTEMS

SENTRY PROTECT PLUS PANEL, SIMPLEX
240V 60Hz DOUBLE POLE POWER

NA0079P03

NA0050P02

DH071



CONCRETE BALLAST NOT REQUIRED

NOTE: DIMENSIONS ARE FOR REF ONLY

FIELD JOINT REQUIRED FOR MODELS DH071-129 / DH071-160

JVL	SGS	7/14/2023	F	1:16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH071
DETAIL SHEET

NA0050P02

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Delaware
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CONSTRUCTION DETAILS

ISSUE BLOCK

MARK	DATE	DESCRIPTION
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1	05/08/26	AGENCY COMMENTS ADDRESSED

LAYER STATE: C901

PROJECT NO.: 2022235.00
DATE: 12/22/2025
SCALE: NONE
DRAWN BY: J.N.K. PROJ. MGR.: J.D.R.

SHEET
C-902

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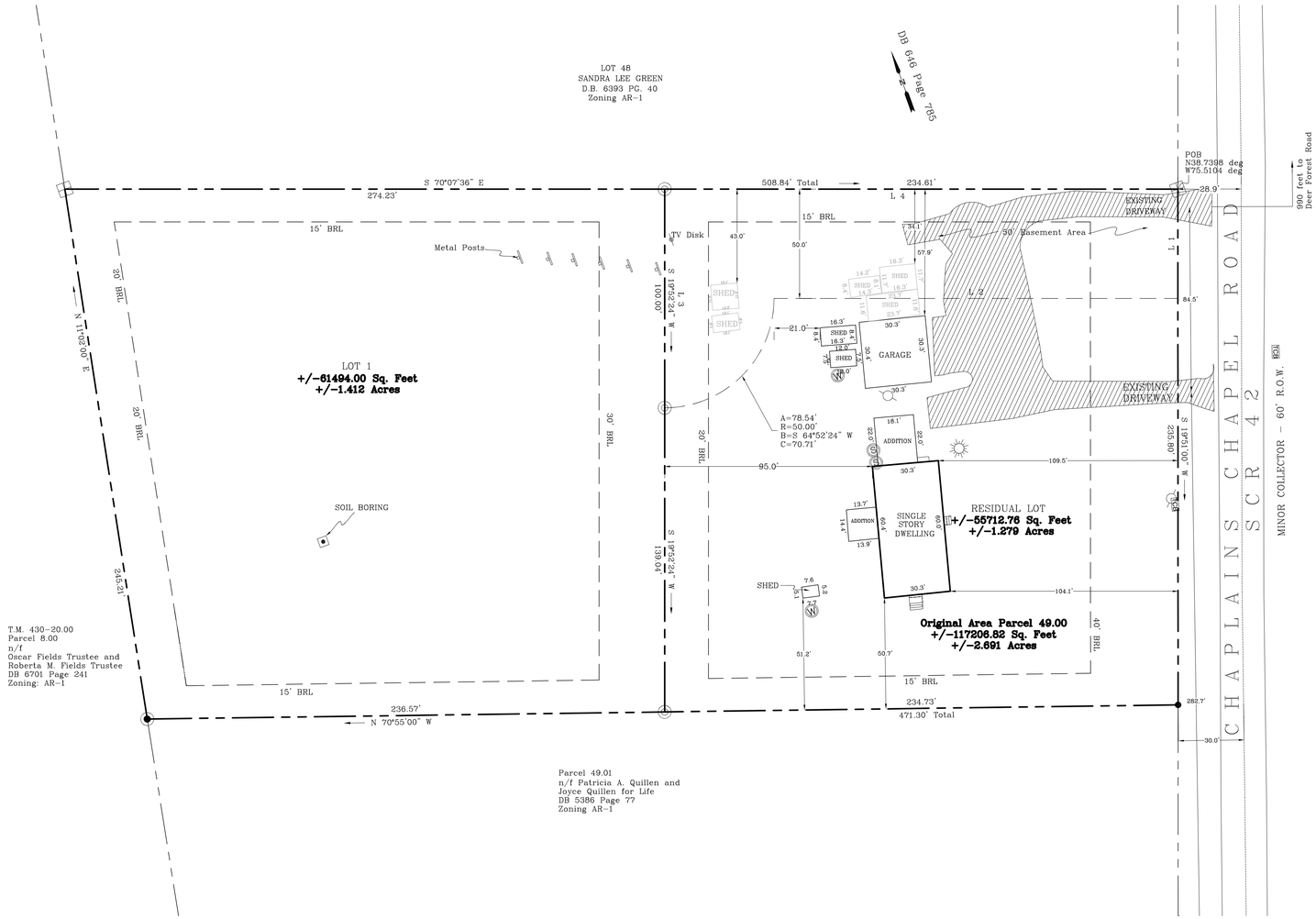
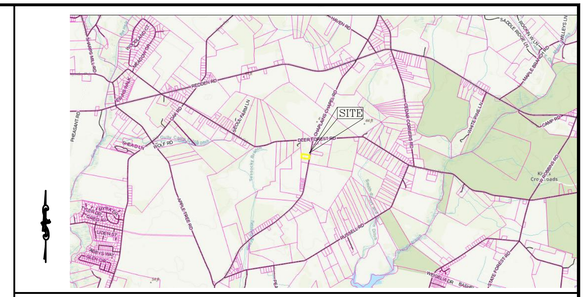
The Purpose of this Survey is to Subdivide Lot 1 from Parcel 430-16.00-49.00



PLAN VIEW
1" = 30'

0' 15' 30' 60' 90'
SCALE: 1" = 30'



Access Easement Line Table

Line	BEARING	DISTANCE
L 1	S 19°31'00" W	50.00'
L 2	N 70°07'35" W	184.63'
L 3	N 19°52'24" E	100.00'
L 4	S 70°07'36" E	234.61'

SUSSEX COUNTY
APPROVAL STAMP

PLAN DATA:

PARCEL I.D. No	*	430-16.00-49.00
PLAT REFERENCE	*	D.B. 646, PAGE 785
ZONING DISTRICT	*	AR-1 (ZONING CLASSIFICATION)
ROADWAY CLASSIFICATION	*	SCR 42 (MINOR COLLECTOR)
SEWAGE DISPOSAL	*	INDIVIDUAL ON-SITE WASTEWATER DISPOSAL SYSTEMS (PRIVATE) SEWERAGE IS SUBJECT TO APPROVAL OF THE THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL.
WATER SUPPLY	*	INDIVIDUAL ON-SITE WELLS (PRIVATE) WATER IS SUBJECT TO THE APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AND THE DELAWARE DIVISION OF PUBLIC HEALTH.
PRESENT USE	-	RESIDENTIAL
PROPOSED USE	-	RESIDENTIAL
FRONTAGE SPEED LIMIT	-	50 MPH
FEMA MAP PANEL NUMBER	-	10005C0260K
OWNER	*	MS. PATRICIA A. QUILLEN FOR LIFE 18070 CHAPLAINS CHAPEL ROAD BRIDGEVILLE, DE 19933
LOT AREA RATIONALE	*	AREA IN LOTS = 1.412 ACRES AREA IN REMAINING LANDS = 1.279 ACRES GROSS AREA = 2.691 ACRES
TOTAL No. OF LOTS	*	2 SINGLE FAMILY DWELLING UNITS
(TID) PROXIMITY	*	19 MILES

DELDOT NOTES:

1. ALL ENTRANCES SHALL CONFORM TO DELDOT'S DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL.
2. 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.
3. IF THE RESIDUAL LANDS OF THE APPLICANT ARE EVER DEVELOPED INTO A MAJOR SUBDIVISION, THEN THE ACCESS TO THE PARCELS CREATED BY THIS MINOR SUBDIVISION PLAN MAY BE REQUIRED TO BE FROM AN INTERNAL SUBDIVISION STREET.
4. LOT A SHALL HAVE ACCESS TO SCR 42 VIA THE 50-FOOT WIDE INGRESS/EGRESS EASEMENT.
5. I/WE, THE UNDERSIGNED, HEREBY CERTIFY TO THE OWNERSHIP OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY/OUR DIRECTION, AND THAT I/WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND THAT I/WE DESIRE THE PLAN TO BE RECORDED ACCORDING TO THE LAW.
5. I CERTIFY THAT TITLE 17, SECTION 530 IS APPLICABLE TO THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN BY VIRTUE OF: (CHECK APPLICABLE SECTION)

X THE SUBDIVIDED PARCEL OR PARCELS WILL BE TRANSFERRED TO A FAMILY MEMBER OR MEMBERS FOR PURPOSES OF USE AS A FAMILY MEMBER OR MEMBERS' PRINCIPAL RESIDENCE OR FARMLAND.

PATRICIA A. QUILLEN FOR LIFE
18070 CHAPLAINS CHAPEL ROAD
BRIDGEVILLE, DE 19933

DATE 07-19-2026

LEGEND

- TV Disk
- Fence Post
- Sewer Cleanout
- Well
- Light Pole
- Telephone or Cable Box
- Power Pole
- Iron Pipe Found
- Concrete Monument Found
- Pipe and Cap Found
- Rebar and Cap Set
- Easement
- Property Line
- Building Setback Line

RECORD MINOR SUBDIVISION PLAN

FOR PROPERTY KNOWN AS:

LANDS OF "PATRICIA A. QUILLEN FOR LIFE"

ALSO KNOWN AS:

"18070 CHAPLAINS CHAPEL ROAD"

SITUATE IN:

NANTICOKE HUNDRED * SUSSEX COUNTY
STATE OF DELAWARE

TAX MAP#: 430-16.00-49.00

NOTES

1. THIS SURVEY IS CLASSIFIED AS A "SUBURBAN" SURVEY.
2. UNLESS THIS PLAT HAS A SEAL WITH AN ORIGINAL SIGNATURE OF ENGINEER, IN RED INK, THIS IS NOT AN AUTHORIZED COPY.
3. THE SURVEY DOES NOT VERIFY THE EXISTENCE OF OR NONEXISTENCE OF ANY EASEMENTS OR RIGHT OF WAYS.
4. THIS PROPERTY IS NOT WITHIN A FEMA FLOOD ZONE PER FEMA FLOOD MAP 10005C0260K.
5. THIS PROPERTY DOES NOT HAVE WETLANDS ON THIS PROPERTY PER DNREC WETLAND MAP.
6. NO BUILDING STRUCTURE OR OTHER PERMANENT OBSTRUCTION SHALL BE PLACED ON ANY EASEMENT.
7. A SHARED USED ACCESS AGREEMENT SHALL BE ESTABLISHED FOR THE USE OF THE SHARED ACCESS ROAD.

ENGINEER'S CERTIFICATION

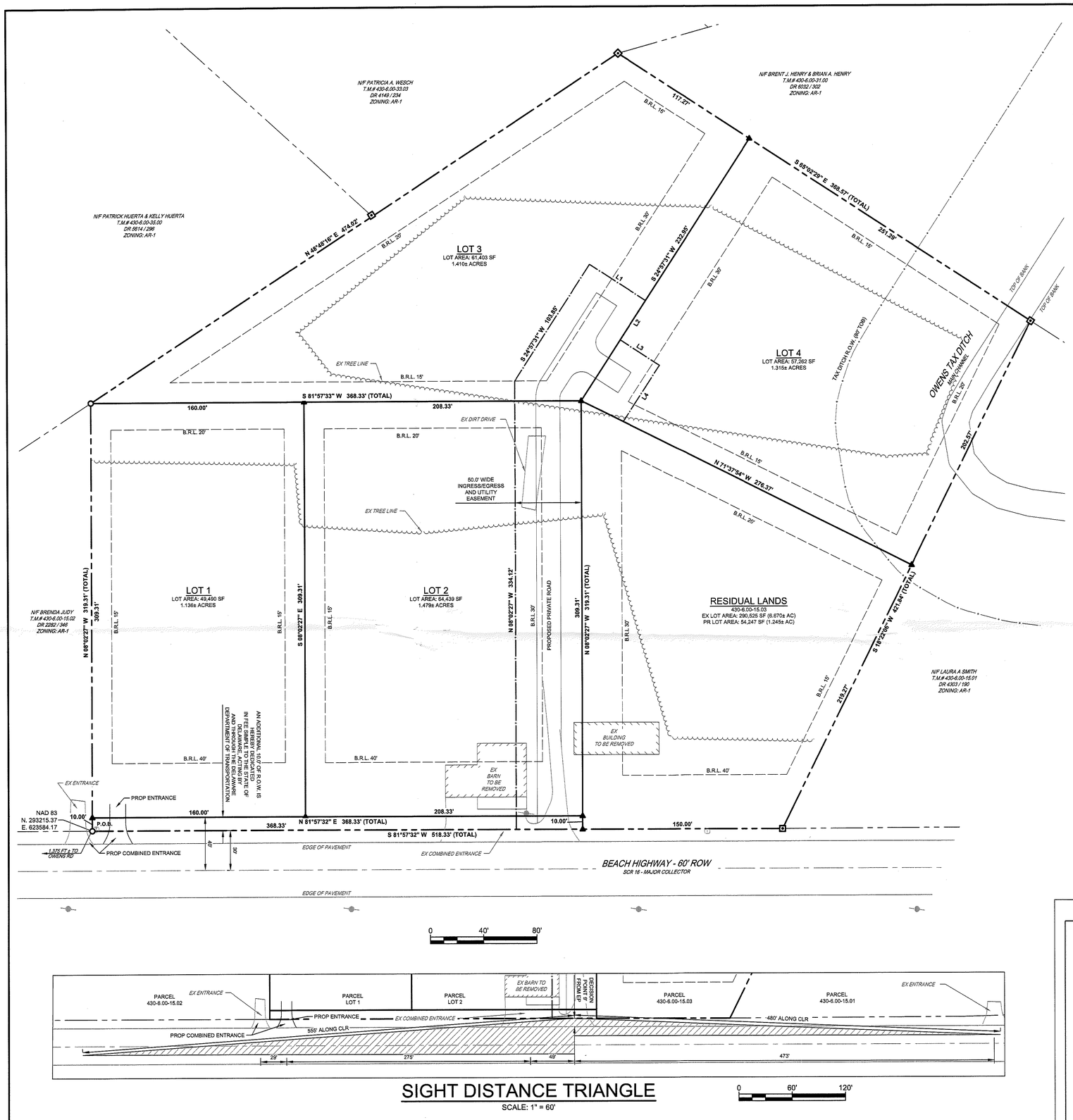
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEGE COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES.

JOHN B. ROACH, JR., P.E. DATE

Revision Number	Revision Date	Revision Description
1	09/07/2026	Revisions per comments 09/02/2026

JOHN B. ROACH Engineering LLC
22184 MELSON ROAD
GEORGETOWN, DELAWARE 19947
PHONE NO. 302-856-1565

Drawn By: JBR	Date: 07-16-2026
Scale: 1"=30'	Sheet 1/1



SIGHT DISTANCE TRIANGLE

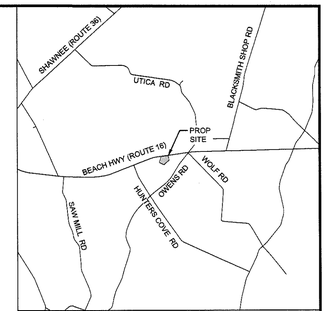
SCALE: 1" = 60'

0 60' 120'

NORTH PER NAD 83

LEGEND

- IRON PIPE FOUND
- IRON REBAR FOUND
- CONCRETE MONUMENT FOUND
- CAPPED IRON REBAR TO BE SET
- UTILITY POLE
- TELEPHONE PEDESTAL
- BUILDING SETBACK LINE
- PROPERTY LINE
- PROPOSED PROPERTY LINE
- ADJACENT PROPERTY LINE
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- EXISTING TREE LINE



LOCATION MAP

SCALE: 1" = 1 MILE

SITE DATA:

1. TAX PARCELS AND OWNERS OF RECORD:
   ALL OF PARCEL 430-6.00-15.03 - INVESTMENT BUILDERS INC.
   SOURCE OF TITLE: DB 4349 PG 168

2. PARCEL AREA:

	EXISTING	PROPOSED
PARCEL 15.03	6.670± AC (290,525 SF)	1.245± AC (54,247 SF)
LOT 1	N/A	1.136± AC (49,490 SF)
LOT 2	N/A	1.479± AC (64,439 SF)
LOT 3	N/A	1.410± AC (61,403 SF)
LOT 4	N/A	1.315± AC (57,262 SF)
DELDOT DEDICATION	N/A	0.085± AC (3,683 SF)
GROSS PROPERTY AREA:	6.670± AC (290,525 SF)	6.670± AC (290,525 SF)

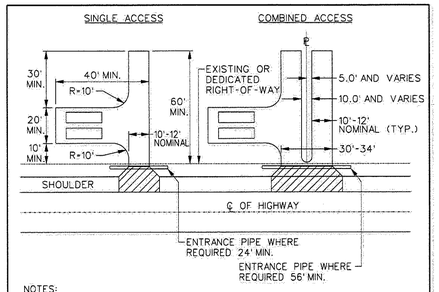
3. SITE ADDRESS: 12386 BEACH HWY, GREENWOOD, DE 19950
4. EXISTING & PROPOSED LOTS: EXISTING LOTS: 1; PROPOSED LOTS: 4; TOTAL: 5
5. GOVERNMENTAL ENTITY RESPONSIBLE FOR LAND USE APPROVAL: SUSSEX COUNTY
6. HUNDRED/COUNTY: NANTICOKE HUNDRED / SUSSEX COUNTY
7. CURRENT ZONING: AR-1
8. PRESENT USE: AGRICULTURE
9. PROPOSED USE: RESIDENTIAL
10. MINIMUM AR-1 LOT SIZE: AREA = 32,670 SF; WIDTH = 100 FEET; DEPTH = 100 FEET
11. REQUIRED AR-1 SETBACKS (B.R.L.): FRONT: 40-FEET (30' FOR PRIVATE STREET); SIDE: 15-FEET; REAR: 20-FEET
12. MAXIMUM HEIGHT REQUIREMENT: 42-FEET
13. WATER: PRIVATE ON-SITE WELL
14. SEWER: PRIVATE ON-SITE WASTE WATER DISPOSAL
15. PERMANENT MONUMENTS: 6 MONUMENTS FOUND; 6 MONUMENTS TO BE SET
16. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA FLOOD MAP PANEL NUMBER: 10005C0120K, EFFECTIVE MARCH 16, 2015.
17. POSTED SPEED LIMIT: BEACH HWY: 50 MPH
18. 2025 STATE INVESTMENT AREA: STATE STRATEGIES LEVEL 4
19. PROXIMITY TO T.I.D.: NOT WITHIN CLOSE PROXIMITY TO AN IDENTIFIED T.I.D.

DELDOT GENERAL NOTES

REVISED MARCH 21, 2019

1. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.
2. NO LANDSCAPING SHALL BE ALLOWED WITHIN THE RIGHT-OF-WAY UNLESS THE PLANS ARE COMPLIANT WITH SECTION 3.7 OF THE DEVELOPMENT COORDINATION MANUAL.
3. 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.
4. IF THE RESIDUAL LANDS OF THE APPLICANT ARE EVER DEVELOPED INTO A MAJOR SUBDIVISION, THEN THE ACCESS TO THE PARCELS CREATED BY THIS MINOR SUBDIVISION PLAN MAY BE REQUIRED TO BE FROM AN INTERNAL SUBDIVISION STREET.
5. LOTS 2, 3, 4, & THE RESIDUAL SHALL HAVE ACCESS TO SCR 16 THROUGH THE PROPOSED 50' INGRESS/EGRESS EASEMENT AND LOT 1 SHALL USE A PRIVATE ENTRACE.
6. LOT 1 TO USE PROPOSED SINGLE ACCESS TO SCR 16

Figure 7.2.3.3-a Residential Access Design Requirements



NOTES:
1. DRIVEWAY WIDTHS MAY BE INCREASED WITH DelDOT'S APPROVAL FOR SPECIAL PURPOSE VEHICLES, I.E. FARM VEHICLES, ETC.
2. MINIMUM RESIDENTIAL PAVEMENT SECTION - 6" GRADED AGGREGATE BASE COURSE.
3. ACCESS TO RESIDENTIAL LOTS SHOULD BE LIMITED TO ONE ACCESS POINT. (SEE SECTION 7.2.3.1 FOR EXCEPTIONS)
4. ENTRANCE GEOMETRICS SHALL CONFORM TO DELDOT STANDARD CONSTRUCTION DETAIL C-3.

FIRE MARSHAL NOTES

1. SITE ADDRESS: 12386 BEACH HWY, GREENWOOD, DE 19950
2. OWNER: INVESTMENT BUILDERS INC.
3. INTENDED USE: RESIDENTIAL
4. NO BUILDINGS WILL BE SPRINKLERED
5. BUILDING CONSTRUCTION TYPE: NPPA TYPE V WOOD FRAME
6. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
7. WATER SUPPLIER: PRIVATE ON SITE WELL
8. SEWER PROVIDER: PRIVATE SEPTIC SYSTEM

GENERAL NOTES

1. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE THE PARCEL AS SHOWN CREATING 4 ADDITIONAL LOTS, AND TO CREATE AN ACCESS & UTILITY EASEMENT EASEMENT.
2. LEVEL OF ACCURACY IS BASED ON "SUBURBAN SURVEY" STANDARDS
3. SURVEY DATE: 7/27/26
4. HORIZONTAL DATUM: NAD 83
5. THIS BOUNDARY SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT AND IS SUBJECT TO ANY ENCUMBRANCES, RESTRICTIONS, EASEMENTS AND/OR RIGHTS OF WAY THAT MIGHT BE REVEALED BY A THOROUGH TITLE SEARCH.
6. NO BUILDING, STRUCTURE, OR OTHER PERMANENT OBSTRUCTION SHALL BE PLACED ON ANY EASEMENT.
7. MAINTENANCE OF THE PROPOSED INGRESS/EGRESS EASEMENT SHALL BE THE RESPONSIBILITY OF THE OWNERS OF LOTS 2,3,4, & THE RESIDUAL PER THE MAINTENANCE AGREEMENT.
8. THERE ARE NO WETLANDS ON THIS PROPERTY PER THE DNREC ENVIRONMENTAL NAVIGATOR.

EASEMENT LINE TABLE		
LINE #	BEARING & DISTANCE	LENGTH
L1	N65°02'29"W	50.00'
L2	S24°57'31"W	35.00'
L3	N65°02'29"W	35.00'
L4	N24°57'31"E	50.00'

SUSSEX COUNTY APPROVAL BLOCK

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.

INVESTMENT BUILDERS INC.
500 MARKET ST,
GREENWOOD, DE 19950

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.

EDWIN J. TENNEFOSS REGISTERED No.12896 PROFESSIONAL ENGINEER STATE OF DELAWARE

8/21/26

EDWIN TENNEFOSS, P.E. (DE LICENSE #12896)
39 COMMERCE STREET
HARRINGTON, DE 19952

DATE

SITEWORKS

INVESTMENT BUILDERS INC.
TAX PARCEL NO. 430-6.00-15.03

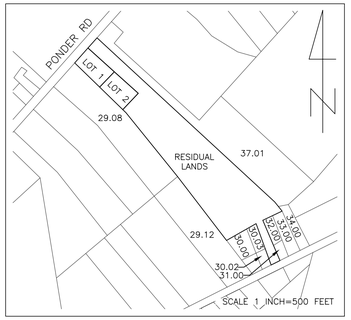
ISSUE / REVISION
8/21/26 - DELDOT
8/21/26 - FIRE MA
8/21/26 - SUSSEX

SCALE	PRO
1" = 40'	26

DRAWING NUME

SHEE

THIS DRAWING INCLUDING DESIGN AND CONSTRUCTION FEATURES ARE PROPRIETARY TO SITEWORKS ENGINEERING LLC. AND SHALL NOT BE ALTERED OR REUSED WITHOUT WRITTEN PERMISSION. © CONTENTS COPYRIGHT 2026 SITEWORKS ENGINEERING, LLC.



ADJOINING PARCELS			
PARCEL	OWNER(S)	DB, PG	ZONING
230-27.00-29.08	LISA A. CANNON AND ANTHONY LEE CANNON	DB 5300, PG 235	AR-1
230-27.00-29.12	NELLIE ALEXANDER	DB 2040, PG 55	AR-1
230-27.00-30.00	PATRICIA AROST	DB 3865, PG 242	AR-1
230-27.00-30.03	ROSALIO I. LUCAS AND SEBASTIAN SIMINA LOPEZ	DB 4347, PG 248	AR-1
230-27.00-30.02	STEVE A. HICKMAN	DB 4460, PG 65	AR-1
230-27.00-31.00	RONALD C. WHITE	DB 3759, PG 11	AR-1
230-27.00-32.00	STEVE A. HICKMAN, SR.	DB 6047, PG 13	AR-1
230-27.00-33.00	THEODIS RIDDICK BOWE IV AND RENEA BOWE	DB 5243, PG 152	AR-1
230-27.00-34.00	ELISA AND AMEE WHITE	DB 6510, PG 229	AR-1
230-27.00-37.01	LUCKY FARM LLC	DB 4479, PG 9	AR-1

LEGEND:

- CORNER NOT MARKED
- CAPPED IRON PIN SET
- IRON PIPE FOUND
- CONCRETE MONUMENT FOUND
- UTILITY POLE
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- ADJOINING PROPERTY LINE
- BUILDING RESTRICTION LINE
- ROAD EDGE
- ROAD SEAM
- TOP OF DITCH BANK
- EXISTING FENCE

SCALE

40 0 20 40 80

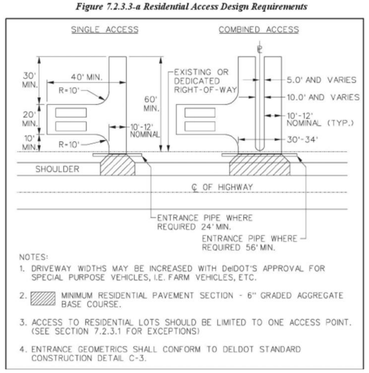
(IN FEET)
1 INCH = 40 FEET

DelDOT NOTES

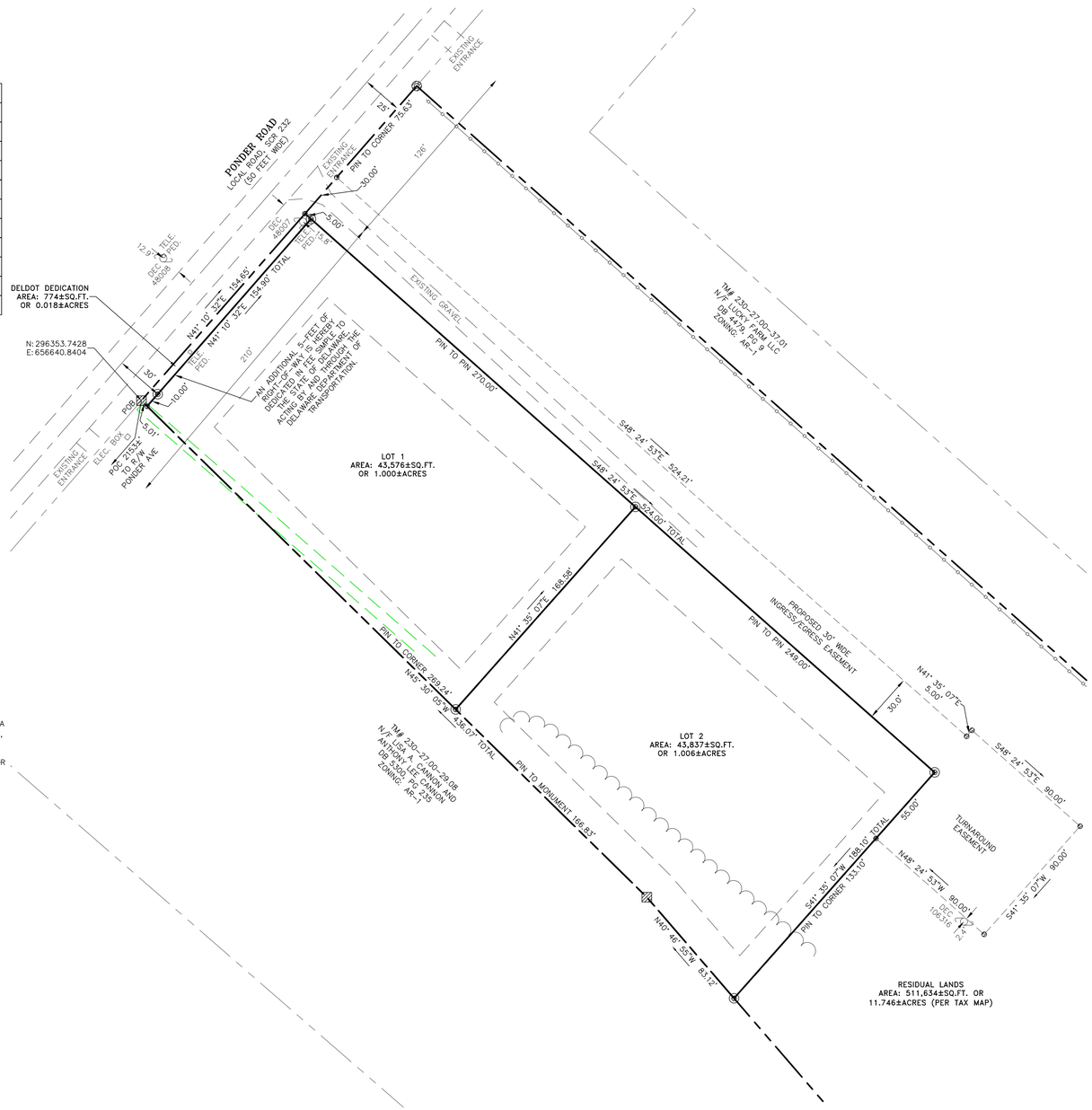
1. ALL ENTRANCES SHALL CONFORM TO DELDOT'S DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL.
2. SHRUBBERY, PLANTINGS, SIGNS AND/OR OTHER VISUAL BARRIERS THAT COULD OBSTRUCT THE SIGHT DISTANCE OF A DRIVER PREPARING TO ENTER THE ROADWAY ARE PROHIBITED WITHIN THE DEFINED DEPARTURE SIGHT TRIANGLE AREA ESTABLISHED ON THIS PLAN. IF THE ESTABLISHED DEPARTURE SIGHT TRIANGLE AREA IS OUTSIDE THE RIGHT-OF-WAY OR PROJECTS ONTO THE PROPERTY OWNER'S LAND, A SIGHT EASEMENT SHOULD BE ESTABLISHED AND RECORDED WITH ALL AFFECTED PROPERTY OWNERS TO MAINTAIN THE REQUIRED SIGHT DISTANCE.
3. IF THE RESIDUAL LANDS OF THE APPLICANT ARE EVER DEVELOPED INTO A MAJOR SUBDIVISION THEN ACCESS TO THE PARCELS CREATED BY THIS MINOR SUBDIVISION PLAN MAY BE REQUIRED TO BE FROM AN INTERNAL SUBDIVISION STREET.
4. LOT 1, LOT 2 AND RESIDUAL LANDS SHALL HAVE ACCESS TO SCR232 VIA THE 30-FOOT WIDE INGRESS/EGRESS EASEMENT.

DelDOT Development Coordination Manual

Figure 7.2.3.3-a Residential Access Design Requirements



NOTES:
1. DRIVEWAY WIDTHS MAY BE INCREASED WITH DelDOT'S APPROVAL FOR SPECIAL PURPOSE VEHICLES, I.E. FARM VEHICLES, ETC.
2. MINIMUM RESIDENTIAL PAVEMENT SECTION - 6" GRADED AGGREGATE BASE COURSE.
3. ACCESS TO RESIDENTIAL LOTS SHOULD BE LIMITED TO ONE ACCESS POINT. (SEE SECTION 7.2.3.1 FOR EXCEPTIONS)
4. ENTRANCE GEOMETRICS SHALL CONFORM TO DELDOT STANDARD CONSTRUCTION DETAIL C-3.



DSPC NSTAS 2011

LOCATION MAP SCALE 1 INCH = 1000 FEET

SITE DATA

1. TAX PARCEL (P/O): 230-27.00-36.00, DB 4090, PG 205.
PROPERTY ADDRESS: PONDER ROAD, ELLENDALE, DE 19941
OWNER'S NAME: LISA A. CANNON

2. TOTAL ACREAGE PRIOR TO SUBDIVISION: 13.77±ACRES (PER TAX MAP)

PARCEL	SQUARE FEET	ACRES
LOT 1	43,576±SQ.FT.	1.000±ACRES
LOT 2	43,837±SQ.FT.	1.006±ACRES
DELDOT DEDICATION	774±SQ.FT.	0.018±ACRES
RESIDUAL LANDS	511,634±SQ.FT.	11.746±ACRES (PER TAX MAP)

3. ZONING: "AR-1"
PRESENT USE: AGRICULTURAL
PROPOSED USE: AGRICULTURAL/RESIDENTIAL
SEWER: ON SITE PRIVATE SEPTIC
WATER: ON SITE PRIVATE WELL

4. BUILDING SETBACKS:
FRONT: 40 FEET (NUMBERED ROAD)
FRONT: 30 FEET (SUBDIVISION STREET)
SIDE: 15 FEET
REAR: 20 FEET

5. EXISTING NUMBER OF LOTS: 1
PROPOSED NUMBER OF LOTS: 3 INCLUDING RESIDUAL LANDS

6. ROAD CLASSIFICATIONS AND FRONTAGE:

RESIDUAL	PONDER ROAD (LOCAL ROAD):	105.63±LF
	EASEMENT (INTERNAL SUBDIVISION STREET):	799.21±LF
LOT 1	PONDER ROAD (LOCAL ROAD):	154.90±LF
	EASEMENT (INTERNAL SUBDIVISION STREET):	270.00±LF
LOT 2	EASEMENT (INTERNAL SUBDIVISION STREET):	304.00±LF

7. NUMBER OF PERMANENT MONUMENTS FOUND: 2 CONCRETE MONUMENTS FOUND, 1 IRON PIPE FOUND
NUMBER OF PERMANENT MONUMENTS SET: 6 CAPPED IRON PINS SET

8. THIS PROPERTY IS LOCATED 4.2±MILES OUTSIDE THE MILTON TRANSPORTATION IMPROVEMENT DISTRICT.

9. ACCORDING TO FEMA FIRM MAP 10005C0133J, DATED 01/06/2005, THE PROPOSED LOTS LIE ENTIRELY IN ZONE X.

10. THERE ARE NO APPARENT WETLANDS ON THE PROPOSED LOTS.

11. NO BUILDING STRUCTURE OR OTHER PERMANENT OBSTRUCTION SHALL BE PLACED ON ANY EASEMENT.

12. LOT 1, LOT 2, AND RESIDUAL LANDS WILL HAVE SHARED MAINTENANCE AND USE OF THE PROPOSED 30FT WIDE INGRESS/EGRESS AND TURNAROUND EASEMENT

13. THE POSTED SPEED LIMIT FOR PONDER ROAD IS 50 MPH.

14. NO TITLE SEARCH PERFORMED OR PROVIDED IN PREPARATION OF THIS PLAN.

FIRE MARSHAL

1. PROPOSED BUILDING USE RESIDENTIAL.
2. MAXIMUM HEIGHT PER SUSSEX COUNTY CODE 42FT.
3. PROPOSED CONSTRUCTION WOOD FRAMED.
4. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
5. AUTOMATIC FIRE SPRINKLERS ARE NOT PROPOSED FOR THIS STRUCTURE.

REV 17 SEP 2026,
PER SCO COMMENTS

AGRICULTURE NOTES

1. THERE IS A FIFTY FOOT BUILDING SETBACK FROM LANDS USED FOR AGRICULTURAL PURPOSES UNLESS THE APPLICANT ACQUIRES A LETTER OF CONSENT FROM THE ADJACENT OWNER.

99-6 (G) STATEMENT – FOR ANY NEW SUBDIVISION DEVELOPMENT LOCATED IN WHOLE OR IN PART WITHIN 300 FEET OF THE BOUNDARY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES, THE OWNER OF THE DEVELOPMENT SHALL PROVIDE IN THE DEED RESTRICTIONS AND ANY LEASES OR AGREEMENTS OF SALE FOR ANY RESIDENTIAL LOT OR DWELLING UNIT THE FOLLOWING NOTICE: "THIS 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 OF AGRICULTURAL CHEMICALS AND NIGHTTIME FARM OPERATIONS. THE USE AND ENJOYMENT OF THIS PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM SUCH NORMAL AGRICULTURAL USES AND ACTIVITIES."

SUSSEX COUNTY APPROVAL

OWNERS OF RECORD

I/WE, THE UNDERSIGNED, HEREBY CERTIFY TO THE OWNERSHIP OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY/OUR DIRECTION, AND THAT I/WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND THAT I/WE DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

LISA A. CANNON — DATE
12457 PONDER ROAD, ELLENDALE, DE 19941

SURVEYOR'S CERTIFICATION

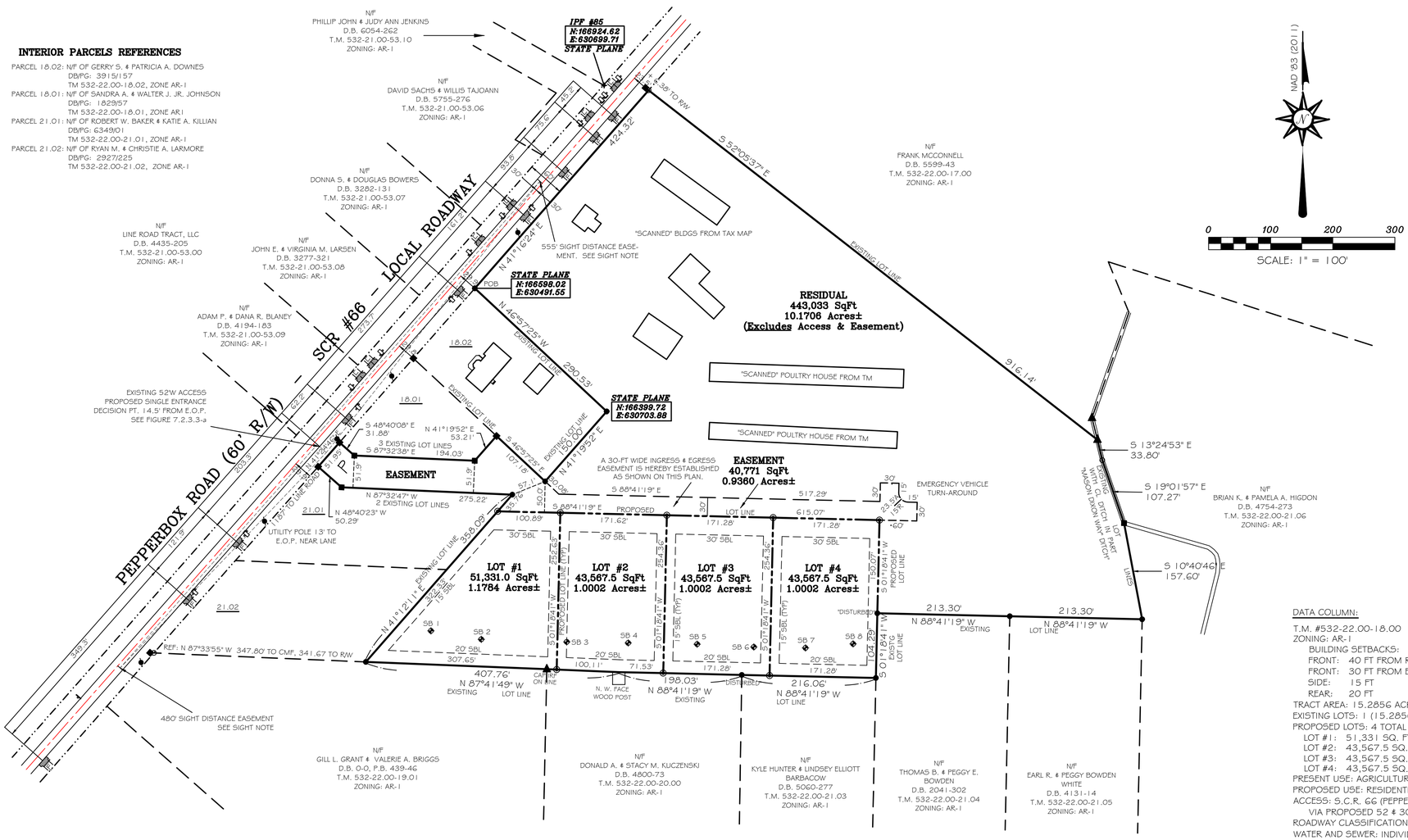
I, ALAN O'DALE KENT REGISTERED AS A PROFESSIONAL LAND SURVEYOR IN THE STATE OF DELAWARE, HEREBY STATE THAT THE INFORMATION SHOWN ON THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND MEETS THE STANDARDS OF PRACTICE AS ESTABLISHED BY THE STATE OF DELAWARE BOARD OF PROFESSIONAL LAND SURVEYORS. ANY CHANGES TO THE PROPERTY CONDITIONS, IMPROVEMENTS, BOUNDARY OR PROPERTY CORNERS AFTER THE DATE SHOWN HEREON SHALL NECESSITATE A NEW REVIEW AND CERTIFICATION FOR ANY OFFICIAL OR LEGAL USE.

ALAN O'DALE KENT, PLS#738 — DATE
ALAN O KENT LAND SURVEYING LLC
9505 SUSSEX STREET
SEAFORD, DE 19973
PHONE: (302) 745-1735
EMAIL: aokisllc@outlook.com

JOB # 2026139 THIS IS A SUBURBAN CLASS SURVEY

DATE OF PLAN 26 AUG 2026	MINOR SUBDIVISION PLAN FOR ALEISHA CANNON OF THE LANDS NOW OR FORMERLY OF LISA A. CANNON SCR 232, ELLENDALE, DE CEDAR CREEK HUNDRED, SUSSEX COUNTY
DATE OF LAST FIELD WORK 25 JUN 2026	PREPARED BY ALAN O KENT LAND SURVEYING, LLC 9505 SUSSEX STREET, SEAFORD, DE 19973 (302) 745-1735

T. M. #532-22.00-18.00 (PART)



MONUMENTATION:

- CONCRETE MONUMENT (FOUND)
- IRON PIPE (FOUND)
- PIPE TO BE SET
- IRON ROD (FOUND)
- POINT
- SOIL BORING
- EXISTING ENTRANCE
- PROPOSED ENTRANCE
- EXISTING AG. ENTRANCE
- MAILBOX
- UTILITY POLE
- TRAFFIC SIGN
- PHONE PULL BOX

DATA COLUMN:

T.M. #532-22.00-18.00
ZONING: AR-1
BUILDING SETBACKS:
FRONT: 40 FT FROM ROW LINE
FRONT: 30 FT FROM EASEMENT LINE
SIDE: 15 FT
REAR: 20 FT
TRACT AREA: 15.2856 ACRES± (SURVEYED AS SHOWN)
EXISTING LOTS: 1 (15.2856 ACRES± PRIOR TO SUBDIVISION)
PROPOSED LOTS: 4 TOTAL INCLUDING RESIDUAL LANDS
LOT #1: 51,331 SQ. FT. (1.1784 ACRES±)
LOT #2: 43,567.5 SQ. FT. (1.0002 ACRES±)
LOT #3: 43,567.5 SQ. FT. (1.0002 ACRES±)
LOT #4: 43,567.5 SQ. FT. (1.0002 ACRES±)
PRESENT USE: AGRICULTURAL
PROPOSED USE: RESIDENTIAL
ACCESS: S.C.R. 66 (PEPPERBOX ROAD)
VIA PROPOSED 52 & 30-FOOT WIDE EASEMENT)
ROADWAY CLASSIFICATION: LOCAL & PRIVATE
WATER AND SEWER: INDIVIDUAL ON-SITE
100 YEAR FLOODPLAIN: SITE IS NOT IMPACTED
AS PER FIRM #10005C0560L DATED 06/20/18.
THE NEAREST TID TO THIS PROJECT IS THE HENLOPEN TID
SPEED LIMIT ON PEPPERBOX RD. IS 50 MPH (UNPOSTED)
THE BEARINGS ARE IN THE DELAWARE STATE PLANE SYSTEM
PERMANENT MONUMENTS FOUND: 23
PERMANENT MONUMENTS SET: 8

I, DONALD K. MILLER REGISTERED AS A PROFESSIONAL LAND SURVEYOR IN THE STATE OF DELAWARE, HEREBY STATE THAT THE INFORMATION SHOWN ON THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND MEETS THE STANDARDS OF PRACTICE AS ESTABLISHED BY THE STATE OF DELAWARE BOARD OF PROFESSIONAL LAND SURVEYORS. ANY CHANGES TO THE PROPERTY CONDITIONS, IMPROVEMENTS, BOUNDARY OR PROPERTY CORNERS AFTER THE DATE SHOWN HEREON SHALL NECESSITATE A NEW REVIEW AND CERTIFICATION FOR ANY OFFICIAL OR LEGAL USE.

DONALD K. MILLER, PLS 407 — DATE

WE, THE UNDERSIGNED, HEREBY CERTIFY TO THE OWNERSHIP OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO LAW.

TAMMY L. HORN — DATE

MICHAEL F. HORN — DATE

OWNERS MAILING ADDRESS: 14147 LINE ROAD
DELMAR, DE. 19940
ph: 410-251-7847

LEGEND:

- EXISTING RIGHT-OF-WAY LINE
- PROPOSED RIGHT-OF -WAY LINE
- EXISTING LOT LINE
- PROPOSED LOT LINE
- NEXT PROPERTY LINE
- CENTERLINE ROAD
- EDGE OF PAVING
- SIGHT TRIANGLE LINE
- SETBACK LINE
- TAX DITCH EASEMENT LINE

GENERAL NOTES:

1. IF THE RESIDUAL LANDS OF THE APPLICANT ARE EVER DEVELOPED INTO A MAJOR SUBDIVISION, THEN THE ACCESS TO THE PARCELS CREATED BY THIS MINOR SUBDIVISION PLAN MAY BE REQUIRED TO BE FROM AN INTERNAL SUBDIVISION STREET.

2. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DEL.D.O.T.'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.

3. THERE IS A FIFTY FOOT BUILDING SETBACK FROM LANDS USED FOR AGRICULTURAL PURPOSES.

4. LOTS 1,2,3 & 4 SHALL HAVE ACCESS TO SCR 66, PEPPERBOX ROAD, VIA THE PROPOSED 52-FT WIDE & 30-FT WIDE EASEMENT AS SHOWN.

5. THE RESIDUAL SHALL RETAIN ACCESS TO SCR 66, PEPPERBOX ROAD, VIA THE EXISTING FOUR (4) ENTRANCES AS SHOWN.

6. PRIVATE MAINTENANCE: THE EASEMENT ACCESSING THIS SUBDIVISION SHALL BE MAINTAINED EQUALLY BY THE DEVELOPER THEIR HEIRS AND ASSIGNS, AND THE FUTURE OWNERS OF LOTS NUMBERS 1,2, 3 & 4 THEIR HEIRS AND ASSIGNS. WITH REFERENCE TO DELDOT CODE (TITLE 17, SECTION 131), DELDOT ASSUMES NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THE EASEMENT.

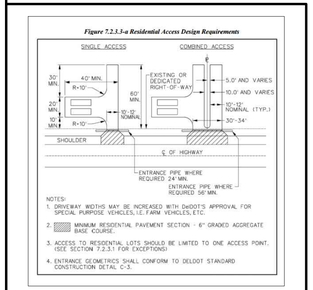
7. ENTRANCES TO PRIVATE STREETS SERVING MULTIPLE RESIDENTIAL LOTS SHOULD BE PAVED FROM THE EDGE OF THE TRAVEL LANE TO THE R.O.W LINE (AT A MINIMUM) WITH THE DRIVEWAY THROAT WIDTH OF 16 TO 24 FEET. REFER TO DELDOT DEVELOPMENT COORDINATION MANUAL REFERENCE 3.3.3.

8. THIS 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.

9. THERE APPEARS TO BE NO WETLANDS ON THE SUBJECT LOTS #1 - #4 ACCORDING TO THE NATIONAL WETLANDS INVENTORY.

10. NO BUILDING STRUCTURE OR OTHER PERMANENT OBSTRUCTION SHALL BE PLACED WITHIN THE 50-FT WIDE & 30-FT WIDE EASEMENT AS SHOWN.

DELDOT DEVELOPMENT COORDINATION MANUAL



SIGHT NOTE:

NOTE: 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.

SUSSEX COUNTY APPROVAL STAMP

THIS SURVEY AND PLAT DOES NOT VERIFY THE EXISTENCE OR NON-EXISTENCE OF RIGHTS-OF-WAY OR EASEMENTS CROSSING THIS PROPERTY.
NO TITLE SEARCH PROVIDED OR STIPULATED.

SURVEY CLASS: RURAL

FIELD WORK PERFORMED MAY 7, 2026

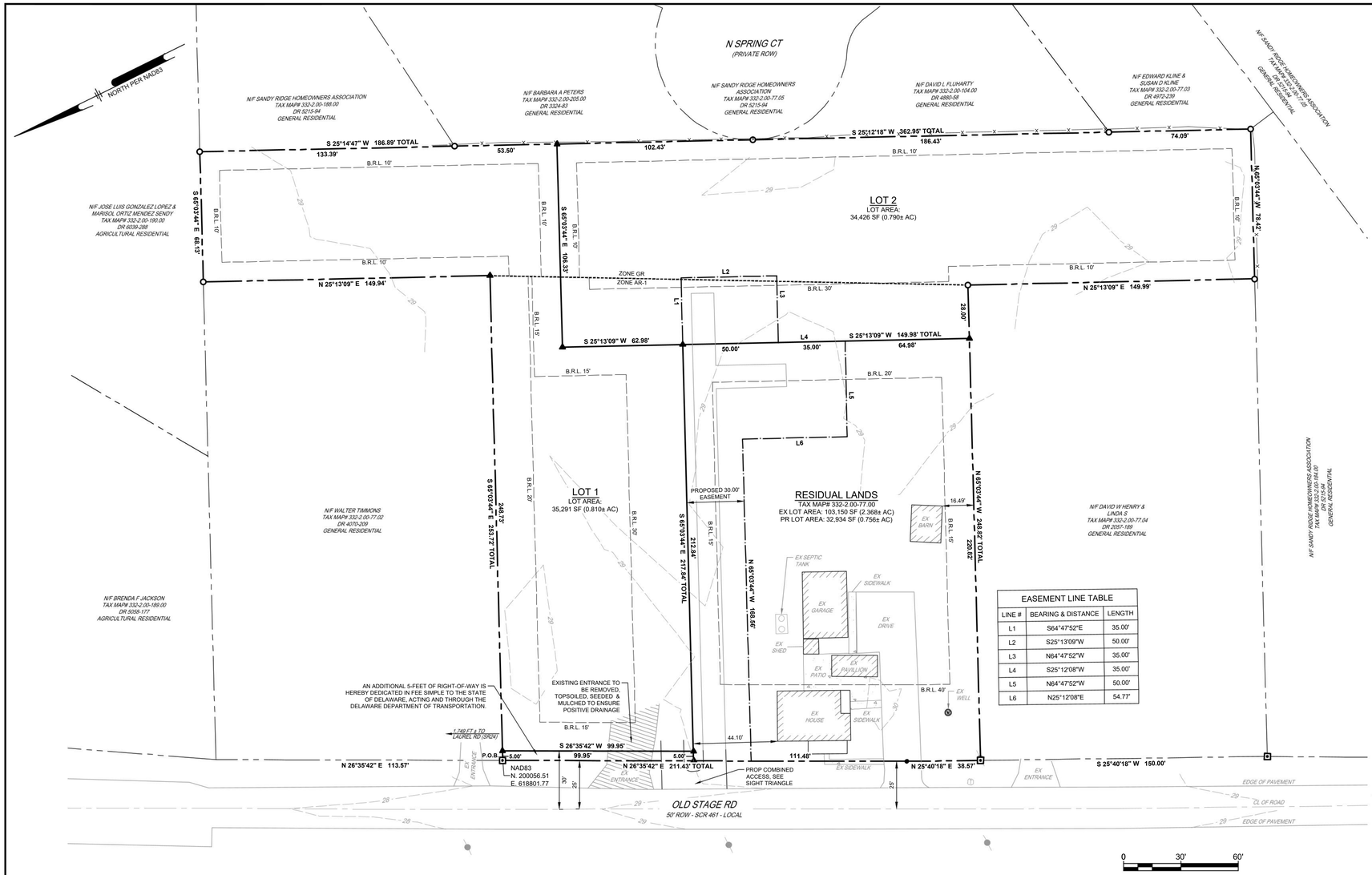
DATE	REVISION
08/28/2026	INITIAL DELDOT SUBMISSION
09/10/2026	RE DELDOT COMMENTS 9/10/26
09/15/2026	RE DELDOT COMMENTS 9/15/26

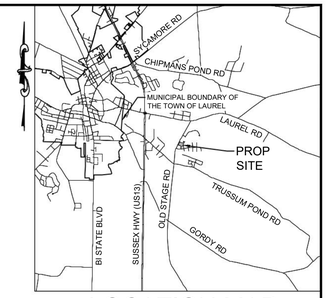
MINOR SUBDIVISION PLAN FOR
TAMMY L. HORN &
MICHAEL F. HORN
SITE LOCATION: 14090 PEPPERBOX ROAD
DELMAR, DE. 19940

MILLER LEWIS, INC.
LAND SURVEYING
1560 MIDDLEFORD RD.
SEAFORD, DELAWARE 19973
PH: 302-629-9895 FAX: 302-629-2391

DONALD K. MILLER REGISTERED No. 407 — 9/22/26

HUNDRED: LITTLE CREEK	COUNTY: SUSSEX
STATE: DELAWARE	DRAWN BY: D.L. PARKER
REF: DB 6451-300	DWG. FILE: BOWDENS 532-22-18





LOCATION MAP

SCALE: 1" = 1 MILE

SITE DATA:

1. TAX PARCELS AND OWNERS OF RECORD:
   ALL OF PARCEL 332-2.00-77.00 - OAK ROAD RENTALS LLC
   SOURCE OF TITLE: DB 5796 PG 108

2. PARCEL AREA:

	EXISTING	PROPOSED
PARCEL 77.00	2.368± AC (103,150 SF)	0.756± AC (32,934 SF)
LOT 1	N/A	0.810± AC (35,291 SF)
LOT 2	N/A	0.790± AC (34,426 SF)
AREA DEDICATED TO DELDOT	N/A	0.012± AC (499 SF)
GROSS PROPERTY AREA:	2.368± AC (103,150 SF)	2.368± AC (103,150 SF)

3. SITE ADDRESS: 32009 OLD STAGE RD, LAUREL, DE 19956
4. EXISTING & PROPOSED LOTS: EXISTING LOTS = 1; PROPOSED LOTS = 3 (2 CREATED)
5. GOVERNMENTAL ENTITY RESPONSIBLE FOR LAND USE APPROVAL: SUSSEX COUNTY
6. HUNDRED/COUNTY: LITTLE CREEK HUNDRED / SUSSEX COUNTY
7. CURRENT ZONING: AR-1/GR
8. PRESENT USE: RESIDENTIAL
9. PROPOSED USE: RESIDENTIAL
10. MINIMUM AR-1 LOT SIZE: AREA = 32,670 SF; WIDTH = 100 FEET; DEPTH = 100 FEET
11. REQUIRED AR-1 SETBACKS (B.R.L.): FRONT: 40-FEET (30' FOR PRIVATE STREET); SIDE: 15-FEET; REAR: 20-FEET
12. MAXIMUM HEIGHT REQUIREMENT: 42-FEET
13. WATER: PRIVATE ON-SITE WELL
14. SEWER: PRIVATE ON-SITE WASTE WATER DISPOSAL
15. PERMANENT MONUMENTS: 11 MONUMENTS FOUND; 8 MONUMENTS TO BE SET
16. THE SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA FLOOD MAP PANEL NUMBER: 10005C0416L, EFFECTIVE JUNE 20, 2018.
17. POSTED SPEED LIMIT: OLD STAGE RD: 50 MPH (UNPOSTED)
18. 2025 STATE INVESTMENT AREA: LEVEL 1 / LEVEL 2
19. PROXIMITY TO T.I.D.: NOT WITHIN CLOSE PROXIMITY TO AN IDENTIFIED T.I.D.

EASEMENT LINE TABLE		
LINE #	BEARING & DISTANCE	LENGTH
L1	S64°47'52"E	35.00'
L2	S25°13'09"W	50.00'
L3	N64°47'52"W	35.00'
L4	S25°12'08"W	35.00'
L5	N64°47'52"W	50.00'
L6	N25°12'08"E	54.77'

FIRE MARSHAL NOTES

1. SITE ADDRESS: 32009 OLD STAGE RD, LAUREL, DE 19956
2. OWNER: OAK ROAD RENTALS LLC
3. INTENDED USE: RESIDENTIAL
4. NO BUILDINGS WILL BE SPRINKLERED
5. BUILDING CONSTRUCTION TYPE: NPPA TYPE V WOOD FRAME
6. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
7. WATER SUPPLIER: PRIVATE ON SITE WELL
8. SEWER PROVIDER: PRIVATE SEPTIC SYSTEM

SUSSEX COUNTY APPROVAL BLOCK

DELDOT GENERAL NOTES

REVISED FEBRUARY 17, 2022

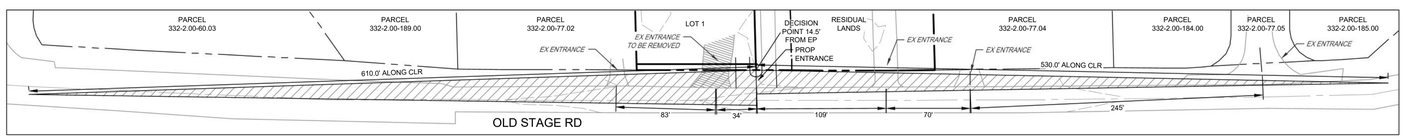
1. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.
2. NO LANDSCAPING SHALL BE ALLOWED WITHIN THE RIGHT-OF-WAY UNLESS THE PLANS ARE COMPLIANT WITH SECTION 3.7 OF THE DEVELOPMENT COORDINATION MANUAL.
3. 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.
4. IF THE RESIDUAL LANDS OF THE APPLICANT ARE EVER DEVELOPED INTO A MAJOR SUBDIVISION, THEN THE ACCESS TO THE PARCELS CREATED BY THIS MINOR SUBDIVISION PLAN MAY BE REQUIRED TO BE FROM AN INTERNAL SUBDIVISION STREET.
5. LOTS 1-2 SHALL HAVE ACCESS TO SCR 461 VIA THE 30' INGRESS/EGRESS EASEMENT.
6. RESIDUAL LANDS SHALL HAVE A SINGLE ACCESS TO SCR 461.

GENERAL NOTES

1. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE THE PARCEL AS SHOWN CREATING 2 LOTS, AND TO CREATED AN ACCESS EASEMENT.
2. LEVEL OF ACCURACY IS BASED ON "SUBURBAN SURVEY" STANDARDS
3. SURVEY DATE: 3/31/26
4. HORIZONTAL DATUM: NAD 83
5. THIS BOUNDARY SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT AND IS SUBJECT TO ANY ENCUMBRANCES, RESTRICTIONS, EASEMENTS AND/OR RIGHTS OF WAY THAT MIGHT BE REVEALED BY A THOROUGH TITLE SEARCH.
6. NO BUILDING, STRUCTURE, OR OTHER PERMANENT OBSTRUCTION SHALL BE PLACED ON ANY EASEMENT.
7. MAINTENANCE OF THE PROPOSED INGRESS/EGRESS EASEMENT SHALL BE THE RESPONSIBILITY OF THE OWNERS OF LOTS 1-2 AND THE RESIDUAL PER THE MAINTENANCE AGREEMENT.
8. THIS PROPERTY IS NOT IMPACTED BY WETLANDS PER THE DNREC ENVIROMENTAL NAVIGATOR.

LEGEND

- POINT
- CAPPED IRON REBAR FOUND
- CONCRETE MONUMENT FOUND
- IRON PIPE FOUND
- CAPPED IRON REBAR TO BE SET
- UTILITY POLE
- TELEPHONE PEDESTAL
- BUILDING SETBACK LINE
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- ADJACENT PROPERTY LINE
- PROPOSED EASEMENT LINE
- ZONING DISTRICT LINE

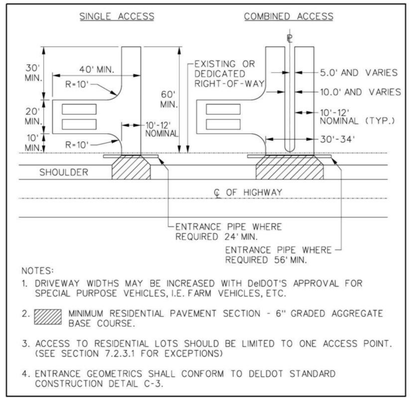


SIGHT DISTANCE TRIANGLE

SCALE: 1" = 60'

0 60' 120'

Figure 7.2.3.3-a Residential Access Design Requirements



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.

OAK ROAD RENTALS LLC
32009 OLD STAGE RD,
LAUREL, DE 19956

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.

EDWIN TENNEFOSS, P.E. (DE LICENSE NO. #12895)
39 COMMERCE STREET
HARRINGTON, DE 19952

DATE

SITEWORKS ENGINEERING LLC
PO BOX 2 | 39 COMMERCE ST, HARRINGTON, DE 19952 Phone: (302) 841-7901

MINOR SUBDIVISION PLAN

LANDS OF OAK ROAD RENTALS LLC

TAX PARCEL NO. 332-2.00-77.00

SCR 461 (OLD STAGE RD) LOCAL

LITTLE CREEK HUNDRED, SUSSEX COUNTY, DELAWARE

ISSUE / REVISION BLOCK
9/4/26 - DELDOT
9/4/26 - SUSSEX COUNTY
9/4/26 - FIRE MARSHAL
9/22/26 - SUSSEX COUNTY

SCALE	PROJECT #	DRAWN BY
1" = 30'	26-0837	DLC

DRAWING NUMBER

1

SHEET 1 OF 1

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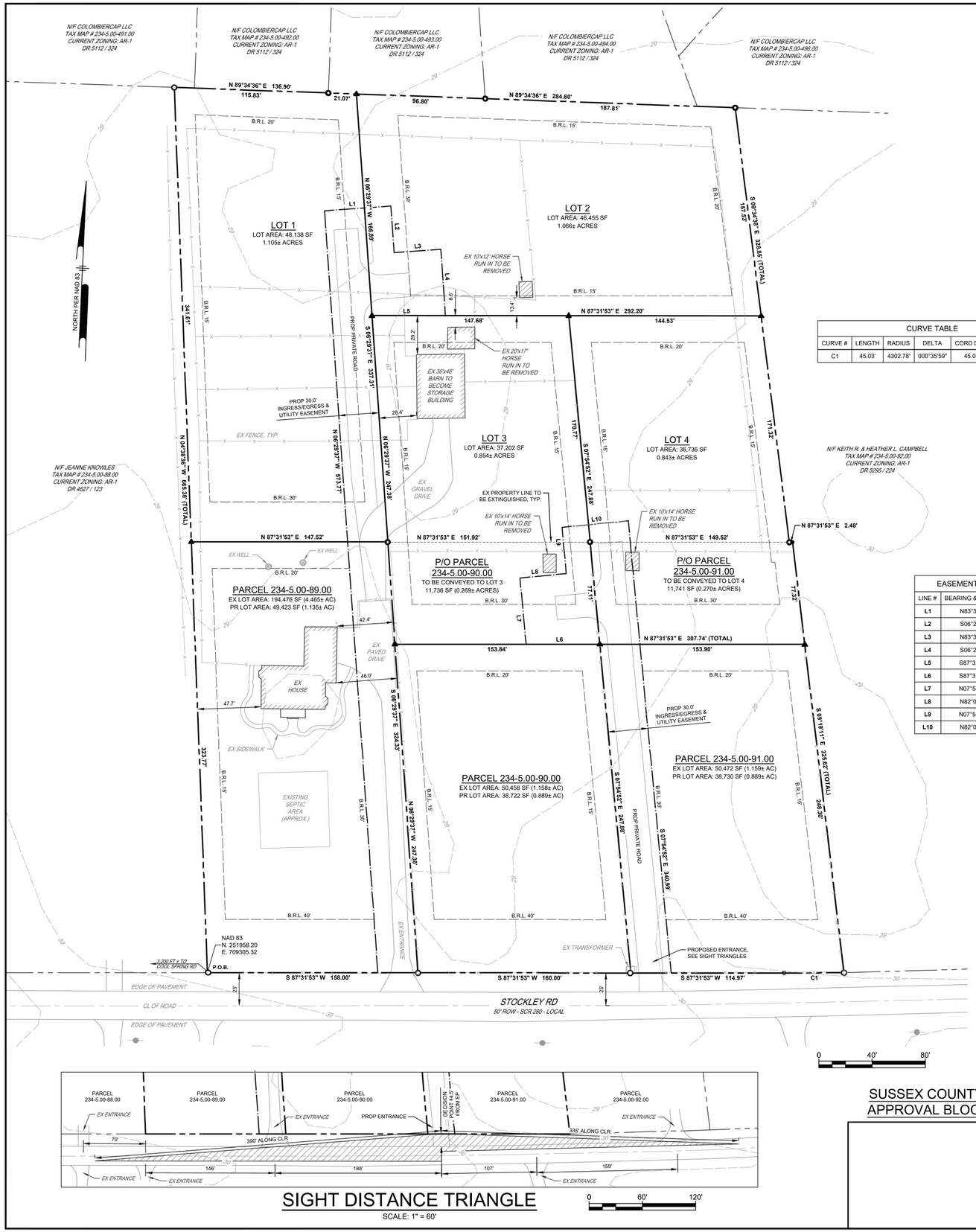


CURVE TABLE					
CURVE #	LENGTH	RADIUS	DELTA	CORD DIST.	CORD BEARING
C1	45.03'	4302.78'	000°35'59"	45.03'	S87° 13' 54"W

EASEMENT LINE TABLE		
LINE #	BEARING & DISTANCE	LENGTH
L1	N83°30'23"E	50.00'
L2	S06°29'37"E	35.00'
L3	N83°30'23"E	35.00'
L4	S06°29'37"E	50.00'
L5	S87°31'53"W	55.14'
L6	S87°31'53"W	55.25'
L7	N07°54'52"W	50.00'
L8	N82°05'08"E	35.00'
L9	N07°54'52"W	35.00'
L10	N82°05'08"E	50.00'

SIGHT DISTANCE TRIANGLE

SCALE: 1" = 60'

0 60' 120'

SUSSEX COUNTY APPROVAL BLOCK

DELDOT GENERAL NOTES

REVISED MARCH 21, 2019

1. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.
2. NO LANDSCAPING SHALL BE ALLOWED WITHIN THE RIGHT-OF-WAY UNLESS THE PLANS ARE COMPLIANT WITH SECTION 3.7 OF THE DEVELOPMENT COORDINATION MANUAL.
3. 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.
4. IF THE RESIDUAL LANDS OF THE APPLICANT ARE EVER DEVELOPED INTO A MAJOR SUBDIVISION, THEN THE ACCESS TO THE PARCELS CREATED BY THIS MINOR SUBDIVISION PLAN MAY BE REQUIRED TO BE FROM AN INTERNAL SUBDIVISION STREET.
5. PARCEL 90.00, 91.00, & LOTS 3-4 SHALL HAVE ACCESS TO SCR 280 VIA THE PROPOSED EASTERN INGRESS/EGRESS EASEMENT.
6. PARCEL 89.00 & LOTS 1-2 SHALL HAVE ACCESS TO SCR 280 VIA THE PROPOSED WESTERN INGRESS/EGRESS EASEMENT.

GENERAL NOTES

1. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE THE PARCEL AS SHOWN CREATING 4 ADDITIONAL LOTS, TO PERFORM A LOT LINE ADJUSTMENT, AND TO CREATED 2 ACCESS & UTILITY EASEMENTS.
2. LEVEL OF ACCURACY IS BASED ON "SUBURBAN SURVEY" STANDARDS
3. SURVEY DATE: 4/28/26
4. HORIZONTAL DATUM: NAD 83
5. THIS BOUNDARY SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT AND IS SUBJECT TO ANY ENCUMBRANCES, RESTRICTIONS, EASEMENTS AND/OR RIGHTS OF WAY THAT MIGHT BE REVEALED BY A THOROUGH TITLE SEARCH.
6. NO BUILDING, STRUCTURE, OR OTHER PERMANENT OBSTRUCTION SHALL BE PLACED ON ANY EASEMENT.
7. MAINTENANCE OF THE PROPOSED EASTERN INGRESS/EGRESS EASEMENT SHALL BE THE RESPONSIBILITY OF THE OWNERS OF PARCELS 90.00 & 91.00 & LOTS 3-4 PER THE MAINTENANCE AGREEMENT.
8. MAINTENANCE OF THE PROPOSED WESTERN INGRESS/EGRESS EASEMENT SHALL BE THE RESPONSIBILITY OF THE OWNERS OF PARCELS 89.00 & LOTS 1-2 PER THE MAINTENANCE AGREEMENT.
9. THIS PROPERTY IS NOT IMPACTED BY WETLANDS PER THE DNREC ENVIROMENTAL NAVIGATOR.

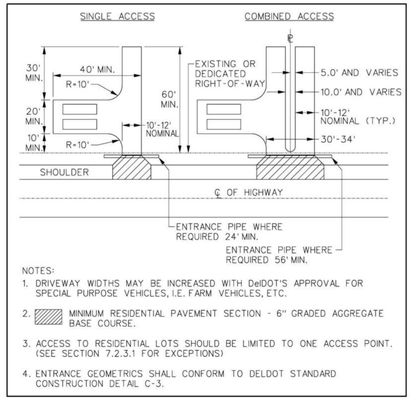
FIRE MARSHAL NOTES

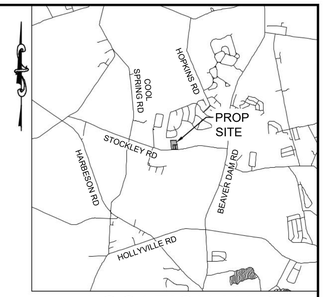
1. SITE ADDRESS: 29161 STOCKLEY RD, MILTON, DE 19968
2. OWNER: HESEYN T. SENTURK & ANDREA M. SENTURK, SENTURK FAMILY TRUST
3. INTENDED USE: RESIDENTIAL
4. NO BUILDINGS WILL BE SPRINKLERED.
5. BUILDING CONSTRUCTION TYPE: NPPA TYPE V WOOD FRAME
6. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
7. WATER SUPPLIER: PRIVATE ON SITE WELL
8. SEWER PROVIDER: PRIVATE SEPTIC SYSTEM

LEGEND

- POINT
- CAPPED IRON PIPE FOUND
- CAPPED IRON REBAR TO BE SET
- UTILITY POLE
- TELEPHONE PEDESTAL
- BUILDING SETBACK LINE
- PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPERTY LINE TO BE EXTINGUISHED
- ADJACENT PROPERTY LINE
- PROPOSED EASEMENT LINE
- EXISTING FENCE

Figure 7.2.3.3-a Residential Access Design Requirements





LOCATION MAP

SCALE: 1" = 1 MILE

SITE DATA:

1. TAX PARCELS AND OWNERS OF RECORD:
   ALL OF PARCEL 234-5.00-89.00 - HUSEYN T. SENTURK & ANDREA M. SENTURK
   SOURCE OF TITLE: DB 6470 PG 295
   OTHER REFERENCES: PLOT 278 / 84, PLOT 61 / 117
   ALL OF PARCEL 234-5.00-90.00 - SENTURK FAMILY TRUST
   SOURCE OF TITLE: DB 5014 PG 68
   OTHER REFERENCES: PLOT 278 / 84, PLOT 61 / 117
   ALL OF PARCEL 234-5.00-91.00 - SENTURK FAMILY TRUST
   SOURCE OF TITLE: DB 5014 PG 66
   OTHER REFERENCES: PLOT 278 / 84, PLOT 61 / 117

2. PARCEL AREA:

	EXISTING	PROPOSED
PARCEL 89.00	4.465± AC (194,476 SF)	1.135± AC (49,423 SF)
PARCEL 90.00	1.158± AC (50,458 SF)	0.889± AC (38,722 SF)
PARCEL 91.00	1.159± AC (50,472 SF)	0.889± AC (38,730 SF)
LOT 1	N/A	1.105± AC (48,138 SF)
LOT 2	N/A	1.066± AC (46,455 SF)
LOT 3	N/A	0.854± AC (37,202 SF)
LOT 4	N/A	0.843± AC (36,736 SF)
GROSS PROPERTY AREA:	6.782± AC (295,406 SF)	6.782± AC (295,406 SF)

3. SITE ADDRESS: 29161 STOCKLEY RD, MILTON, DE 19968
4. EXISTING & PROPOSED LOTS: EXISTING LOTS = 3, PROPOSED LOTS = 4, TOTAL = 7
5. GOVERNMENTAL ENTITY RESPONSIBLE FOR LAND USE APPROVAL: SUSSEX COUNTY
6. HUNDRED/COUNTY: INDIAN RIVER HUNDRED / SUSSEX COUNTY
7. CURRENT ZONING: AR-1
8. PRESENT USE: RESIDENTIAL
9. PROPOSED USE: RESIDENTIAL
10. MINIMUM AR-1 LOT SIZE: AREA = 32,670 SF, WIDTH = 100 FEET, DEPTH = 100 FEET
11. REQUIRED AR-1 SETBACKS (B.R.L.): FRONT: 40-FEET (30' FOR PRIVATE STREET), SIDE: 15-FEET, REAR: 20-FEET
12. MAXIMUM HEIGHT REQUIREMENT: 42-FEET
13. WATER: PRIVATE ON-SITE WELL
14. SEWER: PRIVATE ON-SITE WASTE WATER DISPOSAL
15. PERMANENT MONUMENTS: 11 MONUMENTS FOUND, 8 MONUMENTS TO BE SET
16. FLOODPLAIN: THIS SITE IS NOT IMPACTED BY THE 100-YEAR FLOODPLAIN PER FEMA FLOOD MAP PANEL NUMBER: 10005C0330J, EFFECTIVE JANUARY 6, 2005.
17. POSTED SPEED LIMIT: STOCKLEY RD: 35 MPH
18. 2025 STATE INVESTMENT AREA: STATE STRATEGIES LEVEL 4
19. PROXIMITY TO T.I.D.: APPROXIMATELY 0.7 MILES TO HENLOPEN T.I.D.

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.

SENTURK FAMILY TRUST
29161 STOCKLEY RD,
MILTON, DE 19968

DATE

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.

HUSEYN T. SENTURK
29161 STOCKLEY RD,
MILTON, DE 19968

DATE

ANDREA M. SENTURK
29161 STOCKLEY RD,
MILTON, DE 19968

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.

EDWIN J. TENNEFOSS REGISTERED No. 12806 PROFESSIONAL ENGINEER DELAWARE

9/24/26

EDWIN TENNEFOSS, P.E. (DE LICENSE NO. #12806)
30 COMMERCE STREET
HARRINGTON, DE 19952

DATE

SITEWORKS ENGINEERING LLC
PO BOX 2 | 39 COMMERCE ST, HARRINGTON, DE 19952 Phone: (302) 841-7901

MINOR SUBDIVISION & LOT LINE ADJUSTMENT PLAN

LANDS OF SENTURK

TAX PARCEL NO. 234-5.00-89.00
SCR 280 (STOCKLEY RD) LOCAL

INDIAN RIVER HUNDRED, SUSSEX COUNTY, DELAWARE

ISSUE / REVISION BLOCK
8/18/26 - DELDOT
8/18/26 - FIRE MARSHAL
8/18/26 - SUSSEX COUNTY
9/11/26 - SUSSEX COUNTY

SCALE	PROJECT #	DRAWN BY
1" = 40'	26-0894	EJT

DRAWING NUMBER

1

SHEET 1 OF 1

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DELAWARE AGRICULTURAL LANDS PRESERVATION FOUNDATION
2320 S. DuPont Highway, Dover, 19901
(302)698-4530 de.gov/aglands

Aglands Preservation Application

Project ID # **S-26-01-309**
Date: February 20, 2026
Is this a contingent sale? **No, I own this land.**

Applicant Information

Name of Petitioner(s): LG INVESTMENTS AND FARMING LLC

Mailing Address: P.O. BOX 211, ELLENDALE, DE 19941

Primary Contact Person: VIRGINIA HOUSEMAN Preferred Contact Number: 302-542-1865

Email address: MATT@SDWACCOUNTING.COM

Farm Information

Farm Location (County): SUSSEX Total Acreage of Farm: **812.97**

County Tax Parcel Number(s): 230-20.00-13.00

Total Residential Acres: 0 # of Dwelling Units: 0 Occupant's Name(s):

Is this land zoned for agricultural use? **Yes** Type of Farm Operation: LEASED TO THIRD PARTY

District / Expansion name you would prefer: **LG INVESTMENTS & FARMING LLC DISTRICT**

Do you wish to have your farm appraised for the next round of Aglands easement selections? Yes

Is this farm currently in the Farmland Assessment Program? No

Please give the farm's Average Gross Sales over the last two years. $10,000 - $24,999

Do you operate any non-farming business on the land?

Easements/Rights-of Way (if any):

Is any portion of the Proposed District / Expansion subject to subdivision? No

Is the property land locked? (no road frontage) No
If **Yes**, please contact landowner for access documentation.

DELAWARE AGRICULTURAL LANDS PRESERVATION FOUNDATION
2320 S. DuPont Highway, Dover, 19901
(302)698-4530 de.gov/aglands

Aglands Preservation Application

Is there a professionally developed forest management plan in place? If **Yes**, what is the date of the plan's creation and the name of the forester who developed it? .

Contingent Sale Information

Estimated Settlement Date:

Seller's Name:
Seller's Address:
Seller's Phone Number:
Seller's Email:

Seller's Attorney:

Seller's Attorney Email: ____
Seller's Attorney Phone Number:

Buyer's Name:
Buyer's Address:
Buyer's Email: Buyer's Phone Number:
Buyer's Attorney:
Buyer's Attorney Email:
Buyer's Attorney Phone Number:

By typing your name below, the parties acknowledge their agreement to conduct transactions by electronic means according to Uniform Electronic Transactions Act, 6 Del. C. Ch. 12A, that the information provided on this application is true, and I am authorized to submit this application on behalf of all landowners.

VIRGINIA B. HOUSEMAN

LG INVESTMENTS & FARMING LLC DISTRICT

AGRICULTURAL PRESERVATION DISTRICT

Farm Parcel Boundary

Public Protected Lands

Project ID: S-26-01-309

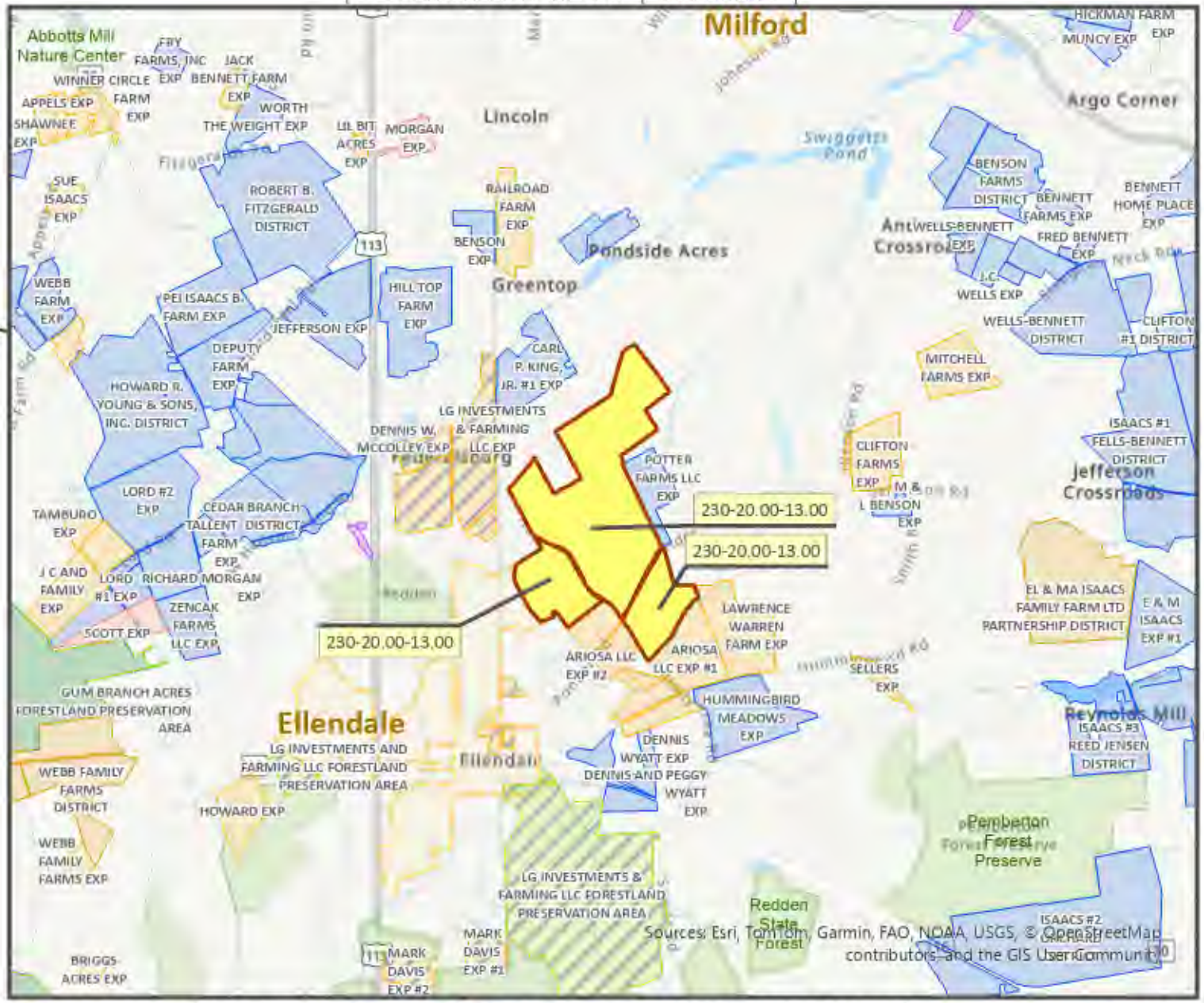
Total Preserved Acres: 812.97

Program Status: Pending

Priority Zone: Yes

Parcel ID	County	Acres
230-20.00-13.00	Sussex	812.97

CEDAR CREEK HUNDRED | DELAWARE



DELAWARE AGRICULTURAL LANDS PRESERVATION FOUNDATION

Eric Reid – Planner IV
Delaware Dept of Agriculture
2320 S. Dupont Hwy
Dover, DE 19901

Pending / Contingent
Contingent
Pending

Ag Easement
District
Expansion

Forestland Area
Forestland Easement
Young Farmer

N

THIS PLAN IS A COMPILATION OF AVAILABLE INFORMATION OF RECORD AND IS NOT TO BE USED FOR ENGINEERING PURPOSES.

Exported: 3/2/2026

1

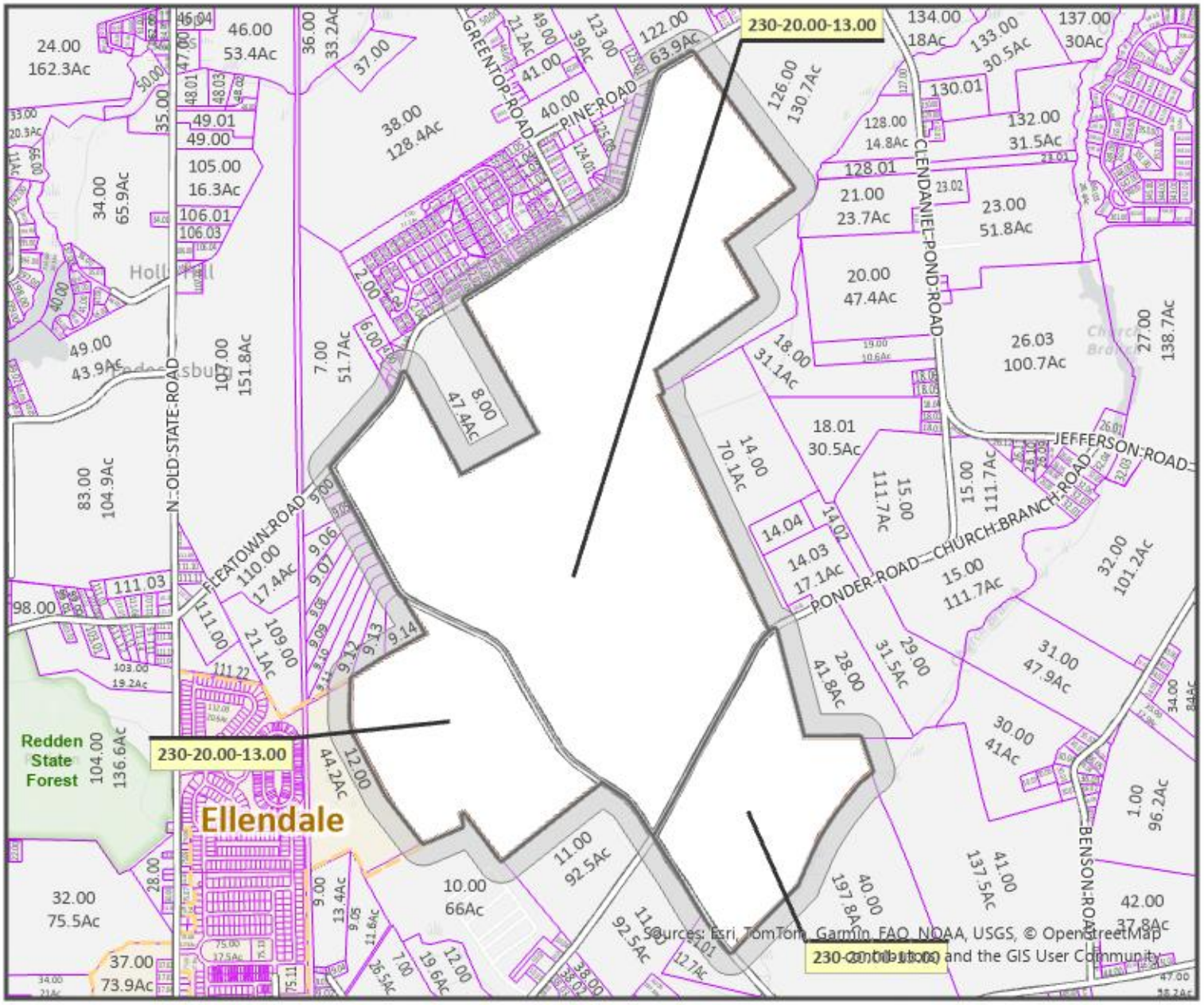
EXHIBIT A

LG INVESTMENTS & FARMING LLC DISTRICT

Project ID: S-26-01-309

Total Preserved Acres: 812.97

Parcel ID	County	Acres
230-20.00-13.00	Sussex	812.97



50 feet

IS THE 50' BOUNDARY LINE FROM AG DISTRICT; NO BUILDINGS FOR NON-AG PURPOSES CAN BE CONSTRUCTED INSIDE THIS AREA. "FOR ANY NEW SUBDIVISION DEVELOPMENT LOCATED IN WHOLE OR IN PART WITHIN FIFTY (50) FEET OF THE BOUNDARY OF AN AGRICULTURAL PRESERVATION DISTRICT, NO IMPROVEMENT REQUIRING AN OCCUPANCY APPROVAL SHALL BE CONSTRUCTED WITHIN FIFTY (50) FEET OF THE BOUNDARY OF THE AGRICULTURAL PRESERVATION DISTRICT," PURSUANT TO 3 DEL. C. ss910 (a) (2)

300 feet

IS THE 300' BOUNDARY LINE; NOTICE MUST BE GIVEN TO ALL NEW HOMEOWNERS IN NEW SUBDIVISIONS FILED AFTER THE APPROVAL DATE OF THIS DISTRICT. "FOR ANY NEW SUBDIVISION DEVELOPMENT LOCATED IN WHOLE OR IN PART WITHIN THREE HUNDRED (300) FEET OF THE BOUNDARY OF AN AGRICULTURAL PRESERVATION DISTRICT, THE OWNER SHALL PROVIDE IN THE DEED RESTRICTIONS AND ANY LEASES OR AGREEMENTS OF SALE FOR ANY RESIDENTIAL LOT OR DWELLING UNIT THE FOLLOWING NOTICE: 'AGRICULTURAL PRESERVATION DISTRICT: THIS PROPERTY IS LOCATED IN THE VICINITY OF AN ESTABLISHED AGRICULTURAL PRESERVATION DISTRICT IN WHICH NORMAL AGRICULTURAL USES AND ACTIVITIES HAVE BEEN AFFORDED THE HIGHEST PRIORITY USE STATUS. IT CAN BE ANTICIPATED THAT SUCH AGRICULTURAL USES AND ACTIVITIES MAY NOW OR IN THE FUTURE INVOLVE NOISE, DUST, MANURE AND OTHER ODORS, THE USE OF AGRICULTURAL CHEMICALS AND NIGHTTIME FARM OPERATIONS. THE USE AND ENJOYMENT OF THIS PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM SUCH NORMAL AGRICULTURAL USE ACTIVITIES.'" PURSUANT TO 3 DEL. C. ss910 (a) (1)

0 1,000 2,000 Feet

N

2

Eric Reid - Planner IV
Delaware Dept of Agriculture
2320 S. Dupont Hwy
Dover, DE 19901
Exported: 3/2/2026

DELAWARE AGRICULTURAL LANDS PRESERVATION FOUNDATION HEREBY CERTIFIES THAT THE PROPERTIES SHOWN AND DESCRIBED ON THIS PLAN, AND SUBJECT TO AN AGRICULTURAL PRESERVATION DISTRICT AGREEMENT FILED AND RECORDED WITH THE RECORDER OF DEEDS IN AND FOR SUSSEX COUNTY, DELAWARE, CONSTITUTE AN AGRICULTURAL PRESERVATION DISTRICT AS PROVIDED IN LEGAL REF. 3 DEL. C. CHAP. 9. FURTHER, I WITNESS THAT THIS DISTRICT HAS BEEN PROPERLY APPROVED AND THAT THE FOUNDATION DESIRES THAT THIS PLAN BE RECORDED ACCORDING TO LAW.

CHAIRMAN OR AUTHORIZED DESIGNEE
DELAWARE AGRICULTURAL LANDS PRESERVATION FOUNDATION

DATE

Project ID: S-26-01-309

LG INVESTMENTS & FARMING LLC DISTRICT

NRCS Soils Present

- ☐ AsA, Askecksy loamy sand, 0 to 2 percent slopes
- ☐ DnA, Downer loamy sand, 0 to 2 percent slopes
- ☐ EvB, Evesboro loamy sand, 0 to 5 percent slopes
- ☐ FadA, Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area
- ☐ FmA, Fort Mott loamy sand, 0 to 2 percent slopes
- ☐ FmB, Fort Mott loamy sand, 2 to 5 percent slopes
- ☐ HbA, Hambrook sandy loam, 0 to 2 percent slopes
- ☐ IeA, Ingleside loamy sand, 0 to 2 percent slopes
- ☐ KsA, Klej loamy sand, 0 to 2 percent slopes
- ☐ LO, Longmarsh and Indiantown soils, frequently flooded
- ☐ RoA, Rosedale loamy sand, 0 to 2 percent slopes
- ☐ RoB, Rosedale loamy sand, 2 to 5 percent slopes
- ☐ RuA, Runclint loamy sand, 0 to 2 percent slopes
- ☐ WddA, Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area

Parcel ID	Class	Soil	Rating	Acres
230-20.00-13.00	Agriculture	AsA	Not prime farmland	0.262
230-20.00-13.00	Agriculture	EvB	Not prime farmland	0.014
230-20.00-13.00	Agriculture	FadA	Farmland of statewide importance	2.541
230-20.00-13.00	Agriculture	FmA	Prime farmland if irrigated	11.995
230-20.00-13.00	Agriculture	FmB	Prime farmland if irrigated	0.926
230-20.00-13.00	Agriculture	IeA	All areas are prime farmland	30.542
230-20.00-13.00	Agriculture	KsA	Farmland of statewide importance	12.063
230-20.00-13.00	Agriculture	RoA	Prime farmland if irrigated	155.047
230-20.00-13.00	Agriculture	RuA	Not prime farmland	17.620
230-20.00-13.00	Agriculture	WddA	All areas are prime farmland	8.925
230-20.00-13.00	Forest	AsA	Not prime farmland	33.503
230-20.00-13.00	Forest	DnA	All areas are prime farmland	0.606
230-20.00-13.00	Forest	EvB	Not prime farmland	0.753
230-20.00-13.00	Forest	FadA	Farmland of statewide importance	46.865
230-20.00-13.00	Forest	FmA	Prime farmland if irrigated	15.098
230-20.00-13.00	Forest	FmB	Prime farmland if irrigated	5.029
230-20.00-13.00	Forest	HbA	All areas are prime farmland	0.396
230-20.00-13.00	Forest	IeA	All areas are prime farmland	3.025
230-20.00-13.00	Forest	KsA	Farmland of statewide importance	22.067
230-20.00-13.00	Forest	LO	Not prime farmland	18.346
230-20.00-13.00	Forest	RoA	Prime farmland if irrigated	383.789
230-20.00-13.00	Forest	RoB	Prime farmland if irrigated	6.794
230-20.00-13.00	Forest	RuA	Not prime farmland	24.915
230-20.00-13.00	Forest	WddA	All areas are prime farmland	11.849

Total: 812.97 Ac
Cropland: 239.05 Ac
Forest: 573.03 Ac

Prime Soil: 717.56 Ac
Impervious Cover: 1.18 Ac
Road Frontage: 23,327 Ft

3

Eric Reid - Planner IV
Delaware Dept of Agriculture
2320 S. Dupont Hwy
Dover, DE 19901
Exported: 3/2/2026

EXHIBIT B

S-26-01-309

LG INVESTMENTS & FARMING LLC DISTRICT

Eric Reid - Planner IV
Delaware Dept of Agriculture
2320 S. Dupont Hwy
Dover, DE 19901
Aerial Photo: 2022
Exported: 3/2/2026

Parcel ID	Dwellings	Residential Acres	Road Frontage	Acres
230-20.00-13.00	0	0	23,327 ft	812.97

Farms in Agricultural Preservation are allowed 1 acre of residential land use for every 20 total acres, with a minimum of 1 and maximum of 10 acres. Up to 3 dwellings may be placed on the residential acres. Allowances may be further assigned to parcels by subsequent acknowledgements. Refer to the district agreement, easement, and any recorded acknowledgments for current allowances.

N

0 1,000 2,000 Feet

4

PLANNING & ZONING COMMISSION
HOLLY J. WINGATE, CHAIR
JEFF ALLEN
G. SCOTT COLLINS
JOHN PASSWATERS
DAVID PETTYJOHN

Sussex County
DELAWARE
SUSSEXCOUNTYDE.GOV
302-855-7878

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: September 2, 2026
Sussex County Council Public Hearing Date: October 13, 2026

Application:	CU 2529
Applicant:	Jaime & Darren Hooks 7119 Airport Road Laurel, DE 19956
Owner:	Jaime & Darren Hooks 7119 Airport Road Laurel, DE 19956
Site Location:	Located on the north side of Airport Road (S.C.R. 494), approximately 600 feet east of Old Hickory Road (S.C.R. 497).
Current Zoning:	Agricultural Residential (AR-1) Zoning District
Proposed Use:	Mechanic Repair Business
Comprehensive Land Use Plan Reference:	Low Density
Councilmanic District:	District 1 - Mr. Lloyd
School District:	Laurel School District
Fire District:	Laurel Fire Department
Sewer:	Private Septic
Water:	Tidewater
Site Area:	4.29-acre(s) +/-
Tax Map ID.:	432-7.00-28.05 & 432-7.00-28.04 (P/O)

EQUAL HOUSING OPPORTUNITY

CU 2529 Jaime & Darren Hooks
Aerial Map
Tax Map No. 432-7.00-28.05 & 28.04

N

0 0.13 0.25 0.5 Miles

N
03/11/2025
© All EagleView Technology Corporation

03/11/2025
© All EagleView Technology Corporation

CU 2529 Jaime & Darren Hooks
Street Map
Tax Map No. 432-7.00-28.05 & 28.04

N

0 0.13 0.25 0.5 Miles

CU 2529 Jaime & Darren Hooks

Zoning

- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

CU 2529 Jaime & Darren Hooks
Zoning Map
Tax Map No. 432-7.00-28.05 & 28.04

N

0 0.5 1 2 Miles

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Planning Commission Members
From: Ann Lepore, Planner I
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: August 26, 2026
RE: Staff Analysis for C/U 2529 Jaime & Darren Hooks

This memo is to provide background and analysis for the Planning Commission to consider as a part of Application C/U 2529 Jaime & Darren Hooks to be reviewed during the September 2, 2026, Planning Commission Meeting. This analysis should be included in the record of this application and is subject to comments and information that may be presented during the public hearing.

Please note that the following staff analysis is for informational purposes only and does not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.

Tax Parcel ID: 432-7.00-28.05 & 28.04 (P/O)

Proposal: The request is for a Conditional Use for Tax Parcel 432-7.00-28.05 & 28.04 to allow for a Mechanic Repair Business, Office, Material and Equipment Storage to be located on parcels lying on the north side of Airport Road (S.C.R. 494), approximately 600 feet east of Old Hickory Road (S.C.R. 497). The parcel is comprised of 4.29 acres +/-.

Zoning: The Parcels are zoned Agricultural Residential (AR-1) District. The adjacent parcels to the east, north, west, and south are zoned Agricultural Residential (AR-1) District.

Future Land Use Map Designation w/in Comprehensive Plan: Low Density Area

Applicability to Comprehensive Plan: The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use map in the plan indicates that the subject property is designated as a Rural Area and has a land use designation of "Low Density Area." All surrounding properties to the north, south, east, and west of the subject site contain the Future Land Use Map designation of "Low Density Area".

As outlined in the 2018 Sussex County Comprehensive Plan, Low Density Areas are areas that the County envisions as "a predominantly rural landscape where farming co-exists with appropriate residential uses and permanently preserved property" (Sussex County Comprehensive Plan, 4-18).
The Plan also notes that commercial uses "should be limited in their location, size and hours of operation" and "more intense commercial uses should be avoided" and commercial uses "may be appropriate depending on surrounding uses" (Sussex County Comprehensive Plan, 4-19).

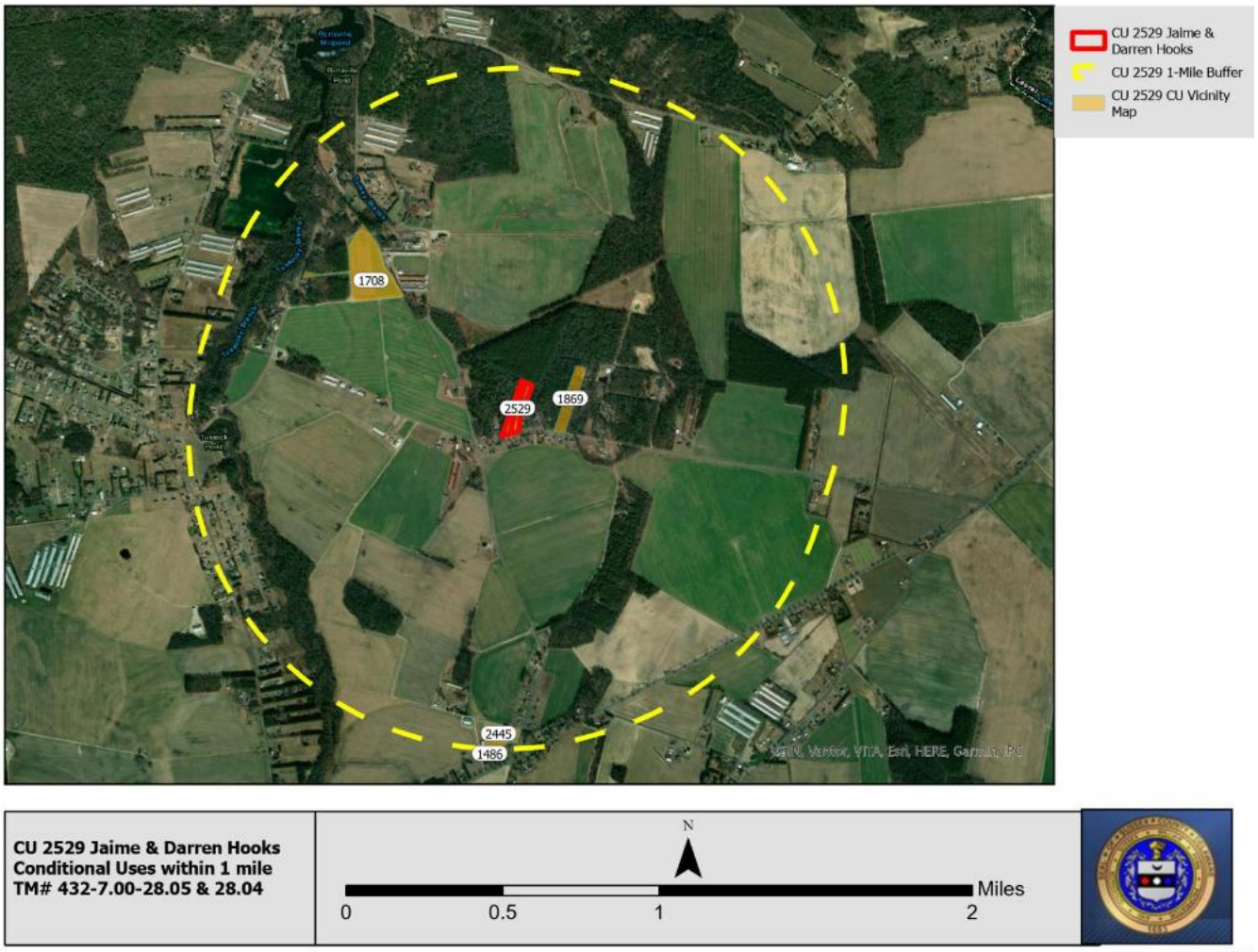
Further Site Considerations:

- **Density: N/A**
- **Open Space Provisions: N/A**
- **Agricultural Areas:** The site is within the vicinity of active agricultural lands.
- **Interconnectivity: N/A**
- **Transportation Improvement District (TID):** The parcels are not within the Henlopen Transportation Improvement District.
- **Forested Areas:** N/A
- **Wetlands Buffers/Waterways:** N/A
- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):** N/A

Based on the analysis of the land use, surrounding zoning and uses, a Conditional Use Application to allow for a Mechanic Repair Business, Office, Material and Equipment Storage, subject to considerations of scale and impact, could be considered as being consistent with the land use, area zoning and surrounding uses.

Existing Conditional Uses within the Vicinity of the Subject Site: Since 1970, there have been five (5) Conditional Use applications within a 1-mile radius of the application site.

CU No.	APPLICANT	Tax Parcel #	Current Zoning	Proposed Use	CC Date	CC Decision
1486	Alton D. White	432-11.00-40.03	AR-1	Parts/frames for race cars	5/6/2003	Approved
1708	Lisa Phillips, Trustee	432-7.00-38.12	AR-1	Borrow Pit/Pond Reclamation	12/12/2007	Approved
1869	John & Nicole Scott	432-7.00-25.08	AR-1	Multi-family	1/17/2012	Denied
2445	Deihm's Trucking	432-11.00-40.03	AR-1	Truck Storage & Office	5/7/2024	Approved
2529	Jaime & Darren Hooks	432-7.00-28.05	AR-1	Mechanic Repair shop, Outdoor Equipment Storage, Office & Parking		Pending


CU 2529 Jaime & Darren Hooks
CU 2529 1-Mile Buffer
CU 2529 CU Vicinity Map
1708
2529
1869
2445
1486
CU 2529 Jaime & Darren Hooks
Conditional Uses within 1 mile
TM# 432-7.00-28.05 & 28.04
N
0
0.5
1
2
Miles

File #: CU 2529

Planning & Zoning Commission Application

Application: 2024060491

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)
Conditional Use ✓
Zoning Map Amendment ___

RECEIVED
MAY 02 2024
SUSSEX COUNTY
PLANNING & ZONING

Site Address of Conditional Use/Zoning Map Amendment

7119 Airport Rd Laurel, DE 19956

Type of Conditional Use Requested:
Private residence, office, parking area, storage for job materials and shop for mechanical repairs.

Tax Map #: 432-7.00-28.05 **Size of Parcel(s):** 2.25

Current Zoning: RES AR-1 **Proposed Zoning:** RES AR-1 **Size of Building:** 2000 square feet

Land Use Classification: Low Density

Water Provider: Tidewater **Sewer Provider:** On Site Septic

Applicant Information

Applicant Name: Jaime & Darren Hooks
Applicant Address: 7119 Airport Rd
City: Laurel State: DE ZipCode: 19956
Phone #: 875-3393 E-mail: d.j.sweepingllc@gmail.com

Owner Information

Owner Name: Jaime & Darren Hooks
Owner Address: 7119 Airport Rd
City: Laurel State: DE Zip Code: 19956
Phone #: 875-3393 E-mail: d.j.sweepingllc@gmail.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: _____
Agent/Attorney/Engineer Address: _____
City: _____ State: _____ Zip Code: _____
Phone #: _____ E-mail: _____

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

___ **Completed Application**

___ **Provide eight (8) copies of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description

___ **Provide Fee $500.00**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

___ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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

Jaime Hook

Date: RECEIVED

MAY 02 2024

Signature of Owner

Jaime Hook

Date: SUSSEX COUNTY PLANNING & ZONING

For office use only:

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

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

Sussex County Government
Treasury
2 The Circle, PO Box 589
Georgetown, DE 19947

05/03/2024 01:06PM Lindsey S
33027128-0016

PERMITS / INSPECTIONS
CONDITIONAL USE - FEE
2024 Item: 2024064911Z010 $500.00

$500.00

Subtotal $500.00
Total $500.00

CHECK $500.00
Check Number001514

Change due $0.00

Paid by: D&J SWEEPING LLC

Thank you for your payment.

Sussex County Government COPY
DUPLICATE RECEIPT

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

NICOLE MAJESKI
SECRETARY

January 29, 2024

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Jamie and Darren Hooks** (7119 Airport Road, Laurel DE 19956) proposed land use application, which we received on January 8, 2024. This application is for an approximate ~2.25-acre parcel (Tax Parcel: 432-7.00-28.05). The parcel is located on north side of Airport Road (Sussex County Road 494) and approximately 600 feet east from the intersection of Old Hickory Road (Sussex County Road 497) and Airport Road. The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a conditional use approval to place a 2,000 sq ft office, maintenance shop and parking lot on the parcel.

Per the 2022 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Airport Road from Mount Pleasant Road (Sussex County Road 493) to Sharptown Road (Delaware Route 24) is 740 vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 180 / GFA 2), we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Mr. Philip Lindsey, at philip.lindsey@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SAM:plm
cc: Jaime and Darren Hooks, Applicant
Ashley Paugh, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer
Tara Summers-Strong, South District Public Works Admin.
Todd Sammons, Assistant Director, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination
Derek Sapp, Sussex County Subdivision Reviewer, Development Coordination
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination
Thomas Gagnon, Sussex County Subdivision Reviewer, Development Coordination
José Quixtan, Sussex County Subdivision Reviewer, Development Coordination
Annamaria Furmato, TIS Group Project Engineer, Development Coordination
Philip Lindsey, TIS Group Project Engineer, Development Coordination

PLANNING & ZONING
Jamie Whitehouse, AICP ,MRTPI
Director
(302) 855-7878 T
(302) 854-5079 F

Sussex County
DELAWARE
sussexcountyde.gov

Service Level Evaluation Request Form

This form **shall** be submitted to the Planning and Zoning Office and a response **shall** be received back from DelDOT prior to the applicant being able to submit an application to the Planning and Zoning Office.

Date: 1-8-24

Site Information:

Site Address/Location: 7119 Airport Rd

Tax Parcel Number: 432-7.00-28.05

Current Zoning: AR-1

Land Use Classification: Low Density

Acreage: 2.25

Subdivision: ☐

Conditional Use: ☒

Change of Zone: ☐ Proposed Zoning: _____

Proposed Use(s):

Private Residence, office, parking area & Shop Maint.

Square footage of any proposed buildings or number of units: 2000

Applicant Information:

Applicant's Name: Jaime & Darren Hooks

Applicant's Address: 7119 Airport Rd

City: Laurel State: DE Zip Code: 19956

Applicant's Phone Number: 302-841-8956

Applicant's e-mail address: dj.sweeping11a@gmail.com

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

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **8/21/2026**

APPLICATION: **CU 2529 Jamie & Darren Hooks**

APPLICANT: **Jamie & Darren Hooks**

FILE NO: **WSPA-5.-2**

TAX MAP & PARCEL(S): **432-7.00-28.05 & 28.04 (P/O)**

LOCATION: **Lying on the north side of Airport Road (SCR 494), approximately 600 feet east of Old Hickory Road (SCR 497).**

NO. OF UNITS: **Mechanic Repair Business**

GROSS ACREAGE: **4.29 +/-**

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

SEWER:

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

Yes ☐ No ☒

a. If yes, see question (2).
b. If no, see question (7).

(2). Which County Tier Area is project in? **Tier 5**

(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 $10,700.00** 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? **No**

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

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

(8). Comments: **The proposed Conditional Use is not located in an area where the Sussex County Engineering Department has a schedule to provide sanitary sewer and/or water.**

(9). Is a Sewer System Concept Evaluation required? **Not at this time**

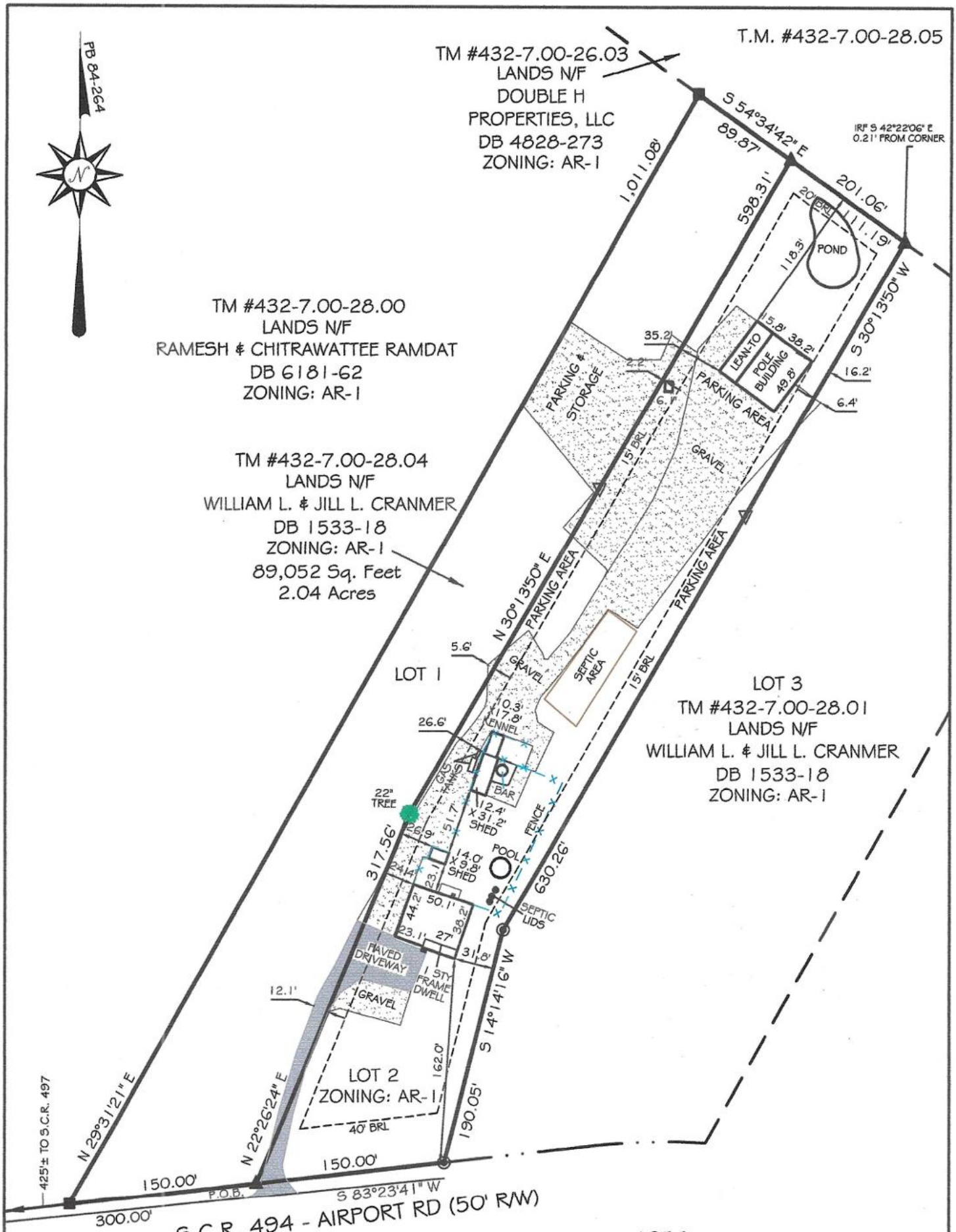
(10). Is a Use of Existing Infrastructure Agreement Required? **Not at this time**

(11). **All residential roads must meet or exceed Sussex County minimum design standards.**

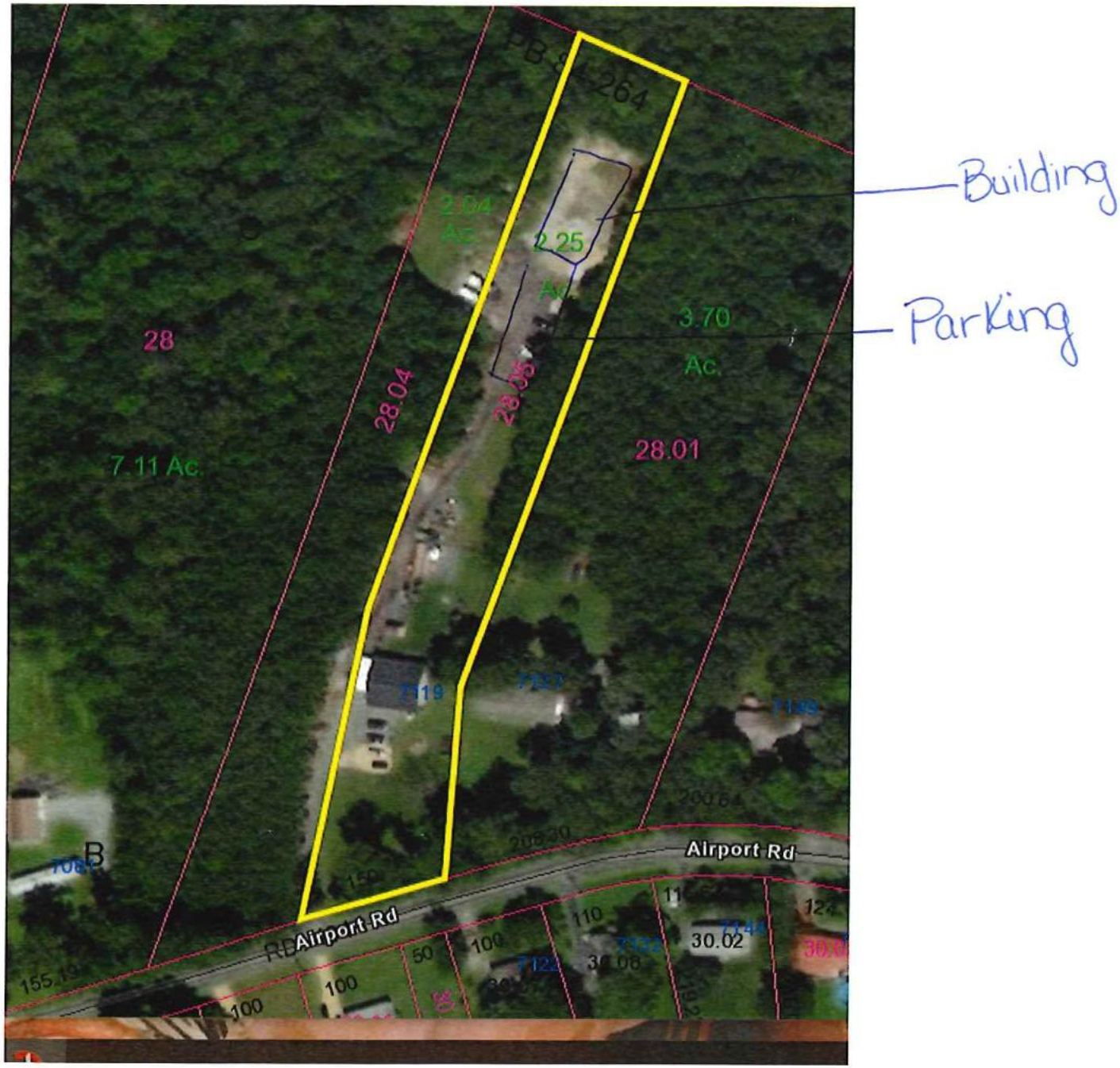
UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

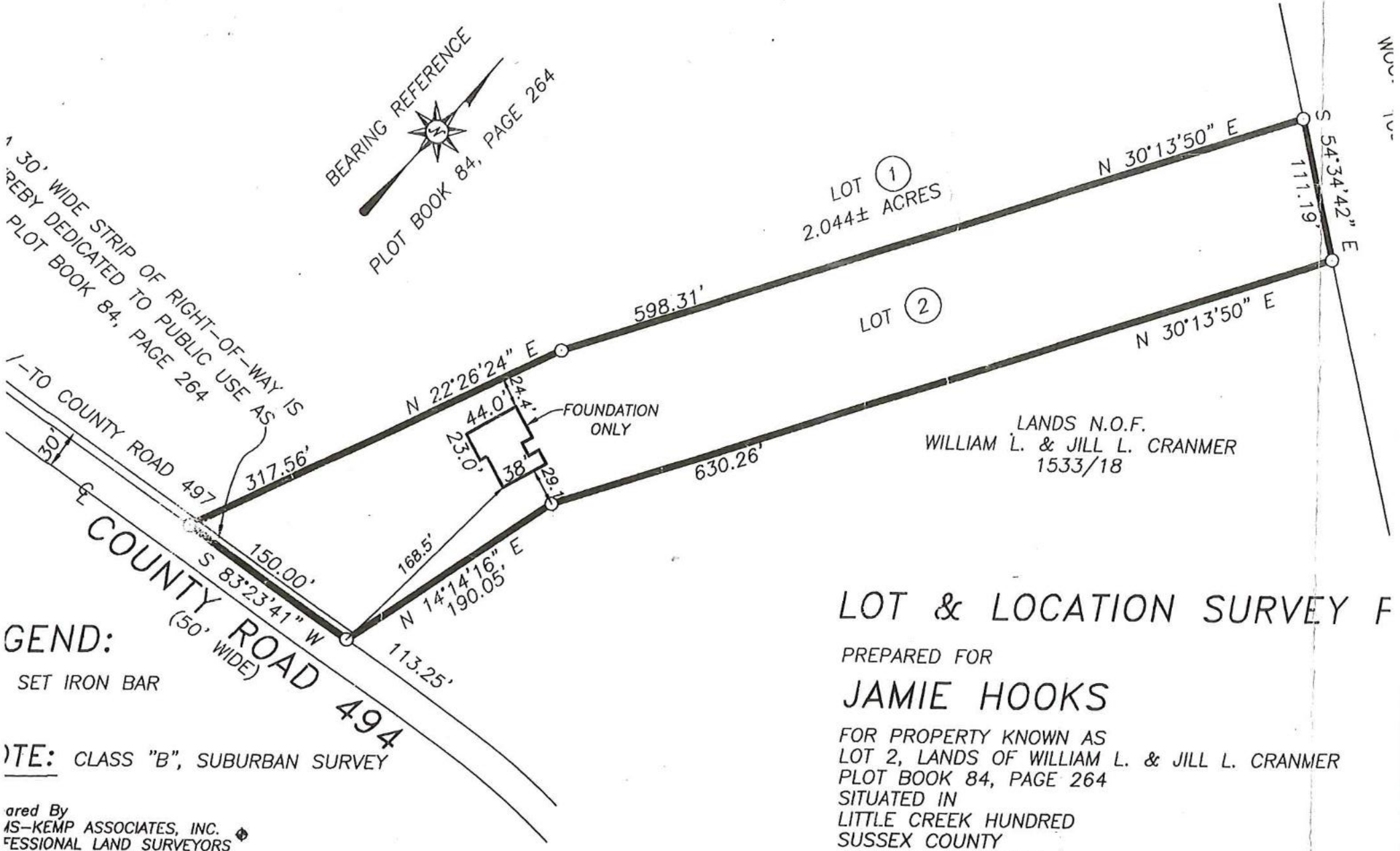
Xc: Mike Harmer, P.E.
Christine Fletcher
No Permit Tech Assigned



CONDITIONAL USE PLAN FOR


Building
Parking
2.04 Ac.
2.25 Ac.
3.70 Ac.
28
28.04
28.05
28.01
7.11 Ac.
Airport Rd
Airport Rd
30.02
B

TAX MAP NO. 4-32-7.00, PAR



GEND:

SET IRON BAR

TE: CLASS "B", SUBURBAN SURVEY

ared By
AS-KEMP ASSOCIATES, INC.
FESSIONAL LAND SURVEYORS
) PLANNERS
SOUTH RACE STREET
RGETOWN, DELAWARE 19947
NE: (302) 856-6699

R.B. KEMP, III, P.L.S. 541

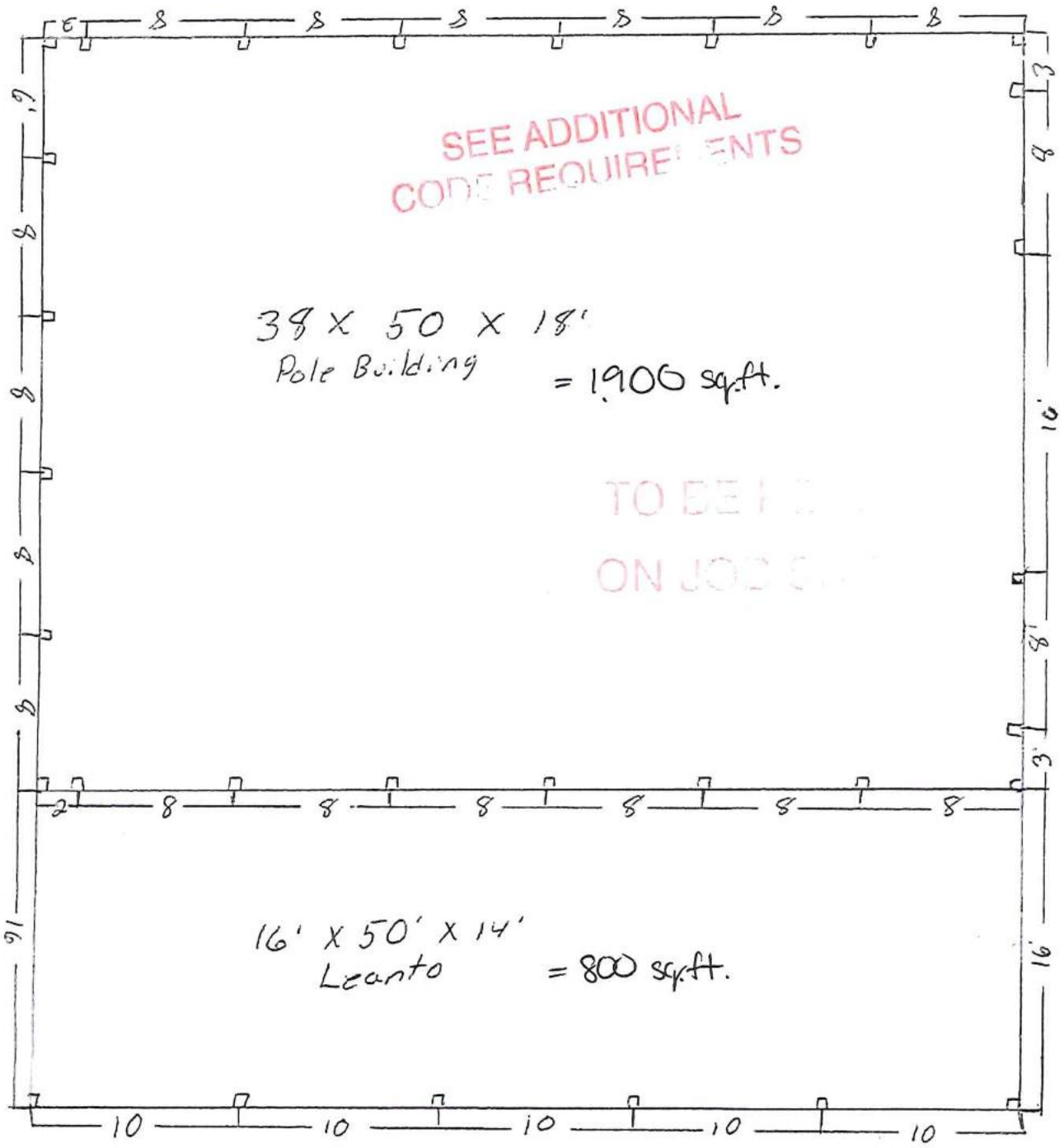
LOT & LOCATION SURVEY F

PREPARED FOR

JAMIE HOOKS

FOR PROPERTY KNOWN AS
LOT 2, LANDS OF WILLIAM L. & JILL L. CRANMER
PLOT BOOK 84, PAGE 264
SITUATED IN
LITTLE CREEK HUNDRED
SUSSEX COUNTY
STATE OF DELAWARE
AREA: 2.247± ACRES
SCALE: 1"=100'
DATE: MARCH 10, 2005

PLAN NO. 05



20221350 6

REVIEWED FOR
CODE COMPLIANCE
DATE 9/23/2022
SIGNED

* Total LOD = 4620
including 10' offset on each
side of build.

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

Re: Property Parcel 432-7.00 28.04
Owners - William &/or Jill Cranmer
7127 Airport Rd.
Laurel, DE 19956

To Whom It May Concern:

Please be advised that we are currently allowing our daughter, Jaime Hooks, to use a partial area in the back of the above said location for equipment storage, parking space, etc. , for the business being operated under D&J Sweeping LLC, 7119 Airport Rd., Laurel, DE 19956.

Signed: Jill L. Cranmer Date: 5-21-2026

Signed: William L Cranmer Date: 5-21-2026

22385

This Deed, Made this

VOL 1533 PAGE 18

20th day of November 19 87

BETWEEN, FRANK A. SOKOLY and MARGARET M. SOKOLY, his wife, of Route 3, Box 347B, Laurel, Delaware, 19956, parties of the first part,

-AND-

WILLIAM L. CRANMER and JILL L. CRANMER, his wife, of Pine Ridge Mobile Park, Seaford, Delaware, 19973, parties of the second part,

810.00 CO TR-TX 11/24/87 1463 333

Witnesseth, That the said party of the first part, for and in consideration of the sum of ---------ONE DOLLAR---------- lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the said party of the second part,

ALL

All that certain lot, piece and parcel of land situate, lying and being in Little Creek Hundred, Sussex County, State of Delaware, located on the northerly side of the right of way line of County Road 494 and more particularly described as follows, to wit:

Beginning at a concrete monument located at the edge of the northerly right of way line of County Road 494; thence North 45 degrees 13 minutes 00 seconds East a distance of 1,011.43 feet along lands now or formerly of Bob Durham and Roland Hastings to a concrete monument; thence South 38 degrees 53 minutes 04 seconds East a distance of 417.17 feet along lands now or formerly of Phillips to the concrete monument; thence South 45 degrees 13 minutes 00 seconds West 675.28 feet along lands now or formerly of Broad Creek Poultry Farms, Inc. to the concrete monument; thence North 77 degrees 28 minutes 56 seconds West chord a distance of 132.22 feet to a coordinate point; thence North 80 degrees 54 minutes 40 seconds West 376.05 feet to a concrete monument, the place of Beginning, the last two directions being along the northerly edge of the right of way line of County Road 494, the entire tract said to contain 8.00 acres more or less as surveyed by Gene R. Littleton & Associates during February, 1974.

Being the same lands conveyed to Frank A. Sokoly and Margaret M. Sokoly, his wife, by deed of Robert W. Durham, etal., dated February 22, 1974, filed for record in the Office of the Recorder of Deeds, Georgetown, Delaware, in Deed Book 726, page 586.

FUQUA AND GRAVES
THE CIRCLE
GEORGETOWN, DELAWARE 19947

STATE OF DELAWARE:
: SS.
COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 24th day of Nov, A.D., 1987, personally came before me, the Subscriber, a Notary Pulblic for the State and County aforesaid, MARGARET M. SOKOLY, party to this Indenture, known to me personally to be such, and she acknowledges this Indenture to be her Act and Deed.

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

Bonnie L Haldeman
Notary Public

VOL 1533 PAGE 20

In Witness Whereof, *the said party of the first part has hereunto set hand and seal , the day and year aforesaid.*

Signed, Sealed, Delivered and Witnessed in the Presence of

Barbara Heden Sturgis 11/20/87

Frank A. Sokoly 11/20/87 SEAL
FRANK A. SOKOLY

Margaret M. Sokoly SEAL
MARGARET M. SOKOLY

SEAL

SEAL

State of Delaware, MARYLAND
County of Sussex SOMERSET } ss.

THIS 25th PURCHASERS REPORT MADE DAY OF November 1987
ASSESSMENT DIVISION OF SUSSEX COUNTY

Be It Remembered, *That on this* 20th *day of* November *19*87 *personally came before me* , the Subscriber, a Notary Public for the State and County aforesaid,

FRANK A. SOKOLY

part ies *to this Indenture, known to me personally to be such, and* they *acknowledged this Indenture to be* their *Deed.*

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

BARBARA HEDIN STURGIS NOTARY PUBLIC SUSSEX COUNTY

C. RUSSELL MCCABE
DOC. SURCHARGE PAID
1987 NOV 24 PM 3:32
RECORDER OF DEEDS
SUSSEX COUNTY

Barbara Heden Sturgis
Notary Public
Commission Expires 7-1-90

Mr. & Mrs. William L Cranmer
Pine Ridge Mobile Park
Seaford, Del 19973 12-11-87

36561

BK 03003 PG 340

TAX MAP # 4-32-7.00-28.01 p/o Lot 2
NO TITLE EXAMINATION
REQUESTED OR PERFORMED

Prepared by: Moore & Rutt, P.A.
P.O. Box 554
Georgetown, DE 19947

Return to: Jaime L. and Darren M. Hooks, Sr.
7127 Airport Road
Laurel, DE 19956

THIS DEED, made this 1st day of July, in the year of our LORD Two Thousand Four (2004),

BETWEEN WILLIAM L. CRANMER and JILL L. CRANMER, parties of the first part,

- AND -

DARREN M. HOOKS, SR. and JAIME L. HOOKS, his wife, as tenants by the entirety with rights of survivorship, and not tenants in common, 7127 Airport Road, Laurel, DE 19956, parties the second part,

WITNESSETH, that the said parties of the first part, for and in consideration of the sum of ONE DOLLAR ($1.00) lawful money and other valuable considerations of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the said parties of the second part,

ALL that certain lot, piece and parcel of land situate, lying and being in Little Creek Hundred, Sussex County, State of Delaware, located on the northerly side of the right of way line of County Road 494 and more particularly described as Lot #2 in the survey prepared by Adams-Kemp Surveyors dated February 17, 2004 and recorded in the Office of the Recorder of Deeds in and for Sussex County, Georgetown, Delaware on April 6, 2004 in Plot Book 84, page 264 and consisting of 2.247 acres, more or less.

Consideration:	90.00	Exempt Code: A
County	State	Total
0.00	0.00	0.00
counter	Date: 07/08/2004	

BK 03003 PG 341

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

SIGNED, SEALED, DELIVERED,
and witnessed in the
presence of

_____

William L Cranmer (SEAL)
WILLIAM L. CRANMER

_____

Jill L Cranmer (SEAL)
JILL L. CRANMER

STATE OF DELAWARE :
: ss.
COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 1st day of July, 2004, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, William L. Cranmer and Jill L. Cranmer, 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.

Sandra J. Haasen
Notary Public

Sandra J. Haasen
Printed Name of Notary
My Commission Expires: 08/13/04

RECORDER OF DEEDS
JOHN F. BRADY
04 JUL -8 PM 3:15
SUSSEX COUNTY
DOC. SURCHARGE PAID

Received
JUL 09 2004
ASSESSMENT DIVISION
OF SUSSEX CTY

File #: 2026047747 2026047748 2026047749

Sussex County Comprehensive Plan Amendment Request Form

Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
☎ 302-855-7878
✉ pandz@sussexcountyde.gov

RECEIVED
APR 15 2026
SUSSEX COUNTY
PLANNING & ZONING

Type of Amendment Requested (e.g Future Land Use Map, Existing Land Use Map, or Text Revision)

Amendment to the Future Land Use Map

Year that Comprehensive Plan was Adopted:

2018 (Certified - March 19, 2019)

If Applicable, the Date(s) of any PLUS Review by the State of Delaware

N/A

Tax Map #: 135-11.00-31.00/135-16.00-17.00 & 70.00 **Total Acreage:** 42.54+/- acres

Applicant Information

Applicant Name: Millsboro Towne Village, L.L.C.
Applicant Address: 33712 Wescoats Road, Unit 5
City: Lewes State: DE ZipCode: 19958
Phone #: 302.644.1400 E-mail: mdyer@ipmequities.com

Developer Information

Developer Name: same as applicant

Attorney Information (If Applicable)

Attorney Name: David C. Hutt - Morris James, LLP
Attorney Address: 107 W. Market Street
City: Georgetown State: DE ZipCode: 19947
Phone #: 302.856.0018 E-mail: dhutt@morrisjames.com

Mark H. Davidson, VP, Principal Land Planner
Pennoni Associates Inc., 18072 Davidson Drive, Milton, DE 19968
302.684.6207, mdavidson@pennoni.com

Description of Request: (Please provide a written description of the request, along with details of the Tax Parcel ID(s) of the relevant parcels to which the amendment request relates. If you are requesting a text amendment to the Comprehensive Plan, please also clearly explain which Chapters of the Comprehensive Plan your request relates)

The applicant respectfully requests an amendment to the Sussex County Comprehensive Plan Future Land Use Map to change the designation of the above-referenced tax parcels on the 2045 Future Land Use Map in the 2018 Comprehensive Plan from a Commercial Area to a Developing Area.

The proposed amendment reflects the existing and anticipated development patterns in the surrounding area and is consistent with the County's long-term growth management objectives. While the Commercial designation is intended for areas with established or planned concentrations of retail, office, and service uses, the subject property is more suitably aligned with the Developing Area designation, which accommodates a broader mix of limited non-residential uses guided by comprehensive planning principles.

The Developing Area land use category is intended to support orderly growth where infrastructure, transportation access, and public services can be planned and provided efficiently. The requested change will allow for development consistent with nearby land uses, help transition between existing zoning and uses of surrounding properties, and support balanced growth while minimizing land use conflicts.

Approval of this amendment will better align the Future Land Use Map with on-the-ground conditions, market realities, and the goals of the Sussex County Comprehensive Plan by encouraging logical growth patterns, protecting community character, and promoting the efficient use of land and public resources.

See additional supporting documents attached to this application.

Check List for Comprehensive Plan Amendment Request Applications

The following shall be submitted with any request

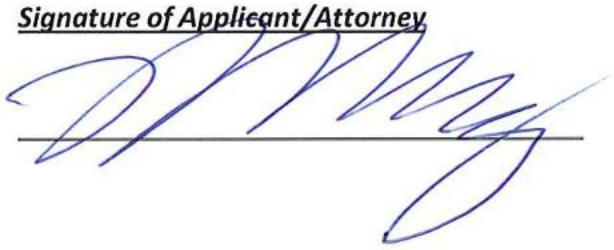
☑ **Completed Application (including relevant Application Fee)**

☑ **A scaled survey drawing is appended to this Application that clearly shows the location of all parcels to which the amendment request relates.**

☑ **The Applicant understands that Sussex County Council may submit a copy of this application, along with copies of all documents received, to the State of Delaware Office of Management and Budget for the purposes of any enabling the State of Delaware to review the requested revision.**

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.

Signature of Applicant/Attorney



For office use only:

Date Submitted: _____ Application & Case # : _____

Staff member receiving Application: _____ Fee: $1,000.00, Check #: _____

Location of property: _____

_____

Date of Commission Hearing: _____ Recommendation: _____

Date of Council Hearing: _____

Sussex County Government
Treasury
2 The Circle, PO Box 601
Georgetown, DE 19947

04/17/2026 02:13PM Lindsay B
Receipt number: 33031305-0111 00130064

PERMITS / INSPECTIONS
2026 20260474712064 $1,000.00

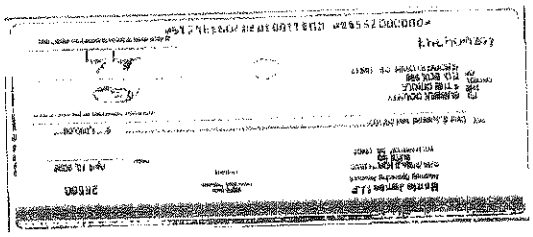
$1,000.00

Subtotal $1,000.00
Total $1,000.00

Tenders
CHECK $1,000.00
Check Number25566

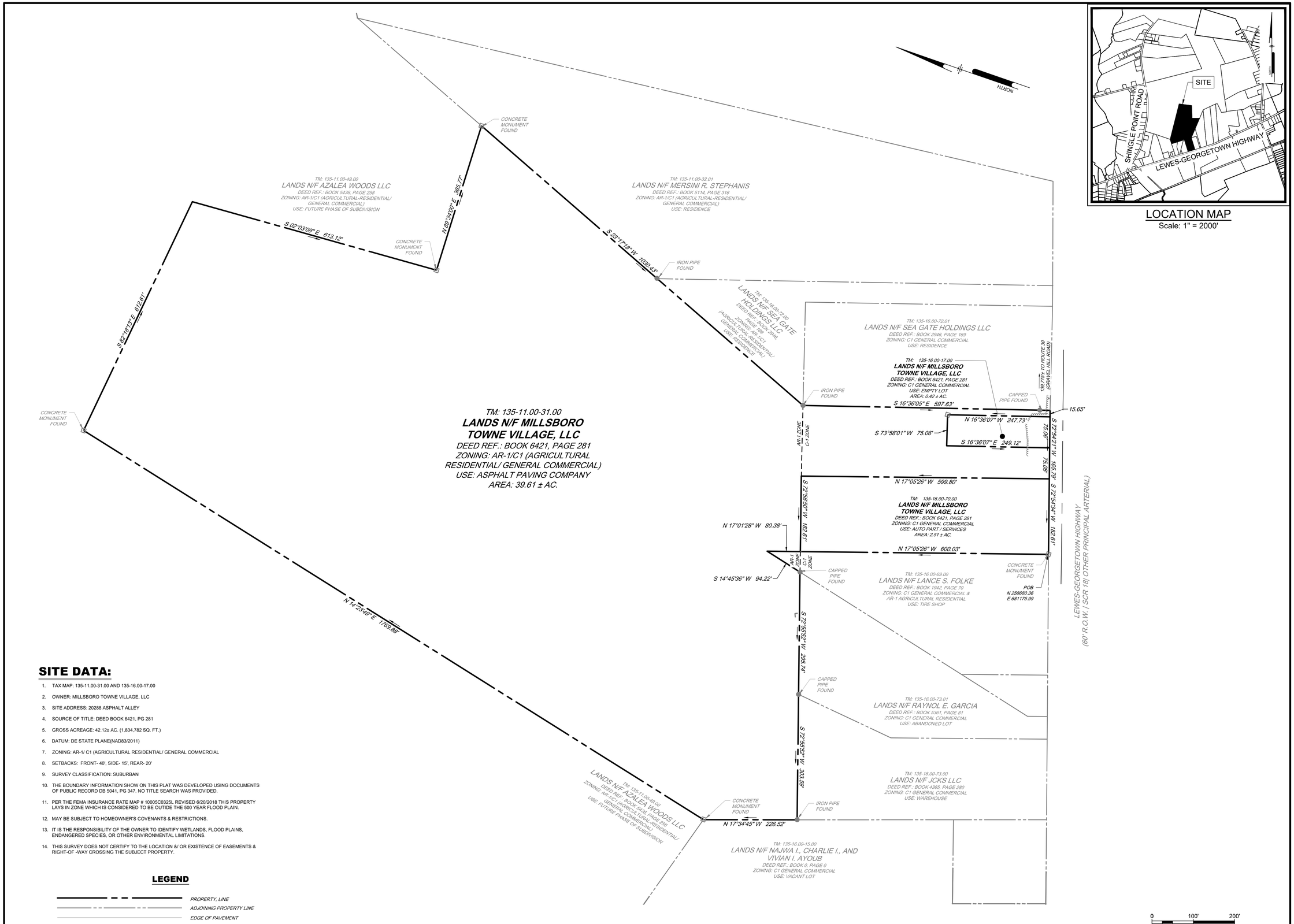
Change due $0.00

Paid by: Morris James



Thank you for your payment.

CUSTOMER COPY



LOCATION MAP
Scale: 1" = 2000'

SITE DATA:

1. TAX MAP: 135-11.00-31.00 AND 135-16.00-17.00
2. OWNER: MILLSBORO TOWNE VILLAGE, LLC
3. SITE ADDRESS: 20288 ASPHALT ALLEY
4. SOURCE OF TITLE: DEED BOOK 6421, PG 281
5. GROSS ACREAGE: 42.12± AC. (1,834,782 SQ. FT.)
6. DATUM: DE STATE PLANE(NAD83/2011)
7. ZONING: AR-1/ C1 (AGRICULTURAL RESIDENTIAL/ GENERAL COMMERCIAL
8. SETBACKS: FRONT- 40', SIDE- 15', REAR- 20'
9. SURVEY CLASSIFICATION: SUBURBAN
10. THE BOUNDARY INFORMATION SHOW ON THIS PLAT WAS DEVELOPED USING DOCUMENTS OF PUBLIC RECORD DB 5041, PG 347. NO TITLE SEARCH WAS PROVIDED.
11. PER THE FEMA INSURANCE RATE MAP # 10005C0325L REVISED 6/20/2018 THIS PROPERTY LAYS IN ZONE WHICH IS CONSIDERED TO BE OUTIDE THE 500 YEAR FLOOD PLAIN.
12. MAY BE SUBJECT TO HOMEOWNER'S COVENANTS & RESTRICTIONS.
13. IT IS THE RESPONSIBILITY OF THE OWNER TO IDENTIFY WETLANDS, FLOOD PLAINS, ENDANGERED SPECIES, OR OTHER ENVIRONMENTAL LIMITATIONS.
14. THIS SURVEY DOES NOT CERTIFY TO THE LOCATION &/ OR EXISTENCE OF EASEMENTS & RIGHT-OF -WAY CROSSING THE SUBJECT PROPERTY.

LEGEND

- PROPERTY, LINE
- ADJOINING PROPERTY LINE
- EDGE OF PAVEMENT
- CENTERLINE OF ROAD
- ZONING BOUNDARY

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

TM: 135-11.00-31.00,135-16.00-17.00 & 135-16.00-70.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
AND LANDS NOW OR FORMERERLY OF
MILLSBORO TOWNE VILLAGE, LLC
33712 WESCOATS RD UNIT 5
LEWES, DE 19958
GEORGETOWN HUNDRED, SUSSEX COUNTY, DE

BOUNDARY PLAT

MILLSBORO TOWNE VILLAGE, LLC
33712 WESCOATS RD UNIT 5
LEWES, DE 19958

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	PDYER25005
DATE	2026-03-10
DRAWING SCALE	1"=100'
DRAWN BY	SJD/ LAC
APPROVED BY	AMD

SHEET 1 OF 1

U:\Accounts\PDYER\PDYER25005 - Yellow Metal - Industrial\DESIGN\XSECS\REPDYER25005-HAOUNDARY.dwg PLOTTED: 4/7/2026 11:18 AM BY: Kevin Ellis PLOTSTYLE: Pennoni PICS.ctb

Morris James LLP

David C. Hutt
302.856.0018
dhutt@morrisjames.com

April 15, 2026

VIA: HAND DELIVERY & EMAIL

Sussex County Council
Council Member Douglas B. Hudson – President
Council Member John L. Rieley – Council Vice President
Council Member Jane Gruenebaum
Council Member Steve C. McCarron
Council Member Matt Lloyd
Sussex County Planning Commission
Commissioner Holly Wingate – Chairperson
Commissioner Gregory Scott Collins – Vice Chairperson
Commissioner Jeff Allen
Commissioner John Passwaters
Commissioner David Pettyjohn
c/o Jamie Whitehouse, AICP, MRTPI, Director
Sussex County Planning & Zoning Department
2 The Circle, P.O. Box 417
Georgetown, DE 19947

RE: Comprehensive Plan Amendment (Future Land Use Map)
Change of Zone Application
24215, 24217 & 20288 Lewes Georgetown Highway, Georgetown, DE 19947
SCTP Nos. 135-11.00-31.00 and 135-16.00-17.00 & 70.00

Dear Council Members and Commissioners:

Kindly find the following applications and supporting materials and information:[1]

- Comprehensive Plan Amendment Request Form;
- Zoning Map Amendment Application Form;
- Boundary Plat dated March 10, 2026;
- Four (4) Legal Descriptions: one for each individual parcel along with a description of the combined parcel;
- Zoning Amendment Plat;
- DelDOT's Service Level Evaluation Request Response; and
- Two (2) checks in the amount of $1,000.00 each (one for each application).

[1] In addition to the paper copies being filed today, an electronic file will also be emailed.

These applications are filed on behalf of the owner of the above-referenced properties who are requesting an amendment to Sussex County's 2045 Future Land Use Map (FLUM) in its 2018 Comprehensive Plan to allow for an amendment of the County's Zoning Map. These amendments are for the properties located at 24215, 24217 & 20288 Lewes Georgetown Highway, Georgetown, DE 19947, which are further identified as Tax Parcel No. 135-11.00 Parcel 31.00 and 135-16.00 Parcels 17.00 & 70.00 (collectively, the Property). The current FLUM designation for the Property is "*Commercial Area*," one of Sussex County's seven (7) Growth Areas. The enclosed FLUM application seeks to change the Property's designation on the FLUM to "*Developing Area*." The *Developing Area* designation on the FLUM is necessary to allow for the requested LI-2, Light Industrial District zoning classification which better reflects existing conditions, surrounding land uses, and future development intentions.

The proposed *Developing Area* designation of this Property situated along the US Route 9 corridor between Georgetown and Lewes is compatible with the character of the surrounding area and consistent with Sussex County's long-term planning objectives. This corridor functions as one of Sussex County's primary east–west transportation spines, connecting established population centers, employment hubs and public services, and has historically accommodated growth in a manner distinct from rural and agricultural areas. There are dozens of "flex" or "warehouse" style units and centers along this corridor located within parcels with various zoning classifications or conditional uses. Because of its central location and proximity to employment centers, this corridor is the location of a significant number of businesses employing many Sussex County residents.

Both Sussex County and the State of Delaware have recognized the organic development of the Route 9 corridor that has occurred to date including the special designation of this corridor on the 2025 Delaware Strategies for State Policies and Spending and the consideration presently being given to this area by the State and the County. Land uses along this segment of Route 9 already reflect a transition from a primarily rural character to a mix of residential, commercial, institutional, industrial and service-oriented uses. The proposed *Developing Area* designation would acknowledge existing development patterns and provide a framework for coordinated, predictable, and orderly growth rather than piecemeal decision-making. Concentrating growth in this corridor supports area compatibility by reducing pressure on outlying rural and agricultural lands and reinforcing established growth areas.

During the public hearings for these applications, the Council Members and Commissioners will hear the details of how the applications for the Property will enhance Sussex County, including, but not limited to the following:

1. **Consistency With Surrounding Land Use Patterns**

The surrounding area is predominantly characterized by commercial and industrial development along a primary principal roadway. US Route 9 is classified as an "Other Principal Arterial" by DelDOT and as a "Major Arterial Roadway" by Sussex County. The commercial and industrial uses are typically front-facing properties including a mixture of uses such as retail, offices, service establishments, warehouses, small manufacturing operations, and contractor yards.

Buildings in this zone often feature larger footprints, outdoor storage areas, loading bays, and parking lots designed to accommodate employees, customers, and commercial vehicles. Directly behind this commercial/industrial frontage is a mixture of agricultural tracts and residential neighborhoods that are separated from the active business corridor by transitional land uses. The residential homes are generally accessed by local public and private streets that are not typically connected through the commercial and industrial uses. Updating the FLUM would ensure consistency with nearby land uses and ongoing development trends.

2. Alignment With County Comprehensive Plan Goals

The proposed *Developing Area* designation supports managed growth, infrastructure efficiency, and community-scale development. This change would align the parcel with the County's stated planning goals by promoting orderly and compatible growth. The Route 9 corridor functions as a primary transportation and service corridor connecting established municipalities and activity centers. Recognizing this area as a *Developing Area* aligns with the Comprehensive Plan's objective to concentrate growth along major corridors and near existing development patterns, thereby reducing the risk of scattered or leapfrog development in rural and agricultural areas. This approach by the County and the enclosed applications for this Property support the Comprehensive Plan's growth management strategy by reinforcing defined growth areas rather than expanding development pressure into less suitable locations.

3. Infrastructure and Access Considerations

Existing infrastructure, including roadway access, utilities, and public services, appropriately supports the type of development contemplated within *Developing Area* classifications. The Route 9 corridor is the focus of ongoing and planned transportation investments and has access to existing or planned utility systems. Aligning the FLUM with these infrastructure commitments promotes responsible growth, helps ensure development occurs where public facilities can be provided efficiently, and supports public safety, mobility, and quality of life for existing and future residents.

4. Area Compatibility

Proposed future improvements to the Property are intended to complement the surrounding area and support a sustainable growth pattern. The *Developing Area* designation will more accurately reflect the trajectory of land use in this area and ensure compatibility with existing residential neighborhoods. Table 4.5-2 of the Comprehensive Plan entitled "Zoning Districts Applicable to Future Land Use Categories" describes the zoning classifications that are applicable to the *Developing Area*. That list includes a mixture of business, commercial and industrial uses that more closely resemble this corridor than the existing *Commercial Area* designation. Area compatibility is further enhanced by the County's land-use regulations, which require buffering, stormwater management, access control, open space, and environmental protections as part of any future development. These standards provide safeguards to ensure that new development integrates with surrounding neighborhoods, preserves natural features, and maintains the visual and functional character of the corridor. During the public hearings, the owner of the Property will

propose significant setbacks to further support the transition of the commercial and industrial uses along Route 9 to the agricultural and residential uses behind those properties.

Finally, the proposed *Developing Area* designation supports Sussex County's broader goals of balancing growth with conservation, coordinating land use with transportation planning, and providing diverse employment opportunities in appropriate locations. By recognizing Route 9 as a strategic growth corridor and planning for development comprehensively, the County can better protect the area's character while accommodating continued growth in a manner that is orderly, efficient, and compatible with surrounding land uses.

Please let us know if there are any questions, additional documentation, studies, or other supporting materials the Council Members or Commissioners may require. We look forward to the opportunity to present these applications to you as soon as possible.

Very truly yours,

PENNONI ASSOCIATES INC.

Mark H. Davidson, VP

MORRIS JAMES LLP

David C. Hutt

Enclosures
Cc: Millsboro Towne Center, L.L.C.

ORDINANCE NO. _____

AN ORDINANCE TO AMEND THE FUTURE LAND USE MAP OF THE COMPREHENSIVE PLAN IN RELATION TO TAX PARCEL NO. 135-11.00-31.00, 135-16.00-17.00 AND 135-16.00-70.00

WHEREAS, on April 15th, 2026, the Sussex County Planning and Zoning Office received an application for a requested Comprehensive Plan Amendment to amend the Future Land Use Map element of the Comprehensive Plan to change the Area designation of Sussex County Parcel No. 135-11.00-31.00, 135-16.00-17.00 and 135-16.00-70.00 from the Commercial Area to the Developing Area; and

WHEREAS, the Parcel is comprised of 42.54 acres of land, lying and being within Georgetown Hundred, and is located on the north side of Lewes Georgetown Highway (Route 9), approximately 0.69 mile west of the intersection of Lewes Georgetown Highway (Route 9) and Gravel Hill Road (Route 30).

WHEREAS, The Property is designated as being within the Commercial Density Area as set forth in the Future Land Use Map identified as Figure 4.5-1 in the 2018 Comprehensive Plan for Sussex County.

WHEREAS, Sussex County Council desires to adopt this Ordinance amending the Future Land Use Map of the Plan with minor amendments; and

WHEREAS, in accordance with the required process for public hearings on ordinances such as this one, both Sussex County Council and the Sussex County Planning & Zoning Commission will hold public hearings on this Ordinance but limited in scope to this specific proposed amendment to the Future Land Use Map contained in the Plan.

NOW, THEREFORE, THE COUNTY OF SUSSEX HEREBY ORDAINS:

Section 1. The Future Land Use Map identified as Figure 4.5-1 of the Sussex County Comprehensive Plan is hereby amended to change the area designation of Sussex County Parcel No. 135-11.00-31.00, 135-16.00-17.00 and 135-16.00-70.00 from the Commercial Area to the Developing Area. The entirety of Sussex County Parcel No. 135-11.00-31.00, 135-16.00-17.00 and 135-16.00-70.00 so changed is identified in Exhibit A, attached hereto, and incorporated herein.

Section 2. This Ordinance shall also take effect following its adoption by majority vote of all members of the County Council of Sussex County, Delaware, and upon certification by the State of Delaware.

Pennoni

18072 Davidson Drive
Milton, DE 19968
T: 302-684-8030
F: 302-684-8054

www.pennoni.com

METES AND BOUNDS DESCRIPTION
FOR THE PURPOSE OF REZONING

LANDS NOW OR FORMERLY OF MILLSBORO TOWNE VILLAGE, LLC
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

TAX MAP 135-11.00-31.00, 135-16.00-17.00 and 70.00

All that certain piece, tract and parcel lying in Georgetown Hundred, Sussex County, Delaware and being more particularly described as follows:

BEGINNING at a point, said point lying on the northerly right-of-way of Lewes-Georgetown Highway and being a corner for this Parcel and Lands now or formerly of Lance S. Folke; thence by and with this Parcel and Lands now or formerly of Lance S. Folke the following three (3) courses and distances:

1) **North 17 degrees, 05 minutes, 26 seconds West, 600.03 feet to a point,**
2) **North 17 degrees, 01 minutes, 28 seconds West, 80.38 feet to a point,**
3) **South 14 degrees, 45 minutes, 36 seconds West, 94.22 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Raynol E. Garcia; thence by and with this Parcel and Lands now or formerly of Raynol E. Garcia, **South 72 degrees, 55 minutes, 52 seconds West, 599.33 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Ayoub; thence by and with this Parcel and Lands now or formerly of Ayoub, **North 17 degrees, 34 minutes, 45 seconds West, 226.52 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Azalea Woods, LLC.; thence by and with this parcel and Lands now or formerly of Azalea Woods, LLC., the following four (4) courses and distances:

1) **North 14 degrees, 23 minutes, 49 seconds East, 1,769.88 feet to a point,**
2) **South 82 degrees, 18 minutes, 13 seconds East, 612.61 feet to a point,**
3) **South 02 degrees, 03 minutes, 09 seconds East, 613.12 feet to a point,**
4) **North 89 degrees, 34 minutes, 00 seconds East, 365.77 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Mersani R. Stephanis; thence by and with this Parcel and Lands now or formerly of

Mersani R. Stephanis, **South 23 degrees, 17 minutes, 18 seconds West, 1,030.43 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Sea Gate Holdings, LLC.; thence by and with this Parcel and Lands now or formerly of Sea Gate Holdings, LLC., **South 16 degrees, 36 minutes, 05 seconds East, 597.63 feet** to a point, said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes-Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes-Georgetown Highway, the following two(2) courses and distances:

1) **South 72 degrees, 54 minutes, 21 seconds West, 165.79 feet to a point,**
2) **South 72 degrees, 54 minutes, 34 seconds West, 182.61 feet to a point,**

said point being the **Point of Beginning** for this description.

This Parcel contains 42.54 acres more or less.

2026-03-17
PDYER25005
KMD:ked:KBE

PLANNING & ZONING COMMISSION
HOLLY WINGATE, CHAIR
SCOTT COLLINS, VICE CHAIR
JEFF ALLEN
JOHN PASSWATERS
DAVID PETTYJOHN

Sussex County
sussexcountyde.gov
pandz@sussexcountyde.gov

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: September 2, 2026

Application:	C/Z 2063 Millsboro Towne Village, LLC
Applicant:	Millsboro Towne Village, LLC 33712 Wescoats Road, Unit 5 Lewes, DE 1998
Owner:	Millsboro Towne Village, LLC 33712 Wescoats Road, Unit 5 Lewes, DE 1998
Site Location:	24215, 24217, & 20288 Lewes Georgetown Highway, Georgetown.
Current Zoning:	Agricultural Residential (AR-1) & General Commercial (C-1)
Proposed Zoning:	Light Industrial (LI-2)
Comprehensive Land Use Plan Reference:	Commercial Area
Councilmanic District:	District 5 – Mr. John Reiley
School District:	Indian River School District
Fire District:	(77) Georgetown Fire Company
Sewer:	Artesian
Water:	Artesian
Site Area:	42.54 acres +/-
Tax Map ID.:	135-11.00-31.00, 135-16.00- 17.00 & 70.00

EQUAL HOUSING OPPORTUNITY

COUNTY ADMINISTRATIVE OFFICES
2 THE CIRCLE | PO BOX 417
GEORGETOWN, DELAWARE 19947

CZ 2063 Millsboro Towne Village, LLC
Aerial Map
Tax Map Nos. 135-11.00-31.00
135-16.00-17.00 & 70.00

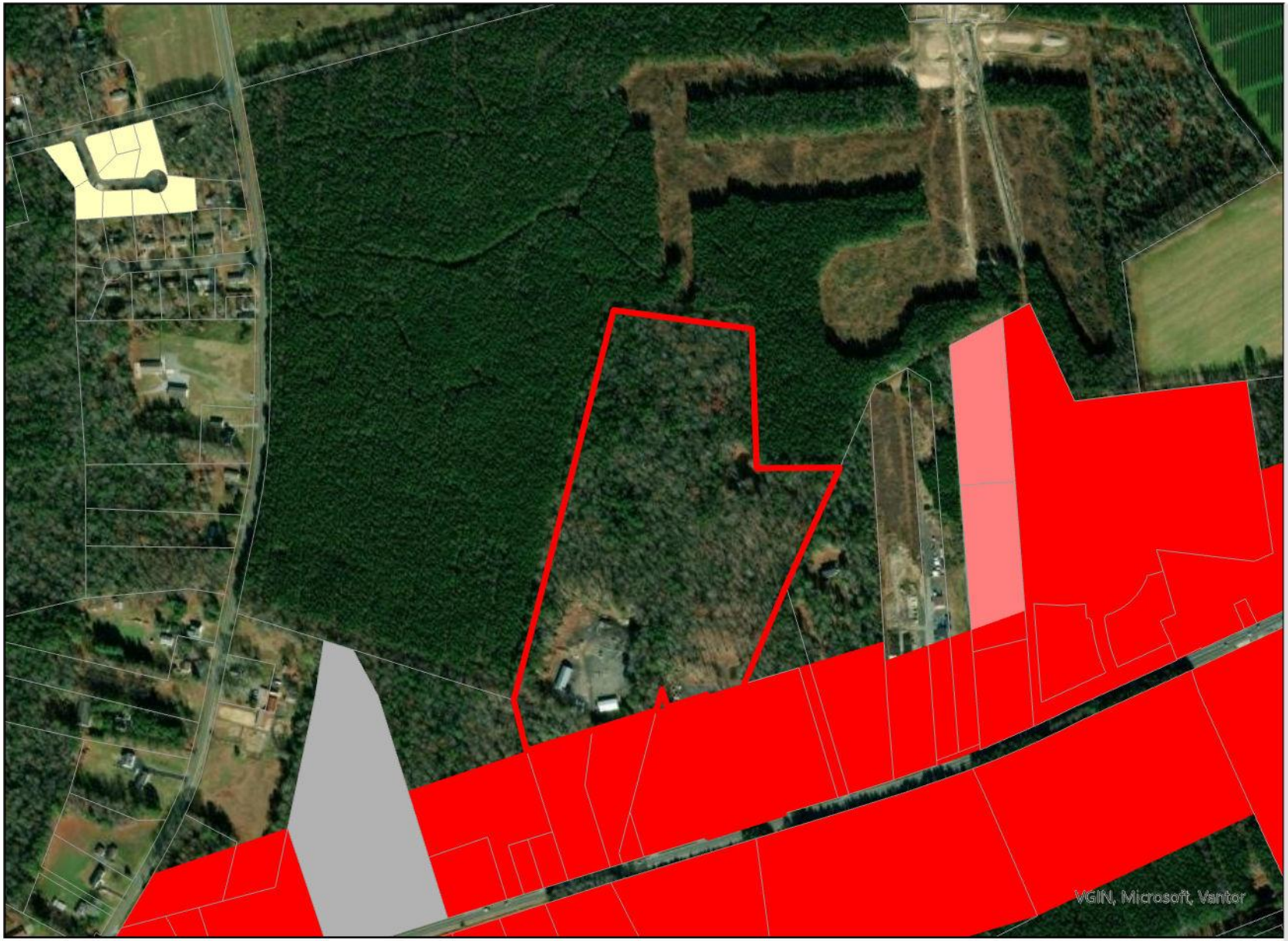
N

0 0.13 0.25 0.5 Miles

CZ 2063 Millsboro Towne Village, LLC
Street Map
Tax Map Nos. 135-11.00-31.00
135-16.00-17.00 & 70.00

N

0 0.13 0.25 0.5 Miles



CZ 2063 Millsboro Towne Village, LLC

Zoning

- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

CZ 2063 Millsboro Towne Village, LLC
Zoning Map
Tax Map Nos. 135-11.00-31.00
135-16.00-17.00 & 70.00

N

0 0.13 0.25 0.5 Miles

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Planning Commission Members
From: Christin Scott, Planner III
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: August 24, 2026
RE: Staff Analysis for C/Z 2063 Millsboro Towne Village, LLC

This memo is to provide background and analysis for the Planning Commission to consider as a part of Application C/Z 2063 Millsboro Towne Village, LLC to be reviewed during the Wednesday, September 2nd, 2026, Planning Commission Meeting. This analysis should be included in the record of this application and is subject to comments and information that may be presented during the public hearing.

Please note that the following staff analysis is for informational purposes only and does not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.

Tax Parcel ID: 135-11.00-31.00, 135-16.00-17.00 & 70.00

Proposal: The proposal is for a Change of Zone from an Agricultural Residential (AR-1) District and a General Commercial (C-1) District to a Light Industrial (LI-2) District for 42.54-acres of land lying on the north side of Lewes Georgetown Highway (Rt. 9), approximately 0.69 mile west of Gravel Hill Road (Rt. 30) in Georgetown, Delaware.

Zoning: The subject property is currently split zoned Agricultural Residential (AR-1) District and General Commercial (C-1) District. The Parcels adjacent to the project site are zoned General Commercial (C-1).

There are also a variety of other Zoning Districts within the immediate vicinity of the subject property, consisting of Light Industrial (LI-2), Medium Commercial (C-2), Commercial Residential (Cr-1), and Heavy Industrial (HI-1) Districts.

Further Site Considerations:

- **Density:** N/A
- **Open Space Provisions:** N/A
- **Agricultural Areas:** The project does not appear to be in proximity to any existing Agricultural Preservation Districts or Agricultural Preservation Easements or lands not within these designations appearing to be actively farmed.
- **Interconnectivity:** N/A

- **Transportation Improvement District (TID):** The subject property is not located within any established Transportation Improvement District (TID).

- **Forested Areas:** The property is located within the vicinity of mature forests.

- **Wetlands Buffers/Waterways:** N/A

- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):** Staff note that the Property is located within Flood Zone "X" - Areas Determined to be outside of the 100-year flood. Staff further note that there are no Tax Ditches or related Tax Ditch Rights-Of-Way (ROW) on the property. There are no Wellhead Protection Areas located on the site. The Site is also located within an area of "Fair" Groundwater Recharge Potential per available FirstMap Data from the Delaware Geological Survey (DGS).

Future Land Use Map Designation w/in Comprehensive Plan: The Property is located within and has a Future Land Use Map (FLUM) designation of "Commercial Area."

The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use Map (FLUM) in the Plan indicates that the subject property has a Growth Area designation of "Commercial Area." The adjacent properties to the north, south and east of the subject property also have a Future Land Use Map designation of Commercial Area.

As outlined in the 2018 Sussex County Comprehensive Plan, *"Commercial Areas include concentrations of retail and service uses that are mainly located along arterials, and highways"* and *"As opposed to small, traditional downtown areas that are often historic and pedestrian-friendly, Commercial Areas include commercial corridors, shopping centers, and other medium and large commercial vicinities geared towards vehicular traffic"* (2018 Sussex County Comprehensive Plan, 4-17).

The Plan further notes that, "Institutional and commercial uses may be appropriate depending on surrounding uses" (20187 Sussex County Comprehensive Plan, 4-16).

Applicability to Comprehensive Plan: Table 4.5-2 "Zoning Districts Applicable to Future Land Use Categories" of the Plan notes that the Light Industrial (LI-2) District is not an applicable Zoning District within the "Commercial Area" (2018 Sussex County Comprehensive Plan, 4-25).

A subsequent Future Land Use Map Amendment application accompanies this Change of Zone request, to amend the Future Land Use Map from "Commercial Area" to a designation of "Industrial Area".

Existing Change of Zones within the Vicinity of the Subject Site: A Data Table has been supplied which provides further background regarding the approval status of Applications in the area including the location of all other Change of Zone Applications that are within a 1-mile distance from the subject site.

Of those Change of Zone Applications w/in a 1.0-mile radius of the Application Site, the following decisions were previously made by the Sussex County Council:

- **There were five (5) Applications within a 1-mile radius of the Application Site.**
- **Of those five (5) Applications:**
  - **Three ( ) Applications were approved by the Sussex County Council.**
  - **Two (2) Applications were Denied by the Sussex County Council.**

Based on the analysis of the land use, surrounding zoning and uses, a Change of Zone to allow for a Change of Zone from an Agricultural Residential (AR-1) District and General Commercial (C-1) District to a Light Industrial (LI-2), subject to considerations of scale and impact, could be considered as being consistent with the land use, area zoning and surrounding uses.

CZ No.	Tax Parcel #	APPLICANT	Proposed Zoning	CC Decision	CC Date	Ord. No.
1902	135-16.00-23.00	John C. Stamato (Ribera Development, LLC	HI-1	Approved	2/18/2020	2708
1959	135-11.00-65.00	Charles E. Turner, Jr.	MR	Denied	12/12/2023	
1838	135-11.00-78.00	Two Farms, Inc.	B-1	Approved	1/9/2018	2539
1830	135-16.00-23.00	H. Dale Parsons	C-1 and CR-1	Approved	11/28/2017	2534
1815	135-11.00-78.00	Two Farms, Inc.	CR-1	Denied	5/9/2017	

File #: C/Z 20063
2026047 50
2026047 52
2026047 53

Planning & Zoning Commission 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

RECEIVED
APR 15 2026
SUSSEX COUNTY
PLANNING & ZONING

Type of Application: (please check applicable)
Conditional Use ___
Zoning Map Amendment ✓

Site Address of Conditional Use/Zoning Map Amendment

24215, 24217 & 20288 Lewes Georgetown Highway, Georgetown, DE 19947

Type of Conditional Use Requested:

N/A

Tax Map #: 135-11.00-31.00 & 135-16.00-17.00 & 70.00 **Size of Parcel(s):** 42.54+/- Acres

Current Zoning: C-1 & AR-1 **Proposed Zoning:** LI-2 **Size of Building:** TBD

Land Use Classification: Commercial (FLUM change to **Developing Area)**

Water Provider: Artesian **Sewer Provider:** Artesian

Applicant Information

Applicant Name: Millsboro Towne Village, L.L.C.
Applicant Address: 33712 Wescoats Road, Unit 5
City: Lewes State: DE ZipCode: 19958
Phone #: (302) 644-1400 E-mail: mdyer@ipmequities.com

Owner Information

Owner Name: Millsboro Towne Village, L.L.C.
Owner Address: 33712 Wescoats Road, Unit 5
City: Lewes State: DE Zip Code: 19958
Phone #: (302) 644-1400 E-mail: mdyer@ipmequities.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: David C. Hutt - Morris James, LLP
Agent/Attorney/Engineer Address: 107 W. Market Street
City: Georgetown State: DE Zip Code: 19947
Phone #: (302) 856-0018 E-mail: dhutt@morrisjames.com

Mark H. Davidson, VP, Principal Land Planner
Pennoni Associates Inc., 18072 Davidson Drive, Milton, DE 19968
302.684.6207, mdavidson@pennoni.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✓ **Completed Application**

✓ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✓ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✓ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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: 4/10/26

Signature of Owner

_____ Date: 4/10/26

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

Sussex County Government
Treasury
2 The Circle, PO Box 601
Georgetown, DE 19947

04/17/2026 02:12PM Lindsay B
Receipt number: 33031305-0110 0013000763

PERMITS / INSPECTIONS
2026 202604750|Z015 $1,000.00

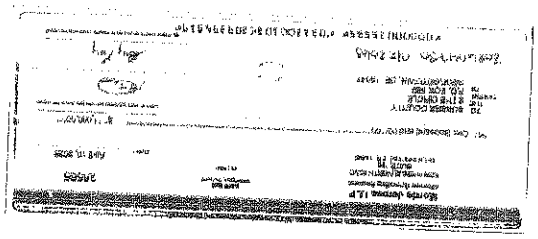
$1,000.00

Subtotal $1,000.00
Total $1,000.00

Tenders
CHECK $1,000.00
Check Number25565

Change due $0.00

Paid by: Morris James



Thank you for your payment.

CUSTOMER COPY

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

SHANTÉ A. HASTINGS
SECRETARY

April 6, 2026

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Millsboro Towne Village, LLC** (20288 Asphalt Alley and 24215 Lewes Georgetown Highway, Georgetown, Delaware 19947) proposed land use application, which we received on March 17, 2026. This application is for an approximate 42.54-acre assemblage of parcels (Tax Parcels: 135-11.00-31.00, 135-16.00-17.00, and 70.00). The parcels are located on the north side of Lewes Georgetown Highway (US Route 9) and approximately 3,650 feet west from the intersection of Gravel Hill Road (Delaware Route 30) and US Route 9. The parcels are currently zoned AR-1 (Agricultural Residential District) and C-1 (General Commercial District), with a proposed zoning of LI -2 (Light Industrial District) to operate a wide variety of light manufacturing, fabricating, processing, wholesale distributing, warehouse use, commercial uses and related business operations.

Per the 2024 Delaware Vehicle Volume Summary, the annual average and summer average daily traffic volumes along US Route 9, where the subject land is located, which is from Harberson Road (Delaware Route 5) to Sand Hill Road (Sussex County Road 319), is 12,031 and 16,413 vehicles per day, respectively.

Our volume-based criteria for requiring a traffic impact study (TIS), addressed in Section 2.2.2.1 of the Development Coordination Manual, are that a development generates more than 500 trips per day or 50 trips during a weekly peak hour. While it seems that the above criteria could be met, we presently cannot predict the site's trip generation with enough accuracy to make a TIS useful. Thus, we recommend that this rezoning application be considered without a TIS and that the need for a TIS be evaluated when a subdivision or land development plan is proposed

DelDOT

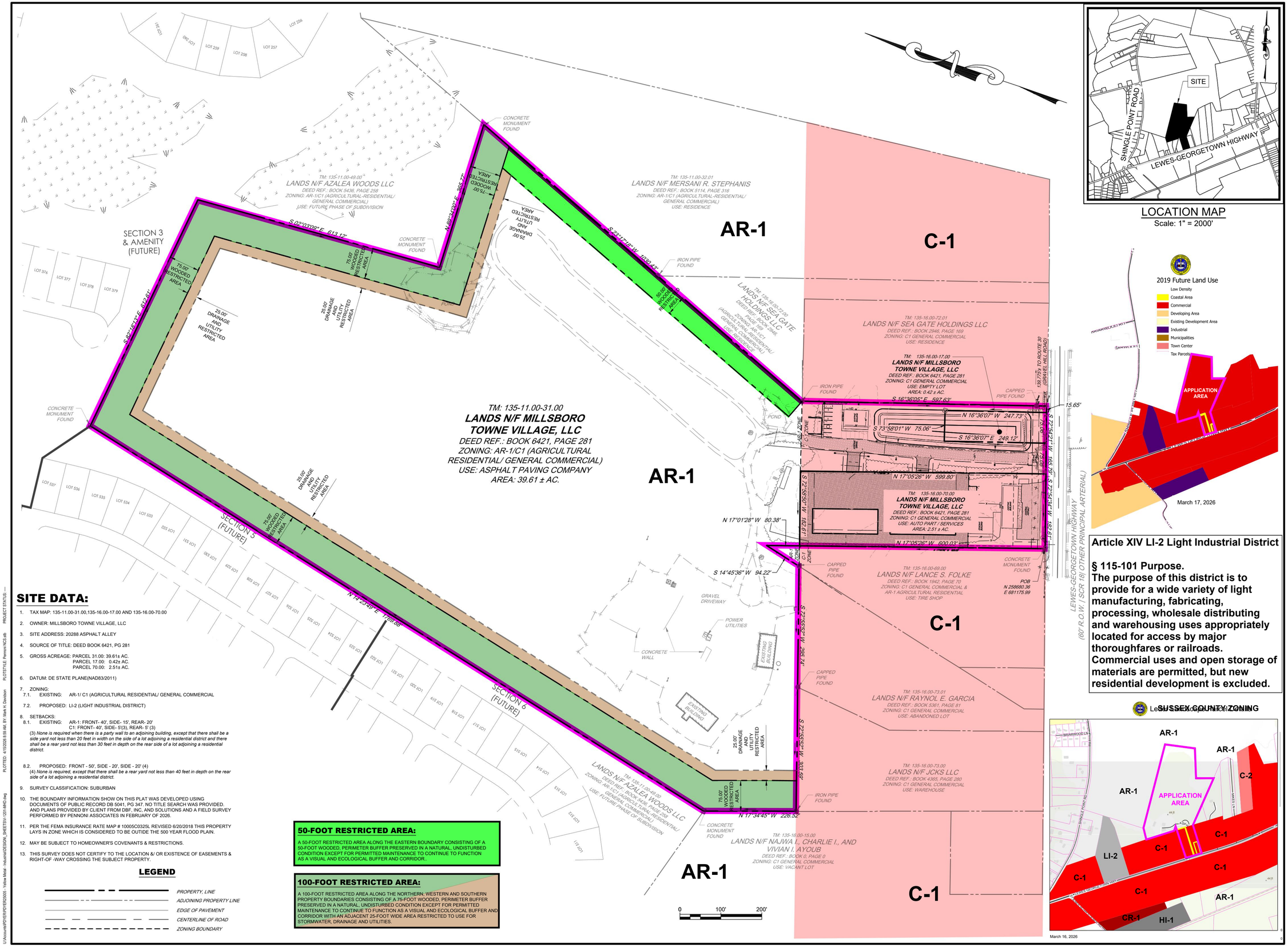
If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Engineer
Economic Development Coordination
DelDOT

SAM:afm
cc: Millsboro Towne Village, LLC, Applicant
Mark Davidson, Applicant
Ashley Paugh, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
James Argo, South District Project Reviewer, M&O
April Foster, South District Public Works Admin. M&O
Matt Schlitter, South District Public Works Engineer, Economic Dev. Coordination
Brian Urbanek, Acting Sussex Coordinator, Economic Development Coordination
Derek Sapp, Sussex Review Engineer, Economic Development Coordination
Jose Quixtan, Sussex Review Engineer, Economic Development Coordination
Kevin Hickman, Sussex Reviewer, Economic Development Coordination
Brian Williams, Sussex Reviewer, Economic Development Coordination
Annamaria Furmato, TIS Review Engineer, Economic Development Coordination
Ben Fisher, TIS Review Engineer, Economic Development Coordination
DelDOT TIS Support


TM: 135-11.00-49.00
LANDS N/F AZALEA WOODS LLC
DEED REF.: BOOK 5436, PAGE 258
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: FUTURE PHASE OF SUBDIVISION
TM: 135-11.00-32.01
LANDS N/F MERSANI R. STEPHANIS
DEED REF.: BOOK 5114, PAGE 316
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: RESIDENCE
TM: 135-16.00-72.00
LANDS N/F SEA GATE HOLDINGS LLC
DEED REF.: BOOK 2946, PAGE 169
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: RESIDENCE
TM: 135-16.00-72.01
LANDS N/F SEA GATE HOLDINGS LLC
DEED REF.: BOOK 2946, PAGE 169
ZONING: C1 GENERAL COMMERCIAL
USE: RESIDENCE
TM: 135-16.00-17.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
DEED REF.: BOOK 6421, PAGE 281
ZONING: C1 GENERAL COMMERCIAL
USE: EMPTY LOT
AREA: 0.42 ± AC.
TM: 135-16.00-70.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
DEED REF.: BOOK 6421, PAGE 281
ZONING: C1 GENERAL COMMERCIAL
USE: AUTO PART / SERVICES
AREA: 2.51 ± AC.
TM: 135-16.00-69.00
LANDS N/F LANCE S. FOLKE
DEED REF.: BOOK 1942, PAGE 70
ZONING: C1 GENERAL COMMERCIAL & AR-1 AGRICULTURAL RESIDENTIAL
USE: TIRE SHOP
TM: 135-16.00-73.01
LANDS N/F RAYNOL E. GARCIA
DEED REF.: BOOK 5361, PAGE 81
ZONING: C1 GENERAL COMMERCIAL
USE: ABANDONED LOT
TM: 135-16.00-73.00
LANDS N/F JCKS LLC
DEED REF.: BOOK 4365, PAGE 280
ZONING: C1 GENERAL COMMERCIAL
USE: WAREHOUSE
TM: 135-16.00-15.00
LANDS N/F NAJWA I., CHARLIE I., AND VIVIAN I. AYOUB
DEED REF.: BOOK 0, PAGE 0
ZONING: C1 GENERAL COMMERCIAL
USE: VACANT LOT
TM: 135-11.00-31.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
DEED REF.: BOOK 6421, PAGE 281
ZONING: AR-1/C1 (AGRICULTURAL RESIDENTIAL/ GENERAL COMMERCIAL)
USE: ASPHALT PAVING COMPANY
AREA: 39.61 ± AC.
AR-1
C-1
SECTION 3 & AMENITY (FUTURE)
SECTION 5 (FUTURE)
SECTION 6 (FUTURE)
LOT 376
LOT 377
LOT 378
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N 17°34'45" W 226.52'
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S 73°58'01" W 75.06'
S 16°36'07" E 249.12'
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S 16°36'07" E 249.12'
S 25°55'27" W 302.58'
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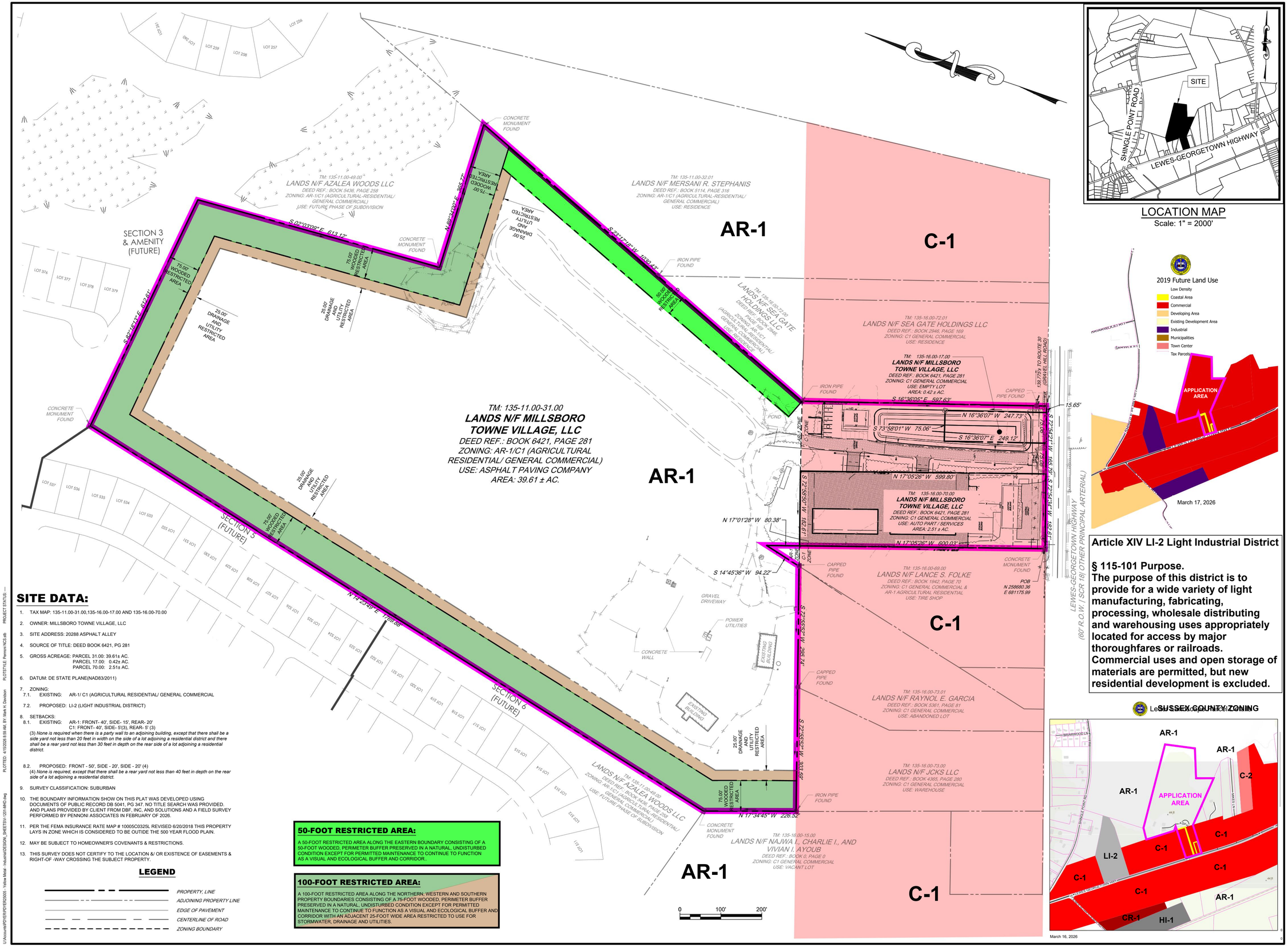
TM: 135-11.00-49.00
LANDS N/F AZALEA WOODS LLC
DEED REF.: BOOK 5436, PAGE 258
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: FUTURE PHASE OF SUBDIVISION
TM: 135-11.00-32.01
LANDS N/F MERSANI R. STEPHANIS
DEED REF.: BOOK 5114, PAGE 316
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: RESIDENCE
TM: 135-16.00-72.00
LANDS N/F SEA GATE HOLDINGS LLC
DEED REF.: BOOK 2946, PAGE 169
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: RESIDENCE
TM: 135-16.00-72.01
LANDS N/F SEA GATE HOLDINGS LLC
DEED REF.: BOOK 2946, PAGE 169
ZONING: C1 GENERAL COMMERCIAL
USE: RESIDENCE
TM: 135-16.00-17.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
DEED REF.: BOOK 6421, PAGE 281
ZONING: C1 GENERAL COMMERCIAL
USE: EMPTY LOT
AREA: 0.42 ± AC.
TM: 135-16.00-70.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
DEED REF.: BOOK 6421, PAGE 281
ZONING: C1 GENERAL COMMERCIAL
USE: AUTO PART / SERVICES
AREA: 2.51 ± AC.
TM: 135-16.00-69.00
LANDS N/F LANCE S. FOLKE
DEED REF.: BOOK 1942, PAGE 70
ZONING: C1 GENERAL COMMERCIAL & AR-1 AGRICULTURAL RESIDENTIAL
USE: TIRE SHOP
TM: 135-16.00-73.01
LANDS N/F RAYNOL E. GARCIA
DEED REF.: BOOK 5361, PAGE 81
ZONING: C1 GENERAL COMMERCIAL
USE: ABANDONED LOT
TM: 135-16.00-73.00
LANDS N/F JCKS LLC
DEED REF.: BOOK 4365, PAGE 280
ZONING: C1 GENERAL COMMERCIAL
USE: WAREHOUSE
TM: 135-16.00-15.00
LANDS N/F NAJWA I., CHARLIE I., AND VIVIAN I. AYOUB
DEED REF.: BOOK 0, PAGE 0
ZONING: C1 GENERAL COMMERCIAL
USE: VACANT LOT
TM: 135-11.00-31.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
DEED REF.: BOOK 6421, PAGE 281
ZONING: AR-1/C1 (AGRICULTURAL RESIDENTIAL/ GENERAL COMMERCIAL)
USE: ASPHALT PAVING COMPANY
AREA: 39.61 ± AC.
AR-1
C-1
SECTION 3 & AMENITY (FUTURE)
SECTION 5 (FUTURE)
SECTION 6 (FUTURE)
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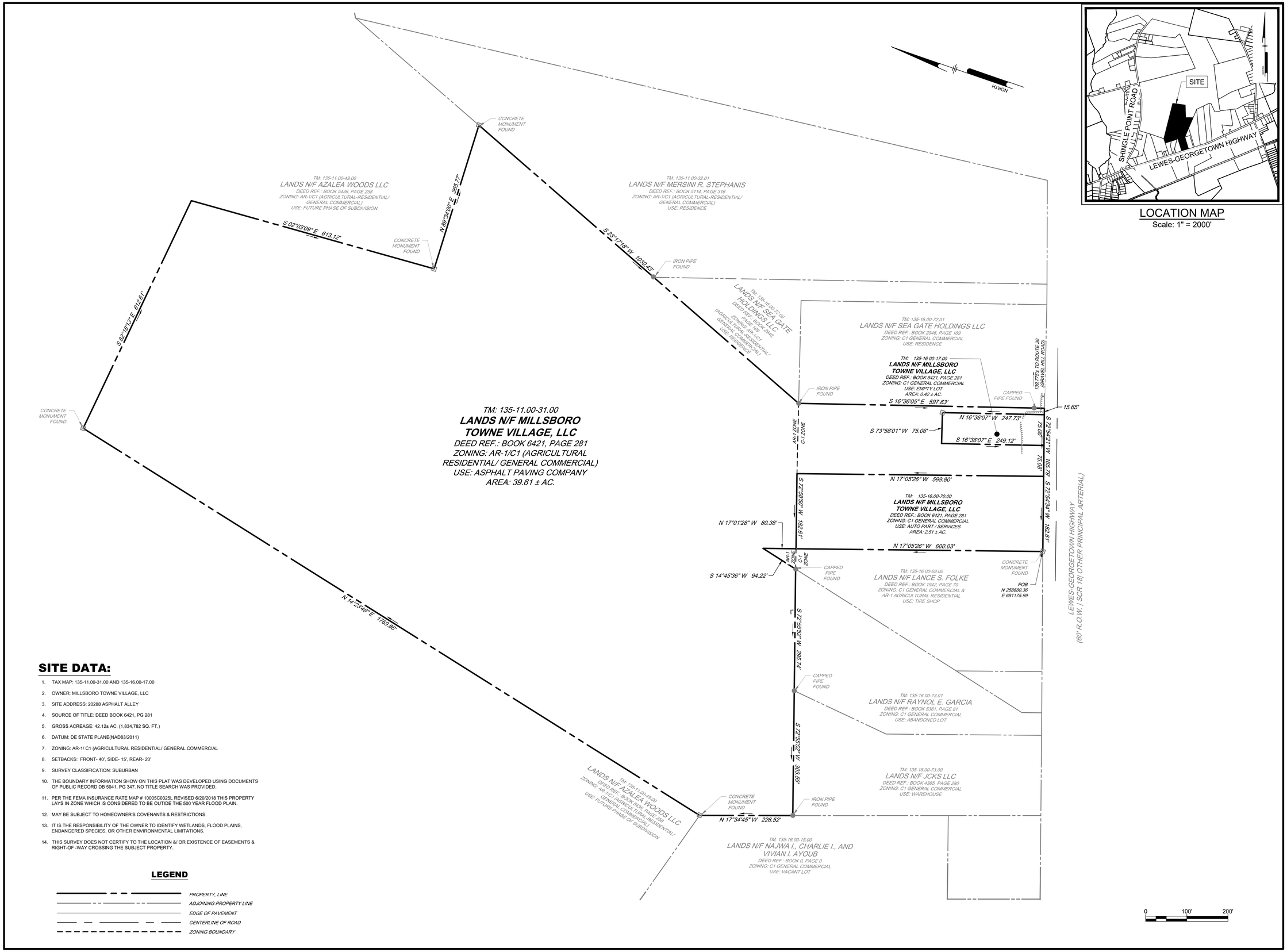

LOCATION MAP
Scale: 1" = 2000'

SITE DATA:

1. TAX MAP: 135-11.00-31.00 AND 135-16.00-17.00
2. OWNER: MILLSBORO TOWNE VILLAGE, LLC
3. SITE ADDRESS: 20288 ASPHALT ALLEY
4. SOURCE OF TITLE: DEED BOOK 6421, PG 281
5. GROSS ACREAGE: 42.12± AC. (1,834,782 SQ. FT.)
6. DATUM: DE STATE PLANE(NAD83/2011)
7. ZONING: AR-1/ C1 (AGRICULTURAL RESIDENTIAL/ GENERAL COMMERCIAL
8. SETBACKS: FRONT- 40', SIDE- 15', REAR- 20'
9. SURVEY CLASSIFICATION: SUBURBAN
10. THE BOUNDARY INFORMATION SHOW ON THIS PLAT WAS DEVELOPED USING DOCUMENTS OF PUBLIC RECORD DB 5041, PG 347. NO TITLE SEARCH WAS PROVIDED.
11. PER THE FEMA INSURANCE RATE MAP # 10005C0325L REVISED 6/20/2018 THIS PROPERTY LAYS IN ZONE WHICH IS CONSIDERED TO BE OUTIDE THE 500 YEAR FLOOD PLAIN.
12. MAY BE SUBJECT TO HOMEOWNER'S COVENANTS & RESTRICTIONS.
13. IT IS THE RESPONSIBILITY OF THE OWNER TO IDENTIFY WETLANDS, FLOOD PLAINS, ENDANGERED SPECIES, OR OTHER ENVIRONMENTAL LIMITATIONS.
14. THIS SURVEY DOES NOT CERTIFY TO THE LOCATION &/ OR EXISTENCE OF EASEMENTS & RIGHT-OF -WAY CROSSING THE SUBJECT PROPERTY.

LEGEND

- PROPERTY, LINE
- ADJOINING PROPERTY LINE
- EDGE OF PAVEMENT
- CENTERLINE OF ROAD
- ZONING BOUNDARY

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

TM: 135-11.00-31.00,135-16.00-17.00 & 135-16.00-70.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
AND LANDS NOW OR FORMERERLY OF
MILLSBORO TOWNE VILLAGE, LLC
33712 WESCOATS RD UNIT 5
LEWES, DE 19958
GEORGETOWN HUNDRED, SUSSEX COUNTY, DE

BOUNDARY PLAT

MILLSBORO TOWNE VILLAGE, LLC
33712 WESCOATS RD UNIT 5
LEWES, DE 19958

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	PDYER25005
DATE	2026-03-10
DRAWING SCALE	1"=100'
DRAWN BY	SJD/ LAC
APPROVED BY	AMD

SHEET 1 OF 1

PLOTTED: 4/7/2026 11:18 AM BY: Kevin Ellis PLOTSTYLE: Pennoni.PCS.ctb
U:\Accounts\PDYER\PDYER25005 - Yellow Metal - Industrial\DESIGN\VISE\DWG\PDYER25005-HAOUNDARY.dwg

Morris James LLP

David C. Hutt
302.856.0018
dhutt@morrisjames.com

April 15, 2026

VIA: HAND DELIVERY & EMAIL

Sussex County Council
Council Member Douglas B. Hudson – President
Council Member John L. Rieley – Council Vice President
Council Member Jane Gruenebaum
Council Member Steve C. McCarron
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Commissioner John Passwaters
Commissioner David Pettyjohn
c/o Jamie Whitehouse, AICP, MRTPI, Director
Sussex County Planning & Zoning Department
2 The Circle, P.O. Box 417
Georgetown, DE 19947

RE: Comprehensive Plan Amendment (Future Land Use Map)
Change of Zone Application
24215, 24217 & 20288 Lewes Georgetown Highway, Georgetown, DE 19947
SCTP Nos. 135-11.00-31.00 and 135-16.00-17.00 & 70.00

Dear Council Members and Commissioners:

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- Comprehensive Plan Amendment Request Form;
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[1] In addition to the paper copies being filed today, an electronic file will also be emailed.

These applications are filed on behalf of the owner of the above-referenced properties who are requesting an amendment to Sussex County's 2045 Future Land Use Map (FLUM) in its 2018 Comprehensive Plan to allow for an amendment of the County's Zoning Map. These amendments are for the properties located at 24215, 24217 & 20288 Lewes Georgetown Highway, Georgetown, DE 19947, which are further identified as Tax Parcel No. 135-11.00 Parcel 31.00 and 135-16.00 Parcels 17.00 & 70.00 (collectively, the Property). The current FLUM designation for the Property is "*Commercial Area*," one of Sussex County's seven (7) Growth Areas. The enclosed FLUM application seeks to change the Property's designation on the FLUM to "*Developing Area*." The *Developing Area* designation on the FLUM is necessary to allow for the requested LI-2, Light Industrial District zoning classification which better reflects existing conditions, surrounding land uses, and future development intentions.

The proposed *Developing Area* designation of this Property situated along the US Route 9 corridor between Georgetown and Lewes is compatible with the character of the surrounding area and consistent with Sussex County's long-term planning objectives. This corridor functions as one of Sussex County's primary east–west transportation spines, connecting established population centers, employment hubs and public services, and has historically accommodated growth in a manner distinct from rural and agricultural areas. There are dozens of "flex" or "warehouse" style units and centers along this corridor located within parcels with various zoning classifications or conditional uses. Because of its central location and proximity to employment centers, this corridor is the location of a significant number of businesses employing many Sussex County residents.

Both Sussex County and the State of Delaware have recognized the organic development of the Route 9 corridor that has occurred to date including the special designation of this corridor on the 2025 Delaware Strategies for State Policies and Spending and the consideration presently being given to this area by the State and the County. Land uses along this segment of Route 9 already reflect a transition from a primarily rural character to a mix of residential, commercial, institutional, industrial and service-oriented uses. The proposed *Developing Area* designation would acknowledge existing development patterns and provide a framework for coordinated, predictable, and orderly growth rather than piecemeal decision-making. Concentrating growth in this corridor supports area compatibility by reducing pressure on outlying rural and agricultural lands and reinforcing established growth areas.

During the public hearings for these applications, the Council Members and Commissioners will hear the details of how the applications for the Property will enhance Sussex County, including, but not limited to the following:

1. **Consistency With Surrounding Land Use Patterns**

The surrounding area is predominantly characterized by commercial and industrial development along a primary principal roadway. US Route 9 is classified as an "Other Principal Arterial" by DelDOT and as a "Major Arterial Roadway" by Sussex County. The commercial and industrial uses are typically front-facing properties including a mixture of uses such as retail, offices, service establishments, warehouses, small manufacturing operations, and contractor yards.

Buildings in this zone often feature larger footprints, outdoor storage areas, loading bays, and parking lots designed to accommodate employees, customers, and commercial vehicles. Directly behind this commercial/industrial frontage is a mixture of agricultural tracts and residential neighborhoods that are separated from the active business corridor by transitional land uses. The residential homes are generally accessed by local public and private streets that are not typically connected through the commercial and industrial uses. Updating the FLUM would ensure consistency with nearby land uses and ongoing development trends.

2. Alignment With County Comprehensive Plan Goals

The proposed *Developing Area* designation supports managed growth, infrastructure efficiency, and community-scale development. This change would align the parcel with the County's stated planning goals by promoting orderly and compatible growth. The Route 9 corridor functions as a primary transportation and service corridor connecting established municipalities and activity centers. Recognizing this area as a *Developing Area* aligns with the Comprehensive Plan's objective to concentrate growth along major corridors and near existing development patterns, thereby reducing the risk of scattered or leapfrog development in rural and agricultural areas. This approach by the County and the enclosed applications for this Property support the Comprehensive Plan's growth management strategy by reinforcing defined growth areas rather than expanding development pressure into less suitable locations.

3. Infrastructure and Access Considerations

Existing infrastructure, including roadway access, utilities, and public services, appropriately supports the type of development contemplated within *Developing Area* classifications. The Route 9 corridor is the focus of ongoing and planned transportation investments and has access to existing or planned utility systems. Aligning the FLUM with these infrastructure commitments promotes responsible growth, helps ensure development occurs where public facilities can be provided efficiently, and supports public safety, mobility, and quality of life for existing and future residents.

4. Area Compatibility

Proposed future improvements to the Property are intended to complement the surrounding area and support a sustainable growth pattern. The *Developing Area* designation will more accurately reflect the trajectory of land use in this area and ensure compatibility with existing residential neighborhoods. Table 4.5-2 of the Comprehensive Plan entitled "Zoning Districts Applicable to Future Land Use Categories" describes the zoning classifications that are applicable to the *Developing Area*. That list includes a mixture of business, commercial and industrial uses that more closely resemble this corridor than the existing *Commercial Area* designation. Area compatibility is further enhanced by the County's land-use regulations, which require buffering, stormwater management, access control, open space, and environmental protections as part of any future development. These standards provide safeguards to ensure that new development integrates with surrounding neighborhoods, preserves natural features, and maintains the visual and functional character of the corridor. During the public hearings, the owner of the Property will

propose significant setbacks to further support the transition of the commercial and industrial uses along Route 9 to the agricultural and residential uses behind those properties.

Finally, the proposed *Developing Area* designation supports Sussex County's broader goals of balancing growth with conservation, coordinating land use with transportation planning, and providing diverse employment opportunities in appropriate locations. By recognizing Route 9 as a strategic growth corridor and planning for development comprehensively, the County can better protect the area's character while accommodating continued growth in a manner that is orderly, efficient, and compatible with surrounding land uses.

Please let us know if there are any questions, additional documentation, studies, or other supporting materials the Council Members or Commissioners may require. We look forward to the opportunity to present these applications to you as soon as possible.

Very truly yours,

PENNONI ASSOCIATES INC.

Mark H. Davidson, VP

MORRIS JAMES LLP

David C. Hutt

Enclosures
Cc: Millsboro Towne Center, L.L.C.

WHITE OAK BUSINESS CENTER

CZ2063

OWNER/DEVELOPER:

MILLSBORO TOWNE VILLAGE, LLC
P.O. BOX 212
LEWES, DE 19958
PRESTON LYNCH DYER
MASON DYER
FLETCHER KENTON

LEGAL:

MORRIS JAMES LLP
107 W. MARKET STREET
GEORGETOWN, DE 19947
DAVID C. HUTT, ESQ

ACCENT ENVIRONMENTAL

GTA – GEO-TECHNOLOGY ASSOC. INC.
TRAVIS P. CARAWAY, P.E.

PLANNER/ENGINEER/SURVEYOR:

MARK H. DAVIDSON, PRINCIPAL LAND PLANNER
ALAN DECKTOR, PE., ENV SP
ERIC WAHL, RLA
KEVIN ELLIS, PLS

PENNONI
18072 DAVIDSON DRIVE
MILTON, DE 19968

ENVIRONMENTAL:

PENNONI
MICHEL BRIENING, PE, LSRP, CEM
JOHN-THOMAS GRAUPENSPERGER,PWS
ROCCO DIPIETRO, CSP
JOSEPH A. COCCIARDI, PhD, MS, CSP, CIH, REHS/RS

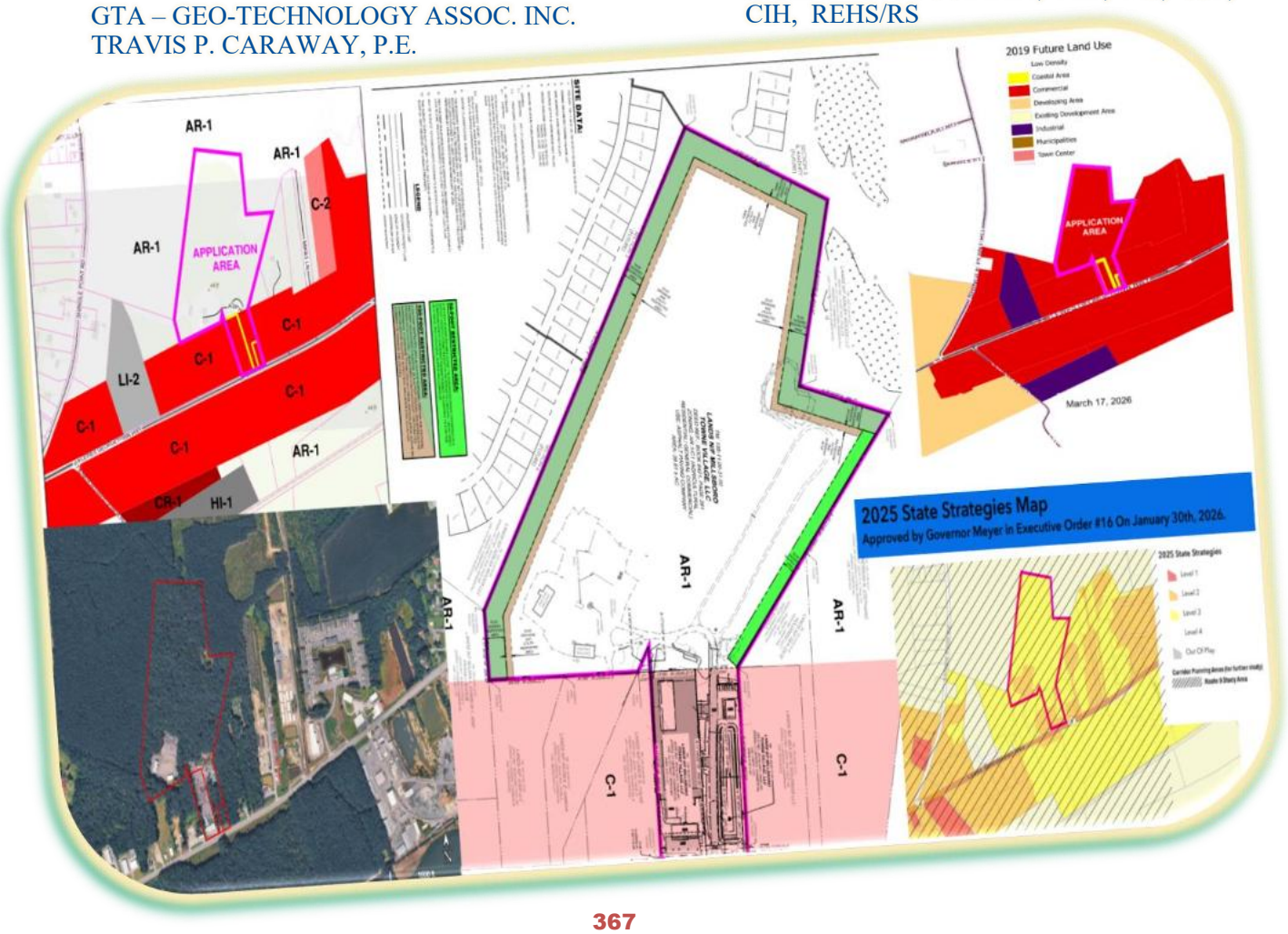

TABLE OF CONTENTS

1. APPLICATION - CCZ2063 **TAB 1**

a. Transmittal Letter
b. CZ 2063 Millsboro Towne Village, LLC Application (4.15.26) (OB)
c. DelDOT SLER Response
d. Boundary Plat 2026-04-06
e. Description Light Industrial
f. Description 135-11.00-31.00
g. Description 135-16.00-70.00
h. Description 135-16.00-17.00

1A. ORD 26-06 **TAB 1A**

a. Transmittal Letter
b. ORD 26-06 Millsboro Towne Village, LLC FLUM – Application (OB)
c. Boundary Plat 2026-04-06
d. Description Light Industrial
e. Description 135-11.00-31.00
f. Description 135-16.00-70.00
g. Description 135-16.00-17.00

2. EXHIBITS **TAB 2**

a. Zoning Amendment Plat
b. Sussex County Zoning Map
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d. State Strategies Map
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3. VOLUNTARY DEED RESTRICTIONS **TAB 3**

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4. C-3 VS LI-2 EXHIBIT **TAB 4**

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b. 2025 State Strategies Map – Area Comparison

5. PLANNING AND COMPATIBILITY ANALYSIS **TAB 5**

a. Planning and Compatibility Report

6. SOUND ATTENUATION EVALUATION REPORT **TAB 6**

a. Sound Attenuation and Wooded Buffer Evaluation Report

7. COST BENEFIT ANALYSIS **TAB 7**

a. Preliminary Cost Benefit Analysis

8. PROPERTY APPROVALS **TAB 8**

a. CU2162 Yellow Metal, LLC Notice of Decision Letter
b. Conditional Use Plan
c. Notice of Decision – Yellow Metal LLC
d. Final Site Plan 5-17-2019
e. 2024-00789 No Permit Required Letter signed
f. NAP-2024-00789_AJD
g. PR-222579 Approved as Submitted
h. Yellow Metal Contractor Yards Plan Approval 8-17-2026
i. Yellow Metal Artesian-No Further Comment
j. Yellow Metal Contractor Yards 135-11.00-31.00, Sussex PEC Approval to Applicant 2026-07-20

9. SOILS AND STORMWATER **TAB 9**

a. Report – Planning and Environmental Benefits of preserving 75' Wooded Buffer
b. Yellow Metal – GTA Report to SWM Subsurface Exploration
c. Yellow Metal – GTA Report to Subsurface Soil Boring Location Map Rev.
d. PDYER25005 Yellow Metal Industrial – Stormwater Assessment Study (SAS) Report
e. 2026-05-05 Yellow Metal Industrial SCD MM

10. MAPS **TAB 10**

a. 2026 Google Aerial, 2022, 2017, 2012, 2007, 2002, 1997, 1992, 1968, 1961, 1954, 1937 Orthophoto, 2025 State Strategies, County Zoning, Land Use Land Cover, NRCS Soils, State Wetlands, FEMA Floodplain, Groundwater Recharge Potential & WHPA, USGS Topographic Maps

11. SUPPORT LETTERS **TAB 12**

a. Letters of Support for CZ2063 and ORD. 26-06

Mark H. Davidson / Vice President

Principal Land Planner/Office Director

EDUCATION

Land Surveying, Delaware Technical & Community College (1984-1986)

University of Delaware; Civil Engineering, (1986-1988)

Land Surveying Business Diploma (1998)

Wastewater Microbiology Diploma (1997)

Land Planning, Institute for Public Administration (2006)

CERTIFICATIONS

DNREC Class A Percolation Tester & Class B Septic Designer, (DE #2418)

Sediment & Stormwater Management, Responsible Personnel, DE (#8760) and MD (#4914)

DNREC Certified Construction Reviewer: DE (#1270)

Delaware Notary

TRAININGS

Hydrology, Delaware TR-20 (1993)

Reducing Flood Hazard in Coastal Development (1996)

Law for Managers/Supervisors (1999)

State and Federal Laws (2000)

Advanced Real Estate Law in Delaware (2002)

Land Conservation and Historic Preservation (2003)

Project Manager Training I, Pennoni (2015)

PROFESSIONAL AFFILIATIONS

National Onsite Wastewater Recycling Association

Delaware Onsite Wastewater Recycling Association

American Planning Association

American Institute of Certified Planners

Sussex Economic Development Action Committee

HONORS/AWARDS

Association of Professionals Philanthropy, Brandywine Chapter Fundraising Nominee (2014)

Notable Networker Award, BNI (2013)

EXPERIENCE SUMMARY

Mark H. Davidson serves as Vice President of Pennoni and Office Director for our Southern Delaware, Milton Office. Mark also serves as the Principal Land Planner for Pennoni. He has over 40-years of experience in Surveying, Engineering, Consulting, Construction and Land Planning. For 12-years he owned a professional engineering, surveying, land planning, environmental and consulting firm that provided professional consulting and design in land planning for residential, industrial, institutional, municipal and commercial applications to a wide range of clients in Delaware and Maryland. Mr. Davidson's project experience includes land development planning, surveying, engineering, environmental design and permitting; construction and project consulting, management and inspection; water resource consulting, management and inspection and municipal consulting, planning and inspection.

The land planning consulting work that he has performed focused on land development civil site engineering, land surveying, urban planning, environmental, water, wastewater, construction management, acquisition, and development. What he has learned is how to listen and then communicate; With the associates he has worked with and managed. With landowners. With investors. With agencies. With developers. With contractors from all industries. He has learned how to negotiate, to compromise and to persuade. The unique skill set that he has developed over the years has allowed him to provide an unmatched style of consulting and planning to anyone who wants to invest and develop land into their vision and goals. Being a landowner representative has allowed him to promote the goals and ideas of individuals in their venture to capitalize on positive returns for their investments. From site feasibility, code creation, financial review, agency advocate, agency approvals and more, he partners with the owner to get their project up and running and provide sufficient, clear and decisive information needed to make the best decisions for any project throughout its lifespan.

Along with all the experience and education stated and with many years of combined experience in Surveying, Engineering, Consulting and Land Planning, he has been responsible for providing consulting, layout and design in surveying, engineering and land planning for residential, industrial, institutional, institutional and municipal and commercial applications to a wide range of clients in Delaware, Maryland, Virginia and West Virginia. He has managed, studied, planned, surveyed, designed and engineered sustainable, master-planned communities, commercial and urban redevelopment projects, and the public infrastructure that supports them.

Mark has provided nationwide land planning consulting services to a variety of clientele to help coordinate project startups as well as final construction consulting services when it involved commercial, residential, industrial, municipal, educational and community land planning. He provided additional consulting in civil/site engineering, stormwater management, erosion and sediment control, wastewater collection and disposal, transportation, and environmental. Market areas practiced, Delaware, Maryland, West Virginia, Virginia, North Carolina, South Carolina, North Dakota, Puerto Rico, Canada and Panama.

Southern Delaware Therapeutic Horseback Riding Association, Inc. – Board Member
Delaware Botanic Gardens – Advisory Committee
Sussex County Habitat for Humanity – Land Acquisition Advisory Committee

AB 1

A A N

Morris James LLP

David C. Hutt
302.856.0018
dhutt@morrisjames.com

April 15, 2026

VIA: HAND DELIVERY & EMAIL

Sussex County Council
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[1] In addition to the paper copies being filed today, an electronic file will also be emailed.

These applications are filed on behalf of the owner of the above-referenced properties who are requesting an amendment to Sussex County's 2045 Future Land Use Map (FLUM) in its 2018 Comprehensive Plan to allow for an amendment of the County's Zoning Map. These amendments are for the properties located at 24215, 24217 & 20288 Lewes Georgetown Highway, Georgetown, DE 19947, which are further identified as Tax Parcel No. 135-11.00 Parcel 31.00 and 135-16.00 Parcels 17.00 & 70.00 (collectively, the Property). The current FLUM designation for the Property is "*Commercial Area*," one of Sussex County's seven (7) Growth Areas. The enclosed FLUM application seeks to change the Property's designation on the FLUM to "*Developing Area*." The *Developing Area* designation on the FLUM is necessary to allow for the requested LI-2, Light Industrial District zoning classification which better reflects existing conditions, surrounding land uses, and future development intentions.

The proposed *Developing Area* designation of this Property situated along the US Route 9 corridor between Georgetown and Lewes is compatible with the character of the surrounding area and consistent with Sussex County's long-term planning objectives. This corridor functions as one of Sussex County's primary east–west transportation spines, connecting established population centers, employment hubs and public services, and has historically accommodated growth in a manner distinct from rural and agricultural areas. There are dozens of "flex" or "warehouse" style units and centers along this corridor located within parcels with various zoning classifications or conditional uses. Because of its central location and proximity to employment centers, this corridor is the location of a significant number of businesses employing many Sussex County residents.

Both Sussex County and the State of Delaware have recognized the organic development of the Route 9 corridor that has occurred to date including the special designation of this corridor on the 2025 Delaware Strategies for State Policies and Spending and the consideration presently being given to this area by the State and the County. Land uses along this segment of Route 9 already reflect a transition from a primarily rural character to a mix of residential, commercial, institutional, industrial and service-oriented uses. The proposed *Developing Area* designation would acknowledge existing development patterns and provide a framework for coordinated, predictable, and orderly growth rather than piecemeal decision-making. Concentrating growth in this corridor supports area compatibility by reducing pressure on outlying rural and agricultural lands and reinforcing established growth areas.

During the public hearings for these applications, the Council Members and Commissioners will hear the details of how the applications for the Property will enhance Sussex County, including, but not limited to the following:

1. Consistency With Surrounding Land Use Patterns

The surrounding area is predominantly characterized by commercial and industrial development along a primary principal roadway. US Route 9 is classified as an "Other Principal Arterial" by DelDOT and as a "Major Arterial Roadway" by Sussex County. The commercial and industrial uses are typically front-facing properties including a mixture of uses such as retail, offices, service establishments, warehouses, small manufacturing operations, and contractor yards.

Buildings in this zone often feature larger footprints, outdoor storage areas, loading bays, and parking lots designed to accommodate employees, customers, and commercial vehicles. Directly behind this commercial/industrial frontage is a mixture of agricultural tracts and residential neighborhoods that are separated from the active business corridor by transitional land uses. The residential homes are generally accessed by local public and private streets that are not typically connected through the commercial and industrial uses. Updating the FLUM would ensure consistency with nearby land uses and ongoing development trends.

2. Alignment With County Comprehensive Plan Goals

The proposed *Developing Area* designation supports managed growth, infrastructure efficiency, and community-scale development. This change would align the parcel with the County's stated planning goals by promoting orderly and compatible growth. The Route 9 corridor functions as a primary transportation and service corridor connecting established municipalities and activity centers. Recognizing this area as a *Developing Area* aligns with the Comprehensive Plan's objective to concentrate growth along major corridors and near existing development patterns, thereby reducing the risk of scattered or leapfrog development in rural and agricultural areas. This approach by the County and the enclosed applications for this Property support the Comprehensive Plan's growth management strategy by reinforcing defined growth areas rather than expanding development pressure into less suitable locations.

3. Infrastructure and Access Considerations

Existing infrastructure, including roadway access, utilities, and public services, appropriately supports the type of development contemplated within *Developing Area* classifications. The Route 9 corridor is the focus of ongoing and planned transportation investments and has access to existing or planned utility systems. Aligning the FLUM with these infrastructure commitments promotes responsible growth, helps ensure development occurs where public facilities can be provided efficiently, and supports public safety, mobility, and quality of life for existing and future residents.

4. Area Compatibility

Proposed future improvements to the Property are intended to complement the surrounding area and support a sustainable growth pattern. The *Developing Area* designation will more accurately reflect the trajectory of land use in this area and ensure compatibility with existing residential neighborhoods. Table 4.5-2 of the Comprehensive Plan entitled "Zoning Districts Applicable to Future Land Use Categories" describes the zoning classifications that are applicable to the *Developing Area*. That list includes a mixture of business, commercial and industrial uses that more closely resemble this corridor than the existing *Commercial Area* designation. Area compatibility is further enhanced by the County's land-use regulations, which require buffering, stormwater management, access control, open space, and environmental protections as part of any future development. These standards provide safeguards to ensure that new development integrates with surrounding neighborhoods, preserves natural features, and maintains the visual and functional character of the corridor. During the public hearings, the owner of the Property will

propose significant setbacks to further support the transition of the commercial and industrial uses along Route 9 to the agricultural and residential uses behind those properties.

Finally, the proposed *Developing Area* designation supports Sussex County's broader goals of balancing growth with conservation, coordinating land use with transportation planning, and providing diverse employment opportunities in appropriate locations. By recognizing Route 9 as a strategic growth corridor and planning for development comprehensively, the County can better protect the area's character while accommodating continued growth in a manner that is orderly, efficient, and compatible with surrounding land uses.

Please let us know if there are any questions, additional documentation, studies, or other supporting materials the Council Members or Commissioners may require. We look forward to the opportunity to present these applications to you as soon as possible.

Very truly yours,

PENNONI ASSOCIATES INC.

Mark H. Davidson, VP

MORRIS JAMES LLP

David C. Hutt

Enclosures
Cc: Millsboro Towne Center, L.L.C.

File #: C/Z 20063
2026047 50
2026047 52
2026047 53

Planning & Zoning Commission 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

RECEIVED
APR 15 2026
SUSSEX COUNTY
PLANNING & ZONING

Type of Application: (please check applicable)
Conditional Use ___
Zoning Map Amendment ✓

Site Address of Conditional Use/Zoning Map Amendment

24215, 24217 & 20288 Lewes Georgetown Highway, Georgetown, DE 19947

Type of Conditional Use Requested:

N/A

Tax Map #: 135-11.00-31.00 & 135-16.00-17.00 & 70.00 **Size of Parcel(s):** 42.54+/- Acres

Current Zoning: C-1 & AR-1 **Proposed Zoning:** LI-2 **Size of Building:** TBD

Land Use Classification: Commercial (FLUM change to **Developing Area)**

Water Provider: Artesian **Sewer Provider:** Artesian

Applicant Information

Applicant Name: Millsboro Towne Village, L.L.C.
Applicant Address: 33712 Wescoats Road, Unit 5
City: Lewes State: DE ZipCode: 19958
Phone #: (302) 644-1400 E-mail: mdyer@ipmequities.com

Owner Information

Owner Name: Millsboro Towne Village, L.L.C.
Owner Address: 33712 Wescoats Road, Unit 5
City: Lewes State: DE Zip Code: 19958
Phone #: (302) 644-1400 E-mail: mdyer@ipmequities.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: David C. Hutt - Morris James, LLP
Agent/Attorney/Engineer Address: 107 W. Market Street
City: Georgetown State: DE Zip Code: 19947
Phone #: (302) 856-0018 E-mail: dhutt@morrisjames.com

Mark H. Davidson, VP, Principal Land Planner
Pennoni Associates Inc., 18072 Davidson Drive, Milton, DE 19968
302.684.6207, mdavidson@pennoni.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✓ **Completed Application**

✓ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✓ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✓ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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: 4/10/26

Signature of Owner

_____ Date: 4/10/26

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

Sussex County Government
Treasury
2 The Circle, PO Box 601
Georgetown, DE 19947

04/17/2026 02:12PM Lindsay B
Receipt number: 33031305-0110 0013000763

PERMITS / INSPECTIONS
2026 202604750|Z015 $1,000.00

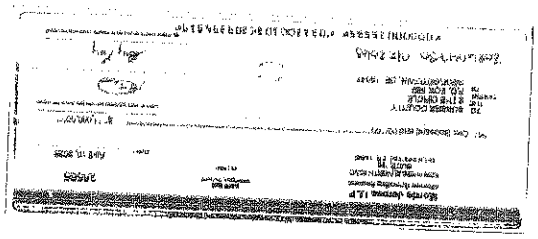
$1,000.00

Subtotal $1,000.00
Total $1,000.00

Tenders
CHECK $1,000.00
Check Number25565

Change due $0.00

Paid by: Morris James



Thank you for your payment.

CUSTOMER COPY

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

SHANTÉ A. HASTINGS
SECRETARY

April 6, 2026

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Millsboro Towne Village, LLC** (20288 Asphalt Alley and 24215 Lewes Georgetown Highway, Georgetown, Delaware 19947) proposed land use application, which we received on March 17, 2026. This application is for an approximate 42.54-acre assemblage of parcels (Tax Parcels: 135-11.00-31.00, 135-16.00-17.00, and 70.00). The parcels are located on the north side of Lewes Georgetown Highway (US Route 9) and approximately 3,650 feet west from the intersection of Gravel Hill Road (Delaware Route 30) and US Route 9. The parcels are currently zoned AR-1 (Agricultural Residential District) and C-1 (General Commercial District), with a proposed zoning of LI -2 (Light Industrial District) to operate a wide variety of light manufacturing, fabricating, processing, wholesale distributing, warehouse use, commercial uses and related business operations.

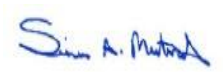
Per the 2024 Delaware Vehicle Volume Summary, the annual average and summer average daily traffic volumes along US Route 9, where the subject land is located, which is from Harberson Road (Delaware Route 5) to Sand Hill Road (Sussex County Road 319), is 12,031 and 16,413 vehicles per day, respectively.

Our volume-based criteria for requiring a traffic impact study (TIS), addressed in Section 2.2.2.1 of the Development Coordination Manual, are that a development generates more than 500 trips per day or 50 trips during a weekly peak hour. While it seems that the above criteria could be met, we presently cannot predict the site's trip generation with enough accuracy to make a TIS useful. Thus, we recommend that this rezoning application be considered without a TIS and that the need for a TIS be evaluated when a subdivision or land development plan is proposed

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

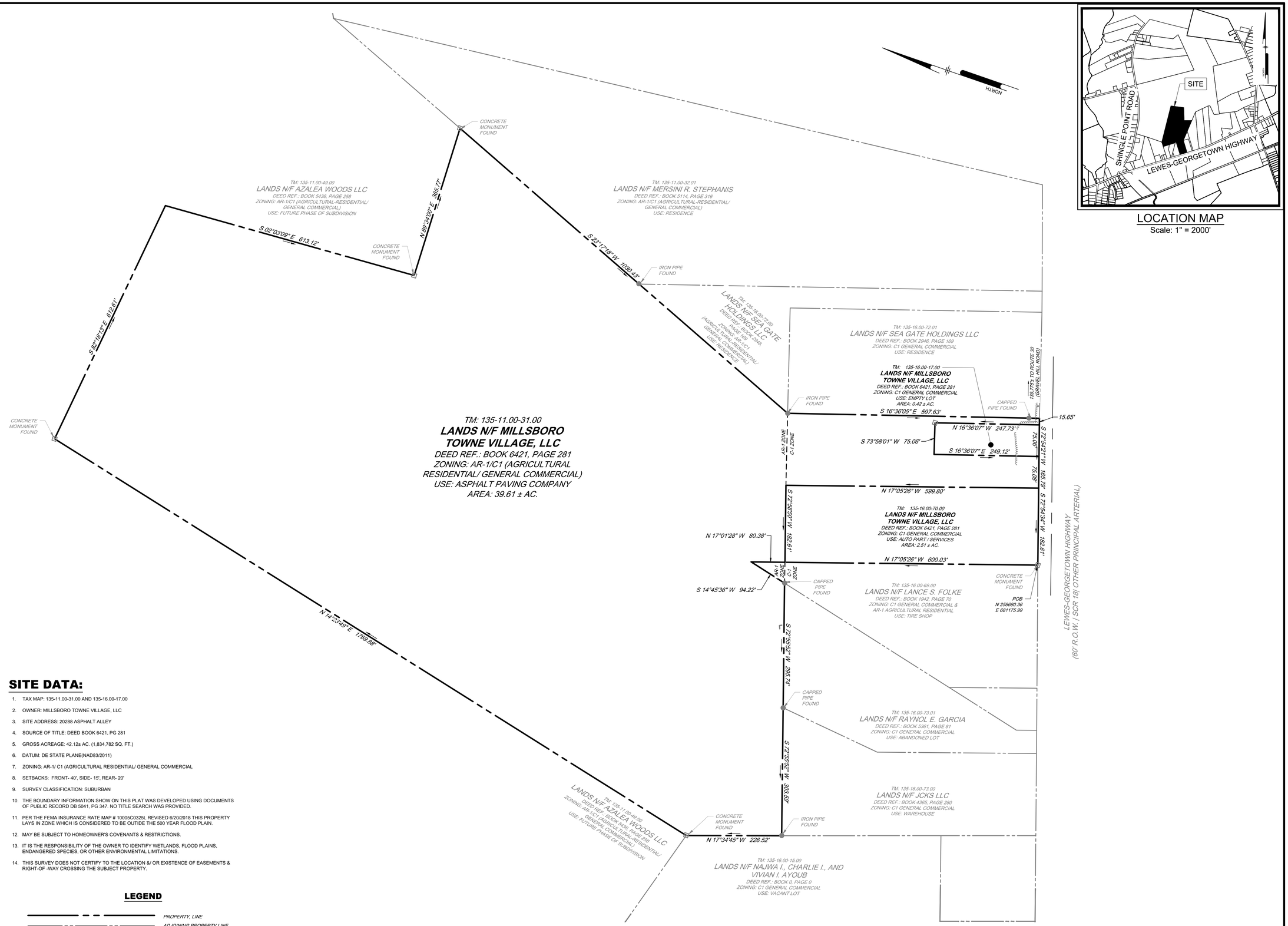
Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,



Sireen Muhtaseb, PE
TIS Engineer
Economic Development Coordination
DelDOT

SAM:afm
cc: Millsboro Towne Village, LLC, Applicant
Mark Davidson, Applicant
Ashley Paugh, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
James Argo, South District Project Reviewer, M&O
April Foster, South District Public Works Admin. M&O
Matt Schlitter, South District Public Works Engineer, Economic Dev. Coordination
Brian Urbanek, Acting Sussex Coordinator, Economic Development Coordination
Derek Sapp, Sussex Review Engineer, Economic Development Coordination
Jose Quixtan, Sussex Review Engineer, Economic Development Coordination
Kevin Hickman, Sussex Reviewer, Economic Development Coordination
Brian Williams, Sussex Reviewer, Economic Development Coordination
Annamaria Furmato, TIS Review Engineer, Economic Development Coordination
Ben Fisher, TIS Review Engineer, Economic Development Coordination
DelDOT TIS Support



LOCATION MAP
Scale: 1" = 2000'

SITE DATA:

1. TAX MAP: 135-11.00-31.00 AND 135-16.00-17.00
2. OWNER: MILLSBORO TOWNE VILLAGE, LLC
3. SITE ADDRESS: 20288 ASPHALT ALLEY
4. SOURCE OF TITLE: DEED BOOK 6421, PG 281
5. GROSS ACREAGE: 42.12± AC. (1,834,782 SQ. FT.)
6. DATUM: DE STATE PLANE(NAD83/2011)
7. ZONING: AR-1/ C1 (AGRICULTURAL RESIDENTIAL/ GENERAL COMMERCIAL
8. SETBACKS: FRONT- 40', SIDE- 15', REAR- 20'
9. SURVEY CLASSIFICATION: SUBURBAN
10. THE BOUNDARY INFORMATION SHOW ON THIS PLAT WAS DEVELOPED USING DOCUMENTS OF PUBLIC RECORD DB 5041, PG 347. NO TITLE SEARCH WAS PROVIDED.
11. PER THE FEMA INSURANCE RATE MAP # 10005C0325L REVISED 6/20/2018 THIS PROPERTY LAYS IN ZONE WHICH IS CONSIDERED TO BE OUTIDE THE 500 YEAR FLOOD PLAIN.
12. MAY BE SUBJECT TO HOMEOWNER'S COVENANTS & RESTRICTIONS.
13. IT IS THE RESPONSIBILITY OF THE OWNER TO IDENTIFY WETLANDS, FLOOD PLAINS, ENDANGERED SPECIES, OR OTHER ENVIRONMENTAL LIMITATIONS.
14. THIS SURVEY DOES NOT CERTIFY TO THE LOCATION &/ OR EXISTENCE OF EASEMENTS & RIGHT-OF -WAY CROSSING THE SUBJECT PROPERTY.

LEGEND

- PROPERTY, LINE
- ADJOINING PROPERTY LINE
- EDGE OF PAVEMENT
- CENTERLINE OF ROAD
- ZONING BOUNDARY

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

TM: 135-11.00-31.00,135-16.00-17.00 & 135-16.00-70.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
AND LANDS NOW OR FORMERERLY OF
MILLSBORO TOWNE VILLAGE, LLC
33712 WESCOATS RD UNIT 5
LEWES, DE 19958
GEORGETOWN HUNDRED, SUSSEX COUNTY, DE

BOUNDARY PLAT

MILLSBORO TOWNE VILLAGE, LLC
33712 WESCOATS RD UNIT 5
LEWES, DE 19958

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	PDYER25005
DATE	2026-03-10
DRAWING SCALE	1"=100'
DRAWN BY	SJD/ LAC
APPROVED BY	AMD

SHEET 1 OF 1

U:\Accounts\PDYER\PDYER25005 - Yellow Metal - Industrial\DESIGN\VISE\DWG\PDYER25005-HAOUNDARY.dwg PLOTTED: 4/7/2026 11:18 AM BY: Kevin Ellis PLOTSTYLE: Pennoni PICS.ctb

18072 Davidson Drive
Milton, DE 19968
T: 302-684-8030
F: 302-684-8054

www.pennoni.com

METES AND BOUNDS DESCRIPTION
FOR THE PURPOSE OF REZONING

LANDS NOW OR FORMERLY OF MILLSBORO TOWNE VILLAGE, LLC
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

TAX MAP 135-11.00-31.00, 135-16.00-17.00 and 70.00

All that certain piece, tract and parcel lying in Georgetown Hundred, Sussex County, Delaware and being more particularly described as follows:

BEGINNING at a point, said point lying on the northerly right-of-way of Lewes-Georgetown Highway and being a corner for this Parcel and Lands now or formerly of Lance S. Folke; thence by and with this Parcel and Lands now or formerly of Lance S. Folke the following three (3) courses and distances:

1) **North 17 degrees, 05 minutes, 26 seconds West, 600.03 feet to a point,**
2) **North 17 degrees, 01 minutes, 28 seconds West, 80.38 feet to a point,**
3) **South 14 degrees, 45 minutes, 36 seconds West, 94.22 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Raynol E. Garcia; thence by and with this Parcel and Lands now or formerly of Raynol E. Garcia, **South 72 degrees, 55 minutes, 52 seconds West, 599.33 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Ayoub; thence by and with this Parcel and Lands now or formerly of Ayoub, **North 17 degrees, 34 minutes, 45 seconds West, 226.52 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Azalea Woods, LLC.; thence by and with this parcel and Lands now or formerly of Azalea Woods, LLC., the following four (4) courses and distances:

1) **North 14 degrees, 23 minutes, 49 seconds East, 1,769.88 feet to a point,**
2) **South 82 degrees, 18 minutes, 13 seconds East, 612.61 feet to a point,**
3) **South 02 degrees, 03 minutes, 09 seconds East, 613.12 feet to a point,**
4) **North 89 degrees, 34 minutes, 00 seconds East, 365.77 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Mersani R. Stephanis; thence by and with this Parcel and Lands now or formerly of

Mersani R. Stephanis, **South 23 degrees, 17 minutes, 18 seconds West, 1,030.43 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Sea Gate Holdings, LLC.; thence by and with this Parcel and Lands now or formerly of Sea Gate Holdings, LLC., **South 16 degrees, 36 minutes, 05 seconds East, 597.63 feet** to a point, said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes-Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes-Georgetown Highway, the following two(2) courses and distances:

1) **South 72 degrees, 54 minutes, 21 seconds West, 165.79 feet to a point,**
2) **South 72 degrees, 54 minutes, 34 seconds West, 182.61 feet to a point,**

said point being the **Point of Beginning** for this description.

This Parcel contains 42.54 acres more or less.

2026-03-17
PDYER25005
KMD:ked:KBE

Pennoni

18072 Davidson Drive
Milton, DE 19968
T: 302-684-8030
F: 302-684-8054

www.pennoni.com

METES AND BOUNDS DESCRIPTION

LANDS NOW OR FORMERLY OF MILLSBORO TOWNE VILLAGE, LLC
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

TAX MAP 135-11.00-31.00

All that certain piece, tract and parcel lying in Georgetown Hundred, Sussex County, Delaware and being more particularly described as follows:

BEGINNING at a point, said point lying on the northerly right-of-way of Lewes-Georgetown Highway and being a corner for this Parcel and Lands now or formerly of Millsboro Towne Village, LLC.; thence by and with this Parcel and Lands now or formerly of Millsboro Towne Village, LLC., the following two (2) courses and distances:

1) **North 17 degrees, 05 minutes, 26 seconds West, 599.80 feet to a point,**
2) **South 72 degrees, 58 minutes, 50 seconds West, 182.61 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Lance S. Folke; thence by and with this Parcel and Lands now or formerly of Lance S. Folke the following two (2) courses and distances:

1) **North 17 degrees, 01 minutes, 28 seconds West, 80.38 feet to a point,**
2) **South 14 degrees, 45 minutes, 36 seconds West, 94.22 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Raynol E. Garcia; thence by and with this Parcel and Lands now or formerly of Raynol E. Garcia, **South 72 degrees, 55 minutes, 52 seconds West, 599.33 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Ayoub; thence by and with this Parcel and Lands now or formerly of Ayoub, **North 17 degrees, 34 minutes, 45 seconds West, 226.52 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Azalea Woods, LLC.; thence by and with this parcel and Lands now or formerly of Azalea Woods, LLC., the following four (4) courses and distances:

1) **North 14 degrees, 23 minutes, 49 seconds East, 1,769.88 feet to a point,**

2) **South 82 degrees, 18 minutes, 13 seconds East, 612.61 feet to a point,**
3) **South 02 degrees, 03 minutes, 09 seconds East, 613.12 feet to a point,**
4) **North 89 degrees, 34 minutes, 00 seconds East, 365.77 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Mersani R. Stephanis; thence by and with this Parcel and Lands now or formerly of Mersani R. Stephanis, **South 23 degrees, 17 minutes, 18 seconds West, 1,030.43 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Sea Gate Holdings, LLC.; thence by and with this Parcel and Lands now or formerly of Sea Gate Holdings, LLC., **South 16 degrees, 36 minutes, 05 seconds East, 597.63 feet** to a point, said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes-Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes-Georgetown Highway, **South 72 degrees, 54 minutes, 21 seconds West, 15.65 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Millsboro Towne Village, LLC.; thence by and with this Parcel and Lands now or formerly of Millsboro Towne Village, LLC., the following three (3) courses and distances:

1) **North 16 degrees, 36 minutes, 07 seconds West, 247.73 feet to a point,**
2) **South 73 degrees, 58 minutes, 01 seconds West, 75.06 feet to a point,**
3) **South 16 degrees, 36 minutes, 07 seconds East, 249.12 feet to a point,**

said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes-Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes-Georgetown Highway, **South 72 degrees, 54 minutes, 34 seconds West, 75.08 feet** to a point, said point being the **Point of Beginning** for this description.

This Parcel contains 39.61 acres more or less.

2026-03-17
PDYER25005
KMD:ked:KBE

METES AND BOUNDS DESCRIPTION

LANDS NOW OR FORMERLY OF MILLSBORO TOWNE VILLAGE, LLC
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

TAX MAP 135-16.00-70.00

All that certain piece, tract and parcel lying in Georgetown Hundred, Sussex County, Delaware and being more particularly described as follows:

BEGINNING at a concrete monument, said concrete monument lying on the northerly right-of-way of Lewes Georgetown Highway and being a corner for this Parcel and Lands now or formerly of Lance S. Folke; thence by and with this Parcel and Lands now or formerly of Lance S. Folke, **North 17 degrees, 05 minutes, 26 seconds West, 600.03 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Millsboro Towne Village, LLC.; thence by and with this Parcel and Lands now or formerly of Millsboro Towne Village, LLC., the following two (2) courses and distances:

1) **North 72 degrees, 58 minutes, 50 seconds East, 182.61 feet to a point,**
2) **South 17 degrees, 05 minutes, 26 seconds East, 599.80 feet to a point,**

said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes Georgetown Highway, **South 72 degrees 54 minutes, 34 seconds West, 182.61 feet** to a concrete monument, said concrete monument being the Point of Beginning for this description

This Parcel contains 2.51 acres, more or less.

Pennoni

18072 Davidson Drive
Milton, DE 19968
T: 302-684-8030
F: 302-684-8054

www.pennoni.com

METES AND BOUNDS DESCRIPTION

LANDS NOW OR FORMERLY OF MILLSBORO TOWNE VILLAGE, LLC
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

TAX MAP 135-16.00-17.00

All that certain piece, tract and parcel lying in Georgetown Hundred, Sussex County, Delaware and being more particularly described as follows:

BEGINNING at a point, said point lying on the northerly right-of-way of Lewes-Georgetown Highway and being a corner for this Parcel and Lands now or formerly of Millsboro Towne Village, LLC.; thence by and with this Parcel and Lands now or formerly of Millsboro Towne Village, LLC., the following three (3) courses and distances:

1) **North 16 degrees, 36 minutes, 07 seconds West, 249.12 feet to a point,**
2) **North 73 degrees, 58 minutes, 01 seconds East, 75.06 feet to a point,**
3) **South 16 degrees, 36 minutes, 07 seconds East, 247.73 feet to a point,**

said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes-Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes-Georgetown Highway, **South 72 degrees, 54 minutes, 21 seconds West, 75.06 feet** to a point, said point being the **Point of Beginning** for this description.

This Parcel contains 0.42 acres more or less.

2026-03-17
PDYER25005
KMD:ked:KBE

AB 1A

ORD 26-06

Morris James LLP

David C. Hutt
302.856.0018
dhutt@morrisjames.com

April 15, 2026

VIA: HAND DELIVERY & EMAIL

Sussex County Council
Council Member Douglas B. Hudson – President
Council Member John L. Rieley – Council Vice President
Council Member Jane Gruenebaum
Council Member Steve C. McCarron
Council Member Matt Lloyd
Sussex County Planning Commission
Commissioner Holly Wingate – Chairperson
Commissioner Gregory Scott Collins – Vice Chairperson
Commissioner Jeff Allen
Commissioner John Passwaters
Commissioner David Pettyjohn
c/o Jamie Whitehouse, AICP, MRTPI, Director
Sussex County Planning & Zoning Department
2 The Circle, P.O. Box 417
Georgetown, DE 19947

RE: Comprehensive Plan Amendment (Future Land Use Map)
Change of Zone Application
24215, 24217 & 20288 Lewes Georgetown Highway, Georgetown, DE 19947
SCTP Nos. 135-11.00-31.00 and 135-16.00-17.00 & 70.00

Dear Council Members and Commissioners:

Kindly find the following applications and supporting materials and information:[1]

- Comprehensive Plan Amendment Request Form;
- Zoning Map Amendment Application Form;
- Boundary Plat dated March 10, 2026;
- Four (4) Legal Descriptions: one for each individual parcel along with a description of the combined parcel;
- Zoning Amendment Plat;
- DelDOT's Service Level Evaluation Request Response; and
- Two (2) checks in the amount of $1,000.00 each (one for each application).

[1] In addition to the paper copies being filed today, an electronic file will also be emailed.

These applications are filed on behalf of the owner of the above-referenced properties who are requesting an amendment to Sussex County's 2045 Future Land Use Map (FLUM) in its 2018 Comprehensive Plan to allow for an amendment of the County's Zoning Map. These amendments are for the properties located at 24215, 24217 & 20288 Lewes Georgetown Highway, Georgetown, DE 19947, which are further identified as Tax Parcel No. 135-11.00 Parcel 31.00 and 135-16.00 Parcels 17.00 & 70.00 (collectively, the Property). The current FLUM designation for the Property is "*Commercial Area*," one of Sussex County's seven (7) Growth Areas. The enclosed FLUM application seeks to change the Property's designation on the FLUM to "*Developing Area*." The *Developing Area* designation on the FLUM is necessary to allow for the requested LI-2, Light Industrial District zoning classification which better reflects existing conditions, surrounding land uses, and future development intentions.

The proposed *Developing Area* designation of this Property situated along the US Route 9 corridor between Georgetown and Lewes is compatible with the character of the surrounding area and consistent with Sussex County's long-term planning objectives. This corridor functions as one of Sussex County's primary east–west transportation spines, connecting established population centers, employment hubs and public services, and has historically accommodated growth in a manner distinct from rural and agricultural areas. There are dozens of "flex" or "warehouse" style units and centers along this corridor located within parcels with various zoning classifications or conditional uses. Because of its central location and proximity to employment centers, this corridor is the location of a significant number of businesses employing many Sussex County residents.

Both Sussex County and the State of Delaware have recognized the organic development of the Route 9 corridor that has occurred to date including the special designation of this corridor on the 2025 Delaware Strategies for State Policies and Spending and the consideration presently being given to this area by the State and the County. Land uses along this segment of Route 9 already reflect a transition from a primarily rural character to a mix of residential, commercial, institutional, industrial and service-oriented uses. The proposed *Developing Area* designation would acknowledge existing development patterns and provide a framework for coordinated, predictable, and orderly growth rather than piecemeal decision-making. Concentrating growth in this corridor supports area compatibility by reducing pressure on outlying rural and agricultural lands and reinforcing established growth areas.

During the public hearings for these applications, the Council Members and Commissioners will hear the details of how the applications for the Property will enhance Sussex County, including, but not limited to the following:

1. Consistency With Surrounding Land Use Patterns

The surrounding area is predominantly characterized by commercial and industrial development along a primary principal roadway. US Route 9 is classified as an "Other Principal Arterial" by DelDOT and as a "Major Arterial Roadway" by Sussex County. The commercial and industrial uses are typically front-facing properties including a mixture of uses such as retail, offices, service establishments, warehouses, small manufacturing operations, and contractor yards.

Buildings in this zone often feature larger footprints, outdoor storage areas, loading bays, and parking lots designed to accommodate employees, customers, and commercial vehicles. Directly behind this commercial/industrial frontage is a mixture of agricultural tracts and residential neighborhoods that are separated from the active business corridor by transitional land uses. The residential homes are generally accessed by local public and private streets that are not typically connected through the commercial and industrial uses. Updating the FLUM would ensure consistency with nearby land uses and ongoing development trends.

2. Alignment With County Comprehensive Plan Goals

The proposed *Developing Area* designation supports managed growth, infrastructure efficiency, and community-scale development. This change would align the parcel with the County's stated planning goals by promoting orderly and compatible growth. The Route 9 corridor functions as a primary transportation and service corridor connecting established municipalities and activity centers. Recognizing this area as a *Developing Area* aligns with the Comprehensive Plan's objective to concentrate growth along major corridors and near existing development patterns, thereby reducing the risk of scattered or leapfrog development in rural and agricultural areas. This approach by the County and the enclosed applications for this Property support the Comprehensive Plan's growth management strategy by reinforcing defined growth areas rather than expanding development pressure into less suitable locations.

3. Infrastructure and Access Considerations

Existing infrastructure, including roadway access, utilities, and public services, appropriately supports the type of development contemplated within *Developing Area* classifications. The Route 9 corridor is the focus of ongoing and planned transportation investments and has access to existing or planned utility systems. Aligning the FLUM with these infrastructure commitments promotes responsible growth, helps ensure development occurs where public facilities can be provided efficiently, and supports public safety, mobility, and quality of life for existing and future residents.

4. Area Compatibility

Proposed future improvements to the Property are intended to complement the surrounding area and support a sustainable growth pattern. The *Developing Area* designation will more accurately reflect the trajectory of land use in this area and ensure compatibility with existing residential neighborhoods. Table 4.5-2 of the Comprehensive Plan entitled "Zoning Districts Applicable to Future Land Use Categories" describes the zoning classifications that are applicable to the *Developing Area*. That list includes a mixture of business, commercial and industrial uses that more closely resemble this corridor than the existing *Commercial Area* designation. Area compatibility is further enhanced by the County's land-use regulations, which require buffering, stormwater management, access control, open space, and environmental protections as part of any future development. These standards provide safeguards to ensure that new development integrates with surrounding neighborhoods, preserves natural features, and maintains the visual and functional character of the corridor. During the public hearings, the owner of the Property will

propose significant setbacks to further support the transition of the commercial and industrial uses along Route 9 to the agricultural and residential uses behind those properties.

Finally, the proposed *Developing Area* designation supports Sussex County's broader goals of balancing growth with conservation, coordinating land use with transportation planning, and providing diverse employment opportunities in appropriate locations. By recognizing Route 9 as a strategic growth corridor and planning for development comprehensively, the County can better protect the area's character while accommodating continued growth in a manner that is orderly, efficient, and compatible with surrounding land uses.

Please let us know if there are any questions, additional documentation, studies, or other supporting materials the Council Members or Commissioners may require. We look forward to the opportunity to present these applications to you as soon as possible.

Very truly yours,

PENNONI ASSOCIATES INC.

Mark H. Davidson, VP

MORRIS JAMES LLP

David C. Hutt

Enclosures
Cc: Millsboro Towne Center, L.L.C.

File #: _____

2026047747
2026047748
2026047749

Sussex County Comprehensive Plan Amendment Request Form

Sussex County, Delaware

Sussex County Planning & Zoning Department
2 The Circle (P.O. Box 417) Georgetown, DE 19947
☎ 302-855-7878
✉ pandz@sussexcountyde.gov

RECEIVED
APR 15 2026
SUSSEX COUNTY
PLANNING & ZONING

Type of Amendment Requested (e.g Future Land Use Map, Existing Land Use Map, or Text Revision)

Amendment to the Future Land Use Map

Year that Comprehensive Plan was Adopted:

2018 (Certified - March 19, 2019)

If Applicable, the Date(s) of any PLUS Review by the State of Delaware

N/A

Tax Map #: 135-11.00-31.00/135-16.00-17.00 & 70.00 **Total Acreage:** 42.54+/- acres

Applicant Information

Applicant Name: Millsboro Towne Village, L.L.C.
Applicant Address: 33712 Wescoats Road, Unit 5
City: Lewes State: DE ZipCode: 19958
Phone #: 302.644.1400 E-mail: mdyer@ipmequities.com

Developer Information

Developer Name: same as applicant

Attorney Information (If Applicable)

Attorney Name: David C. Hutt - Morris James, LLP
Attorney Address: 107 W. Market Street
City: Georgetown State: DE ZipCode: 19947
Phone #: 302.856.0018 E-mail: dhutt@morrisjames.com

Mark H. Davidson, VP, Principal Land Planner
Pennoni Associates Inc., 18072 Davidson Drive, Milton, DE 19968
302.684.6207, mdavidson@pennoni.com

Description of Request: (Please provide a written description of the request, along with details of the Tax Parcel ID(s) of the relevant parcels to which the amendment request relates. If you are requesting a text amendment to the Comprehensive Plan, please also clearly explain which Chapters of the Comprehensive Plan your request relates)

The applicant respectfully requests an amendment to the Sussex County Comprehensive Plan Future Land Use Map to change the designation of the above-referenced tax parcels on the 2045 Future Land Use Map in the 2018 Comprehensive Plan from a Commercial Area to a Developing Area.

The proposed amendment reflects the existing and anticipated development patterns in the surrounding area and is consistent with the County's long-term growth management objectives. While the Commercial designation is intended for areas with established or planned concentrations of retail, office, and service uses, the subject property is more suitably aligned with the Developing Area designation, which accommodates a broader mix of limited non-residential uses guided by comprehensive planning principles.

The Developing Area land use category is intended to support orderly growth where infrastructure, transportation access, and public services can be planned and provided efficiently. The requested change will allow for development consistent with nearby land uses, help transition between existing zoning and uses of surrounding properties, and support balanced growth while minimizing land use conflicts.

Approval of this amendment will better align the Future Land Use Map with on-the-ground conditions, market realities, and the goals of the Sussex County Comprehensive Plan by encouraging logical growth patterns, protecting community character, and promoting the efficient use of land and public resources.

See additional supporting documents attached to this application.

Check List for Comprehensive Plan Amendment Request Applications

The following shall be submitted with any request

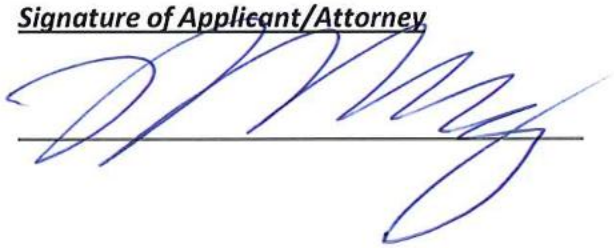
☑ **Completed Application (including relevant Application Fee)**

☑ **A scaled survey drawing is appended to this Application that clearly shows the location of all parcels to which the amendment request relates.**

☑ **The Applicant understands that Sussex County Council may submit a copy of this application, along with copies of all documents received, to the State of Delaware Office of Management and Budget for the purposes of any enabling the State of Delaware to review the requested revision.**

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.

Signature of Applicant/Attorney



For office use only:

Date Submitted: _____ Application & Case # : _____

Staff member receiving Application: _____ Fee: $1,000.00, Check #: _____

Location of property: _____

_____

Date of Commission Hearing: _____ Recommendation: _____

Date of Council Hearing: _____

Sussex County Government
Treasury
2 The Circle, PO Box 601
Georgetown, DE 19947

04/17/2026 02:13PM Lindsay B
Receipt number: 33031305-0111 00130064

PERMITS / INSPECTIONS
2026 20260474712064 $1,000.00

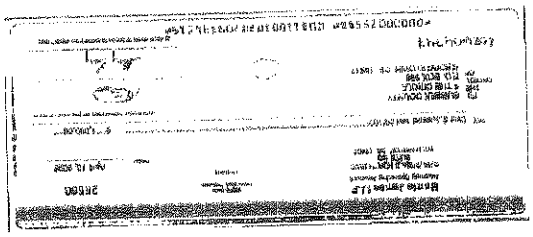
$1,000.00

Subtotal $1,000.00
Total $1,000.00

Tenders
CHECK $1,000.00
Check Number25566

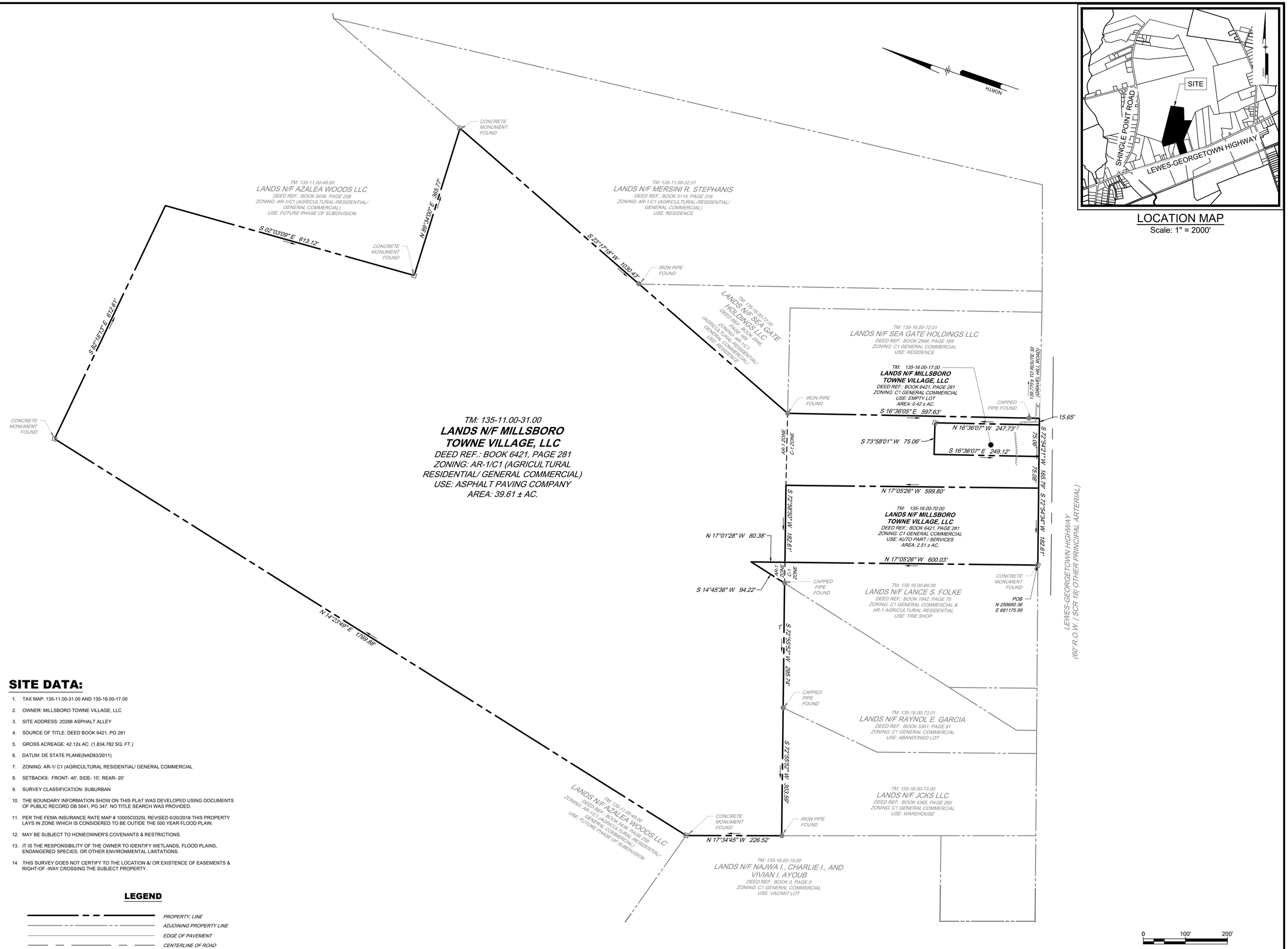
Change due $0.00

Paid by: Morris James



Thank you for your payment.

CUSTOMER COPY



LOCATION MAP
Scale: 1" = 2000'

SITE DATA:

1. TAX MAP: 135-11.00-31.00 AND 135-16.00-17.00
2. OWNER: MILLSBORO TOWNE VILLAGE, LLC
3. SITE ADDRESS: 20288 ASPHALT ALLEY
4. SOURCE OF TITLE: DEED BOOK 6421, PG 281
5. GROSS ACREAGE: 42.12± AC. (1,834,782 SQ. FT.)
6. DATUM: DE STATE PLANE(NAD83/2011)
7. ZONING: AR-1/ C1 (AGRICULTURAL RESIDENTIAL/ GENERAL COMMERCIAL
8. SETBACKS: FRONT- 40', SIDE- 15', REAR- 20'
9. SURVEY CLASSIFICATION: SUBURBAN
10. THE BOUNDARY INFORMATION SHOW ON THIS PLAT WAS DEVELOPED USING DOCUMENTS OF PUBLIC RECORD DB 5041, PG 347. NO TITLE SEARCH WAS PROVIDED.
11. PER THE FEMA INSURANCE RATE MAP # 10005C0325L REVISED 6/20/2018 THIS PROPERTY LAYS IN ZONE WHICH IS CONSIDERED TO BE OUTIDE THE 500 YEAR FLOOD PLAIN.
12. MAY BE SUBJECT TO HOMEOWNER'S COVENANTS & RESTRICTIONS.
13. IT IS THE RESPONSIBILITY OF THE OWNER TO IDENTIFY WETLANDS, FLOOD PLAINS, ENDANGERED SPECIES, OR OTHER ENVIRONMENTAL LIMITATIONS.
14. THIS SURVEY DOES NOT CERTIFY TO THE LOCATION &/ OR EXISTENCE OF EASEMENTS & RIGHT-OF -WAY CROSSING THE SUBJECT PROPERTY.

LEGEND

- PROPERTY, LINE
- ADJOINING PROPERTY LINE
- EDGE OF PAVEMENT
- CENTERLINE OF ROAD
- ZONING BOUNDARY

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

TM: 135-11.00-31.00,135-16.00-17.00 & 135-16.00-70.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
AND LANDS NOW OR FORMERERLY OF
MILLSBORO TOWNE VILLAGE, LLC
33712 WESCOATS RD UNIT 5
LEWES, DE 19958
GEORGETOWN HUNDRED, SUSSEX COUNTY, DE

BOUNDARY PLAT

MILLSBORO TOWNE VILLAGE, LLC
33712 WESCOATS RD UNIT 5
LEWES, DE 19958

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	PDYER25005
DATE	2026-03-10
DRAWING SCALE	1"=100'
DRAWN BY	SJD/ LAC
APPROVED BY	AMD

SHEET 1 OF 1

PLOTTED: 4/7/2026 11:18 AM BY: Kevin Ellis PLOTSTYLE: Pennoni.PCS.ctb
U:\Accounts\PDYER\PDYER25005 - Yellow Metal - Industrial\DESIGN\VISE\DWG\PDYER25005-HAOUNDARY.dwg

18072 Davidson Drive
Milton, DE 19968
T: 302-684-8030
F: 302-684-8054

www.pennoni.com

METES AND BOUNDS DESCRIPTION
FOR THE PURPOSE OF REZONING

LANDS NOW OR FORMERLY OF MILLSBORO TOWNE VILLAGE, LLC
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

TAX MAP 135-11.00-31.00, 135-16.00-17.00 and 70.00

All that certain piece, tract and parcel lying in Georgetown Hundred, Sussex County, Delaware and being more particularly described as follows:

BEGINNING at a point, said point lying on the northerly right-of-way of Lewes-Georgetown Highway and being a corner for this Parcel and Lands now or formerly of Lance S. Folke; thence by and with this Parcel and Lands now or formerly of Lance S. Folke the following three (3) courses and distances:

1) **North 17 degrees, 05 minutes, 26 seconds West, 600.03 feet to a point,**
2) **North 17 degrees, 01 minutes, 28 seconds West, 80.38 feet to a point,**
3) **South 14 degrees, 45 minutes, 36 seconds West, 94.22 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Raynol E. Garcia; thence by and with this Parcel and Lands now or formerly of Raynol E. Garcia, **South 72 degrees, 55 minutes, 52 seconds West, 599.33 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Ayoub; thence by and with this Parcel and Lands now or formerly of Ayoub, **North 17 degrees, 34 minutes, 45 seconds West, 226.52 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Azalea Woods, LLC.; thence by and with this parcel and Lands now or formerly of Azalea Woods, LLC., the following four (4) courses and distances:

1) **North 14 degrees, 23 minutes, 49 seconds East, 1,769.88 feet to a point,**
2) **South 82 degrees, 18 minutes, 13 seconds East, 612.61 feet to a point,**
3) **South 02 degrees, 03 minutes, 09 seconds East, 613.12 feet to a point,**
4) **North 89 degrees, 34 minutes, 00 seconds East, 365.77 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Mersani R. Stephanis; thence by and with this Parcel and Lands now or formerly of

Mersani R. Stephanis, **South 23 degrees, 17 minutes, 18 seconds West, 1,030.43 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Sea Gate Holdings, LLC.; thence by and with this Parcel and Lands now or formerly of Sea Gate Holdings, LLC., **South 16 degrees, 36 minutes, 05 seconds East, 597.63 feet** to a point, said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes-Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes-Georgetown Highway, the following two(2) courses and distances:

1) **South 72 degrees, 54 minutes, 21 seconds West, 165.79 feet to a point,**
2) **South 72 degrees, 54 minutes, 34 seconds West, 182.61 feet to a point,**

said point being the **Point of Beginning** for this description.

This Parcel contains 42.54 acres more or less.

2026-03-17
PDYER25005
KMD:ked:KBE

Pennoni

18072 Davidson Drive
Milton, DE 19968
T: 302-684-8030
F: 302-684-8054

www.pennoni.com

METES AND BOUNDS DESCRIPTION

LANDS NOW OR FORMERLY OF MILLSBORO TOWNE VILLAGE, LLC
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

TAX MAP 135-11.00-31.00

All that certain piece, tract and parcel lying in Georgetown Hundred, Sussex County, Delaware and being more particularly described as follows:

BEGINNING at a point, said point lying on the northerly right-of-way of Lewes-Georgetown Highway and being a corner for this Parcel and Lands now or formerly of Millsboro Towne Village, LLC.; thence by and with this Parcel and Lands now or formerly of Millsboro Towne Village, LLC., the following two (2) courses and distances:

1) **North 17 degrees, 05 minutes, 26 seconds West, 599.80 feet to a point,**
2) **South 72 degrees, 58 minutes, 50 seconds West, 182.61 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Lance S. Folke; thence by and with this Parcel and Lands now or formerly of Lance S. Folke the following two (2) courses and distances:

1) **North 17 degrees, 01 minutes, 28 seconds West, 80.38 feet to a point,**
2) **South 14 degrees, 45 minutes, 36 seconds West, 94.22 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Raynol E. Garcia; thence by and with this Parcel and Lands now or formerly of Raynol E. Garcia, **South 72 degrees, 55 minutes, 52 seconds West, 599.33 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Ayoub; thence by and with this Parcel and Lands now or formerly of Ayoub, **North 17 degrees, 34 minutes, 45 seconds West, 226.52 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Azalea Woods, LLC.; thence by and with this parcel and Lands now or formerly of Azalea Woods, LLC., the following four (4) courses and distances:

1) **North 14 degrees, 23 minutes, 49 seconds East, 1,769.88 feet to a point,**

2) **South 82 degrees, 18 minutes, 13 seconds East, 612.61 feet to a point,**
3) **South 02 degrees, 03 minutes, 09 seconds East, 613.12 feet to a point,**
4) **North 89 degrees, 34 minutes, 00 seconds East, 365.77 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Mersani R. Stephanis; thence by and with this Parcel and Lands now or formerly of Mersani R. Stephanis, **South 23 degrees, 17 minutes, 18 seconds West, 1,030.43 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Sea Gate Holdings, LLC.; thence by and with this Parcel and Lands now or formerly of Sea Gate Holdings, LLC., **South 16 degrees, 36 minutes, 05 seconds East, 597.63 feet** to a point, said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes-Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes-Georgetown Highway, **South 72 degrees, 54 minutes, 21 seconds West, 15.65 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Millsboro Towne Village, LLC.; thence by and with this Parcel and Lands now or formerly of Millsboro Towne Village, LLC., the following three (3) courses and distances:

1) **North 16 degrees, 36 minutes, 07 seconds West, 247.73 feet to a point,**
2) **South 73 degrees, 58 minutes, 01 seconds West, 75.06 feet to a point,**
3) **South 16 degrees, 36 minutes, 07 seconds East, 249.12 feet to a point,**

said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes-Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes-Georgetown Highway, **South 72 degrees, 54 minutes, 34 seconds West, 75.08 feet** to a point, said point being the **Point of Beginning** for this description.

This Parcel contains 39.61 acres more or less.

2026-03-17
PDYER25005
KMD:ked:KBE

METES AND BOUNDS DESCRIPTION

LANDS NOW OR FORMERLY OF MILLSBORO TOWNE VILLAGE, LLC
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

TAX MAP 135-16.00-70.00

All that certain piece, tract and parcel lying in Georgetown Hundred, Sussex County, Delaware and being more particularly described as follows:

BEGINNING at a concrete monument, said concrete monument lying on the northerly right-of-way of Lewes Georgetown Highway and being a corner for this Parcel and Lands now or formerly of Lance S. Folke; thence by and with this Parcel and Lands now or formerly of Lance S. Folke, **North 17 degrees, 05 minutes, 26 seconds West, 600.03 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Millsboro Towne Village, LLC.; thence by and with this Parcel and Lands now or formerly of Millsboro Towne Village, LLC., the following two (2) courses and distances:

1) **North 72 degrees, 58 minutes, 50 seconds East, 182.61 feet to a point,**
2) **South 17 degrees, 05 minutes, 26 seconds East, 599.80 feet to a point,**

said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes Georgetown Highway, **South 72 degrees 54 minutes, 34 seconds West, 182.61 feet** to a concrete monument, said concrete monument being the Point of Beginning for this description

This Parcel contains 2.51 acres, more or less.

Pennoni

18072 Davidson Drive
Milton, DE 19968
T: 302-684-8030
F: 302-684-8054

www.pennoni.com

METES AND BOUNDS DESCRIPTION

LANDS NOW OR FORMERLY OF MILLSBORO TOWNE VILLAGE, LLC
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

TAX MAP 135-16.00-17.00

All that certain piece, tract and parcel lying in Georgetown Hundred, Sussex County, Delaware and being more particularly described as follows:

BEGINNING at a point, said point lying on the northerly right-of-way of Lewes-Georgetown Highway and being a corner for this Parcel and Lands now or formerly of Millsboro Towne Village, LLC.; thence by and with this Parcel and Lands now or formerly of Millsboro Towne Village, LLC., the following three (3) courses and distances:

1) **North 16 degrees, 36 minutes, 07 seconds West, 249.12 feet to a point,**
2) **North 73 degrees, 58 minutes, 01 seconds East, 75.06 feet to a point,**
3) **South 16 degrees, 36 minutes, 07 seconds East, 247.73 feet to a point,**

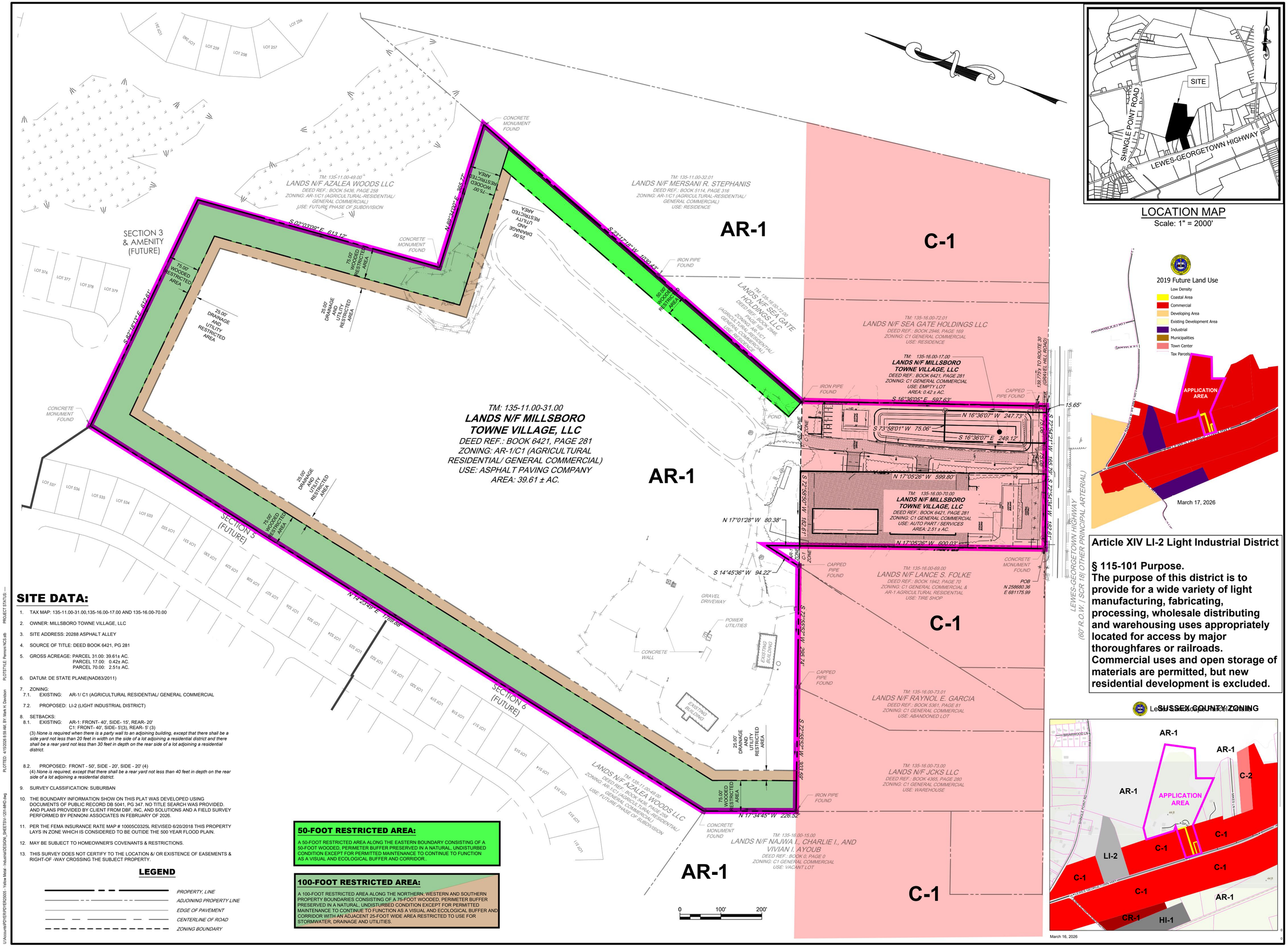
said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes-Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes-Georgetown Highway, **South 72 degrees, 54 minutes, 21 seconds West, 75.06 feet** to a point, said point being the **Point of Beginning** for this description.

This Parcel contains 0.42 acres more or less.

2026-03-17
PDYER25005
KMD:ked:KBE

AB 2

E IBITS


TM: 135-11.00-31.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
DEED REF.: BOOK 6421, PAGE 281
ZONING: AR-1/C1 (AGRICULTURAL RESIDENTIAL/ GENERAL COMMERCIAL)
USE: ASPHALT PAVING COMPANY
AREA: 39.61 ± AC.
AR-1
C-1
TM: 135-11.00-49.00
LANDS N/F AZALEA WOODS LLC
DEED REF.: BOOK 5436, PAGE 258
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: FUTURE PHASE OF SUBDIVISION
TM: 135-11.00-32.01
LANDS N/F MERSANI R. STEPHANIS
DEED REF.: BOOK 5114, PAGE 316
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: RESIDENCE
TM: 135-16.00-72.00
LANDS N/F SEA GATE HOLDINGS LLC
DEED REF.: BOOK 2946, PAGE 169
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: RESIDENCE
TM: 135-16.00-72.01
LANDS N/F SEA GATE HOLDINGS LLC
DEED REF.: BOOK 2946, PAGE 169
ZONING: C1 GENERAL COMMERCIAL
USE: RESIDENCE
TM: 135-16.00-17.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
DEED REF.: BOOK 6421, PAGE 281
ZONING: C1 GENERAL COMMERCIAL
USE: EMPTY LOT
AREA: 0.42 ± AC.
TM: 135-16.00-70.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
DEED REF.: BOOK 6421, PAGE 281
ZONING: C1 GENERAL COMMERCIAL
USE: AUTO PART / SERVICES
AREA: 2.51 ± AC.
TM: 135-16.00-69.00
LANDS N/F LANCE S. FOLKE
DEED REF.: BOOK 1942, PAGE 70
ZONING: C1 GENERAL COMMERCIAL & AR-1 AGRICULTURAL RESIDENTIAL
USE: TIRE SHOP
TM: 135-16.00-73.01
LANDS N/F RAYNOL E. GARCIA
DEED REF.: BOOK 5361, PAGE 81
ZONING: C1 GENERAL COMMERCIAL
USE: ABANDONED LOT
TM: 135-16.00-73.00
LANDS N/F JCKS LLC
DEED REF.: BOOK 4365, PAGE 280
ZONING: C1 GENERAL COMMERCIAL
USE: WAREHOUSE
TM: 135-16.00-15.00
LANDS N/F NAJWA I., CHARLIE I., AND VIVIAN I. AYOUB
DEED REF.: BOOK 0, PAGE 0
ZONING: C1 GENERAL COMMERCIAL
USE: VACANT LOT
SECTION 3 & AMENITY (FUTURE)
SECTION 5 (FUTURE)
SECTION 6 (FUTURE)
LOT 376
LOT 377
LOT 378
LOT 379
LOT 537
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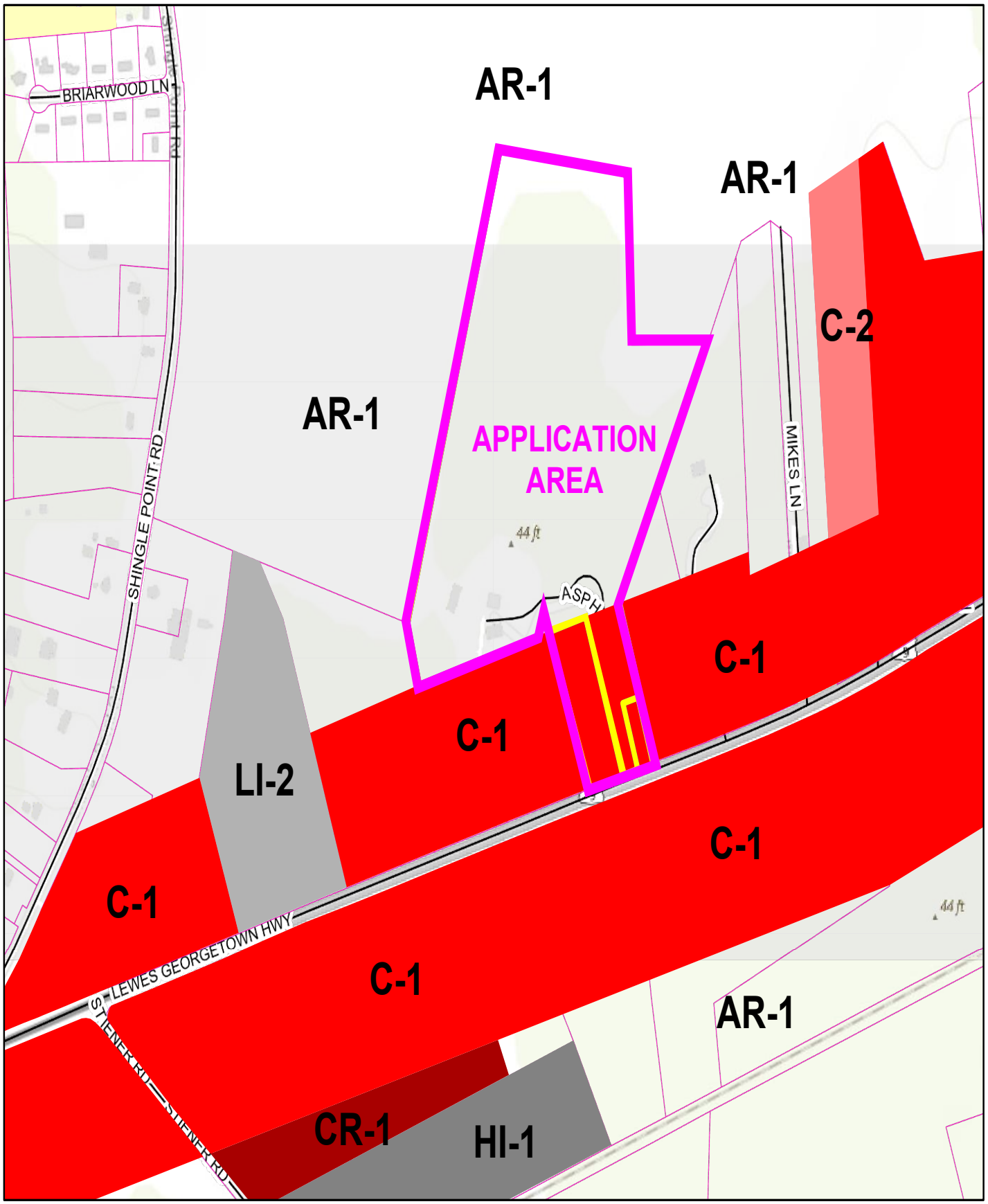
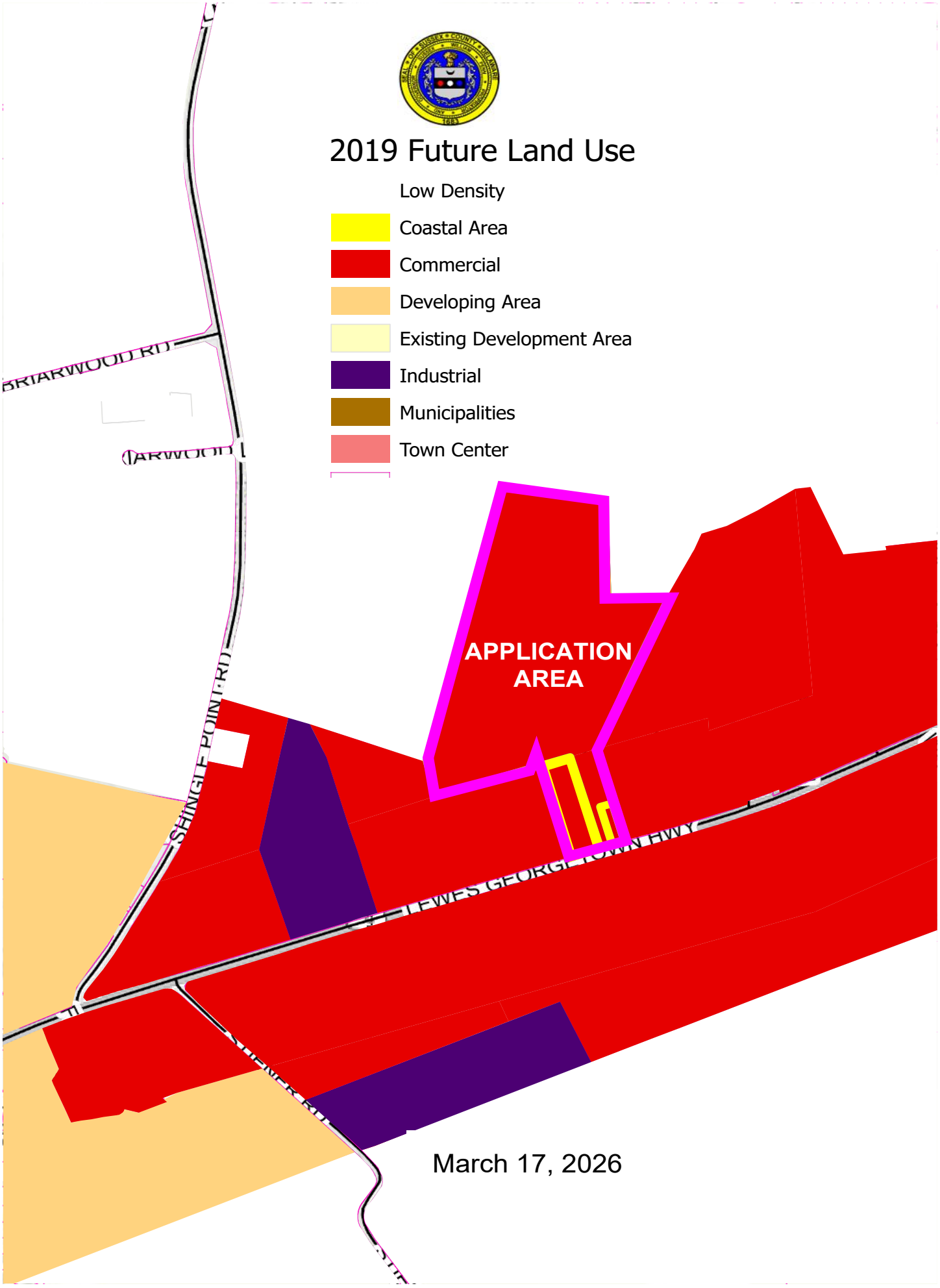
LOT 510
LOT 260
LOT 259
LOT 258
LOT 257
LOT 256
S 07°03'09" E 613.12'
S 16°19'15" E 617.61'
N 14°23'49" E 1700.88'
S 23°17'15" W 1030.43'
N 17°34'45" W 226.52'
N 17°01'28" W 80.38'
N 17°05'26" W 599.80'
N 17°05'26" W 600.03'
S 14°45'36" W 94.22'
S 16°36'05" E 597.63'
N 16°36'07" W 247.73'
S 73°58'01" W 75.06'
S 16°36'07" E 249.12'
S 16°36'05" E 313.69'
S 16°36'05" E 313.69'
S 16°36'05" E 313.69'
N 16°36'05" W 313.69'
N 16°36'05" W 313.69'
N 16°36'05" W

SUSSEX COUNTY ZONING

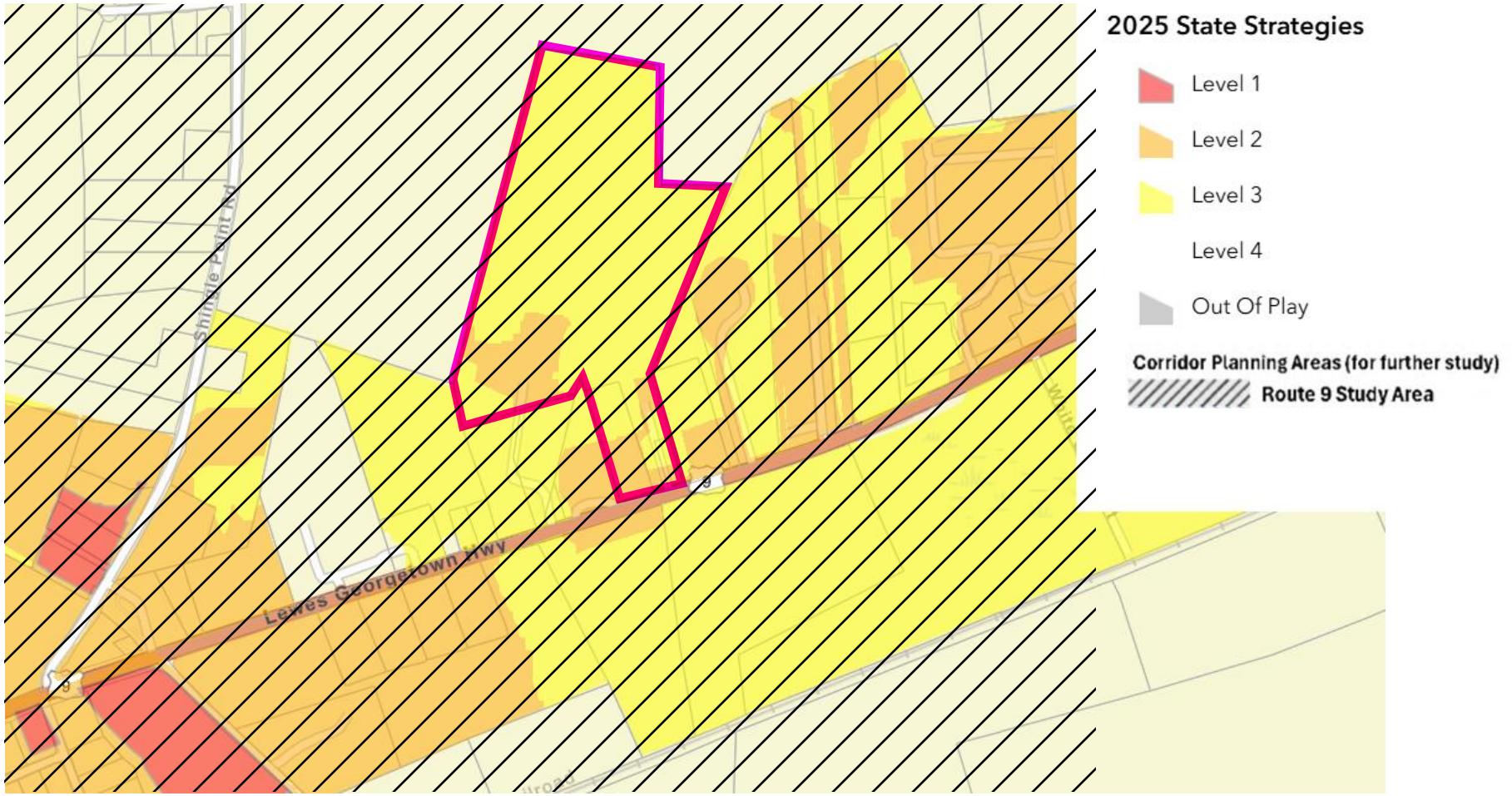


March 16, 2026


2019 Future Land Use
Low Density
Coastal Area
Commercial
Developing Area
Existing Development Area
Industrial
Municipalities
Town Center
APPLICATION AREA
BRIARWOOD RD
SHINGLE POINT RD
March 17, 2026

2025 State Strategies Map

Approved by Governor Meyer in Executive Order #16 On January 30th, 2026.



CONTRACTOR OFFICE AND STORAGE YARD SITE PLAN FOR
DELARAY FOUNDATIONS OF GEORGETOWN
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

LEGEND

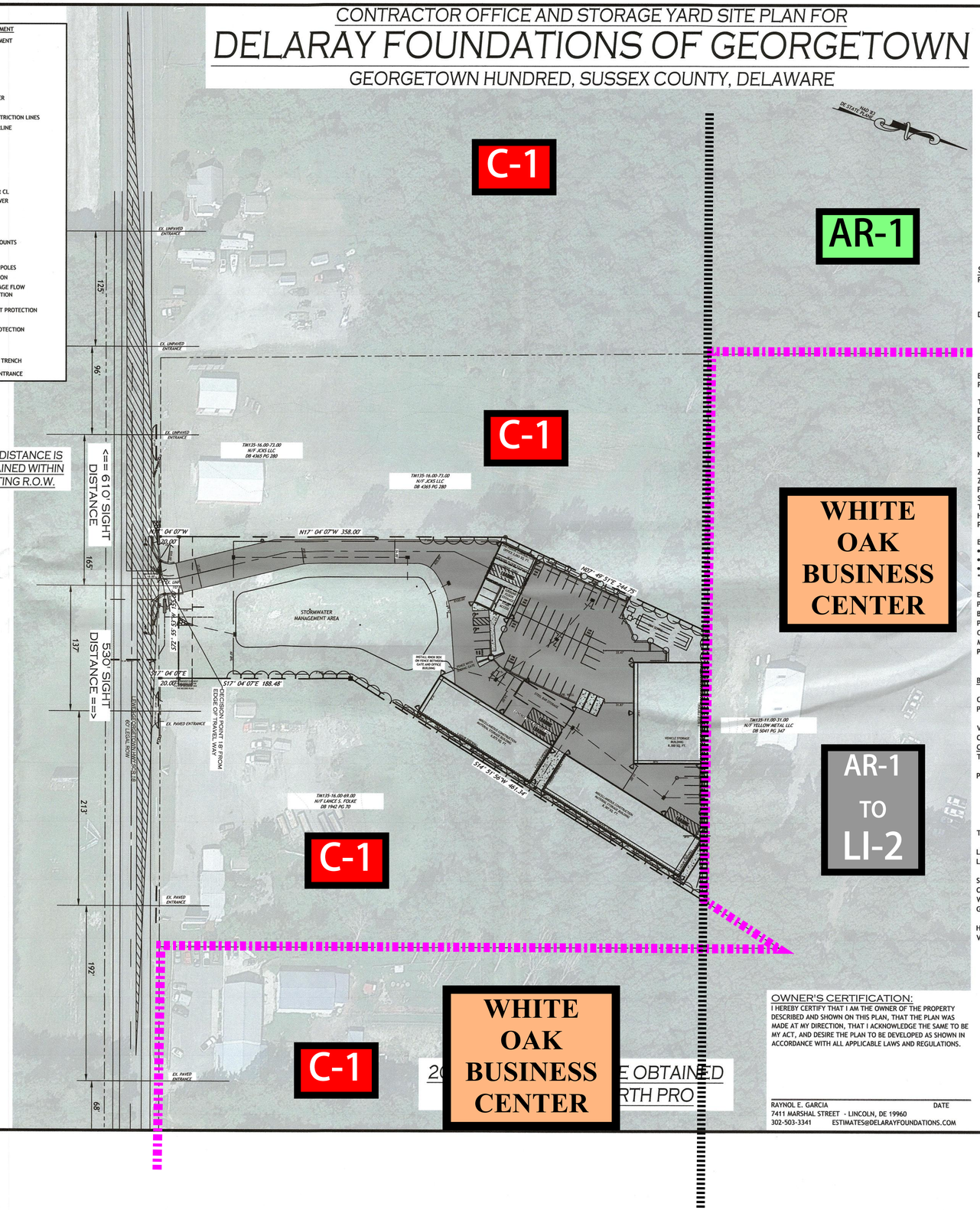
EX. PROPERTY LINE		FOUND / SET	BOUNDARY MONUMENT
PROPOSED SUBDIVISION LINE		CMF ■ / ☒ CMS	CONCRETE MONUMENT
EX. ADJACENT PROPERTY LINES		RBF • / ▲ RBS	REBAR
EX. 404 WETLANDS	ZONE X	MNF ◘ / ✪ MNS	MAGNETIC NAIL
STATE (TIDAL) WETLANDS	ZONE AE (ELEV. 7)	SPF ◥	SPIKE
FEMA FLOODPLAIN BOUNDARY		IPF ●	IRON PIPE
EX. MINOR CONTOUR	22		POST
EX. MAJOR CONTOUR	20	BENCHMARK 25.5	UNMARKED CORNER
EX. BUILDING RESTRICTION LINES			PR. CONTOUR
EX. ROAD CENTERLINE			PR. BUILDING RESTRICTION LINES
EX. EASEMENT			PR. ROAD CENTERLINE
EX. BUILDING	EX. SHED		PR. EASEMENT
EX. SWALE			PR. BUILDING
EX. SIDEWALK			PR. SWALE
EX. CURB			PR. SIDEWALK
EX. STORM SEWER	EX. CATCH BASIN — DRAINAGE MANHOLE — PR. CATCH BASIN		PR. CURB
EX. SANITARY SEWER	EX. SANITARY MANHOLE — PR. SANITARY MANHOLE		PR. STORM SEWER CL
EX. WOODS LINE			PR. SANITARY SEWER
EX. WATER LINE	EX. REDUCER — EX. WATER — EX. VALVE — PR. REDUCER — PR. WATER — PR. VALVE — PR. FIRE HYDRANT		PR. WOODS LINE
EX. WELL	W	9 LARGE PERPENDICULAR 10' X 20'	PR. WATER LINE
TRAFFIC SIGN		9 PERPENDICULAR 9' X 18'	PR. WELL
EX. ZONING BOUNDARY		9 DIAGONAL 9' X 18'	PARKING SPACE COUNTS
EX. ELECTRIC LINES UTILITIES		1 HANDICAP 8' X 20' + PAINTED AISLE	
EX. UTILITY POLES/LIGHT POLES		1 COMPACT 8' X 17'	
EX. FENCE		PROPOSED WALL PACK LIGHT	PROPOSED LIGHT POLES
EX. SPOT ELEVATION	X 25.21	100.00	PR. SPOT ELEVATION
PR. DELDOT ENTRANCE PAVING			PROPOSED DRAINAGE FLOW
PR. ROTOMILL OVERLAY		TYPE 1 IP-1 TYPE 2 IP-2	PR. INLET PROTECTION
EROSION CONTROL MATTING		CIP	PR. CULVERT INLET PROTECTION
SOIL BORING/TEST PIT	SB-1 TP-12	TYPE 1 ROP-1 TYPE 2 ROP-2	ROCK OUTLET PROTECTION
EX. STREAM			PR. FOREBAY
LIMIT OF DISTURBANCE	LOD LOD LOD		PR. INFILTRATION TRENCH
SILT FENCE	SF SF SF SF	CONCRETE WASHOUT CW SCE	CONSTRUCTION ENTRANCE

NOTES:

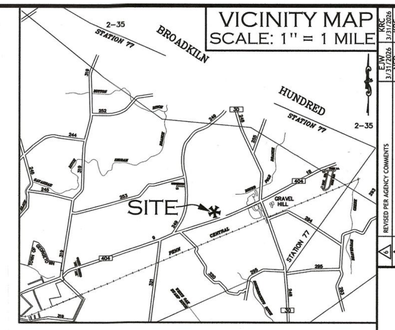
1. THE BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAT WAS TAKEN FROM A FIELD SURVEY PREPARED BY AXIOM ENGINEERING, LLC IN FEBRUARY 2024. HORIZONTAL CONTROL IS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983, DELAWARE STATE PLANE GRID (U.S. SURVEY FEET), VERTICAL CONTROL IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
2. THIS PLAN DOES NOT VERIFY TO THE LOCATION AND/OR EXISTENCE OF EASEMENTS OR RIGHT-OF-WAYS CROSSING THE SUBJECT PROPERTY AS NO TITLE SEARCH WAS PROVIDED.
3. WATERHSED ECO PERFORMED A SITE INVESTIGATION REGARDING STATE WETLANDS, FEDERAL WETLANDS AND WATERS OF THE UNITED STATES. THE SITE INVESTIGATION DETERMINED THAT THE SITE DOES NOT HAVE REGULATED WETLANDS OR WATERWAYS.
4. BASED UPON FLOOD INSURANCE RATE MAP (FIRM) NUMBER 10005C0325 L, DATED JUNE 20, 2018; THE ENTIRE PROPERTY IS LOCATED IN AN AREA DESIGNATED AS ZONE "X" (UNSHADED), WHICH IS AN AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN.
5. PAVEMENT, STORMWATER MANAGEMENT FACILITIES, LANDSCAPE FEATURES AND OTHER FACILITIES SHALL BE MAINTAINED BY THE PROPERTY OWNER. SUSSEX COUNTY AND THE STATE OF DELAWARE ASSUME NO RESPONSIBILITY FOR THE FUTURE MAINTENANCE OF THESE FACILITIES WITHIN THE SITE.
6. PROPOSED SIGNAGE REQUIRES A SEPARATE PERMIT FROM SUSSEX COUNTY.
7. ALL ENTRANCES SHALL CONFORM TO DELDOT'S DEVELOPMENT COORDINATION MANUAL AND SHALL BE SUBJECT TO ITS APPROVAL.
8. FINAL SITE PLAN APPROAL SHALL BE CONTINGENT UPON RECEIPT OF PROJECT APPROVAL BY THE SUSSEX CONSERVATION DISTRICT REGARDING LAND DISTRUBING ACTIVITIES AND THE REQURIED STORMWATER MANAGEMENT, SEDIMENT AND EROSION CONTROL MEASURES.
9. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.

FIRE ALARM NOTE:

PROPOSED BUILDINGS SHALL BE PROTECTED BY A FIRE ALARM SIGNALING SYSTEM THAT SHALL BE AUTOMATIC, SUPERVISED OFF SITE, ANDSHALL CONSIST OF FULL COVERAGE BY SMOKE DETECTION AND ALARM NOTIFICATION (DSFPR REG 702, CHAP 6). WHERE SMOKE DETECTION DEVICES WILL NOT FUNCTION BY REASON OF DEVICE LIMITATION, HEAT DETECTION SHALL BE PROVIDED IN THOSE SPECIFIC LOCATIONS. UPON APPLICATION FOR BUILDING REVIEW, FIRE ALARM SIGNALING SYSTEM PLANS AND SPECIFICATIONS SHALL BE SUBMITTED FOR REVIEW (DSFPR REG 701, CHAPTER 4).



VICINITY MAP
SCALE: 1" = 1 MILE



SITE DATA:

PROPERTY OWNER	RAYNOL E. GARCIA 7411 MARSHAL STREET LINCOLN, DE 19960	
DEVELOPER/APPLICANT	DELARAY FOUNDATIONS, INC. RAYNOL E. GARCIA 7411 MARSHAL STREET LINCOLN, DE 19960 ESTIMATES@DELARAYFOUNDATIONS.COM 302-503-3341	
EXISTING LOTS	2	
PROPOSED LOTS	1 (LOT LINE TO BE ABANDONED)	
TAX MAP REFERENCE	135-16.00-73.01	135-16.00-71.00
DEED REFERENCE	DB 5361 - PG 81	DB 5361 - PG 81
EXISTING PARCEL AREA	2.649± AC.	0.249± AC.
DELDOT DEDICATION	0.000± AC.	0.000± AC.
COMBINED LOT AREA	2.898± AC.	
NET DEVELOPMENT AREA	2.898± AC.	
ZONING JURISDICTION	SUSSEX COUNTY	
ZONING	C-1 (GENERAL COMMERCIAL)	
FUTURE LAND USE MAP DESIGNATION	COMMERCIAL	
STATE STRATEGIES INVESTMENT LEVEL	3 & 4	
TRANSPORTATION IMPROVEMENT DISTRICT	PROJECT IS NOT LOCATED WITHIN A TID	
HIGHWAY FUNCTIONAL CLASS	US 9- SCR 018 - OTHER PRINCIPAL ARTERIAL	
POSTED SPEED	50 MPH	
BUILDING SETBACKS		
• FRONT	60'	
• SIDE	5'	
• REAR	5' *	
* BOA CASE NUMBER 12966 REDUCED 30' REAR SETBACK TO 5'		
EXISTING USE	CONTRACTOR OFFICE (TRAILER)	
PROPOSED USE	CONTRACTOR OFFICE AND STORAGE BUILDINGS	
BUILDING SPRINKLERS PROVIDED	NONE	
PROPOSED CONSTRUCTION TYPE	SLAB FOUNDATION, STEEL FRAME W METAL SIDING	
CONSTRUCTION CLASS	-	
MAXIMUM BUILDING HEIGHT	42'	
PROPOSED BUILDING HEIGHT	32'	

BUILDING USE	GROSS FLOOR AREA (SQ. FT.)	PARKING REQUIRED
CONTRACTOR OFFICE (2ND FLOOR)	3,065	16
PARKING & STORAGE GARGE (1ST FLOOR)	3,065	0
VEHICLE STORAGE BUILDING	8,300	0
CONSTRUCTION MATERIAL STORAGE	8,387	0
CONSTRUCTION MATERIAL STORAGE	6,875	0
TOTAL	27,474	16

PARKING SPACES PROVIDED	
HANDICAP	2
DIAGONAL (9'x18')	0
PERPENDICULAR (9' X 18')	5
LARGE PERPENDICULAR (10' X 18')	46
COMPACT	6
TOTAL PARKING SPACES PROVIDED	58
LOADING SPACES REQUIRED	3
LOADING SPACES PROVIDED	4
SEWER PROVIDER	ON-SITE SEPTIC
CENTRAL WATER PROVIDER	PRIVATE WELL
WELLHEAD PROTECTION AREA	NONE
GROUNDWATER RECHARGE POTENTIAL	FAIR
HORIZONTAL CONTROL	NAD '83 DE STATE PLANE
VERTICAL CONTROL	NAVD 1988

OWNER'S CERTIFICATION:

I HEREBY CERTIFY THAT I AM THE 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 DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

RAYNOL E. GARCIA — DATE
7411 MARSHAL STREET - LINCOLN, DE 19960
302-503-3341 ESTIMATES@DELARAYFOUNDATIONS.COM

ENGINEER'S CERTIFICATION

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

KENNETH R. CHRISTENBURY - DELAWARE P.E. #11553 (EXPIRES JUNE 30, 2026) — DATE
AXIOM ENGINEERING, LLC - 18 CHESTNUT STREET - GEORGETOWN, DE 19947
(302) 855-0810 - ken@axeng.com

REV	DESCRIPTION OF REVISION	BY/DATE	
1	REVISED PER AGENCY COMMENTS	KRC 12/6/2024	
2	RESPONSE TO AGENCY COMMENTS	NFP 11/18/2024	
3	RESPONSE TO P & Z COMMENTS	NFP 10/15/2024	
4	AGENCY SUBMITTALS	NFP 9/6/2024	
5	REVISED SETBACKS AND DELDOT TODS	KRC 8/16/2024	
6	ADD DELDOT TRAFFIC DIAGRAMS	KRC 6/18/2024	
7	REVISED PER AGENCY COMMENTS	KRC 6/18/2024	

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AND ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO AND APPURTENANT.

COVER SHEET
CONTRACTOR OFFICE & STORAGE YARD SITE PLAN
DELARAY FOUNDATIONS OF GEORGETOWN
U.S. RT. 9 - SCR 018 - LEWES-GEORGETOWN HIGHWAY
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

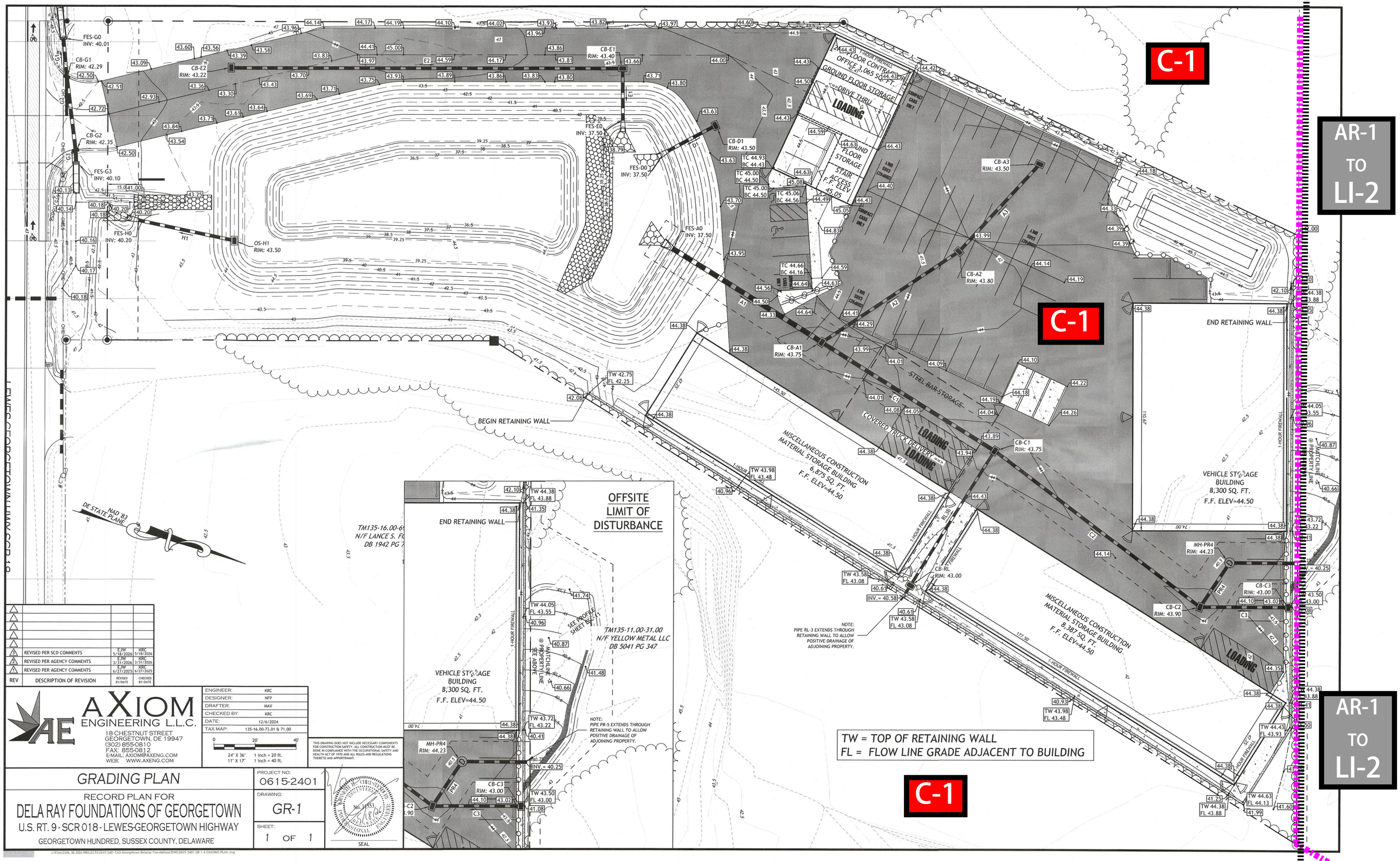
AXIOM ENGINEERING L.L.C.
18 CHESTNUT STREET
GEORGETOWN, DE 19947
(302) 855-0810
E-MAIL: AXIOM@AXENG.COM
WEB: WWW.AXENG.COM

ENGINEER: KRC
DESIGNER: NFP
DRAFTER: MAV
CHECKED BY: KRC
DATE: 12/6/2024
TAX MAP: 135-16.00-73.01 & 71.00
0 30 60 120 180 ft.
24" x 36" 1 inch = 60 ft.
11" x 17" 1 inch = 120 ft.

KENNETH R. CHRISTENBURY No. 11553 PROFESSIONAL ENGINEER DELAWARE SEAL

PROJECT NO: 0615-2401
DRAWING: C-1
SHEET: 1 OF 2

J:\Files\CIVIL 3D 2024 PROJECTS\0615-2401 CAD-Georgetown Delaray Foundations\DWG\0615-2401-C - CONSTRUCTION OFFICE SITE PLAN.dwg



REV	DESCRIPTION OF REVISION	REVISED BY/DATE	CHECKED BY/DATE
3	REVISED PER SCD COMMENTS	EJW 5/18/2026	KRC 5/18/2026
2	REVISED PER AGENCY COMMENTS	EJW 3/31/2026	KRC 3/31/2026
1	REVISED PER AGENCY COMMENTS	EJW 6/27/2025	KRC 6/27/2025

AXIOM ENGINEERING L.L.C.
18 CHESTNUT STREET
GEORGETOWN, DE 19947
(302) 855-0810
FAX: 855-0812
E-MAIL: AXIOM@AXENG.COM
WEB: WWW.AXENG.COM

ENGINEER:	KRC
DESIGNER:	NFP
DRAFTER:	MAV
CHECKED BY:	KRC
DATE:	12/6/2024
TAX MAP:	135-16.00-73.01 & 71.00

0 20' 40'
24" X 36" 1 inch = 20 ft.
11" X 17" 1 inch = 40 ft.

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

GRADING PLAN

RECORD PLAN FOR
DELA RAY FOUNDATIONS OF GEORGETOWN
U.S. RT. 9 - SCR 018 - LEWES-GEORGETOWN HIGHWAY
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

PROJECT NO: 0615-2401
DRAWING: GR-1
SHEET: 1 OF 1

SEAL

AB 3

VOLUNTARY DEED RESTRICTIONS

Sussex County Tax Parcel Nos.
135-11.00-31.00
135-16.00-17.00
135-16.00-70.00

Prepared by and Return to:
David C. Hutt, Esquire
Morris James, LLP
P.O. Box 690
Georgetown, DE 19947

DECLARATION OF RESTRICTIVE COVENANTS
AND REMEDIAL CLAUSES
OF
LANDS OF MILLSBORO TOWNE VILLAGE, L.L.C.

THIS DECLARATION (the "Declaration"), made this ____ day of _____, A.D. 2026, by Millsboro Towne Village, L.L.C., of 33712 Wescoats Road, Unit 5, Lewes, Delaware 19958, hereinafter called the "Declarant."

WITNESSETH:

WHEREAS, the Declarant is the owner in fee simple of those certain parcels of real property, situate, lying and being on the North side of Lewes Georgetown Highway (U.S. Route 9), said pieces or parcels of land being located in Georgetown Hundred, Sussex County, Delaware, being part of the lands more particularly described in a Deed dated December 9, 2025, and recorded December 9, 2025 in the Recorder's Office in Deed Book 6421, Page 281 and being further shown and designated on the tax maps of the Sussex County Department of Finance as Tax Parcel Nos. 1-35 11.00 31.00, 1-35 16.00 17.00 and 1-35 16.00 70.00 (collectively, the "Property").

WHEREAS, the Property was previously split-zoned as part of the Property was designated as being within Sussex County's C-1 General Commercial District and the other part of the Property was designated as being within Sussex County's AR-1 Agricultural Residential District.

WHEREAS, Declarant filed an application, designated by Sussex County as Change of Zone 2063 (CZ 2063), to eliminate the split-zoning of the Property by amending the Sussex County Zoning Map for the Property by changing the zoning classification of the Property from the split-zoning classifications of the of C-1 General Commercial District and AR-1 Agricultural Residential District

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to a single zoning classification—Sussex County's LI-2 Light Industrial District to be compatible with the mixed employment and transportation corridor along the Lewes Georgetown Highway (U.S. Route 9).

WHEREAS, on the northern, western and southern boundaries of the Property there are lands with an AR-1 Agricultural Residential District zoning classification which are being developed as a single-family, cluster subdivision residential community known as Azalea Woods, approved by the Sussex County Planning & Zoning Commission as Subdivision No. 2019-8 with conditions A through U ("Azalea Woods Property").

WHEREAS, on the eastern boundary of the Property, there are undeveloped lands with an AR-1 Agricultural Residential District zoning classification.

WHEREAS, during the application process for CZ 2063, Declarant proffered to provide enhanced stormwater infiltration, pollutant removal, groundwater recharge, erosion control, noise attenuation, visual screening, habitat preservation, ecological sustainability, carbon sequestration, air quality improvement and land-use compatibility through the creation of voluntary restricted areas on the Property creating buffers that exceed those found in the Sussex County Zoning Code.

WHEREAS, the Declarant in connection with the development of the Property, desires to make known and declare these covenants, agreements, conditions, easements, reservations and restrictions which shall be applicable to and bind the aforesaid land owned by Declarant.

WHEREAS, the Declarant desires to impose said covenants, agreements, easements, conditions, reservations and restrictions for the equal benefit of the Sussex County and the following adjacent property owners:

1) Sussex County Tax Parcel No. 135-11.00-32.01, currently owned by Mersini R. Stephanis;
2) Sussex County Tax Parcel No. 135-16.00-72.00, currently owned by Sea Gate Holdings, LLC;
3) Sussex County Tax Parcel No. 135-16.00-72.01, currently owned by Sea Gate Holdings, LLC;
4) Sussex County Tax Parcel No. 135-16.00-69.00, currently owned by Lance S. Folk;
5) Sussex County Tax Parcel No. 135-16.00-71.00, currently owned by Raynol E. Garcia;

6) Sussex County Tax Parcel No. 135-16.00-73.01, currently owned by Raynol E. Garcia;
7) Sussex County Tax Parcel No. 135-16.00-73.00, currently owned by JCKS, LLC;
8) Sussex County Tax Parcel No. 135-16.00-15.00, currently owned by Najwa I. Ayoub, Charlie I. Ayoub and Vivian I. Ayoub;
9) Sussex County Tax Parcel No. 135-11.00-49.00, currently owned by Azalea Woods, LLC (collectively, Sussex County and the aforementioned adjacent properties shall be referred to as the "Benefitted Parties" or, individually, as a "Benefitted Party").

WHEREAS, on _____, Sussex County Council adopted Ordinance No. _____, changing the zoning classification of the Property to Sussex County's LI-2 Light Industrial District.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That Declarant does hereby covenant and declare that Declarant shall hold and stand seized of the aforesaid lands owned by it, and subject nevertheless to the following covenants, agreements, conditions, easements, reservations and restrictions which it hereby declares shall be covenants running with aforesaid land, and shall bind upon Declarant, its successors and assigns, which covenants, agreements, easements, conditions, reservations and restrictions are hereby imposed for the equal benefit of the Benefitted Parties:

1. Duration and Amendment. This Declaration shall be recorded by Declarant within ten (10) days of the adoption of an ordinance by Sussex County Council changing the zoning designation of the Property to Sussex County's LI-2 Light Industrial District. The Restrictions of this Declaration run with and bind the Property but shall not apply to or bind any other lands of the Declarant and shall inure to the benefit of and be enforceable by the Declarant or the Benefitted Parties, their respective legal representatives, heirs, successors and assigns, as the case may be, for so long as the Property is zoned LI-2 Light Industrial District.

Any amendment of this Declaration shall require the written consent of the Declarant and no less than two-thirds of the Benefitted Parties.

2. Remedies. The Declarant or any Benefitted Party subject to this Declaration, shall have the right to enforce this Declaration and the Restrictions contained herein by any

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proceeding at law or in equity, against any person or persons violating or attempting to violate any provision of this Declaration or any Restrictions contained herein, to restrain violation, to require specific performance, and/or to recover damages. If legal action is initiated for the enforcement of this Declaration or any amendment thereto, the expense and cost of enforcement including the costs of reasonable attorney's fees, shall be chargeable to the non-prevailing party.

3. Nonwaiver. Failure of the Declarant or any Benefitted Party subject to this Declaration, or their respective legal representatives, heirs, successors and assigns, to enforce any Restrictions contained in this Declaration shall in no event be considered a waiver of the right to do so thereafter, as to the same violation or breach or as to such violation or breach occurring prior to subsequent thereto.

4. Severability. All the covenants, conditions, restrictions, and reservations contained in this Declaration are hereby declared to be severable, and a finding by any court of competent jurisdiction that any of them or any clause or phrase thereof is void, unlawful or unenforceable, shall not affect the validity or enforceability of any other covenants, conditions, restrictions, reservations or clause or phase thereof.

5. Restricted Area within the Property. The Property shall have restricted areas as shown on the Restricted Area Plat attached dated _____ and attached hereto as Exhibit A, which restrictions shall be as follows:

5.1 100-Foot Restricted Area. A 100-foot restricted area along the northern, western and southern boundaries of the Property, *i.e.*, along the common boundary with the Azalea Woods Property, is hereby established to consist of a 75-foot wide wooded, perimeter buffer preserved in a natural, undisturbed condition except for permitted maintenance to continue to function as a visual and ecological buffer and corridor with an adjacent 25-foot wide area restricted to use for stormwater drainage and utilities.

5.2 50-Foot Restricted Area. A 50-foot restricted area along the eastern boundary of the Property is established to consist of a 50-foot wide wooded, perimeter buffer preserved in a natural, undisturbed condition except for permitted maintenance to continue to function as a visual and ecological buffer and corridor.

[*emainder of Page ntentionally eft Blan Signature Page to Follow*]

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IN WITNESS WHEREOF, the Declarant, Millsboro Towne Village, L.L.C., a Delaware limited liability company, has caused its name to be hereunto set under seal, on the day and year aforesaid.

GRANTOR:
MILLSBORO TOWNE VILLAGE, L.L.C.,
a Delaware limited liability company

By:_____(SEAL)
Printed Name:_____
Title:_____

STATE OF DELAWARE :
: ss.
SUSSEX COUNTY :

BE IT REMEMBERED, that on this _____ day of _____, 2026, personally came before me, the Subscriber, a Notary Public for the State and County aforesaid, _____(name), _____(title) of Millsboro Towne Village, L.L.C., a Delaware limited liability company, party to this Indenture, known to me personally to be such, and acknowledged this Indenture to be his act and deed, and the act and the deed of the said limited liability company, that the signature of the authorized individual is in his/her own proper handwriting; and that the act of signing, sealing, acknowledging and delivering the said Indenture was first duly authorized by resolution of the members of the said limited liability company.

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

_____
NOTARY PUBLIC

_____
Name Typewritten or Printed
My Commission Expires:_____

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EXHIBIT A

RESTRICTED AREA PLAT SHOWING LOCATION OF RESTRICTED AREAS

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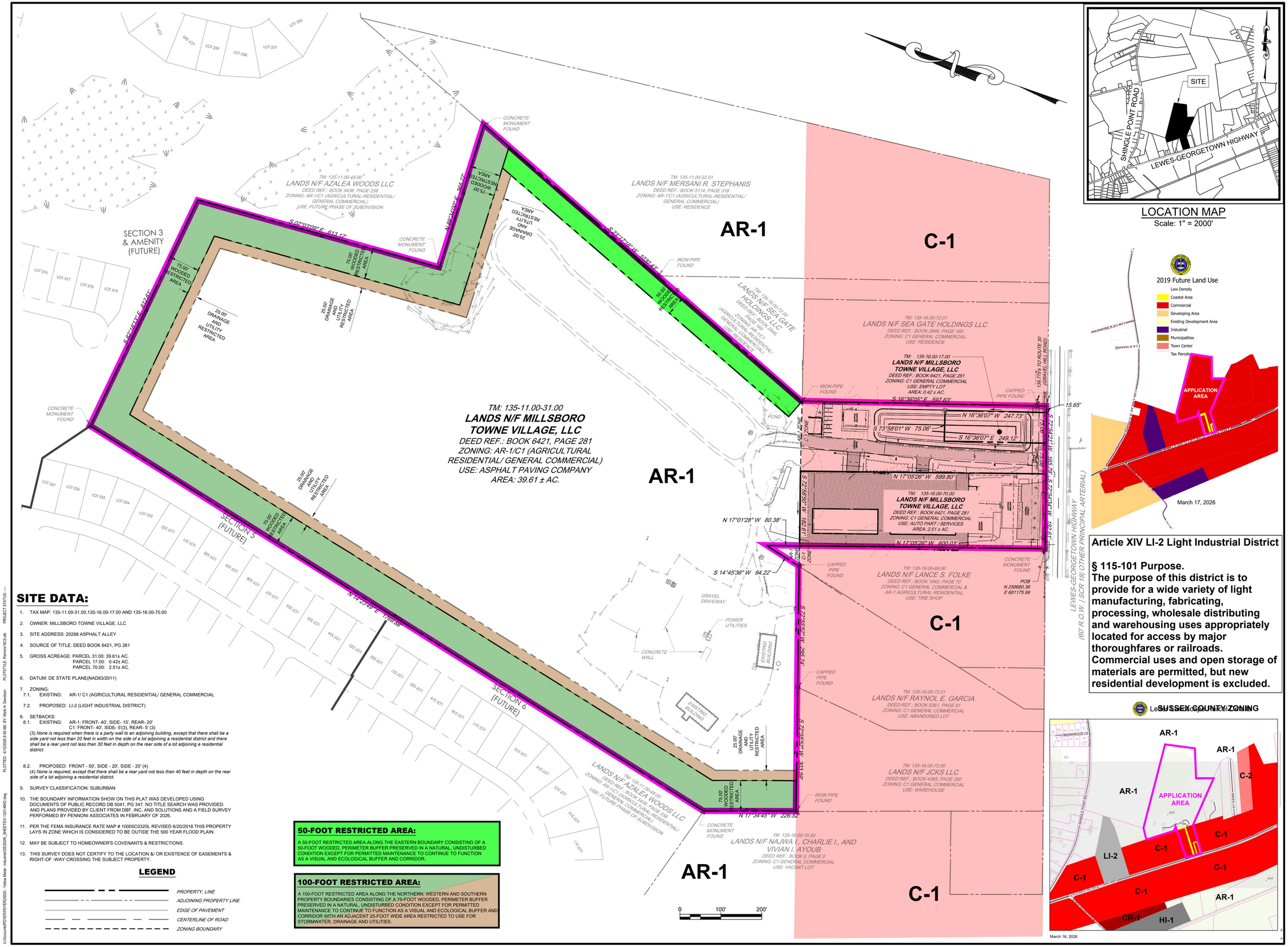


LOCATION MAP
Scale: 1" = 2000'

Article XIV LI-2 Light Industrial District

§ 115-101 Purpose.
The purpose of this district is to provide for a wide variety of light manufacturing, fabricating, processing, wholesale distributing and warehousing uses appropriately located for access by major thoroughfares or railroads. Commercial uses and open storage of materials are permitted, but new residential development is excluded.

SUSSEX COUNTY ZONING

SITE DATA:

1. TAX MAP: 135-11.00-31.00,135-16.00-17.00 AND 135-16.00-70.00
2. OWNER: MILLSBORO TOWNE VILLAGE, LLC
3. SITE ADDRESS: 20288 ASPHALT ALLEY
4. SOURCE OF TITLE: DEED BOOK 6421, PG 281
5. GROSS ACREAGE: PARCEL 31.00: 39.61± AC.
   PARCEL 17.00: 0.42± AC.
   PARCEL 70.00: 2.51± AC.
6. DATUM: DE STATE PLANE(NAD83/2011)
7. ZONING:
   7.1. EXISTING: AR-1/ C1 (AGRICULTURAL RESIDENTIAL/ GENERAL COMMERCIAL
   7.2. PROPOSED: LI-2 (LIGHT INDUSTRIAL DISTRICT)
8. SETBACKS:
   8.1. EXISTING: AR-1: FRONT- 40', SIDE- 15', REAR- 20'
   C1: FRONT- 40', SIDE- 5'(3), REAR- 5' (3)
   (3) None is required when there is a party wall to an adjoining building, except that there shall be a side yard not less than 20 feet in width on the side of a lot adjoining a residential district and there shall be a rear yard not less than 30 feet in depth on the rear side of a lot adjoining a residential district.
   8.2. PROPOSED: FRONT - 50', SIDE - 20', SIDE - 20' (4)
   (4) None is required, except that there shall be a rear yard not less than 40 feet in depth on the rear side of a lot adjoining a residential district.
9. SURVEY CLASSIFICATION: SUBURBAN
10. THE BOUNDARY INFORMATION SHOW ON THIS PLAT WAS DEVELOPED USING DOCUMENTS OF PUBLIC RECORD DB 5041, PG 347. NO TITLE SEARCH WAS PROVIDED. AND PLANS PROVIDED BY CLIENT FROM DBF, INC. AND SOLUTIONS AND A FIELD SURVEY PERFORMED BY PENNONI ASSOCIATES IN FEBRUARY OF 2026.
11. PER THE FEMA INSURANCE RATE MAP # 10005C0325L REVISED 6/20/2018 THIS PROPERTY LAYS IN ZONE WHICH IS CONSIDERED TO BE OUTIDE THE 500 YEAR FLOOD PLAIN.
12. MAY BE SUBJECT TO HOMEOWNER'S COVENANTS & RESTRICTIONS.
13. THIS SURVEY DOES NOT CERTIFY TO THE LOCATION &/ OR EXISTENCE OF EASEMENTS & RIGHT-OF -WAY CROSSING THE SUBJECT PROPERTY.

LEGEND

- PROPERTY, LINE
- ADJOINING PROPERTY LINE
- EDGE OF PAVEMENT
- CENTERLINE OF ROAD
- ZONING BOUNDARY

50-FOOT RESTRICTED AREA:

A 50-FOOT RESTRICTED AREA ALONG THE EASTERN BOUNDARY CONSISTING OF A 50-FOOT WOODED, PERIMETER BUFFER PRESERVED IN A NATURAL, UNDISTURBED CONDITION EXCEPT FOR PERMITTED MAINTENANCE TO CONTINUE TO FUNCTION AS A VISUAL AND ECOLOGICAL BUFFER AND CORRIDOR.

100-FOOT RESTRICTED AREA:

A 100-FOOT RESTRICTED AREA ALONG THE NORTHERN, WESTERN AND SOUTHERN PROPERTY BOUNDARIES CONSISTING OF A 75-FOOT WOODED, PERIMETER BUFFER PRESERVED IN A NATURAL, UNDISTURBED CONDITION EXCEPT FOR PERMITTED MAINTENANCE TO CONTINUE TO FUNCTION AS A VISUAL AND ECOLOGICAL BUFFER AND CORRIDOR WITH AN ADJACENT 25-FOOT WIDE AREA RESTRICTED TO USE FOR STORMWATER, DRAINAGE AND UTILITIES.

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

TM: 135-11.00-31.00,135-16.00-17.00 & 135-16.00-70.00
LANDS NOW OR FORMERERLY OF
MILLSBORO TOWNE VILLAGE, LLC
33712 WESCOATS RD UNIT 5, LEWES, DE 19958
GEORGETOWN HUNDRED, SUSSEX COUNTY, DE

ZONING AMENDMENT PLAT

MILLSBORO TOWNE VILLAGE, LLC
33712 WESCOATS RD UNIT 5
LEWES, DE 19958

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES. AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	PDYER25005
DATE	2026-04-06
DRAWING SCALE	1"=100'
DRAWN BY	SJD/ LAC
APPROVED BY	AMD

V-1201

SHEET 1 OF 1

PROJECT STATUS: —
PLOTSTYLE: Pennoni NCS.stb
PLOTTED: 4/15/2026 8:59 AM BY: Mark H. Davidson
U:\Accounts\PDYER\PDYER25005 - Yellow Metal - Industrial\DESIGN_SHEETS\V-1201-MHD.dwg

AB 4

C-3 VS LI-2 E IBIT

Article XIV LI-2 Light Industrial District

B. Minimum yard requirements. Minimum yard requirements shall be as follows:

Use	Depth of Front Yard (feet)	Width of Side Yard (feet)	Depth of Rear Yard (feet)
All uses	50	20	20 (4)

(4) None is required, except that there shall be a rear yard not less than 40 feet in depth on the rear side of a lot adjoining a residential district.

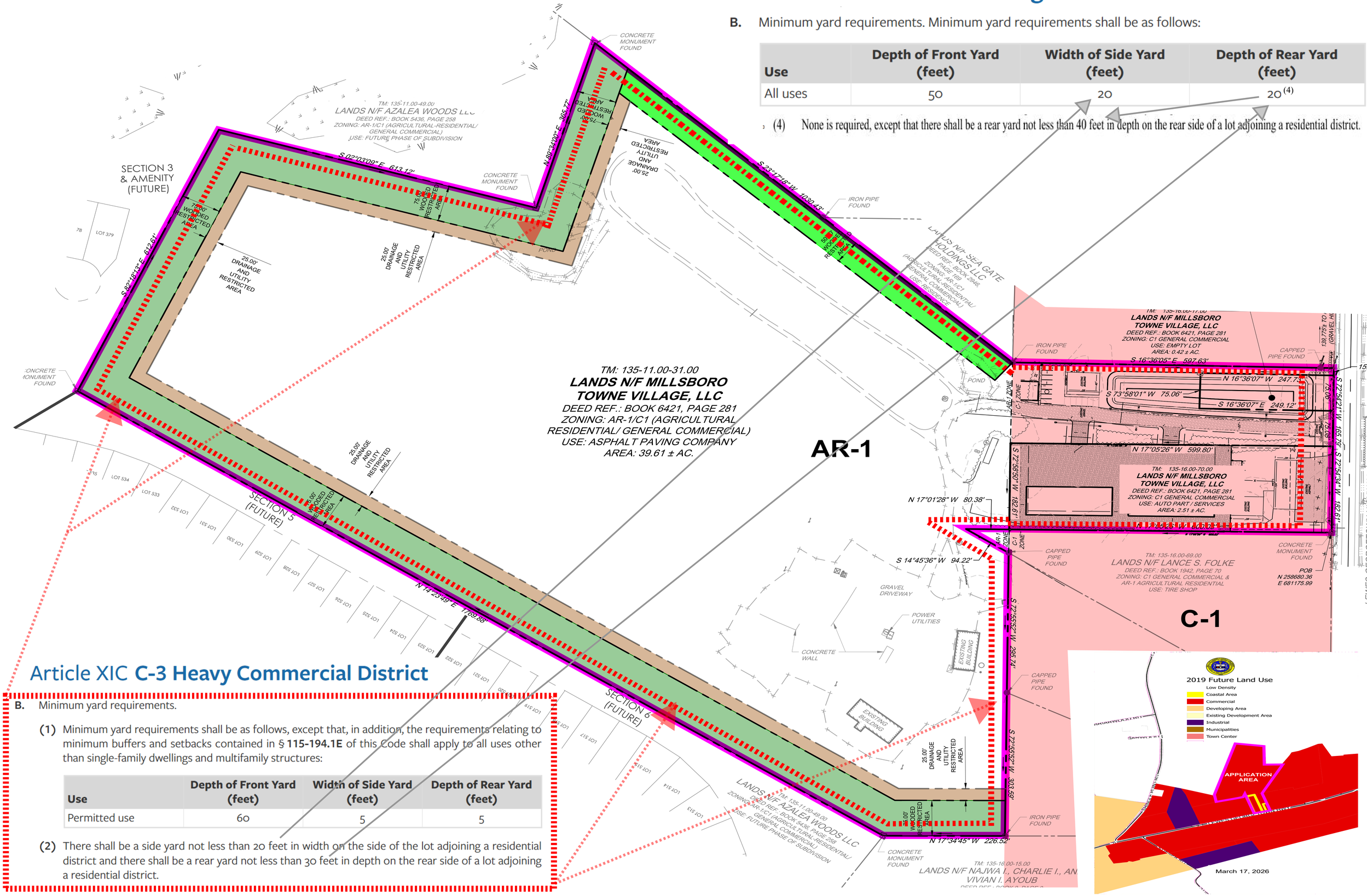
Article XIC C-3 Heavy Commercial District

B. Minimum yard requirements.

(1) Minimum yard requirements shall be as follows, except that, in addition, the requirements relating to minimum buffers and setbacks contained in § **115-194.1E** of this Code shall apply to all uses other than single-family dwellings and multifamily structures:

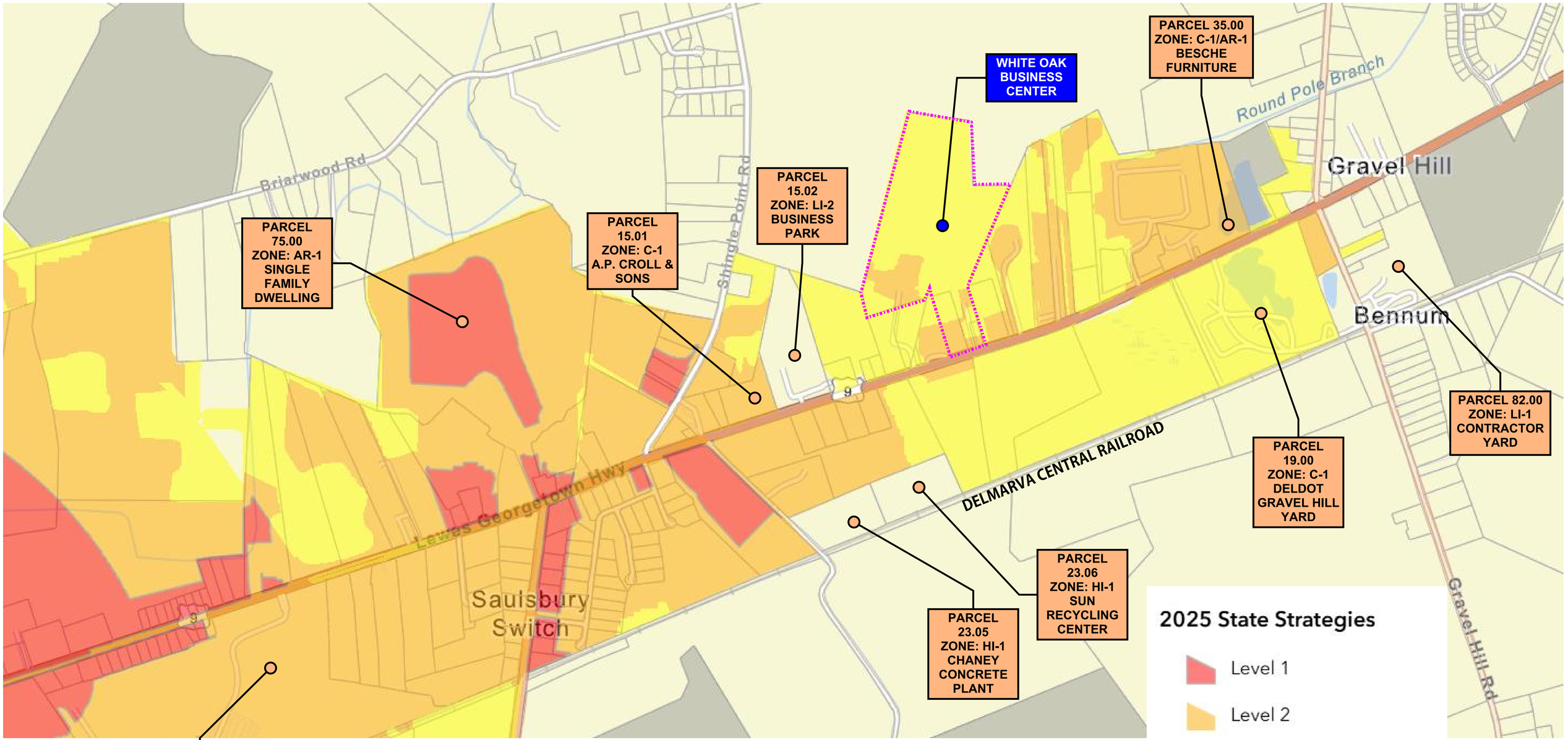
Use	Depth of Front Yard (feet)	Width of Side Yard (feet)	Depth of Rear Yard (feet)
Permitted use	60	5	5

(2) There shall be a side yard not less than 20 feet in width on the side of the lot adjoining a residential district and there shall be a rear yard not less than 30 feet in depth on the rear side of a lot adjoining a residential district.



2025 State Strategies Map

Approved by Governor Meyer in Executive Order #16 On January 30th, 2026.



Corridor Planning Areas (for further study)

Route 9 Study Area

AB

PLANNING COMPATABILITY ANALYSIS

August 21, 2026

Planning and Compatibility Report
Proposed LI-2 (Light Industrial) Zoning District
Tax Parcels 135-11.00-31.00, 135-16.00-17.00 & 135-16.00-70.00
Lewes-Georgetown Highway (U.S. Route 9), Sussex County, Delaware
C/Z 2026 and ORD 26-06

Purpose of Report

This report summarizes planning principles, zoning compatibility standards, and American Planning Association (APA) land use planning practices supporting the ability of a Light Industrial (LI-2) zoning district to coexist with adjacent and nearby residential communities when proper design, buffering, operational controls, and transportation improvements are implemented.

The analysis is based upon:

- Sussex County Comprehensive Plan
- Sussex County Zoning Code (Chapter 115)
- Sussex County Future Land Use Policies
- Relevant APA planning principles concerning land-use compatibility
- Sussex County Tax Parcels:
  - 135-11.00-31.00
  - 135-16.00-17.00
  - 135-16.00-70.00
- U.S. Route 9 (Lewes-Georgetown Highway) corridor planning initiatives
- C/Z 2026 and ORD 26-06 applications and associated public hearing materials.

Executive Summary

Modern planning practice recognizes that light industrial and employment districts can successfully exist near residential neighborhoods when designed in accordance with accepted buffering, access management, landscaping, building orientation, and operational standards.

The proposed LI-2 designation is located along an established major transportation corridor, U.S. Route 9 (Lewes-Georgetown Highway), a roadway specifically intended to accommodate regional traffic, employment centers, and economic development activities. Sussex County and State planning efforts have identified the Route 9 corridor as an important growth and transportation planning area.

From a planning perspective, light industrial districts serve an important role by:

- Providing jobs close to residential populations;
- Diversifying the local tax base;
- Supporting local businesses and service industries;

- Reducing commuting distances;
- Creating opportunities for flex-space, warehousing, research, contractor services, and business support activities.

APA planning guidance consistently supports the concept that industrial and residential uses are compatible. Their compatibility depends upon site design, transitions, and operational performance standards.

Consistency with the Sussex County Comprehensive Plan
The Sussex County Comprehensive Plan is intended to guide growth, economic development, transportation planning, and land-use decisions over the long term. The Plan recognizes the need to balance residential growth with employment opportunities and non-residential development. Key planning objectives include:

Economic Development
The Comprehensive Plan encourages the development of employment-producing land uses in locations capable of supporting workforce opportunities and economic investment. Industrial and business parks are recognized components of a balanced land use system.

Transportation Efficiency
The subject parcels are located on Route 9, a principal east-west arterial highway serving Sussex County. Major transportation corridors are traditionally considered appropriate locations for commercial, business, and industrial development because roadway infrastructure is designed to accommodate higher traffic volumes than local subdivision streets.

Smart Growth Principles
Delaware planning policies promote concentrating employment-generating uses near existing transportation corridors instead of dispersing such uses into agricultural or environmentally sensitive areas. This approach supports efficient use of infrastructure and public services.

LI-2 Zoning and Residential Compatibility
The Sussex County Zoning Code establishes LI-2 (Light Industrial) as a district intended for lower-impact industrial and employment uses rather than heavy manufacturing. The district differs significantly from heavy industrial zoning and typically accommodates uses such as:

- Warehousing
- Light assembly
- Contractor offices
- Distribution facilities
- Technology and research operations
- Business support services
- Flex industrial buildings

These uses generally produce limited off-site impacts when developed under County zoning regulations.

APA Compatibility Principles
The American Planning Association recognizes several planning techniques that allow industrial and residential uses to coexist:

1. Transitional Land Uses
Employment districts located along major highways provide a transition between high-intensity transportation corridors and residential neighborhoods.

2. Landscape Buffers
Effective buffers may include:

- Preserved woodland areas
- Earthen berms
- Dense evergreen plantings
- Fencing and screening

These measures significantly reduce visual impacts and noise transmission.

3. Building Orientation
Industrial buildings can be oriented away from residential lots with loading areas and service functions directed internally toward the site rather than toward adjoining neighborhoods.

4. Controlled Access
Traffic access can be directed exclusively to Route 9 rather than neighborhood streets, thereby protecting residential areas from industrial traffic.

5. Performance Standards
Modern zoning regulations regulate:

- Noise
- Lighting
- Dust
- Odors
- Hours of operation
- Outdoor storage

These standards are intended to ensure neighboring properties are protected from potentially adverse impacts.

Existing Development Pattern Supports Compatibility
The Route 9 corridor already exhibits a mixed development pattern consisting of:

- Residential subdivisions
- Agricultural uses

- Commercial businesses
- Institutional uses
- Employment-generating land uses

This mixture reflects a common suburban growth pattern found throughout Sussex County.
APA planning literature generally recognizes that mixed-use growth corridors function most effectively when housing, employment, and commercial services are located within reasonable proximity to each other. Such patterns reduce travel distances and improve economic sustainability.

The proposed LI-2 zoning would not introduce heavy industrial activity into an exclusively residential area. Rather, it would continue the evolution of the Route 9 corridor as a mixed employment and transportation corridor.

Benefits to Adjacent Residential Communities
When properly developed, LI-2 properties can provide several benefits to nearby residents:

Employment Opportunities
Residents gain access to jobs closer to home, reducing commute times and traffic congestion.

Tax Base Expansion
Industrial and employment properties contribute to County revenues while generally requiring fewer public services than residential development.

Infrastructure Improvements
Industrial developments often contribute to:

- Roadway upgrades
- Turning lanes
- Signal improvements
- Stormwater management facilities
- Utility expansions

Local Services Support
Business and industrial employment centers generate demand supporting restaurants, retail establishments, contractors, and service providers throughout the region.

Route 9 Corridor Planning Considerations
Sussex County and State planning agencies have initiated corridor planning efforts for Route 9 due to continuing growth and increasing transportation demands. The corridor has been identified as an area where future land use and transportation planning should occur in a coordinated manner.

Locating employment uses along a major corridor such as Route 9 is generally consistent with accepted planning practices because:

- The corridor already functions as a regional transportation facility.
- Traffic impacts can be managed through DelDOT review.
- Industrial traffic can be separated from residential neighborhood streets.
- Access management standards can improve roadway safety.

Based upon review of the Sussex County Comprehensive Plan, the Sussex County Zoning Code, APA-compatible planning principles, and the existing development pattern along the Route 9 corridor, the proposed LI-2 zoning classification for Tax Parcels 135-11.00-31.00, 135-16.00-17.00, and 135-16.00-70.00 can reasonably coexist with existing residential subdivisions provided that site planning incorporates appropriate buffering, landscaping, access management, lighting controls, and operational performance standards.

Furthermore, the location along an established major transportation corridor supports the planning rationale for employment-generating uses and is consistent with broader County objectives related to economic development, transportation efficiency, and balanced growth.

Accordingly, it is reasonable to conclude that the proposed LI-2 designation is compatible with surrounding land uses and can be developed in a manner that protects neighboring residential properties while providing long-term economic and community benefits to Sussex County.

References

1. Sussex County Comprehensive Plan. Sussex County, Delaware.
2. Sussex County Planning & Zoning Department, Comprehensive Code Update and Route 9 Corridor Planning Initiatives.
3. Sussex County Public Hearing Notice, C/Z 2063 and ORD 26-06, Tax Parcels 135-11.00-31.00, 135-16.00-17.00 & 135-16.00-70.00.
4. Delaware Office of State Planning Coordination, Comprehensive Planning Guidance.
5. Sussex County Zoning Code, Chapter 115, LI-2 Light Industrial District provisions.
6. Route 9 Corridor Planning Study and Smart Growth Initiatives, Sussex County and State of Delaware.

Relevant Sussex County Zoning Code Excerpts

Purpose of the LI-2 Light Industrial District
The Sussex County Zoning Code establishes the LI-2 Light Industrial District to accommodate light industrial and employment-generating activities while regulating development through County standards governing setbacks, screening, access, environmental controls, lighting, landscaping, and site plan review. The district is intended for uses that are significantly less intensive than Heavy Industrial zoning and that can operate within developed growth corridors when appropriately designed.

Comprehensive Planning Framework
The Sussex County Comprehensive Plan recognizes the need to balance residential growth with employment opportunities, economic development, transportation planning, and infrastructure investment. The Plan serves as the County's long-range guide for determining appropriate land use patterns and growth areas. Employment centers and business uses located along major transportation corridors are consistent with comprehensive planning objectives promoting economic sustainability and efficient infrastructure utilization.

Route 9 Corridor Significance
U.S. Route 9 (Lewes-Georgetown Highway) has been identified by Sussex County and the State of Delaware as a major transportation and growth corridor requiring coordinated land use and transportation planning. Corridor planning efforts acknowledge continuing population growth, increasing traffic demand, and the need for carefully planned commercial, employment, and industrial development in appropriate locations.

Compatibility Standards
Modern planning practice recognizes that residential and light industrial uses can coexist when separated and protected through:

- Landscape buffering;
- Preserved wooded areas;
- Controlled access points;
- Building orientation;
- Lighting controls;
- Stormwater management facilities;
- Noise and operational performance standards; and
- DelDOT transportation review requirements.

These principles are widely recognized by the American Planning Association (APA) as accepted land use compatibility practices and are commonly implemented throughout growing suburban communities.

Additional Findings Supporting Approval

1. The subject properties (Tax Parcels 135-11.00-31.00, 135-16.00-17.00, and 135-16.00-70.00) are located directly along a principal arterial highway rather than within an established residential subdivision.
2. The location provides direct access to Route 9, reducing the likelihood that industrial traffic would utilize local subdivision streets.
3. Residential growth in eastern Sussex County has increased demand for nearby employment opportunities, making workforce-supporting land uses increasingly important.
4. Industrial and flex-space development typically generates a stronger commercial tax base while requiring fewer public services than residential development, creating a positive fiscal impact for Sussex County.
5. The proposed zoning would support economic diversification by providing sites for light manufacturing, contractor services, warehousing, and business support operations.
6. The proposed parcels are situated within an area where mixed land use patterns already exist, including residential, agricultural, commercial, institutional, and transportation-related uses, making the introduction of LI-2 zoning a logical extension of existing corridor development patterns.

Based upon the Sussex County Comprehensive Plan, the Sussex County Zoning Code, accepted American Planning Association planning principles, and the existing development pattern along the Route 9 corridor, the proposed LI-2 Light Industrial rezoning for Tax Parcels 135-11.00-31.00, 135-16.00-17.00, and 135-16.00-70.00 is compatible with surrounding land uses and can successfully coexist with adjacent residential communities. The subject properties front on U.S. Route 9, a major arterial highway specifically intended to accommodate higher-intensity transportation, employment, and economic development activities, rather than relying upon local residential streets for access. Sussex County's Comprehensive Plan encourages balanced growth by providing opportunities for both residential development and employment-generating land uses, while Route 9 has been identified by County and State officials as a strategic corridor for coordinated land-use and transportation planning. The proposed LI-2 designation would create opportunities for light industrial, business park, warehousing, contractor service, and employment-supporting uses that generate jobs, strengthen the local tax base, and expand economic opportunities for Sussex County residents. Professional planning practice recognizes that light industrial uses are compatible with residential communities when proper buffering, landscaping, lighting controls, building orientation, stormwater management, and transportation improvements are incorporated into project design. The existing County review process, DelDOT oversight, and site plan approval requirements provide multiple layers of protection to ensure compatibility with neighboring residential subdivisions. Accordingly, the requested rezoning is consistent with sound planning principles, advances the goals of the Sussex County Comprehensive Plan, supports economic development along an established growth corridor, and represents an appropriate transition between the Route 9 transportation corridor and surrounding land uses.

Planning Opinion: The requested LI-2 zoning and associated Future Land Use Map amendment under C/Z 2026 and ORD 26-06 promote orderly growth, support the County's economic

development objectives, are compatible with surrounding development patterns, and satisfy recognized planning criteria for approval.

AB 6

SOUND ATTENUATION EVALUATION REPORT

SOUND ATTENUATION AND WOODED BUFFER EVALUATION REPORT
Public Hearing Exhibit
Change of Zone No. 2603 and Ordinance No. 26-06
Sussex County, Delaware

EXECUTIVE SUMMARY

This Sound Attenuation and Wooded Buffer Evaluation has been prepared in support of Change of Zone No. 2603 (C/Z 2603) and Ordinance No. 26-06 for consideration by the Sussex County Planning & Zoning Commission and Sussex County Council.

The analysis evaluates the effectiveness of an existing 125-foot-wide wooded buffer located between the proposed LI-2 (Light Industrial-2) zoned property and adjacent residentially zoned lands. The buffer consists of approximately 75 feet of mature woodland located on the LI-2 parcel and 50 feet of existing woodland located on the adjoining residential property, creating a continuous forested corridor that functions as a natural transition between industrial and residential uses.

Based upon accepted acoustical engineering research, Federal Highway Administration (FHWA) guidance, U.S. Forest Service studies, Delaware noise regulations, Sussex County buffering policies, and American Planning Association (APA) land-use compatibility principles, the existing wooded corridor provides meaningful sound attenuation, visual screening, environmental protection, and neighborhood compatibility benefits. Research indicates that dense woodland buffers exceeding 100 feet in width can reduce noise levels by approximately 5 to 8 dBA, which represents a noticeable decrease in perceived sound levels for adjacent residential properties.

The existing buffer also exceeds many conventional landscape screening requirements and is consistent with Sussex County's adopted policies encouraging preservation of existing woodlands and perimeter buffers. While engineered noise walls may achieve greater measurable sound reduction, the existing woodland corridor provides a broader range of benefits, including visual buffering, habitat preservation, ecological sustainability, stormwater benefits, and enhancement of community character.

Accordingly, it is concluded that the existing 125-foot wooded corridor represents an effective and appropriate natural buffer that substantially mitigates potential impacts between permitted LI-2 industrial activities and adjacent residential properties while supporting the land-use compatibility objectives of C/Z 2603 and Ordinance No. 26-06.

1. PURPOSE OF REPORT

The purpose of this report is to:

- Evaluate existing buffer conditions between the proposed LI-2 zoning district and adjacent residentially zoned lands.

- Assess the acoustical and planning benefits of the existing woodland corridor.
- Compare the effectiveness of the existing wooded buffer to engineered noise mitigation measures.
- Provide recommendations for long-term preservation and maintenance of the wooded corridor.
- Demonstrate consistency with Sussex County land use policies and accepted planning practices.

2. EXISTING CONDITIONS

The applications for C/Z 2603 and Ordinance No. 26-06 contain an existing 125-foot-wide wooded buffer located along the interface between the proposed LI-2 (Light Industrial-2) zoning district and adjoining residentially zoned property.

The wooded buffer and corridor consists of two distinct components:

- Approximately 75 feet of existing mature woodland located within the LI-2 zoned parcel; and
- Approximately 50 feet of existing mature woodland located on the adjoining residentially zoned parcel.

Together, these areas create a continuous 125-foot-wide forested corridor that separates industrial and residential land uses.

The buffer consists of:

- Mature canopy trees;
- Understory vegetation;
- Native woodland growth;
- Forest floor organic materials;
- Natural topography; and
- Existing environmental features.

The existing wooded corridor currently functions as:

1. A physical separation between industrial and residential land uses;
2. A visual screening area;
3. A natural sound attenuation corridor;
4. A wildlife habitat corridor;
5. An environmental resource area; and
6. A land-use compatibility transition zone.

Unlike recently planted landscape buffers, the subject woodland consists of established vegetation on both sides of the zoning boundary and therefore provides a substantially greater degree of screening and compatibility than typical newly installed landscaping. The combined wooded area

creates approximately 125 feet of separation between proposed LI-2 uses and adjacent residential properties.

3. ENGINEERING BASIS OF SOUND ATTENUATION

The existing 125-foot wooded corridor functions as a natural sound attenuation system through several recognized acoustical mechanisms.

Sound Absorption
Leaves, branches, bark surfaces, understory vegetation, and natural forest floor materials absorb a portion of sound energy before it reaches nearby residences. The cumulative effect of the entire 125-foot woodland corridor contributes to overall noise reduction.

Sound Scattering and Diffusion
Trees and vegetation interrupt direct sound paths and scatter sound waves in multiple directions. This process reduces the intensity of industrial noise transmitted toward residential properties.

Distance Attenuation
The combined 125-foot buffer increases physical separation between industrial activities and residential receptors. Increased distance is a recognized noise mitigation methodology used in both planning and engineering practice.

Visual and Psychological Screening
Accepted planning literature recognizes that visual separation often reduces perceived noise impacts. Woodland buffers can significantly lessen the perception of industrial activity and improve neighborhood compatibility even where measured sound reductions are moderate.

4. EXPECTED SOUND ATTENUATION PERFORMANCE

Published engineering and forestry research has documented the following noise reduction ranges:

Buffer Type	Typical Noise Reduction
50-foot vegetated buffer	Approximately 2-4 dBA
100-foot dense woodland buffer	Approximately 5-8 dBA
100-foot vegetated buffer with berm	Approximately 10-15 dBA
120-foot dense forest corridor	Up to approximately 7 dBA or greater

Research indicates that dense forested corridors wider than 100 feet provide meaningful reductions in perceived and measured noise levels. Based on these findings, the existing 125-foot woodland corridor may reasonably be expected to achieve noise reductions generally within the documented range of approximately 5 to 8 dBA, depending upon vegetation density, source characteristics, meteorological conditions, and topography.

A reduction of approximately 5 dBA is generally noticeable to the average listener, while reductions approaching 10 dBA are often perceived as cutting the apparent loudness roughly in half.

5. COMPARISON TO ENGINEERED NOISE BARRIERS

Engineered noise barriers such as solid vinyl-fencing, concrete walls, masonry walls, or constructed berms are specifically designed for maximum sound attenuation and may achieve reductions of approximately 10 to 15 dBA when properly designed and located.

While a solid engineered barrier may provide greater acoustical reduction, the existing wooded corridor provides several additional benefits:

- Natural visual screening;
- Preservation of existing mature woodlands;
- Wildlife habitat protection;
- Ecological sustainability;
- Stormwater and environmental benefits;
- Improved neighborhood character;
- Enhanced aesthetics; and
- Consistency with Sussex County woodland preservation objectives.

From a land-use planning standpoint, the existing woodland corridor provides a superior transition between industrial and residential districts because it addresses both environmental and compatibility objectives in addition to noise mitigation.

Potential Supplemental Acoustic Fencing Mitigation

As an additional, non-mandatory mitigation measure, the LI-2 property owner could consider the future installation of a soundproof or acoustically rated fence along portions of the industrial-residential interface if site-specific operations, equipment locations, or subsequent noise observations indicate that supplemental attenuation would be beneficial. Acoustic fencing is generally intended to function as a solid line-of-sight barrier between a noise source and a receiving property, and its effectiveness depends upon height, continuity, density, placement, distance from the source, topography, and the absence of gaps or flanking paths. FHWA noise-barrier guidance recognizes that effective barriers are evaluated based upon source-receiver geometry, insertion loss, diffraction over the top of the barrier, transmission through the barrier material, and flanking around the barrier ends. USDA National Agroforestry Center guidance similarly recognizes that solid barriers, earth berms, and properly designed vegetative buffers may be used independently or in combination for outdoor noise reduction. Federal Highway Administration guidance recognizes that properly designed solid noise barriers can provide meaningful sound reduction, commonly in the range of approximately 10 to 15 dBA under suitable design conditions, although actual performance is project-specific.

For an acoustically rated fence to be effective in an outdoor industrial-residential setting, the fence should be designed as a continuous, solid barrier with sufficient surface mass to resist sound

transmission through the fence material. The principal acoustical objective is to interrupt the direct line of sight between the industrial noise source and the residential receiver, consistent with FHWA noise-barrier design principles. In general, the fence should extend above the height of the dominant noise source or otherwise be placed so that the sound path must diffract over the top of the barrier. Openings, decorative gaps, louvered sections, unsealed joints, gate gaps, and discontinuities at the bottom of the fence can materially reduce performance because sound will follow the path of least resistance around, over, beneath, or through the barrier.

Typical acoustic fence systems may include high-mass composite panels, masonry or precast concrete panels, absorptive metal panels, treated timber acoustic panels, recycled composite systems, or other proprietary outdoor-rated sound barrier materials. Reflective barrier systems primarily block and redirect sound energy, while absorptive systems incorporate sound-absorbing faces or cores intended to reduce reflected noise on the industrial side of the fence. Selection between reflective and absorptive systems would depend upon the nature of the industrial noise source, the relationship of buildings and equipment to the property line, site geometry, and whether reflected noise could affect other on-site or off-site receptors.

A solid vinyl privacy fence may also be considered as a lower-cost structural noise-barrier option when compared to specialized proprietary acoustic fence systems. For purposes of noise mitigation, any vinyl fence considered for this application should be fully opaque and continuous, with interlocking or tightly fitted panels, minimal gaps at posts and rails, and limited openings at the bottom of the fence. The fence should be oriented to block the direct line of sight between specific industrial noise sources and the residential receiver. While standard vinyl fencing is not typically equivalent to high-mass engineered acoustic panels, a properly installed solid vinyl fence may provide some supplemental attenuation by interrupting direct sound transmission, reducing visual exposure, and adding a structural component to the existing wooded buffer system.

If evaluated in the future, the effectiveness of solid vinyl fencing would depend upon fence height, continuity, panel density, placement, grade changes, wind loading, post and footing design, maintenance condition, and the degree to which the fence prevents sound from passing through joints, under the bottom rail, or around its ends. Solid vinyl fencing may be most appropriate as a localized or segmented barrier near specific exterior noise sources, loading areas, service yards, or equipment locations rather than as a full-length industrial acoustic barrier. This option should be considered discretionary and supplemental only, and it should not be interpreted as a commitment, requirement, or substitute for maintaining the existing 125-foot wooded buffer.

Technical performance of an acoustic fence is commonly evaluated using concepts such as insertion loss, sound transmission loss, Sound Transmission Class (STC), Noise Reduction Coefficient (NRC), barrier height, barrier length, source-receiver geometry, and end diffraction. In practical terms, the barrier should be long enough to reduce sound flanking around its ends and high enough to block the direct sound path. Additional design considerations include wind loading, post spacing, foundation design, corrosion resistance, freeze-thaw durability, maintenance access, fire and life-safety requirements, visibility at drive aisles, stormwater flow, vegetative preservation, and compatibility with Sussex County site plan and zoning requirements.

If acoustic fencing were ever evaluated for this site, a project-specific acoustical review should identify the dominant noise sources, receiver locations, ground elevations, equipment operating conditions, expected noise frequency characteristics, and the most effective barrier alignment. The fence would generally be most effective when located close to the noise source or close to the receiving property line, provided that constructability, buffer preservation, access, drainage, and property ownership constraints are addressed. Field noise measurements or predictive modeling may be used, if warranted, to determine whether a fence would provide meaningful additional attenuation beyond the existing 125-foot wooded corridor.

Because the existing wooded corridor already provides physical separation, visual screening, and natural sound attenuation, acoustic fencing should be viewed only as a potential supplemental measure for targeted operational conditions, not as a substitute for preserving the existing woodland buffer. Any future consideration of fencing should be framed as a discretionary engineering option, subject to site-specific need, agency review, owner evaluation, cost-benefit considerations, and final design approval.

Less Costly Alternative Supplemental Mitigation Measures

Before considering proprietary or high-mass acoustic fence systems, less costly and less intensive mitigation measures could be evaluated, if warranted, using a source-path-receiver approach consistent with FHWA construction noise mitigation guidance and general engineering noise-control practice. These measures are not proposed as mandatory conditions; rather, they are identified as practical options that may be considered if future operations demonstrate a need for additional attenuation.

- Preserve and enhance the existing wooded buffer by maintaining canopy, understory, shrubs, and ground cover, and by supplementing gaps with evergreen plantings for year-round screening.
- Use localized earth berms or low earthen mounds where grading allows, recognizing that USDA guidance identifies landforms in combination with vegetative buffers as an effective means of increasing outdoor noise-buffer performance.
- Relocate or orient exterior mechanical equipment, loading areas, backup generators, dumpsters, shop doors, or routine outdoor work areas farther from the residential interface where practical.
- Use operational controls such as limiting unnecessary idling, restricting after-hours outdoor industrial activity near the residential edge, maintaining equipment mufflers, and adopting quieter backup alarms or broadband alarms where permitted by applicable safety requirements.
- Install targeted partial screening near specific equipment or localized noise sources rather than a continuous full-length acoustic fence, provided that the localized screening blocks the direct line of sight and does not create unsafe access or drainage conditions.
- Use building placement, storage buildings, existing structures, solid dumpster enclosures, or opaque service-yard screening as incidental sound-path interruption where such features are otherwise needed for site operations.
- Maintain smooth paved circulation areas, control loose plates or rattling surfaces, and

require regular maintenance of equipment, doors, fans, compressors, and exhaust systems to reduce avoidable tonal or impulsive noise at the source.

In Pennoni's professional opinion, these lower-cost alternatives should generally be considered before committing to proprietary acoustic fencing because source controls, operational management, localized screening, vegetative enhancement, and limited grading improvements may address site-specific noise concerns with less visual, financial, construction, and maintenance burden. If future field observations or sound measurements identify a specific noise concern, the preferred approach would be to first identify the source, evaluate practical source controls, then consider path controls such as supplemental plantings, berming, localized screening, or, only if necessary, a more formal acoustically rated fence system.

In Pennoni's professional opinion, an acoustically rated fence, if ever determined to be warranted, could serve as a supplemental mitigation measure in combination with the existing 125-foot wooded corridor. Such a measure would not replace the value of the existing woodland buffer, but could provide an additional structural component for reducing direct sound transmission from selected industrial activities toward adjacent residential lands. This report does not recommend, require, or commit the applicant or property owner to installation of such fencing; rather, it identifies acoustic fencing as a possible future option that may be evaluated if operational conditions, agency review, or field conditions demonstrate a need for additional noise mitigation.

6. CONSISTENCY WITH SUSSEX COUNTY AND APA PLANNING PRINCIPLES

The existing woodland corridor is consistent with Sussex County's recently adopted perimeter buffer and woodland preservation policies that encourage retention of mature forests and natural vegetation along development boundaries.

The buffer also advances accepted American Planning Association (APA) planning objectives by:

- Providing separation between differing land uses;
- Creating a transition between industrial and residential districts;
- Preserving environmental resources;
- Reducing visual impacts;
- Improving neighborhood compatibility; and
- Supporting context-sensitive site design.

The preservation of existing woodland corridors is widely recognized as a preferred planning approach where adequate buffering can be achieved through natural features rather than solely through structural mitigation measures.

7. WOODED BUFFER MAINTENANCE RECOMMENDATIONS

To ensure continued effectiveness of the wooded corridor, the following measures are recommended:

Woodland Preservation

- Retain existing mature trees.
- Minimize unnecessary clearing.
- Preserve the existing woodland character.

Buffer Width Protection

- Maintain the full 125-foot wooded corridor.
- Prevent encroachments by parking, storage, or future improvements.

Vegetative Density

- Maintain canopy trees, understory vegetation, shrubs, and ground cover.
- Preserve a multi-layer woodland structure.

Supplemental Plantings

- Install native evergreen species where gaps occur.
- Utilize species such as American Holly and Eastern Red Cedar to maintain year-round screening.

Tree Protection During Construction

- Install protective fencing.
- Prevent construction encroachment.
- Limit disturbance within wooded areas.

Invasive Species Management

- Remove invasive vegetation.
- Implement replacement plantings where significant canopy loss occurs.

Topographic Preservation

- Preserve existing grades and natural landforms.
- Utilize natural terrain as part of the overall attenuation strategy.

PLANNING AND ENGINEERING FINDING

Based upon review of accepted acoustical engineering literature, FHWA guidance, U.S. Forest Service research, Delaware noise regulations, Sussex County land use policies, and established planning principles, it is Pennons' professional opinion that the existing 125-foot-wide wooded corridor comprised of approximately 75 feet located on the proposed LI-2 parcel and approximately 50 feet located on the adjacent residential property constitutes a substantial natural buffer between industrial and residential land uses.

The wooded corridor provides measurable sound attenuation, significant visual screening, environmental protection, and enhanced neighborhood compatibility. Preservation and maintenance of this existing buffer represent sound planning and engineering practice and support the objectives of Change of Zone No. 2603 and Ordinance No. 26-06 while protecting the character

and quality of adjacent residential properties. In addition, acoustically rated fencing may be considered as a possible supplemental mitigation measure in the future if site-specific conditions demonstrate that additional noise control is warranted; however, this report does not create any commitment, requirement, or obligation to install such fencing.

This Sound Attenuation and Wooded Buffer Evaluation Report has been prepared by Pennoni Associates Inc. based upon the collective planning, engineering, land development, environmental, and regulatory experience of its professional staff. Pennoni Associates Inc. brings substantial experience in land planning, civil engineering, site design, zoning, permitting, public hearing support, environmental review, and land-use compatibility analysis for development projects within Sussex County and throughout the region.

The opinions and conclusions stated herein are offered as planning and engineering opinions based upon available project information, existing site conditions, generally accepted industry guidance, and the professional judgment of Pennoni Associates Inc. personnel familiar with land-use compatibility, buffering, and noise-mitigation considerations. This report is intended to support the public hearing record for Change of Zone No. 2603 and Ordinance No. 26-06 and should be interpreted in that context.

Researched and Prepared by:

Pennoni Associates Inc.

Mark H. Davidson**,** Vice President
Principal Land Planner

Date: August 19, 2026

References and Citations

Federal and Engineering References

1. **Federal Highway Administration (FHWA)**
   - *Highway Traffic Noise Analysis and Abatement Policy and Guidance*
   - U.S. Department of Transportation, Federal Highway Administration.
   - Utilized for accepted noise attenuation principles and comparative performance of vegetative buffers and engineered noise barriers.
   - Also utilized for technical acoustic fence and barrier principles, including line-of-sight blockage, insertion loss, diffraction, flanking, barrier geometry, barrier materials, safety, structural considerations, installation, maintenance, cost, and effectiveness evaluation.

2. **United States Forest Service**
   - *Buffers for Noise Control*
   - USDA National Agroforestry Center.
   - Provides documented noise attenuation ranges for forested and vegetated buffers.
   - Also utilized for lower-cost supplemental mitigation concepts, including dense vegetative buffers, evergreen plantings, earth berms or landforms, and combined structural-vegetative buffering approaches.

3. **United States Forest Service**
   - *Using Agroforestry to Buffer Noise*
   - USDA National Agroforestry Center.
   - Provides guidance on sound attenuation through vegetation and woodland screening effectiveness.
   - Also relied upon for general noise-buffer design principles, including density, year-round foliage, placement near the noise source, and use of vegetation with solid barriers or landforms where greater attenuation is desired.

4. **Peng, Bullen & Kean**
   - *The Effects of Vegetation on Road Traffic Noise*
   - International Congress on Noise Control Engineering.
   - Research regarding sound attenuation performance of dense vegetative corridors.

Delaware Regulatory References

1. **State of Delaware**
   - *7 Del. Admin. Code 1149 - Regulations Governing the Control of Noise*
   - Delaware Department of Natural Resources and Environmental Control (DNREC).
   - Establishes definitions and standards relating to noise impacts and noise control measures.

Sussex County References

1. **Sussex County, Delaware**
   - *Ordinance Regarding Perimeter Buffers Around Residential Developments*
   - Adopted August 27, 2024.
   - Establishes buffer preservation and woodland retention requirements applicable to development adjacent to residential uses.

2. **Sussex County, Delaware**
   - *Sussex County Adopts New Rules to Protect and Enhance Residential Buffer Zones*
   - August 27, 2024.
   - Provides policy basis supporting preservation of existing woodlands as preferred perimeter buffers.

Project-Specific References

1. **Existing Project Buffer Documentation**
   - "Create a Voluntary Landscape Buffer (Industrial-Residential Edge)"
   - Internal project planning documentation.
   - Provides woodland buffer design concepts, preservation measures, and compatibility objectives.
2. **Voluntary Landscape Buffer Note**
   - Industrial Properties Adjacent to Residential Lands – Sussex County, Delaware.
   - Internal project planning documentation.
   - Provides recommended woodland preservation and buffer management practices.

AB 7

COST BENE IT ANALYSIS

COST-BENEFIT ANALYSIS AND PUBLIC BENEFITS REPORT
Proposed LI-2 Light Industrial Rezoning
White Oak Business Center
Georgetown Hundred, Sussex County, Delaware

EXECUTIVE SUMMARY

This report evaluates the public benefits, fiscal impacts, infrastructure investments, compliance considerations, and economic advantages associated with the proposed rezoning of the entire boundary of the subject lands to the LI-2 Light Industrial District. The rezoning area is based upon the full project boundary for Tax Map Parcels 135-11.00-31.00, 135-16.00-17.00, and 135-16.00-70.00, consisting of approximately 42.54± acres. The intent of the rezoning is to establish a unified LI-2 zoning classification over the full project boundary while recognizing that the front C-1 portion of the property contains previously approved uses and site improvements that will be constructed consistent with the approvals already issued for that portion of the property.

For purposes of this report, the rezoning should be understood as a parcel-wide land-use request rather than a request limited to only the rear portion of the lands. The full boundary includes the existing and approved front commercial/contractor-yard area along Lewes-Georgetown Highway together with the remaining lands proposed to be placed under the LI-2 Light Industrial classification. The approved front-portion uses - including contractor-yard, storage, parking, access, utility, stormwater, and related site improvements - are not speculative uses; they have been reviewed through applicable agency and County approval processes and are intended to be constructed as approved.

The parcel-wide LI-2 rezoning provides a more consistent and legally coherent zoning framework for the property by aligning the full boundary with the existing and approved industrial, contractor-service, storage, infrastructure, and employment-generating uses on the site. The requested classification also supports orderly development, avoids fragmented zoning treatment across one integrated property, and allows future site planning to proceed under a single industrial zoning district subject to all applicable Sussex County, State, and federal review requirements.

SECTION 1

PROJECT OVERVIEW

Proposed Development

The White Oak Business Center is proposed as a multi-pad industrial business park in Georgetown Hundred, Sussex County, Delaware. The development includes industrial pad sites, internal roadways, utility infrastructure, public water and sewer service, stormwater management facilities, landscaping, buffers, and associated site improvements. The project is planned to support up to approximately 320,000 square feet of industrial building area.

The rezoning area follows the entire project boundary, not merely a conceptual development envelope. The assembled property consists of approximately 42.54± acres and includes Tax Map Parcels 135-11.00-31.00, 135-16.00-17.00, and 135-16.00-70.00. The existing zoning includes AR-1 and C-1 classifications, and the proposed rezoning would consolidate the full boundary into the LI-2 Light Industrial District. This full-boundary approach is important from a legal and planning standpoint because it removes split-zoning uncertainty, provides one coherent zoning classification for an integrated property, and allows all future site improvements to be reviewed under a consistent regulatory framework.

The front portion of the property currently associated with C-1 zoning and previously approved site activity is a material part of the rezoning request. That area has received approvals and agency clearances for contractor-yard and related improvements, including County final site-plan approval, State Fire Marshal review, DelDOT entrance construction authorization, Sussex Conservation District sediment and stormwater plan approval, utility coordination, and federal jurisdictional determinations. Those approved uses and improvements are intended to be constructed as approved and should be treated in this report as established project components rather than hypothetical future uses.

Development Characteristics

Item	Description
Total Site Area	42.54 ± Acres based on full project boundary
Proposed Zoning	LI-2 Light Industrial
Proposed Industrial Pads	Approved front-portion contractor-yard/storage improvements plus future LI-2 industrial/flex development areas

Item	Description
Potential Building Area	To be determined through final site planning and agency review; previously approved front-portion buildings and contractor-yard uses to proceed as approved
Water Service	Public Water
Sewer Service	Public Sewer
Development Type	Industrial Business Park
Boundary Parcels Included	Tax Map Parcels 135-11.00-31.00, 135-16.00-17.00, and 135-16.00-70.00
Approved Front-Parcel Uses	Contractor-yard, storage, access, utility, stormwater, and related site improvements to be constructed consistent with existing approvals

SECTION 2

DIRECT ECONOMIC BENEFITS

Approved Front-Portion Improvements

The existing front portion of the property is already subject to a series of approvals and agency reviews that support construction of contractor-yard, storage, utility, access, stormwater, fire-safety, and related site improvements. Those approvals confirm that the front portion of the property is not merely a future development concept, but an approved and constructible component of the overall project. The requested LI-2 rezoning therefore incorporates both the previously approved front-portion improvements and the remaining lands within the surveyed boundary under a unified industrial zoning classification.

- Sussex County Planning and Zoning approval of revised final site plans for Yellow Metal identifying contractor-yard/storage buildings, fencing, gates, stormwater management, and related site improvements.
- Conditional Use approval for a paving construction business with office, equipment storage, buffers, use limitations, and site-plan compliance conditions.

- Office of the State Fire Marshal plan review approval for the Yellow Metal storage project, subject to applicable State Fire Prevention Regulations and final inspection requirements.
- DelDOT authorization to proceed toward a Permit for Entrance Construction for the existing commercial entrance on Lewes-Georgetown Highway, including required entrance modifications.
- Sussex Conservation District approval of the sediment and stormwater management plan, subject to construction, inspection, closeout, and compliance conditions.
- Artesian utility review indicating no further comments following revised utility-plan coordination.
- U.S. Army Corps of Engineers Approved Jurisdictional Determination and No Permit Required determination confirming that identified aquatic resources within the review area are non-jurisdictional for federal permitting purposes under the determinations issued.

These approvals provide an important legal and planning foundation for the rezoning analysis because they demonstrate that the front portion of the property has already been reviewed for compatibility, access, fire safety, stormwater, utilities, and environmental jurisdictional status. The LI-2 rezoning does not disregard those approvals; rather, it incorporates them into a parcel-wide zoning framework so that the approved front-portion uses and any future industrial use of the remaining lands can be evaluated and administered consistently.

Compliance Finding

The record of approvals for the front C-1 portion of the property demonstrates substantial legal and regulatory compliance. The approved uses have been reviewed through Sussex County land-use and site-plan procedures, State Fire Marshal review, DelDOT entrance authorization, Sussex Conservation District sediment and stormwater review, utility coordination, and federal jurisdictional review. Accordingly, the report treats the front-portion improvements as legally recognized, agency-reviewed, and constructible project components. Future development of the remaining LI-2 lands will remain subject to all applicable Sussex County Code requirements, agency approvals, building permits, stormwater compliance, entrance permits, utility approvals, and any other federal, state, or local regulatory obligations in effect at the time of construction.

Private Capital Investment

The project is projected to support approximately:

Site Readiness Infrastructure

- Engineering and Permitting
- Site Preparation
- Internal Roadways
- Stormwater Facilities
- Water Infrastructure
- Sewer Infrastructure
- Utility Extensions
- Landscaping and Buffers

Total Infrastructure Investment:

$10,505,000

Vertical Development Investment

- Industrial Buildings
- Soft Costs
- Financing and Carrying Costs

Total Vertical Development:

$45,500,000

Total Project Investment

Approximately $56,005,000

Because the front C-1 portion of the property includes approved contractor-yard, storage, access, utility, stormwater, and related site improvements that are intended to be constructed as approved, the economic analysis includes those improvements as near-term capital investment rather than speculative future value. Construction of the front-portion approvals will generate immediate project expenditures, contractor activity, permit and inspection revenues, fire district fee revenue, entrance-improvement

investment, utility-related fees, and increased taxable nonresidential property value. These near-term improvements strengthen the overall benefit-cost ratio because a portion of the project benefits can be realized before full buildout of the broader LI-2 industrial development area.

Front-Portion Approved Improvement	Revenue / Benefit Impact
Approved contractor-yard and storage buildings	Building permit fees, plan review fees, inspection fees, fire district fees, construction employment, and increased nonresidential assessment value
Approved entrance and access improvements	Private investment in transportation safety, access management, and regulatory compliance without shifting construction cost to the public
Approved sediment and stormwater improvements	Water-quality treatment, erosion control, regulatory compliance, construction bonding or guarantee requirements, and long-term stormwater management benefits
Approved utility coordination and service extensions	Connection fees, service revenues, utility-system readiness, and infrastructure capacity for approved and future industrial users

Job Creation Benefits

The project is expected to create both temporary construction employment and long-term permanent employment.

Construction Employment

Category	Jobs
Direct Construction Jobs	250-300
Indirect/Induced Jobs	150-200

Category	Jobs
Total Employment Impact	400-500

Permanent Employment

Category	Estimated Jobs
Manufacturing	Included
Warehousing	Included
Distribution	Included
Logistics	Included
Contractor Services	Included
Total Permanent Jobs	100-150

Payroll Generation

Category	Amount
Annual Payroll Low Estimate	$5.5 Million
Annual Payroll High Estimate	$11.25 Million
Ten-Year Payroll Low Estimate	$55 Million
Ten-Year Payroll High Estimate	$112.5 Million

SECTION 3

COUNTY REVENUE BENEFITS

Building Permit Revenue

Industrial development generates substantial permit revenues during construction.

Permit categories may include:

- Building permits
- Electrical permits
- Mechanical permits
- Plumbing permits
- Fire suppression permits
- Sign permits
- Occupancy permits

The project documents identify building permit fees as one of the anticipated fiscal benefits of the development.

Public Benefit

These fees directly support:

- Sussex County Building Code Department operations
- Permit processing staff
- Plan review functions
- Code enforcement activities
- Administrative services

Building Inspection Revenue

Construction of industrial facilities requires numerous inspections during development.

Inspection categories may include:

- Foundation inspections
- Structural inspections
- Electrical inspections
- Plumbing inspections
- Mechanical inspections

- Fire suppression inspections
- Final occupancy inspections

The project documents specifically identify inspection fees as a fiscal benefit associated with industrial development.

Public Benefit

Inspection revenues support:

- Building inspectors
- Public safety programs
- Code enforcement activities
- Training and certification
- Vehicles and equipment

Planning and Zoning Review Fees

Development applications generate County review revenues through:

- Rezoning review
- Site plan review
- Land use review
- Administrative processing
- Public hearing administration

The project documents specifically identify planning and land-use review fees as fiscal benefits.

Public Benefit

These revenues support:

- Planning & Zoning operations
- GIS and mapping systems
- Record management

- Public hearing administration
- Professional review services

SECTION 4

PUBLIC WATER AND SEWER BENEFITS

The project includes substantial public utility infrastructure.

Proposed Utility Infrastructure

- Approximately 2,910 LF of water main
- Approximately 2,856 LF of sanitary sewer
- Eleven sewer manholes
- Five fire hydrants
- Utility extensions
- Public utility connections

Utility Revenue Categories

The project may generate:

- Water system connection fees
- Sewer system connection fees
- Impact fees
- Capacity fees
- Meter fees
- Ongoing utility service revenues

The attached documents identify public water and sewer infrastructure as a major public benefit and utility advantage associated with the project.

Public Benefit

Utility fees support:

- Treatment plant improvements
- Utility system upgrades
- New capital investment
- Long-term system maintenance
- Future infrastructure expansion
- Improved service reliability

SECTION 5

FIRE PROTECTION BENEFITS

The project includes installation of public water infrastructure and fire hydrants.

Public Benefits

- Increased fire suppression capability
- Improved emergency response
- More reliable water supply
- Enhanced public safety
- Improved community resilience
- Additional infrastructure available to serve future development

SECTION 6

STORMWATER AND ENVIRONMENTAL BENEFITS

The project includes regional stormwater management facilities designed under current regulatory standards.

Public Benefits

- Reduced flooding potential
- Improved watershed protection
- Better water quality treatment
- Erosion control
- Groundwater recharge
- Enhanced resiliency during major storm events
- Long-term environmental stewardship

SECTION 7

TRANSPORTATION BENEFITS

The project includes:

- Internal roadway construction
- Access management improvements
- Entrance improvements
- Transportation infrastructure investment

Public Benefits

- Improved roadway efficiency
- Better truck circulation
- Reduced congestion
- Enhanced emergency access
- Improved roadway safety
- Reduced future public infrastructure burden

SECTION 8

TAX BASE BENEFITS

The project documents estimate:

Metric	Value
Year 1 Stabilized Property Value	~$38.5 Million
Year 10 Stabilized Property Value	~$50.9 Million

Public Benefits

The project provides:

- Increased County property-tax base
- Increased school district assessment base
- Increased State economic activity
- Long-term nonresidential tax generation

Importantly, the development does not create residential dwelling units and therefore avoids the direct public-school enrollment impacts commonly associated with residential projects.

SECTION 9

LAND USE AND PLANNING BENEFITS

The proposed LI-2 zoning provides long-term planning benefits by applying a unified light-industrial zoning classification to the entire surveyed boundary of the subject property. This approach recognizes the existing and approved front-portion contractor-yard and storage improvements, while also allowing the balance of the property to be planned, reviewed, buffered, served by infrastructure, and regulated as one coordinated employment-generating land use. From a planning and legal perspective, parcel-wide rezoning reduces the potential for fragmented use limitations, inconsistent zoning lines, and unnecessary uncertainty regarding future site administration.

Public Benefits

- Creation of a designated employment center
- Improved land use compatibility
- Centralized infrastructure investment
- Predictable development patterns
- Reduced land-use conflicts
- Elimination of split-zoning uncertainty across an integrated project boundary
- Recognition of previously approved front-portion contractor-yard and storage improvements as part of the overall rezoning analysis
- Enhanced economic development opportunities
- Support for future business recruitment

SECTION 10

SHOVEL-READY SITE BENEFITS

The project is specifically intended to create development-ready industrial sites for future employers.

Public Benefits

- Faster business recruitment
- Reduced development timelines

- Increased competitiveness with surrounding states
- Expanded industrial inventory
- Attraction of new employers
- Retention of local businesses seeking expansion opportunities

SECTION 11

APPROXIMATE PUBLIC REVENUE BENEFITS

In addition to the broader economic and infrastructure benefits described above, the proposed industrial business park and the approved front C-1 improvements are expected to generate meaningful public revenues for Sussex County, the State of Delaware, and Indian River School District. The following estimates are planning-level projections based upon the current development assumptions of approximately $45.5 million in vertical construction value, approximately $56.0 million in total project investment, approximately 100 to 150 permanent jobs, the approved front-portion contractor-yard and storage improvements, and an estimated stabilized property value ranging from approximately $38.5 million in Year 1 to approximately $50.9 million in Year 10. Actual revenues will depend upon final assessed values, final building permit valuations, adopted tax rates, tenant mix, wage levels, business activity, utility connection requirements, approved front-portion building permits, and applicable fee schedules in effect at the time of permitting and operation.

Revenue Source	Basis / Formula	Approximate Project Revenue
Sussex County building permit fee	Outside town limits: $5.00 for first $1,000 of construction value plus $2.50 per each additional $1,000 of value	Approximately $113,752.50 based on $45.5 million vertical construction value
Fire district fee	0.0015 of construction value	Approximately $68,250 based on $45.5 million construction value
Sussex County Building Code plan review and inspection fee	Commercial/apartment base fee of $360 plus $5.00 per $1,000 of construction value for plan review and inspections	Approximately $227,860 based on $45.5 million construction value

Revenue Source	Basis / Formula	Approximate Project Revenue
Front C-1 approved construction revenues	Permit, plan review, inspection, fire district, utility, entrance, and stormwater-related revenues generated as approved front-portion improvements proceed to construction	Additional near-term public revenue above the broader LI-2 buildout projections; final amount dependent on approved building valuations, permit sequencing, utility connections, and agency fee schedules

Revenue Source	Basis / Formula	Approximate Project Revenue
Indian River School District and Sussex Technical School property taxes	Indian River School District 2026 school tax rate of 0.1703 per $100 assessment, plus Sussex Technical School rate of 0.0211 per $100 assessment; combined school-related rate of 0.1914 per $100 assessment	Approximately $73,689 annually at $38.5 million value and approximately $97,423 annually at $50.9 million value, subject to final assessed value and annual rate confirmation
State gross receipts, business license, and withholding revenue	Revenue depends on tenant classification, taxable receipts, payroll structure, and applicable Delaware tax rules	The projected annual payroll of $5.5 million to $11.25 million creates a recurring wage base that may support State withholding and business activity revenue

Fiscal Revenue Finding

The proposed industrial business park provides a balanced fiscal benefit to Sussex County, Indian River School District, Sussex Technical School, and the State of Delaware. Sussex County receives one-time development, Building Code plan review, inspection, fire district, and permit-related revenues together with recurring County property-tax revenues. Indian River School District and Sussex Technical School receive recurring nonresidential tax-base support without direct residential enrollment

impacts. The State of Delaware benefits from business activity, employment, payroll, and operating revenues associated with future industrial users.

SECTION 12

BENEFIT-COST ANALYSIS SUMMARY

Benefit Category	Public Benefit
Private Investment	$56 Million
Infrastructure Improvements	$10.5 Million
Permanent Jobs	100-150
Construction Jobs	400-500 Total Impact
Annual Payroll	$5.5M-$11.25M
10-Year Payroll	$55M-$112.5M
Water Infrastructure	2,910 LF
Sewer Infrastructure	2,856 LF
Fire Hydrants	5
Industrial Pad Sites	14
Year 10 Property Value	~$50.9 Million
County, State, and School District Revenue	Permit fees, inspection fees, property taxes, school taxes, business license activity, gross receipts taxes, withholding taxes, and related public revenues

CONCLUSION AND PUBLIC PURPOSE FINDING

The proposed LI-2 rezoning creates substantial public benefits that extend well beyond direct economic impacts. The rezoning request is evaluated on the basis of the entire project boundary, consisting of approximately 42.54± acres across Tax Map Parcels 135-11.00-31.00, 135-16.00-17.00, and 135-16.00-70.00. The full-boundary rezoning appropriately includes the front portion of the property that has already received approvals for contractor-yard, storage, access, utility, stormwater, and related site improvements. Those approved uses and improvements are intended to be constructed as approved and should be recognized as an established, legally compliant component of the overall project.

The requested LI-2 classification advances orderly land-use planning by eliminating fragmented zoning treatment across one integrated property, aligning the existing and approved industrial-service activities with the balance of the lands proposed for employment-generating use, and establishing a consistent regulatory framework for future site-plan review. The development will result in significant private investment, public utility expansion, enhanced fire protection, modern stormwater infrastructure, transportation improvements, permit and inspection revenues, increased nonresidential tax base, and shovel-ready industrial development capacity capable of supporting future employers.

Based upon the full 42.54± acre project boundary, the existing and approved front-portion uses, the submitted development program, infrastructure investments, fiscal impact analysis, employment projections, public utility improvements, and demonstrated regulatory compliance, the proposed LI-2 rezoning advances the public health, safety, and welfare of Sussex County. It creates a planned employment center, increases public infrastructure capacity, strengthens the tax base, supports economic diversification, promotes orderly growth within an infrastructure-supported area, and provides a legally coherent zoning classification for the entire property. The approved front C-1 improvements further enhance the benefit-cost analysis by generating near-term construction activity, permit revenues, inspection revenues, utility revenues, stormwater compliance benefits, and increased nonresidential property value.

Accordingly, the public benefits of the proposed full-boundary LI-2 rezoning substantially outweigh the associated development costs and support approval of the requested LI-2 zoning classification.

AB

PROPERTY APPROVALS

PLANNING & ZONING
JANELLE M. CORNWELL, AICP
DIRECTOR
(302) 855-7878 T
(302) 854-5079 F

Sussex County
DELAWARE
sussexcountyde.gov

April 8, 2019

Yellow Metal, LLC
20873 Old Landing Road
Rehoboth Beach, DE 19971

RE: Notice of Decision Letter for Conditional Use (CU 2162) Yellow Metal, LLC to be located at 20288 Broadogs Place, Georgetown.
Tax Parcel: 135-11.00-31.00

To Whom it May Concern:

At their meeting of March 26, 2019, the Sussex County Council approved the Conditional Use application for a paving construction business with an office to be located at 20288 Broadogs Place with twenty (20) conditions. The Conditional Use shall be substantially underway within three (3) years of the County Council approval otherwise the Conditional Use shall expire. A Site Plan showing the conditions of approval shall be reviewed and approved by the Planning Commission prior to commencement of the use of the paving construction business with an office. The following are the conditions:

A. The use shall be limited to a paving construction business with an office and the storage of equipment associated with that use.
B. There shall be a 50-foot buffer around the site. The existing woodlands and vegetation shall not be disturbed in these buffer areas. This buffer shall not be required for the C-1 portion of the site.
C. According to information presented during the hearing, there are wetlands on this site. The Final Site Plan shall contain a wetlands delineation, and there shall be a 50-foot vegetated buffer from all wetland areas. The existing trees and vegetation shall not be disturbed in these buffer areas.
D. There shall not be any outside storage of paint, seal coating or other liquid materials associated with the use. All storage of paint, seal coating or other liquid materials shall occur within the area that is currently zoned C-1.
E. No retail sales shall occur from the site.
F. No vehicle or equipment repairs shall occur outside.
G. All lighting on the site shall be downward screened so that it does not shine on neighboring properties or roadways.
H. All dumpsters on the site are to be located near the interior of the property and they must be screened from the view of neighboring properties and roadways.
I. The applicant shall comply with all DelDOT requirements for entrance and roadway improvements.
J. The hours of operation shall be Monday through Saturday from 5:30 a.m. until 6:30 p.m. No deliveries to or from the site shall occur before 7:00 a.m.

K. One lighted sign shall be permitted on the site. It shall be no larger than 32 square feet per side.
L. All vehicle parking and large equipment storage areas shall be clearly shown on the Final Site Plan and clearly marked on the site itself. All vehicles, including the applicant's vehicle and employees' vehicles, must only be parked within the designated areas.
M. No outside burning of any materials shall occur on the site.
N. No materials such as asphalt or stone shall be permanently stored or stockpiled on the site. These materials needed for current jobs may remain on the site, but they shall only be located in the area that is currently zoned C-1.
O. No junked, in-operable or untitled vehicles shall be located on the site.
P. The applicant has stated that there will be milling operation proposed for the site. Any milling operations that occur shall be subject to the following additional conditions:
    1. The Applicant shall only mill asphalt materials that are the result of its own roadwork and paving operations. No materials shall be accepted for milling from any third parties.
    2. No milling of trees, stumps, mulch or materials other than the Applicant's own asphalt materials shall occur on the site.
    3. Milling shall only occur between 3:00 p.m. and 6:00 p.m., Monday through Friday. No milling operations shall occur on Saturday or Sunday.
    4. Milling operations shall only occur in the area of land that is currently zoned C-1 and is far away from the boundaries of property as possible.
    5. No more than 50 tons (approximately 2 dump truck loads) shall be milled and located on the site at any one time. These materials shall be located on an asphalt pad which is no larger than 50 by 100-feet in size. The asphalt pad shall be clearly shown on the Final Site Plan. No millings shall be permanently stored on the site.
    6. The pile of millings shall not be higher than 10-feet.
Q. No more than 25 acres of this property shall be used as part of the permitted Conditional Use. On the Final Site Plan the Applicant shall designate the area excluded from this Conditional Use by establishing a line that runs parallel with Route 9 right-of-way. The Final Site Plan shall show that no activities permitted by this Conditional Use shall occur on the property to the north of this line. In addition, there shall be markings installed along this line to confirm its location on the site itself
R. Only uses that shall be permitted on the area of the property that is not zoned C-1 are office uses and the parking and storage of equipment and vehicles. All other uses shall occur within the area of this property that currently has C-1 zoning.
S. Failure to comply with any of these conditions shall be grounds for the termination of the Conditional Use approval.
T. The Final Site Plan shall be subject to the review and approval of the Sussex County Planning and Zoning Commission.

The Final Site Plan shall be prepared by a licensed Delaware Surveyor or Engineer and shall contain the conditions of approval on the plan. The Final Site Plan shall be approved prior to the commencement of the use on the property. The Site Plan shall be reviewed and approved by the Planning Commission. Agency approvals include, but are not limited to: DelDOT, Sussex Conservation District, and the Office of the State Fire Marshal.

Please submit a minimum of two (2) full size paper copies and an electronic copy (PDF) of the Preliminary Site Plan to the Planning and Zoning Office a minimum of twenty (20) days prior to a Planning Commission meeting.

An approved copy of the Ordinance granting approval of the Conditional Use will be sent to you from the Clerk of Council.

Please feel free to contact me with any questions during business hours 8:30 am to 4:30 pm, Monday through Friday, at (302)855-7878.

Sincerely,

Janelle M Cornwell

Janelle M. Cornwell, AICP
Director of Planning and Zoning

CC: Blake Carey, Esq.
E.F. Quillen, Zoning Inspector
Mike Brady, Public Works
Andy Wright, Building Code
John Ashman, Engineering
Bill Pfaff, Economic Development
CU 2162 file

CONDITIONAL USE (CU2162) YELLOW METAL, LLC.

SITE DATA

CURRENT OWNER:	YELLOW METAL, LLC. 20288 BROADOGS PL. GEORGETOWN, DE 19963
TAX MAP, PARCEL NO.:	1-35-11.00-31.00
DEED REF.:	3467/332
SITE AREA:	39.630± ACRES
EXISTING ZONING:	C-1 & AR-1 WITH CONDITIONAL USE
PROPOSED ZONING:	C-1 & AR-1 WITH CONDITIONAL USE

C-1 ZONING REQUIREMENTS		AR-1 ZONING REQUIREMENTS
FRONT YARD:	60 FT.	25 FT.
SIDE YARD:	5 FT.	10 FT.
REAR YARD:	5 FT.	10 FT.
WIDTH OF LOT:	75 FT.	60 FT.
DEPTH OF LOT:	100 FT.	100 FT.
MINIMUM LOT AREA:	10,000 SF.	20,000 SF.

MAXIMUM BUILDING HEIGHT: 42 FT.

WATER SUPPLY: ON-SITE
SANITARY SEWER: ON-SITE

FLOOD HAZARD MAP: THE PROPERTY IS NOT IMPACTED BY THE 100 YEAR FLOODPLAIN AS DETERMINED BY FEMA FLOOD MAP 10005C0325L (DATED JUNE 20, 2018),

DATUM
VERTICAL: NAVD88
HORIZONTAL: NAD 83 (DE STATE PLANE)

THE FOLLOWING ARE THE CONDITIONS:

A. THE USE SHALL BE LIMITED TO A PAVING CONSTRUCTION BUSINESS WITH AN OFFICE AND THE STORAGE OF EQUIPMENT ASSOCIATED WITH THAT USE.

B. THERE SHALL BE A 50-FOOT BUFFER AROUND THE SITE. THE EXISTING WOODLANDS AND VEGETATION SHALL NOT BE DISTURBED IN THE BUFFER AREAS. THIS BUFFER SHALL NOT BE REQUIRED FOR THE C-1 PORTION OF THE SITE.

C. ACCORDING TO INFORMATION PRESENTED DURING THE HEARING, THERE ARE WETLANDS ON THIS SITE. THE FINAL SITE PLAN SHALL CONTAIN A WETLANDS DELINEATION, AND THERE SHALL BE A 50- FOOT VEGETATED BUFFER FROM ALL WETLAND AREAS. THE EXISTING TREES AND VEGETATION SHALL NOT BE DISTURBED IN THESE BUFFER AREAS.

D. THERE SHALL NOT BE ANY OUTSIDE STORAGE OF PAINT, SEAL COATING OR OTHER LIQUID MATERIALS ASSOCIATED WITH THE USE. ALL STORAGE OF PAINT, SEAL COATING OR OTHER LIQUID MATERIALS SHALL OCCUR WITHIN THE AREA THAT IS CURRENTLY ZONED C-1.

E. NO RETAIL SALES SHALL OCCUR FROM THE SITE.

F. NO VEHICLE OR EQUIPMENT REPAIRS SHALL OCCUR OUTSIDE.

G. ALL LIGHTING ON THE SITE SHALL BE DOWNWARD SCREENED SO THAT IT DOES NOT SHINE ON NEIGHBORING PROPERTIES OR ROADWAYS.

H. ALL DUMPSTERS ON THE SITE ARE TO BE LOCATED NEAR THE INTERIOR OF THE PROPERTY AND THEY MUST BE SCREENED FROM THE VIEW OF NEIGHBORING PROPERTIES AND ROADWAYS.

I. THE APPLICANT SHALL COMPLY WITH ALL DELDOT REQUIREMENTS FOR ENTRANCE AND ROADWAY IMPROVEMENTS.

J. THE HOURS OF OPERATION SHALL BE MONDAY THROUGH SATURDAY FROM 5:30 A.M. UNTIL 6:30 P.M. NO DELIVERIES TO OR FROM THE SITE SHALL OCCUR BEFORE 7:00 A.M.

K. ONE LIGHTED SIGN SHALL BE PERMITTED ON THE SITE. IT SHALL BE NO LARGER THAN 32 SQUARE FEET PER SIDE.

L. ALL VEHICLE PARKING AND LARGE EQUIPMENT STORAGE AREAS SHALL BE CLEARLY SHOWN ON THE FINAL SITE PLAN AND CLEARLY MARKED ON THE SITE ITSELF. ALL VEHICLES, INCLUDING THE APPLICANT'S VEHICLE AND EMPLOYEES' VEHICLES, MUST ONLY BE PARKED WITHIN THE DESIGNATED AREAS.

M. NO OUTSIDE BURNING OF ANY MATERIALS SHALL OCCUR ON THE SITE.

N. NO MATERIALS SUCH AS ASPHALT OR STONE SHALL BE PERMANENTLY STORED OR STOCKPILED ON THE SITE. THESE MATERIALS NEEDED FOR CURRENT JOBS MAY REMAIN ON THE SITE, BUT THEY SHALL ONLY BE LOCATED IN THE AREA THAT IS CURRENTLY ZONED C-1.

O. NO JUNKED, IN-OPERABLE OR UNTITLED VEHICLES SHALL BE LOCATED ON THE SITE.

P. THE APPLICANT HAS STATED THAT THERE WILL BE MILLING OPERATION PROPOSED FOR THE SITE. ANY MILLING OPERATIONS THAT OCCUR SHALL BE SUBJECT TO THE FOLLOWING ADDITIONAL CONDITIONS:

1. THE APPLICANT SHALL ONLY MILL ASPHALT MATERIALS THAT ARE THE RESULT OF ITS OWN ROADWORK AND PAVING OPERATIONS. NO MATERIALS SHALL BE ACCEPTED FOR MILLING FROM ANY THIRD PARTIES.
2. NO MILLING OF TREES, STUMPS, MULCH OR MATERIALS OTHER THAN THE APPLICANT'S OWN ASPHALT MATERIALS SHALL OCCUR ON THE SITE.
3. MILLING SHALL ONLY OCCUR BETWEEN 3:00 P.M. AND 6:00 P.M., MONDAY THROUGH FRIDAY. NO MILLING OPERATIONS SHALL OCCUR ON SATURDAY OR SUNDAY.
4. MILLING OPERATIONS SHALL ONLY OCCUR IN THE AREA OF LAND THAT IS CURRENTLY ZONED C-1 AND IS FAR AWAY FROM THE BOUNDARIES OF PROPERTY AS POSSIBLE.
5. NO MORE THAN 50 TONS (APPROXIMATELY 2 DUMP TRUCK LOADS) SHALL BE MILLED AND LOCATED ON THE SITE AT ANY ONE TIME. THESE MATERIALS SHALL BE LOCATED ON AN ASPHALT PAD WHICH IS NO LARGER THAN 50 BY 100-FEET IN SIZE. THE ASPHALT PAD SHALL BE CLEARLY SHOW ON THE FINAL SITE PLAN. NO MILLINGS SHALL BE PERMANENTLY STORED ON THE SITE.
6. THE PILE OF MILLINGS SHALL NOT BE HIGHER THAN 10 FEET.

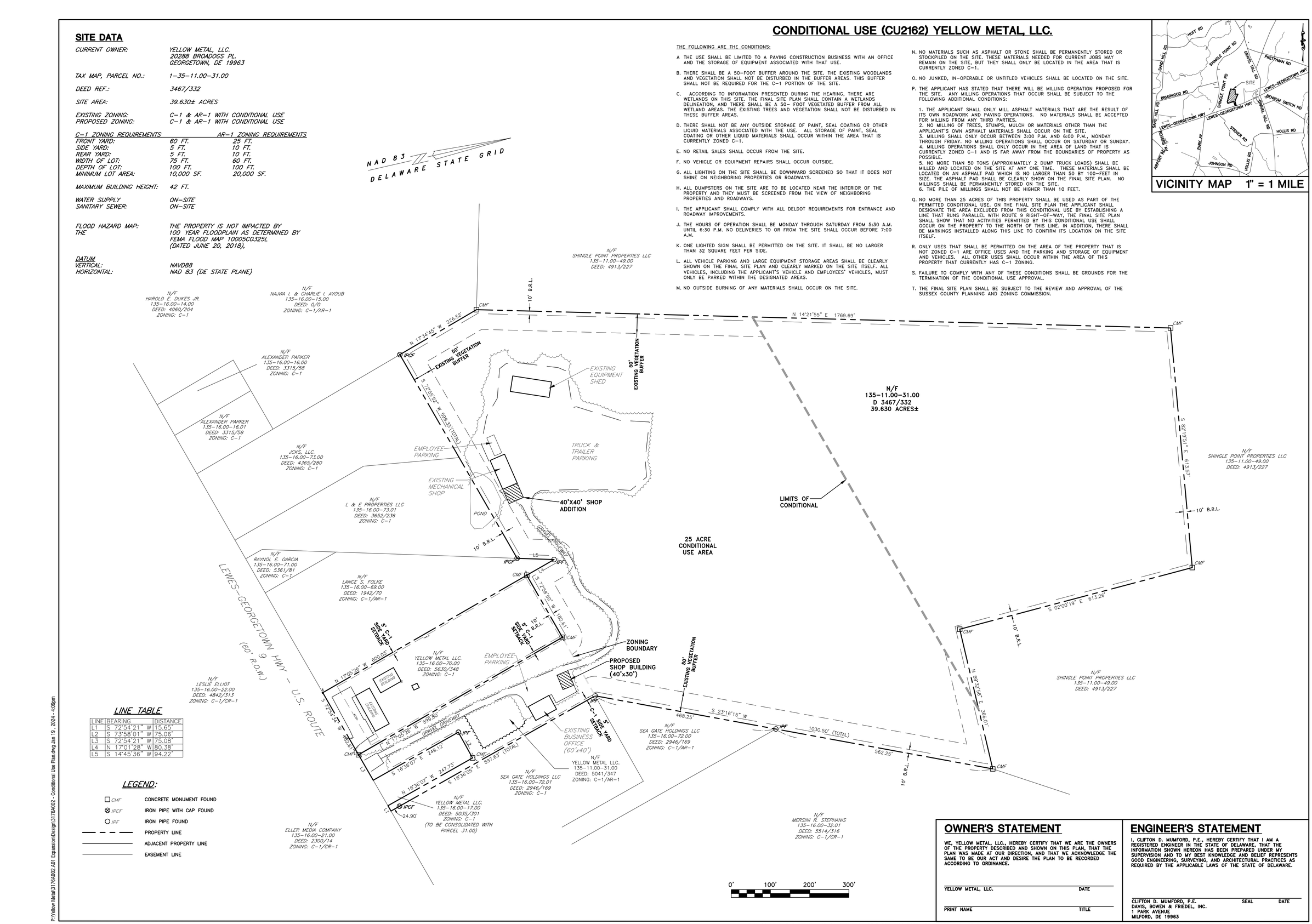
Q. NO MORE THAN 25 ACRES OF THIS PROPERTY SHALL BE USED AS PART OF THE PERMITTED CONDITIONAL USE. ON THE FINAL SITE PLAN THE APPLICANT SHALL DESIGNATE THE AREA EXCLUDED FROM THIS CONDITIONAL USE BY ESTABLISHING A LINE THAT RUNS PARALLEL WITH ROUTE 9 RIGHT-OF-WAY, THE FINAL SITE PLAN SHALL SHOW THAT NO ACTIVITIES PERMITTED BY THIS CONDITIONAL USE SHALL OCCUR ON THE PROPERTY TO THE NORTH OF THIS LINE. IN ADDITION, THERE SHALL BE MARKINGS INSTALLED ALONG THIS LINE TO CONFIRM ITS LOCATION ON THE SITE ITSELF.

R. ONLY USES THAT SHALL BE PERMITTED ON THE AREA OF THE PROPERTY THAT IS NOT ZONED C-1 ARE OFFICE USES AND THE PARKING AND STORAGE OF EQUIPMENT AND VEHICLES. ALL OTHER USES SHALL OCCUR WITHIN THE AREA OF THIS PROPERTY THAT CURRENTLY HAS C-1 ZONING.

S. FAILURE TO COMPLY WITH ANY OF THESE CONDITIONS SHALL BE GROUNDS FOR THE TERMINATION OF THE CONDITIONAL USE APPROVAL.

T. THE FINAL SITE PLAN SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE SUSSEX COUNTY PLANNING AND ZONING COMMISSION.

VICINITY MAP 1" = 1 MILE



LINE TABLE

LINE	BEARING	DISTANCE
L1	S 72°54'21" W	15.65'
L2	S 73°58'01" W	75.06'
L3	S 72°54'21" W	75.08'
L4	N 17°01'28" W	80.38'
L5	S 14°45'36" W	94.22'

LEGEND:

- CMF — CONCRETE MONUMENT FOUND
- IPCF — IRON PIPE WITH CAP FOUND
- IPF — IRON PIPE FOUND
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE

OWNER'S STATEMENT

WE, YELLOW METAL, LLC., HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO ORDINANCE.

YELLOW METAL, LLC. DATE

PRINT NAME TITLE

ENGINEER'S STATEMENT

I, CLIFTON D. MUMFORD, P.E., HEREBY CERTIFY THAT I AM A REGISTERED 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, SURVEYING, AND ARCHITECTURAL PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

CLIFTON D. MUMFORD, P.E. SEAL DATE
DAVIS, BOWEN & FRIEDEL, INC.
1 PARK AVENUE
MILFORD, DE 19963

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS ENGINEERS SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

SITE PLAN of the Lands of YELLOW METAL, LLC.

GEORGETOWN HUNDRED
SUSSEX COUNTY, STATE

Revisions:
2024-01-19:
SHOP ADDITIONS

Date: MAY 2019
Scale: 1"=100'
Dwn.By: JMJ
Proj.No.: 3176A001
Dwg.No.:

1 OF 1

P:\Yellow Metal\3176A002-A01 Expansion\Design\3176A002 - Conditional Use Plan.dwg, Jan 19, 2024 - 4:09pm

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

Sussex County
DELAWARE
SUSSEXCOUNTYDE.GOV
302-855-7878 T
302-854-5079 F
JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR

December 20th, 2022

Mr. Cliff Mumford, P.E.
Davis, Bowen & Friedel, Inc.
1 Park Avenue
Milford, Delaware 19963

Electronically delivered to: cdm@dbfinc.com

Subject: Notice of Decision for the Revised Final Site Plan for Yellow Metal, LLC
Tax Parcels: 135-11.00-31.00, 135-16.00-17.00 & 70.00

Dear Mr. Mumford,

At their meeting of Thursday, December 20th, 2022, the Sussex County Planning and Zoning Commission approved the Revised Final Site Plan for Yellow Metal, LLC. Additionally, the Commission granted all final approvals to be made by staff upon the receipt of all other agency approvals. This plan proposes four (4) 2,400 square foot pole buildings, fencing, gates, stormwater management, and other site improvements for the property located at 24215 & 24217 Lewes Georgetown Highway (Route 9) in Georgetown.

The Revised Final Site Plan is subject to a final review by staff which shall include the requirements of Chapter 115 and the submission of all required agency approvals. No further submissions or actions are requested at this time.

Please be advised that any approved Final Site Plan is valid for a period of five (5) years. If construction is not substantially and continuously underway within this time, the plan may be deemed null and void. The validity period for any approved Final Site Plan shall begin from time of stamped approval by staff.

Should there be any questions, I can be contacted at chase.phillips@sussexcountyde.gov or at 302-855-7878. Thank you.

Sincerely,

Chase Phillips
Planner II

EQUAL HOUSING OPPORTUNITY

CONDITIONAL USE (CU2162) YELLOW METAL, LLC.

SITE DATA

CURRENT OWNER: YELLOW METAL, LLC.
20288 BROADOGS PL.
GEORGETOWN, DE 19963

TAX MAP, PARCEL NO.: 1-35-11.00-31.00

DEED REF.: 3467/332

SITE AREA: 39.630± ACRES

EXISTING ZONING: C-1 & AR-1 WITH CONDITIONAL USE
PROPOSED ZONING: C-1 & AR-1 WITH CONDITIONAL USE

C-1 ZONING REQUIREMENTS
FRONT YARD: 60 FT.
SIDE YARD: 5 FT.
REAR YARD: 5 FT.
WIDTH OF LOT: 75 FT.
DEPTH OF LOT: 100 FT.
MINIMUM LOT AREA: 10,000 SF.

MAXIMUM BUILDING HEIGHT: 42 FT.

WATER SUPPLY: ON-SITE
SANITARY SEWER: ON-SITE

FLOOD HAZARD MAP: THE PROPERTY IS NOT IMPACTED BY THE 100 YEAR FLOODPLAIN AS DETERMINED BY FEMA FLOOD MAP 10005C0325L (DATED JUNE 20, 2018),

DATUM
VERTICAL: NAVD88
HORIZONTAL: NAD 83 (DE STATE PLANE)

THE FOLLOWING ARE THE CONDITIONS:

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B. THERE SHALL BE A 50-FOOT BUFFER AROUND THE SITE. THE EXISTING WOODLANDS AND VEGETATION SHALL NOT BE DISTURBED IN THE BUFFER AREAS. THIS BUFFER SHALL NOT BE REQUIRED FOR THE C-1 PORTION OF THE SITE.

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L. ALL VEHICLE PARKING AND LARGE EQUIPMENT STORAGE AREAS SHALL BE CLEARLY SHOWN ON THE FINAL SITE PLAN AND CLEARLY MARKED ON THE SITE ITSELF. ALL VEHICLES, INCLUDING THE APPLICANT'S VEHICLE AND EMPLOYEES' VEHICLES, MUST ONLY BE PARKED WITHIN THE DESIGNATED AREAS.

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Q. NO MORE THAN 25 ACRES OF THIS PROPERTY SHALL BE USED AS PART OF THE PERMITTED CONDITIONAL USE. ON THE FINAL SITE PLAN THE APPLICANT SHALL DESIGNATE THE AREA EXCLUDED FROM THIS CONDITIONAL USE BY ESTABLISHING A LINE THAT RUNS PARALLEL WITH ROUTE 9 RIGHT-OF-WAY, THE FINAL SITE PLAN SHALL SHOW THAT NO ACTIVITIES PERMITTED BY THIS CONDITIONAL USE SHALL OCCUR ON THE PROPERTY TO THE NORTH OF THIS LINE. IN ADDITION, THERE SHALL BE MARKINGS INSTALLED ALONG THIS LINE TO CONFIRM ITS LOCATION ON THE SITE ITSELF.

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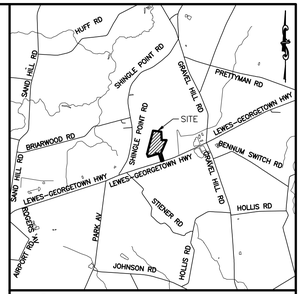
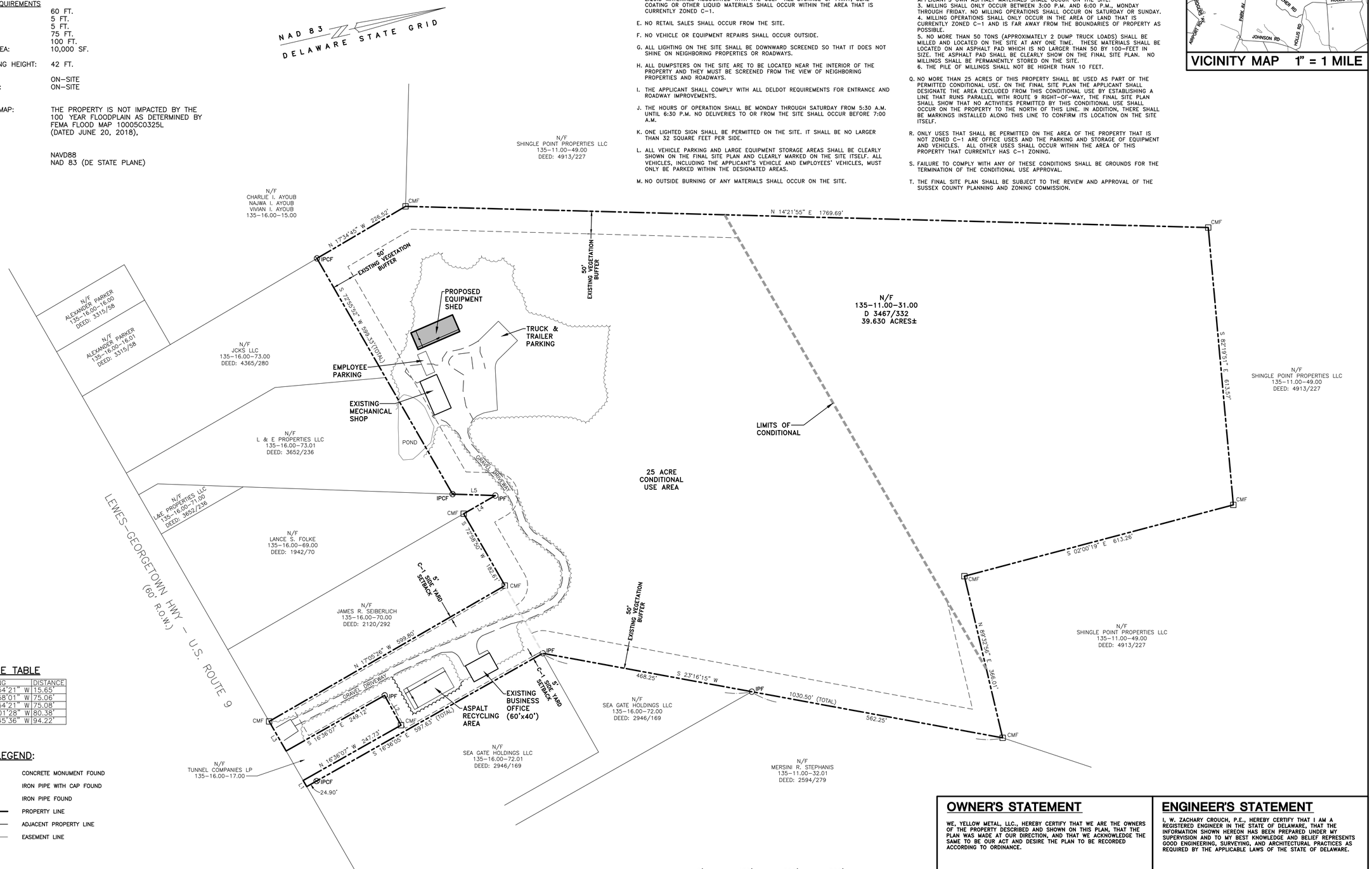
T. THE FINAL SITE PLAN SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE SUSSEX COUNTY PLANNING AND ZONING COMMISSION.



VICINITY MAP 1" = 1 MILE



LINE TABLE

LINE	BEARING	DISTANCE
L1	S 72°54'21" W	15.65'
L2	S 73°58'01" W	75.06'
L3	S 72°54'21" W	75.08'
L4	N 17°01'28" W	80.38'
L5	S 14°45'36" W	94.22'

LEGEND:

- CMF — CONCRETE MONUMENT FOUND
- IPCF — IRON PIPE WITH CAP FOUND
- IPF — IRON PIPE FOUND
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EASEMENT LINE

OWNER'S STATEMENT

WE, YELLOW METAL, LLC., HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE RECORDED ACCORDING TO ORDINANCE.

YELLOW METAL, LLC. DATE

PRINT NAME TITLE

ENGINEER'S STATEMENT

I, W. ZACHARY CROUCH, P.E., HEREBY CERTIFY THAT I AM A REGISTERED 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, SURVEYING, AND ARCHITECTURAL PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

W. ZACHARY CROUCH, P.E. SEAL DATE
DAVIS, BOWEN & FRIEDEL, INC.
1 PARK AVENUE
MILFORD, DE 19963

DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS ENGINEERS SURVEYORS
SALISBURY, MARYLAND (410) 543-9091
MILFORD, DELAWARE (302) 424-1441

SITE PLAN
of the Lands of
YELLOW METAL, LLC.
GEORGETOWN HUNDRED
SUSSEX COUNTY, STATE

Revisions:

Date: MAY 2019
Scale: 1"=100'
Dwn.By: JMJ
Proj.No.: 3176A001
Dwg.No.:

1 OF 1

P:\Yellow Metal\Design\Site dwg May 16, 2019 - 3:35pm

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DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT
1650 ARCH STREET
PHILADELPHIA PA 19103-2004

January 10, 2025

Regulatory Branch

SUBJECT: No Permit Required NAP-2024-00789-85
Asphalt Alley Georgetown SX
Center coordinates (38.713622°N, 75.329724°W)

Fletcher Kenton
Yellow Metal, LLC
20288 Asphalt Alley
Georgetown, Delaware 19947
fkenton@peninsulapavingco.com

Dear Mr. Kenton:

This letter is written regarding your proposal to conduct site development activities on a portion of a property. The project is located on Tax Map Parcel 135-16.00-70.00, 135-11.00-31.00 and 135-16.00-17.00 on the north side of the Lewes Georgetown Highway in Georgetown, Sussex County, Delaware.

Under current federal regulations, a Department of the Army (DA) permit is required for work or structures in navigable waters of the United States pursuant to Section 10 of the Rivers and Harbors Act and the discharge of dredged or fill material into waters of the United States pursuant to Section 404 of the Clean Water Act. Any proposal involving the performance of federally regulated activities within an area of Federal jurisdiction, whether the work is permanent or temporary, would require the prior approval of this office.

Based on the information provided, it has been determined that the proposed project does not involve a federally regulated activity. This office has determined that the discharges of dredged/fill material associated with your proposed activities are not occurring in waters of the United States as indicated by the enclosed Approved Jurisdictional Determination dated January 10, 2025. Therefore, the proposed project would not require a DA permit from the U.S. Army Corps of Engineers.

This determination is based upon the enclosed plan identified as: YELLOW METAL, LLC. GEORGETOWN HUNDRED SUSSEX COUNTY, DELAWARE EX. CONDITIONS & LOT CONSOLIDATION PLAN/PRELIMINARY SITE PLAN, prepared by Davis, Bowen & Friedel, Incorporated, dated October 2022 and revised on November 28, 2022, 1 sheet.

This letter does not affect your responsibility to obtain any other federal, state, or local approvals required by law for the proposed activity.

If you should have any questions regarding this matter, please contact Michael D. Yost of this office at (267) 240-5278 or Michael D. Yost.

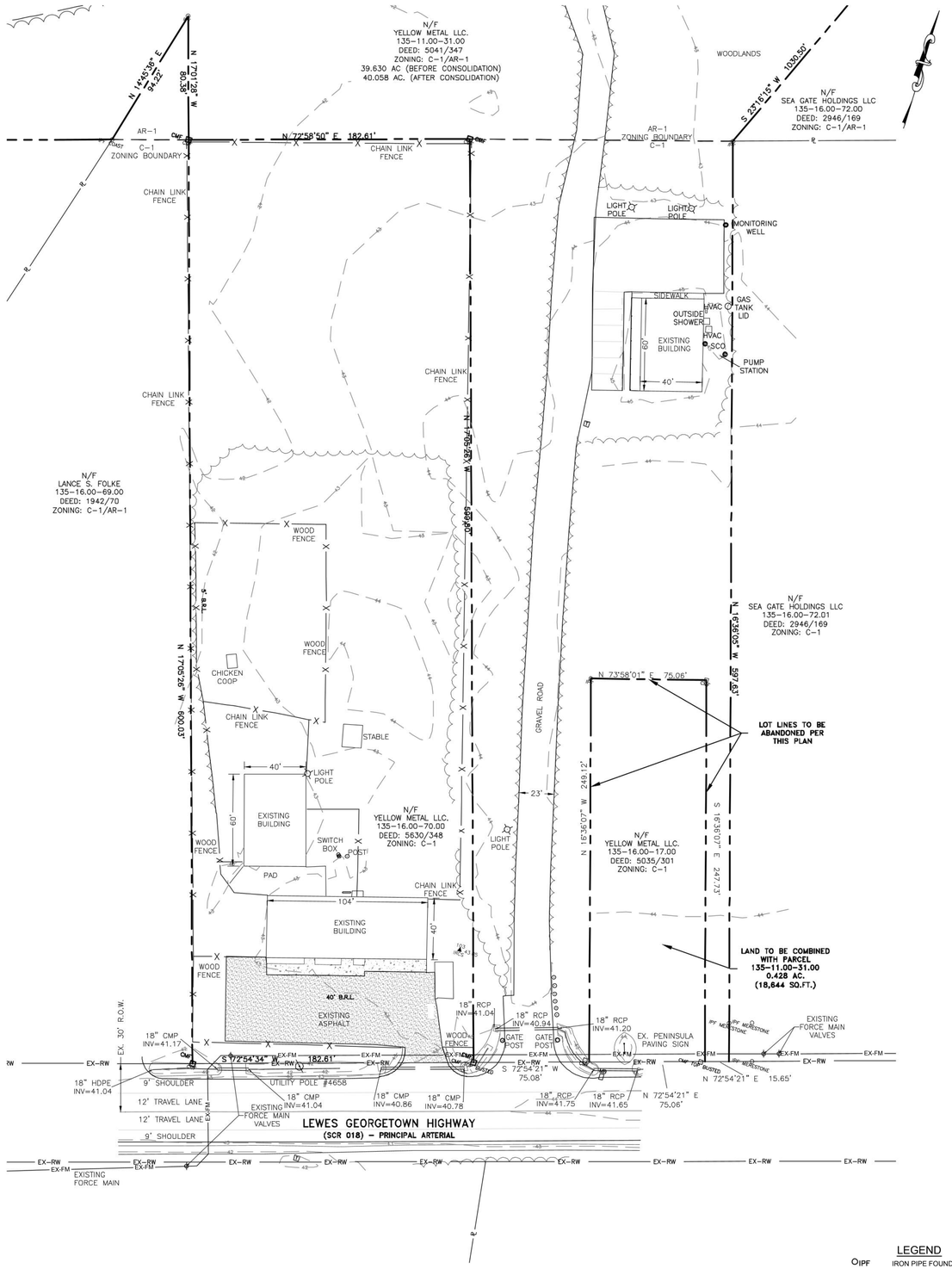
Sincerely,

Michael D. Yost
2025.01.10
12:16:06 -05'00'

Michael D. Yost
Applications Section I Biologist

Enclosure(s)

cc:
Thomas Nobile, Environmental Resource Insights
Wetlands and Waterways Section, DDNREC
Sussex Conservation District

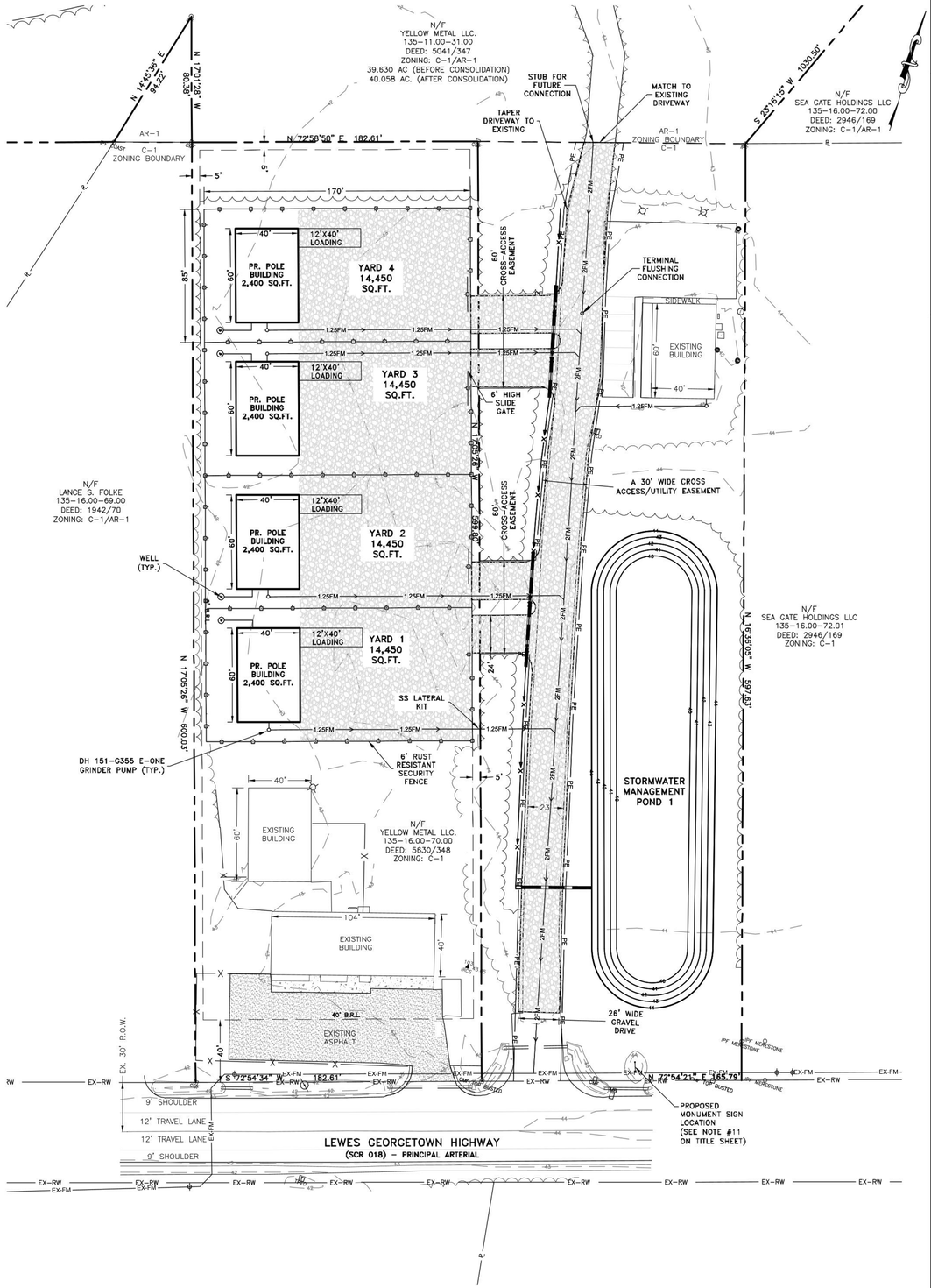


EXISTING CONDITIONS & LOT CONSOLIDATION PLAN

1"=40'

LEGEND

○IPF	IRON PIPE FOUND
□CMF	CONCRETE MONUMENT FOUND
•	POINT



PRELIMINARY SITE PLAN

1"=40'

0' 40' 80' 120'

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CLIFTON DANIEL MUMFORD
LICENSED
No. 19006
DELAWARE
PROFESSIONAL ENGINEER
12/01/22

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS - ENGINEERS - SURVEYORS
EASTON, MARYLAND 410.770.4744
MILFORD, DELAWARE 302.424.1444
SALISBURY, MARYLAND 410.543.9091

YELLOW METAL, LLC.
GEORGETOWN HUNDRED
SUSSEX COUNTY, DELAWARE

NO.	DATE	COMMENTS
1	11/28/22	PAZ PRELIM 1

Date: OCTOBER, 2022
Scale: 1" = 40'
Dwn.By: TCB
Proj.No.: 3176A002

EX. CONDITIONS & LOT CONSOLIDATION PLAN / PRELIMINARY SITE PLAN

Dwg.No.: **PL-03**

P:\Yellow Metal\3176A002 A01 Expansion\Preliminary\3176A002 - Preliminary Site Plan.dwg Dec 01, 2022 - 10:31am mumc

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT
1650 ARCH STREET
PHILADELPHIA PA 19103-2004

January 8, 2025

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination NAP-2024-00789-85
Asphalt Alley Georgetown SX
Center coordinates (38.713622°N, 75.329724°W)

Fletcher Kenton
Yellow Metal, LLC
20288 Asphalt Alley
Georgetown, Delaware 19947
fkenton@peninsulapavingco.com

Dear Mr. Kenton:

This Approved Jurisdictional Determination (AJD) is provided in response to your request on December 4, 2024 for a determination of federal jurisdiction by this office. The site associated with your request is located on three tax parcels, 135-11.00-31.00, 134-16.00-70.00 and 135-16.00-17.00 on the north side of the Lewes Georgetown Highway, east of Georgetown, Sussex County, Delaware.

The findings of this AJD are documented in the **enclosed** Memorandum for Record. The findings are also depicted on the **enclosed** plan(s) identified as YELLOW METAL, LLC GEORGETOWN HUNDRED SUSSEX COUNTY, DELAWARE, prepared by Davis Bowen & Friedel, Incorporated, dated December 3, 2024, and revised on December 16, 2024, and December 22, 2024, 2 sheets.

A Department of the Army permit is required for work or structures in "navigable waters of the United States" pursuant to Section 10 the Rivers and Harbors Act (RHA) of 1899 and the discharge of dredged or fill material into "waters of the United States" pursuant to Section 404 of the Clean Water Act (CWA). Any proposal to perform these activities within areas of federal jurisdiction requires prior approval by this office.

The delineation included herein has been conducted to identify the location and extent of the aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of an NRCS Certified Wetland Determination with the local USDA service center, prior to starting work.

This AJD is valid for a period of five (5) years. This AJD is issued in accordance with current federal regulations and is based upon the existing site conditions and information provided by you in your application. This office reserves the right to reevaluate and modify this AJD at any time should the existing site conditions or federal regulations change, or should the information provided by you prove to be false, incomplete or inaccurate.

You may request an administrative appeal of this AJD if you do not accept this determination. **Enclosed** you will find a combined Notification of Appeal Process (NAP) and Request for Appeal (RFA) form. Should you wish to appeal this determination, you must submit a completed RFA form to the North Atlantic Division Office within 60 days of the date on the form. Additionally, for the appeal to be accepted, the Corps must determine that it is complete and that it meets the criteria for appeal under 33 CFR Part 331.5. The form should be submitted to Andrew Dangler, Regulatory Program Manager, at Andrew.C.Dangler@usace.army.mil. If you do not have the means to submit this form electronically, you may send it by mail to the Division office at:

US Army Corps of Engineers North Atlantic Division
Attn: Andrew Dangler (CENAD-PD-OR)
Fort Hamilton Military Community
301 John Warren Avenue, First Floor
Brooklyn, NY 11252-6700

If you have any questions regarding this matter, please contact Michael D. Yost at (267)240-5278 or michael.d.yost@usace.army.mil.

Sincerely,

Date:
2025.01.10
11:02:44 -05'00'

Todd A. Hoernemann
Chief, Application Section I

Enclosures

cc:
Edward Launay, Environmental Resource Insights
Wetlands and Waterways Section, DDNREC
Sussex Conservation District
Wetlands Branch, USEPA Region 3

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT
1650 ARCH STREET
PHILADELPHIA, PENNSYLVANIA 19103-2004

NAP

January 10, 2025

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (Corps) Approved Jurisdictional Determination in accordance with the "Revised Definition of 'Waters of the United States'"; (88 FR 3004 (January 18, 2023) as amended by the "Revised Definition of 'Waters of the United States'; Conforming" (8 September 2023) ,[1] NAP-2024-00789-85 MFR 1 of 1[2].

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.[3] AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.[4]

On January 18, 2023, the Environmental Protection Agency (EPA) and the Department of the Army ("the agencies") published the "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule"). On September 8, 2023, the agencies published the "Revised Definition of 'Waters of the United States'; Conforming", which amended the 2023 Rule to conform to the 2023 Supreme Court decision in *Sackett v. EPA*, 598 U.S., 143 S. Ct. 1322 (2023) ("*Sackett*").

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a Corps AJD as defined in 33 CFR §331.2. For the purposes of this AJD, we have relied on Section 10 of the Rivers and Harbors Act of 1899 (RHA),[5] the 2023 Rule as amended,

[1] While the Revised Definition of "Waters of the United States"; Conforming had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.
[2] When documenting aquatic resources within the review area that are jurisdictional under the Clean Water Act (CWA), use an additional MFR and group the aquatic resources on each MFR based on the TNW, the territorial seas, or interstate water that they are connected to. Be sure to provide an identifier to indicate when there are multiple MFRs associated with a single AJD request (i.e., number them 1, 2, 3, etc.).
[3] 33 CFR 331.2.
[4] Regulatory Guidance Letter 05-02.
[5] USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

as well as other applicable guidance, relevant case law, and longstanding practice in evaluating jurisdiction.

1. SUMMARY OF CONCLUSIONS.

   a. Provide a list of each individual feature within the review area and the jurisdictional status of each one (i.e., identify whether each feature is/is not a water of the United States and/or a navigable water of the United States).

      i. Wetland 1B: Non-jurisdictional

      ii. Pond 1: Non-jurisdictional

      iii. Pond 2: Non-jurisdictional

      iv. Pond 3: Non-jurisdictional

      v. Ditch 1: Non-jurisdictional

2. REFERENCES.

   a. "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule")

   b. "Revised Definition of 'Waters of the United States'; Conforming" 88 FR 61964 (September 8, 2023))

   c. *Sackett v. EPA*, 598 U.S., 143 S. Ct. 1322 (2023)

3. REVIEW AREA. The review area includes three (3) tax parcels, 135-11.00-31.00, 134-16.00-70.00 and 135-16.00-17.00 on the north side of the Lewes Georgetown Highway, east of Georgetown, Sussex County, Delaware. The coordinates for the site are 38.713622°N, -75.329724°W. The properties encompass approximately 42 acres that is primarily wooded, with structures and parking areas for a commercial business.

4. NEAREST TRADITIONAL NAVIGABLE WATER (TNW), THE TERRITORIAL SEAS, OR INTERSTATE WATER TO WHICH THE AQUATIC RESOURCE IS

CONNECTED.[6] The Broadkill River is the nearest TNW and is approximately 23,000 linear feet from the review area. However, the ponds and the wetland within the review area lack a continuous surface connection to the Broadkill River.

5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, THE TERRITORIAL SEAS, OR INTERSTATE WATER. The only aquatic resource within the review area that flows to a TNW is Ditch 1. Traveling east from the site, Ditch 1 flows into Prong 3 of the Koeppel-Robinson Tax Ditch, which enters into the Main of the Koeppel-Robinson Tax Ditch. This continues north as the Round Pole Branch which empties into the Broadkill River, approximately 5.76 miles from the review area. The Broadkill River is a TNW, as it is subject to the ebb and flow of the tide.

6. SECTION 10 JURISDICTIONAL WATERS[7]: Describe aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899. Include the size of each aquatic resource or other feature within the review area and how it was determined to be jurisdictional in accordance with Section 10.[8] N/A

7. SECTION 404 JURISDICTIONAL WATERS: Describe the aquatic resources within the review area that were found to meet the definition of waters of the United States in accordance with the 2023 Rule as amended, consistent with the Supreme Court's decision in *Sackett*. List each aquatic resource separately, by name, consistent with the naming convention used in section 1, above. Include a rationale for each aquatic resource, supporting that the aquatic resource meets the relevant category of "waters of the United States" in the 2023 Rule as amended. The rationale should also include a written description of, or reference to a map in the administrative record that shows, the lateral limits of jurisdiction for each aquatic resource, including how that limit was determined, and incorporate relevant references used. Include the size of each aquatic resource in acres or linear feet and attach and reference related figures as needed.

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[6] This MFR should not be used to complete a new stand-alone TNW determination. A stand-alone TNW determination for a water that is not subject to Section 9 or 10 of the Rivers and Harbors Act of 1899 (RHA) is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established.

[7] 33 CFR 329.9(a) A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in § 329.8(b) of this part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions.

[8] This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

a. Traditional Navigable Waters (TNWs) (a)(1)(i): N/A

b. The Territorial Seas (a)(1)(ii): N/A

c. Interstate Waters (a)(1)(iii): N/A

d. Impoundments (a)(2): N/A

e. Tributaries (a)(3): N/A

f. Adjacent Wetlands (a)(4): N/A

g. Additional Waters (a)(5): N/A

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

a. Describe aquatic resources and other features within the review area identified in the 2023 Rule as amended as not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5). Include the type of excluded aquatic resource or feature, the size of the aquatic resource or feature within the review area and describe how it was determined to meet one of the exclusions listed in 33 CFR 328.3(b).[9]

Ditch 1 is 0.004 acre in size and located at the entrance along the southern property boundary. The ditch enters the property from the roadside on both sides of Asphalt Alley and crosses under Asphalt Alley via a 40' long by 18" diameter reinforced concrete pipe. The ditch is part of the Lewes-Georgetown Highway roadside drainage. The ditch is well defined, vegetated throughout and maintained like a lawn. Because the ditch is vegetated throughout, there is no evidence of an ordinary high-water mark (OHWM), wrack deposits, or alluvial deposits. Additionally, the ditch was dry at the time of a site visit conducted on December 13, 2024, two days after a significant rain event. Without the physical indicators of OHWM, it is determined that the ditch only supports hydrology in response to precipitation. As such, the flow regime of the ditch is ephemeral. The ditch is excavated wholly in uplands, draining only uplands and does not carry a relatively permanent flow of water. For these reasons, Ditch 1 meets the (b)(3) Certain Ditches exclusion.

[9] 88 FR 3004 (January 18, 2023)

b. Describe aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the 2023 Rule as amended (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).

Pond 1 is approximately 0.05 acre in size and located near a barn along a southern parcel boundary. Pond 1 is created in uplands and surrounded by uplands. Pond 1 extends outside of the review area and the extent of the pond is easily seen from the review area. Furthermore, use of the USGS 3D Elevation Program map layer shows there is no outlet and no connection to any other aquatic resources. This pond is geographically separated from any other aquatic resource with no continuous surface connection to an (a)(1) water. As such, Pond 1 does not meet the definition of an (a)(5) water.

Pond 2 is approximately 0.12 acre in size and located along the southeast parcel boundary. Pond 2 was excavated as a stormwater pond. Pond 2 is created in uplands and surrounded by uplands. Pond 2 receives stormwater sheet flow from the surrounding uplands and has a 12" high density polyethylene (HDPE) culvert that receives stormwater inputs from the uplands on the west side of an access road. Pond 2 does not have an outlet and is geographically separated from any other aquatic resource with no continuous surface connection to an (a)(1) water. As such, Pond 2 does not meet the definition of an (a)(5) water.

Pond 3 is approximately 0.14 acre in size and located along a northeast parcel boundary. This pond was excavated in approximately 2006 as a waterfowl pond. The excavated material was used to create an embankment around the pond with an 8" diameter HDPE outlet pipe along the southwest portion of the pond into the upland forest. Hydrology is provided to this pond via a well pump and retained using a plug for the HDPE. Pond 3 is created in uplands and surrounded by uplands. This pond is geographically separated from any other aquatic resource with no continuous surface connection to an (a)(1) water. As such, Pond 3 does not meet the definition of an (a)(5) water.

Wetland 1B is approximately 0.63 acre in size within the review area and located along the southeast property boundary. Wetland 1B continues east offsite into the adjacent parcel and may be contiguous with a pond located on the adjacent parcel. The pond is clearly excavated, as spoil piles can be seen around the pond during a site visit. Clear views of the area during the sit visit indicate that Wetland 1B is the only wetland around the pond. Furthermore, elevations indicate there are no distinguishable wetlands or drainage features leaving the pond. Additionally, a single-family home is located east of the pond. Based off of

the U.S. Fish and Wildlife Service NWI mapper, the closest (a)(1) through (a)(3) water to Wetland 1B is Ingram Branch, identified as a perennial stream. Wetland 1B is approximately 4,590 linear feet from the Ingram Branch with no surface connection. Because Wetland 1B lacks a surface connection to an (a)(1) through (a)(3) water, it does not meet the definition of an (a)(4) Adjacent Wetland.

9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.

   a. USACE site visit conducted on December 13, 2024.

   b. Cover letter, dated December 2, 2024, prepared by Environmental Resource Insights.

   c. U.S. Army Corps of Engineers (USACE) Request for Jurisdictional Determination (JD), dated November 19, 2024.

   d. Sussex County Topographic Map, dated November 4, 2022.

   e. USDA Natural Resources Conservation Service Web Soil Survey Soils Map-Sussex County, Delaware, dated November 4, 2022.

   f. U.S. Fish and Wildlife Service National Wetlands Inventory, Yellow Metal Georgetown, dated November 4, 2022.

   g. Google Earth Yellow Metal Project 2005 Photo.

   h. Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network.

   i. Wetland Determination Data Form-Atlantic and Gulf Coastal Plain Region, prepared by Environmental Resource Insights, dated February 23, 2023, March 10, 2024, and March 8, 2024.

   j. Yellow Metal, LLC. Georgetown Hundred Sussex County, Delaware, prepared by Davis, Bowen & Friedel, Incorporated, dated December 3, 2024, and revised on December 16, 2024, and December 22, 2024, 2 sheets.

   k. Yellow Metal, Georgetown, Sussex Co., Delaware, DBF#3176A002.A01 Photographic Log, 8 photographs.

I. USGS 3D Elevation Program map, accessed on December 27, 2024.

10. OTHER SUPPORTING INFORMATION. N/A

11. NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.

OFFICE OF THE STATE FIRE MARSHAL
Technical Services

22705 Park Avenue
Georgetown, DE 19947

SFMO PERMIT – SHALL BE POSTED ON JOBSITE UNTIL FINAL INSPECTION

Plan Review Number: 2025-04-222579-MJS-01
Status: Approved as Submitted

Tax Parcel Number: 135-11.00-31.00
Date: 12/01/2025

Project

Yellow Metal Storage

Yellow Metal - Georgetown

Lewes Georgetown Highway, East of Shingle Point Road
Georgetown DE 19947

Scope of Project

Number of Stories:
Square Footage:
Construction Class:
Fire District: 77 - Georgetown Fire Co Inc

Occupant Load Inside:
Occupancy Code:

Applicant

Clifton Mumford
1 Park Avenue
Milford, DE 19963

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: 2025-04-222579-MJS-01
Status: Approved as Submitted
Tax Parcel Number: 135-11.00-31.00
Date: 12/01/2025

PROJECT COMMENTS

1002 A	**This project has been reviewed under the provisions of the Delaware State Fire Prevention Regulations (DSFPR) ADOPTED September 1, 2021. The 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. The Office of the State Fire Marshal recommends theinstallation of fire sprinkler systems in all residential occupancies, including one- and two-family dwellings, duplexes, and townhomes. For additional information on residential sprinkler systems, please see here:https://statefiremarshal.delaware.gov /wp-content/uploads/sites /110/2017/07/Home_Sprinkler_Brochure.pdf**
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.**
1190 A	**Separate plan submittal is required for the building(s) proposed for this project.**
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 orrevisions to the plans occur, plans are required to be submitted, reviewed, and approved.**

August 12, 2026

Mr. Fletcher Kenton

FKenton@PeninsulaPavingCo.com

RE: Yellow Metal Contractor Yards
Final Approval

Dear Mr. Kenton:

A Sediment and Stormwater Management Plan has been reviewed for compliance with the Sediment and Stormwater Regulations and is approved with conditions (see attached). Enclosed herein please find a copy of the approved application form and approved plan sets. Please retain a copy for your use, and provide the contractor with a copy to be retained onsite at all times. Failure to keep an approved plan onsite is a violation of the approved plan.

Approval of a Sediment and Stormwater Plan does not grant or imply a right to discharge stormwater runoff. The owner/developer is responsible for acquiring any and all agreements, easements, etc., necessary to comply with State drainage and other applicable laws.

This plan approval pertains to compliance with the Delaware Sediment and Stormwater Regulations. Please understand that the approval of this plan does not relieve you from complying with any and all federal, state, county, or municipal laws and regulations.

As of January 1, 2014, the Sussex Conservation District began collecting financial guarantees to ensure the construction of stormwater management practices is accomplished in accordance with the approved sediment and stormwater plan. Please refer to the SCD Policy on Bonds located on our website at Sussexconservation.org. If you have any questions concerning the aforementioned, please do not hesitate to call 302 856-7219.

Sincerely,

Jessica Watson

Jessica Watson
Program Manager

CONDITIONS OF APPROVAL

NOTIFICATION

1. This approved plan will remain valid for 5 years from the date of this approval. If construction does not begin within five years, the approved plan will be considered to have expired and must be resubmitted to the District for a new review. In addition, if work is not completed within the five-year timeframe, the District must be contacted and a request for an extension submitted. Depending on regulation changes, a new plan may need to be submitted to ensure that all stormwater management facilities are constructed to the most recent standards.

2. Submittal of the Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activities together with this approval of the detailed Sediment and Stormwater Plan provide this project with Federal permit coverage to be authorized to discharge stormwater associated with construction activities. It is the owner's responsibility to ensure that permit coverage remains valid throughout construction by submitting the NOI fee annually as requested. The developer is responsible for weekly self-inspection reporting to be retained onsite.

3. Notify the Sussex Conservation District Sediment and Stormwater Management Section of your intent to begin construction in writing five (5) days prior to commencing. Failure to do so constitutes a violation of the approved plan.

CHANGES

4. This project is to be undertaken in accordance with the plans submitted and as approved. If changes are necessary at any time during the completion of the project, submit revised plans, prior to further construction, to the Sussex Conservation District Sediment and Stormwater Program for review and approval of the revision.

5. Should ownership change during the construction period, a revised plan must be submitted for approval showing the new owner's signature on the owner's certification. In addition, a Transfer of Authorization form must be submitted to DNREC to transfer Federal permit coverage to the new owner.

CONSTRUCTION AND CLOSEOUT

6. A pre-construction meeting must take place before any land disturbing activity begins. The meeting may take place on site and be attended by the owner, contractor, design consultant, Certified Construction Reviewer, and Sussex Conservation District Sediment and Stormwater Program Construction Reviewer. The owner or the owner's designee shall contact the Sussex Conservation Construction Reviewer to schedule the pre-construction meeting.

7. Keep available onsite, during all phases of construction, a copy of the approved Sediment and Stormwater Management Plan.

8. Keep available onsite, during all phases of constriction, copies of the Developers weekly self-inspection reports and/or the CCR Reports.

9. Any sediment transported off-site to roads or road rights-of-way including ditches shall be removed. Any damage to ditches shall be repaired and stabilized to original condition.

10. Grading shall not impair surface drainage, create an erosion hazard, or create a source of sediment to any adjacent watercourse or property owner.

11. Failure to implement the permanent stormwater management practices as mentioned herein constitutes a violation of the conditions of this plan approval; it may result in the suspension or revocation of building permits or grading permits issued by the local jurisdiction, and it may result in legal action by the DNREC to bring the site into compliance with the approved Sediment and Stormwater Management Plan and the Delaware Sediment and Stormwater Regulations.

12. The permanent stormwater management facility or facilities must be constructed and accepted by the Sussex Conservation District Sediment and Stormwater Program prior to final closeout of the project site. Post-construction verification documentation of the stormwater management facility or facilities must be completed as soon as construction of the facility or facilities is complete so that any necessary modifications may be made during the construction period.

Cliff Mumford

From: Katherine Garrison <kgarrison@artesianwater.com>
Sent: Wednesday, May 27, 2026 8:29 AM
To: Cliff Mumford; Tim C. Barnes; Fletcher Kenton
Cc: Adam Gould; Keith Campbell
Subject: Re: EXTERNAL: Yellow Metal - Submittal-3

Follow Up Flag: Follow up
Flag Status: Flagged

Hi guys, we have no comments. This looks good.

Katherine E. Garrison
Supervisor of Survey/Senior Planning Designer/CCR
Cell: 302-275-2368
Desk: 302-453-2508

From: Katherine Garrison <kgarrison@artesianwater.com>
Sent: Wednesday, May 6, 2026 2:34 PM
To: Cliff Mumford <cdm@dbfinc.com>; Tim C. Barnes <tcb@dbfinc.com>; Fletcher Kenton <fkenton@peninsulapavingco.com>
Cc: Adam Gould <AGould@artesianwater.com>
Subject: Re: EXTERNAL: Yellow Metal - Submittal-3

Thanks Cliff, I'll get to this as soon as I can..

Katherine E. Garrison
Supervisor of Survey/Senior Planning Designer/CCR
Cell: 302-275-2368
Desk: 302-453-2508

From: Cliff Mumford <cdm@dbfinc.com>
Sent: Wednesday, May 6, 2026 9:24 AM
To: Katherine Garrison <kgarrison@artesianwater.com>; Tim C. Barnes <tcb@dbfinc.com>; Fletcher Kenton <fkenton@peninsulapavingco.com>
Cc: Adam Gould <AGould@artesianwater.com>
Subject: RE: EXTERNAL: Yellow Metal - Submittal-3

Kathy,

Please find revised Utility plans at the One Drive link below showing a new alignment of the force main per our discussion with a stub out for a future 6" connection along the Route 9 frontage. Jason Miller with Freemire has reviewed the low pressure force main layout and finds it acceptable.

YM_Utility-Plans.pdf

Regarding your email about the EDU counts, we looked into Sussex County's code where it breaks down the fixture units and matched our data column accordingly. At the moment, we don't have architectural plans, so after discussing with Mr. Kenton on his intentions for the buildings, we made assumptions on what would be in each building.

Thanks,

Cliff Mumford, P.E.
Associate | Senior Civil Engineer
Department of Land Development
Davis, Bowen & Friedel, Inc.
Office: 302-424-1441 | Fax: 302-424-0430

From: Katherine Garrison <kgarrison@artesianwater.com>
Sent: Wednesday, April 29, 2026 2:04 PM
To: Tim C. Barnes <tcb@dbfinc.com>; Fletcher Kenton <fkenton@peninsulapavingco.com>; Cliff Mumford <cdm@dbfinc.com>
Cc: Adam Gould <AGould@artesianwater.com>
Subject: Re: EXTERNAL: Yellow Metal - Submittal-2

Hi Tim, you say that you're not worrying about the back of the property but Artesian always plans for the future upfront. Are you going to abandon the idea of the subdivision all together?

This design is not acceptable to meet future needs of a subdivision of the property. There will only be one tap to the existing forcemain and a water main extension will be required which means a private well is

void. Has an analysis of the future EDUS been calculated for the subdivision and will a 2" forcemain be enough for it? The idea would be to plan and install for future without have to dig it all up and reinstall larger pipes and interrupt service.

We still need the architectural plans to verify the flows shown in the Non-Domestic form that Cliff signed.

Katherine E. Garrison
Supervisor of Survey/Senior Planning Designer/CCR
Cell: 302-275-2368
Desk: 302-453-2508

From: Tim C. Barnes <tcb@dbfinc.com>
Sent: Wednesday, April 29, 2026 1:07 PM
To: Katherine Garrison <kgarrison@artesianwater.com>; Fletcher Kenton <fkenton@peninsulapavingco.com>; Cliff Mumford <cdm@dbfinc.com>
Cc: Keith Campbell <KCampbell@artesianwater.com>
Subject: RE: EXTERNAL: Yellow Metal - Submittal-2

Good afternoon Kathy,

We revised the plans per your comments. Plans are provided in the OneDrive link below.
At this time, we are not connecting the back section up front.
YM_Utility-Plans.pdf

Thanks,
Tim C. Barnes
CAD II Technician
Department of Land Development
Davis, Bowen & Friedel, Inc.
Office: 302-424-1441 | Fax: 302-424-0430

From: Katherine Garrison <kgarrison@artesianwater.com>
Sent: Monday, March 16, 2026 1:37 PM
To: Fletcher Kenton <fkenton@peninsulapavingco.com>; Cliff Mumford <cdm@dbfinc.com>
Cc: Keith Campbell <KCampbell@artesianwater.com>
Subject: Re: EXTERNAL: Yellow Metal - Submittal-2

Cliff, these are my plan comments:

- Please redraw the profile to include the tap detail shown on page 10. There should be the wet tap and valve, a section of 4" pipe, then a reducer, 2" pipe to the curb stop.

- the double block and bleed needs to be closer to the curb stop.
- Are there architectual plans yet for us to verify the plumbing fixture count? We will need those to prepare any service agreements to get the billing right..

Katherine E. Garrison
Supervisor of Survey/Senior Planning Designer/CCR
Cell: 302-275-2308
Desk: 302-453-2508

From: Fletcher Kenton <fkenton@peninsulapavingco.com>
Sent: Monday, March 16, 2026 12:37 PM
To: Cliff Mumford <cdm@dbfinc.com>; Katherine Garrison <kgarrison@artesianwater.com>
Cc: Keith Campbell <KCampbell@artesianwater.com>
Subject: Re: EXTERNAL: Yellow Metal - Submittal-2

Thank you both for your help.

Fletch Kenton ~ President
Peninsula Paving Co.
Office: 302-226-PAVE
Mobile: 302-542-1236
www.PeninsulaPavingCo.com

> On Mar 16, 2026, at 10:56 AM, Cliff Mumford <cdm@dbfinc.com> wrote:
>
> Thanks Kathy.
>
> **Cliff Mumford, P.E.**
> Associate | Senior Civil Engineer
> Department of Land Development
> **Davis, Bowen & Friedel, Inc.**
> Office: 302-424-1441 | Fax: 302-424-0430
>
> **From:** Katherine Garrison <kgarrison@artesianwater.com>
> **Sent:** Monday, March 16, 2026 10:14 AM
> **To:** Cliff Mumford <cdm@dbfinc.com>
> **Cc:** Keith Campbell <KCampbell@artesianwater.com>; Fletcher Kenton (fkenton@peninsulapavingco.com) <fkenton@peninsulapavingco.com>
> **Subject:** Re: EXTERNAL: Yellow Metal - Submittal-2

Hi Cliff, we will honor the install of the service to the property line. I will review the plans then pass it off internally to someone who will manage that part…

Katherine E. Garrison
Supervisor of Survey/Senior Planning Designer/CCR
Cell: 302-275-2308
Desk: 302-453-2508
<image001.jpg>

From: Cliff Mumford <cdm@dbfinc.com>
Sent: Monday, March 16, 2026 7:03 AM
To: Katherine Garrison <kgarrison@artesianwater.com>
Cc: Keith Campbell <KCampbell@artesianwater.com>; Fletcher Kenton (fkenton@peninsulapavingco.com) <fkenton@peninsulapavingco.com>
Subject: RE: EXTERNAL: Yellow Metal - Submittal-2

Kathy – When the owner of the Yellow Metal parcel, Fletcher Kenton (copied), agreed to the easement he was told by Rodney Wyatt that Artesian would install a curb stop for his future connection. It appears from our field survey and your as-builts that one was not installed. Will Artesian agree to install a curb stop to the easement line at their expense?

Cliff Mumford, P.E.
Associate | Senior Civil Engineer
Department of Land Development
Davis, Bowen & Friedel, Inc.
Office: 302-424-1441 | Fax: 302-424-0430

From: Cliff Mumford
Sent: Friday, March 13, 2026 3:45 PM
To: Katherine Garrison <kgarrison@artesianwater.com>
Cc: Tim C. Barnes <tcb@dbfinc.com>; Keith Campbell <KCampbell@artesianwater.com>; Carrie Y. Joles <cyj@dbfinc.com>; Brian J. Mast <bjm@dbfinc.com>
Subject: RE: EXTERNAL: Yellow Metal - Submittal-2

Kathy,

Good afternoon. Please find revised plans for Yellow Metal at the below One Drive link.

YM_Utility-Plans.pdf

A comment response letter and application are attached. The application is filled out to the best of our ability as the specific users are not known. The owner's intent is for it to be pole buildings for contractors to use as a home base for storing trucks and equipment. Employees will come there in the morning, load up and head out for the day. It is not meant to be a manufacturing site.

Let me know if you need hard copies or any additional information.

Thanks,

Cliff Mumford, P.E.
Associate | Senior Civil Engineer
Department of Land Development
Davis, Bowen & Friedel, Inc.
Office: 302-424-1441 | Fax: 302-424-0430

From: Katherine Garrison <kgarrison@artesianwater.com>
Sent: Thursday, November 20, 2025 9:05 AM
To: Carrie Y. Joles <cyj@dbfinc.com>
Cc: Cliff Mumford <cdm@dbfinc.com>; Stephen H. Fox <shf@dbfinc.com>; Brian J. Mast <bjm@dbfinc.com>; Tim C. Barnes <tcb@dbfinc.com>; Keith Campbell <KCampbell@artesianwater.com>
Subject: Re: EXTERNAL: Yellow Metal

Good morning, please find attached comments for the above referenced project. We have an easement thru this parcel and the adjacent ones that you need to show on the plans, they are recorded. The attached details are how the connection to our forcemain should look. And the attached form needs to be filled out to the best of your ability to calculate the number of EDU's based on fixture units/6… Let us know if you have any questions, thanks.

Katherine E. Garrison
Supervisor of Survey/Senior Planning Designer/CCR
Cell: 302-275-2308
Desk: 302-453-2508
<image001.jpg>

From: Carrie Y. Joles <cyj@dbfinc.com>
Sent: Tuesday, November 11, 2025 4:10 PM
To: Katherine Garrison <kgarrison@artesianwater.com>
Cc: Cliff Mumford <cdm@dbfinc.com>; Stephen H. Fox <shf@dbfinc.com>; Brian J. Mast <bjm@dbfinc.com>; Tim C. Barnes <tcb@dbfinc.com>
Subject: EXTERNAL: Yellow Metal

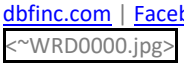
⚠ **Caution:** This message originated **outside your organization.** Be careful with links, attachments, or unexpected requests.
If this message seems suspicious, please report it using the **Phish Alert Button**.

Katherine,

Good afternoon! On behalf of our client, Yellow Metal, LLC., we are pleased to submit Construction plans for Yellow Metal. The project will consist of the construction of two contractor yards with pole buildings on parcel 70.00 and a storage building on parcel 31.00 located on the north side of Lewes Georgetown Highway east of Shingle Ponit Road.

Thank you,

Carrie Y. Joles
Executive Assistant
Department of Administrative Support

Davis, Bowen & Friedel, Inc.
Email: cyj@dbfinc.com
Office: 302-424-1441 | Fax: 302-424-0430
1 Park Ave., Milford, DE 19963
dbfinc.com | Facebook | LinkedIn | Instagram | Twitter | Youtube


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

SHANTÉ A. HASTINGS
SECRETARY

July 21, 2026

Mr. Fletch Kenton
Yellow Metal, LLC
20288 Asphalt Alley
Georgetown, Delaware 19947

SUBJECT: **Authorization to Apply for a Permit for Entrance Construction**
Yellow Metal Contractor Yards
Tax Parcel # 135-11.00-31.00, 135-16.00-70.00
LEWES-GEORGETOWN (SCR 18)
Georgetown Hundred, Sussex

Dear Mr. Fletch Kenton:

The Delaware Department of Transportation (DelDOT) has reviewed your request, dated June 23, 2026, to obtain a Letter of No Contention (LONC) to use an existing commercial building and site entrance for the above referenced project. In coordination with the South District Public Works Office we have determined that your project will require some modifications or enhancements to meet current regulatory requirements. We have therefore determined that this project is eligible to obtain a Permit for Entrance Construction (PEC) to make these modifications. The PEC will include a list of items that must be addressed, as well as requirements for bonding to perform work, where needed, within the State of Delaware right-of-way (ROW). This approval shall be valid for a period of **one (1) year**.

Please note: Your Permit for Entrance Construction must be obtained from the South District Public Works Office, before you can start any construction.

The following conditions are provided with this response letter:

1) Site shall have access from the existing entrance located on Lewes-Georgetown HWY (SCR 018).
2) Only the modifications/construction or traffic pattern changes that are itemized and authorized under the PEC will be permitted. Please coordinate with the DelDOT Public Works Office regarding the scope, location and limits of the following items, as well any other items listed in the PEC:
   a) 2” Mill and Overlay of Existing Entrance
   b) Install R1-1 36”x36” Stop sign and/or Stop Bar at Existing Entrance

3) DelDOT reserves the right to review, modify or revoke this authorization letter and PEC and require additional entrance upgrades in the future if proposed activities create traffic conflicts, safety concerns or operational issues.

4) The property owner is responsible to:

   a. Submit information to DelDOT, regarding any future operational or site changes, (including but not limited to: rezoning, site layout changes, changes in use, entrance modifications, expanded/additional uses, new uses, etc.). Changes of this nature may alter the flow and/or volume of traffic and could require a new PEC, LONC or formal review for Approvals and/or Permits.

   b. Establish and maintain clear sight lines at the entrance. There shall be no placement of structures, signs, objects, items for sale or parking of vehicles within State ROW or entrance limits. Shrubbery, Plantings, trees and/or other visual barriers that could obstruct the sight distance of a driver preparing to enter the roadway are prohibited.

5) The property owner and applicant are responsible to coordinate with DelDOT Outdoor Advertising & Roadside Control at (302) 853-1327, for information on obtaining specific permits for sign installation on private property. Permits for Utilities construction within State right-of-way require separate permit applications please contact DelDOT's South District at (302) 853-1345.

Please contact the South District Public Works Office at (302) 853-1340, for their assistance in obtaining the PEC. No construction or modification listed under Item 2 is allowed in advance of the DelDOT Public Works Office issuance of the Permit for Entrance Construction.

Sincerely,

Brian Urbanek
Kent / Sussex County Review Engineer,
Development Coordination

cc: Cliff Mumford, Davis, Bowen & Friedel, Inc.
Jamie Whitehouse, Sussex County Planning & Zoning Commission
Sussex County Planning & Zoning Adminstration
Jessica L. Watson, Sussex Conservation District
Matt Schlitter, South District Public Works Engineer
Travis Schirmer, South District Public Works Supervisor
James Argo, South District Project Reviewer
James Smith, South District Entrance Permit Supervisor
Wendy L. Polasko, P.E., Assistant Director
Derek Sapp, Sussex County Reviewer

AB 9

SOILS AND STORMWATER

August 16, 2026

75-Foot Wooded Buffer Benefits Report
Enhancing Environmental and Ecological Protection, Community Compatibility, and Sustainable Development at the Industrial-Residential Interface

Benefits of a 75-Foot Wooded Buffer Along the Perimeter of an Industrially Zoned Property Adjacent to Residential Lands

Executive Summary

A 75-foot-wide wooded buffer located along the perimeter of an industrially zoned property adjacent to residential lands represents a significant land planning, environmental and ecological protection, stormwater management, and compatibility enhancement measure. From a regulatory, engineering, and planning perspective, a mature wooded buffer exceeds many minimum buffering practices commonly utilized between differing land uses and is consistent with the intent of Delaware stormwater regulations, DNREC stormwater Best Management Practices (BMPs), Environmental Protection Agency (EPA) guidance, American Planning Association (APA) planning principles, and recognized industry best management practices.

The preservation and maintenance of a 75-foot wooded buffer create multiple public benefits, including enhanced stormwater infiltration, pollutant removal, groundwater recharge, erosion control, noise attenuation, visual screening, habitat preservation, ecological sustainability, carbon sequestration, air quality improvement, and land-use compatibility. Such buffers are considered among the most effective natural green infrastructure systems available for reducing potential impacts associated with industrial development while protecting adjacent residential communities.

1. Purpose of the Wooded Buffer

The primary purpose of a wooded buffer between industrial and residential uses is to establish a natural transition zone that minimizes potential conflicts between differing land uses while providing measurable environmental and community benefits.

The buffer serves as:

- A visual screen between industrial activities and residences.
- A stormwater management and water quality treatment area.

- A noise reduction and sound attenuation zone.
- A wildlife habitat and ecological corridor.
- A carbon sequestration and air quality improvement area.
- A community character preservation feature.
- A long-term sustainability component of site design.

The establishment or preservation of a 75-foot wooded buffer demonstrates a commitment to environmental stewardship and responsible development practices.

2. Consistency with Delaware Stormwater Regulations
Delaware's Sediment and Stormwater Regulations (7 DE Admin. Code 5101) were established to reduce erosion, flooding, water quality degradation, decreased infiltration, and loss of groundwater recharge associated with development activities. The regulations specifically recognize that maintaining vegetation and infiltration opportunities reduces stormwater impacts and protects public health, safety, and welfare.

A 75-foot wooded buffer directly supports these regulatory objectives by:

A. Stormwater Infiltration
Woodland soils typically exhibit higher infiltration rates than disturbed or developed land due to:

- Extensive root systems
- Organic matter accumulation
- Natural soil structure
- Reduced soil compaction

These characteristics promote infiltration of stormwater runoff and reduce surface discharge volumes.

B. Groundwater Recharge
The wooded buffer facilitates rainfall infiltration into underlying soils, helping maintain groundwater resources and baseflow contributions to local watersheds.

C. Flood Mitigation
Natural woodland areas slow runoff velocities and reduce peak discharge rates entering downstream drainage systems, thereby reducing localized flooding potential.

D. Water Quality Protection
Wooded vegetation acts as a natural treatment system by removing:

- Sediment

- Nitrogen
- Phosphorus
- Heavy metals
- Hydrocarbons
- Other stormwater pollutants before they reach receiving waters.

These functions are consistent with Delaware's stated stormwater management objectives and BMP guidance.

3. Consistency with Delaware Post-Construction BMP Standards
The Delaware Post Construction Stormwater BMP Standards emphasize practices that:

- Reduce runoff volume
- Promote infiltration
- Improve water quality
- Enhance groundwater recharge
- Mimic natural hydrologic conditions

The BMP Manual identifies infiltration and natural vegetative systems as preferred approaches because they reduce both runoff quantity and pollutant loading.

A 75-foot wooded buffer functions similarly to several recognized green infrastructure BMPs:

- Vegetated filter strips
- Conservation areas
- Natural recharge zones
- Riparian-type buffer systems
- Bio-retention pretreatment areas

Unlike engineered stormwater facilities, wooded buffers provide these benefits continuously throughout the life of the development with relatively low maintenance requirements.

4. EPA Green Infrastructure Benefits

The U.S. Environmental Protection Agency identifies preservation of natural vegetation and tree cover as a core green infrastructure strategy.
According to EPA guidance, wooded buffers provide:

Stormwater Benefits

- Reduced runoff generation
- Increased infiltration
- Reduced downstream erosion
- Improved water quality

Air Quality Benefits

Trees remove airborne pollutants including:

- Particulates
- Nitrogen oxides
- Ozone precursors

Climate Benefits

Wooded buffers contribute to:

- Carbon sequestration
- Urban heat-island reduction
- Temperature moderation

Community Benefits

Natural vegetation improves aesthetics and increases public acceptance of adjacent development.

A 75-foot wooded buffer constitutes a substantial green infrastructure feature and represents an environmentally beneficial design component consistent with EPA recommendations.

5. Compliance with APA Land Use Planning Principles

The American Planning Association encourages the use of buffers where different land uses adjoin one another.
APA planning principles emphasize:

Land Use Compatibility

Buffers reduce conflicts between:

- Industrial development
- Residential neighborhoods

by creating separation and transition between activities of differing intensity.

Quality of Life Protection

Wooded buffers contribute to:

- Neighborhood character
- Privacy
- Visual quality
- Perceived environmental quality

Sustainable Development
Natural buffers are recognized as sustainable planning tools because they provide environmental services while preserving community character.

Long-Term Community Planning
APA best practices support preserving significant vegetated areas to protect environmental resources and reduce future community conflicts.
The proposed 75-foot wooded buffer is consistent with these established planning objectives and represents a superior land-use compatibility measure.

6. Noise Attenuation Benefits
Multiple studies have demonstrated that dense wooded areas can reduce perceived noise through:

- Sound absorption
- Sound deflection
- Interruption of sound transmission pathways
- Psychological screening effects

A 75-foot wooded buffer with mature trees, understory vegetation, and evergreen materials provides greater noise attenuation than narrow landscape strips and contributes significantly to the reduction of industrial noise perceptions from adjacent residential properties.

While performance varies depending on vegetation density and topography, wooded buffers are recognized as valuable supplemental noise mitigation measures.

7. Visual Screening Benefits
One of the most important community benefits is visual separation.

A mature 75-foot wooded buffer can effectively screen:

- Buildings
- Equipment yards
- Parking areas

- Lighting
- Loading operations
- Vehicular activity

The wooded character maintains a natural appearance that is generally preferred over fencing or constructed barriers.

Existing Sussex County planning policies increasingly emphasize preservation of existing vegetation and enhanced buffer design to improve compatibility between development types.

8. Wildlife Habitat and Ecological Benefits

Wooded buffers provide habitat for:

- Songbirds
- Pollinators
- Small mammals
- Reptiles
- Beneficial insects

Benefits include:

- Habitat continuity
- Wildlife movement corridors
- Biodiversity preservation
- Ecological resilience

These functions contribute to broader environmental sustainability objectives.

9. Industry Best Management Practices
Recognized industry best practices recommend:

Preservation First
Retaining existing mature woodlands is generally preferable to clearing and replanting.

Native Vegetation
Buffers should emphasize:

- Native trees
- Native shrubs
- Native groundcover

Multi-Layer Vegetation
Optimal performance is achieved through:

- Canopy trees
- Understory trees
- Shrubs
- Ground vegetation

Long-Term Protection
Buffers should remain undisturbed except for:

- Removal of hazardous trees
- Invasive species management
- Periodic maintenance

Minimized Disturbance
Utilities, grading, and clearing should be minimized within the buffer area.

10. Findings and Conclusions
Based upon Delaware Sediment and Stormwater Regulations, Delaware BMP Standards and Specifications, EPA green infrastructure guidance, APA planning principles, and accepted engineering and land planning practices, a 75-foot wooded buffer along the perimeter of an industrially zoned property adjacent to residential lands provides substantial and measurable public benefits.

Findings of Fact

1. The wooded buffer promotes stormwater infiltration and groundwater recharge.
2. The buffer improves water quality through pollutant filtration.
3. The buffer reduces runoff rates and contributes to flood mitigation.
4. The buffer provides effective visual screening between industrial and residential uses.
5. The buffer contributes to noise attenuation and community compatibility.
6. The buffer protects wildlife habitat and ecological functions.
7. The buffer improves air quality and carbon sequestration.
8. The buffer advances sustainable development objectives.
9. The buffer is consistent with Delaware stormwater regulatory intent and BMP guidance.
10. The buffer is consistent with APA planning principles regarding compatibility between contrasting land uses.

11. The 75-foot width exceeds many conventional landscape buffer treatments and represents a significant environmental enhancement.
12. Preservation of mature woodland is considered an industry best management practice and provides greater long-term environmental value than newly planted buffer systems.

Professional Opinion

Based upon existing land planning practice, recognized engineering judgment, published stormwater research, and accepted industry standards, the preservation and long-term maintenance of a 75-foot wooded buffer constitutes a meaningful and supportable compatibility measure between industrial and residential land uses. Existing regulatory and technical guidance recognizes that stable vegetative cover, mature tree canopy, uncompacted soils, and layered understory vegetation assist in reducing runoff velocity, promoting infiltration, supporting groundwater recharge, filtering sediment and nonpoint source pollutants, moderating visual and noise impacts, and maintaining ecological function. On that factual and technical basis, the 75-foot wooded buffer is not merely an aesthetic feature; it is a practical green infrastructure and land-use transition tool consistent with Delaware stormwater management objectives, EPA green infrastructure principles, APA land-use compatibility practices, and generally accepted engineering and planning standards for minimizing potential impacts at the industrial-residential interface.

References

- Delaware Sediment and Stormwater Regulations (7 DE Admin. Code 5101).
- Delaware Post Construction Stormwater BMP Standards & Specifications (DNREC).
- DNREC Sediment and Stormwater Program Guidance.
- U.S. Environmental Protection Agency Green Infrastructure Program.
- American Planning Association (APA) Planning Advisory Service publications addressing land use compatibility and environmental buffering.
- Sussex County buffer and vegetation preservation policies.

GEO-TECHNOLOGY ASSOCIATES, INC.

GEOTECHNICAL • ENVIRONMENTAL •
CONSTRUCTION OBSERVATION AND TESTING

A Practicing Geoprofessional Business Association Member Firm

June 5, 2026

Pennoni Associates
18072 Davidson Drive
Milton, Delaware 19968

Attn: Mr. Alan M. Decktor, P.E.

Re: Report of SWM Subsurface Exploration Services
Yellow Metal
Sussex County, Delaware

Dear Alan:

In accordance with our agreement, dated April 8, 2026, Geo-Technology Associates, Inc. (GTA) has performed a subsurface exploration for the proposed stormwater management (SWM) facility planned in conjunction with the development of the above referenced project. The purpose of the subsurface exploration was to estimate the seasonal high groundwater elevation; evaluate the suitability of the subsoils to facilitate infiltration practices at selected test locations; present the subsoil conditions encountered at selected borings and provide preliminary recommendations for infiltration facility construction with respect to geotechnical considerations included in Appendix 1 – Soil Investigation Procedures of the February 2019 BMP Standards and Specifications. A site plan, titled *Yellow Metal – Industrial* prepared by Pennoni, the project civil engineer, dated April 1, 2026, and GTA's report dated September 18, 2025, were referenced for this report. The results of our subsurface exploration are summarized below.

The site vicinity is shown on the attached Figure 1, Site Location Plan. The existing site conditions and relative locations of the explorations are shown on the attached Figure 2, Exploration Location Plan. The project site is located on the north side of Lewes Georgetown Highway (Route 9) approximately ½-mile east of Shingle Point Road in the Georgetown area of Sussex County, Delaware. The subject property is an irregular shaped parcel totaling approximately 42-acres and consisting of mature woods with interspersed commercial building and yard areas in the southern portion of the site. The site is bounded by residential properties to the east and west and mature woods to the north, west and south beyond Route 9. Based on a review of the plan, the existing ground surface across the site slopes downward from approximate Elevation 48 to 38 feet above Mean Sea Level (MSL) in a western direction.

According to the Geologic Map of the Harbeson Quadrangle, Delaware (2011) prepared by the Delaware Geologic Survey the site is within the Coastal Plain Physiographic Province. Coastal Plain sediments below the surficial deposits exposed in the site area were generally deposited in commonly estuarine environments of the Tertiary geologic age. The Late Pliocene deposits present on this site are designated as the Beaverdam Formation. Please refer to the Site Geology Map (Figure No. 3) and the above-referenced publications for more details about the geologic formations mapped in the site vicinity. Please note that man-made fill is anticipated to be present at this site based on the site conditions observed at the time of GTA's exploration.

From review of the USDA Soil Survey, the near surface soils conform to Pepperbox loamy sand (0 to 2 percent slopes). Also present are soils conforming to Woodstown sandy loam (0 to 2 percent slopes, Northern Tidewater Area) and Fallsington sandy loams (0 to 2 percent slopes, Northern Tidewater Area). The soils map information is attached.

From review of the attached Monthly Groundwater Depth for Pe54-51, Columbia Aquifer, taken from the Delaware Geological Survey website, the groundwater depth at Well Pe54-51 (west of Millsboro, Delaware), was below the normal seasonal high when the borings were performed in April of 2026.

GTA performed 3 test pits, designated as B-9, B-11 and B-14, to depths of 10 feet below the ground surface and eight auger borings, designated as B-22 through B-29, to depths of 10 feet below the ground surface or to where wet, caving conditions were met at 8½ feet below the ground surface. The explorations were performed at the approximate locations shown on the attached Exploration Location Plan, presented as Figure 2. Water level measurements were taken one to three days after completion of drilling, and the boreholes were backfilled after the longer-term water level measurements were taken. The exploration locations were selected and field located by GTA using a recreational handheld Garmin 64 GPS unit and, therefore, the locations shown should be considered approximate. The ground surface elevations at the exploration locations were estimated from the referenced plans and the elevations shown on the logs and discussed herein should be considered approximate. The exploration logs are attached to this report.

The soils were visually classified in accordance with the Unified Soil Classification System (USCS) and the United States Department of Agriculture (USDA) classification system. At the ground surface, the explorations encountered an approximately 2- to 7-inch-thick topsoil layer. Below the topsoil, Borings B-24 and B-25 encountered an approximately 3-foot-thick surficial fill layer which generally consisted of Silty SAND.

Beneath the topsoil/fill layers, where encountered, the borings generally encountered native soils, predominantly consisting of Silty SAND (USCS: SM; USDA: Sandy Loam), Poorly-graded SAND (SP; Sand), Poorly-graded SAND with Silt (SP-SM; Loamy Sand), and Clayey SAND (SC; Sandy Clay Loam). Boring B-23 encountered an interbedded layer of Sandy Lean CLAY (CL; Clay Loam) from approximately 1 to 5 feet below the ground surface.

GTA's estimate of the seasonal high groundwater level at the borings is based upon soil coloring, mottling and/or saturation. The results of the groundwater level readings and GTA's opinion of the estimated seasonal high groundwater depth are summarized as follows:

GROUNDWATER DATA SUMMARY

Exploration No.	Existing Ground Surface Elevation (MSL)	Depth Below Existing Ground Surface (ft.)/ Elevation (MSL) to Groundwater at Completion	Depth Below Existing Ground Surface (ft.)/ Elevation (MSL) to Groundwater At One to Three Days After Completion	[1]Depth Below Existing Ground Surface (ft.)/ Elevation (MSL) to Estimated Seasonal High Groundwater
B-9	EL 41	10 / EL 31	10 / EL 31	6 / EL 35
B-11	EL 43	Dry to 10 / Dry to EL 33	Dry to 10 / Dry to EL 33	8 / EL 35
B-14	EL 42	Dry to 10 / Dry to EL 32	Dry to 10 / Dry to EL 32	7 / EL 35
B-22	EL 41	8.3 / EL 32.7	7.2 / EL 33.8	6 / EL 35
B-23	EL 41	6.2 / EL 34.8	6.5 / EL 34.5	6 / EL 35
B-24	EL 46	Dry to 10 / Dry to EL 36	Dry to 10 / Dry to EL 36	Deeper than 10 / Deeper than EL 36
B-25	EL 42	Dry to 10 / Dry to EL 32	Dry to 10 / Dry to EL 32	7 / EL 35
B-26	EL 42	9.5 / EL 32.5	9.3 / EL 32.7	7 / EL 35
B-27	EL 43	Dry to 10 / Dry to EL 33	9.6 / EL 33.4	8 / EL 35
B-28	EL 44	Dry to 10 / Dry to EL 34	Dry to 10 / Dry to EL 34	9 / EL 35
B-29	EL 44	Dry to 10 / Dry to EL 34	Dry to 10 / Dry to EL 34	9 / EL 35

[1]Seasonal high groundwater estimate based upon observed soil mottling, color, and/or saturation and should be considered approximate.

The groundwater levels can be expected to fluctuate with seasonal changes, precipitation, and other factors such as development activity. Please refer to the exploration logs provided in the attachments for further information.

Selected samples obtained from the borings were tested for grain-size analysis, Atterberg Limits, and natural moisture contents. The grain-size analysis and Atterberg Limits testing were performed to determine the USCS and USDA designations for the soil. The results of testing are as follows:

SUMMARY OF LABORATORY TESTING

EXPLORATION NO.	DEPTH (FT.)	USCS CLASSIFICATION	LL (%)	PI (%)	NMC (%)
B-11	3 – 4	Lean CLAY (CL)	37	17	20.8
B-23	1.2 – 5.3	Sandy Lean CLAY (CL)	35	18	18.0
B-29	3.2 – 6.3	Clayey SAND (SC)	31	13	20.2

Note: LL=Liquid Limit PI=Plastic Index NP=Non-plastic NMC=Natural Moisture Content

Please refer to the attached laboratory test results for additional information.

Three single ring, 5-inch diameter, and eight single ring, 12-inch diameter, falling head infiltration tests were performed at locations offset from the borings. The infiltration test holes were pre-soaked prior to the falling head tests. The test locations were charged with a 6-inch head, and the water level drop was recorded at 15 minutes or less intervals. The results of the infiltration tests, test depth, estimated seasonal high groundwater and soil type at the test location are summarized as follows:

SUMMARY OF INFILTRATION DATA

TEST NO.	EXISTING GROUND SURFACE ELEVATION (MSL)	[1]DEPTH BELOW EXISTING GROUND SURFACE (FT.)/ ELEVATION (MSL) TO ESTIMATED SEASONAL HIGH GROUNDWATER	INFILTRATION TEST DEPTH BELOW EXISTING GROUND SURFACE (FT)/ ELEVATION (MSL)	[2]INFILTRATION TEST RATE (IN/HR)	CASING DIAMETER (IN)	ESTIMATED VISUAL USDA SOIL CLASSIFICATION
B-9	EL 41	6 / EL 35	4 / EL 37	6.0	12	Loamy Sand
B-11	EL 43	8 / EL 35	6 / EL 37	6.0	12	Loamy Sand
B-14	EL 42	7 / EL 35	5 / EL 37	2.0	12	Sandy Loam
B-22	EL 41	6 / EL 35	4 / EL 37	0.0	12	Sandy Clay Loam
B-23	EL 41	6 / EL 35	4 / EL 37	0.1	12	Sandy Clay Loam
B-24	EL 46	11 / EL 35	9 / EL 37	3.6	5	Sandy Loam
B-25	EL 42	7 / EL 35	5 / EL 37	4.1	12	Sandy Loam
B-26	EL 42	7 / EL 35	5 / EL 37	24.0	12	Sand
B-27	EL 43	8 / EL 35	6 / EL 37	2.3	12	Sandy Loam
B-28	EL 44	9 / EL 35	7 / EL 37	3.0	5	Sandy Loam
B-29	EL 44	9 / EL 35	7 / EL 37	3.1	5	Sandy Loam

[1]Seasonal high groundwater estimate based upon observed soil mottling, color and/or saturation and should be considered approximate.
[2]Infiltration tests performed in general accordance with ASTM D-5126.

The guidelines established in the *Delaware Post Construction Stormwater BMP Standards & Specifications*, dated February 2019 indicate that the minimum infiltration rate for all runoff reduction and infiltration practices is 1 inch per hour. Also, a vertical separation of at least 2 feet from the seasonal high groundwater elevation or limiting layer is required for all infiltration practices.

Based upon the field infiltration rate and using a factor of safety of 2 for the 12-inch diameter and 2.5 for the 5-inch diameter, GTA recommends the following infiltration rate for the SWM design.

SUMMARY OF INFILTRATION SUITABILITY

SWM AREA	BORING RANGE	PREDOMINANT USDA SOIL TYPE	SUITABILITY OF LOCATION FOR INFILTRATION PRACTICE	RECOMMENDED FACILITY BOTTOM RANGE OF ELEVATION (MSL)	[1]RECOMMENDED MAXIMUM DESIGN INFILTRATION RATE (IN/HR)
1	B-9, B-11, B-14, B-22 through B-	Sandy Loam	Suitable	EL 37 to EL 38	1.7[2]

[1]FS=2 for 12-inch test, 2.5 for 5-inch test.
[2]Due to variable soils B-22, B-23 and B-26 are excluded from the recommended maximum design rate.

GTA recommends extending the facility bottom through less permeable Sandy Clay Loam into Sandy Loam and Loamy Sand and Sand layers. To facilitate placement in the Sandy loam/Loamy Sandy/Sand layers, the actual facility bottom elevation will vary and should be adjusted as required in the field based upon the observed conditions at the time of construction but should not extend within 2 feet above the estimated seasonal high groundwater elevation. In areas where less permeable soil including Sandy Clay Loam are encountered at the basin bottom up to within two feet below the facility bottom, the soils should be over excavated and replaced with ASTM C33 Concrete Sand.

GTA recommends that infiltration facilities be excavated using a track-mounted excavator, which will generally eliminate the need to operate equipment directly on the subgrade.

Post-construction infiltration testing should be provided and the groundwater depth observed within proposed SWM facilities with the results reported to the site engineer for conformance with the facility design parameters. The earthwork contractor should anticipate that the post-construction infiltration testing will take two to four days to complete once the facility bottom is exposed.

GTA does not recommend using an SWM facility as a temporary sediment basin; however, if a portion of a SWM facility is to be used for a temporary sediment basin, GTA recommends excavating the basin to 2 feet above the planned pond bottom and limiting the footprint of the temporary basin, if practical, to minimize degradation (e.g., decreased permeability) of the infiltration facility basin.

All SWM pond construction should conform to *Delaware Conservation Practice Standard Pond Code 378* and *Code 521*, latest editions and *Delaware Sediment and Stormwater Regulations*, latest edition, as applicable.

Limitations

This report, including all supporting exploration logs, field data, field notes, estimates, and other documents prepared by GTA in connection with this project, has been prepared for the exclusive use of Pennoni Associates pursuant to the agreement between GTA and Pennoni Associates dated April 8, 2026, and in accordance with generally accepted engineering practice. All terms and conditions set forth in the Agreement are incorporated herein by reference. No warranty, express or implied, is given herein. Use and reproduction of this report by any other person without the expressed written permission of GTA and Pennoni Associates is unauthorized and such use is at the sole risk of the user.

The analysis and recommendations contained in this report are based on the data obtained from limited observation and testing of the encountered materials. Explorations indicate soil and groundwater conditions only at specific locations and times and only to the depths penetrated. They do not necessarily reflect strata variations that may exist between the exploration locations. Consequently, the analysis and recommendations must be considered preliminary until the subsurface conditions can be verified by direct observation at the time of construction. If variations in subsurface conditions from those described are noted during construction, recommendations in this report may need to be re-evaluated.

In the event that any changes in the nature, design, or location of the facilities are planned, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and conclusions of this report are verified in writing. Geo-Technology Associates, Inc. is not responsible for any claims, damages, or liability associated with interpretation of subsurface data or reuse of the subsurface data or engineering analysis without the expressed written authorization of Geo-Technology Associates, Inc.

The scope of our services for this geotechnical exploration did not include any environmental assessment or investigation for the presence or absence of wetlands, or hazardous or toxic materials in the soil, surface water, groundwater or air, on or below or around this site. Any statements in this report or on the logs regarding odors or unusual or suspicious items or conditions observed are strictly for the information of our Client. The subject matter of this report is limited to the facts and matters stated herein. Absence of a reference to any other conditions or subject matter shall not be constructed by the reader to imply approval by the writer.

The soil samples obtained in conjunction with this exploration will be discarded 60 days after the date of this report, unless other arrangements are made by the Client. We appreciate the opportunity to be of assistance on this project. Should you have any questions or require additional information, please contact our office at (302) 855-9761.

Sincerely,
GEO-TECHNOLOGY ASSOCIATES, INC.

Adam M. Wood, G.I.T.
Project Geological Professional

Travis P. Caraway, P.E.
Associate

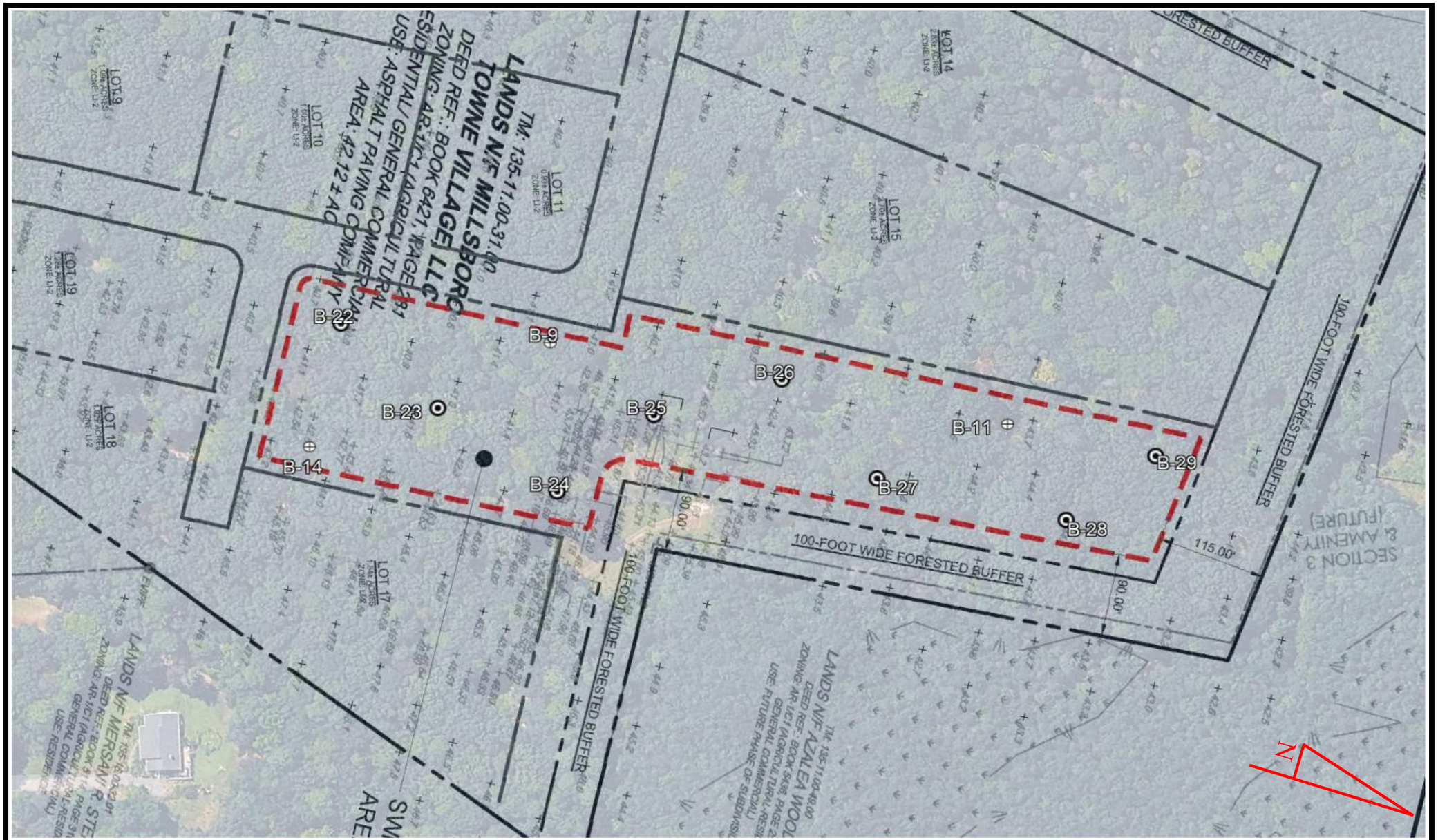
AMW/TPC/llh
31260999
S:\1 Job File\2026 Projects\31260999-Yellow Metal\Report\Yellow Metal - GTA Report for SWM Subsurface Exploration.doc

Attachments: Site Location Plan (1 page)
Exploration Location Plan (1 page)
Site Geology Map (1 page)
Subsurface Profile (1 page)
USDA Soil Survey Map (3 pages)
Water Conditions Summary Page (1 page)
Notes for Exploration Logs (1 page)
Exploration Logs (8 pages)
Previous Exploration Logs (3 pages)
Particle Size Distribution Report (3 pages)
Infiltration Logs (8 pages)
Previous Infiltration Logs (3 pages)
GBA – Important Information about your Geotechnical Engineering Report (2 pages)

Site Location Plan taken from Google Maps.

GTA	**GEO-TECHNOLOGY ASSOCIATES, INC.** *GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS* 21491 Baltimore Avenue, Unit 1 Georgetown, Delaware 19947 (302) 855-9761 Fax (302) 856-3388	**Site Location Plan** **Yellow Metal** **Sussex County, Delaware**

SCALE	DATE	DRAWN BY	REVEW BY	JOB NO.	FIGURE
NTS	May 2026	GTA	TPC	31260999	1



Exploration Location Plan taken from Google Earth and a site plan titled *Yellow Metal Industrial* prepared by Pennoni Asdociates, Inc. and dated April 1, 2026.

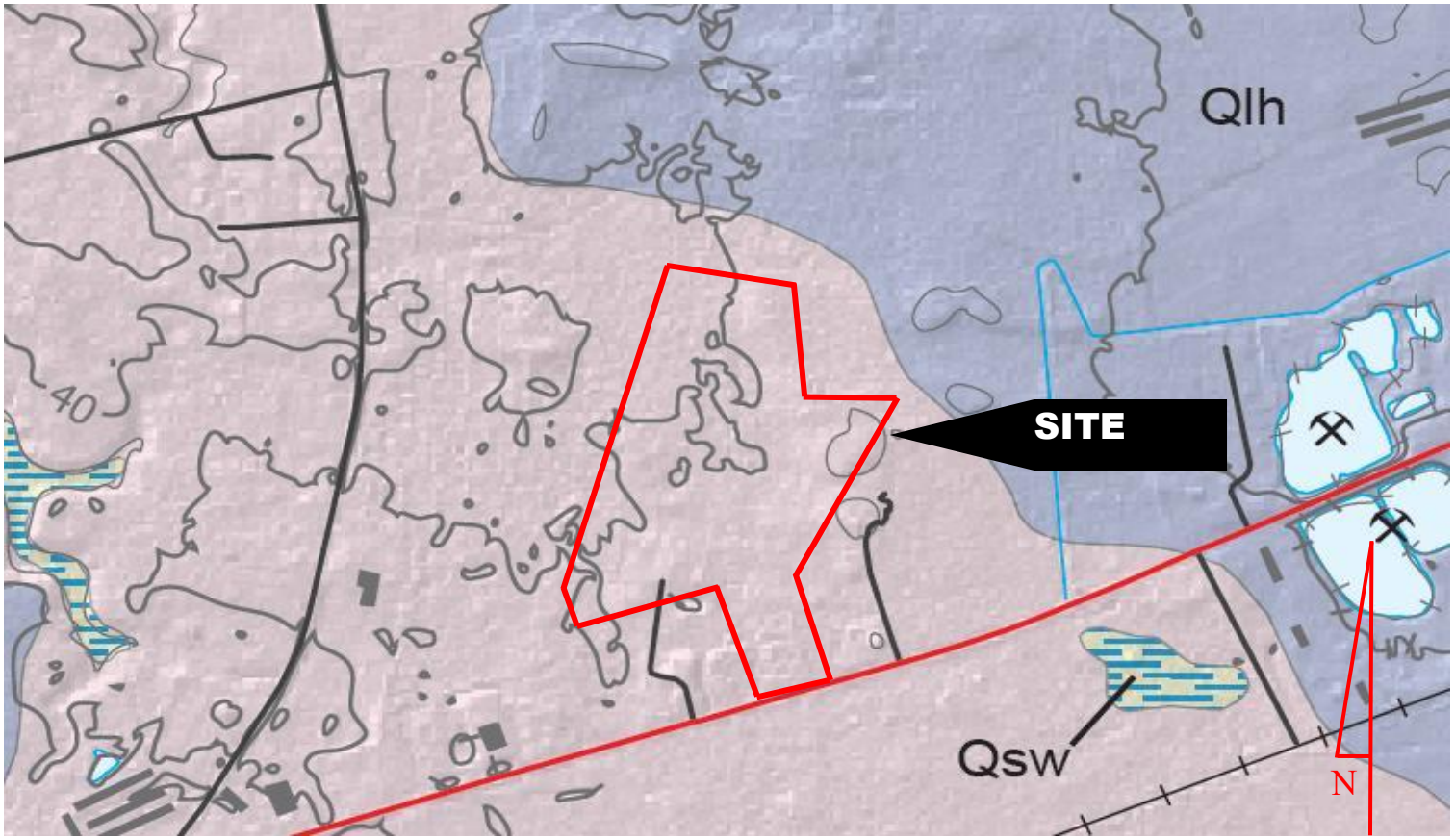
Exploration Location

Previous Exploration Location

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
21491 Baltimore Avenue, Unit 1
Georgetown, Delaware 19947
(302) 855-9761

Exploration Location Plan
Yellow Metal
Sussex County, Delaware

SCALE 11X17	DATE	DRAWN BY	DESIGN BY	REVIEW BY	JOB NO.	Figure
1" ~ 100'	May 2026	GTA	Pennoni	TPC	31260999	2



BEAVERDAM FORMATION

Tbd

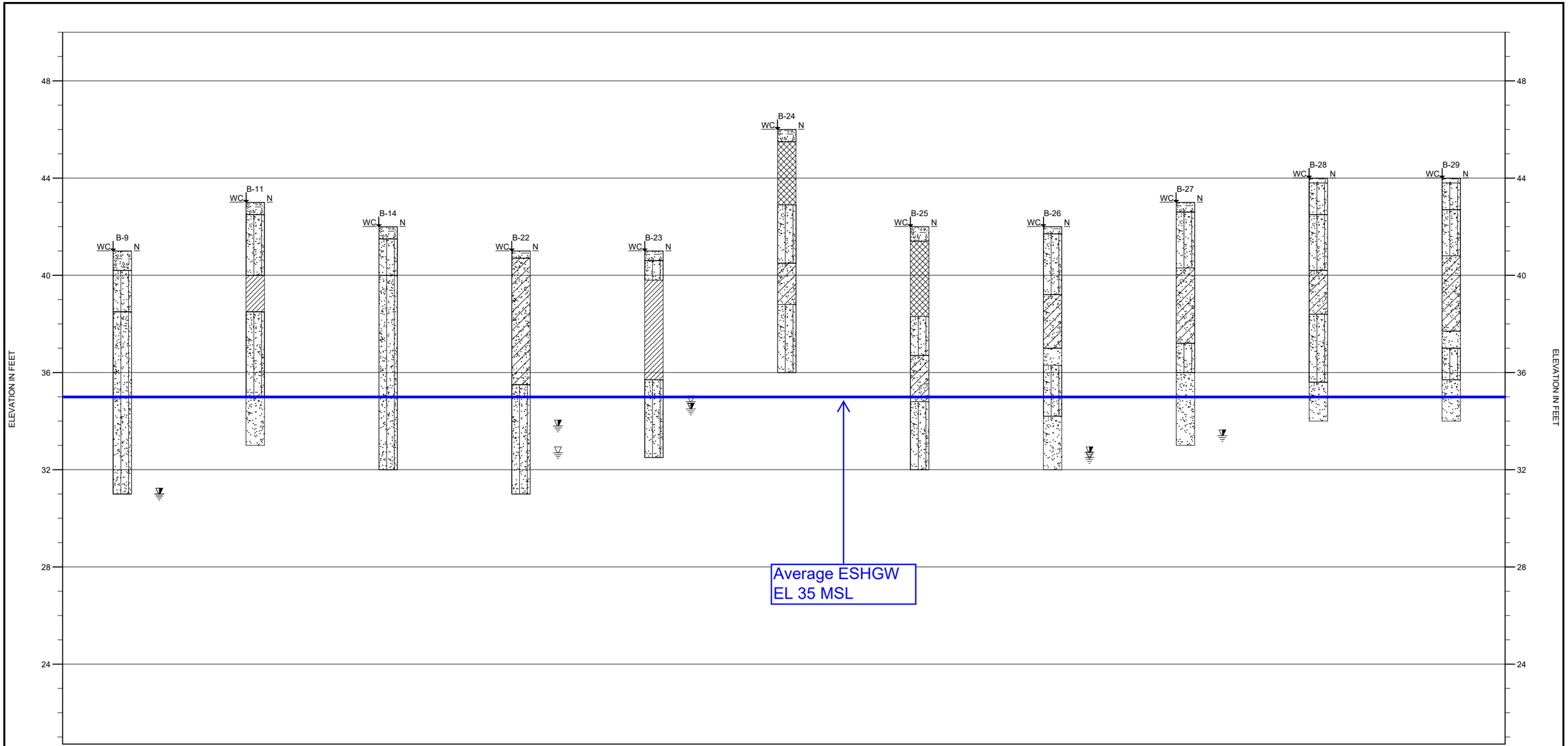
Heterogeneous unit ranging from very coarse sand with pebbles to silty clay. The predominant lithologies at the land surface are white to mottled light-gray and reddish-brown, silty to clayey, fine to coarse sand. Laminae and beds of very coarse sand with pebbles to gravel are common as are laminae and beds of bluish-gray to light-gray silty clay. In a few places near the land surface, but more commonly in the subsurface, beds ranging from 2 to 20 ft thick of finely laminated, very fine sand and silty clay are present. The sands of the Beaverdam Formation have a white, silty matrix that gives samples a milky appearance when wet. This white, silty matrix is the most distinguishing characteristic of the unit and readily differentiates the Beaverdam Formation from the adjacent cleaner sands of the Lynch Heights and Turtle Branch Formations. The Beaverdam Formation is interpreted to be a late Pliocene fluvial to estuarine deposit (Groot et al., 1990; Ramsey, 2010a, b) and ranges from 50 to 100 ft thick in the map area. Late Pliocene.

Base plan adapted from the USGS Geologic Map of the Harbeson Quadrangle, Delaware (2011).

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
21491 Baltimore Avenue, Unit 1
Georgetown, Delaware 19947
(302) 855-9761

Site Geology Map
Yellow Metal
Sussex County, Delaware

SCALE	DATE	DRAWN BY	REVIEW BY	JOB NO.	FIGURE
NTS	May 2026	GTA	TPC	31260999	3

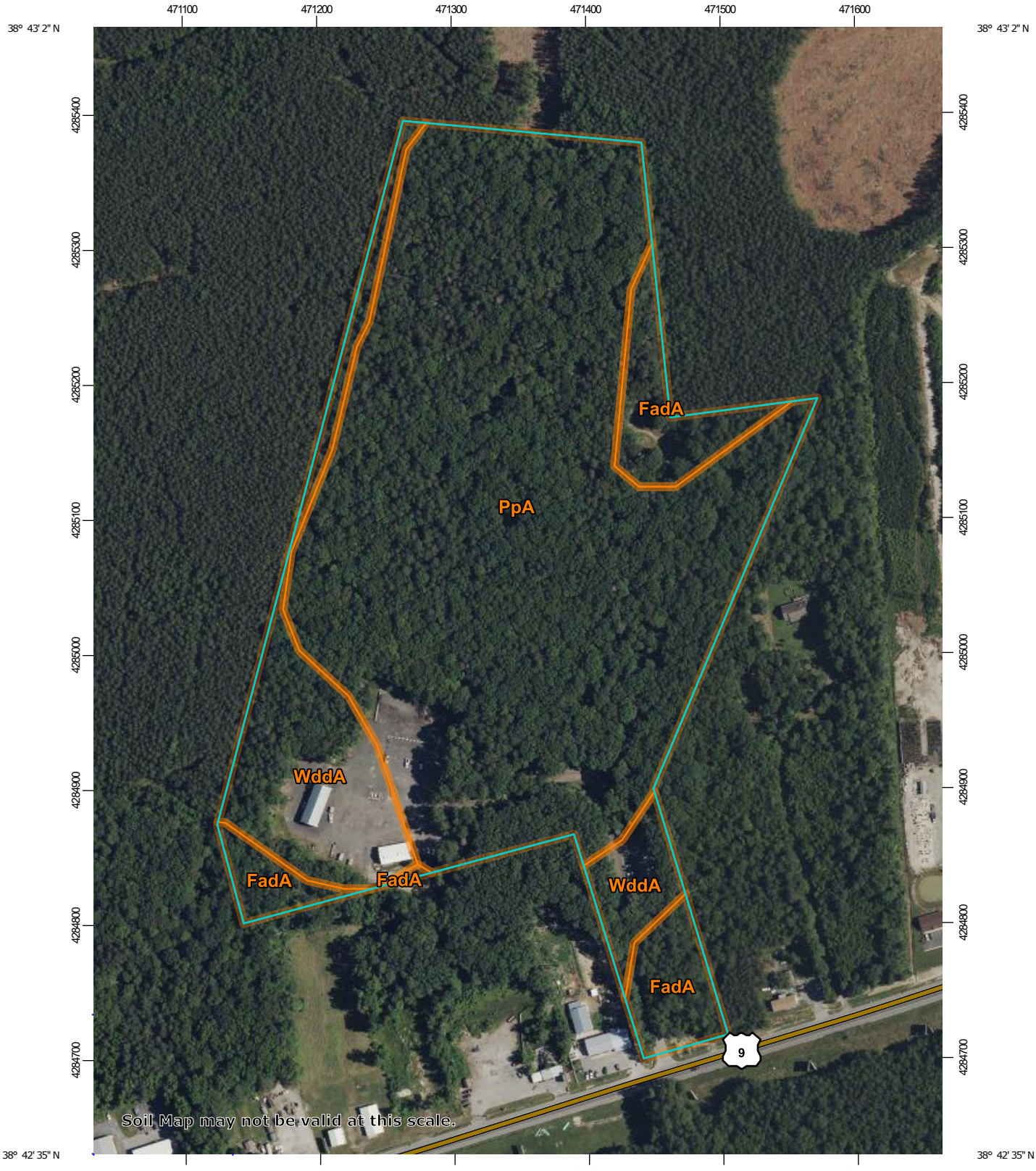


Symbol Description

- Topsoil
- SM - Silty Sand
- SP-SM - Poorly Graded Sand with Silt
- CL - Lean Clay
- SP - Poorly Graded Sand
- SC - Clayey Sand
- Existing Fill
- Approximate horizontal location of exploration
- Water table during drilling
- Water table after 24 hours

Geo-Technology Associates, Inc.			
SUBSURFACE PROFILE			
VERTICAL SCALE: 1"=4'	DRAWN BY AWN	APPROVED BY TPC	DATE: 5/22/2026
Yellow Metal Sussex County, Delaware			
PROJECT NO. 31260999		FIGURE 4	

Soil Map—Sussex County, Delaware



Map Scale: 1:4,070 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

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 26, Sep 9, 2025

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

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

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	4.1	9.6%
PpA	Pepperbox loamy sand, 0 to 2 percent slopes	31.9	75.3%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	6.4	15.0%
Totals for Area of Interest		**42.3**	**100.0%**

UNIVERSITY OF DELAWARE | DELAWARE GEOLOGICAL SURVEY

Delaware Geological Survey Building
257 Academy Street
Newark, DE 19716-7501

Kent County Hydrologic Conditions – April 30, 2026

PRECIPITATION

Dover – running surplus/deficit

12-month	6-month	5-month
-5.19	-7.07	-5.45

STREAMFLOW

St. Jones at Dover – 30-day moving average

17.1 mgd (Below Normal)

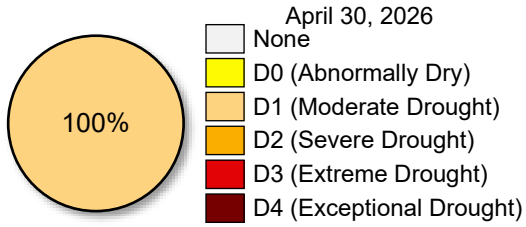
GROUNDWATER

Well Mc51-01a

15.1 fbls (Below Normal)

(Normal for April is between 9.5 and 12.6 fbls)

Kent County (DE) Percent Area in U.S. Drought Monitor Categories



Modified from the U.S. Drought Monitor

National Drought Mitigation Center

Sussex County Hydrologic Conditions – April 30, 2026

PRECIPITATION

Georgetown – running surplus/deficit

12-month	6-month	5-month
-6.37	-6.81	-4.90

STREAMFLOW

Nanticoke River at Bridgeville – 30-day moving average

38.3 mgd (Below Normal)

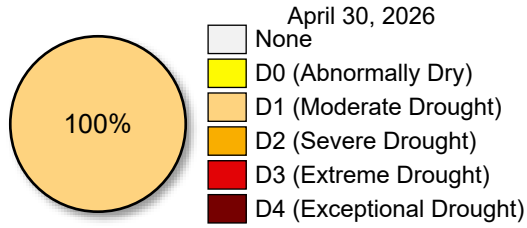
GROUNDWATER

Well Pe54-51

6.9 fbls (Normal)

(Normal for April is between 5.8 and 8.6 fbls)

Sussex County (DE) Percent Area in U.S. Drought Monitor Categories



Modified from the U.S. Drought Monitor

National Drought Mitigation Center

NOTES FOR EXPLORATION LOGS

KEY TO USCS TERMINOLOGY AND GRAPHIC SYMBOLS

MAJOR DIVISIONS (BASED UPON ASTM D 2488)				SYMBOLS: GRAPHIC	SYMBOLS: LETTER
COARSE-GRAINED SOILS — MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS — MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 15% PASSING THE NO. 200 SIEVE)			GW
					GP
		GRAVELS WITH FINES (MORE THAN 15% PASSING THE NO. 200 SIEVE)			GM
					GC
	SAND AND SANDY SOILS — MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LESS THAN 15% PASSING THE NO. 200 SIEVE)			SW
					SP
		SANDS WITH FINES (MORE THAN 15% PASSING THE NO. 200 SIEVE)			SM
					SC
FINE-GRAINED SOILS — MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILT OR CLAY (<15% RETAINED ON THE NO. 200 SIEVE)		SILTS AND LEAN CLAYS — LIQUID LIMIT LESS THAN 50		ML
					CL
	SILT OR CLAY WITH SAND OR GRAVEL (15% TO 30% RETAINED ON THE NO. 200 SIEVE)				OL
	SANDY OR GRAVELLY SILT OR CLAY (>30% RETAINED ON THE NO. 200 SIEVE)		ELASTIC SILTS AND FAT CLAYS — LIQUID LIMIT GREATER THAN 50		MH
					CH
					OH
HIGHLY ORGANIC SOILS					PT

NOTE: DUAL SYMBOLS ARE USED TO INDICATE COARSE-GRAINED SOILS WHICH CONTAIN AN ESTIMATED 5 TO 15% FINES BASED ON VISUAL CLASSIFICATION OR BETWEEN 5 AND 12% FINES BASED ON LABORATORY TESTING; AND FINE-GRAINED SOILS WHEN THE PLOT OF LIQUID LIMIT & PLASTICITY INDEX VALUES FALLS IN THE PLASTICITY CHART'S CROSS-HATCHED AREA. FINE-GRAINED SOILS ARE CLASSIFIED AS ORGANIC (OL OR OH) WHEN ENOUGH ORGANIC PARTICLES ARE PRESENT TO INFLUENCE ITS PROPERTIES. LABORATORY TEST RESULTS ARE USED TO SUPPLEMENT SOIL CLASSIFICATION BY THE VISUAL-MANUAL PROCEDURES OF ASTM D 2488.

ADDITIONAL TERMINOLOGY AND GRAPHIC SYMBOLS

	DESCRIPTION		GRAPHIC SYMBOLS
ADDITIONAL DESIGNATIONS	TOPSOIL		
	MAN MADE FILL		
	GLACIAL TILL		
	COBBLES AND BOULDERS		
RESIDUAL SOIL DESIGNATIONS	DESCRIPTION	"N" VALUE	
	HIGHLY WEATHERED ROCK	50 TO 50/1"	
	PARTIALLY WEATHERED ROCK	MORE THAN 50 BLOWS FOR 1" OF PENETRATION OR LESS, AUGER PENETRABLE	

COARSE-GRAINED SOILS (GRAVEL AND SAND)

DESIGNATION	BLOWS PER FOOT (BPF) "N"
VERY LOOSE	0 - 4
LOOSE	5 - 10
MEDIUM DENSE	11 - 30
DENSE	31 - 50
VERY DENSE	>50

NOTE: "N" VALUE DETERMINED AS PER ASTM D 1586

FINE-GRAINED SOILS (SILT AND CLAY)

CONSISTENCY	BPF "N"
VERY SOFT	<2
SOFT	2 - 4
MEDIUM STIFF	5 - 8
STIFF	9 - 15
VERY STIFF	16 - 30
HARD	>30

NOTE: ADDITIONAL DESIGNATIONS TO ADVANCE SAMPLER INDICATED IN BLOW COUNT COLUMN:
WOH = WEIGHT OF HAMMER
WOR = WEIGHT OF ROD(S)

SAMPLE TYPE

DESIGNATION	SYMBOL
SOIL SAMPLE	S-
SHELBY TUBE	U-
ROCK CORE	R-

WATER DESIGNATION

DESCRIPTION	SYMBOL
ENCOUNTERED DURING DRILLING	▽
UPON COMPLETION OF DRILLING	▼
24 HOURS AFTER COMPLETION	▼

NOTE: WATER OBSERVATIONS WERE MADE AT THE TIME INDICATED. POROSITY OF SOIL STRATA, WEATHER CONDITIONS, SITE TOPOGRAPHY, ETC. MAY CAUSE WATER LEVEL CHANGES.

LOG OF EXPLORATION NO. B-22

PROJECT: **Yellow Metal**
PROJECT NO.: **31260999**
PROJECT LOCATION: **Sussex County, Delaware**

WATER LEVEL (ft):	8.3		7.2
DATE:	4/24/26		4/27/26
CAVED (ft):	-		-

DATE STARTED: **4/24/2026**
DATE COMPLETED: **4/24/2026**
DRILLING CONTRACTOR: **Geo-Technology Associates, Inc.**
DRILLER: **K. Mitchell**
DRILLING METHOD: **Auger**
SAMPLING METHOD: **Discrete**

GROUND SURFACE ELEVATION: **41**
DATUM: **Topo**
EQUIPMENT: **Hand Auger**
LOGGED BY: **NO**
CHECKED BY: **T. Caraway**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE BLOWS/1¾ inches	DCP (see notes)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
				41.0	0	TS		Topsoil : 3 inches	
				40.7		SC		Gray, moist, Clayey SAND USDA: Sandy Clay Loam	
					3				
				35.5		SM		Brown, moist to wet, Silty SAND USDA: Sandy Loam	
					6				
					9				
				31.0				Bottom of hole 10 feet	
					12				
					15				
					18				

NOTES: **Air Temp.: 53, 48 Hr. Precip.: 0.00 in., Coords: 38042'49.24"N, 75019'44.05"W**
ASTM D-2488

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Suite 1
Georgetown, DE 19947

LOG OF EXPLORATION NO. B-22

Sheet 1 of 1

LOG OF EXPLORATION NO. B-23

PROJECT: **Yellow Metal**
PROJECT NO.: **31260999**
PROJECT LOCATION: **Sussex County, Delaware**

WATER LEVEL (ft): 6.2 | | 6.5
DATE: 4/24/26 | | 4/27/26
CAVED (ft): - | | -

DATE STARTED: **4/24/2026**
DATE COMPLETED: **4/24/2026**
DRILLING CONTRACTOR: **Geo-Technology Associates, Inc.**
DRILLER: **K. Mitchell**
DRILLING METHOD: **Auger**
SAMPLING METHOD: **Discrete**

GROUND SURFACE ELEVATION: **41**
DATUM: **Topo**
EQUIPMENT: **Hand Auger**
LOGGED BY: **NO**
CHECKED BY: **T. Caraway**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE BLOWS/1¾ inches	DCP (see notes)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
				41.0	0	TS		Topsoil : 5 inches	
				40.6		SM		Gray, moist, Silty SAND USDA: Sandy Loam	
				39.8		CL		Brown, moist, Sandy Lean CLAY USDA: Sandy Clay Loam	
					3				
				35.7		SM		Gray, moist to wet, Silty SAND USDA: Sandy Loam	
					6				
				32.5				Bottom of hole 8.5 feet	Wet, caving conditions met at 8.5 feet
					9				
					12				
					15				
					18				

NOTES: **Air Temp.: 53, 48 Hr. Precip.: 0.00 in., Coords: 38042'50.44"N, 75019'43.21"W**
ASTM D-2488

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Suite 1
Georgetown, DE 19947

LOG OF EXPLORATION NO. B-23

Sheet 1 of 1

LOG OF EXPLORATION NO. B-24

PROJECT: **Yellow Metal**
PROJECT NO.: **31260999**
PROJECT LOCATION: **Sussex County, Delaware**

WATER LEVEL (ft): Dry 10 | | Dry 10
DATE: 4/24/26 | | 4/27/26
CAVED (ft): - | | -

DATE STARTED: **4/24/2026**
DATE COMPLETED: **4/24/2026**
DRILLING CONTRACTOR: **Geo-Technology Associates, Inc.**
DRILLER: **K. Mitchell**
DRILLING METHOD: **Auger**
SAMPLING METHOD: **Discrete**

GROUND SURFACE ELEVATION: **46**
DATUM: **Topo**
EQUIPMENT: **Hand Auger**
LOGGED BY: **NO**
CHECKED BY: **T. Caraway**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE BLOWS/1¾ inches	DCP (see notes)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
				46.0	0	TS		Topsoil : 6 inches	
				45.5		FILL		Black-brown, moist, Silty SAND (Fill) USDA: Sandy Loam	
				42.9	3	SP-SM		Brown, moist, Poorly-graded SAND with Silt USDA: Loamy Sand	
				40.5	6	SC		Brown, moist, Clayey SAND USDA: Sandy Clay Loam	
				38.8		SM		Gray, moist, Silty SAND USDA: Sandy Loam	
				36.0	9			Bottom of hole 10 feet	
					12				
					15				
					18				

NOTES: **Air Temp.: 53, 48 Hr. Precip.: 0.00 in., Coords: 38042'51.86"N, 75019'42.46"W**
ASTM D-2488

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Suite 1
Georgetown, DE 19947

LOG OF EXPLORATION NO. B-24

Sheet 1 of 1

LOG OF EXPLORATION NO. B-25

PROJECT: **Yellow Metal**
PROJECT NO.: **31260999**
PROJECT LOCATION: **Sussex County, Delaware**

WATER LEVEL (ft):	Dry 10		Dry 10
DATE:	4/24/26		4/27/26
CAVED (ft):	-		-

DATE STARTED: **4/24/2026**
DATE COMPLETED: **4/24/2026**
DRILLING CONTRACTOR: **Geo-Technology Associates, Inc.**
DRILLER: **K. Mitchell**
DRILLING METHOD: **Auger**
SAMPLING METHOD: **Discrete**

GROUND SURFACE ELEVATION: **42**
DATUM: **Topo**
EQUIPMENT: **Hand Auger**
LOGGED BY: **NO**
CHECKED BY: **T. Caraway**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE BLOWS/1¾ inches	DCP (see notes)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
				42.0	0	TS		Topsoil : 7 inches	
				41.4		FILL		Black, moist, Silty SAND (Fill) USDA: Sandy Loam	
				38.3	3	SM		Brown, moist, Silty SAND USDA: Sandy Loam	
				36.7		SC		Brown, moist, Clayey SAND USDA: Sandy Clay Loam	
				34.8	6	SM		Brown, moist, Silty SAND USDA: Sandy Loam	
				32.0	9			Bottom of hole 10 feet	
					12				
					15				
					18				

NOTES: **Air Temp.: 53, 48 Hr. Precip.: 0.00 in., Coords: 38042'52.64"N, 75019'43.79"W**
ASTM D-2488

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Suite 1
Georgetown, DE 19947

LOG OF EXPLORATION NO. B-25

Sheet 1 of 1

LOG OF EXPLORATION NO. B-26

PROJECT: **Yellow Metal**
PROJECT NO.: **31260999**
PROJECT LOCATION: **Sussex County, Delaware**

WATER LEVEL (ft): 9.5 | | 9.3
DATE: 4/27/26 | | 4/28/26
CAVED (ft): - | | -

DATE STARTED: **4/27/2026**
DATE COMPLETED: **4/27/2026**
DRILLING CONTRACTOR: **Geo-Technology Associates, Inc.**
DRILLER: **N. Okpo**
DRILLING METHOD: **Auger**
SAMPLING METHOD: **Discrete**

GROUND SURFACE ELEVATION: **42**
DATUM: **Topo**
EQUIPMENT: **Hand Auger**
LOGGED BY: **NO**
CHECKED BY: **T. Caraway**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE BLOWS/1¾ inches	DCP (see notes)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
				42.0	0	TS		Topsoil : 4 inches	
				41.7		SM		Brown, moist, Silty SAND USDA: Sandy Loam	
				39.2	3	SC		Brown-gray, moist, Clayey SAND USDA: Sandy Clay Loam	
				37.0		SP		Tan, moist, Poorly-graded SAND USDA: Sand	
				36.3	6	SM		Brown-gray, moist, Silty SAND USDA: Sandy Loam	
				34.2		SP		Tan, moist to wet, Poorly-graded SAND USDA: Sand	
				32.0	9			Bottom of hole 10 feet	
					12				
					15				
					18				

NOTES: **Air Temp.: 39, 48 Hr. Precip.: 0.01 in., Coords: 38042'53.85"N, 75019'44.67"W**
ASTM D-2488

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Suite 1
Georgetown, DE 19947

LOG OF EXPLORATION NO. B-26

Sheet 1 of 1

LOG OF EXPLORATION NO. B-27

PROJECT: **Yellow Metal**
PROJECT NO.: **31260999**
PROJECT LOCATION: **Sussex County, Delaware**

WATER LEVEL (ft): Dry 10 | | 9.6
DATE: 4/27/26 | | 4/28/26
CAVED (ft): - | | -

DATE STARTED: **4/27/2026**
DATE COMPLETED: **4/27/2026**
DRILLING CONTRACTOR: **Geo-Technology Associates, Inc.**
DRILLER: **N. Okpo**
DRILLING METHOD: **Auger**
SAMPLING METHOD: **Discrete**

GROUND SURFACE ELEVATION: **43**
DATUM: **Topo**
EQUIPMENT: **Hand Auger**
LOGGED BY: **NO**
CHECKED BY: **T. Caraway**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE BLOWS/1¾ inches	DCP (see notes)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
				43.0	0	TS		Topsoil : 5 inches	
				42.6		SM		Brown, moist, Silty SAND USDA: Sandy Loam	
				40.3	3	SC		Brown, moist, Clayey SAND USDA: Sandy Clay Loam	
				37.2	6	SM		Tan, moist, Silty SAND USDA: Sandy Loam	
				36.0		SP		Tan, moist, Poorly-graded SAND USDA: Sand	
					9				
				33.0				Bottom of hole 10 feet	
					12				
					15				
					18				

NOTES: **Air Temp.: 39, 48 Hr. Precip.: 0.01 in., Coords: 38042'57.06"N, 75019'43.62"W**
ASTM D-2488

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Suite 1
Georgetown, DE 19947

LOG OF EXPLORATION NO. B-27

Sheet 1 of 1

LOG OF EXPLORATION NO. B-28

PROJECT: **Yellow Metal**
PROJECT NO.: **31260999**
PROJECT LOCATION: **Sussex County, Delaware**

WATER LEVEL (ft):	Dry 10		Dry 10
DATE:	4/27/26		4/28/26
CAVED (ft):	-		-

DATE STARTED: **4/27/2026**
DATE COMPLETED: **4/27/2026**
DRILLING CONTRACTOR: **Geo-Technology Associates, Inc.**
DRILLER: **N. Okpo**
DRILLING METHOD: **Auger**
SAMPLING METHOD: **Discrete**

GROUND SURFACE ELEVATION: **44**
DATUM: **Topo**
EQUIPMENT: **Hand Auger**
LOGGED BY: **NO**
CHECKED BY: **T. Caraway**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE BLOWS/1¾ inches	DCP (see notes)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
				44.0	0	TS		Topsoil : 2 inches	
				43.8		SP-SM		Gray, moist, Poorly-graded SAND with Silt USDA: Loamy Sand	
				42.5		SM		Brown, moist, Silty SAND USDA: Sandy Loam	
					3				
				40.2		SC		Brown, moist, Clayey SAND USDA: Sandy Clay Loam	
				38.4		SM		Brown, moist, Silty SAND USDA: Sandy Loam	
					6				
				35.6		SP		Tan, moist, Poorly-graded SAND USDA: Sand	
					9				
				34.0				Bottom of hole 10 feet	
					12				
					15				
					18				

NOTES: **Air Temp.: 39, 48 Hr. Precip.: 0.01 in., Coords: 38042'57.07"N, 75019'43.65"W**
ASTM D-2488

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Suite 1
Georgetown, DE 19947

LOG OF EXPLORATION NO. B-28

Sheet 1 of 1

LOG OF EXPLORATION NO. B-29

PROJECT: **Yellow Metal**
PROJECT NO.: **31260999**
PROJECT LOCATION: **Sussex County, Delaware**

WATER LEVEL (ft): Dry 10 | | Dry 10
DATE: 4/27/26 | | 4/28/26
CAVED (ft): - | | -

DATE STARTED: **4/27/2026**
DATE COMPLETED: **4/27/2026**
DRILLING CONTRACTOR: **Geo-Technology Associates, Inc.**
DRILLER: **N. Okpo**
DRILLING METHOD: **Auger**
SAMPLING METHOD: **Discrete**

GROUND SURFACE ELEVATION: **44**
DATUM: **Topo**
EQUIPMENT: **Hand Auger**
LOGGED BY: **NO**
CHECKED BY: **T. Caraway**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE BLOWS/1¾ inches	DCP (see notes)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
				44.0	0	TS		Topsoil : 2 inches	
				43.8		SM		Brown, moist, Silty SAND USDA: Sandy Loam	
				42.7		SP-SM		Gray, moist, Poorly-graded SAND with Silt USDA: Loamy Sand	
				40.8	3	SC		Brown, moist, Clayey SAND USDA: Sandy Clay Loam	
				37.7	6	SP		Tan, moist, Poorly-graded SAND USDA: Sand	
				37.0		SM		Tan-gray, moist, Silty SAND USDA: Sandy Loam	
				35.7	9	SP		Tan, moist, Poorly-graded SAND USDA: Sand	
				34.0				Bottom of hole 10 feet	
					12				
					15				
					18				

NOTES: **Air Temp.: 39, 48 Hr. Precip.: 0.01 in., Coords: 38042'57.82"N, 75019'44.79"W**
ASTM D-2488

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Suite 1
Georgetown, DE 19947

LOG OF EXPLORATION NO. B-29

Sheet 1 of 1

LOG OF EXPLORATION NO. B-9

PROJECT: **Yellow Metal**
PROJECT NO.: **31251973**
PROJECT LOCATION: **Sussex County, Delaware**

WATER LEVEL (ft):	10.0		10.0
DATE:	8/18/25		8/19/25
CAVED (ft):	-		-

DATE STARTED: **8/18/2025**
DATE COMPLETED: **8/18/2025**
DRILLING CONTRACTOR: **Cropper & Sons**
DRILLER: **Cropper**
DRILLING METHOD: **Excavator**
SAMPLING METHOD: **Discrete**

GROUND SURFACE ELEVATION: **41**
DATUM: **Google Earth**
EQUIPMENT: **John Deere 50G**
LOGGED BY: **TDV**
CHECKED BY: **T. Caraway**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE BLOWS/1¾ inches	DCP (see notes)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
				41.0	0	TS		Topsoil: 10 inches	
				40.1		SM		Tan, moist, Silty SAND USDA: Sandy Loam	
				38.5	3	SP-SM		Tan-gray, moist to wet, Poorly-graded SAND with Silt USDA: Loamy Sand	
					6				
					9				
				31.0				Bottom of hole 10 feet	
					12				
					15				
					18				

NOTES: **Air Temp.: 80, 48 Hr. Precip.: 0.0 in., Coords: 38042'51.41"N, 75019'44.45"W**
ASTM D-2488

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Suite 1
Georgetown, DE 19947

LOG OF EXPLORATION NO. B-9

Sheet 1 of 1

LOG OF EXPLORATION NO. B-11

PROJECT: **Yellow Metal**
PROJECT NO.: **31251973**
PROJECT LOCATION: **Sussex County, Delaware**

WATER LEVEL (ft):	Dry 10		Dry 10
DATE:	8/18/25		8/19/25
CAVED (ft):	-		-

DATE STARTED: **8/18/2025**
DATE COMPLETED: **8/18/2025**
DRILLING CONTRACTOR: **Cropper & Sons**
DRILLER: **Cropper**
DRILLING METHOD: **Excavator**
SAMPLING METHOD: **Discrete**

GROUND SURFACE ELEVATION: **43**
DATUM: **Google Earth**
EQUIPMENT: **John Deere 50G**
LOGGED BY: **TDV**
CHECKED BY: **T. Caraway**

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE BLOWS/1¾ inches	DCP (see notes)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
				43.0	0	TS		Topsoil: 6 inches	
				42.5		SP-SM		Tan, moist, Poorly-graded SAND with Silt USDA: Loamy Sand	
				40.0	3	CL		Orange, moist, Lean CLAY USDA: Clay Loam	
				38.5		SP-SM		Tan-orange, moist, Poorly-graded SAND with Silt USDA: Loamy Sand	
				35.0	6	SP		Tan, moist, Poorly-graded SAND USDA: Sand	
				33.0	9			Bottom of hole 10 feet	
					12				
					15				
					18				

NOTES: **Air Temp.: 80, 48 Hr. Precip.: 0.0 in., Coords: 38042'56.25"N, 75019'44.77"W**
ASTM D-2488

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Suite 1
Georgetown, DE 19947

LOG OF EXPLORATION NO. B-11

LOG OF EXPLORATION NO. B-14

PROJECT: **Yellow Metal**
PROJECT NO.: **31251973**
PROJECT LOCATION: **Sussex County, Delaware**

WATER LEVEL (ft):	Dry 10		Dry 10
DATE:	8/18/25		8/19/25
CAVED (ft):	-		-

DATE STARTED: **8/18/2025**
DATE COMPLETED: **8/18/2025**
DRILLING CONTRACTOR: **Cropper & Sons**
DRILLER: **Cropper**
DRILLING METHOD: **Excavator**
SAMPLING METHOD: **Discrete**

GROUND SURFACE ELEVATION: **42**
DATUM: **Google Earth**
EQUIPMENT: **John Deere 50G**
LOGGED BY: **TDV**
CHECKED BY: **T. Caraway**

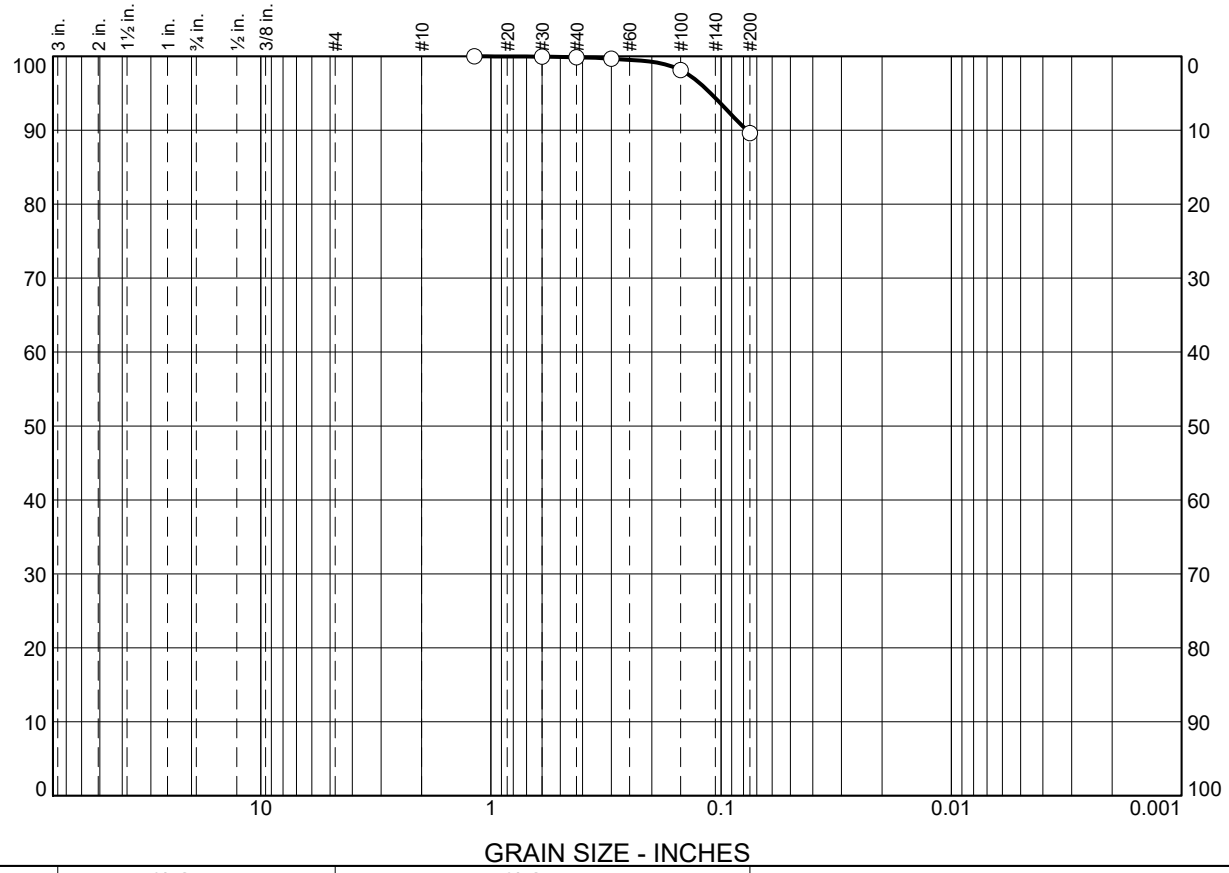
SAMPLE NUMBER	SAMPLE DEPTH (ft.)	SAMPLE BLOWS/1¾ inches	DCP (see notes)	ELEVATION (ft.)	DEPTH (ft.)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
				42.0	0	TS		Topsoil: 6 inches	
				41.5		SP-SM		Tan, moist, Poorly-graded SAND with Silt USDA: Loamy Sand	
				40.0		SM		Tan-gray, moist, Silty SAND USDA: Sandy Loam	
					3				
					6				
					9				
				32.0				Bottom of hole 10 feet	
					12				
					15				
					18				

NOTES: **Air Temp.: 80, 48 Hr. Precip.: 0.0 in., Coords: 38042'49.24"N, 75019'42.30"W**
ASTM D-2488

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Suite 1
Georgetown, DE 19947

LOG OF EXPLORATION NO. B-14

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines
	Coarse	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.0	0.1	10.3	89.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#16	100.0		
#30	100.0		
#40	99.9		
#50	99.7		
#100	98.1		
#200	89.6		

* (no specification provided)

Soil Description

Orange, Lean CLAY

Atterberg Limits

PL= 20 LL= 37 PI= 17 NM= 20.8

Coefficients

D_{90}= 0.0774 D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(15)

Remarks

Source of Sample: B-11 **Depth:** 3.0-4.5 feet

Date: 8/18/2025

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Unit 1
Georgetown, DE 19947

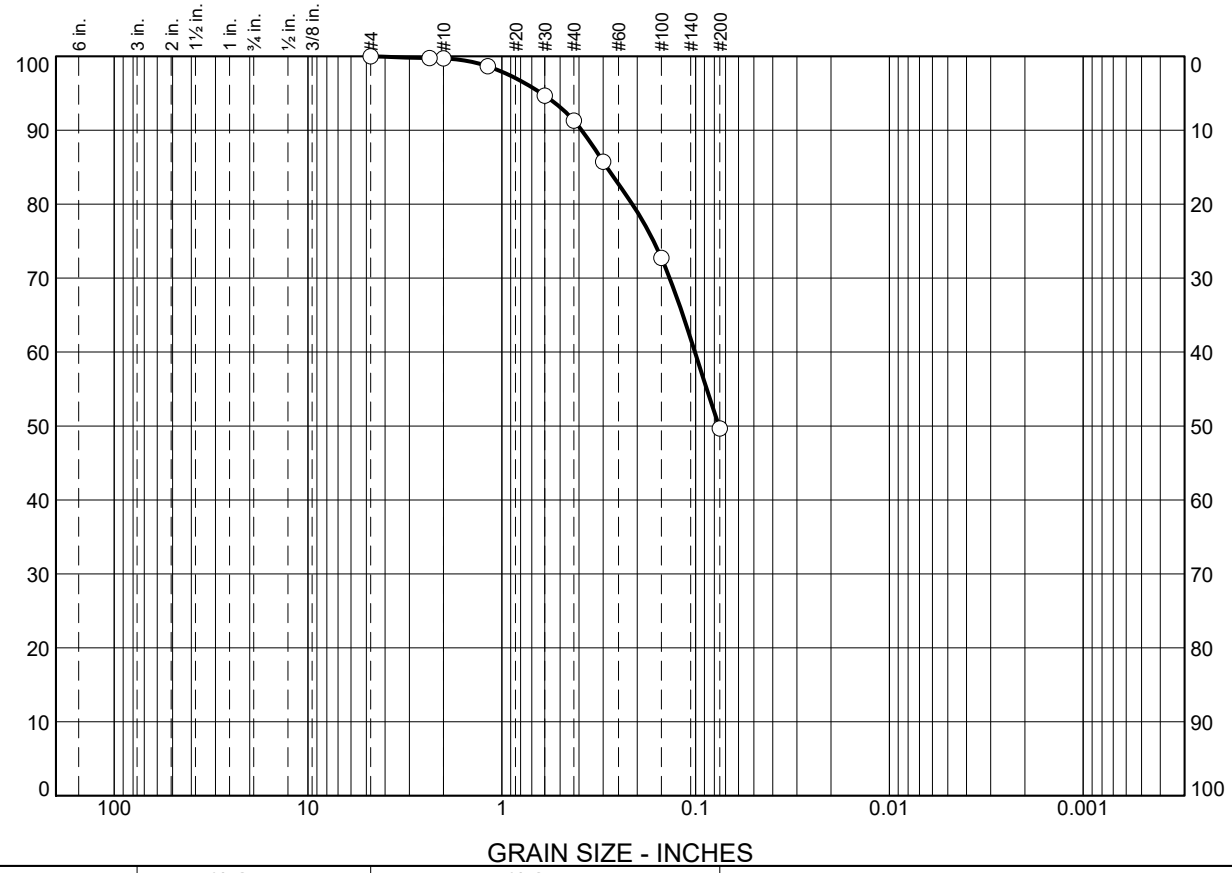
Client: Yellow Metal, LLC
Project: Yellow Metal

Project No: 31251973 **Figure**

Tested By: T. Sockriter **Checked By:** T. Caraway

ASTM specifications performed may include C117, C136, D421, D422, D1140, D6913, D2216, D2217, and D4318

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines
	Coarse	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.3	8.4	41.6	49.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	99.8		
#10	99.7		
#16	98.7		
#30	94.7		
#40	91.3		
#50	85.8		
#100	72.7		
#200	49.7		

* (no specification provided)

Soil Description

Brown, Clayey SAND

Atterberg Limits

PL= 18 LL= 31 PI= 13 NM= 20.2

Coefficients

D_{90}= 0.3870 D_{85}= 0.2871 D_{60}= 0.1007
D_{50}= 0.0758 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SC AASHTO= A-6(3)

Remarks

Source of Sample: B-29 **Depth:** 3.2-6.3 feet

Date: 4/27/2026

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Unit 1
Georgetown, DE 19947

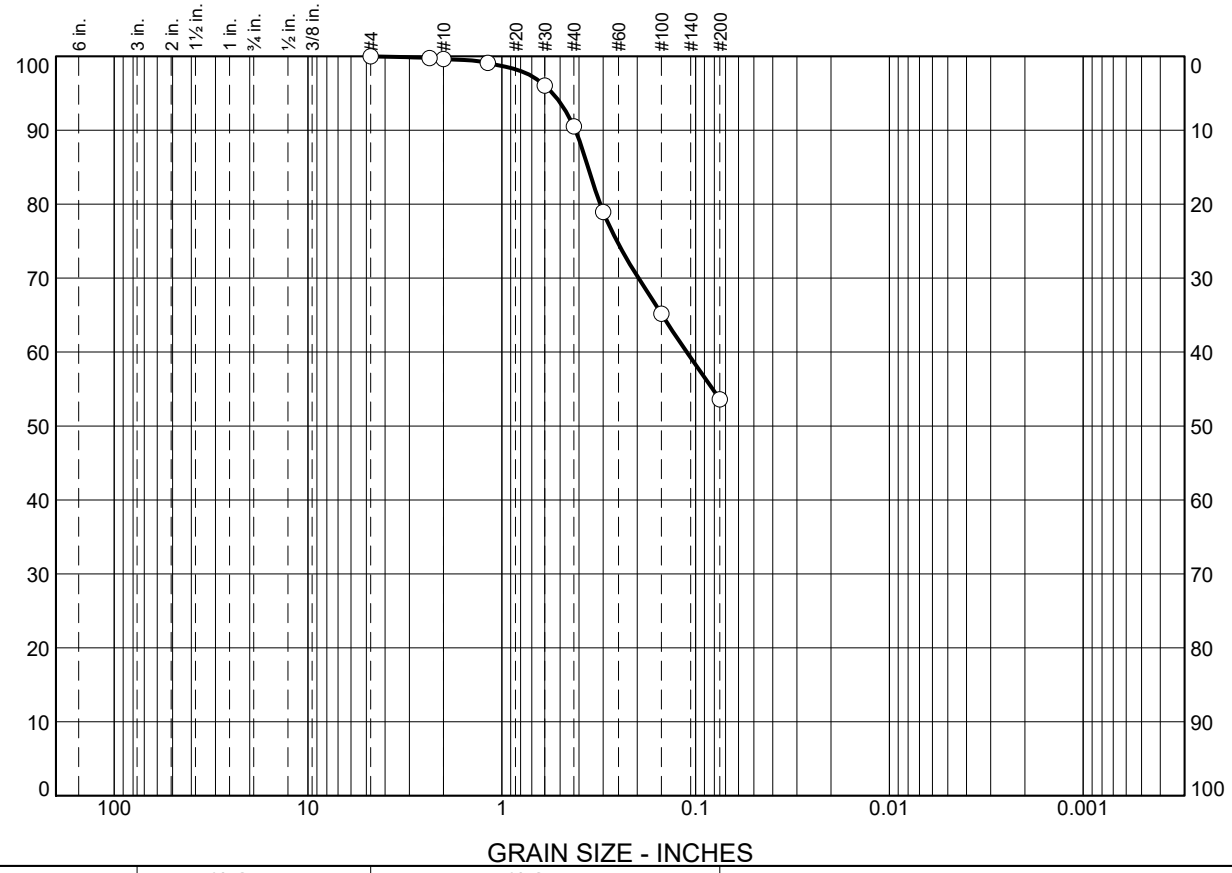
Client: Pennoni Associates
Project: Yellow Metal

Project No: 31260999 **Figure**

Tested By: K. Kershaw Lab Manager **Checked By:** T. Caraway, PE

ASTM specifications performed may include C117, C136, D421, D422, D1140, D6913, D2216, D2217, and D4318

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines
	Coarse	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.4	9.1	36.9	53.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	99.8		
#10	99.6		
#16	99.1		
#30	96.1		
#40	90.5		
#50	79.0		
#100	65.2		
#200	53.6		

* (no specification provided)

Soil Description

Brown, Sandy Lean CLAY

Atterberg Limits

PL= 17 LL= 35 PI= 18 NM= 18.0

Coefficients

D_{90}= 0.4165 D_{85}= 0.3588 D_{60}= 0.1111
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(6)

Remarks

Source of Sample: B-23 **Depth:** 1.2-5.3 feet

Date: 4/24/2026

GEO-TECHNOLOGY ASSOCIATES, INC.
21491 Baltimore Avenue, Unit 1
Georgetown, DE 19947

Client: Pennoni Associates
Project: Yellow Metal

Project No: 31260999 **Figure**

Tested By: T. Sockriter Lab Tech **Checked By:** T. Caraway, PE

ASTM specifications performed may include C117, C136, D421, D422, D1140, D6913, D2216, D2217, and D4318

Geo-Technology Associates, Inc.

Single Ring Falling Head Infiltration Testing

Name: Mitchell
I. D. of Pipe: 12 in.
Test Depth: 4 / 37 ft. / EL
Depth of Casing Penetration: 1"
Soil Type Tested: Sandy Clay Loam

Date 5/20/2026
Temp _95°F_ Weather: Sunny
Rainfall Last 24 hrs. __0.0"___
Location: ___B-22_____
Presoak : 12" drop at <1 hour / 0" drop at 1 hour

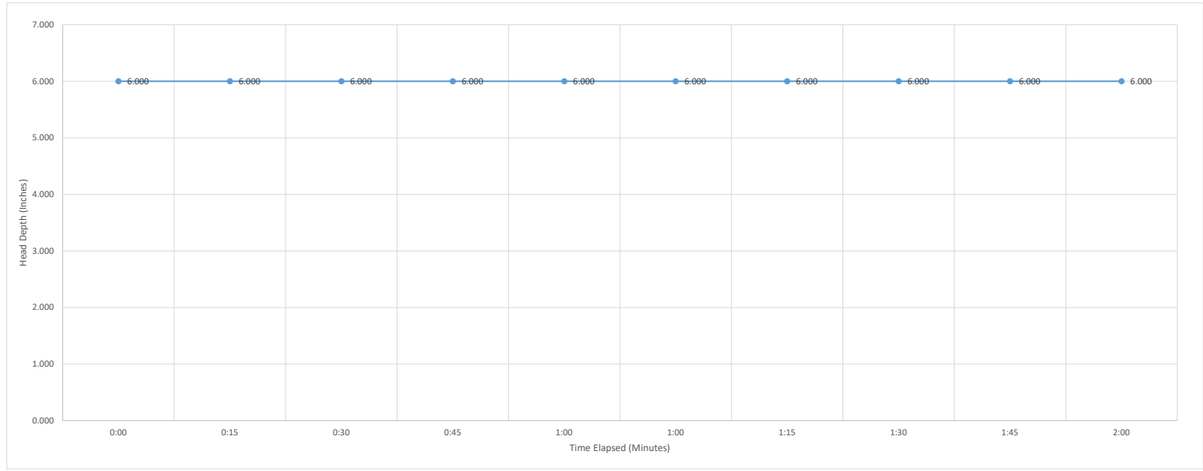
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	Infiltration Rate (in/hr)	Comments
5/20/2026	12:00 PM	0:00		12.000			Presoak
	1:00 PM	1:00		12.000	0.000	N/A	

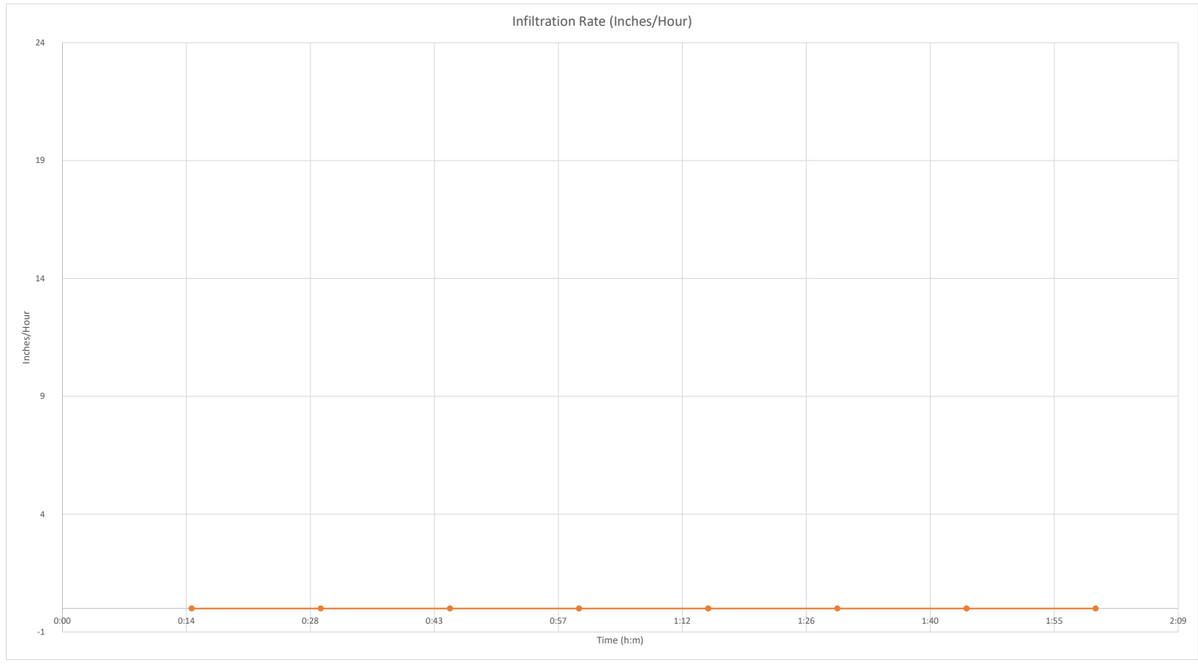
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	ΔH Difference Between Readings	Infiltration Rate (in/hr)	Comments
5/20/2026	1:00 PM	0:00		6.000	N/A			Bailed to 6" head
	1:15 PM	0:15		6.000	0.000		0.0	
	1:30 PM	0:30		6.000	0.000	0.000	0.0	
	1:45 PM	0:45		6.000	0.000	0.000	0.0	
	2:00 PM	1:00		6.000	0.000	0.000	0.0	Max-Min: 0.000
	2:00 PM	1:00		6.000	N/A			
	2:15 PM	1:15		6.000	0.000		0.0	
	2:30 PM	1:30		6.000	0.000	0.000	0.0	
	2:45 PM	1:45		6.000	0.000	0.000	0.0	
	3:00 PM	2:00		6.000	0.000	0.000	0.0	Max-Min: 0.000

Field Infiltration Rate 0.0

Note: Readings were recorded to the nearest 1/8-inch and presented with three decimals.

Measurments in the field were not taken with a presicison of 0.001-inch due to practical limitations.





Yellow Metal
31260999

Location: B-22
Test Depth: 4

Geo-Technology Associates, Inc.

Single Ring Falling Head Infiltration Testing

Name: Mitchell
I. D. of Pipe: 12 in.
Test Depth: 4 / 37 ft. / EL
Depth of Casing Penetration: 1"
Soil Type Tested: Sandy Clay Loam

Date 5/20/2026
Temp _95°F_ Weather: Sunny
Rainfall Last 24 hrs. __0.0"___
Location: ___B-23_____
Presoak : 12" drop at <1 hour / 0.1" drop at 1 hour

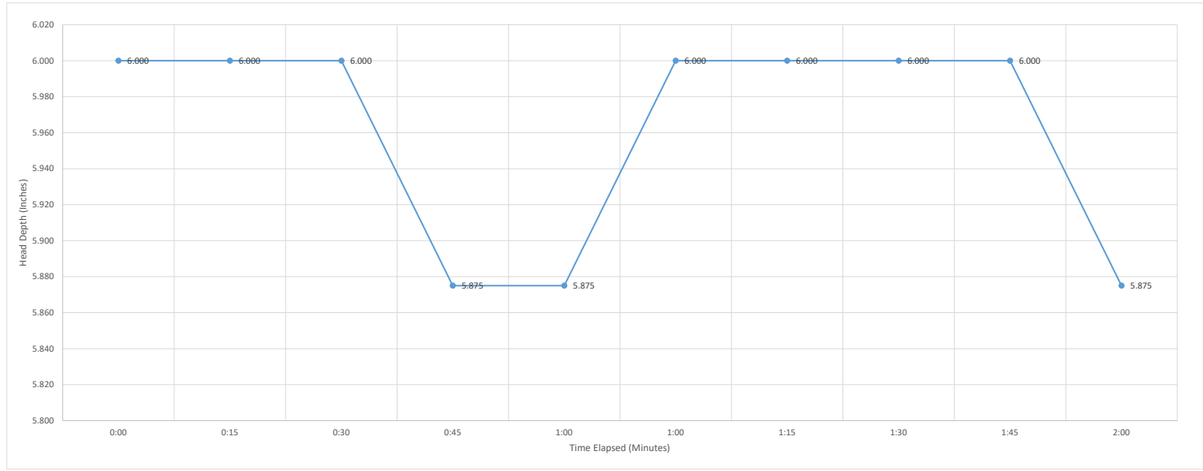
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	Infiltration Rate (in/hr)	Comments
5/20/2026	11:50 AM	0:00		12.000			Presoak
	12:50 PM	1:00		11.900	0.100	N/A	

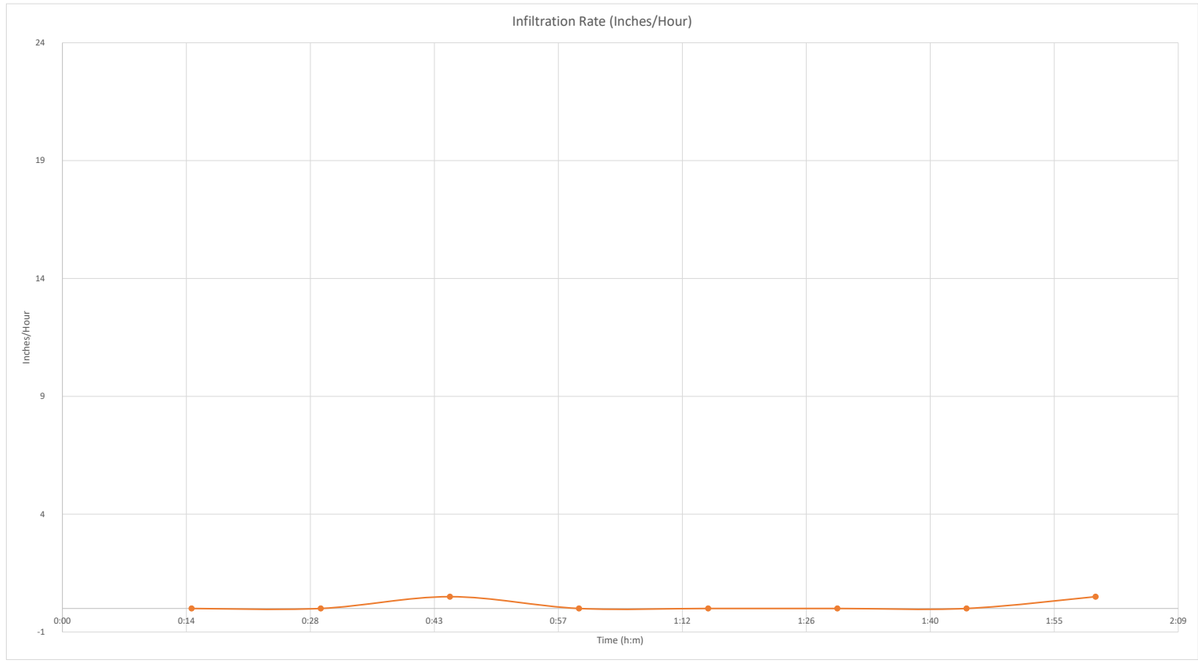
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	ΔH Difference Between Readings	Infiltration Rate (in/hr)	Comments
5/20/2026	1:00 PM	0:00		6.000	N/A			Bailed to 6" head
	1:15 PM	0:15		6.000	0.000		0.0	
	1:30 PM	0:30		6.000	0.000	0.000	0.0	
	1:45 PM	0:45		5.875	0.125	-0.125	0.5	
	2:00 PM	1:00		5.875	0.000	0.125	0.0	Max-Min: 0.125
	2:00 PM	1:00		6.000	N/A			
	2:15 PM	1:15		6.000	0.000		0.0	
	2:30 PM	1:30		6.000	0.000	0.000	0.0	
	2:45 PM	1:45		6.000	0.000	0.000	0.0	
	3:00 PM	2:00		5.875	0.125	-0.125	0.5	Max-Min: 0.125

Field Infiltration Rate 0.1

Note: Readings were recorded to the nearest 1/8-inch and presented with three decimals.

Measurments in the field were not taken with a presicison of 0.001-inch due to practical limitations.





Yellow Metal
31260999

Location: B-23
Test Depth: 4

Geo-Technology Associates, Inc.

Single Ring Falling Head Infiltration Testing

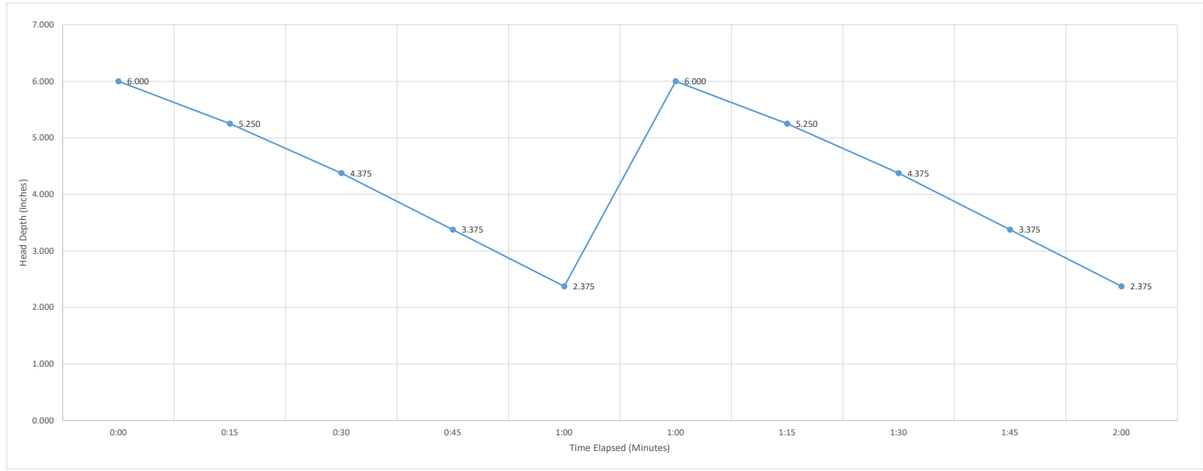
Name: Mitchell
I. D. of Pipe: 5 in.
Test Depth: 9 / 37 ft. / EL
Depth of Casing Penetration: 1"
Soil Type Tested: Sandy Loam

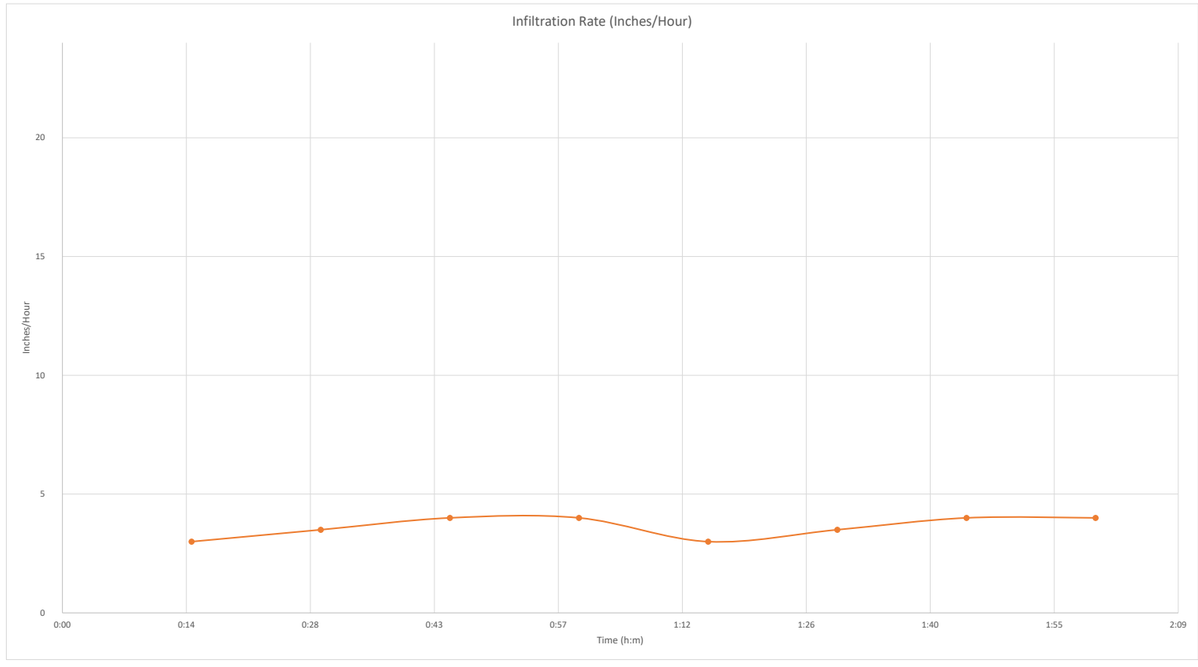
Date 5/15/2026
Temp _69°F_ Weather: Cloudy
Rainfall Last 24 hrs. __0.0"___
Location: ___B-24_____
Presoak : 12" drop at <1 hour / 3.6" drop at 1 hour

Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	Infiltration Rate (in/hr)	Comments
5/15/2026	12:00 PM	0:00		12.000			Presoak
	1:00 PM	1:00		8.400	3.600	N/A	

Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	ΔH Difference Between Readings	Infiltration Rate (in/hr)	Comments
5/15/2026	1:00 PM	0:00		6.000	N/A			Bailed to 6" head
	1:15 PM	0:15		5.250	0.750		3.0	
	1:30 PM	0:30		4.375	0.875	-0.125	3.5	
	1:45 PM	0:45		3.375	1.000	-0.125	4.0	
	2:00 PM	1:00		2.375	1.000	0.000	4.0	Max-Min: 0.250
	2:00 PM	1:00		6.000	N/A			
	2:15 PM	1:15		5.250	0.750		3.0	
	2:30 PM	1:30		4.375	0.875	-0.125	3.5	
	2:45 PM	1:45		3.375	1.000	-0.125	4.0	
	3:00 PM	2:00		2.375	1.000	0.000	4.0	Max-Min: 0.250

Field Infiltration Rate 3.6





Note: Readings were recorded to the nearest 1/8-inch and presented with three decimals.

Measurments in the field were not taken with a presicison of 0.001-inch due to practical limitations.

Yellow Metal
31260999

Location: B-24
Test Depth: 9

Geo-Technology Associates, Inc.

Single Ring Falling Head Infiltration Testing

Name: Mitchell
I. D. of Pipe: 12 in.
Test Depth: 5 / 37 ft. / EL
Depth of Casing Penetration: 1"
Soil Type Tested: Sandy Loam

Date 5/20/2026
Temp _95°F_ Weather: Sunny
Rainfall Last 24 hrs. __0.0"___
Location: ___B-25_____
Presoak : 12" drop at <1 hour / 4.1" drop at 1 hour

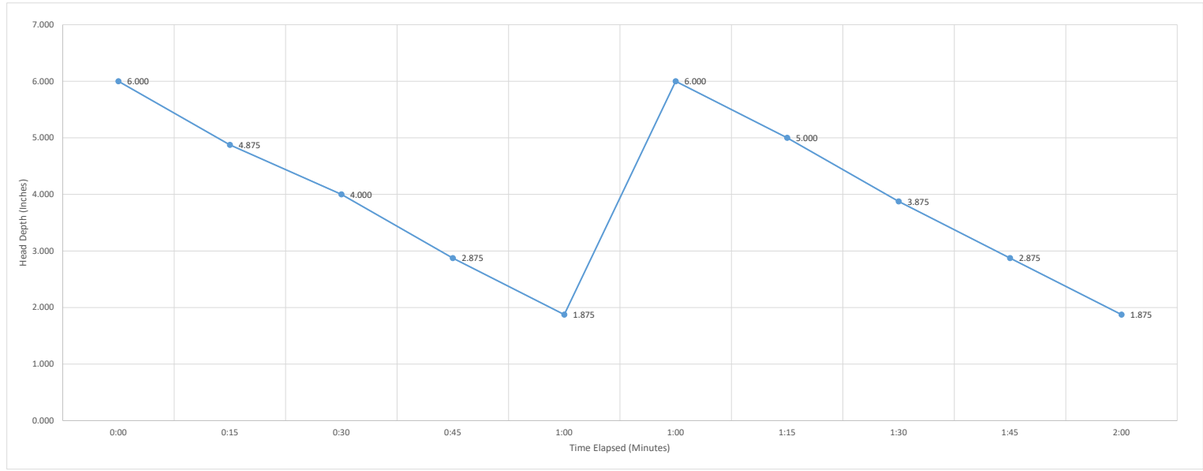
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	Infiltration Rate (in/hr)	Comments
5/20/2026	11:40 AM	0:00		12.000			Presoak
	12:40 PM	1:00		7.900	4.100	N/A	

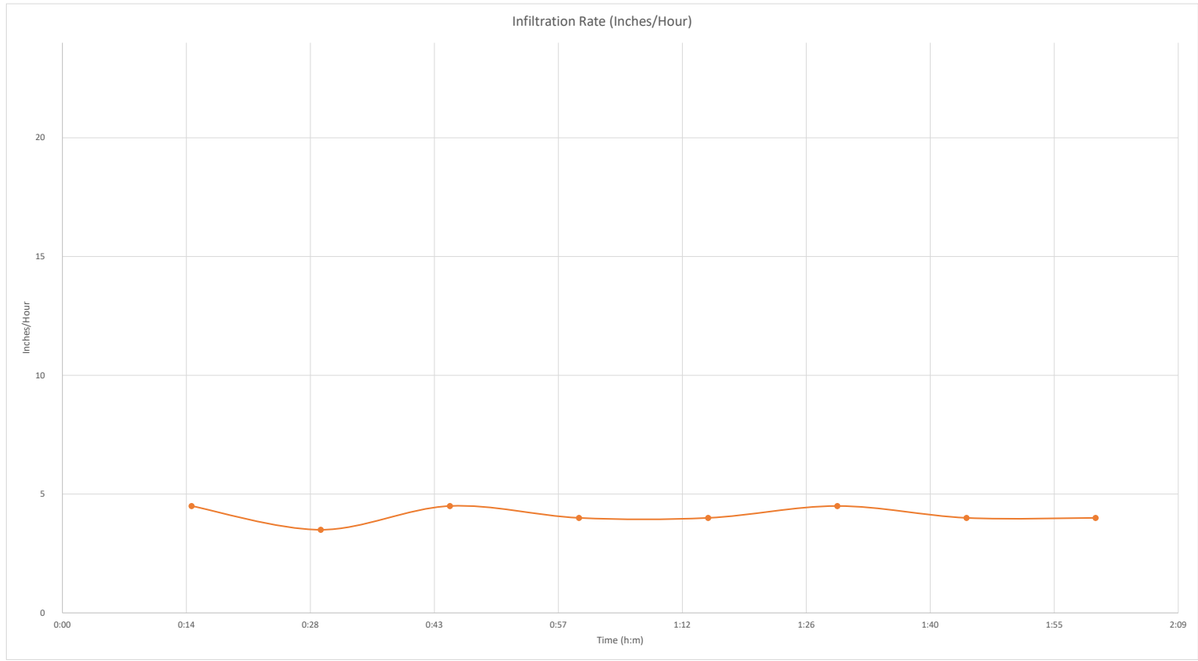
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	ΔH Difference Between Readings	Infiltration Rate (in/hr)	Comments
5/20/2026	1:00 PM	0:00		6.000	N/A			Bailed to 6" head
	1:15 PM	0:15		4.875	1.125		4.5	
	1:30 PM	0:30		4.000	0.875	0.250	3.5	
	1:45 PM	0:45		2.875	1.125	-0.250	4.5	
	2:00 PM	1:00		1.875	1.000	0.125	4.0	Max-Min: 0.250
	2:00 PM	1:00		6.000	N/A			
	2:15 PM	1:15		5.000	1.000		4.0	
	2:30 PM	1:30		3.875	1.125	-0.125	4.5	
	2:45 PM	1:45		2.875	1.000	0.125	4.0	
	3:00 PM	2:00		1.875	1.000	0.000	4.0	Max-Min: 0.125

Field Infiltration Rate 4.1

Note: Readings were recorded to the nearest 1/8-inch and presented with three decimals.

Measurments in the field were not taken with a presicison of 0.001-inch due to practical limitations.





Yellow Metal
31260999

Location: B-25
Test Depth: 5

Geo-Technology Associates, Inc.

Single Ring Falling Head Infiltration Testing

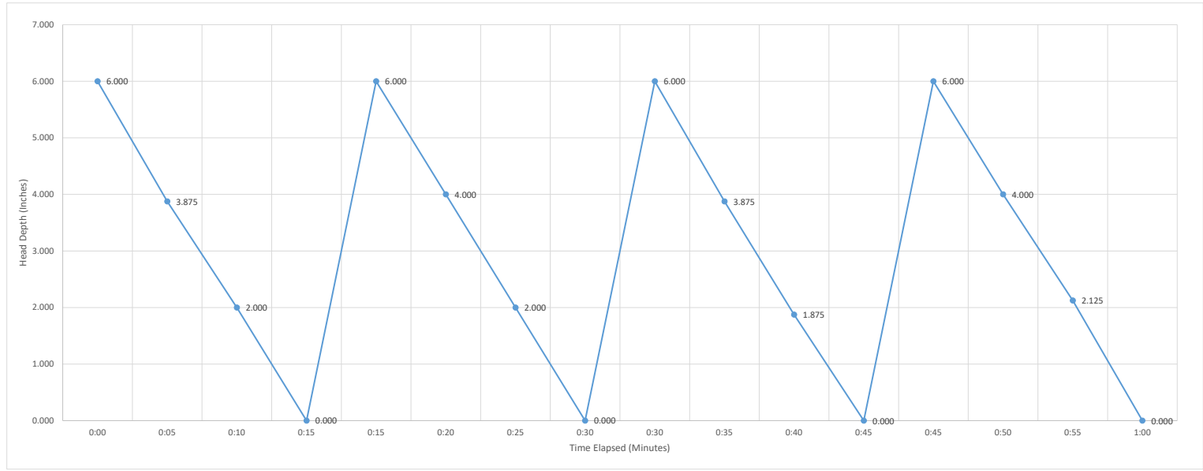
Name: Mitchell
I. D. of Pipe: 12 in.
Test Depth: 5 / 37 ft. / EL
Depth of Casing Penetration: 1"
Soil Type Tested: Sand

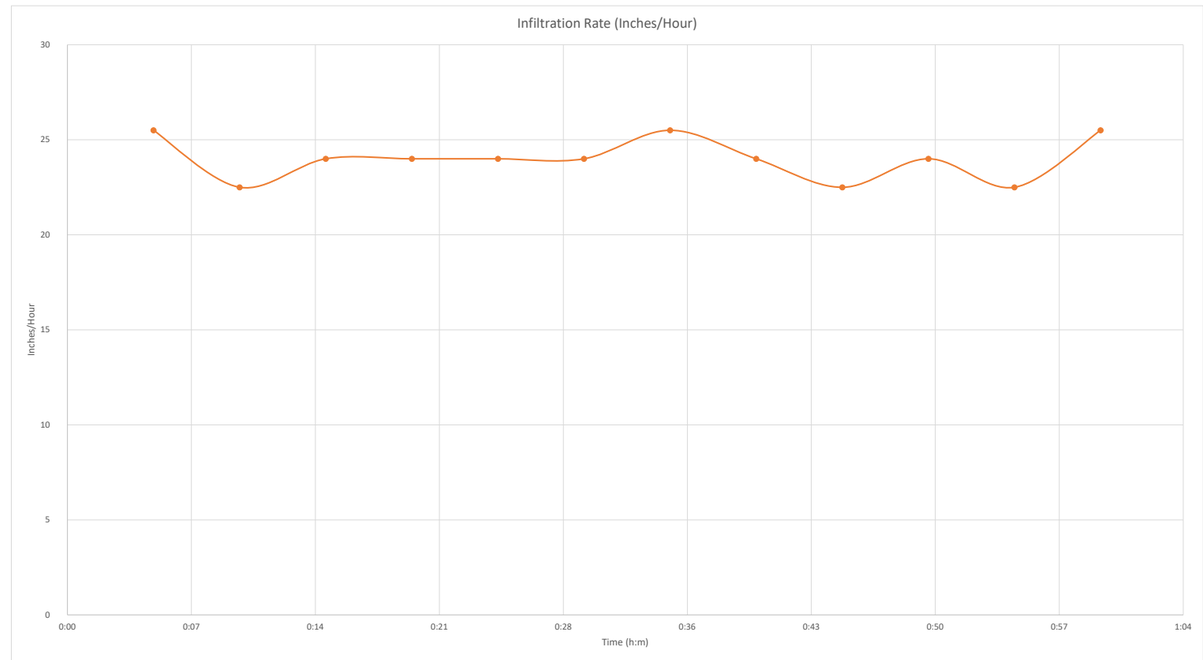
Date 5/20/2026
Temp _95°F_ Weather: Sunny
Rainfall Last 24 hrs. __0.0"___
Location: ___B-26_____
Presoak - 12" drop at <1 hour / 4.1" drop at 1 hour

Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	Infiltration Rate (in/hr)	Comments
5/20/2026	12:30 PM	0:00		12.000			Presoak
	1:30 PM	1:00		0.000	12.000	N/A	

Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	ΔH Difference Between Readings	Infiltration Rate (in/hr)	Comments
5/20/2026	1:30 PM	0:00		6.000	N/A			
	1:35 PM	0:05		3.875	2.125		25.5	
	1:40 PM	0:10		2.000	1.875	0.250	22.5	
	1:45 PM	0:15		0.000	2.000	-0.125	24.0	Max-Min: 0.250
	1:45 PM	0:15		6.000	N/A			
	1:50 PM	0:20		4.000	2.000		24.0	
	1:55 PM	0:25		2.000	2.000	0.000	24.0	
	2:00 PM	0:30		0.000	2.000	0.000	24.0	Max-Min: 0.000
	2:00 PM	0:30		6.000	N/A			
	2:05 PM	0:35		3.875	2.125		25.5	
	2:10 PM	0:40		1.875	2.000	0.125	24.0	
	2:15 PM	0:45		0.000	1.875	0.125	22.5	Max-Min: 0.250
	2:15 PM	0:45		6.000	N/A			
	2:20 PM	0:50		4.000	2.000		24.0	
	2:25 PM	0:55		2.125	1.875	0.125	22.5	
	2:30 PM	1:00		0.000	2.125	-0.250	25.5	Max-Min: 0.250

Field Infiltration Rate 24.0





Note: Readings were recorded to the nearest 1/8-inch and presented with three decimals.

Measurments in the field were not taken with a presicison of 0.001-inch due to practical limitations.

Yellow Metal
31260999

Location: B-26
Test Depth: 5

Geo-Technology Associates, Inc.

Single Ring Falling Head Infiltration Testing

Name: Mitchell
I. D. of Pipe: 12 in.
Test Depth: 6 / 37 ft. / EL
Depth of Casing Penetration: 1"
Soil Type Tested: Sandy Loam

Date 5/20/2026
Temp _95°F_ Weather: Sunny
Rainfall Last 24 hrs. __0.0"___
Location: ___B-27_____
Presoak - 12" drop at <1 hour / 2.3" drop at 1 hour

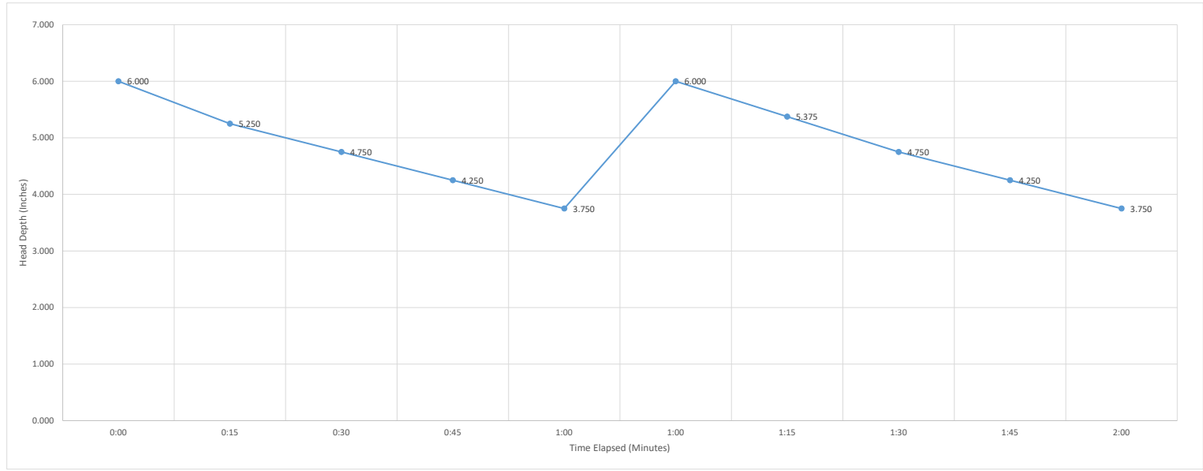
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	Infiltration Rate (in/hr)	Comments
5/20/2026	12:20 PM	0:00		12.000			Presoak
	1:20 PM	1:00		9.700	2.300	N/A	

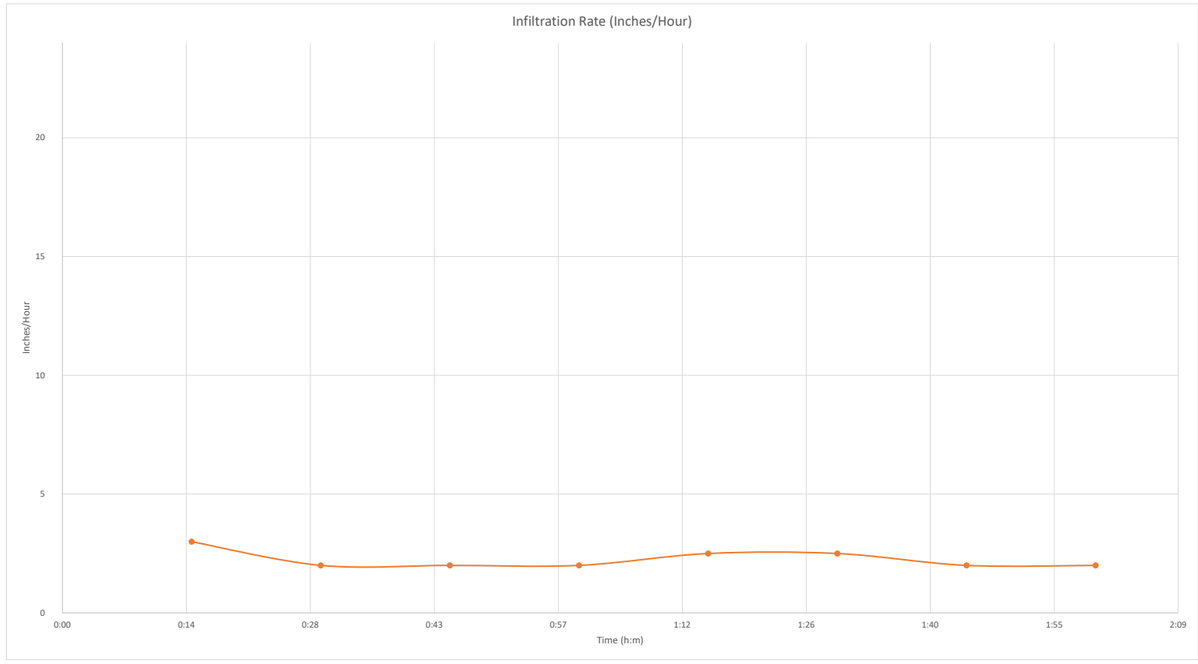
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	ΔH Difference Between Readings	Infiltration Rate (in/hr)	Comments
5/20/2026	1:30 PM	0:00		6.000	N/A			Bailed to 6" head
	1:45 PM	0:15		5.250	0.750		3.0	
	2:00 PM	0:30		4.750	0.500	0.250	2.0	
	2:15 PM	0:45		4.250	0.500	0.000	2.0	
	2:30 PM	1:00		3.750	0.500	0.000	2.0	Max-Min: 0.250
	2:30 PM	1:00		6.000	N/A			
	2:45 PM	1:15		5.375	0.625		2.5	
	3:00 PM	1:30		4.750	0.625	0.000	2.5	
	3:15 PM	1:45		4.250	0.500	0.125	2.0	
	3:30 PM	2:00		3.750	0.500	0.000	2.0	Max-Min: 0.125

Field Infiltration Rate 2.3

Note: Readings were recorded to the nearest 1/8-inch and presented with three decimals.

Measurments in the field were not taken with a presicison of 0.001-inch due to practical limitations.





Yellow Metal
31260999

Location: B-27
Test Depth: 6

Geo-Technology Associates, Inc.

Single Ring Falling Head Infiltration Testing

Name: Mitchell
I. D. of Pipe: 5 in.
Test Depth: 7 / 37 ft. / EL
Depth of Casing Penetration: 1"
Soil Type Tested: Sandy Loam

Date 5/15/2026
Temp _69°F_ Weather: Cloudy
Rainfall Last 24 hrs. __0.0"___
Location: ___B-28_____
Presoak : 12" drop at <1 hour / 3" drop at 1 hour

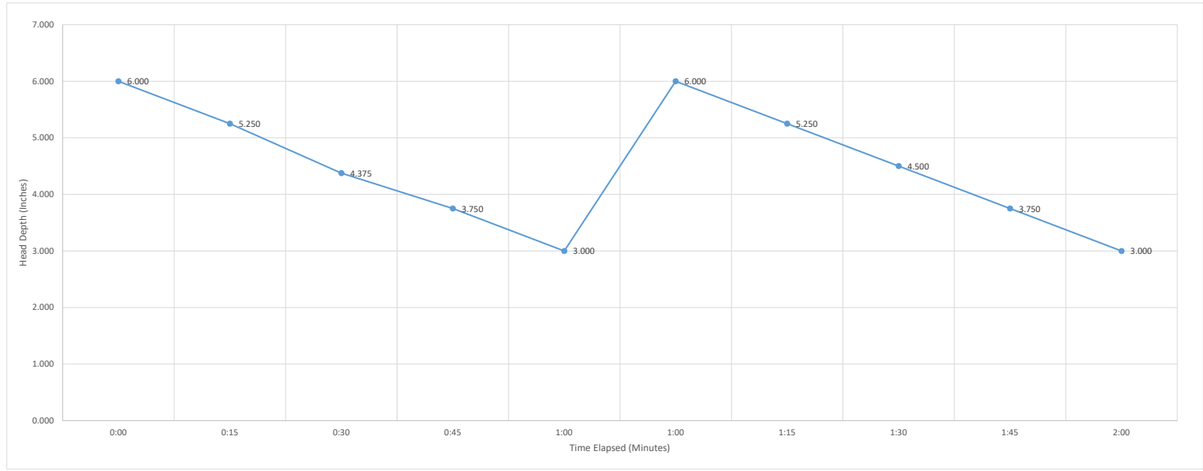
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	Infiltration Rate (in/hr)	Comments
5/15/2026	11:50 AM	0:00		12.000			Presoak
	12:50 PM	1:00		9.000	3.000	N/A	

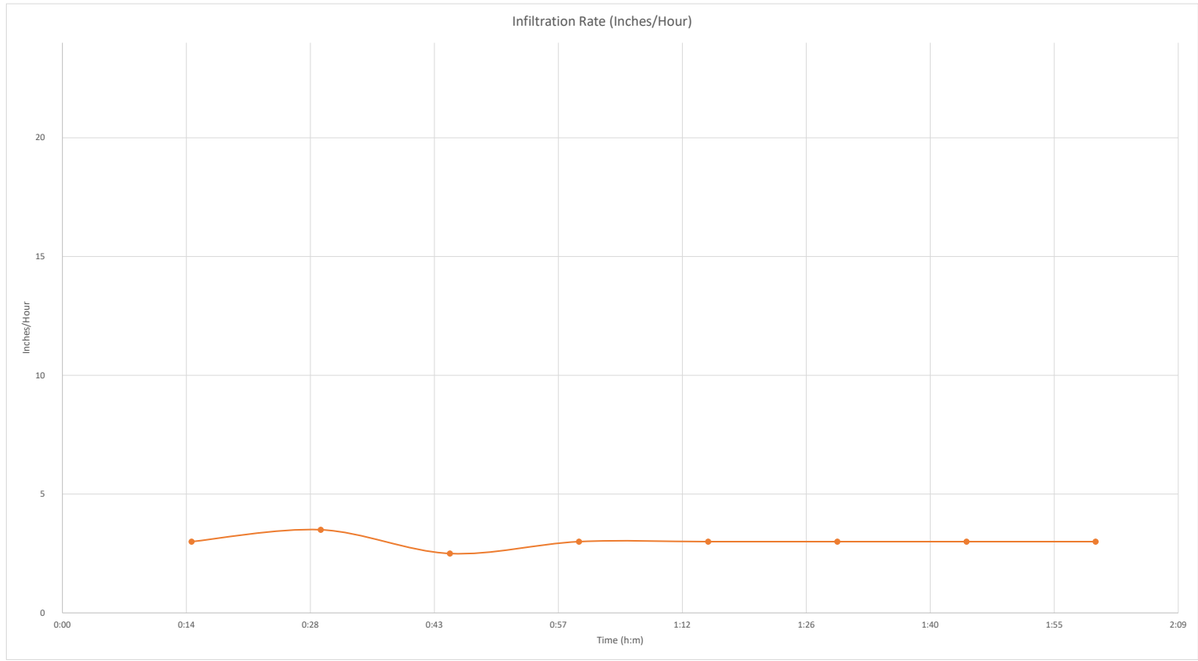
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	ΔH Difference Between Readings	Infiltration Rate (in/hr)	Comments
5/15/2026	1:00 PM	0:00		6.000	N/A			Bailed to 6" head
	1:15 PM	0:15		5.250	0.750		3.0	
	1:30 PM	0:30		4.375	0.875	-0.125	3.5	
	1:45 PM	0:45		3.750	0.625	0.250	2.5	
	2:00 PM	1:00		3.000	0.750	-0.125	3.0	Max-Min: 0.250
	2:00 PM	1:00		6.000	N/A			
	2:15 PM	1:15		5.250	0.750		3.0	
	2:30 PM	1:30		4.500	0.750	0.000	3.0	
	2:45 PM	1:45		3.750	0.750	0.000	3.0	
	3:00 PM	2:00		3.000	0.750	0.000	3.0	Max-Min: 0.000

Field Infiltration Rate 3.0

Note: Readings were recorded to the nearest 1/8-inch and presented with three decimals.

Measurments in the field were not taken with a presicison of 0.001-inch due to practical limitations.





Yellow Metal
31260999

Location: B-28
Test Depth: 7

Geo-Technology Associates, Inc.

Single Ring Falling Head Infiltration Testing

Name: Mitchell
I. D. of Pipe: 5 in.
Test Depth: 7 / 37 ft. / EL
Depth of Casing Penetration: 1"
Soil Type Tested: Sandy Loam

Date 5/15/2026
Temp _69°F_ Weather: Cloudy
Rainfall Last 24 hrs. __0.0"___
Location: ___B-29_____
Presoak : 12" drop at <1 hour / 3.1" drop at 1 hour

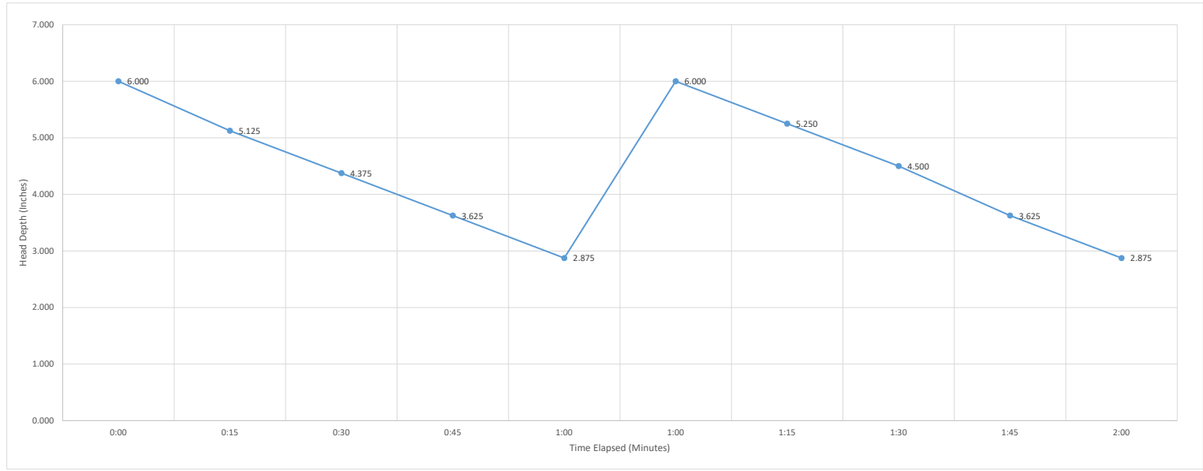
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	Infiltration Rate (in/hr)	Comments
5/15/2026	12:30 PM	0:00		12.000			Presoak
	1:30 PM	1:00		8.900	3.100	N/A	

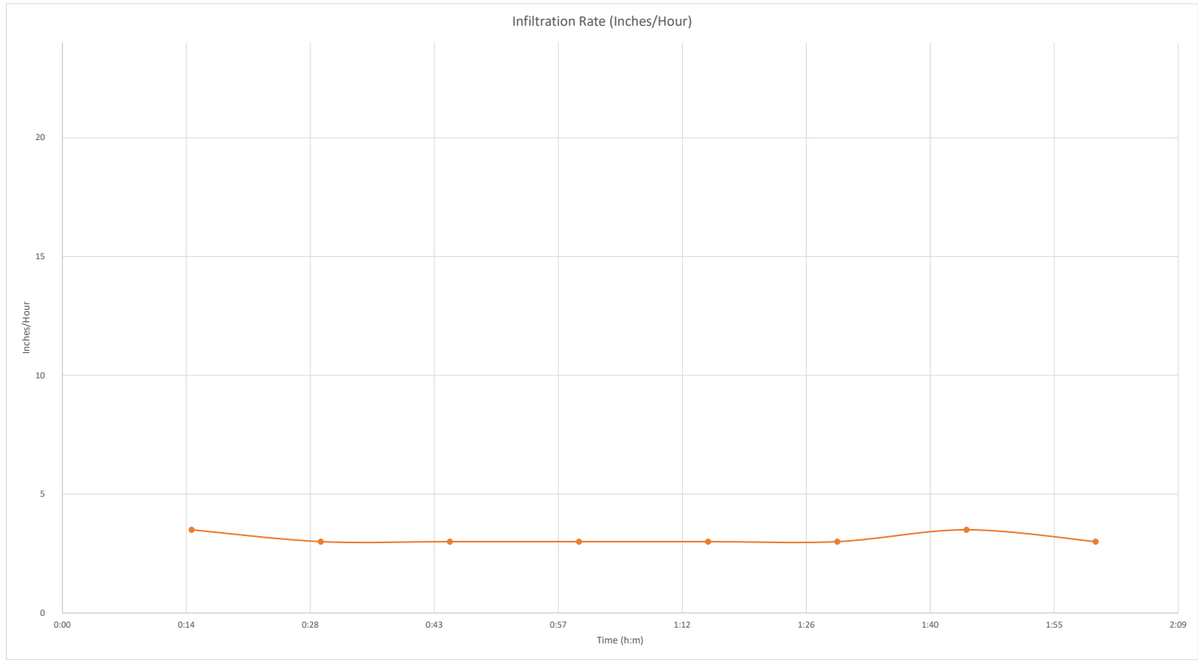
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	ΔH Difference Between Readings	Infiltration Rate (in/hr)	Comments
5/15/2026	1:30 PM	0:00		6.000	N/A			Bailed to 6" head
	1:45 PM	0:15		5.125	0.875		3.5	
	2:00 PM	0:30		4.375	0.750	0.125	3.0	
	2:15 PM	0:45		3.625	0.750	0.000	3.0	
	2:30 PM	1:00		2.875	0.750	0.000	3.0	Max-Min: 0.125
	2:30 PM	1:00		6.000	N/A			
	2:45 PM	1:15		5.250	0.750		3.0	
	3:00 PM	1:30		4.500	0.750	0.000	3.0	
	3:15 PM	1:45		3.625	0.875	-0.125	3.5	
	3:30 PM	2:00		2.875	0.750	0.125	3.0	Max-Min: 0.125

Field Infiltration Rate **3.1**

Note: Readings were recorded to the nearest 1/8-inch and presented with three decimals.

Measurments in the field were not taken with a presicison of 0.001-inch due to practical limitations.





Yellow Metal
31260999

Location: B-29
Test Depth: 7

Geo-Technology Associates, Inc.

Single Ring Falling Head Infiltration Testing

Name: Mitchell
I. D. of Pipe: 12 in.
Test Depth: 4 / 37.0 ft. / EL
Depth of Casing Penetration: 1"
Soil Type Tested: Loamy Sand

Date 9/10/2025
Temp _70°F_ Weather: Cloudy
Rainfall Last 24 hrs. __0.02"___
Location: ___B-9____
Presoak : 12" drop at <1 hour / 6" drop at 1 hour

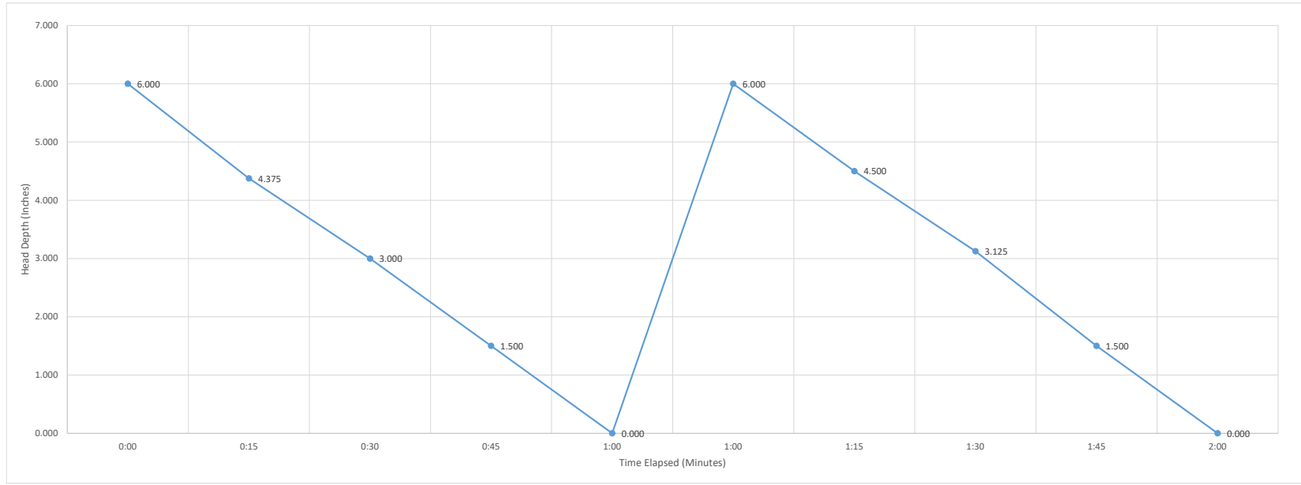
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	Infiltration Rate (in/hr)	Comments
9/10/2025	9:50 AM	0:00		12.000			Presoak
	10:50 AM	1:00		6.000	6.000	N/A	

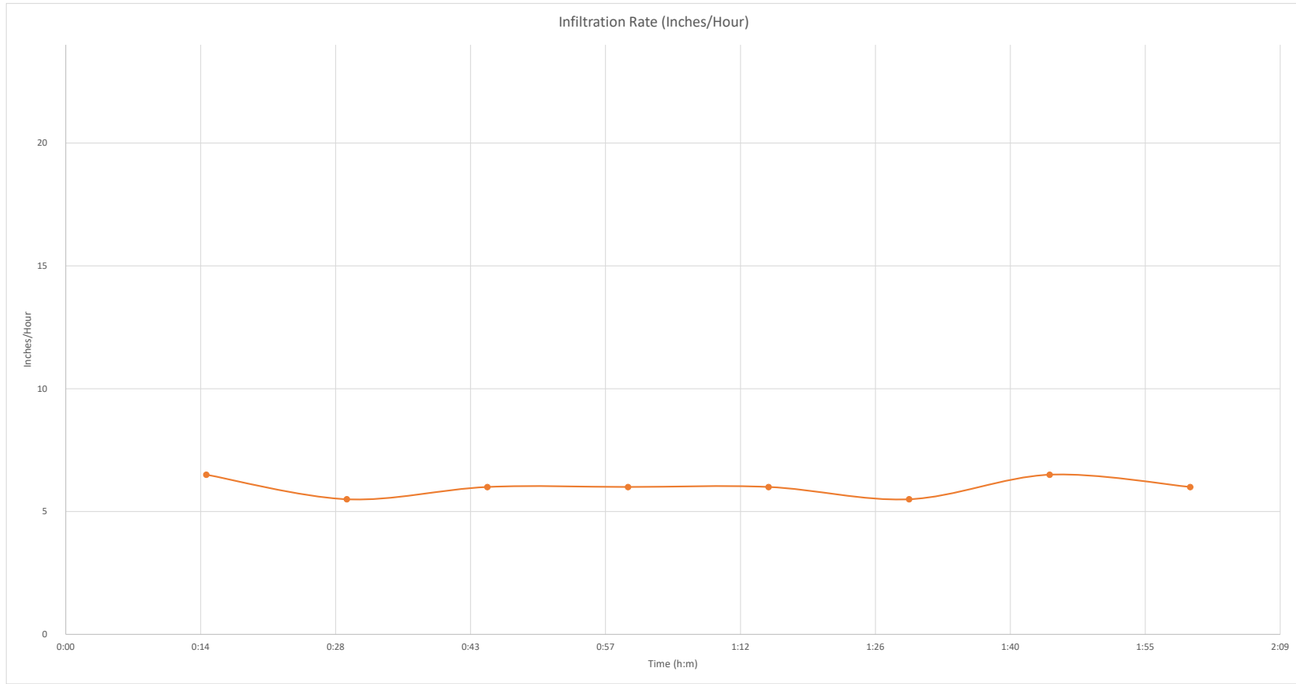
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	ΔH Difference Between Readings	Infiltration Rate (in/hr)	Comments
9/10/2025	11:00 AM	0:00		6.000	N/A			
	11:15 AM	0:15		4.375	1.625		6.5	
	11:30 AM	0:30		3.000	1.375	0.250	5.5	
	11:45 AM	0:45		1.500	1.500	-0.125	6.0	
	12:00 PM	1:00		0.000	1.500	0.000	6.0	Max-Min: 0.250
	12:00 PM	1:00		6.000	N/A			
	12:15 PM	1:15		4.500	1.500		6.0	
	12:30 PM	1:30		3.125	1.375	0.125	5.5	
	12:45 PM	1:45		1.500	1.625	-0.250	6.5	
	1:00 PM	2:00		0.000	1.500	0.125	6.0	Max-Min: 0.250

Field Infiltration Rate 6.0

Note: Readings were recorded to the nearest 1/8-inch and presented with three decimals.

Measurments in the field were not taken with a presicison of 0.001-inch due to practical limitations.





Yellow Metal
31251973

Location: B-9
Test Depth: 4.0

Geo-Technology Associates, Inc.

Single Ring Falling Head Infiltration Testing

Name: Mitchell
I. D. of Pipe: 12 in.
Test Depth: 6 / 37.0 ft. / EL
Depth of Casing Penetration: 1"
Soil Type Tested: Loamy Sand

Date 9/9/2025
Temp _72°F_ Weather: Cloudy
Rainfall Last 24 hrs. __0.0"___
Location: ___B-11____
Presoak : 12" drop at <1 hour / 6" drop at 1 hour

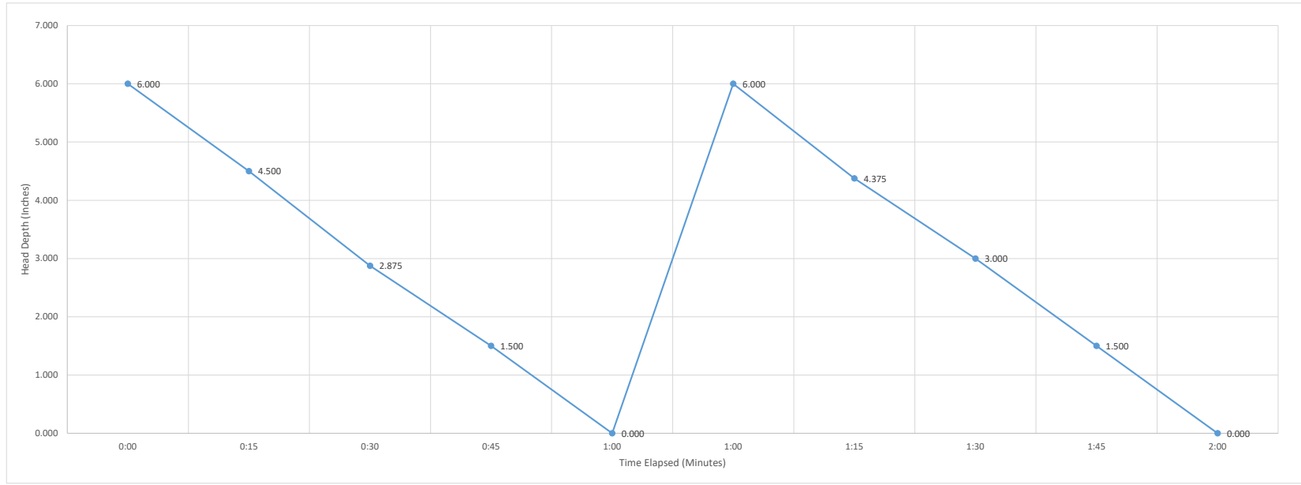
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	Infiltration Rate (in/hr)	Comments
9/9/2025	11:50 AM	0:00		12.000			Presoak
	12:50 PM	1:00		6.000	6.000	N/A	

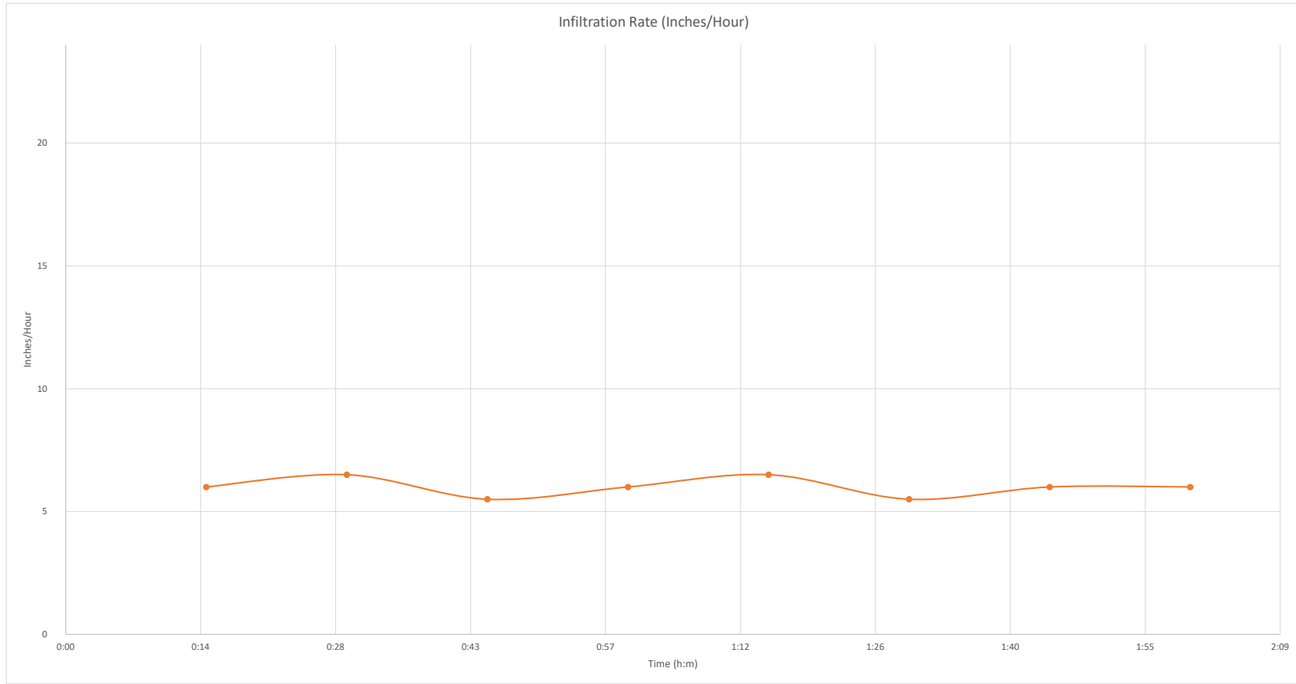
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	ΔH Difference Between Readings	Infiltration Rate (in/hr)	Comments
9/9/2025	1:00 PM	0:00		6.000	N/A			
	1:15 PM	0:15		4.500	1.500		6.0	
	1:30 PM	0:30		2.875	1.625	-0.125	6.5	
	1:45 PM	0:45		1.500	1.375	0.250	5.5	
	2:00 PM	1:00		0.000	1.500	-0.125	6.0	Max-Min: 0.250
	2:00 PM	1:00		6.000	N/A			
	2:15 PM	1:15		4.375	1.625		6.5	
	2:30 PM	1:30		3.000	1.375	0.250	5.5	
	2:45 PM	1:45		1.500	1.500	-0.125	6.0	
	3:00 PM	2:00		0.000	1.500	0.000	6.0	Max-Min: 0.250

Field Infiltration Rate 6.0

Note: Readings were recorded to the nearest 1/8-inch and presented with three decimals.

Measurments in the field were not taken with a presicison of 0.001-inch due to practical limitations.





Yellow Metal
31251973

Location: B-11
Test Depth: 6.0

Geo-Technology Associates, Inc.

Single Ring Falling Head Infiltration Testing

Name: Okpo
I. D. of Pipe: 12 in.
Test Depth: 5 / 37.0 ft. / EL
Depth of Casing Penetration: 1"
Soil Type Tested: Sandy Loam

Date 9/9/2025
Temp _72°F_ Weather: Cloudy
Rainfall Last 24 hrs. __0.0"___
Location: ___B-14_____
Presoak : 12" drop at <1 hour / 2" drop at 1 hour

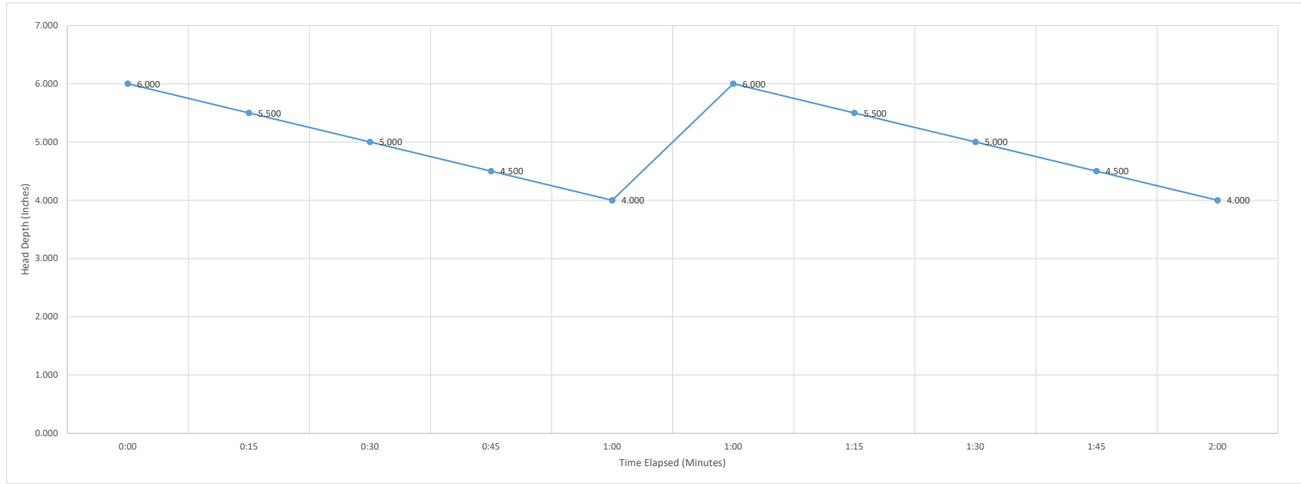
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	Infiltration Rate (in/hr)	Comments
9/9/2025	12:00 PM	0:00		12.000			Presoak
	1:00 PM	1:00		10.000	2.000	N/A	

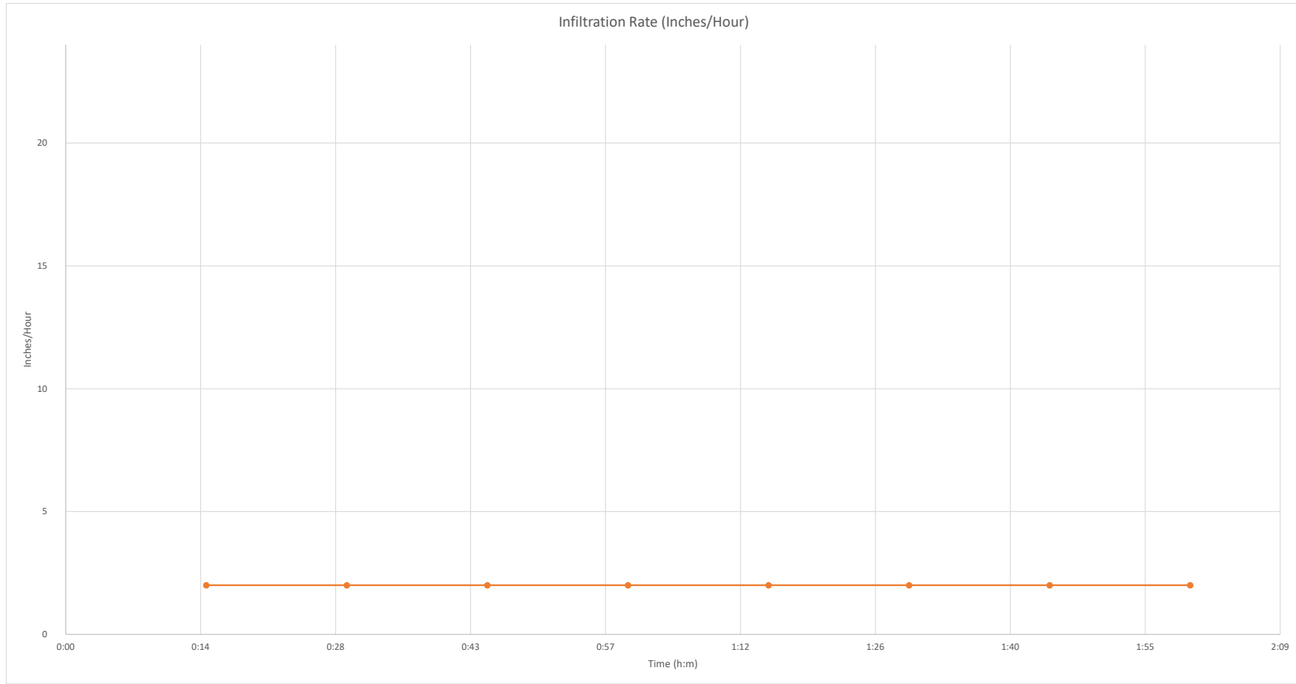
Date	Time	Δt (h:m)		Head of Water (in.)	ΔH	ΔH Difference Between Readings	Infiltration Rate (in/hr)	Comments
9/9/2025	1:00 PM	0:00		6.000	N/A			Bailed to 6" head
	1:15 PM	0:15		5.500	0.500		2.0	
	1:30 PM	0:30		5.000	0.500	0.000	2.0	
	1:45 PM	0:45		4.500	0.500	0.000	2.0	
	2:00 PM	1:00		4.000	0.500	0.000	2.0	Max-Min: 0.000
	2:00 PM	1:00		6.000	N/A			
	2:15 PM	1:15		5.500	0.500		2.0	
	2:30 PM	1:30		5.000	0.500	0.000	2.0	
	2:45 PM	1:45		4.500	0.500	0.000	2.0	
	3:00 PM	2:00		4.000	0.500	0.000	2.0	Max-Min: 0.000

Field Infiltration Rate 2.0

Note: Readings were recorded to the nearest 1/8-inch and presented with three decimals.

Measurments in the field were not taken with a presicison of 0.001-inch due to practical limitations.





Yellow Metal
31251973

Location: B-14
Test Depth: 5.0

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

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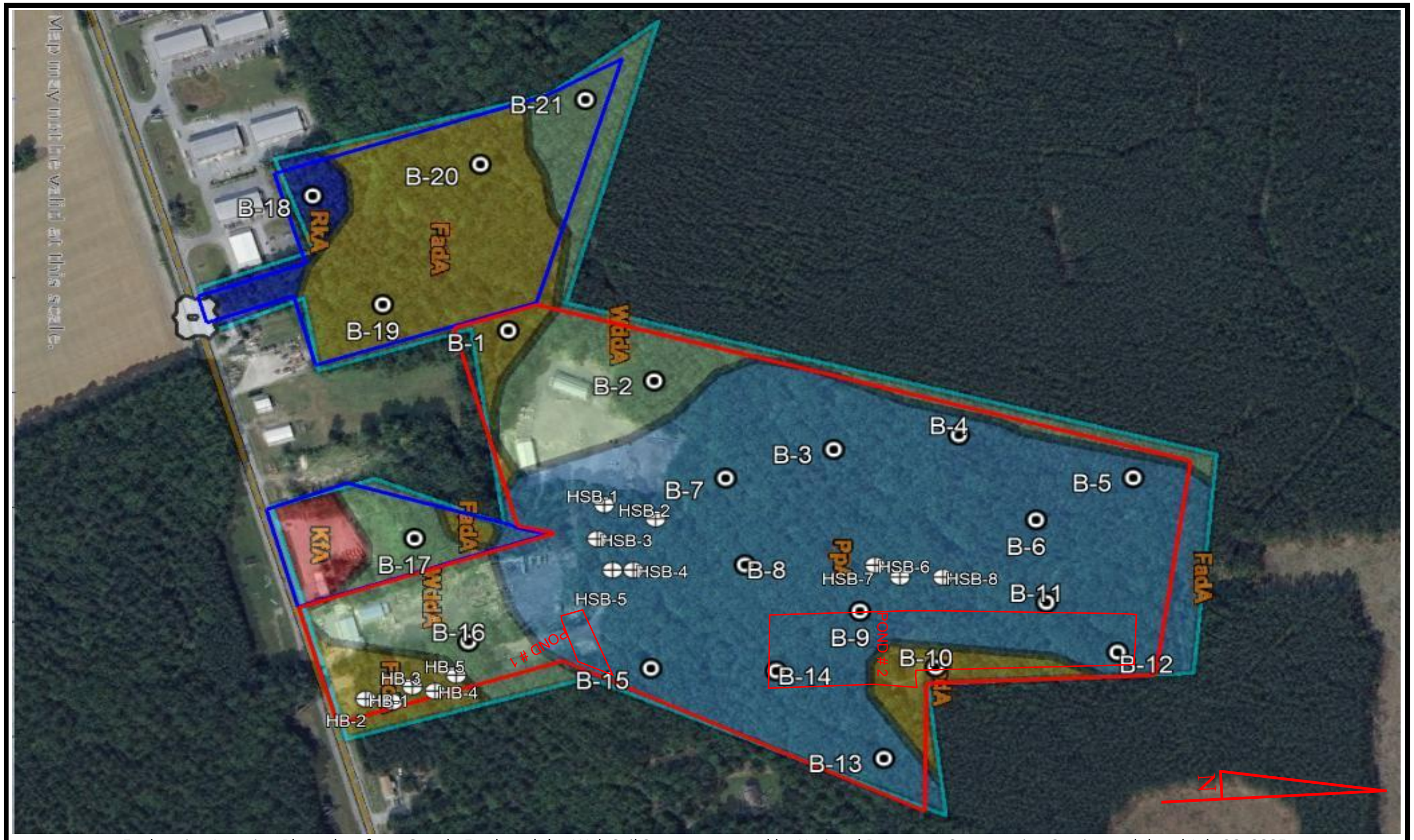

Exploration Location Plan taken from Google Earth and the *Web Soil Survery* prepared by National Resources Conservation Service and dated July 28, 2025.

Exploration Location

Previous Exploration Location

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
21491 Baltimore Avenue, Unit 1
Georgetown, Delaware 19947
(302) 855-9761

USDA Soil Survey Location Plan
Yellow Metal
Sussex County, Delaware

SCALE 11X17	DATE	DRAWN BY	DESIGN BY	REVIEW BY	JOB NO.	Figure
1" ~ 270'	August 2025	GTA	NRCS	GRS	31251973	3

STORMWATER ASSESSMENT STUDY (SAS)
REPORT FOR

Yellow Metal Industrial
20288 ASPHALT ALLEY

Asphalt Alley
Georgetown, DELAWARE, 19947
SUSSEX COUNTY

April 10, 2026

PREPARED BY

Pennoni
PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

Alan M. Decktor, PE, ENV SP

18072 Davidson Drive
Milton, DE 19968
(302) 684-8030

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ii. Existing Conditions	6
iii. Proposed Conditions	6-7
iv. Site Photos	8
B. Existing & Proposed Hydrology GIS Mapping	Appendix A
i. Existing & Proposed Drainage Features Map (1" = 80' scale)	
▪ On-Site Subareas	
▪ Off-Site Subareas	
▪ Site Points of Analysis	
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i. Site Location Map	
ii. LiDAR Contour Mapping	
iii. Groundwater Recharge & WHPA	
iv. 2017 Land Use / Land Cover (LULC)	
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Sussex conservation district

23818 Shortly Road
Georgetown, DE 19947
302-856-2105
SUSSEXCONSERVATION.ORG

Office Use Only
Date Received:_____ Reviewer:_____
Meeting date/time:_____ DelDOT Attendance Required Y/N:_____

Stormwater Assessment Study (SAS) Checklist

Project Name: Yellow Metal Industrial

Owner/Developer Name: Millsboro Towne Village, LLC

Contact Person: Mason Dyer

e-mail: mdyer@ipmequities.com Phone: (302) 542-2543

Consultant Company: Pennoni Associates Inc.

Contact Person: Alan M. Decktor, PE

e-mail: adecktor@pennoni.com Phone: (302) 684-8030

Check all items that apply; leave check box blank if N/A.

A. Documents

Items should be arranged in the following order:

☒ This completed Stormwater Assessment Study (SAS) Checklist

☒ Brief narrative to include the following:

- Project type/description
- Description of soil limitations and how they relate to BMP selection
- Applicable criteria if the site is in an area served by Watershed Master Plan
- Impacts to tax ditch watershed or ROW
- Description of existing site conditions and proposed conditions including information on downstream conveyance and Points of Analysis (POAs)
- Identify and describe existing drainage structures and features
- Provide photographs of structures / channels / outfalls / POAs

☐ Feedback from DelDOT Maintenance regarding drainage concerns **(if relevant)**.

Consultant to contact DelD T to determine if there are any nown drainage problems. Provide Parcel D number and a description of the pro ect location, from the nearest intersection. DelD T will respond with any nown drainage and flooding problems.

- *ew Castle County – (302) 326-4523*
- *ent County – (302) 760-2424*
- *Sussex County – (302) 853-1340*

B. Existing Hydrology Mapping

Submit an existing drainage features map based on **field-run topo or current LIDAR data**:

☒ On-site subareas

☐ Off-site subareas

☒ Site points of analysis

C. Stormwater Assessment Study GIS Mapping

Provide maps from the following SAS G S eb application lin
https firstmap.delaware.gov sasgis
(Layers to be overlaid on the most recent aerial imagery basemap)

- ☒ Site location
- ☐ Parcel Boundary showing parcel and ID
- ☐ NHD rivers, streams and water features
- ☒ Contours
- ☐ Tax Ditch Mapping (watershed boundaries, channel locations, rights-of-way)
- ☐ Wellhead protection
- ☒ Aquifer recharge areas
- ☒ 2017 Aerial Imagery to Determine Baseline Forest Conditions
- ☒ Soils
- ☒ State Wetland Mapping Project (SWMP)
- ☐ Head of Tide Mapping
- ☐ Potential Contamination Sources
  - ☐ SIRB Sites
  - ☐ Leaking Tanks
  - ☐ Above Ground Storage Tank Facility
  - ☐ Underground Storage Tanks
  - ☐ Solid and Hazardous Waste Site
- ☒ Flood Data (BFE and FEMA Flood Map)
- ☒ Depth to Water WET

D. Supplemental Information

- ☒ StreamStats Map and Basin Characteristics Report showing limit of downstream analysis. (The downstream analysis point will be located at the point in the watershed where the site area comprises less than 10% of the watershed area. Alternative downstream limit points may be shown for discussion.)
  StreamStats lin https streamstats.usgs.gov ss

- ☐ Adjacent well locational data
  ell permit data can be searched by tax parcel D from the Delaware penData portal
  https data.delaware.gov Energy-and-Environment ell-Permits 2655- n8
  - ☐ Public wells within 150' of parcel boundary
  - ☐ Domestic wells within 100' of parcel boundary

- ☐ Adjacent septic system data
  - ☐ Drainfields within 50' of parcel boundary
  - ☐ System components within 25' of parcel boundary

This chec list is for guidance only. The Delegated Agency reserves the right to re uest additional information during the review process as it deems necessary. Compliance with the chec list in no way is meant to relieve the design professional of his her professional responsibilities.

Office Use Only
Date Received:_____
Submittal Complete: Yes / No Reviewer Initials _____
Meeting Date/Time: _____
DelDOT Attendance Required? Yes / No

Stormwater Assessment Study (SAS) Contact Sheet

Project Name:	**Yellow Metal - Industrial**
Owner/Developer Name:	Millsboro Towne Village, LLC
Contact Person:	Mason Dyer
Address:	P.O. Box 212
	Lewes, DE 19958
Owner/Developer Phone:	(302) 542-2543
Owner/Developer email:	mdyer@ipmequities.com
Consultant Name:	Pennoni Associates Inc.
Contact Person:	Alan M. Decktor, PE
Address:	18072 Davidson Drive
	Milton, DE 19968
Consultant Phone:	(302) 684-8030
Consultant email:	adecktor@pennoni.com

INTRODUCTION

Pennoni Associates was retained by Millsboro Towne Village, LLC to prepare construction documents for the proposed 20288 Asphalt Alley located in Georgetown Delaware in Sussex County. The project consists of approximately 39.61 +/- acres. The existing site consists of mostly woods with some developed areas (buildings and paved areas). The developed area is an active business. The project is to propose an industrial area with 18 lots and associated site improvements. Lot 1 and 2 are already under review with a project named Yellow Metal.

PROJECT NARRATIVE

Existing Conditions

The subject site is located on Asphalt Alley in Georgetown, DE. The site is bound by Lot 1 and 2 (Yellow Metal) and misc. retail/warehouse/businesses/ woods to the south(between property line and Lewes-Georgetown Highway(SCR18), existing woodlands to the west (approved Azalea Woods section 6), existing woods to the north (approved Azalea Woods section 3) and existing woods and wetlands (Azalea Woods) and existing woods with a few homes. The total site acreage is 39.6+/- acres, while the drainage boundary of the subject site is approximately the same. The disturbed area for the proposed site improvements will be approximately 31.7+/- acres. In the pre-developed 1ondition, the site consists of five subareas and five analysis points. Sub-area 1 drains to the west property line (TM: 135-11.00-49.00) of the site which is identified as Analysis Point 1 on the DA plans. Sub-area 2 drains to the southeast property line (TM: 135-11.00-49.00) of the site which is identified as Analysis Point 5 on the DA plans. Sub-area 3 drains to the northeast property line (TM: 135-11.00-49.00) of the site which is identified as Analysis Point 2. DA-4 drains to an existing pond in the southeast of the property. DA-5 drains to the eastern property line (TM135-11.00-49.00 and TM: 135-11.00-32.01). There are a few existing low points on site that were going to be removed or converted to a proposed Storm Water Management Facility. The existing drainage areas (DA-1, to DA-5) are shown on the Pre-Developed Drainage Reference Plan in Appendix A. The existing surface condition consists mainly of grass, woods and two small wet ponds. There are a few gravel and existing building areas, currently on the site which are shown as impervious on the Pre-Developed Drainage Reference Plan. Soils on the site include Fallsington sandy loams (FadA), Keyport fine sandy loam (KfA), Pepperbox loamy sand (PpA), Rockawalkin loamy sand (RkA) and Woodstown sandy loam (WddA). The soil located within the drainage areas is classified as Hydrologic Soil Groups B/D, D, A, C. Refer to Appendix D for additional soil information.

Proposed Conditions

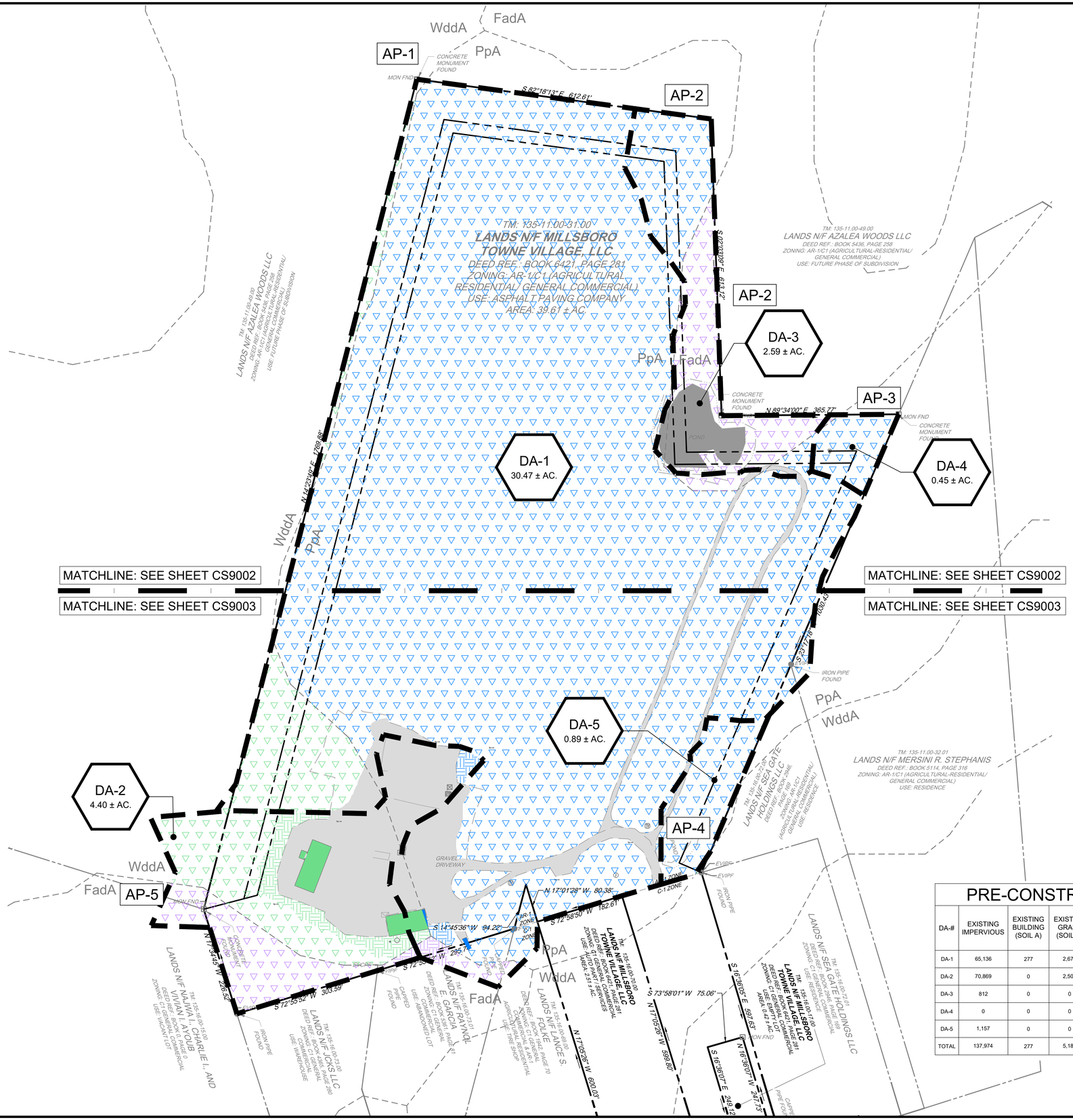
The proposed construction will be an industrial area with 16 pad sites and associated site improvements. Both existing ponds will be removed and pond near AP-2 will become a buffer and the other pond will become part of Pad Site 16 and a buffer. The

Post-Development Drainage Reference Plan will utilize one proposed stormwater facility to collect, convey and manage the additional runoff from the proposed site improvements. The pre-development analysis point matches the post-development analysis point on the Post-Development Drainage Plan. See the post-developed DA map in Appendix A.

Existing Site Entrance

APPENDIX A

Existing & Proposed Hydrology Mapping



DRAINAGE AREA REFERENCE LEGEND

- SOIL BOUNDARY LINES
- RuB — SOIL BOUNDARY TEXT
- DRAINAGE AREA BOUNDARY
- TC PATHWAY
- AP-1 — ANALYSIS POINT
- DA-## — DRAINAGE AREA
- IMPERVIOUS
- WATER
- SOIL A / SOIL C / SOIL B/D — GRASS
- WOODS
- BUILDING

SOILS

TYPE	DESCRIPTION	HYDROLOGIC SOIL
PpA	PEPPERBOX LOAMY SAND, 0 TO 2 PERCENT SLOPES	A
FadA	FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA	B/D
WddA	WOODSTOWN SANDY LOAM, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA	C

* HYDRAULIC SOIL GROUP B/D WILL BE MODEL AS SOIL D FOR CALCULATION PURPOSES

THIS PROPERTY IS LOCATED ON THE FEMA INSURANCE RATE MAP NUMBER 10005C0325L, MAP REVISED JUNE 20, 2018. PROPERTY LIES WITH IN ZONE X WHICH IS AN AREA LOCATED OUTSIDE THE 500 YEAR FLOOD PLAN.

PRE-CONSTRUCTION DRAINAGE AREA SUMMARY TABLE

DA-#	EXISTING IMPERVIOUS	EXISTING BUILDING (SOIL A)	EXISTING GRASS (SOIL A)	EXISTING WOODS (SOIL A)	EXISTING BUILDING (SOIL B/D)	EXISTING GRASS (SOIL B/D)	EXISTING WOODS (SOIL B/D)	EXISTING BUILDING (SOIL C)	EXISTING GRASS (SOIL C)	EXISTING WOODS (SOIL C)	EXISTING WATER	TOTAL (SF)	TOTAL (ACRES)
DA-1	65,136	277	2,676	1,175,532	0	2,745	10,970	1,548	1,039	67,143	0	1,327,066	30.47
DA-2	70,869	0	2,507	0	0	976	42,706	5,798	15,966	52,786	0	191,608	4.40
DA-3	812	0	0	46,544	0	0	45,967	0	0	0	19,472	112,795	2.59
DA-4	0	0	0	19,270	0	0	386	0	0	0	0	19,656	0.45
DA-5	1,157	0	0	37,430	0	0	0	0	0	0	0	38,587	0.89
TOTAL	137,974	277	5,183	1,278,776	0	3,721	100,029	7,346	17,005	119,929	19,472	1,689,712	38.79

0 100' 200'

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

YELLOW METAL - INDUSTRIAL

TM: 135-11.00-31.00 & 135-16.00-17.00
20288 ASPHALT ALLEY
GEORGETOWN, DE. 19947
GEORGETOWN HUNDRED, SUSSEX COUNTY, DE

PRE-CONSTRUCTION DRAINAGE AREA KEY SHEET

MILLSBORO TOWN VILLAGE, LLC
P.O. BOX 212
LEWES, DE 19958

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATE, AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	PDYER25005
DATE	2026-04-03
DRAWING SCALE	1" = 100'
DRAWN BY	JMM
APPROVED BY	RLH

CS9001

SHEET 1 OF 6

PLOTTED: 4/14/2026 8:40 AM BY: Jesse Morgan P:\DTSTYLE Pennoni MCS.stb
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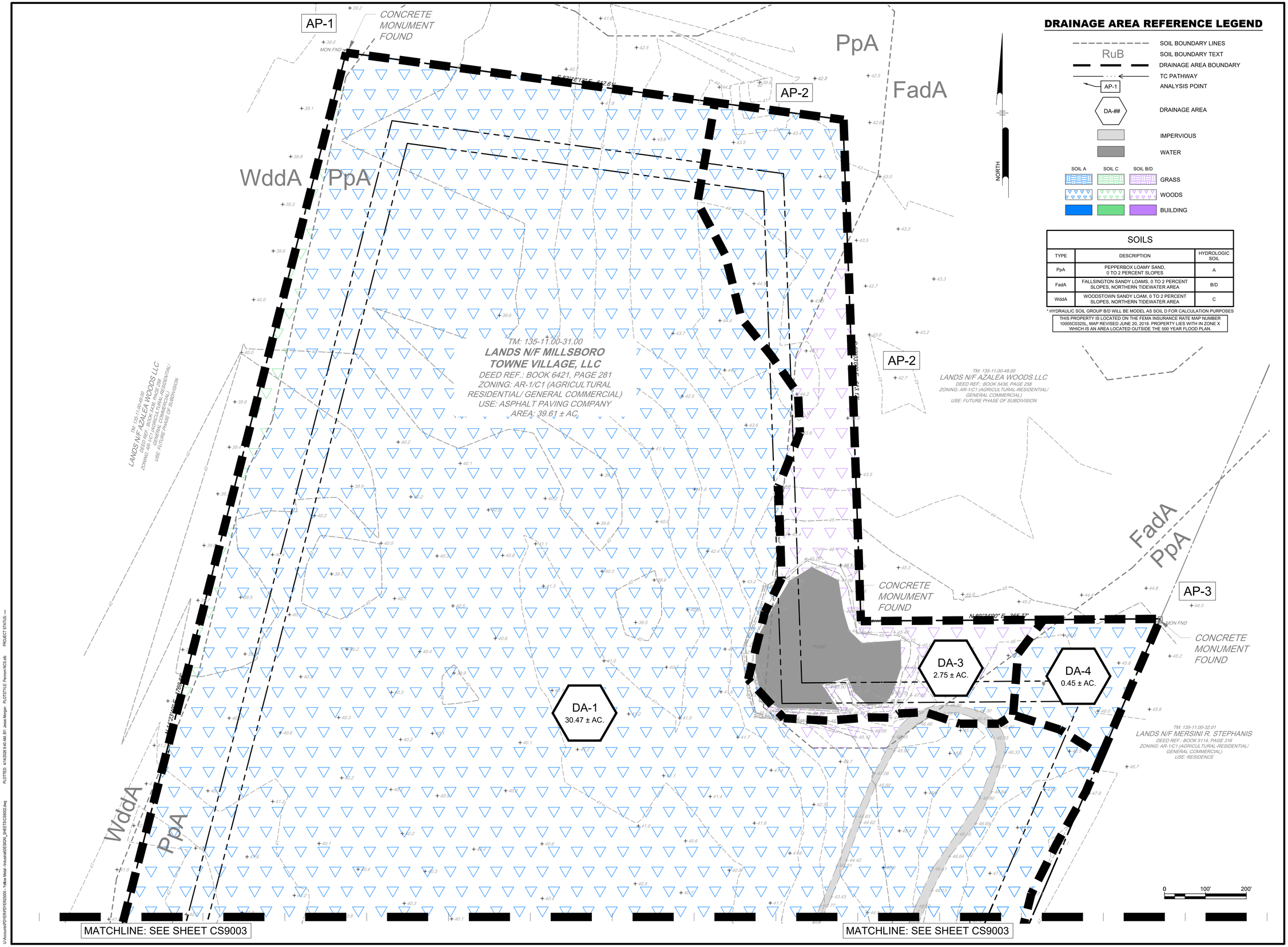

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* HYDRAULIC SOIL GROUP B/D WILL BE MODEL AS SOIL D FOR CALCULATION PURPOSES

THIS PROPERTY IS LOCATED ON THE FEMA INSURANCE RATE MAP NUMBER 10005C0325L, MAP REVISED JUNE 20, 2018. PROPERTY LIES WITH IN ZONE X WHICH IS AN AREA LOCATED OUTSIDE THE 500 YEAR FLOOD PLAN.

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

YELLOW METAL - INDUSTRIAL
TM: 135-11.00-31.00 & 135-16.09-17.00
20298 ASPHALT ALLEY
GEORGETOWN, DE. 19947
GEORGETOWN HUNDRED, SUSSEX COUNTY, DE

PRE-CONSTRUCTION DRAINAGE AREA PLAN

MILLSBORO TOWN VILLAGE, LLC
P.O. BOX 212
LEWES, DE 19958

NO.	DATE	REVISIONS	BY

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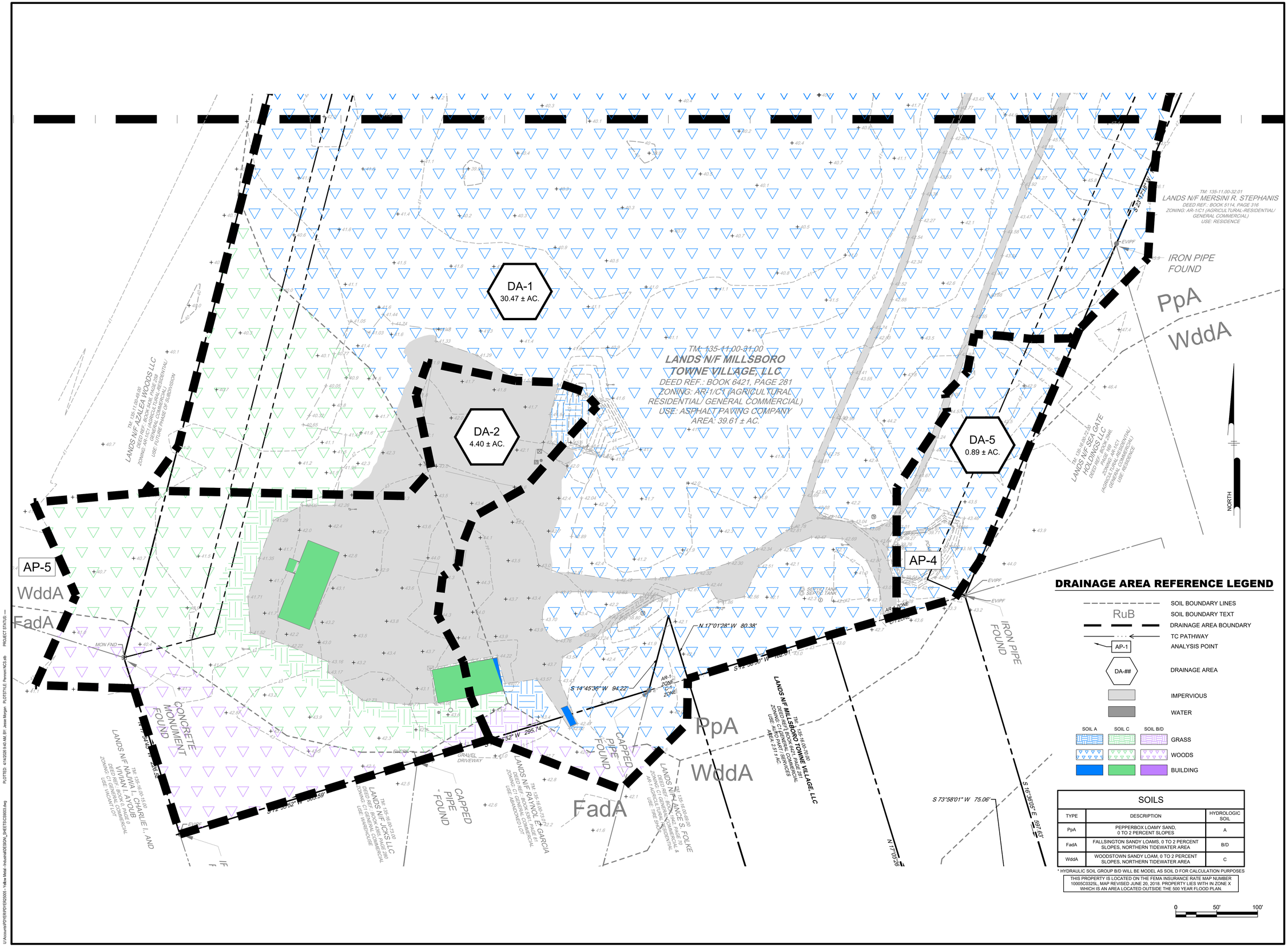
PROJECT	PDYER25005
DATE	2026-04-03
DRAWING SCALE	1" = 50'
DRAWN BY	JMM
APPROVED BY	RLH

CS9002

SHEET 2 OF 6

U:\Accounts\PDYER\PDYER25005 - Yellow Metal - Industrial\DESIGN_SHEETS\CS9002.dwg PLOTTED: 4/14/2026 8:40 AM BY: Jesse Morgan PLOTSTYLE: Pennoni WCS.ctb PROJECT STATUS: —



DRAINAGE AREA REFERENCE LEGEND

- SOIL BOUNDARY LINES
- SOIL BOUNDARY TEXT (RuB)
- DRAINAGE AREA BOUNDARY
- TC PATHWAY
- ANALYSIS POINT (AP-1)
- DRAINAGE AREA (DA-##)
- IMPERVIOUS
- WATER

SOIL A	SOIL C	SOIL B/D	
			GRASS
			WOODS
			BUILDING

SOILS

TYPE	DESCRIPTION	HYDROLOGIC SOIL
PpA	PEPPERBOX LOAMY SAND, 0 TO 2 PERCENT SLOPES	A
FadA	FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA	B/D
WddA	WOODSTOWN SANDY LOAM, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA	C

* HYDRAULIC SOIL GROUP B/D WILL BE MODEL AS SOIL D FOR CALCULATION PURPOSES

THIS PROPERTY IS LOCATED ON THE FEMA INSURANCE RATE MAP NUMBER 10005C0325L, MAP REVISED JUNE 20, 2018. PROPERTY LIES WITH IN ZONE X WHICH IS AN AREA LOCATED OUTSIDE THE 500 YEAR FLOOD PLAN.

Pennoni
PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

YELLOW METAL - INDUSTRIAL

TM: 135-11.00-31.00 & 135-16.00-17.00
20298 ASPHALT ALLEY
GEORGETOWN, DE. 19947
GEORGETOWN HUNDRED, SUSSEX COUNTY, DE

PRE-CONSTRUCTION DRAINAGE AREA PLAN

MILLSBORO TOWN VILLAGE, LLC
P.O. BOX 212
LEWES, DE 19958

NO.	DATE	REVISIONS	BY

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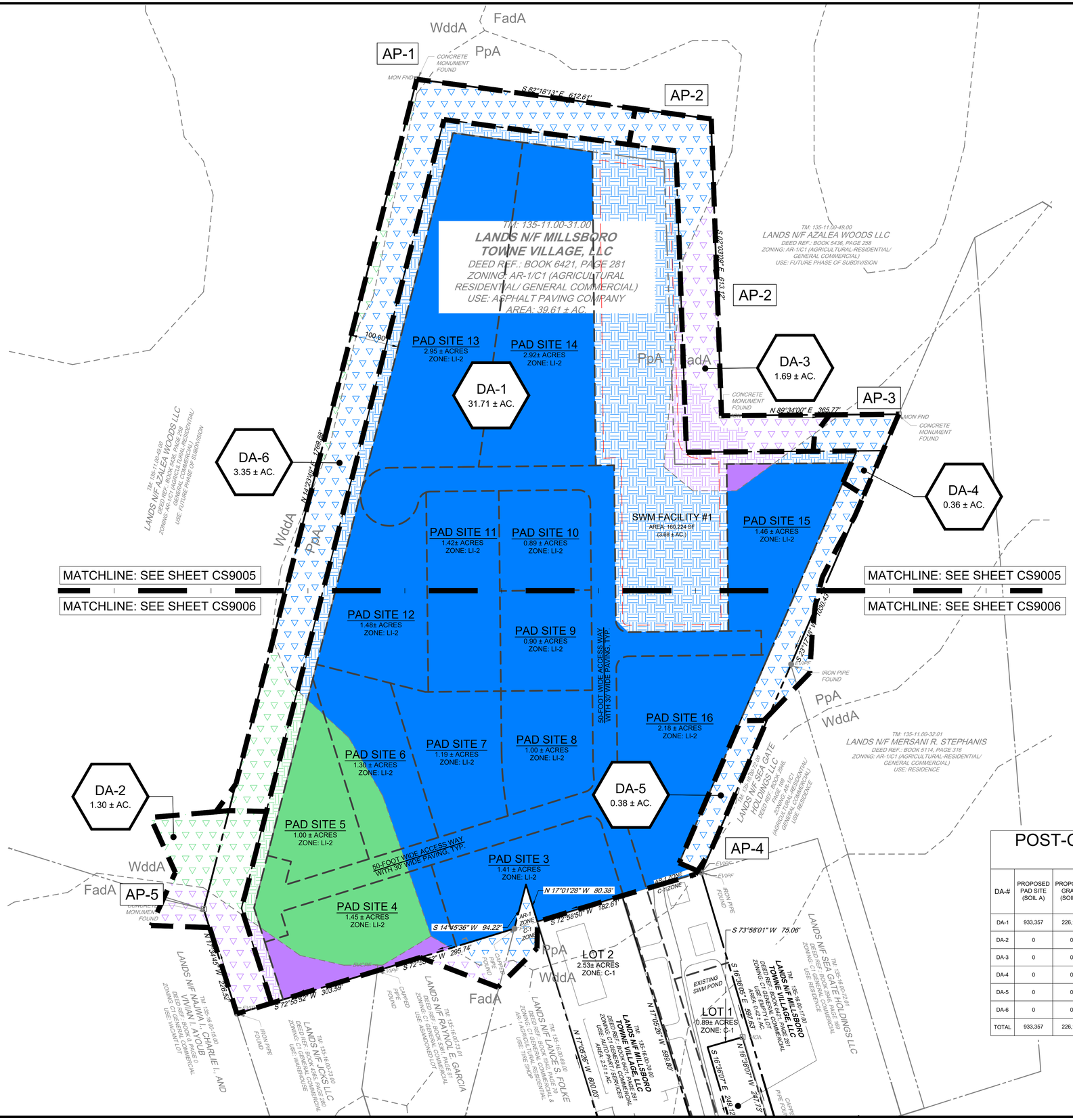
PROJECT	PDYER25005
DATE	2026-04-03
DRAWING SCALE	1" = 50'
DRAWN BY	JMM
APPROVED BY	RLH

CS9003

SHEET 3 OF 6

U:\Accounts\PDYER\PDYER25005 - Yellow Metal - Industrial\DESIGN_SHEETS\CS9003.dwg PLOTTED: 4/14/2026 9:40 AM BY: Jesse Morgan PLOTSTYLE: Pennoni MCS.stb PROJECT STATUS: —



DRAINAGE AREA REFERENCE LEGEND

- SOIL BOUNDARY LINES
- RuB — SOIL BOUNDARY TEXT
- DRAINAGE AREA BOUNDARY
- TC PATHWAY
- AP-1 — ANALYSIS POINT
- DA-## — DRAINAGE AREA
- IMPERVIOUS
- SOIL A / SOIL C / SOIL B/D — GRASS
- WOODS
- PAD SITE

SOILS		
TYPE	DESCRIPTION	HYDROLOGIC SOIL
PpA	PEPPERBOX LOAMY SAND, 0 TO 2 PERCENT SLOPES	A
FadA	FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA	B/D
WddA	WOODSTOWN SANDY LOAM, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA	C

* HYDRAULIC SOIL GROUP B/D WILL BE MODEL AS SOIL D FOR CALCULATION PURPOSES

THIS PROPERTY IS LOCATED ON THE FEMA INSURANCE RATE MAP NUMBER 10005C0325L, MAP REVISED JUNE 20, 2018. PROPERTY LIES WITH IN ZONE X WHICH IS AN AREA LOCATED OUTSIDE THE 500 YEAR FLOOD PLAN.

POST-CONSTRUCTION DRAINAGE AREA SUMMARY TABLE

DA-#	PROPOSED PAD SITE (SOIL A)	PROPOSED GRASS (SOIL A)	EXISTING WOODS (SOIL A)	PROPOSED PAD SITE (SOIL B/D)	PROPOSED GRASS (SOIL B/D)	EXISTING GRASS (SOIL B/D)	EXISTING WOODS (SOIL B/D)	PROPOSED PAD SITE (SOIL C)	PROPOSED GRASS (SOIL C)	EXISTING WOODS (SOIL C)	TOTAL (SF)	TOTAL (ACRES)
DA-1	933,357	226,178	40,683	19,095	23,554	0	6,496	120,015	12,088	0	1,381,466	31.71
DA-2	0	0	0	0	0	0	25,217	0	0	31,444	56,661	1.30
DA-3	0	0	25,028	0	0	10,701	37949	0	0	0	73,678	1.69
DA-4	0	0	15,005	0	0	0	475	0	0	0	15,480	0.36
DA-5	0	0	16,387	0	0	0	0	0	0	0	16,387	0.38
DA-6	0	0	110,340	0	0	0	0	0	0	35700	146,040	3.35
TOTAL	933,357	226,178	207,443	19,095	23,554	10,701	70,137	120,015	12,088	67,144	1,689,712	38.79

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

YELLOW METAL - INDUSTRIAL
TM: 135-11.00-31.00 & 135-16.00-17.00
20288 ASPHALT ALLEY
GEORGETOWN, DE. 19947
GEORGETOWN HUNDRED, SUSSEX COUNTY, DE

POST-CONSTRUCTION DRAINAGE AREA KEY SHEET

MILLSBORO TOWN VILLAGE, LLC
P.O. BOX 212
LEWES, DE 19958

NO.	DATE	REVISIONS	BY

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PROJECT	PDYER25005
DATE	2026-04-03
DRAWING SCALE	1" = 100'
DRAWN BY	JMM
APPROVED BY	RLH

CS9004

SHEET 4 OF 6

U:\Accounts\PDYER\PDYES25005 - Yellow Metal - Industrial\DESIGN_SHEETS\CS9004.dwg PLOTTED: 4/7/2026 10:06 AM BY: Jesse Morgan PLOTSTYLE: Pennoni NCS.stb

AP-1

CONCRETE MONUMENT FOUND

MON FND

AP-2

100-FOOT WIDE FORESTED BUFFER

15.00'

90.00'

75-FOOT WIDE FORESTED BUFFER

WddA PpA

PpA

FadA

TM: 135-11.00-31.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
DEED REF.: BOOK 6421, PAGE 281
ZONING: AR-1/C1 (AGRICULTURAL RESIDENTIAL/ GENERAL COMMERCIAL)
USE: ASPHALT PAVING COMPANY
AREA: 39.61 ± AC.

TM: 135-11.00-49.00
LANDS N/F AZALEA WOODS LLC
DEED REF.: BOOK 5436, PAGE 258
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: FUTURE PHASE OF SUBDIVISION

LANDS N/F AZALEA WOODS LLC
TM: 135-11.00-49.00
DEED REF.: BOOK 5436, PAGE 258
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: FUTURE PHASE OF SUBDIVISION

PAD SITE 13
2.95 ± ACRES
ZONE: LI-2

PAD SITE 14
2.92± ACRES
ZONE: LI-2

PAD SITE 11
1.42± ACRES
ZONE: LI-2

PAD SITE 10
0.89 ± ACRES
ZONE: LI-2

SWM FACILITY #1
AREA: 160,224 SF
(3.68 ± AC.)

PAD SITE 15
1.46 ± ACRES
ZONE: LI-2

DA-1
31.71 ± AC.

DA-3
1.69 ± AC.

DA-4
0.36 ± AC.

DA-6
3.35 ± AC.

AP-3

75-FOOT WIDE FORESTED BUFFER

TM: 135-11.00-32.01
LANDS N/F MERSINI R. STEPHANIS
DEED REF.: BOOK 5114, PAGE 316
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: RESIDENCE

0 50' 100'

MATCHLINE: SEE SHEET CS9006

MATCHLINE: SEE SHEET CS9006

DRAINAGE AREA REFERENCE LEGEND

- SOIL BOUNDARY LINES
- RuB — SOIL BOUNDARY TEXT
- DRAINAGE AREA BOUNDARY
- TC PATHWAY
- AP-1 — ANALYSIS POINT
- DA-## — DRAINAGE AREA
- IMPERVIOUS
- SOIL A / SOIL C / SOIL B/D — GRASS
- WOODS
- PAD SITE

NORTH

SOILS

TYPE	DESCRIPTION	HYDROLOGIC SOIL
PpA	PEPPERBOX LOAMY SAND, 0 TO 2 PERCENT SLOPES	A
FadA	FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA	B/D
WddA	WOODSTOWN SANDY LOAM, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA	C

* HYDRAULIC SOIL GROUP B/D WILL BE MODEL AS SOIL D FOR CALCULATION PURPOSES

THIS PROPERTY IS LOCATED ON THE FEMA INSURANCE RATE MAP NUMBER 10005C0325L, MAP REVISED JUNE 20, 2018. PROPERTY LIES WITH IN ZONE X WHICH IS AN AREA LOCATED OUTSIDE THE 500 YEAR FLOOD PLAN.

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

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YELLOW METAL - INDUSTRIAL
TM: 135-11.00-31.00 & 135-16.00-17.00
20298 ASPHALT ALLEY
GEORGETOWN, DE. 19947
GEORGETOWN HUNDRED, SUSSEX COUNTY, DE

POST-CONSTRUCTION DRAINAGE AREA PLAN

MILLSBORO TOWN VILLAGE, LLC
P.O. BOX 212
LEWES, DE 19958

NO.	DATE	REVISIONS	BY

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PROJECT	PDYER25005
DATE	2026-04-03
DRAWING SCALE	1" = 50'
DRAWN BY	JMM
APPROVED BY	RLH

CS9005

SHEET 5 OF 6

U:\Accounts\PDYER\PDYER25005 - Yellow Metal - Industrial\ENGR\CAD_SHEETS\CS9005.dwg PLOTTED: 4/17/2026 10:06 AM, BY: Jesse Morgan PLOTSTYLE: Pennoni NCS.stb PROJECT STATUS: —

MATCHLINE: SEE SHEET CS9005

MATCHLINE: SEE SHEET CS9005

PAD SITE 12
1.48± ACRES
ZONE: LI-2

PAD SITE 9
0.90 ± ACRES
ZONE: LI-2

50-FOOT WIDE ACCESS WAY
WITH 30' WIDE PAVING, TYP.

50-FOOT WIDE FORESTED BUFFER

DA-6
3.35 ± AC.

75-FOOT WIDE FORESTED BUFFER

DA-1
31.71 ± AC.

PAD SITE 7
1.19 ± ACRES
ZONE: LI-2

PAD SITE 6
1.30 ± ACRES
ZONE: LI-2

TM: 135-11.00-31.00
LANDS N/F MILLSBORO TOWNE VILLAGE, LLC
DEED REF.: BOOK 6421, PAGE 281
ZONING: AR-1/C1 (AGRICULTURAL RESIDENTIAL/ GENERAL COMMERCIAL)
USE: ASPHALT PAVING COMPANY
AREA: 39.61 ± AC.

PAD SITE 16
2.18 ± ACRES
ZONE: LI-2

TM: 135-11.00-32.01
LANDS N/F MERSINI R. STEPHANIS
DEED REF.: BOOK 5114, PAGE 316
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: RESIDENCE

IRON PIPE FOUND

PpA
WddA

50.00' WOODED RESTRICTED AREA

TM: 135-16.00-7.00
LANDS N/F SEA GATE HOLDINGS LLC
DEED REF.: BOOK 2946, PAGE 199
ZONING: AR-1/C1 (AGRICULTURAL-RESIDENTIAL/ GENERAL COMMERCIAL)
USE: RESIDENCE

NORTH

DA-5
0.38 ± AC.

AP-4

PAD SITE 5
1.00± ACRES
ZONE: LI-2

DA-2
1.30 ± AC.

AP-5

WddA

FadA

50-FOOT WIDE ACCESS WAY
WITH 30' WIDE PAVING, TYP.

PAD SITE 3
1.41 ± ACRES
ZONE: LI-2

PAD SITE 4
1.45 ± ACRES
ZONE: LI-2

N 17°01'28" W 80.38'

S 14°45'36" W 94.22'

AR-1 ZONE
C-1 ZONE

S 72°30'52" W 295.74'

IRON PIPE FOUND

CAPPED PIPE FOUND

PpA
WddA
FadA

LOT 2
2.53± ACRES
ZONE: C-1

EXISTING SWM POND

LOT 1
0.89± ACRES
ZONE: C-1

S 73°58'01" W

S 16°39'05" E 567.63'

N 17°02'52" E

75.00' WOODED RESTRICTED AREA

25.00' DRAINAGE AND UTILITY RESTRICTED AREA

TM: 135-16.00-73.00
LANDS N/F RAYNOL E. GARCIA
DEED REF.: BOOK 4961, PAGE 280
ZONING: C1 (GENERAL COMMERCIAL)
USE: ABANDONED LOT

TM: 135-16.00-73.02
LANDS N/F NAWAL I. AND VIVIAN J. AYOUB
DEED REF.: BOOK 0, PAGE 0
ZONING: C1 (GENERAL COMMERCIAL)
USE: VACANT LOT

TM: 135-16.00-73.03
LANDS N/F JACKS LLC
DEED REF.: BOOK 4355, PAGE 280
ZONING: C1 (GENERAL COMMERCIAL)
USE: WAREHOUSE

TM: 135-16.00-69.00
LANDS N/F LANCE S. FOLKE
DEED REF.: BOOK 4282, PAGE 70
ZONING: AR-1 (AGRICULTURAL RESIDENTIAL)
USE: TREE SERVICE

TM: 135-16.00-68.00
LANDS N/F AZALEA WOODS LLC
DEED REF.: BOOK 5148, PAGE 258
ZONING: AR-1/C1 (AGRICULTURAL RESIDENTIAL/ GENERAL COMMERCIAL)
USE: FUTURE PHASE OF SUBDIVISION

DRAINAGE AREA REFERENCE LEGEND

- SOIL BOUNDARY LINES
- RuB — SOIL BOUNDARY TEXT
- DRAINAGE AREA BOUNDARY
- TC PATHWAY
- AP-1 — ANALYSIS POINT
- DA-## — DRAINAGE AREA
- IMPERVIOUS

SOIL A	SOIL C	SOIL B/D	
			GRASS
			WOODS
			PAD SITE

SOILS

TYPE	DESCRIPTION	HYDROLOGIC SOIL
PpA	PEPPERBOX LOAMY SAND, 0 TO 2 PERCENT SLOPES	A
FadA	FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA	B/D
WddA	WOODSTOWN SANDY LOAM, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA	C

* HYDRAULIC SOIL GROUP B/D WILL BE MODEL AS SOIL D FOR CALCULATION PURPOSES

THIS PROPERTY IS LOCATED ON THE FEMA INSURANCE RATE MAP NUMBER 10005C0329L, MAP REVISED JUNE 20, 2018. PROPERTY LIES WITH IN ZONE X WHICH IS AN AREA LOCATED OUTSIDE THE 500 YEAR FLOOD PLAIN.

0 50' 100'

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

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YELLOW METAL - INDUSTRIAL
TM: 135-11.00-31.00 & 135-16.00-17.00
20298 ASPHALT ALLEY
GEORGETOWN, DE 19947
GEORGETOWN HUNDRED, SUSSEX COUNTY, DE

POST-CONSTRUCTION DRAINAGE AREA PLAN

MILLSBORO TOWN VILLAGE, LLC
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LEWES, DE 19958

NO.	DATE	REVISIONS	BY

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PROJECT	PDYER25005
DATE	2026-04-03
DRAWING SCALE	1" = 50'
DRAWN BY	JMM
APPROVED BY	RLH

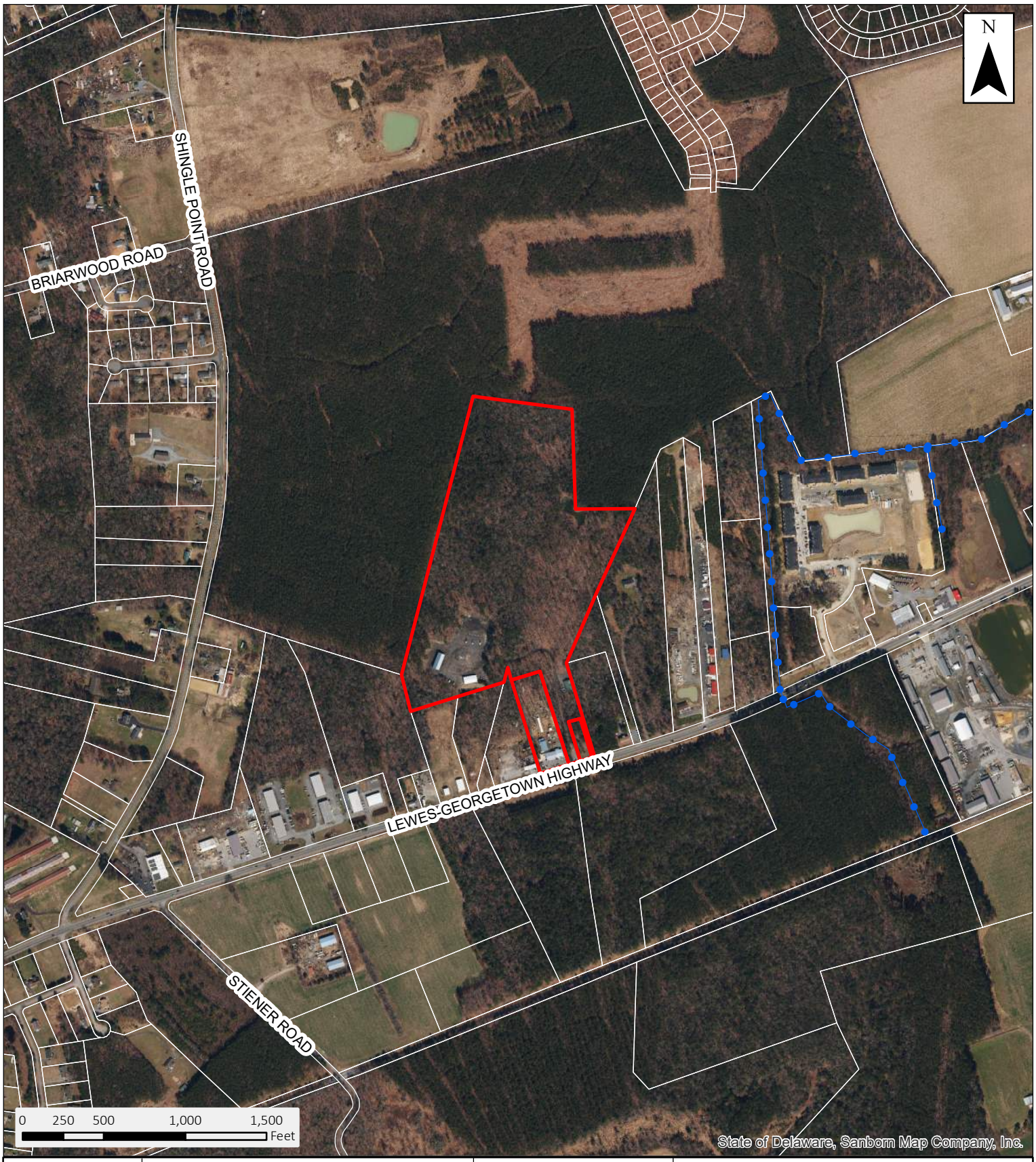
CS9006

SHEET 6 OF 6

U:\Accounts\PDYER\PDYER25005 - Yellow Metal - Industrial\DESIGN_SHEETS\CS9006.dwg PLOTTED: 4/17/2026 10:06 AM, BY: Jesse Morgan PLOTSTYLE: Pennoni WCS.ctb PROJECT STATUS: —

APPENDIX B

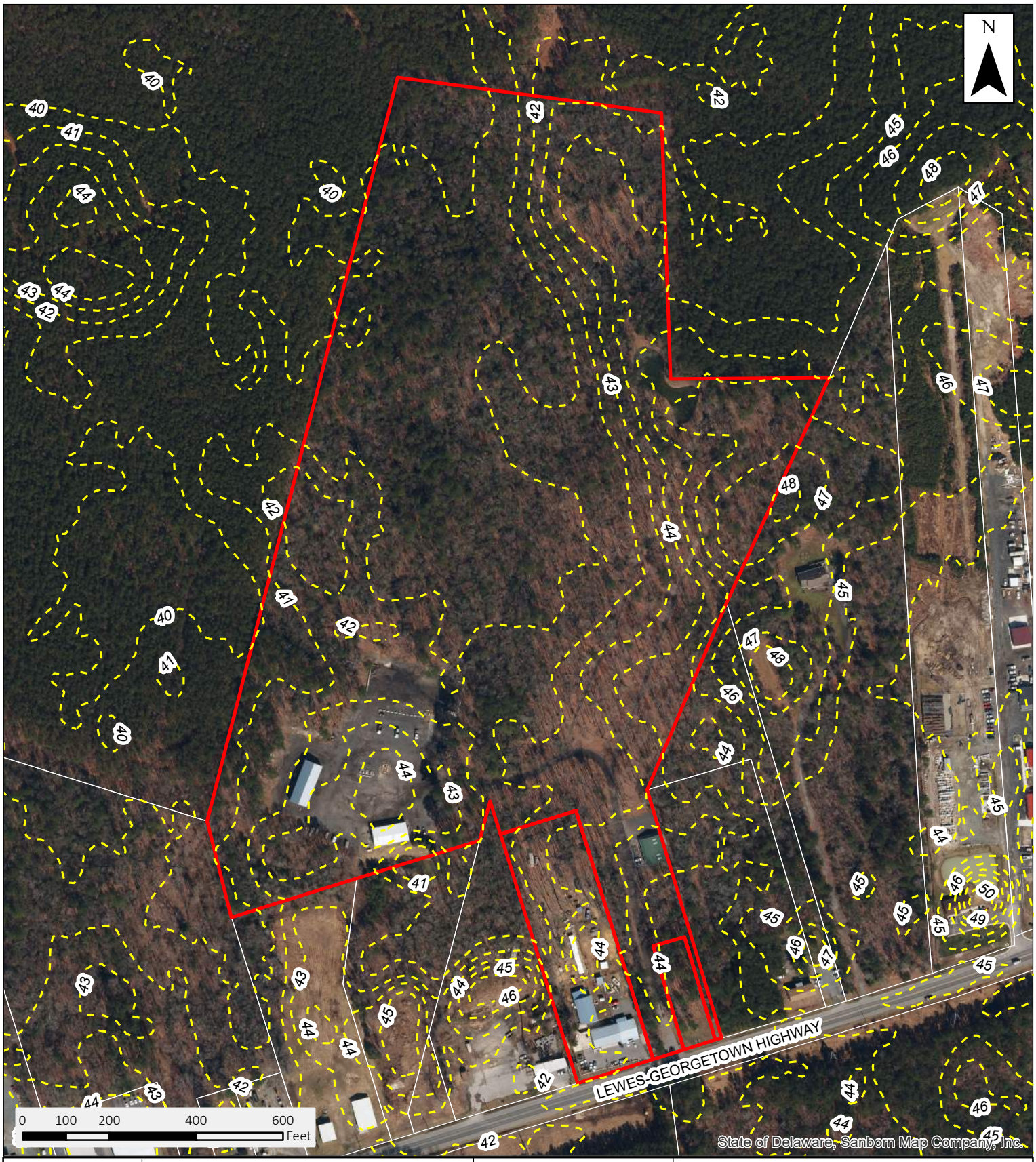
On-Line Background Information



1	Site Location Map	Pennoni	Tax Ditch Segments Subject Property Other Tax Parcels
	Yellow Metal Industrial		
	PDYER25005		

Date: 4/1/2026

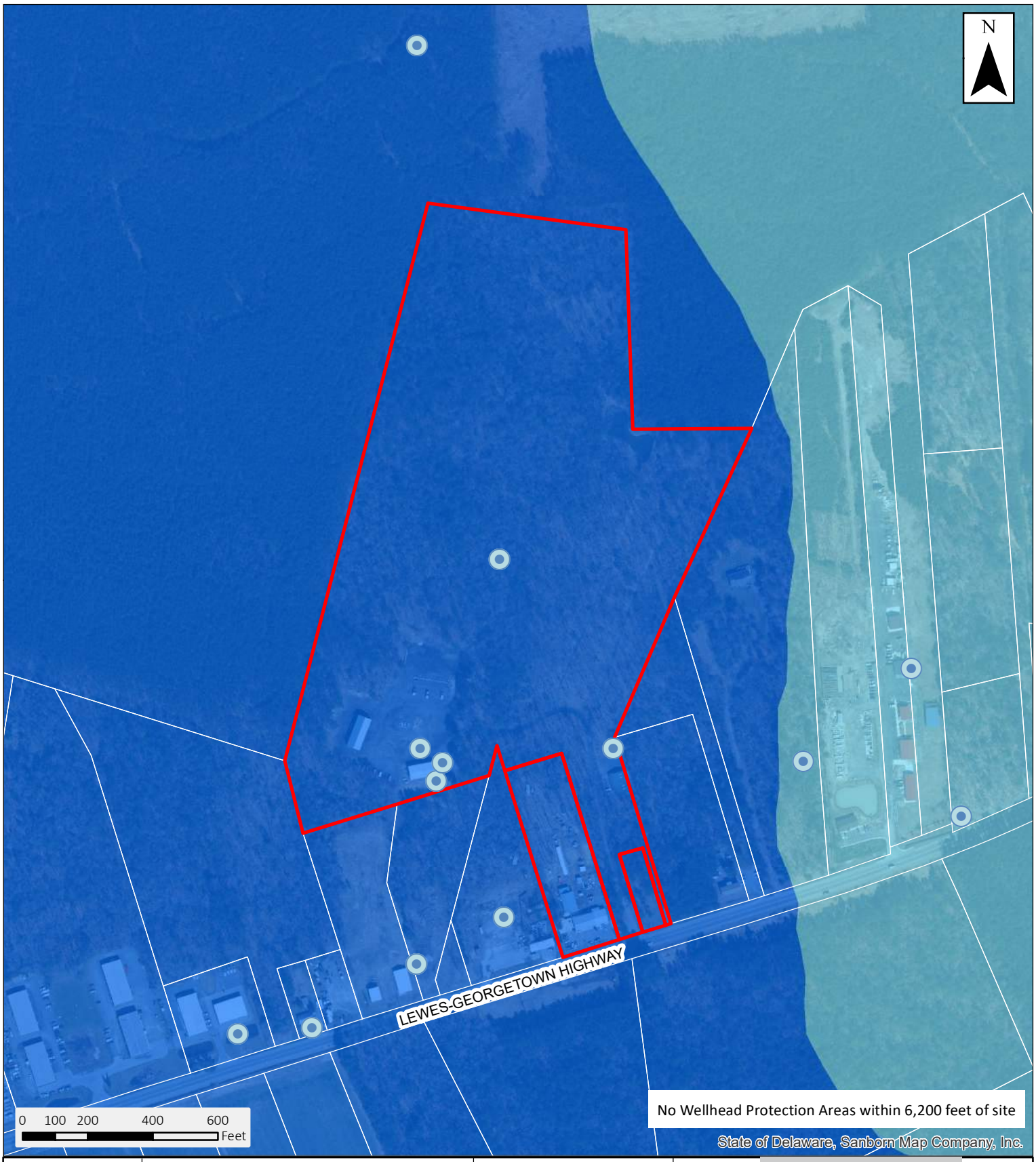
Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\SAS\01 Site Location Map.mxd



2	LiDAR Contour Map	Pennoni	LiDAR Contours Subject Property Other Tax Parcels
	Yellow Metal Industrial		
	PDYER25005		

Date: 4/1/2026

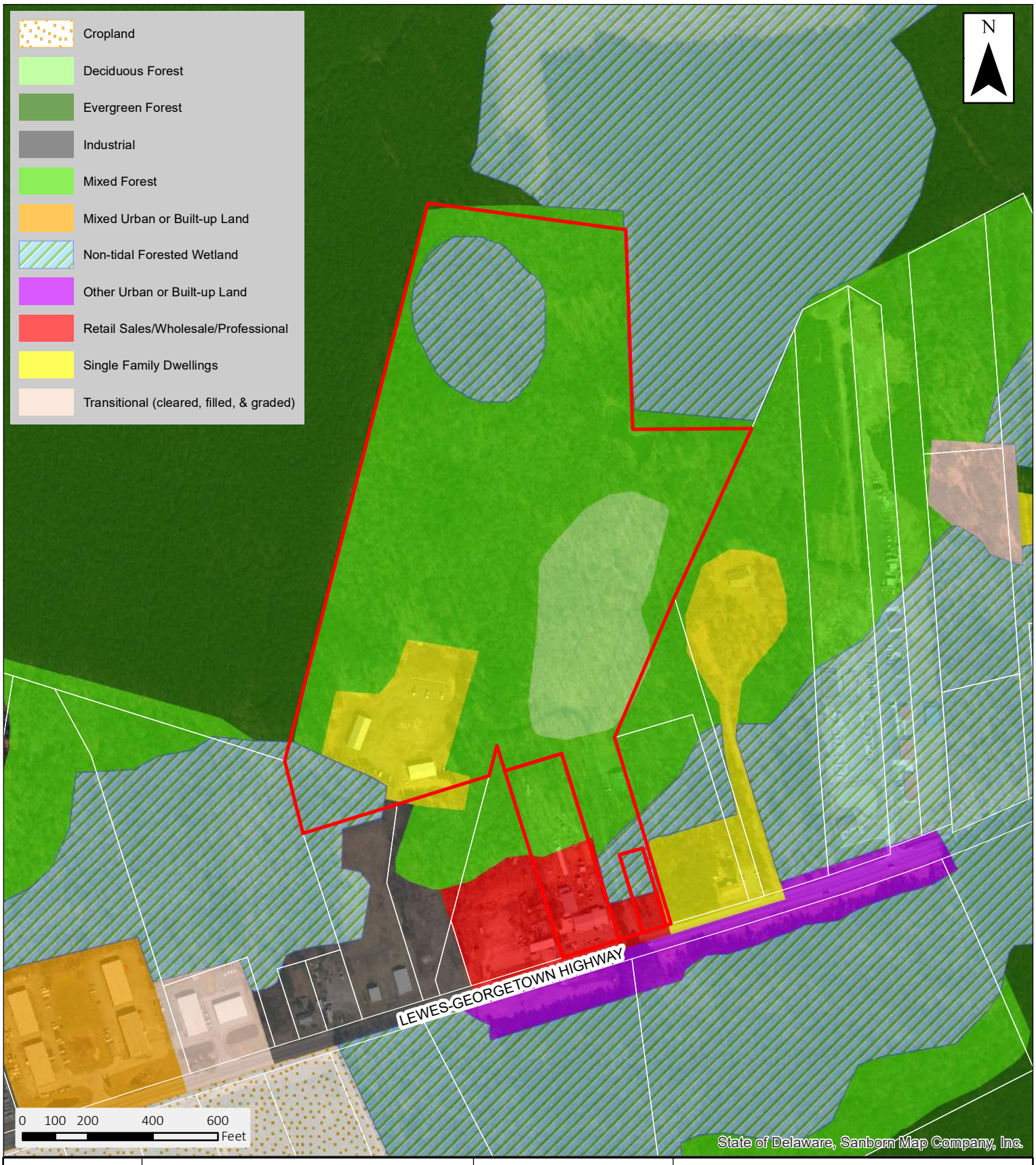
Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\SAS\02 LiDAR Contour Map.mxd



3	Groundwater Recharge & WHPA	Pennoni	Non-Public Wells Recharge Potential Fair Poor
	Yellow Metal Industrial		
	PDYER25005		

Date: 4/2/2026

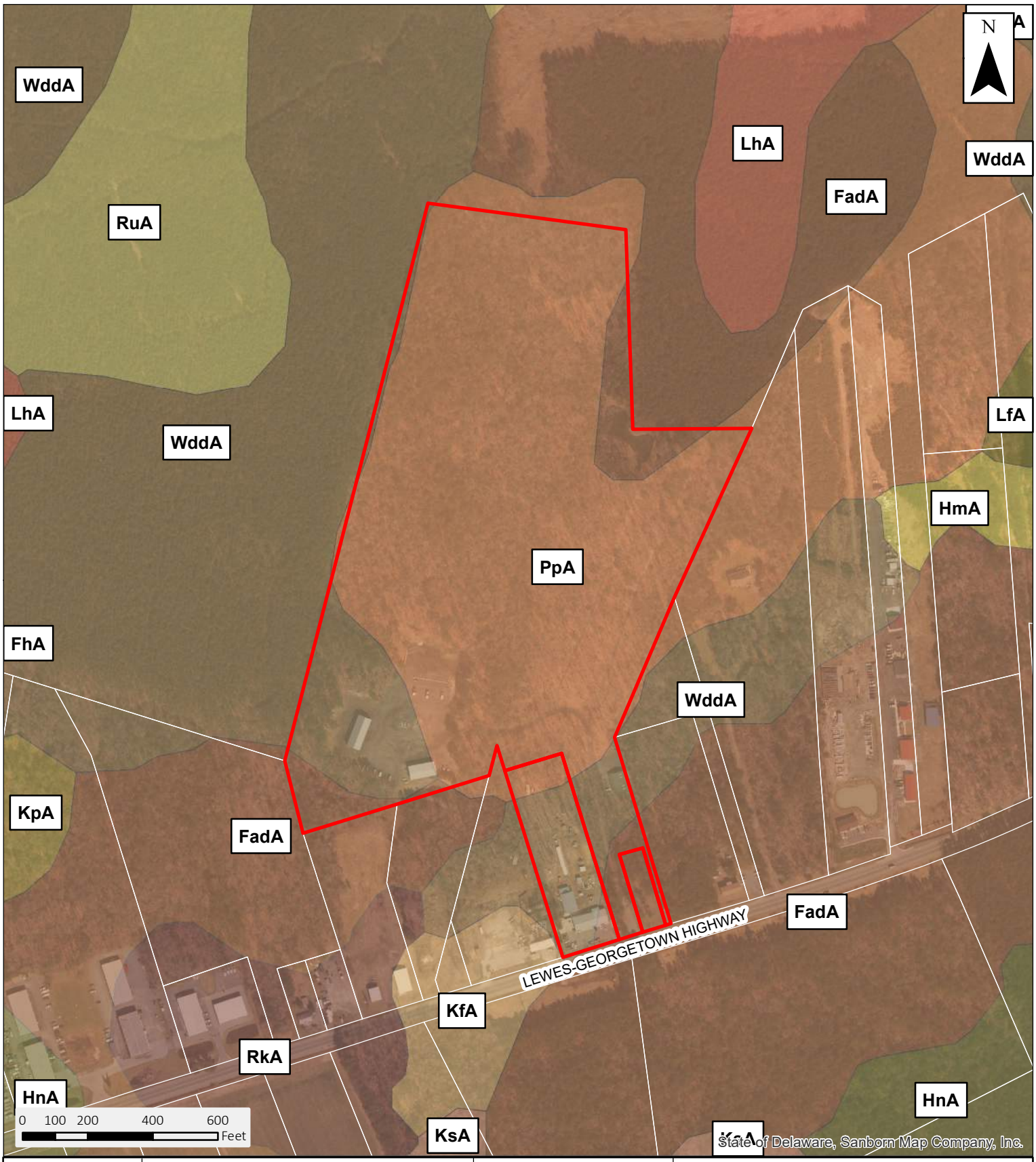
Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\SAS\03 Groundwater Recharge Potential & WHPA.mxd



4	2017 Land Use/Land Cover	Pennoni	
	Yellow Metal Industrial		
	PDYER25005		

Date: 4/2/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\SAS\04 2017 Land Use Land Cover.mxd



5	NRCS Soils Mapping Yellow Metal Industrial PDYER25005	Pennoni	Soil Types: FadA - Fallsington sandy loam, Group B/D PpA - Pepperbox loamy sand, Group A WddA - Woodstown sandy loam, Group C

Date: 4/2/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\SAS\05 NRCS Soils Mapping.mxd

6	State Wetlands Mapping	Pennoni	DNREC Wetlands
	Yellow Metal Industrial		
	PDYER25005		

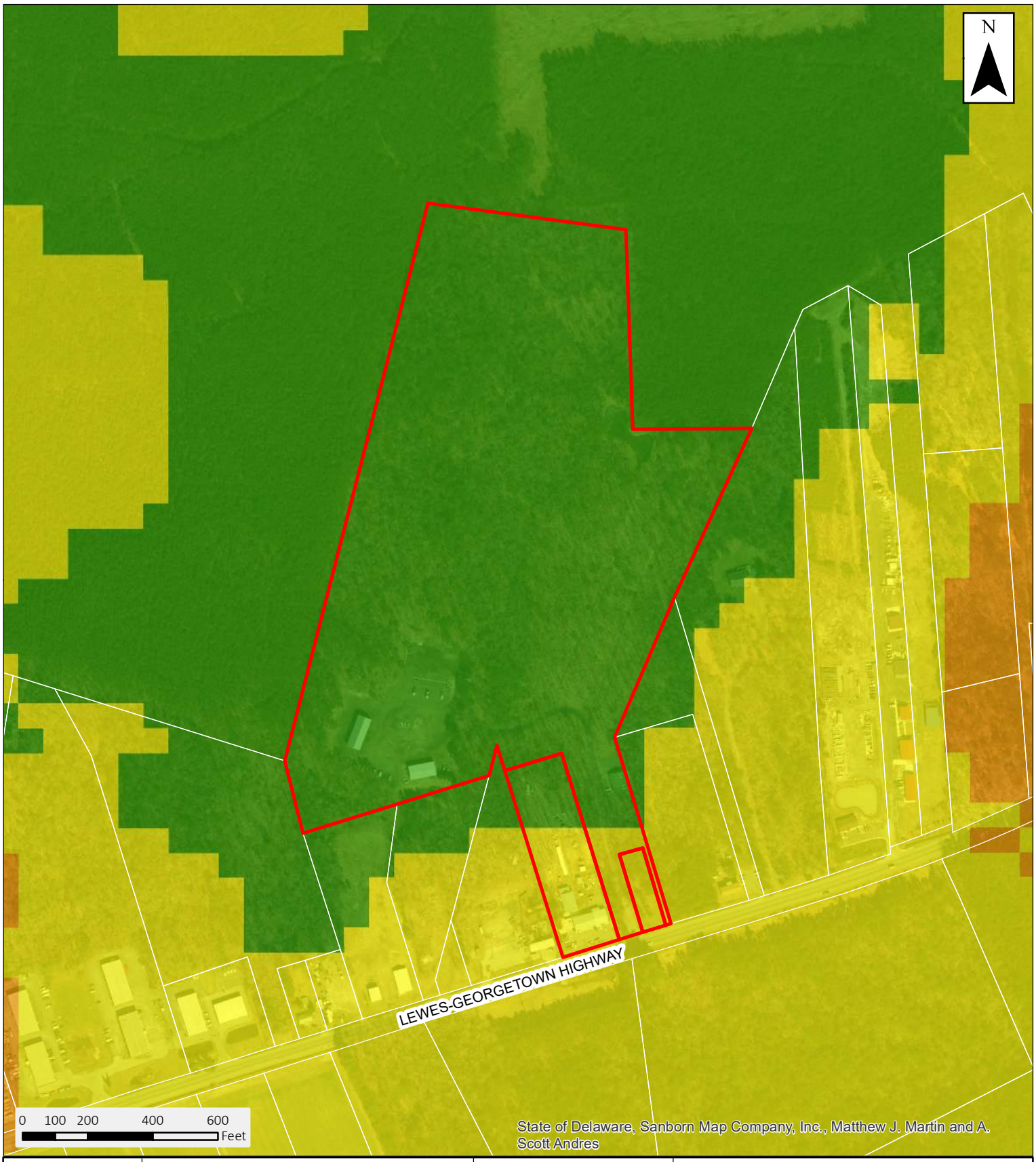
Date: 4/2/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\SAS\06 State Wetlands Mapping.mxd

7	FEMA Floodplain Mapping	Pennoni	Zone X
	Yellow Metal Industrial		
	PDYER25005		Flood Map reference: #10005C0325L (6/20/18)

Date: 4/2/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\SAS\07 FEMA Floodplain Mapping.mxd



8	Depth To Water WET (Inches)	Pennoni	0 - 3 / 9 - 16 / 3 - 6 / 16 - 20 / 6 - 9 / > 20
	Yellow Metal Industrial		
	PDYER25005		

Date: 4/2/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\SAS\08 Depth To Water WET.mxd

APPENDIX C

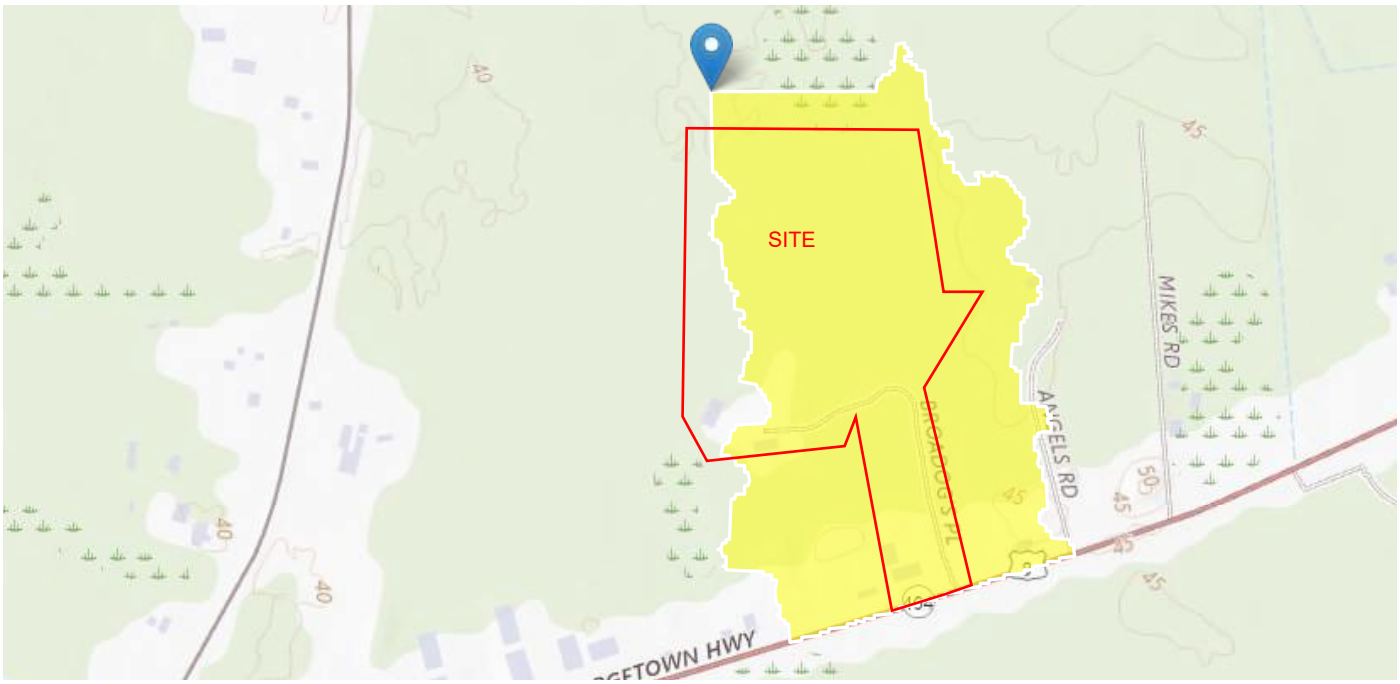
StreamStats Basin Characteristics

Report & Map

AT PROPERTY LINE

StreamStats Report

Region ID: DE
Clicked Point (Latitude, Longitude): 38.71534, -75.33133
NHD Stream GNIS Name of Click Point: Stream name not found
Time: 2026-04-01 09:03:32 -0400



StreamStats Update

Starting with version 4.30.0, the StreamStats application uses services that were redeveloped with open-source software components. Users may observe minor variations in computed results when compared to those from previous versions. These differences are expected and do not reflect errors in the underlying data or analytical methods. Users are advised to consider these potential variations when interpreting or comparing results generated across different versions of StreamStats. Please email streamstats@usgs.gov with any questions or concerns. A full list of changes can be found at **https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release (https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release)** .

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM3M	Mean basin slope computed from 3 meter digital elevation model, in percent	2.14	percent
DRNAREA	Area that drains to a point on a stream	0.07	square miles

Parameter Code	Parameter Description	Value	Unit
SOILA	Percentage of area of Hydrologic Soil Type A	58.707	percent

Peak-Flow Statistics

Peak-Flow Statistics Parameters [DE Peakflow Coastal Plain 2022 5005]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM3M	Mean basin slope from 3 meter dem	2.14	percent	1.4	6.5
DRNAREA	Drainage Area	0.07	square miles	0.5	112.3
SOILA	Percent Hydrologic Soil Type A	58.707	percent	0	82.4

Peak-Flow Statistics Disclaimers [DE Peakflow Coastal Plain 2022 5005]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [DE Peakflow Coastal Plain 2022 5005]

Statistic	Value	Unit
50-percent AEP flood	3.62	ft^3/s
20-percent AEP flood	6.9	ft^3/s
10-percent AEP flood	9.7	ft^3/s
4-percent AEP flood	14	ft^3/s
2-percent AEP flood	17.7	ft^3/s
1-percent AEP flood	22	ft^3/s
0.5-percent AEP flood	26.9	ft^3/s
0.2-percent AEP flood	34.2	ft^3/s

Peak-Flow Statistics Citations

John C. Hammond, Edward J. Doheny, Jonathan J.A. Dillow, Mark R. Nardi, Peter A. Steeves, and Daniel L. Warner2021, Peak-Flow and Low-Flow Magnitude Estimates at Defined Frequencies and Durations for Nontidal Streams in Delaware, U.S. Geological Survey Scientific Ivestigations Report 2022-5005 (https://pubs.er.usgs.gov/publication/sir20225005)

Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.07	square miles	0.1	3000

Maximum Probable Flood Statistics Disclaimers [Crippen Bue Region 2]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 2]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	814	ft^3/s

Maximum Probable Flood Statistics Citations

Crippen, J.R. and Bue, Conrad D.1977, Maximum Floodflows in the Conterminous United States, Geological Survey Water-Supply Paper 1887, 52p. (https://pubs.usgs.gov/wsp/1887/report.pdf)

NHD Features of Delineated Basin

NHD Streams Intersecting Basin Delineation Boundary

This functionality attempts to find the stream name at the delineation point. The name of the nearest intersecting National Hydrography Dataset (NHD) stream is selected by default to appear in the report above. NHD streams do not correspond to the StreamStats stream grid and may not be accurate. If you would like a different stream to appear in the above section, please make a selection below.

No NHD streams intersect the delineated basin.

Watershed Boundary Dataset (WBD) HUC 8 Intersecting Basin Delineation Boundary

This functionality attempts to find the intersecting HUC 8 of the delineated watershed. HUC boundaries do not correspond to the StreamStats data and may not be accurate.

HUC 8	Name
02040207	Broadkill-Smyrna

NHD Hydrologic Features Citations

U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6. (https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6) U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4. (https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4)

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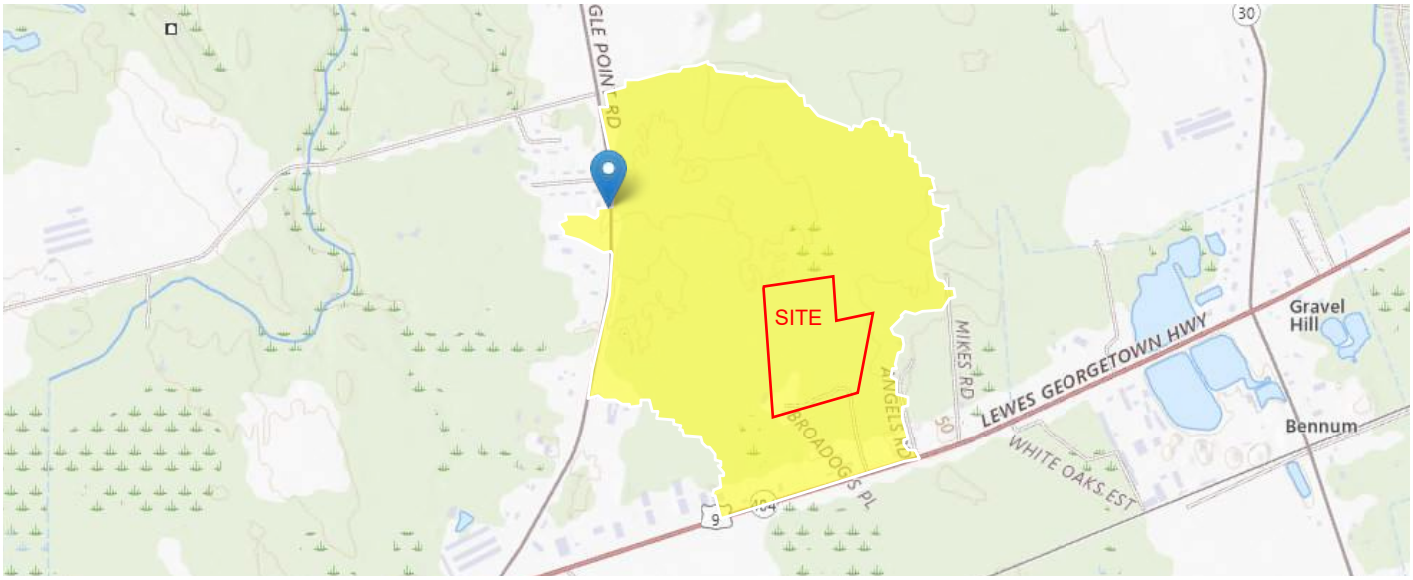
USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.31.1
SSHydro Services Version: 1.1.1
SSDelineate Services Version: 1.0.1
NSS Services Version: 2.2.1
GageStats Services Version: 1.2.1
Pourpoint Services Version: 1.2.0
Batch Processor Version: 1.6.1

AT SHINGLE POINT ROAD

StreamStats Report

Region ID: DE
Clicked Point (Latitude, Longitude): 38.71659, -75.33603
NHD Stream GNIS Name of Click Point: Stream name not found
Time: 2026-04-01 09:17:08 -0400



StreamStats Update

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Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM3M	Mean basin slope computed from 3 meter digital elevation model, in percent	1.883	percent
DRNAREA	Area that drains to a point on a stream	0.31	square miles
SOILA	Percentage of area of Hydrologic Soil Type A	38.047	percent

Peak-Flow Statistics

Peak-Flow Statistics Parameters [DE Peakflow Coastal Plain 2022 5005]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM3M	Mean basin slope from 3 meter dem	1.883	percent	1.4	6.5
DRNAREA	Drainage Area	0.31	square miles	0.5	112.3

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
SOILA	Percent Hydrologic Soil Type A	38.047	percent	0	82.4

Peak-Flow Statistics Disclaimers [DE Peakflow Coastal Plain 2022 5005]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [DE Peakflow Coastal Plain 2022 5005]

Statistic	Value	Unit
50-percent AEP flood	10.4	ft^3/s
20-percent AEP flood	20.4	ft^3/s
10-percent AEP flood	28.9	ft^3/s
4-percent AEP flood	42.2	ft^3/s
2-percent AEP flood	54	ft^3/s
1-percent AEP flood	67.6	ft^3/s
0.5-percent AEP flood	83	ft^3/s
0.2-percent AEP flood	106	ft^3/s

Peak-Flow Statistics Citations

John C. Hammond, Edward J. Doheny, Jonathan J.A. Dillow, Mark R. Nardi, Peter A. Steeves, and Daniel L. Warner2021, Peak-Flow and Low-Flow Magnitude Estimates at Defined Frequencies and Durations for Nontidal Streams in Delaware, U.S. Geological Survey Scientific Ivestigations Report 2022-5005 (https://pubs.er.usgs.gov/publication/sir20225005)

Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.31	square miles	0.1	3000

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 2]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	2440	ft^3/s

Maximum Probable Flood Statistics Citations

Crippen, J.R. and Bue, Conrad D.1977, Maximum Floodflows in the Conterminous United States, Geological Survey Water-Supply Paper 1887, 52p. (https://pubs.usgs.gov/wsp/1887/report.pdf)

NHD Features of Delineated Basin

NHD Streams Intersecting Basin Delineation Boundary

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No NHD streams intersect the delineated basin.

APPENDIX D

Customized Web Soil Survey Report

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

20288 ASPHALT ALLEY -

April 1, 2026

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

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.

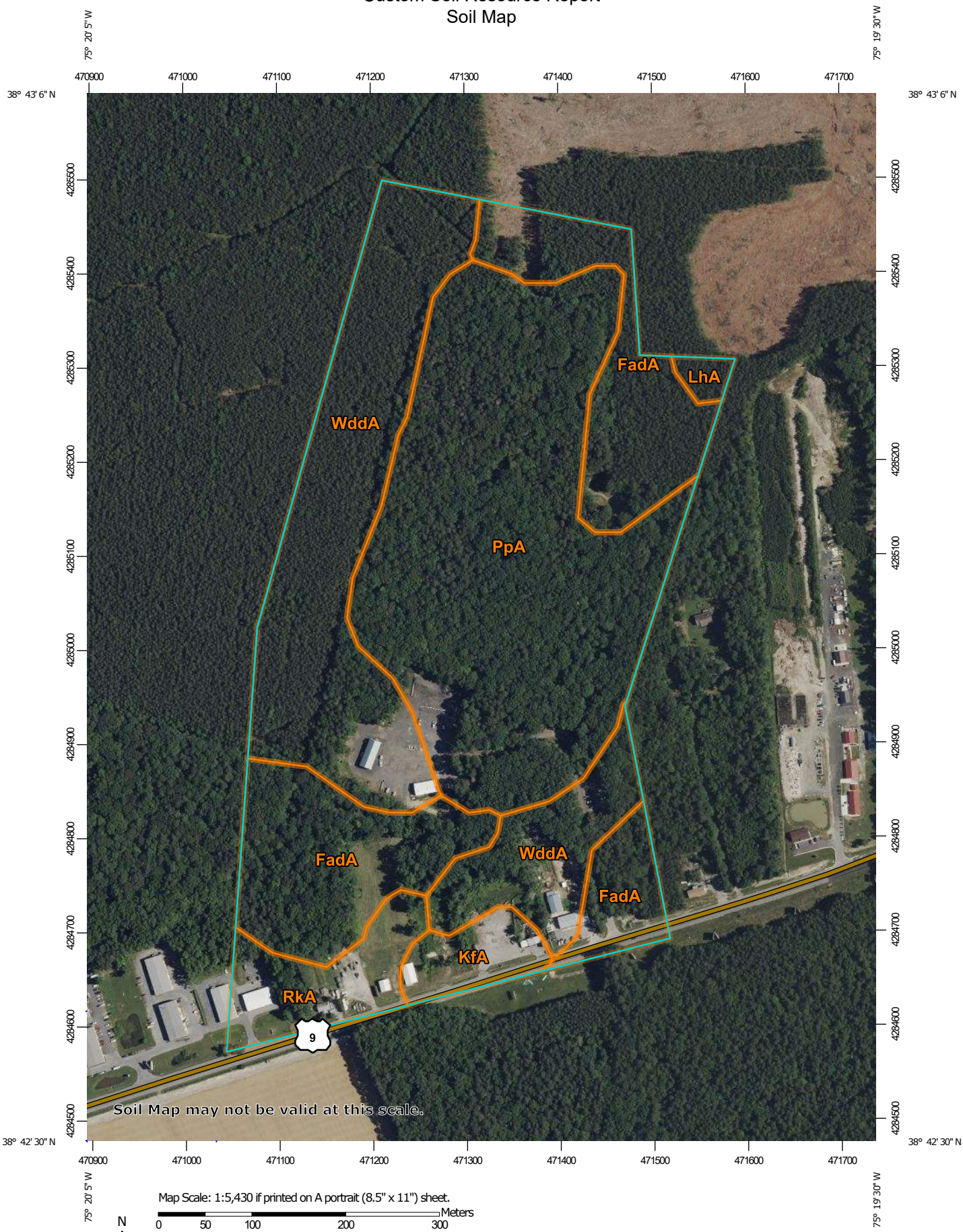
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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 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 26, Sep 9, 2025

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

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

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	19.6	23.3%
KfA	Keyport fine sandy loam, 0 to 2 percent slopes	2.5	3.0%
LhA	Lenni silt loam, 0 to 2 percent slopes	0.6	0.7%
PpA	Pepperbox loamy sand, 0 to 2 percent slopes	33.1	39.3%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	4.6	5.4%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	23.8	28.3%
Totals for Area of Interest		**84.2**	**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 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
Landscape: Coastal plains
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

Landscape: Coastal plains
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

Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Description of Fallsington, Drained

Setting

Landscape: Coastal plains
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
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Minor Components

Woodstown

Percent of map unit: 9 percent
Landscape: Coastal plains
Landform: Broad interstream divides, Fluviomarine terraces, Flats
Landform position (three-dimensional): Tread, talf, rise
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Hammonton

Percent of map unit: 8 percent
Landscape: Coastal plains
Landform: Drainageways, Flats
Landform position (three-dimensional): Dip, rise

Down-slope shape: Concave, linear
Across-slope shape: Linear
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Othello

Percent of map unit: 8 percent
Landscape: Coastal plains
Landform: Depressions, Swales, Drainageways, Flats
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

KfA—Keyport fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qthn
Landscape: Uplands, lowlands
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

Keyport and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Keyport

Setting

Landscape: Uplands, lowlands
Landform: Flats, Depressions, Fluviomarine terraces
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Silty and clayey fluviomarine deposits

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bt - 10 to 48 inches: silty clay loam
2Cg - 48 to 80 inches: stratified silt loam to sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained

Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 20 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups
Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: D
Ecological site: F149AY120MD - Moist Clayey Upland
Hydric soil rating: No

Minor Components

Pepperbox
Percent of map unit: 5 percent
Landform: Swales, Depressions, Intermingled flats
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Lenni
Percent of map unit: 5 percent
Landform: Swales, Drainageways, Depressions, Flats
Landform position (three-dimensional): Dip
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Rosedale
Percent of map unit: 5 percent
Landform: Ancient dunes, Knolls, Flats
Landform position (three-dimensional): Rise
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

LhA—Lenni silt loam, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 1qthy
Landscape: Uplands, coastal plains
Elevation: 20 to 70 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
Lenni, drained, and similar soils: 50 percent
Lenni, undrained, and similar soils: 30 percent

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

Description of Lenni, Drained

Setting

Landscape: Uplands, coastal plains
Landform: Depressions, Swales, Flats
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Clayey fluviomarine sediments

Typical profile

Ap - 0 to 7 inches: silt loam
Eg - 7 to 14 inches: loam
Btg - 14 to 51 inches: clay
2Cg - 51 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.04 to 0.57 in/hr)
Depth to water table: About 10 to 20 inches
Frequency of flooding: None
Frequency of ponding: Rare
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Description of Lenni, Undrained

Setting

Landscape: Uplands, coastal plains
Landform: Depressions, Swales, Flats
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Clayey fluviomarine sediments

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 7 inches: silt loam
Eg - 7 to 14 inches: loam
Btg - 14 to 51 inches: clay
2Cg - 51 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.04 to 0.57 in/hr)
Depth to water table: About 0 to 10 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Minor Components

Crosiadore

Percent of map unit: 5 percent
Landform: Flats
Landform position (three-dimensional): Rise
Ecological site: F153CY020MD - Moist Loess Upland
Hydric soil rating: No

Mattapex

Percent of map unit: 5 percent
Landform: Flats
Landform position (three-dimensional): Rise
Ecological site: F153CY020MD - Moist Loess Upland
Hydric soil rating: No

Keyport

Percent of map unit: 5 percent
Landform: Flats
Ecological site: F149AY120MD - Moist Clayey Upland
Hydric soil rating: No

Corsica

Percent of map unit: 5 percent
Landform: Depressions
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

PpA—Pepperbox loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qtjj
Landscape: Coastal plains, uplands
Elevation: 0 to 70 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

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

Description of Pepperbox

Setting

Landscape: Coastal plains, uplands
Landform: Flats, Shallow depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits over fluvial marine sediments

Typical profile

A - 0 to 10 inches: loamy sand
E - 10 to 25 inches: loamy sand
Bt - 25 to 37 inches: sandy loam
2Btg - 37 to 65 inches: sandy clay loam
2Cg - 65 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 1.98 in/hr)
Depth to water table: About 20 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Minor Components

Rosedale

Percent of map unit: 10 percent
Landform: Flats
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Rockawalkin

Percent of map unit: 5 percent
Landform: Flats

Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Fort mott

Percent of map unit: 5 percent
Landform: Knolls, Flats
Landform position (three-dimensional): Rise
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

RkA—Rockawalkin loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qtjv
Landscape: Uplands
Elevation: 10 to 100 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

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

Description of Rockawalkin

Setting

Landscape: Uplands
Landform: Flats, Shallow depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy eolian deposits over fluviomarine sediments

Typical profile

Ap - 0 to 10 inches: loamy sand
E - 10 to 27 inches: loamy sand
Bt - 27 to 43 inches: sandy loam
BC - 43 to 70 inches: loamy sand
C - 70 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 20 to 40 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Minor Components

Pepperbox

Percent of map unit: 10 percent
Landform: Swales, Depressions, Intermingled flats
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Klej

Percent of map unit: 5 percent
Landform: Swales, Depressions, Flats
Ecological site: F153DY150NJ - Moist Sandy Upland
Hydric soil rating: No

Runclint

Percent of map unit: 5 percent
Landform: Ancient dunes, Knolls, Flats
Landform position (three-dimensional): Rise
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Woodstown

Percent of map unit: 5 percent
Landform: Intermingled flats, Depressions, Swales
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

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

Map Unit Setting

National map unit symbol: 2thvr
Landscape: Coastal plains
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

Landscape: Coastal plains
Landform: Fluviomarine terraces, Shallow 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 fluviomarine 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
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Minor Components

Fallsington

Percent of map unit: 6 percent
Landscape: Coastal plains
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
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Hammonton

Percent of map unit: 6 percent
Landscape: Coastal plains

Landform: Flats, Shallow 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
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Mattapex

Percent of map unit: 4 percent
Landscape: Coastal plains
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
Ecological site: F153CY020MD - Moist Loess Upland
Hydric soil rating: No

Hambrook

Percent of map unit: 4 percent
Landscape: Coastal plains
Landform: Fluviomarine terraces, Flats, Shallow depressions
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F149AY170MD - Well Drained Fine-Loamy Upland
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Rating by Map Unit

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Custom Soil Resource Report
Map—Hydric Rating by Map Unit

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- 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 26, Sep 9, 2025

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

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

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—Hydric Rating by Map Unit

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	83	19.6	23.3%
KfA	Keyport fine sandy loam, 0 to 2 percent slopes	5	2.5	3.0%
LhA	Lenni silt loam, 0 to 2 percent slopes	85	0.6	0.7%
PpA	Pepperbox loamy sand, 0 to 2 percent slopes	0	33.1	39.3%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	0	4.6	5.4%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	6	23.8	28.3%
Totals for Area of Interest			**84.2**	**100.0%**

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

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.

Hydrologic Soil Group

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.

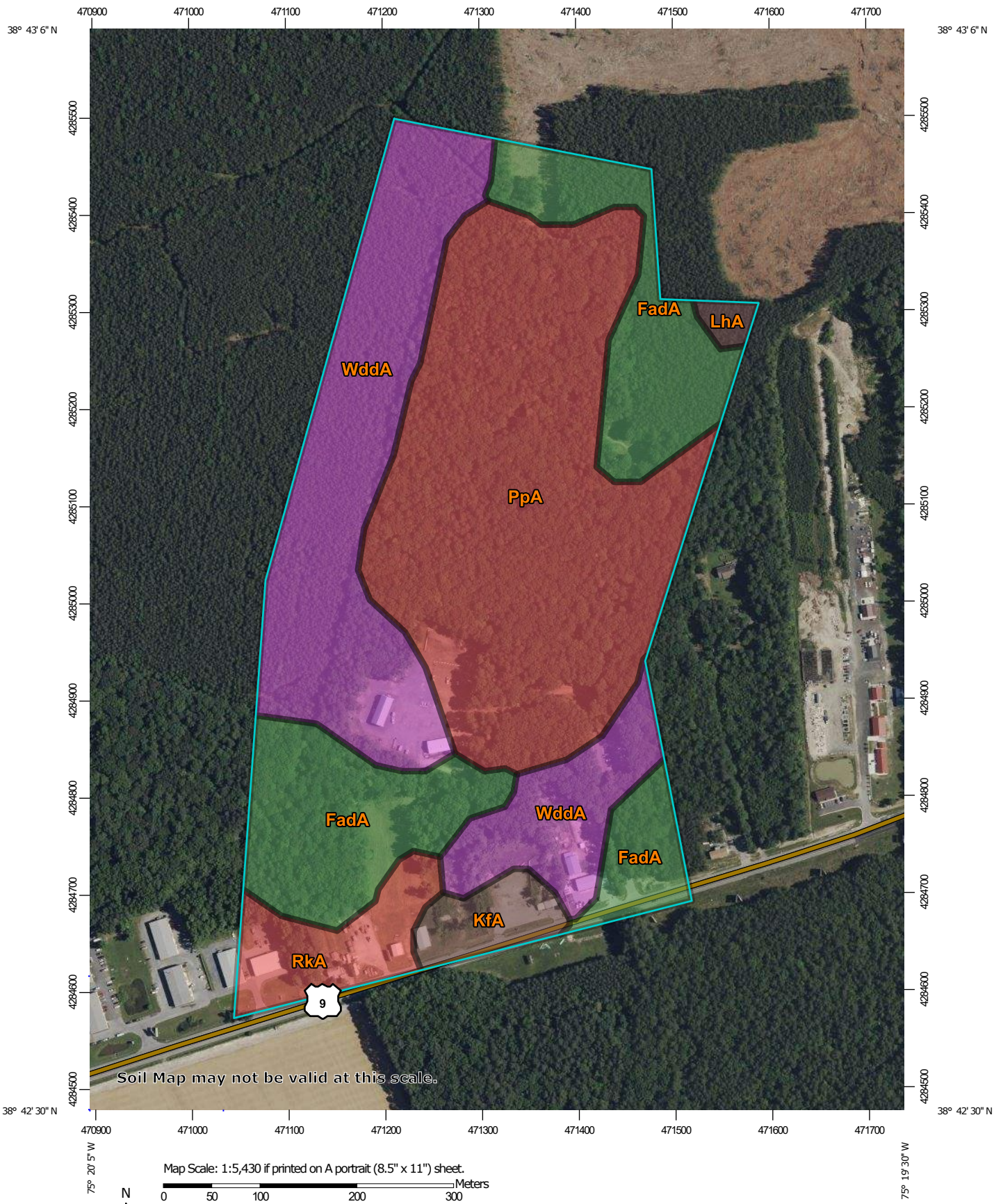
Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

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



Map Scale: 1:5,430 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

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
- 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.

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 26, Sep 9, 2025

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

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

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

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	19.6	23.3%
KfA	Keyport fine sandy loam, 0 to 2 percent slopes	D	2.5	3.0%
LhA	Lenni silt loam, 0 to 2 percent slopes	D	0.6	0.7%
PpA	Pepperbox loamy sand, 0 to 2 percent slopes	A	33.1	39.3%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	A	4.6	5.4%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	C	23.8	28.3%
Totals for Area of Interest			**84.2**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Water Features

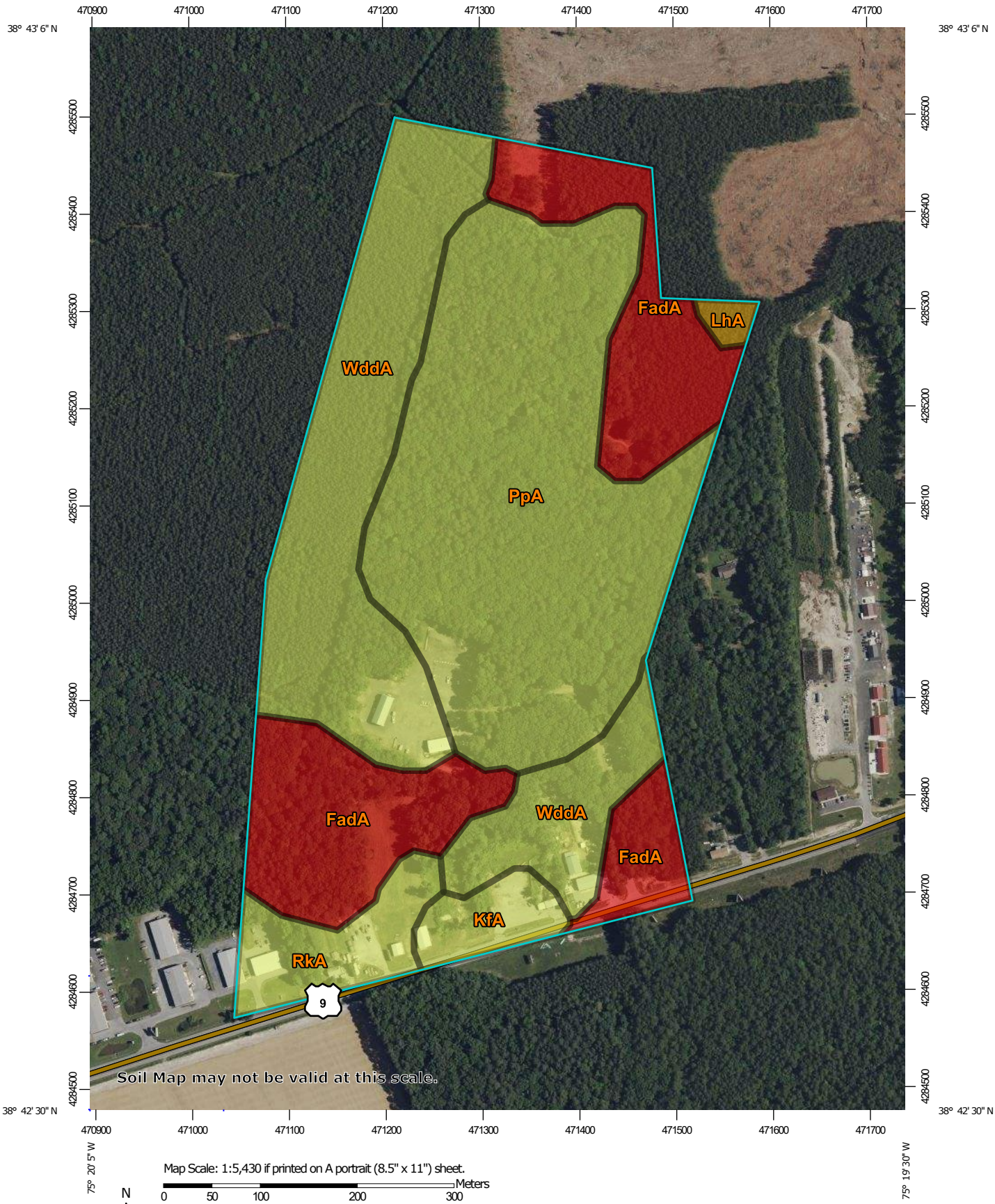
Water Features include ponding frequency, flooding frequency, and depth to water table.

Depth to Water Table

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Depth to Water Table



Map Scale: 1:5,430 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Lines
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Points
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- 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 26, Sep 9, 2025

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

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

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—Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
FadA	Fallsington sandy loams, 0 to 2 percent slopes, Northern Tidewater Area	13	19.6	23.3%
KfA	Keyport fine sandy loam, 0 to 2 percent slopes	61	2.5	3.0%
LhA	Lenni silt loam, 0 to 2 percent slopes	36	0.6	0.7%
PpA	Pepperbox loamy sand, 0 to 2 percent slopes	61	33.1	39.3%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	61	4.6	5.4%
WddA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Tidewater Area	61	23.8	28.3%
Totals for Area of Interest			**84.2**	**100.0%**

Rating Options—Depth to Water Table

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

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United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

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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

18072 Davidson Drive
Milton, DE 19968
T: 302-684-8030
F: 302-684-8054

www.pennoni.com

May 5, 2026
PDYER25005

Date of Meeting:	May 5, 2026
Subject:	SAS Meeting
Meeting Location:	Online Meeting
Prepared by:	Robert Hurwitz

RE: SCD SAS Meeting Minutes
Yellow Metal- Industrial
Georgetown, DE

Attendees:
Jim Elliott– SCD
Robert Hurwitz – Pennoni

Items Discussed:

Standard

- All submittals are to include paper copy of plans and reports as well as electronic copies to aid in an expeditious review. (i.e., pdf, Excel, HydroCAD, CAD). We will email electronic version of everything at time of hard copy submission.
- Project report narrative to state how regulatory compliance is being met quantitatively and qualitatively for the RPv, Cv & Fv storm events.
- For consistency, and assistance with implementing SCD/DNREC's database, the site data, latitude/longitude to be on State Plane coordinates, with approximate geographical location (i.e., benchmark #1, NE site corner, etc.) *AND* in degree decimal format (xx.xxx, -xx.xxx)
- We will analyze the entire property area and compare between pre and post runoff rates.
- Report to include sizing computations of Forebay(s), ROP & Sediment Trap(s). This information will be included on the plans and the SWM report.
- Silt fences to be provided behind all curbs (sidewalks if provided).
- Both the 'Sequence of Construction' and Operation & Maintenance notes and schedule are to be site specific.
- The soils report will follow the SIP requirements and be included in the SWM report and part of the initial submission.

Site Specific

- At the SAS, we reviewed the proposed site development. The site includes 16 industrial lots (2 lots have already been submitted by another engineer), 75' wide forested buffer and 25' drainage and utility restricted area. The subject property is 39.61+/- acres but only 34+/- areas are being developed and 6+/- acres will remain as a forested buffer. The site is adjacent to Azalea Woods. The site will utilize one proposed stormwater BMPs to control the post development flows and water elevations to match pre-development. The BMP will infiltrate the water on site.
    - We have conducted preliminary soil borings. The soil scientist or Geotech of record will dictate how the proposed facilities will be used during construction for temporary sediment basins.
    - Post Confirmatory Testing - We will confirm testing initially at start of construction, and then after the completion of the project (to avoid no smearing).
- The pre-development drainage areas drain from west to east.

  - The proposed project will not impact adjacent properties.
- DelDOT Entrance is part of the original approval by others. We will coordinate with DelDOT the increased traffic flow from our phase and adjust the design as needed.
- DelDOT Entrance Permit required prior to scheduling Pre-Construction Meeting.
- There are no wetlands on subject property.
- Ensure that proper separation is provided from proposed facilities in accordance with Appendix 8 of the BMP Standards & Specifications.
- A 95% impervious runoff curve number will be utilized for post drainage calculations.
- We will use the DURMM PLD method to analyze the disturbed area.
- The property is assumed to be built in multiple phases and has required ESC measures for the property (GB bags, flocculation, etc). A detailed phasing plan will be provided with our submission.
- A detailed grading plan will be provided with our submission.
- It is understood if the proposed BMP is designed as infiltration and built as a permanent system, additional excessive ESC measures will be required including silt fence at top and bottom, CFL along top.
- There was concern about the tree removal for the pond may impact on the existing trees in the buffer that will remain.
- The site will have public sewer connected to the existing force main in front of property and maybe wells but will look into extending public water. If we use wells then there will be proper separation from the SWM facility
- Expect that phase 1 might be the pond and road system and the lots would be developed as they are leased.
- Any storm water from phase under review that does not drain to the proposed SWM facility by DBF would be treated by our SWM faciltiy.

The summary listed above reflects our best recollection of the items presented and discussed. Please do not hesitate to advise us if any items are missing, incomplete or inaccurate.

U:\Accounts\PDYER\PDYER25005 - Yellow Metal - Industrial\DELIVERABLES\SCD\SAS Submission\ 2026-5-5 Yellow Metal Industrial SCD MM

AB 10

MAPS

Untitled Map

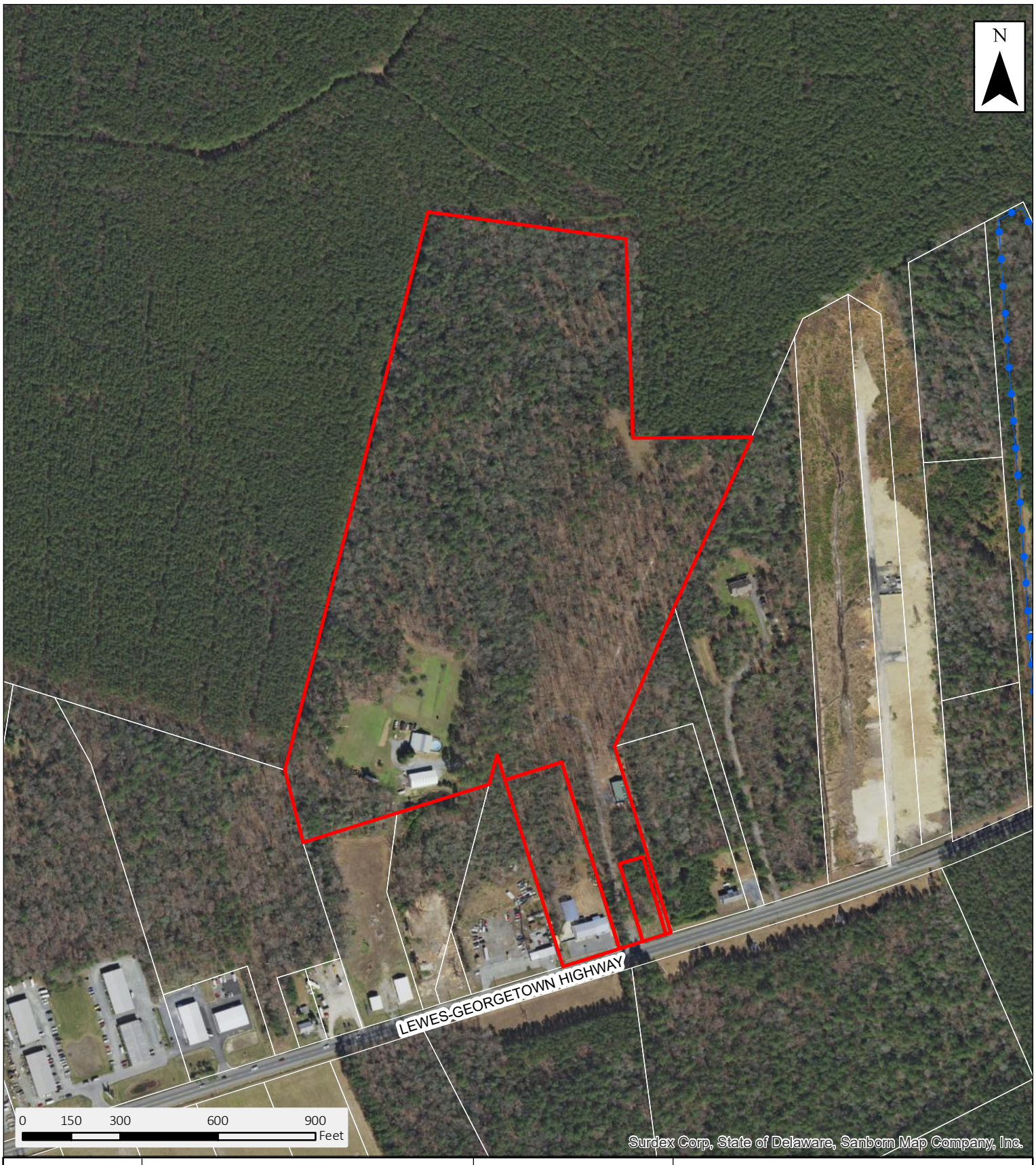
Write a description for your map.

Legend

1	2022 Orthophoto Yellow Metal Industrial PDYER25005	Pennoni	Tax Ditch Segments Subject Property Other Tax Parcels

Date: 8/12/2026

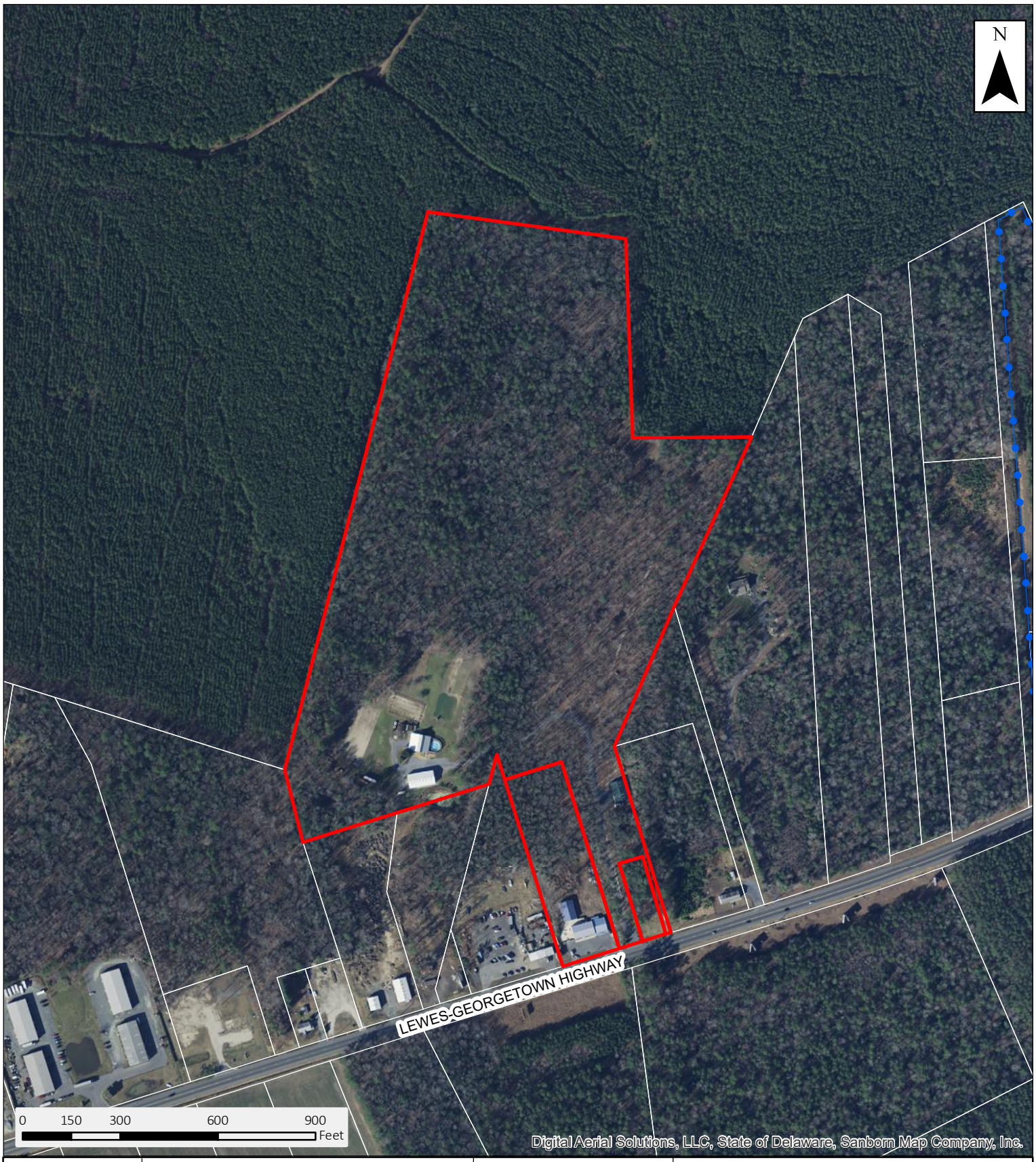
Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\01 2022 Orthophoto.mxd



2	2017 Orthophoto Yellow Metal Industrial PDYER25005	Pennoni	Tax Ditch Segments Subject Property Other Tax Parcels

Date: 8/12/2026

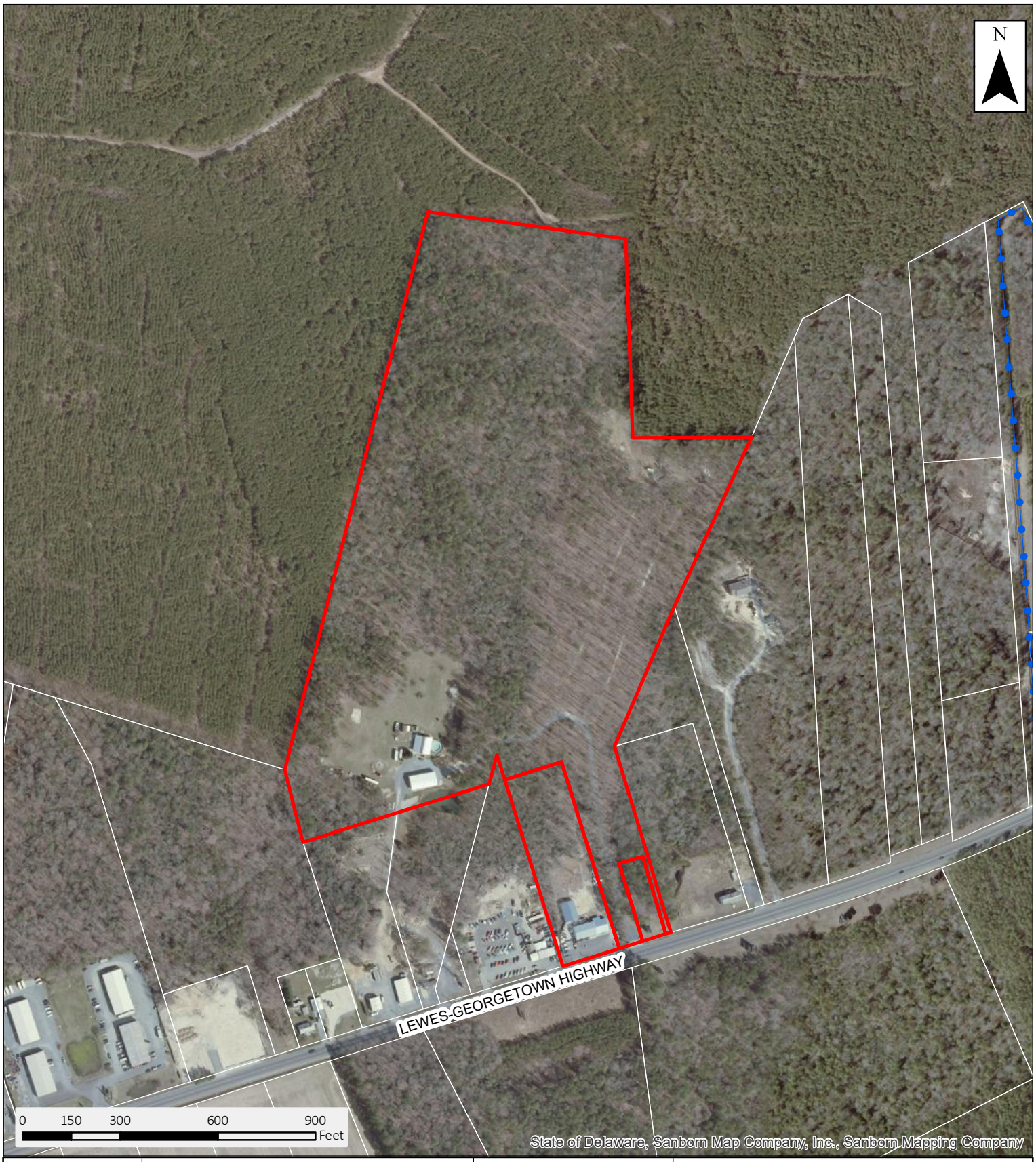
Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\02 2017 Orthophoto.mxd



3	2012 Orthophoto Yellow Metal Industrial PDYER25005	Pennoni	Tax Ditch Segments Subject Property Other Tax Parcels

Date: 8/14/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\03 2012 Orthophoto.mxd



4	2007 Orthophoto Yellow Metal Industrial PDYER25005	Pennoni	Tax Ditch Segments Subject Property Other Tax Parcels

Date: 8/14/2026

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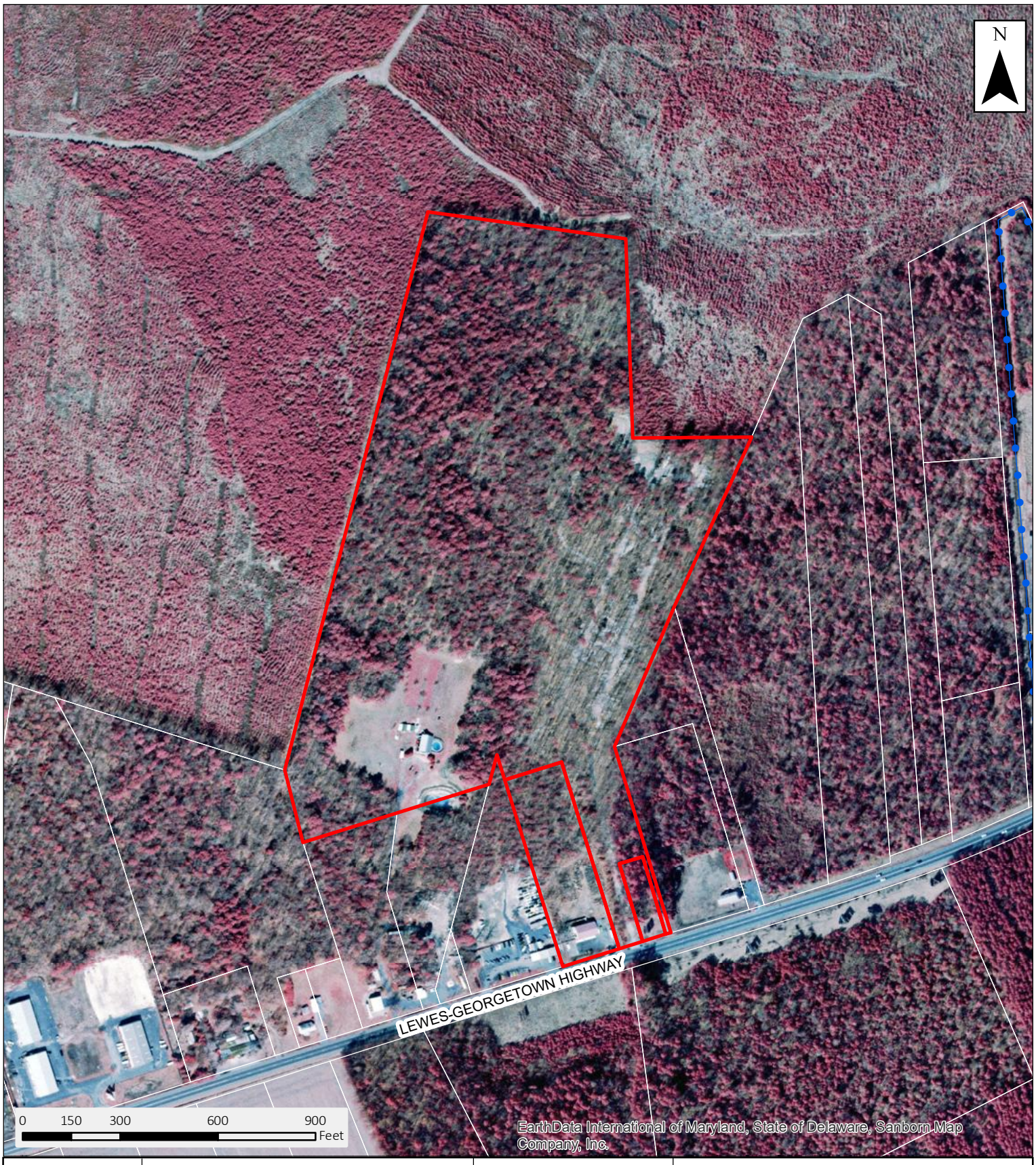


5	2002 Orthophoto Yellow Metal Industrial PDYER25005	Pennoni	Tax Ditch Segments Subject Property Other Tax Parcels

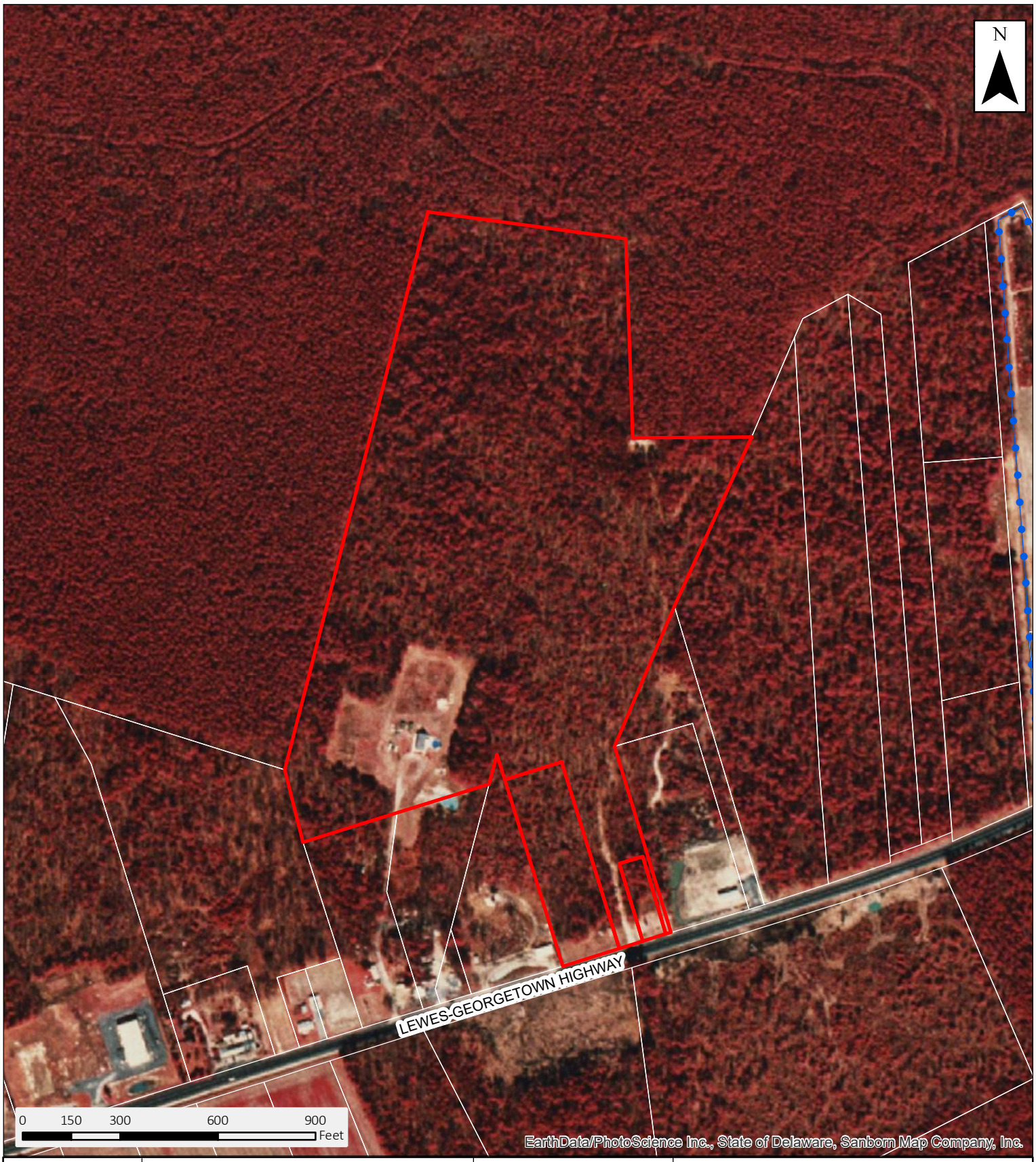
Date: 8/14/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\05 2002 Orthophoto.mxd

6	1997 Orthophoto Yellow Metal Industrial PDYER25005	Pennoni	Tax Ditch Segments Subject Property Other Tax Parcels

Date: 8/14/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\06 1997 Orthophoto.mxd



7	1992 Orthophoto Yellow Metal Industrial PDYER25005	Pennoni	Tax Ditch Segments Subject Property Other Tax Parcels

Date: 8/14/2026

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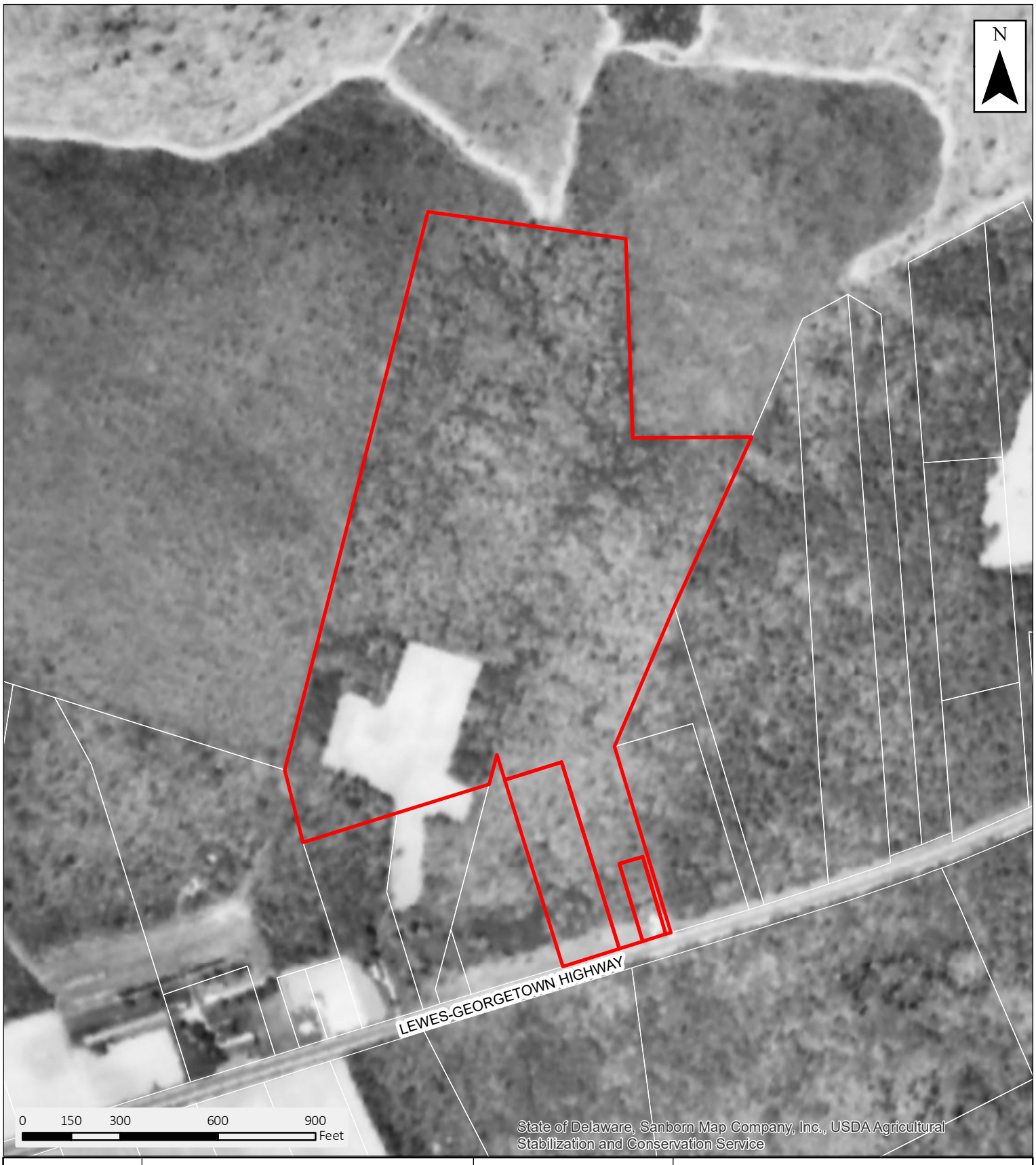

8	1968 Orthophoto Yellow Metal Industrial PDYER25005	Pennoni	Subject Property Other Tax Parcels

Date: 8/14/2026

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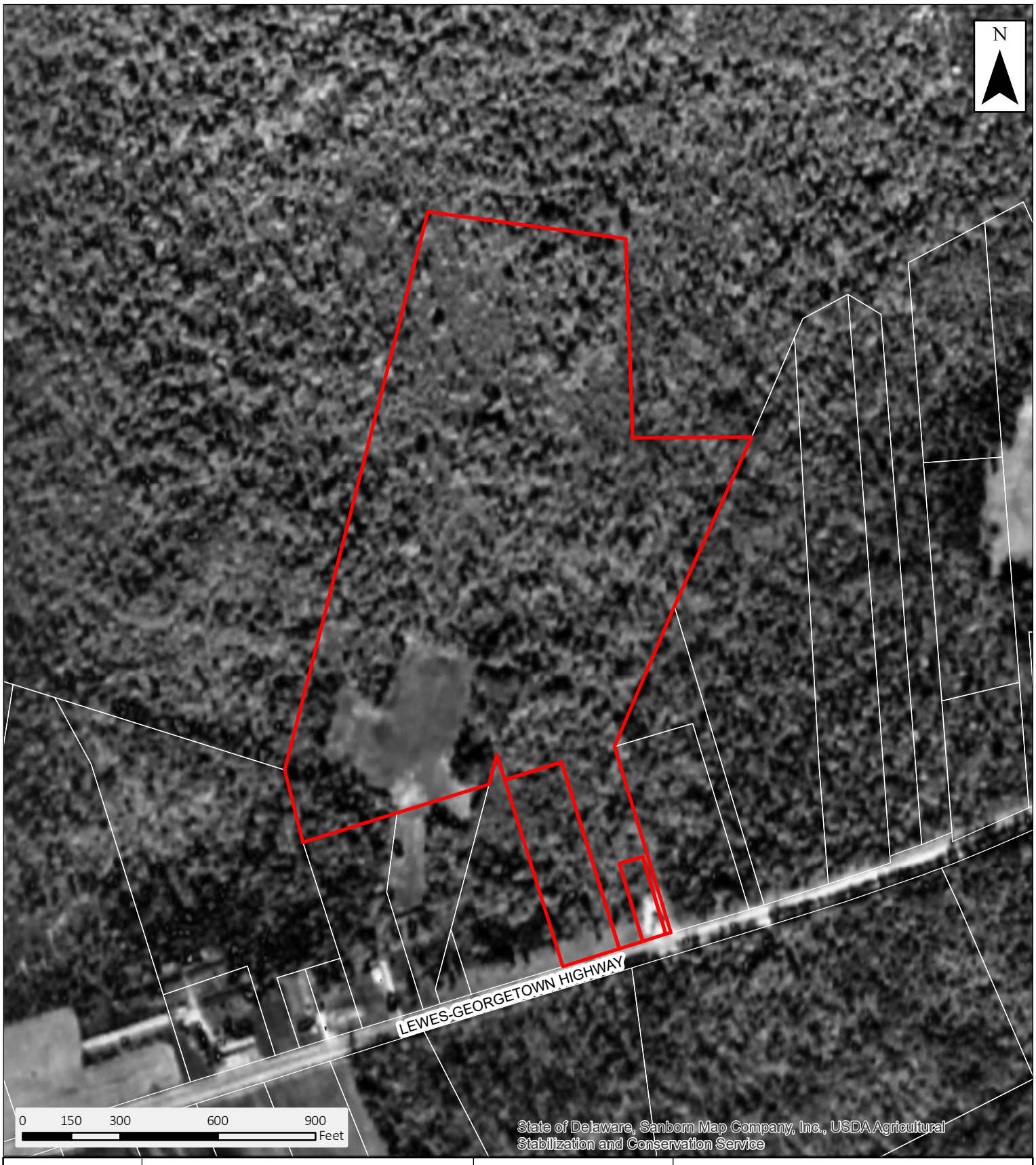

9	1961 Orthophoto Yellow Metal Industrial PDYER25005	Pennoni	Subject Property Other Tax Parcels

Date: 8/14/2026

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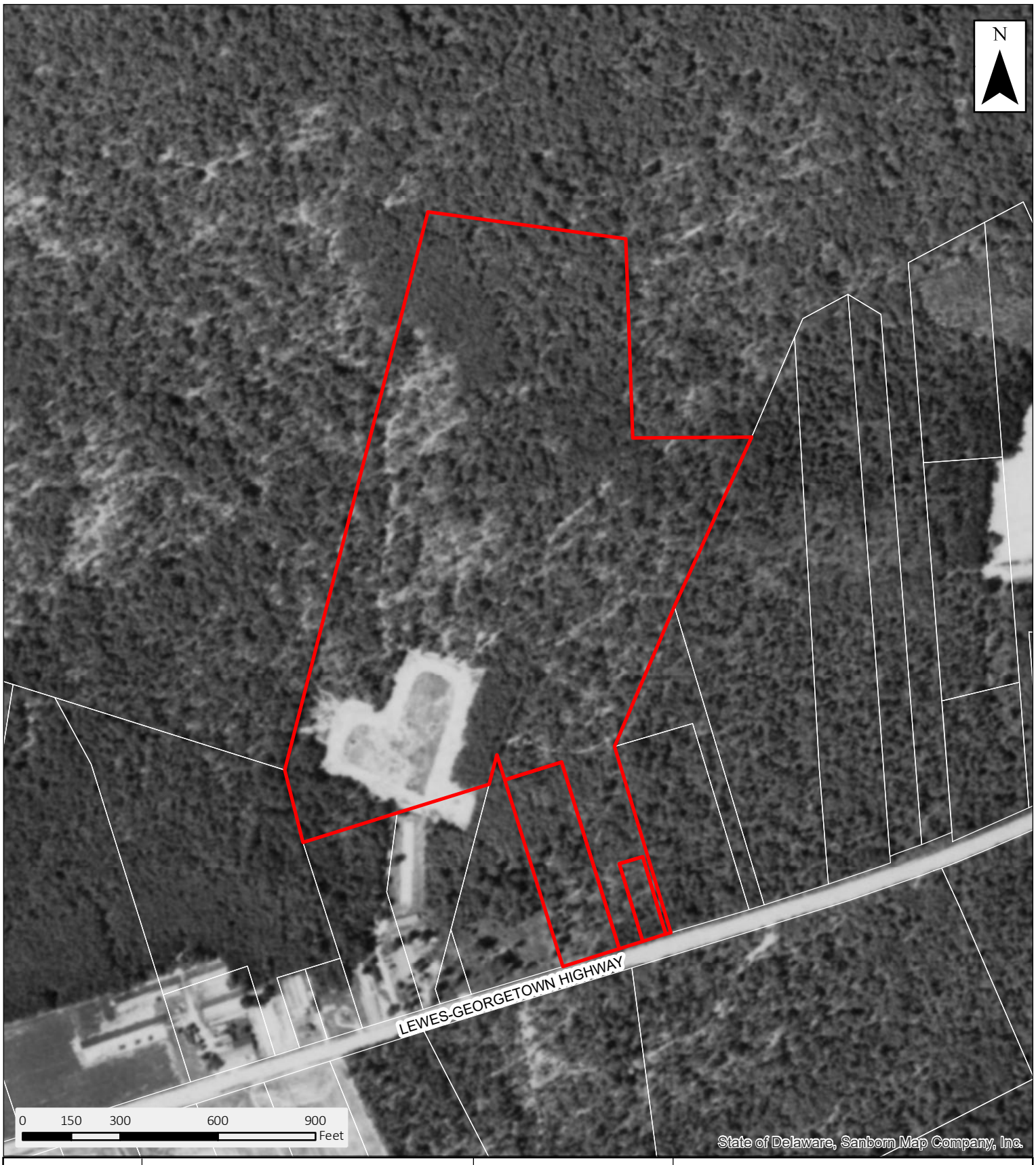


10	1954 Orthophoto Yellow Metal Industrial PDYER25005	Pennoni	Subject Property Other Tax Parcels

Date: 8/14/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\10 1954 Orthophoto.mxd

11	1937 Orthophoto Yellow Metal Industrial PDYER25005	Pennoni	Subject Property Other Tax Parcels

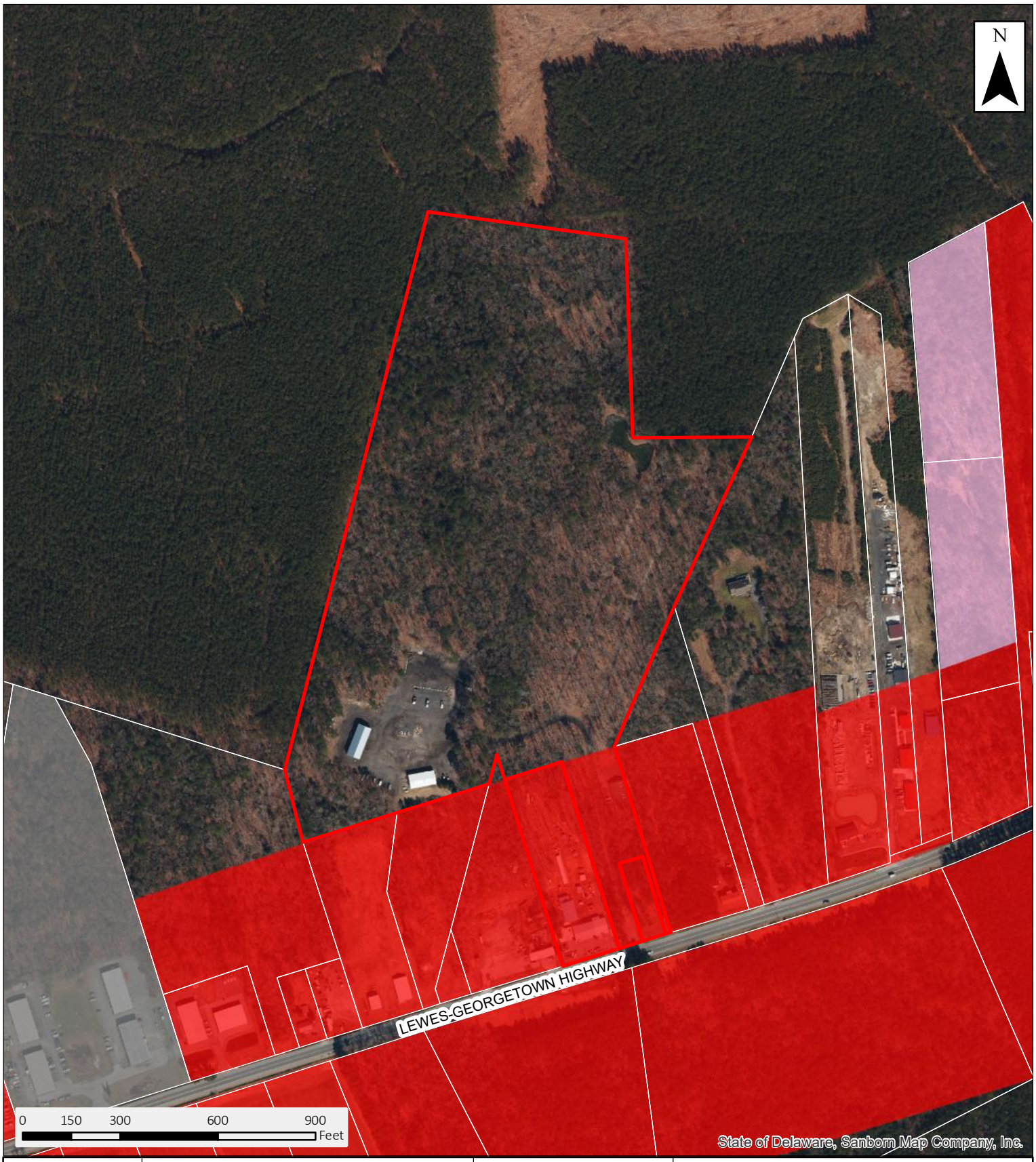
Date: 8/14/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\11 1937 Orthophoto.mxd

12	2025 State Strategies & Investment Levels Yellow Metal Industrial PDYER25005	Pennoni	1 2 3 4 Out of Play

Date: 8/12/2026

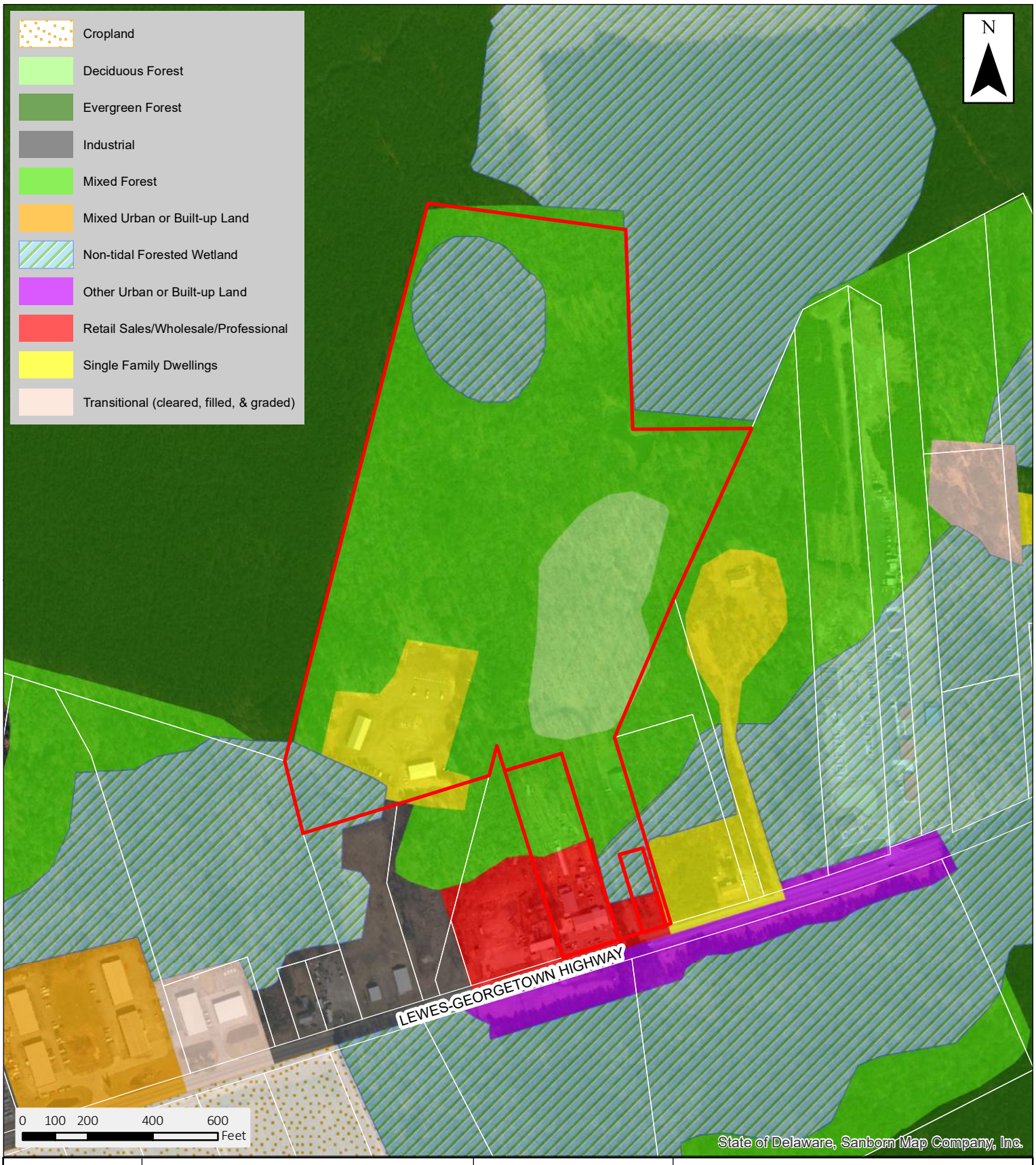
Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\12 2025 State Strategies.mxd



13	County Zoning Map	Pennoni	AR-1 (Unshaded) C-2 C-1 LI-2
	Yellow Metal Industrial		
	PDYER25005		

Date: 8/12/2026

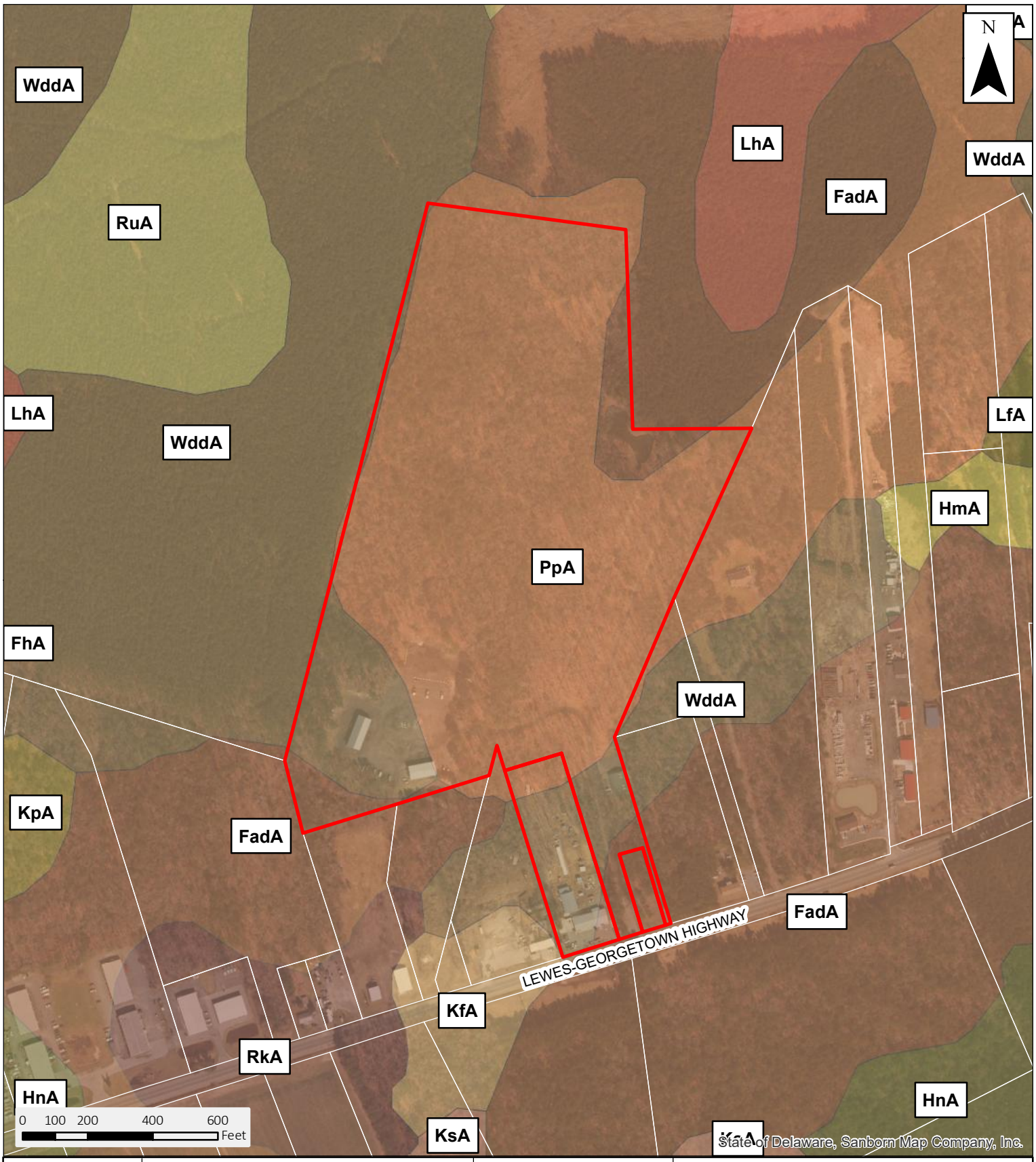
Document Path: C:\Users\MWalls\Documents\GIS Projects\ATTAR26001\SAS Maps\13 County Zoning Map.mxd



14	2017 Land Use/Land Cover	Pennoni	
	Yellow Metal Industrial		
	PDYER25005		

Date: 8/13/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\14 2017 Land Use Land Cover.mxd



15	NRCS Soils Mapping Yellow Metal Industrial PDYER25005	Pennoni	Soil Types: FadA - Fallsington sandy loam, Group B/D PpA - Pepperbox loamy sand, Group A WddA - Woodstown sandy loam, Group C

Date: 8/13/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\15 NRCS Soils Mapping.mxd

16	State Wetlands Mapping	Pennoni	DNREC Wetlands
	Yellow Metal Industrial		
	PDYER25005		

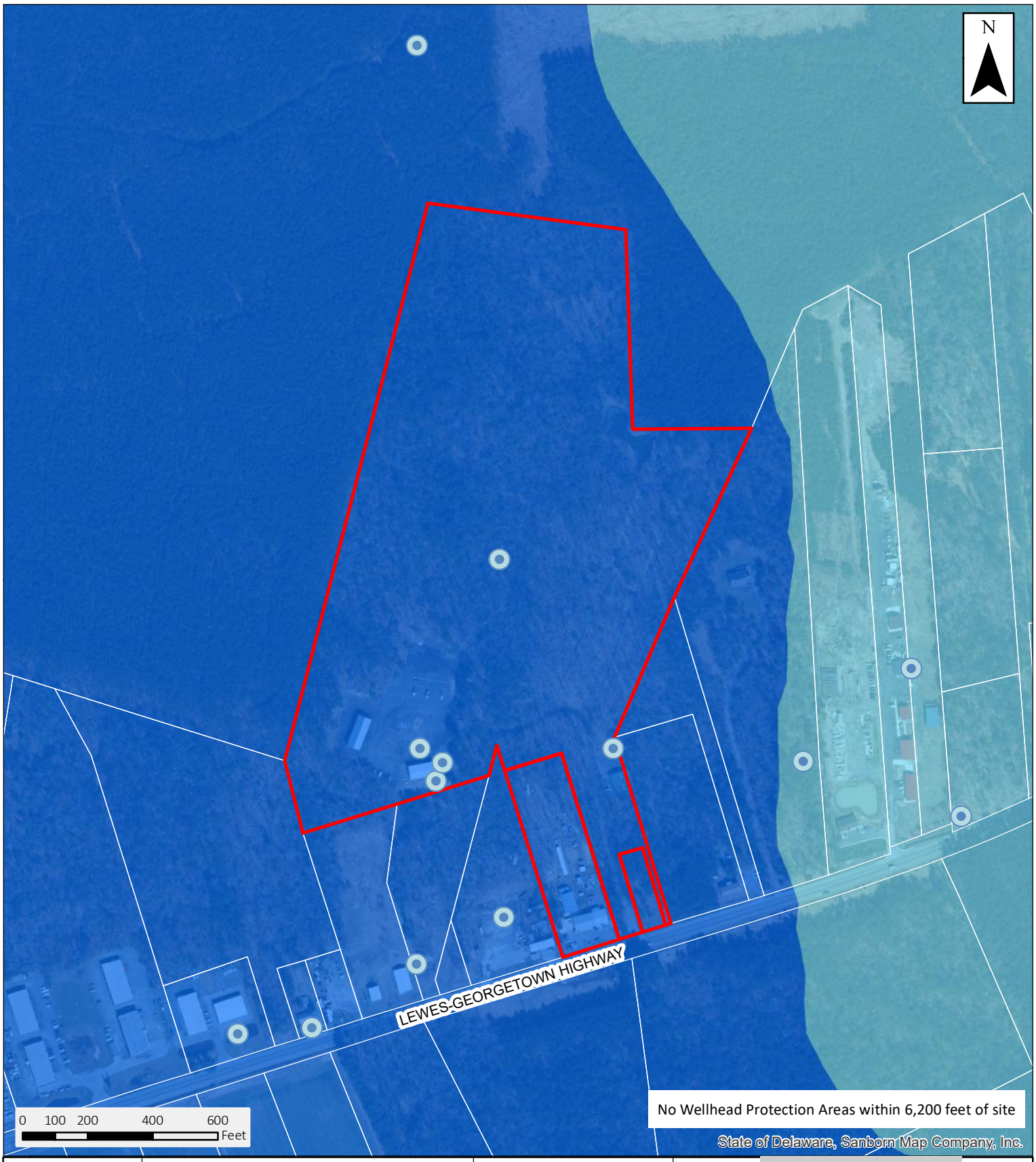
Date: 8/13/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\16 State Wetlands Mapping.mxd

17	FEMA Floodplain Mapping	Pennoni	Zone X
	Yellow Metal Industrial		
	PDYER25005		Flood Map reference: #10005C0325L (6/20/18)

Date: 8/12/2026

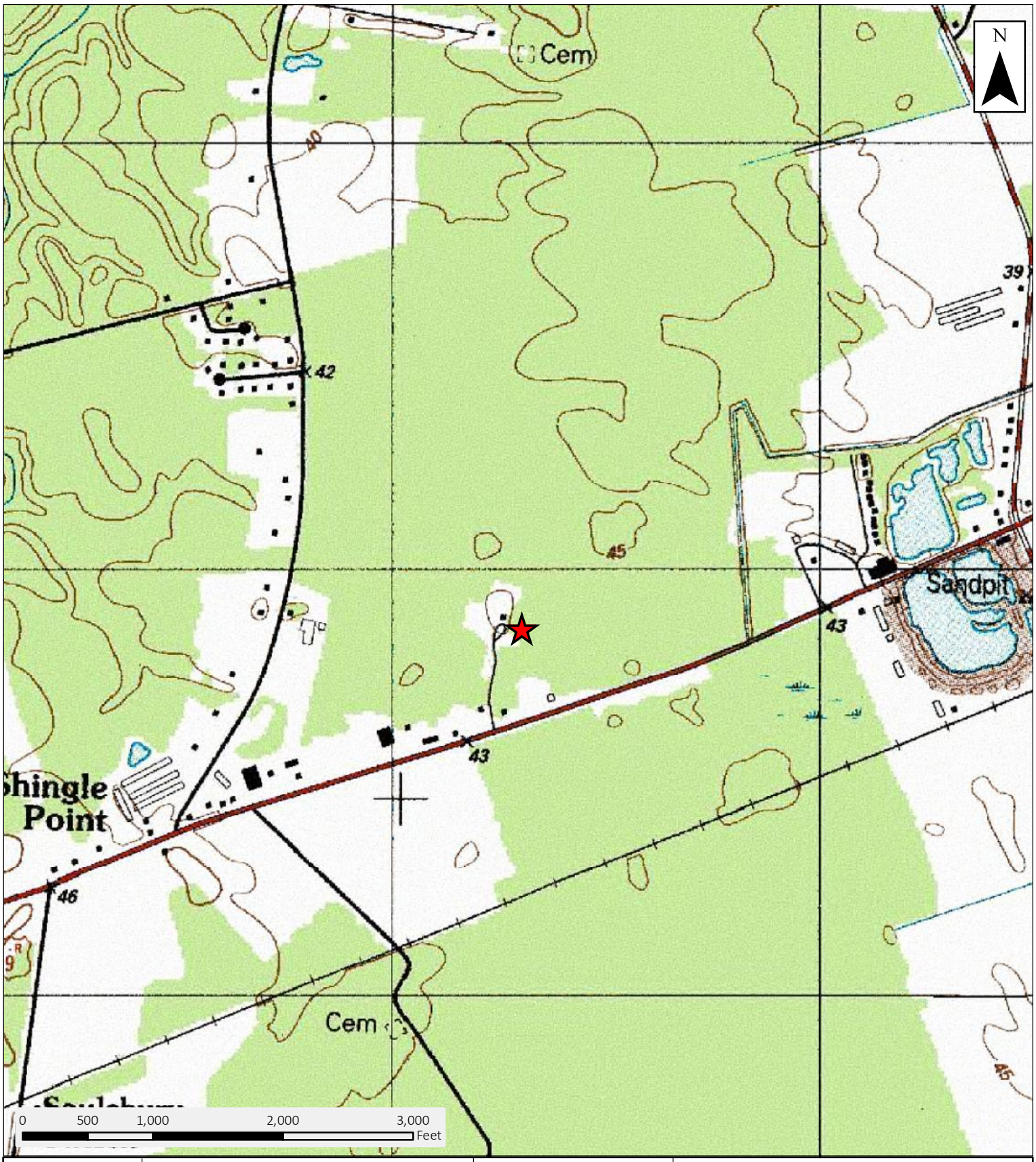
Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\17 FEMA Floodplain Mapping.mxd



18	Groundwater Recharge & WHPA	Pennoni	Non-Public Wells Recharge Potential Fair Poor
	Yellow Metal Industrial		
	PDYER25005		

Date: 8/12/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\18 Groundwater Recharge Potential & WHPA.mxd



19	USGS Topographic Map	Pennoni	
	Yellow Metal Industrial		
	PDYER25005		

Date: 8/12/2026

Document Path: C:\Users\MWalls\Documents\GIS Projects\PDYER25005\19 USGS Topographic Map.mxd

AB 11

SUPPORT LETTERS

Letter of Support for C/Z 2063 and ORD. 26-06

Date: September 2, 2026

Sussex County Planning & Zoning Commission
Sussex County Council
2 The Circle
Georgetown, Delaware 19947

RE: Support for C/Z 2063 and ORD. 26-06 – Millsboro Towne Village, LLC

Honorable Commissioners and Council Members:

I am writing to express my support for **C/Z 2063**, the application of Millsboro Towne Village, LLC to rezone approximately 42.54 acres from AR-1 Agricultural Residential and C-1 General Commercial to LI-2 Light Industrial, and **ORD. 26-06**, the associated Future Land Use Map amendment concerning the subject property located along Lewes-Georgetown Highway (US Route 9) near Georgetown, Delaware.

I believe this application represents a logical and appropriate land use decision that will promote economic development, support employment opportunities, strengthen the County's tax base, and provide land for businesses that contribute to the long-term prosperity of Sussex County.

The property's location along a major transportation corridor makes it well-suited for industrial and employment-generating uses, and approval of this application will help ensure that adequate land is available to accommodate future business and industrial growth within the County.

For these reasons, I respectfully request that the Planning & Zoning Commission recommend approval and that Sussex County Council approve C/Z 2063 and ORD. 26-06.

Thank you for your consideration.

Respectfully submitted,

Signature David F Kenton

Printed Name David Fletcher Kenton

Address 20288 Asphalt Alley Georgetown, DE 19947

Date August 17th, 2026

We, the undersigned, support C/Z 2063 and ORD. 26-06 submitted by Millsboro Towne Village, LLC. We respectfully request approval of the proposed rezoning and Future Land Use Map amendment as being in the best interests of the economic growth and long-term prosperity of Sussex County.

Name	Signature	Date
Harold E Dukes jr.	Harold E. Dukes Jr. Harold E. Dukes Jr. (Aug 17, 2026 15:59:12 EDT)	Aug 17, 2026
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date

Letter of Support for CZ and FLUM Ammendments

Final Audit Report 2026-08-17

Created:	2026-08-17
By:	Rose Werner (rwerner@peninsulapavingco.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAdxbVs6O20czNMEphZJU3A4j9YNFizPKU

"Letter of Support for CZ and FLUM Ammendments" History

Document created by Rose Werner (rwerner@peninsulapavingco.com)
2026-08-17 - 4:37:11 PM GMT

Document emailed to Harold E. Dukes Jr. (hal@tunnellraysor.com) for signature
2026-08-17 - 4:37:15 PM GMT

Email viewed by Harold E. Dukes Jr. (hal@tunnellraysor.com)
2026-08-17 - 7:56:09 PM GMT

Document e-signed by Harold E. Dukes Jr. (hal@tunnellraysor.com)
Signature Date: 2026-08-17 - 7:59:12 PM GMT - Time Source: server - Signature Appearance Selected: TYPE

Agreement completed.
2026-08-17 - 7:59:12 PM GMT

We, the undersigned, support C/Z 2063 and ORD. 26-06 submitted by Millsboro Towne Village, LLC. We respectfully request approval of the proposed rezoning and Future Land Use Map amendment as being in the best interests of the economic growth and long-term prosperity of Sussex County.

Name	Signature	Date
Name	Signature	Date
A P Croll III	Gus Crollparsons (Aug 17, 2026 16:56:49 EDT)	Aug 17, 2026
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
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Name	Signature	Date
Name	Signature	Date
Name	Signature	Date

We, the undersigned, support C/Z 2063 and ORD. 26-06 submitted by Millsboro Towne Village, LLC. We respectfully request approval of the proposed rezoning and Future Land Use Map amendment as being in the best interests of the economic growth and long-term prosperity of Sussex County.

Name	Signature	Date
Monroe E. Brittingham, Jr.	Monroe E. Brittingham, Jr. (Aug 18, 2026 13:34:48 EDT)	Aug 18, 2026

Letter of Support for CZ and FLUM Ammendments

Final Audit Report 2026-08-18

Created:	2026-08-18
By:	Rose Werner (rwerner@peninsulapavingco.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA52jZOUYtldIJqp1xYAZvv1SVW0w52a5W

"Letter of Support for CZ and FLUM Ammendments" History

Document created by Rose Werner (rwerner@peninsulapavingco.com)
2026-08-18 - 3:51:07 PM GMT

Document emailed to Mike Brittingham (freetobeme062@yahoo.com) for signature
2026-08-18 - 3:51:14 PM GMT

Email viewed by Mike Brittingham (freetobeme062@yahoo.com)
2026-08-18 - 5:30:16 PM GMT

Signer Mike Brittingham (freetobeme062@yahoo.com) entered name at signing as Monroe E. Brittingham, Jr.
2026-08-18 - 5:34:44 PM GMT

Document e-signed by Monroe E. Brittingham, Jr. (freetobeme062@yahoo.com)
Signature Date: 2026-08-18 - 5:34:46 PM GMT - Time Source: server - Signature Appearance Selected: TYPE

Agreement completed.
2026-08-18 - 5:34:46 PM GMT

We, the undersigned, support C/Z 2063 and ORD. 26-06 submitted by Millsboro Towne Village, LLC. We respectfully request approval of the proposed rezoning and Future Land Use Map amendment as being in the best interests of the economic growth and long-term prosperity of Sussex County.

Name	Signature	Date
Jeffrey A Kane	Jeffrey A Kane (Aug 18, 2026 21:19:27 EDT)	Aug 18, 2026

Letter of Support for CZ and FLUM Ammendments

Final Audit Report 2026-08-19

Created:	2026-08-18
By:	Rose Werner (rwerner@peninsulapavingco.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAoCR6WlOddN2oNlirEfTEhNvb0i3dXqWa

"Letter of Support for CZ and FLUM Ammendments" History

Document created by Rose Werner (rwerner@peninsulapavingco.com)
2026-08-18 - 4:07:36 PM GMT

Document emailed to Jeff Kane (jakane254@aol.com) for signature
2026-08-18 - 4:07:43 PM GMT

Email viewed by Jeff Kane (jakane254@aol.com)
2026-08-18 - 4:17:36 PM GMT

Signer Jeff Kane (jakane254@aol.com) entered name at signing as Jeffrey A. Kane
2026-08-19 - 1:19:25 AM GMT

Document e-signed by Jeffrey A. Kane (jakane254@aol.com)
Signature Date: 2026-08-19 - 1:19:27 AM GMT - Time Source: server - Signature Appearance Selected: MOBILE_DRAW

Agreement completed.
2026-08-19 - 1:19:27 AM GMT

We, the undersigned, support C/Z 2063 and ORD. 26-06 submitted by Millsboro Towne Village, LLC. We respectfully request approval of the proposed rezoning and Future Land Use Map amendment as being in the best interests of the economic growth and long-term prosperity of Sussex County.

Name	Signature	Date
Isaac davis	Isaac (Aug 19, 2026 08:52:49 EDT)	Aug 19, 2026
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
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Name	Signature	Date
Name	Signature	Date

Letter of Support for CZ and FLUM Ammendments

Final Audit Report 2026-08-19

Created:	2026-08-18
By:	Rose Werner (rwerner@peninsulapavingco.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA0BO7i-MjYBAjVEGDMQ7I9VcrT_Cj5GEP

"Letter of Support for CZ and FLUM Ammendments" History

Document created by Rose Werner (rwerner@peninsulapavingco.com)
2026-08-18 - 3:50:07 PM GMT

Document emailed to Isaac (isaacspaving@gmail.com) for signature
2026-08-18 - 3:50:13 PM GMT

Email viewed by Isaac (isaacspaving@gmail.com)
2026-08-19 - 12:50:23 PM GMT

Document e-signed by Isaac (isaacspaving@gmail.com)
Signature Date: 2026-08-19 - 12:52:49 PM GMT - Time Source: server - Signature Appearance Selected: MOBILE_DRAW

Agreement completed.
2026-08-19 - 12:52:49 PM GMT

Pennoni

Pennoni

18072 Davidson Drive
Milton, DE 19968
T: 302-684-8030
F: 302-684-8054

www.pennoni.com

METES AND BOUNDS DESCRIPTION
FOR THE PURPOSE OF REZONING

LANDS NOW OR FORMERLY OF MILLSBORO TOWNE VILLAGE, LLC
GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE

TAX MAP 135-11.00-31.00, 135-16.00-17.00 and 70.00

All that certain piece, tract and parcel lying in Georgetown Hundred, Sussex County, Delaware and being more particularly described as follows:

BEGINNING at a point, said point lying on the northerly right-of-way of Lewes-Georgetown Highway and being a corner for this Parcel and Lands now or formerly of Lance S. Folke; thence by and with this Parcel and Lands now or formerly of Lance S. Folke the following three (3) courses and distances:

1) **North 17 degrees, 05 minutes, 26 seconds West, 600.03 feet to a point,**
2) **North 17 degrees, 01 minutes, 28 seconds West, 80.38 feet to a point,**
3) **South 14 degrees, 45 minutes, 36 seconds West, 94.22 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Raynol E. Garcia; thence by and with this Parcel and Lands now or formerly of Raynol E. Garcia, **South 72 degrees, 55 minutes, 52 seconds West, 599.33 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Ayoub; thence by and with this Parcel and Lands now or formerly of Ayoub, **North 17 degrees, 34 minutes, 45 seconds West, 226.52 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Azalea Woods, LLC.; thence by and with this parcel and Lands now or formerly of Azalea Woods, LLC., the following four (4) courses and distances:

1) **North 14 degrees, 23 minutes, 49 seconds East, 1,769.88 feet to a point,**
2) **South 82 degrees, 18 minutes, 13 seconds East, 612.61 feet to a point,**
3) **South 02 degrees, 03 minutes, 09 seconds East, 613.12 feet to a point,**
4) **North 89 degrees, 34 minutes, 00 seconds East, 365.77 feet to a point,**

said point being a corner for this Parcel and Lands now or formerly of Mersani R. Stephanis; thence by and with this Parcel and Lands now or formerly of

Mersani R. Stephanis, **South 23 degrees, 17 minutes, 18 seconds West, 1,030.43 feet** to a point, said point being a corner for this Parcel and Lands now or formerly of Sea Gate Holdings, LLC.; thence by and with this Parcel and Lands now or formerly of Sea Gate Holdings, LLC., **South 16 degrees, 36 minutes, 05 seconds East, 597.63 feet** to a point, said point being a corner for this Parcel and lying on the northerly right-of-way of Lewes-Georgetown Highway; thence by and with this Parcel and the northerly right-of-way of Lewes-Georgetown Highway, the following two(2) courses and distances:

1) **South 72 degrees, 54 minutes, 21 seconds West, 165.79 feet to a point,**
2) **South 72 degrees, 54 minutes, 34 seconds West, 182.61 feet to a point,**

said point being the **Point of Beginning** for this description.

This Parcel contains 42.54 acres more or less.

2026-03-17
PDYER25005
KMD:ked:KBE

PLANNING & ZONING COMMISSION
HOLLY J. WINGATE, CHAIR
JEFF ALLEN
G. SCOTT COLLINS
JOHN PASSWATERS
DAVID PETTYJOHN

Sussex County
DELAWARE
SUSSEXCOUNTYDE.GOV
302-855-7878

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: September 16, 2026
Sussex County Council Public Hearing Date: October 20, 2026

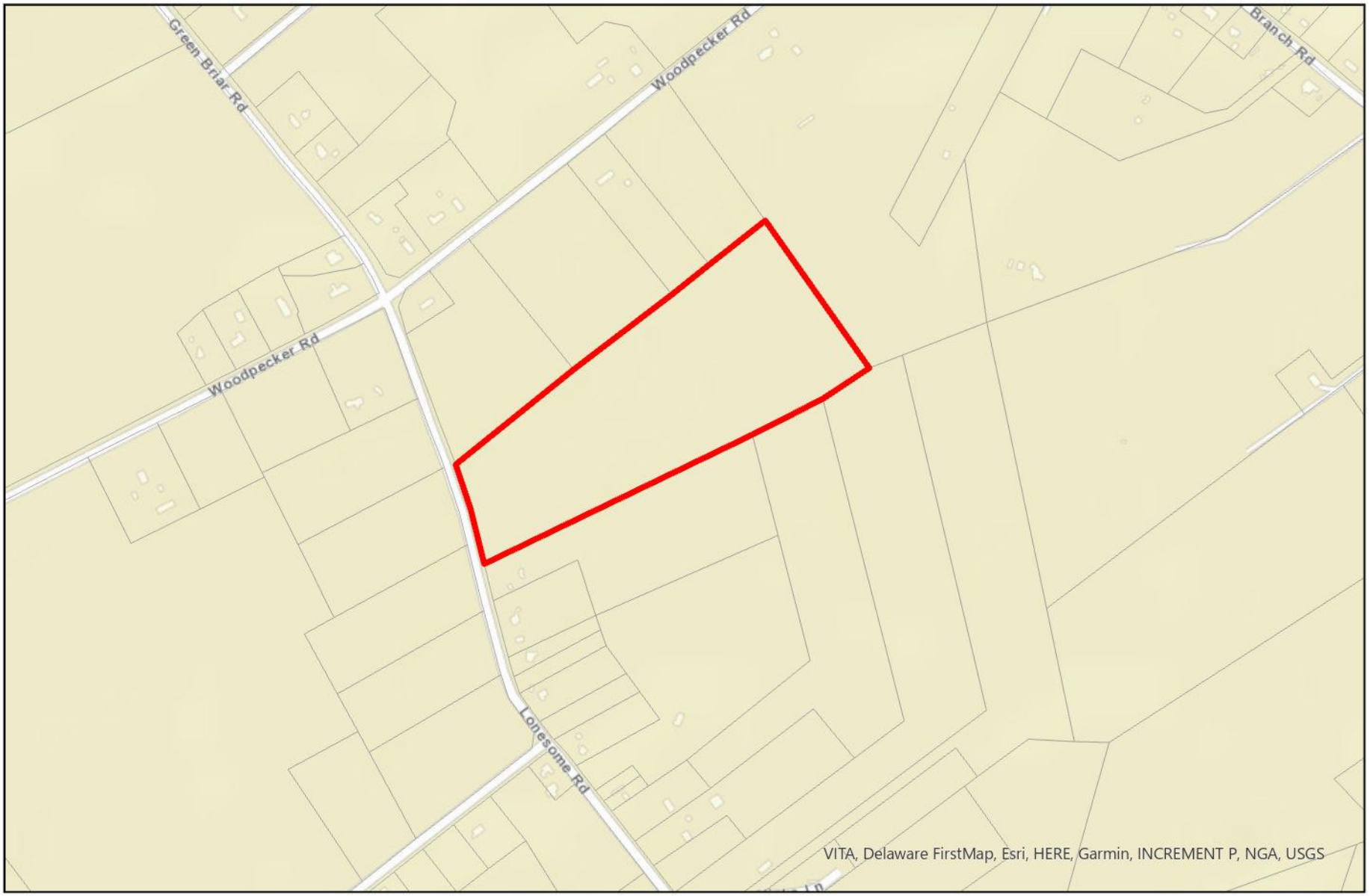
Application:	C/U 2597 Lonesome Road Community Energy Initiative, LLC
Applicant:	Lonesome Road Community Energy Initiative, LLC C/O Michael Redding, P.E. 203 Crescent Street, Suite 106 Waltham, MA 02453
Owner:	Catherine A. Savage, Theodore R. Savage, Jr. & Randi N. Gootee C/O Catherine A. Savage 9875 Sherwood Farm Road Owings Mill, MD 21117
Site Location:	The property is lying the east side of Lonesome Road (S.C.R. 541), approximately 800 feet south of Woodpecker Road (S.C.R. 80).
Current Zoning:	Agricultural Residential (AR-1) Zoning District
Proposed Use:	Solar Facility
Comprehensive Land Use Plan Reference:	Low Density Area
Councilmanic District:	District 1 - Mr. Lloyd
School District:	Seaford School District
Fire District:	Seaford Fire Department
Sewer:	N/A
Water:	N/A
Site Area:	28.64 acres +/-
Tax Map ID.:	531-12.00-92.02

EQUAL HOUSING OPPORTUNITY

CU 2597 Lonesome Road, LLC
Aerial Map
TM# 531-12.00-92.02

N

0 0.13 0.25 0.5 Miles



CU 2597 Lonesome Road, LLC
Aerial Map
TM# 531-12.00-92.02

N

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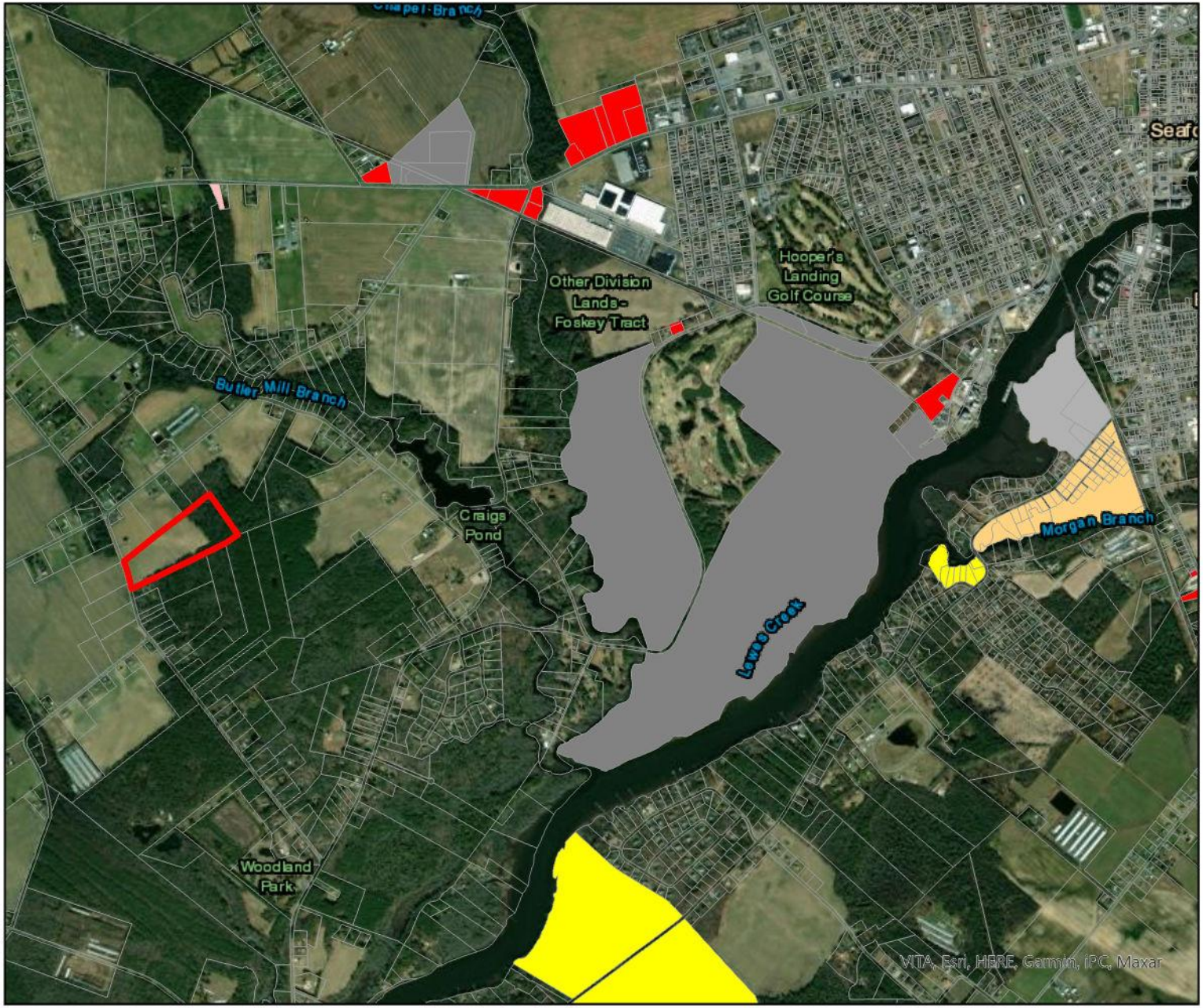


CU 2597 Lonesome Road, LLC

Zoning

- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

CU 2597 Lonesome Road, LLC
Zoning Map
TM# 531-12.00-92.02

N

0 0.5 1 2 Miles

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Planning Commission Members
From: Ann Lepore, Planner I
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: August 26, 2026
RE: Staff Analysis for C/U 2597 Lonesome Road Community Energy Initiative, LLC

This memo is to provide background and analysis for the Planning Commission to consider as a part of Application C/U 2597 Lonesome Road Community Energy Initiative, LLC to be reviewed during the September 16, 2026, Planning Commission Meeting. This analysis should be included in the record of this application and is subject to comments and information that may be presented during the public hearing.

Please note that the following staff analysis is for informational purposes only and does not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.

Tax Parcel ID: 531-12.00-92.02

Proposal: The request is for a Conditional Use for Tax Parcel 531-12.00-92.02 to allow for a Solar Facility on a parcel lying on the east side of Lonesome Road (S.C.R. 541), approximately 800 feet south of Woodpecker Road (S.C.R. 80). The parcel is comprised of 28.64 acres +/-.

Zoning: The Parcel is zoned Agricultural Residential (AR-1) District. The adjacent parcels to the north, south, east, and west are zoned Agricultural Residential (AR-1) District.

Future Land Use Map Designation w/in Comprehensive Plan: Low Density Area

Applicability to Comprehensive Plan: The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use map in the plan indicates that the subject property is designated as a Rural Area and has a land use designation of "Low Density Area." All surrounding properties to the north, south, east, and west of the subject site contain the Future Land Use Map designation of "Low Density Area".

As outlined in the 2018 Sussex County Comprehensive Plan, Low Density Areas are areas that the County envisions as "a predominantly rural landscape where farming co-exists with appropriate residential uses and permanently preserved property" (Sussex County Comprehensive Plan, 4-18).
The Plan also notes that commercial uses "should be limited in their location, size and hours of operation" and "more intense commercial uses should be avoided" and commercial uses "may be appropriate depending on surrounding uses" (Sussex County Comprehensive Plan, 4-19).

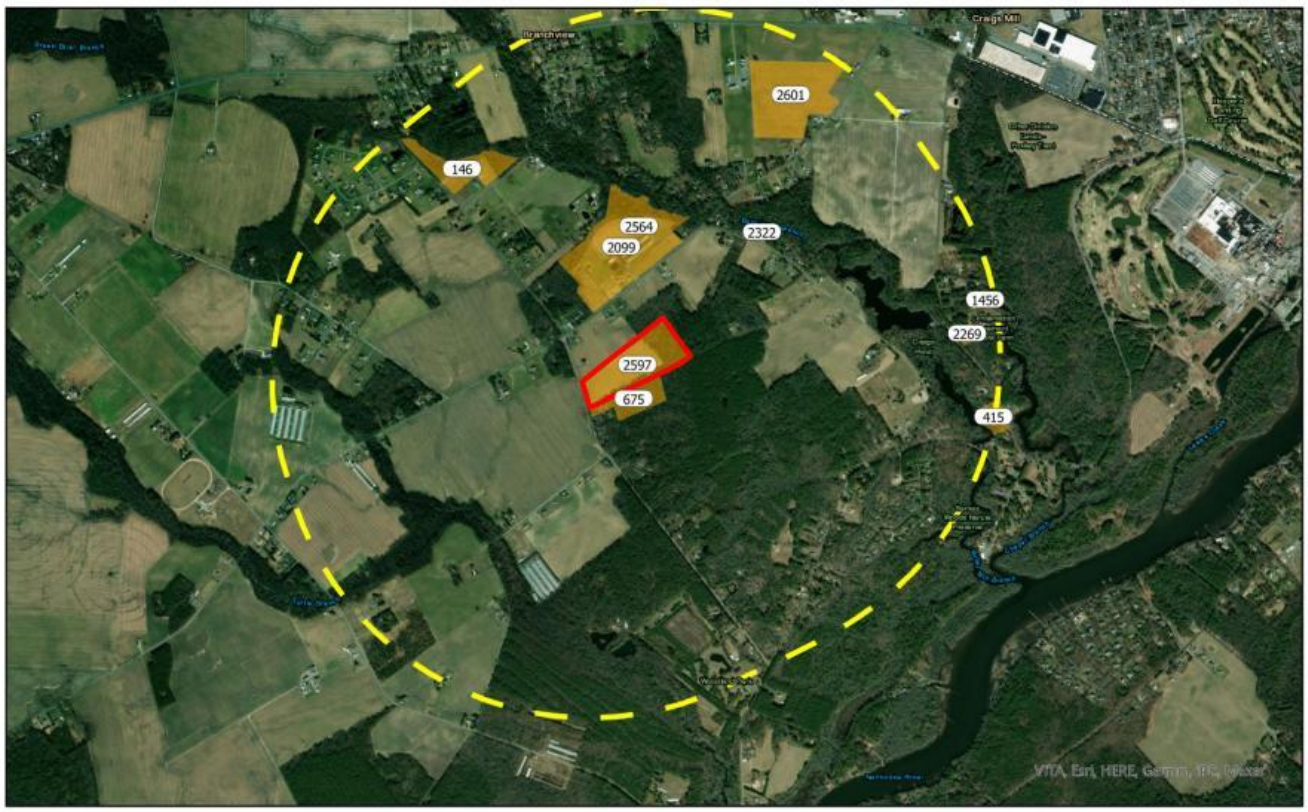
Further Site Considerations:

- **Density: N/A**
- **Open Space Provisions: N/A**
- **Agricultural Areas:** The site is within the vicinity of active agricultural lands.
- **Interconnectivity: N/A**
- **Transportation Improvement District (TID):** The parcels are not within the Henlopen Transportation Improvement District.
- **Forested Areas:** N/A
- **Wetlands Buffers/Waterways:** N/A
- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):** N/A

Based on the analysis of the land use, surrounding zoning and uses, a Conditional Use Application to allow for a Solar Facility, subject to considerations of scale and impact, could be considered as being consistent with the land use, area zoning and surrounding uses.

Existing Conditional Uses within the Vicinity of the Subject Site: Since 2011, there have been ten (10) Conditional Use applications within a 1-mile radius of the application site.

CU #	APPLICANT	Tax Parcel #	Current Zoning	Proposed Use	CC Decision Date	CC Decision	Ord. #
146	W. Addison Figgs	531-12.00-53.00	AR-1	Borrow pit	6/26/1973	Approved	
415	John Herbert Litchford Jr	531-15.00-63.00	AR-1	Retail store for the sale of seafood	5/17/1977	Approved	
675	Lina Taylor	531-15.00-23.00	AR-1	Used car lot		WITHDRAWN	
1456	Boyd Taylor	531-12.00-136.00	AR-1	Repairs boats/motors/trailers/etc	8/3/2002	Approved	1557-A
2099	Richard and Dawn Jamison	531-12.00-92.00	AR-1	Wedding Venue within Barn	12/5/2017	Approved	2536
2269	Dennis Nelson Jr.	531-12.00-129.00	AR-1	Tractor Trailer Parking	12/14/2022	Denied	
2322	Spencer B. Yoder	531-12.00-110.00	AR-1	Automotive Repair Shop		WITHDRAWN	
2564	Richard Jamison	531-12.00-92.09	AR-1	RV & Boat Storage		Pending	
2597	Lonesome Road Community Energy Initiative, LLC	531-12.00-92.02	AR-1	Solar Energy Facility		Pending	
2601	Woodpecker Road Community Energy Initiative, LLC	531-12.00-84.01	AR-1	Solar Facility		Pending	



CU 2597 Lonesome Road Community Energy Initiative, LLC
Conditional Uses within 1 mile
TM# 531-12.00-92.02

CU 2597 Lonesome Road, LLC
CU 2597 1-mile Buffer
CU 2597 Vicinity Map

N

0 0.25 0.5 1 Miles

File #: CU 2597

202507422

Planning & Zoning Commission 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

RECEIVED
MAY 30 2025
SUSSEX COUNTY
PLANNING & ZONING

Type of Application: (please check applicable)
Conditional Use ✓
Zoning Map Amendment ___

Site Address of Conditional Use/Zoning Map Amendment
Lonesome Road, Seaford, DE 19973

Type of Conditional Use Requested:
Solar Energy Facility

Tax Map #: 531-12.00-92.02 **Size of Parcel(s):** 28.64 AC.

Current Zoning: AR-1 **Proposed Zoning:** AR-1 **Size of Building:** 0 S.F.

Land Use Classification: LD (Low Density)

Water Provider: N/A **Sewer Provider:** N/A

Applicant Information

Applicant Name: Lonesome Road Community Energy Initiative LLC c/o Michael Redding, P.E.
Applicant Address: 203 Crescent St, Suite 106
City: Waltham State: MA ZipCode: 02453
Phone #: (603) 494-6801 E-mail: mr@ecasolar.com

Owner Information

Owner Name: Catherine A. Savage & Theodore R. Savage JR. & Randi N. Gootee c/o Catherine Savage
Owner Address: 9875 Sherwood Farm Road
City: Owings Mill State: MD Zip Code: 21117
Phone #: (302) 542-8871 E-mail: CathyS0598@hotmail.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Becker Morgan Group, Inc. c/o Michael Henry
Agent/Attorney/Engineer Address: 309 South Governors Ave.
City: Dover State: DE Zip Code: 19904
Phone #: (302) 734-7950 E-mail: mhenry@beckermorgan.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✓ Completed Application

✓ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✓ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✓ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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: 5/6/2025

Signature of Owner

Catherine A Savage Date: 05/01/25

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

Sussex County Government
Treasury
2 The Circle, PO Box 601
Georgetown, DE 19947

06/02/2025 09:49AM Catherine
33029644-0035 001197382

PERMITS / INSPECTIONS
2025 202507422|Z010 $1,000.00

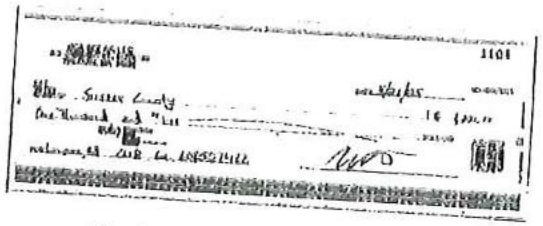
$1,000.00

Subtotal $1,000.00
Total $1,000.00

CHECK
Check Number001104 $1,000.00

Change due $0.00

Paid by: ECA SOLAR LLC



Thank you for your payment.

CUSTOMER COPY

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

PLANNING OUR CLIENTS' SUCCESS

RECEIVED

MAY 3 0 2025

SUSSEX COUNTY PLANNING & ZONING

May 21, 2025

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
2 The Circle, P.O. Box 417
Georgetown, Delaware 19947

RE: **Conditional Use Site Plan Submission**
LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC
Seaford, Delaware
2025036.00

Dear Mr. Whitehouse:

On behalf of our client, Lonesome Road Community Energy Initiative LLC, an affiliate of ECA Solar, LLC., we are hereby submitting a Conditional Use Site Plan Application for the above-mentioned project. We have included the following documents in support of the submission:

- Two (2) Paper sets - Conditional Use Site, Landscape, Pollinator & Forest Assessment Plans
- One (1) PDF set of Conditional Use Site, Landscape, Pollinator & Forest Assessment Plans (submitted via Email)
- One (1) Copy - Planning & Zoning Commission Application (Conditional Use)
- One (1) Copy - DelDOT Service Level Evaluation Response
- One (1) Copy – Conditional Use Area Legal Description
- One (1) Check (No. 1104) in the amount of $1,000.00
- One (1) Copy of The Decommissioning Plan
- PDF files of all documents (sent via email)

Please include this project on the earliest agenda opening for Planning Commission consideration. In addition, we intend to provide an optional exhibit booklet a minimum of ten (10) days prior to the scheduled Planning Commission meeting.

Please review the enclosed documents at your earliest convenience. If you have any comments and/or questions, please do not hesitate to contact me.

Sincerely,

BECKER MORGAN GROUP, INC.

Michael J. Henry, LEED AP
Senior Associate

MJH/

Cc: Michael Redding, P.E. (mr@ecasolar.com)

202503600ac-ltr-PandZ.docx

BECKER MORGAN GROUP, INC.

309 SOUTH GOVERNORS AVENUE
DOVER, DELAWARE 19904
302.734.7950

THE TOWER AT STAR CAMPUS
100 DISCOVERY BOULEVARD, SUITE 102
NEWARK, DELAWARE 19713
302.369.3700

PORT EXCHANGE
312 WEST MAIN STREET, SUITE 300
SALISBURY, MARYLAND 21801
410.546.9100

3333 JACKLE DRIVE, SUITE 120
WILMINGTON, NORTH CAROLINA 28403
910.341.7600

1942 EAST 7TH STREET, SUITE 240
CHARLOTTE, NORTH CAROLINA 28204
980.270.9100

314 EAST MAIN STREET
CLAYTON, NORTH CAROLINA 27520
919.243.1332

www.beckermorgan.com

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

SHANTÉ A. HASTINGS
SECRETARY

May 20, 2025

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Lonesome Road Community Energy Initiative LLC** (Lonesome Road, Seaford, Delaware 19973**)** proposed land use application, which we received on April 22, 2025. This application is for an approximate 28.6-acre parcel (Tax Parcel: 531-12.00-92.02). The parcel is located on the east side of Lonesome Road (Sussex County Road 541) and approximately 800 feet south from the intersection of Woodpecker Road (Sussex County Road 80) and Lonesome Road. The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a conditional use approval to build a Solar Energy Facility.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Lonesome Road, where the subject land is located, which is from Woodland Road (Sussex County Road 536) to Woodpecker Road, is 145 vehicles per day.

Based on our review, we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Tijah Jones, at tijah.jones@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Engineer
Development Coordination

SM:tjm
cc: Lonesome Road Community Energy Initiative LLC, Applicant
Ashley Paugh, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, M&O
James Argo, South District Project Reviewer, M&O
Tara Summers-Strong, South District Public Works Admin. M&O
Todd Sammons, Assistant Director, Development Coordination
John Pietrobono, Acting Sussex Review Coordinator, Dev Coord
Kevin Hickman, Sussex Reviewer, Development Coordination
Derek Sapp, Sussex Review Engineer, Development Coordination
Thomas Gagnon, Sussex Review Engineer, Development Coordination
José Quixtan, Sussex Review Engineer, Development Coordination
Annamaria Furmato, TIS Review Engineer, Development Coordination
Ben Fisher, TIS Review Engineer, Development Coordination
Tijah Jones, TIS Review Engineer, Development Coordination
DelDOT TIS Support

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

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **8/26/2026**

APPLICATION: **CU 2597 Lonesome Road Community Energy Initiative, LLC**

APPLICANT: **Lonesome Road Community Energy Initiative, LLC – C/O Michael Redding, P.E.**

FILE NO: **WWSPA-5.02**

TAX MAP & PARCEL(S): **531-12.00-92.02**

LOCATION: **Lying on the east side of Lonesome Road (SCR 541), approximately 800 feet south of Woodpecker Road (SCR 80).**

NO. OF UNITS: **Solar Facility**

GROSS ACREAGE: **28.64 +/-**

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

SEWER:

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

Yes ☐ No ☒

a. If yes, see question (2).
b. If no, see question (7).

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

(3). Is wastewater capacity available for the project? **No** 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 $10,700.00** per EDU. Please contact **Choose an item.** at **302-855-7719** for additional information on charges.

(6). Is the project capable of being annexed into a Sussex County sanitary sewer district? **No**

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

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

(8). Comments: **The proposed Conditional Use is not located in an area where the Sussex County Engineering Department has a schedule to provide sanitary sewer and/or water.**

(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**

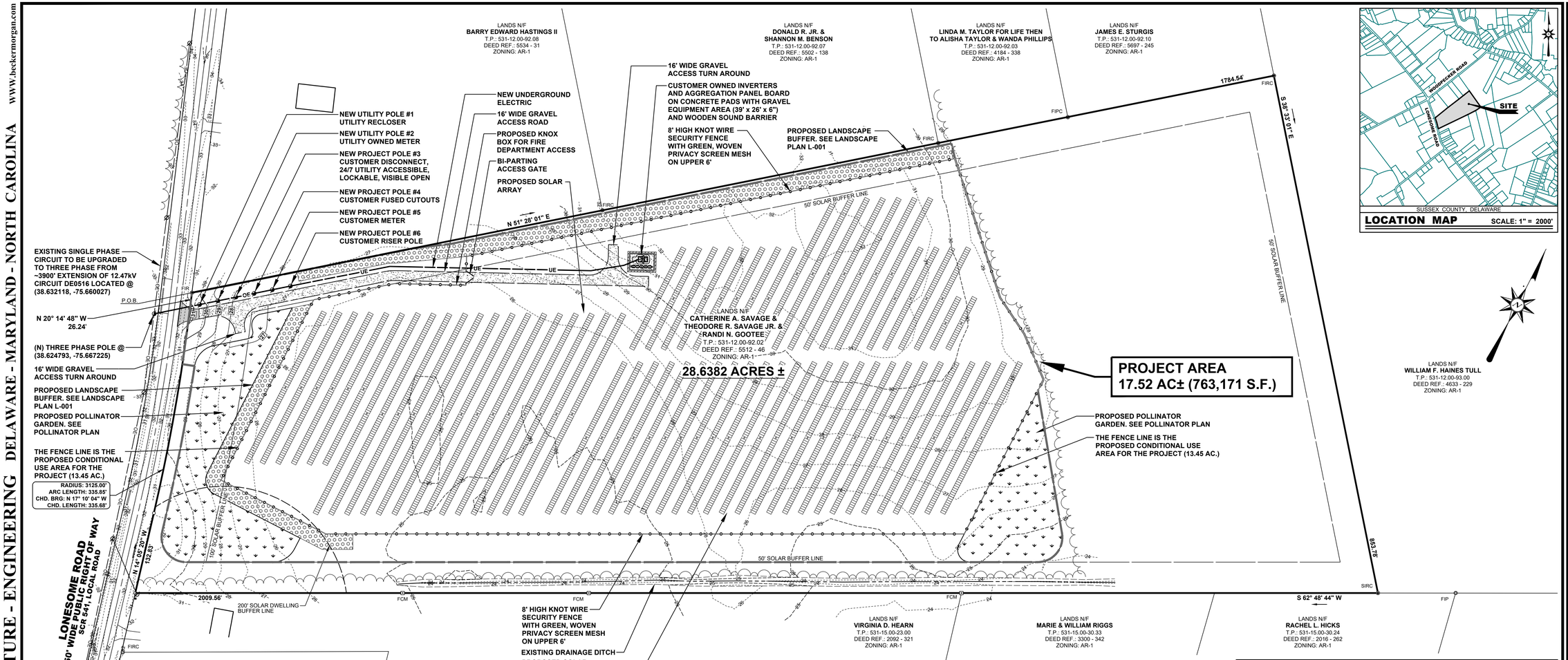
(11). **All residential roads must meet or exceed Sussex County minimum design standards.**

UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
Choose an item.

BECKER MORGAN GROUP ARCHITECTURE - ENGINEERING DELAWARE - MARYLAND - NORTH CAROLINA www.beckermorgan.com



LEGEND

ITEM	EXISTING	PROPOSED
CONCRETE CURB & GUTTER		
CONCRETE SIDEWALK, SLAB / PAVING		
IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT		N/A
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	
WIRE FENCE		
CHAINLINK FENCE		
STOCKADE FENCE		
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)		
DRAINAGE DITCH OR SWALE		
WETLAND BOUNDARY LINE		N/A
CONTOUR	49	55
ELEVATION SPOT SHOT	43.55	25.15 / 25.50 T.C. / 25.00 B.C.
BENCH MARK		N/A
PROPERTY OR RIGHT-OF-WAY LINE		
CENTERLINE		
LIGHT POLE		

ITEM	EXISTING	PROPOSED
SANITARY GRAVITY SEWER LINE (**S**) SIZE & FLOW DIRECTION	EX. 10"S	10" S
SANITARY SEWER FORCE MAIN (**F.M.**) SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
SANITARY SEWER MANHOLE (**S.S.M.H.**)		
SANITARY SEWER CLEANOUT (**C.O.**)		
WATER MAIN & SIZE	EX. 10" W	12" W
FIRE HYDRANT (**F.H.**)	F.H.	F.H.
WATER VALVE (**W.V.**) OR METER (**W.M.**)	W.M. W.V.	W.M. W.V.
STORM DRAIN MANHOLE (**S.D.M.H.**)		
STORM DRAIN LINE (**RMP**, **RCP**, **HDPE**)		
CATCH BASIN (**C.B.**)		
UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (**O.T.**), ELECTRIC (**O.E.**)		
UNDERGROUND ELECTRIC (**U.E.**)	U.E.	U.E.
UNDERGROUND TELEPHONE (**U.T.**)	U.T.	U.T.
UNDERGROUND GAS MAIN (**G**)	EX. 2" G	2" G

SHEET INDEX

C-001	CONDITIONAL USE SITE PLAN
L-001	LANDSCAPE PLAN
1 OF 1	POLLINATOR GARDEN PLANTING PLAN
1 OF 1	FOREST ASSESSMENT

OWNERS CERTIFICATION

WE, CATHERINE A. SAVAGE, THEODORE R. SAVAGE JR. & RANDI N. GOOTEE, HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

CATHERINE A. SAVAGE, AUTHORIZED SIGNATORY — DATE

ENGINEERS CERTIFICATION

I, J. MICHAEL RIEMANN, P.E., HEREBY CERTIFY THAT I AM A REGISTERED 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.

J. MICHAEL RIEMANN — P.E. NO. 13772 — DATE

GENERAL NOTES :

1. THE BOUNDARY & TOPOGRAPHIC DATA SHOWN HEREON WAS COMPILED FROM A FIELD SURVEY PERFORMED BY BECKER MORGAN GROUP, INC. , DOVER, DE. COMPLETED IN MARCH OF 2025
2. THE BOUNDARY LINES PORTRAYED HEREON HAVE BEEN ESTABLISHED BASED SOLELY ON PHYSICAL EVIDENCE DISCOVERED IN THE FIELD, IN CONJUNCTION WITH DETERMINATIONS DERIVED FROM SOURCE OF TITLE AND ADJACENT DEED RECORD INFORMATION.
3. THE ACCOMPANYING SURVEY WAS MADE ON THE GROUND AND CORRECTLY SHOWS THE LOCATION OF ALL BUILDINGS, STRUCTURES AND OTHER IMPROVEMENTS SITUATED ON THE ABOVE PREMISES; THAT THERE ARE NO VISIBLE ENCROACHMENTS ON THE SUBJECT PROPERTY OR UPON THE LAND ABUTTING SAID PROPERTY EXCEPT AS SHOWN HEREON.
4. A WETLAND DELINEATION OF THE SUBJECT SITE WAS PERFORMED BY GTA IN DECEMBER 2024. AS A RESULT OF THE REVIEW OF THE SUBJECT SITE, IT IS GTA'S PROFESSIONAL OPINION THAT THERE ARE NOT JURISDICTIONAL WETLANDS AND WATERBODIES PRESENT WITHIN THE SUBJECT SITE.
5. THE SUBJECT PROPERTY IS LOCATED WITHIN AN AREA HAVING A ZONE DESIGNATION "X" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAP NO. 10005C0245L WITH A DATE OF IDENTIFICATION OF JUNE 20, 2018.
6. THE SOLAR ARRAY LEASE AREA HAS DIRECT ACCESS TO LONESOME ROAD (SCR 541), A DEDICATED PUBLIC STREET, AS SHOWN HEREON.
7. NO VISIBLE EVIDENCE OF CEMETERY OR BURIAL GROUND OBSERVED AT TIME OF SURVEY ON LEASE AREA.
8. BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION HE MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM SUSSEX COUNTY, DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROLS (DNREC), DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT), SUSSEX CONSERVATION DISTRICT (SCD) AND ALL OTHER APPROPRIATE STATE AND COUNTY AGENCIES.
9. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO THE SUSSEX COUNTY AND THE STATE OF DELAWARE (DELDOT) STANDARDS AND CONSTRUCTION SPECIFICATIONS.
10. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
11. ALL WORK WITHIN STATE MAINTAINED ROAD RIGHT-OF-WAY SHALL MEET THE REQUIREMENTS AS SET FORTH IN THE CURRENT REVISION OF THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION BY THE DELAWARE DEPARTMENT OF TRANSPORTATION.
12. A FOREST ASSESSMENT OF THIS PARCEL (531-12.00-92.02) WAS PERFORMED BY GEO-TECHNOLOGY ASSOCIATES, INC. SEE PLAN TITLED " FOREST ASSESSMENT LONESOME ROAD", DATED APRIL 9, 2025.
13. NEITHER A DRAINAGE ASSESSMENT OR RESOURCE BUFFER MANAGEMENT PLAN ARE REQUIRED FOR THIS SITE AS THERE ARE NO AQUATIC RESOURCES ON THE SITE THAT NEEDED TO BE EVALUATED AS DETERMINED BY BY GEO-TECHNOLOGY ASSOCIATES, INC.
14. LONESOME ROAD COMMUNITY ENERGY INITIATIVE, LLC SHALL BE RESPONSIBLE FOR THE DECOMMISSIONING/ REMOVAL OF THE FACILITY.
15. IF TOPSOIL IS REMOVED FOR IMPROVEMENTS, IT SHALL REMAIN ON THE SITE.
16. NONINVASIVE, PERENNIAL VEGETATIVE GROUND COVER MUST BE MAINTAINED OR ESTABLISHED IN ALL AREAS CONTAINING SOLAR ARRAYS AND IN REQUIRED SETBACKS TO PREVENT EROSION AND MANAGE RUNOFF. A SEED MIX WILL BE USED TO PROMOTE THE GROWTH OF A GROUND COVER THAT IS FAVORABLE TO FUTURE USE OF THE LAND BY ANIMALS. THE HEIGHT OF THE VEGETATION GROWTH SHALL BE MAINTAINED AS TO REDUCE THE POSSIBILITY OF THE AIRBORNE SPREADING OF SEEDS AND SEEDS TRANSMITTED TO OTHER ADJACENT LANDS.
17. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
18. ALL PROPOSED SIGNAGE SHALL REQUIRE A SEPARATE PERMIT FROM SUSSEX COUNTY.
19. NO SITE LIGHTING IS PROPOSED FOR THE PROJECT.
20. ALL AREAS INTENDED FOR PLANTING OF MEADOW / WILDFLOWER MIX GROUND COVER ON THE SITE (BOTH INSIDE AND OUTSIDE THE FENCED AREA) ARE INTENDED TO BE ALLOWED TO GROW BEYOND THE MAXIMUM ALLOWABLE GRASS HEIGHT AS LISTED IN THE SUSSEX COUNTY CODE FOR BOTH SEDIMENT / STORMWATER MANAGEMENT REQUIREMENTS AND TO PROVIDE HABITAT FOR INSECTS AND WILDLIFE. THE MEADOW AREAS BOTH OUTSIDE AND INSIDE THE FENCED AREA, ARE TO BE CUT ONLY BY THE OWNER BASED ON THEIR GENERAL MAINTENANCE SCHEDULE (GENERALLY 1 TO 2 TIMES PER YEAR).

SITE DATA

1.	OWNER OF RECORD:	CATHERINE A. SAVAGE & THEODORE R. SAVAGE JR. & RANDI N. GOOTEE 9875 SHERWOOD FARM ROAD OWINGS MILL, MD 21117 c/o CATHERINE SAVAGE
2.	EQUITABLE OWNER:	GREENPATH LONESOME ROAD LANDCO, LLC 203 CRESCENT ST, SUITE 106 WALTHAM, MA 02453 c/o MICHAEL REDDING, P.E.
3.	LESSEE:	LONESOME ROAD COMMUNITY ENERGY INITIATIVE, LLC 203 CRESCENT ST, SUITE 106 WALTHAM, MA 02453 c/o MICHAEL REDDING, P.E.
4.	ENGINEER / SURVEYOR:	BECKER MORGAN GROUP INC. 309 SOUTH GOVERNORS AVE. DOVER, DELAWARE 19904 302-734-7950
5.	PROPERTY ADDRESS:	LONESOME ROAD SEAFORD, DE 19973
6.	TAX PARCEL NUMBER:	531-12.00-92.02
7.	DEED REFERENCE :	5512 - 46
8.	SITE AREA SUMMARY:	28.6382 ACRES ±
9.	SITE AREA SUMMARY:	PROPERTY AREA = 28.64 ACRES ± TOTAL PROJECT AREA = 17.52 ACRES ± PROJECTED FENCED AREA (COND. USE AREA) = 13.45 ACRES ± PROJECT PANEL AREA = 9.62 ACRES ±
10.	WOODLAND AREA:	9.61 AC.
11.	IMPERVIOUS AREA:	EXISTING: 0.00 AC. PROPOSED: 0.36 AC.
12.	ZONING CLASSIFICATION:	EXISTING: AR-1 - AGRICULTURAL RESIDENTIAL PROPOSED: AR-1 - AGRICULTURAL RESIDENTIAL
13.	SETBACKS:	AR-1 - AGRICULTURAL RESIDENTIAL (AS AMENDED BY ORDINANCE NO. 2920) STREET YARD 100 FT SIDE YARD 50 FT REAR YARD 50 FT OFFSITE DWELLING 200 FT
14.	BULK STANDARDS:	AR-1- AGRICULTURE RESIDENTIAL MINIMUM LOT AREA: NA MINIMUM LOT WIDTH: 150 FT. BUILDING HEIGHT: 35 FT DENSITY: N/A
15.	PRESENT USE:	AGRICULTURE
16.	PRESENT USE:	COMMUNITY SOLAR ENERGY SYSTEM
17.	INVESTMENT LEVEL:	LEVEL 4
18.	DELDOT TID:	PARCEL LOCATED OUTSIDE OF ANY TRANSPORTATION IMPROVEMENT DISTRICT
19.	ROAD CLASSIFICATION:	LONESOME ROAD - LOCAL ROAD (50 M.P.H.)
20.	GROWTH ZONE:	PARCEL OUTSIDE GROWTH ZONE
21.	PROPERTY LOCATION:	LATITUDE: N 38° 37' 29.83" GRS80 - NAD83 (2011) LONGITUDE: W 75° 40' 01.52" GRS80 - NAD83 (2011)
22.	SURVEY DATUM:	NGS MONUMENTS VERTICAL: NAVD 88 - DEDO HORIZONTAL: NAD 83 (2011) DSP - DEDO
23.	SURVEY UNIT:	LINEAR: US SURVEY FOOT ANGULAR: DEGREES MINUTES SECONDS (DMS) COORDINATE: GROUND
24.	MONUMENTATION:	10 FOUND / 1 SET

BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700
Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
www.beckermorgan.com

eca solar

PROJECT TITLE

LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC

LONESOME ROAD
SEAFORD HUNDRED
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONDITIONAL USE SITE PLAN

0 40 80 160
SCALE: 1" = 80'

ISSUE BLOCK		
MARK	DATE	DESCRIPTION

LAYER STATE: C001

PROJECT NO.:	2025036.00
DATE:	5-21-25
SCALE:	1" = 80'
DRAWN BY: A.J.S.	PROJ. MGR.: M.J.H.

SHEET
C-001

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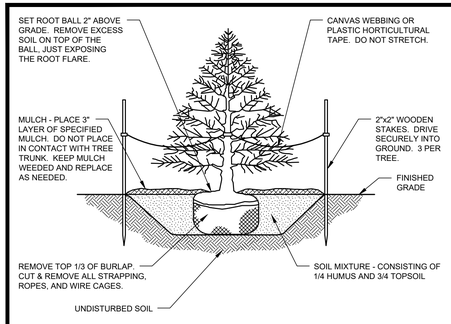
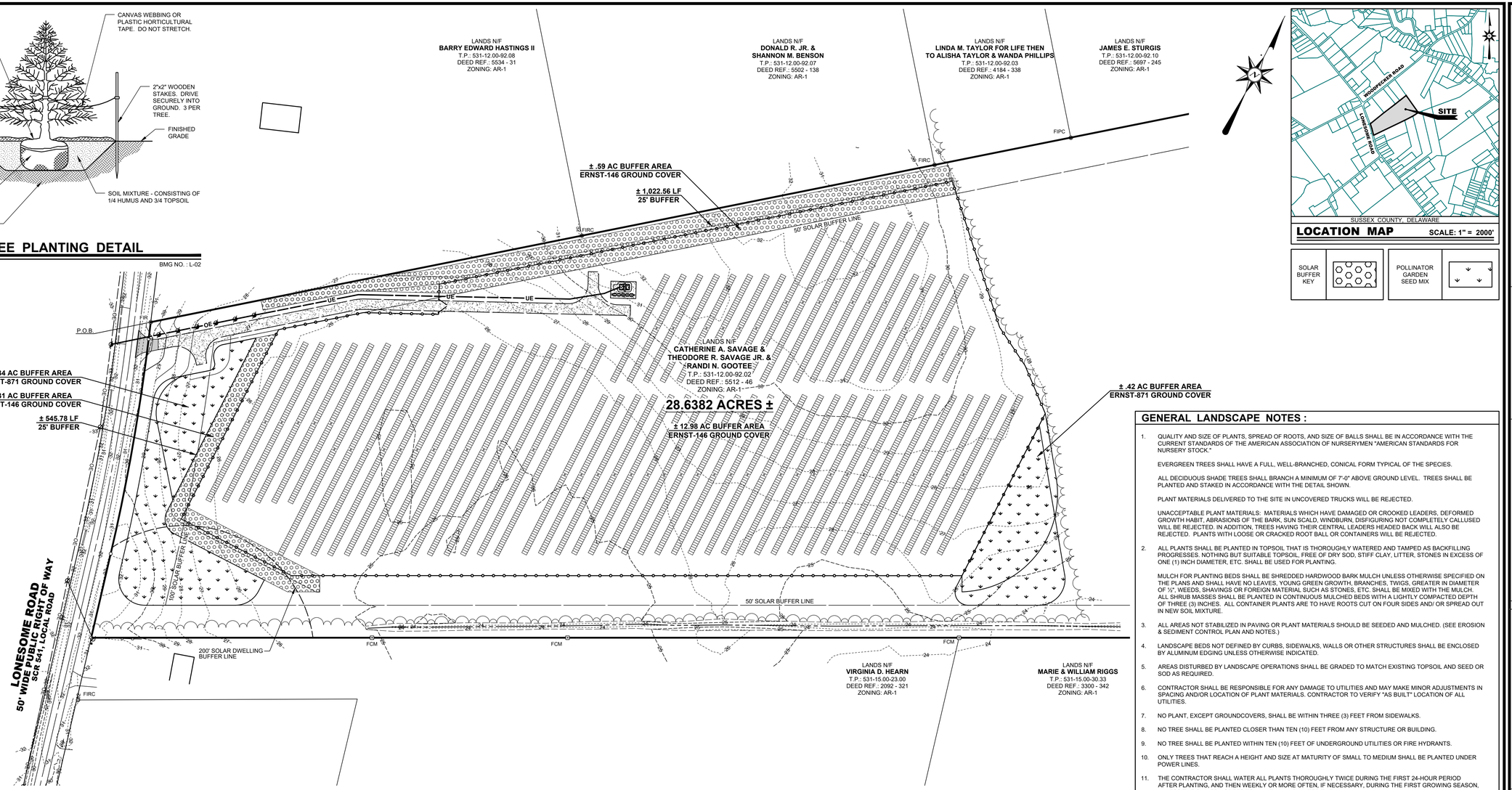


EVERGREEN TREE PLANTING DETAIL

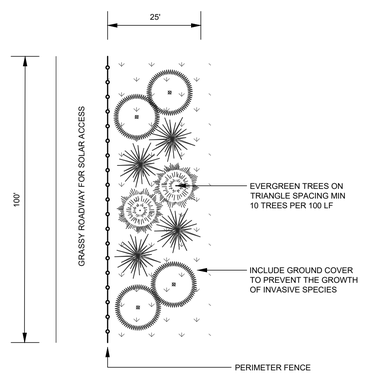
NO SCALE BMG NO. : L-02



LOCATION MAP SCALE: 1" = 2000'

SOLAR BUFFER KEY

POLLINATOR GARDEN SEED MIX



NOTES:

BUFFERYARD PLANTINGS SHALL BE ARRANGED IN A WAY THAT DIAMETER OF TREES SHALL OVERLAP WHEN VIEWED AT A PERPENDICULAR ANGLE TO EFFECTIVELY ACHIEVE AN OPAQUE VISUAL BARRIER.

EVERGREEN TREES SHALL PROVIDE A MINIMUM OF 3 SPECIES PER 100 LF OF BUFFER. NO PLANTED SPECIES SHALL MAKE UP MORE THAN 40% OF THE PLANTINGS.

SUSSEX CO. SOLAR BUFFERYARD DETAIL

NO SCALE BMG NO. : L-08

ERNST SEEDS

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: November 11, 2024

Fuzz & Buzz Mix - Standard - ERNMX-146

	Botanical Name	Common Name	Price/Lb
26.80 %	*Lolium perenne, 'Tetra Sweet', Tetraploid*	Perennial Ryegrass, 'Tetra Sweet', Tetraploid	3.60
21.00 %	*Dactylis glomerata, 'Pennlate'*	Orchardgrass, 'Pennlate'	4.44
18.90 %	*Poa pratensis, 'Ginger'*	Kentucky Bluegrass, 'Ginger' (pasture type)	4.20
12.40 %	*Bromus biebersteinii, 'Fleet'*	Meadow Brome, 'Fleet'	6.24
5.70 %	*Trifolium hybridum*	Alsike Clover	4.80
5.00 %	*Festuca elatior x Lolium perenne, Duo*	Festulolium, 'Duo'	3.60
4.80 %	*Trifolium pratense, Medium, Variety Not Stated*	Red Clover, Medium, Variety Not Stated	6.00
2.00 %	*Lotus corniculatus, 'Norcen'*	Bird's Foot Trefoil, 'Norcen'	10.80
1.00 %	*Linum perenne*	Perennial Blue Flax	48.00
0.90 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	28.80
0.60 %	*Cichorium intybus*	Blue Chicory	19.20
0.50 %	*Chrysanthemum leucanthemum*	Oxeye Daisy	40.80
0.40 %	*Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	264.00
100.00 %		**Mix Price/Lb Bulk:**	**$6.54**

Seeding Rate: Expect to apply about 40 lbs per acre with a cover crop of annual ryegrass 12 lbs/acre

Forage & Pasture Sites; Forage & Pasture Sites - Herbaceous Perennial; Solar Sites

The Fuzz & Buzz Mix-Standard was developed to address the unique nutritional needs of sheep, while providing a low-growing, easily maintained and sustainable vegetation solution for solar installations. The plant species were chosen with guidance from the American Solar Grazing Association (ASGA). The wildflowers in this mix support pollinators. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

ERNST SEEDS

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: April 24, 2025

VA Northern Coastal Plain UPL Meadow Mix - ERNMX-871

	Botanical Name	Common Name	Price/Lb
68.40 %	*Schizachyrium scoparium, Fort Indiantown Gap-PA Ecotype*	Little Bluestem, Fort Indiantown Gap-PA Ecotype	20.40
15.00 %	*Elymus virginicus, Madison-NY Ecotype*	Virginia Wildrye, Madison-NY Ecotype	11.10
3.00 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	31.20
3.00 %	*Rudbeckia hirta*	Blackeyed Susan	33.80
2.00 %	*Chamaecrista fasciculata, PA Ecotype*	Partridge Pea, PA Ecotype	13.00
1.90 %	*Lespedeza virginica, VA Ecotype*	Slender Lespedeza, VA Ecotype	234.00
1.10 %	*Asclepias tuberosa, PA Ecotype*	Butterfly Milkweed, PA Ecotype	468.00
1.00 %	*Chamaecrista nictitans, NC Ecotype*	Sensitive Pea, NC Ecotype	62.40
1.00 %	*Eragrostis spectabilis, RI Ecotype*	Purple Lovegrass, RI Ecotype	208.00
1.00 %	*Pycnanthemum tenuifolium*	Narrowleaf Mountainmint	260.00
0.50 %	*Aster lateriflorus*	Calico Aster	364.00
0.50 %	*Aster pilosus, PA Ecotype*	Heath Aster, PA Ecotype	286.00
0.50 %	*Monarda punctata, FL Ecotype*	Spotted Beebalm, FL Ecotype	338.00
0.50 %	*Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	312.00
0.30 %	*Heliopsis helianthoides, PA Ecotype*	Oxeye Sunflower, PA Ecotype	36.40
0.20 %	*Asclepias syriaca, PA Ecotype*	Common Milkweed, PA Ecotype	104.00
0.10 %	*Solidago bicolor, PA Ecotype*	White Goldenrod, PA Ecotype	312.00
100.00 %		**Mix Price/Lb Bulk:**	**$39.86**

Seeding Rate: Seed at 20 lbs/acre with a cover crop. For a cover crop use one of the following: grain oats (30 lbs/acre; 1 Jan to 30 Apr), brown top millet (10 lbs/acre; 1 May to 31 Aug), or Grain Rye (30 lbs/acre; 1 Sep to 31 Dec).

Grasses & Grass-like Species - Herbaceous Perennial; Herbaceous Flowering Species - Herbaceous Perennial; Pollinator Favorites; Uplands & Meadows

Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

GENERAL LANDSCAPE NOTES :

1. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN "AMERICAN STANDARDS FOR NURSERY STOCK."

   EVERGREEN TREES SHALL HAVE A FULL, WELL-BRANCHED, CONICAL FORM TYPICAL OF THE SPECIES.

   ALL DECIDUOUS SHADE TREES SHALL BRANCH A MINIMUM OF 7'-0" ABOVE GROUND LEVEL. TREES SHALL BE PLANTED AND STAKED IN ACCORDANCE WITH THE DETAIL SHOWN.

   PLANT MATERIALS DELIVERED TO THE SITE IN UNCOVERED TRUCKS WILL BE REJECTED.

   UNACCEPTABLE PLANT MATERIALS: MATERIALS WHICH HAVE DAMAGED OR CROOKED LEADERS, DEFORMED GROWTH HABIT, ABRASIONS OF THE BARK, SUN SCALD, WINDBURN, DISFIGURING NOT COMPLETELY CALLUSED WILL BE REJECTED. IN ADDITION, TREES HAVING THEIR CENTRAL LEADERS HEADED BACK WILL ALSO BE REJECTED. PLANTS WITH LOOSE OR CRACKED ROOT BALL OR CONTAINERS WILL BE REJECTED.

2. ALL PLANTS SHALL BE PLANTED IN TOPSOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACKFILLING PROGRESSES. NOTHING BUT SUITABLE TOPSOIL, FREE OF DRY SOD, STIFF CLAY, LITTER, STONES IN EXCESS OF ONE (1) INCH DIAMETER, ETC. SHALL BE USED FOR PLANTING.

   MULCH FOR PLANTING BEDS SHALL BE SHREDDED HARDWOOD BARK MULCH UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SHALL HAVE NO LEAVES, YOUNG GREEN GROWTH, BRANCHES, TWIGS, GREATER IN DIAMETER OF ½", WEEDS, SHAVINGS OR FOREIGN MATERIAL SUCH AS STONES, ETC. SHALL BE MIXED WITH THE MULCH. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS WITH A LIGHTLY COMPACTED DEPTH OF THREE (3) INCHES. ALL CONTAINER PLANTS ARE TO HAVE ROOTS CUT ON FOUR SIDES AND/ OR SPREAD OUT IN NEW SOIL MIXTURE.

3. ALL AREAS NOT STABILIZED IN PAVING OR PLANT MATERIALS SHOULD BE SEEDED AND MULCHED. (SEE EROSION & SEDIMENT CONTROL PLAN AND NOTES.)

4. LANDSCAPE BEDS NOT DEFINED BY CURBS, SIDEWALKS, WALLS OR OTHER STRUCTURES SHALL BE ENCLOSED BY ALUMINUM EDGING UNLESS OTHERWISE INDICATED.

5. AREAS DISTURBED BY LANDSCAPE OPERATIONS SHALL BE GRADED TO MATCH EXISTING TOPSOIL AND SEED OR SOD AS REQUIRED.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND MAY MAKE MINOR ADJUSTMENTS IN SPACING AND/OR LOCATION OF PLANT MATERIALS. CONTRACTOR TO VERIFY "AS BUILT" LOCATION OF ALL UTILITIES.

7. NO PLANT, EXCEPT GROUNDCOVERS, SHALL BE WITHIN THREE (3) FEET FROM SIDEWALKS.

8. NO TREE SHALL BE PLANTED CLOSER THAN TEN (10) FEET FROM ANY STRUCTURE OR BUILDING.

9. NO TREE SHALL BE PLANTED WITHIN TEN (10) FEET OF UNDERGROUND UTILITIES OR FIRE HYDRANTS.

10. ONLY TREES THAT REACH A HEIGHT AND SIZE AT MATURITY OF SMALL TO MEDIUM SHALL BE PLANTED UNDER POWER LINES.

11. THE CONTRACTOR SHALL WATER ALL PLANTS THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING, AND THEN WEEKLY OR MORE OFTEN, IF NECESSARY, DURING THE FIRST GROWING SEASON, UNLESS THE OWNER AGREES TO MAINTAIN AND WATER THEM.

12. TREES TO REMAIN ON-SITE SHALL BE PROTECTED WITH SNOW FENCE DURING CONSTRUCTION (SEE DETAIL). SNOW FENCING TO BE MAINTAINED DURING CONSTRUCTION BY CONTRACTOR.

13. THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.

14. NO SUBSTITUTIONS SHALL BE MADE WITHOUT APPROVAL OF THE OWNER AND/ OR THE LANDSCAPE ARCHITECT.

15. ALL NEW TREES SHALL BE GUARANTEED TO SURVIVE FOR ONE FULL YEAR AFTER INSTALLATION (FULL COST). ALL STAKES AND GUYS SHALL BE REMOVED FROM TREES AND SITE AS EARLY AS THREE (3) MONTHS, BUT NO LONGER THAN ONE (1) YEAR AFTER PLANTING.

SUSSEX COUNTY SOLAR - TREE DENSITY & BUFFER NOTES:

1. PERIMETER BUFFER PROVIDED : 1,568.34 LF OF OPAQUE EVERGREEN BUFFERING

   EACH EVERGREEN TREE SHALL BE PLANTED AT A HEIGHT OF NO LESS THAN 6'
   NO SPECIES SHALL COMPRISE OF MORE THAN 40% OF THE TOTAL WITHIN 100LF
   THE FOLLOWING SPECIES OF EVERGREEN TREES ARE ACCEPTABLE:

ILEX CRENATA	10' MATURE HEIGHT
ILEX OPACA	15-20' MATURE HEIGHT
CEDRUS ATLANTICA	30-40' MATURE HEIGHT
PLATYCLADUS ORIENTALIS	18-25' MATURE HEIGHT
THUJA OCCIDENTALIS 'TECHNY'	12-15' MATURE HEIGHT
THUJA X GREEN GIANT	30-40' MATURE HEIGHT

2. BUFFER TREES PROVIDED : 1,568.34 LF / 100 LF @ 25' WIDE = 15.68 BUFFER UNITS
   15.68 BUFFER UNITS X 10 TREES = 156.8 = 157 TREES (MIN)

3. GROUND COVER PROVIDED: SOLAR ARRAY AREA = 12.98 AC
   BUFFER AREA = .9 AC
   POLLINATOR GARDEN AREA = .76 AC
   TOTAL GROUND COVER ACREAGE: 14.64 ACRES

DELAWARE LANDSCAPE ARCHITECTS CERTIFICATION

I, CHAD D. CARTER, RLA, ASLA, HEREBY CERTIFY THAT I AM A LANDSCAPE ARCHITECT IN THE STATE OF DELAWARE, THAT THE LANDSCAPING INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF, REPRESENTS GOOD LANDSCAPING PRACTICES.

CHAD D. CARTER, RLA, ASLA S1-499 DATE

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

eca solar

PROJECT TITLE

LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC

LONESOME ROAD
SEAFORD HUNDRED
SUSSEX COUNTY, DELAWARE

SHEET TITLE

LANDSCAPE PLAN

0 40 80 160

SCALE: 1" = 80'

ISSUE BLOCK

MARK	DATE	DESCRIPTION

LAYER STATE: L-001

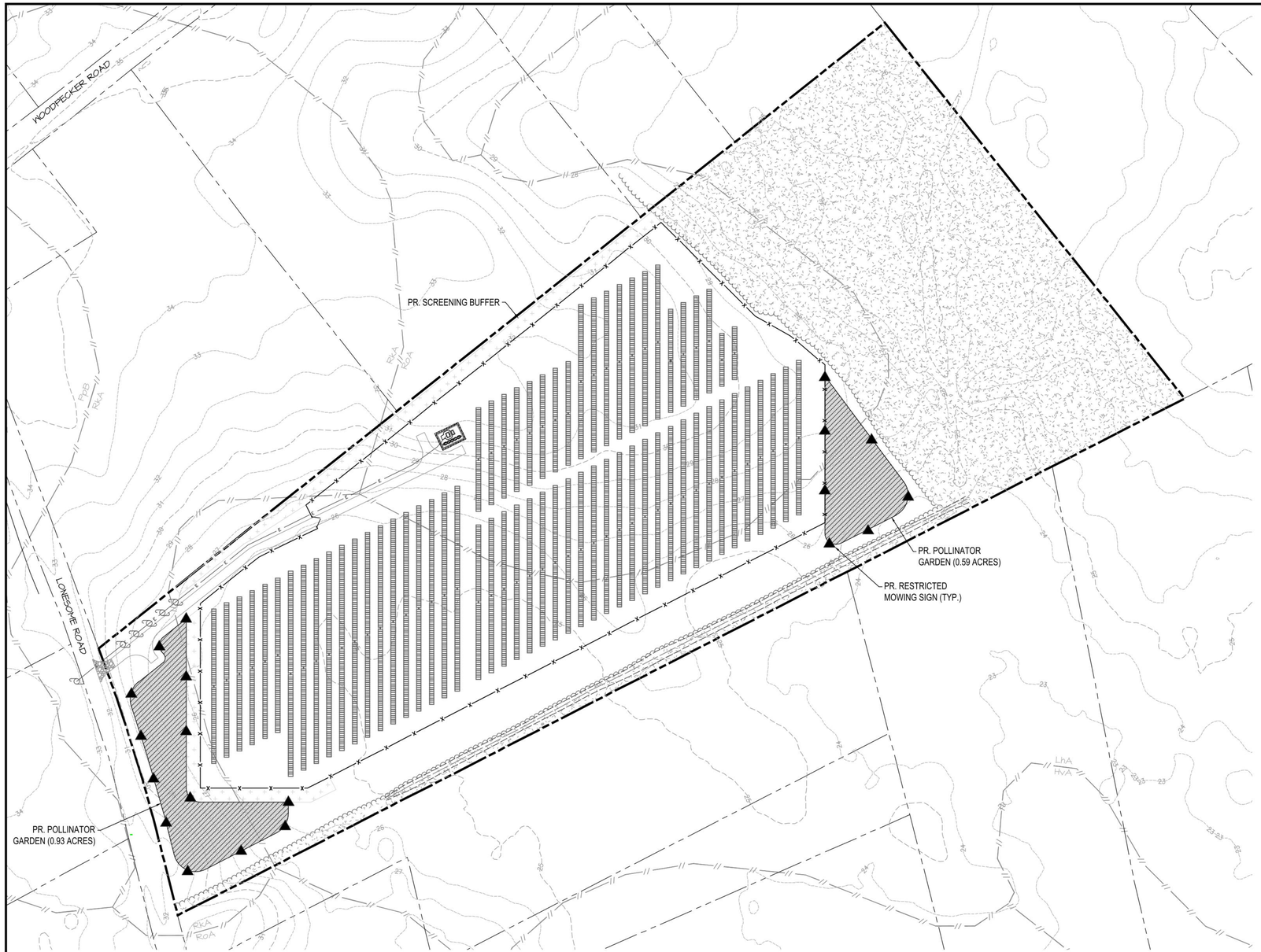
PROJECT NO.:	2025036.00
DATE:	5-21-25
SCALE:	1" = 80'
DRAWN BY: P.R.R.	PROJ. MGR.: M.J.H.

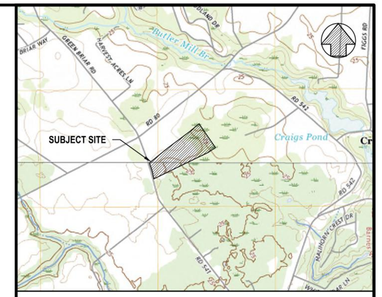
SHEET

L-001

COPYRIGHT 2023

F:\Projects\2025\2025036000\10_Civil\DWG\2025036-LSCAPE-C3D21.dwg, May 20, 2025 - 4:06pm





VICINITY MAP

SCALE: 1"=2,000'

UNITED STATES GEOLOGICAL SURVEY, SEAFORD, DELAWARE AND SHARPTOWN, MARYLAND QUADRANGLES, 7.5 MINUTE TOPOGRAPHIC MAP SERIES, DATED 2023.

GENERAL INFORMATION

1. PLAN PREPARED FOR: LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC
   203 CRESCENT STREET, SUITE 106
   WALTHAM, MASSACHUSETTS 02453
   ATTN: MR. MICHAEL REDDING
2. PLAN PREPARED BY: GEO-TECHNOLOGY ASSOCIATES, INC. (GTA)
   3445-A BOX HILL CORPORATE CENTER DRIVE
   ABINGDON, MARYLAND 21009
   ATTN: MR. MATTHEW JENNETTE
   PHONE: 410-515-9446
   EMAIL: MJENNETTE@GTAENG.COM
3. AREA OF REVIEW: 28.0± ACRES
4. THIS PLAN WAS PRODUCED ON A BASE MAP PROVIDED BY LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC.
5. THIS POLLINATOR PLANTING PLAN WAS PREPARED BASED ON RECOMMENDATIONS RECEIVED FROM BILL MCAVOY, BOTANIST AT THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL.
6. THERE ARE NO AREAS OF 100-YEAR FLOODPLAIN WITHIN THE SUBJECT SITE PER FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 24001C0295G, EFFECTIVE MAY 5, 2014.
7. THE SUBJECT SITE GENERALLY DRAINS SOUTHEAST TOWARDS BUTLER MILL BRANCH, A TRIBUTARY OF NANTICOKE RIVER.
8. A WETLAND DELINEATION OF THE SUBJECT SITE WAS PERFORMED BY GTA IN DECEMBER 2024.
9. GTA'S CONCLUSIONS REGARDING THIS SITE HAVE BEEN BASED ON OBSERVATIONS OF EXISTING CONDITIONS, PROFESSIONAL EXPERIENCE, AND GENERALLY ACCEPTED PROFESSIONAL ENVIRONMENTAL PRACTICE UNDER SIMILAR CIRCUMSTANCES. SEASONAL VEGETATION CYCLES AND FLUCTUATIONS IN PRECIPITATION OR WEATHER CONDITIONS CAN RESULT IN DIFFERENCES IN THE PERCEPTION OF HYDROLOGIC CONDITIONS AND THE PRESENCE OF PREDOMINANTLY HYDROPHYTIC VEGETATION, WHICH CAN ALTER GTA'S EVALUATION OF WETLANDS/WATERBODIES.
10. IT IS IMPORTANT TO NOTE THAT THIS EVALUATION IS GTA'S PROFESSIONAL OPINION, ONLY. DECISIONS REGARDING THE OFFICIAL JURISDICTIONAL STATUS OF WETLANDS/WATERBODIES ARE MADE BY FEDERAL, STATE, AND/OR LOCAL REGULATORY AGENCIES.
11. THIS PLAN WAS PREPARED BY GTA FOR THE SOLE AND EXCLUSIVE USE OF LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC. ANY REPRODUCTION OF THIS PLAN BY ANY OTHER PERSON WITHOUT THE EXPRESSED WRITTEN PERMISSION OF GTA AND LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC IS UNAUTHORIZED, AND SUCH USE IS AT THE SOLE RISK OF THE USER.

LEGEND

- SUBJECT SITE
- EX. PROPERTY BOUNDARY
- EX. 1-FOOT CONTOUR
- EX. 5-FOOT CONTOUR
- EX. TREELINE
- EX. SOIL BOUNDARY
- PR. FENCE
- PR. GRAVEL ROAD
- PR. UNDERGROUND ELECTRIC
- PR. OVERHEAD ELECTRIC
- PR. SCREENING BUFFER
- PR. POLLINATOR GARDEN
- PR. RESTRICTED MOWING SIGN

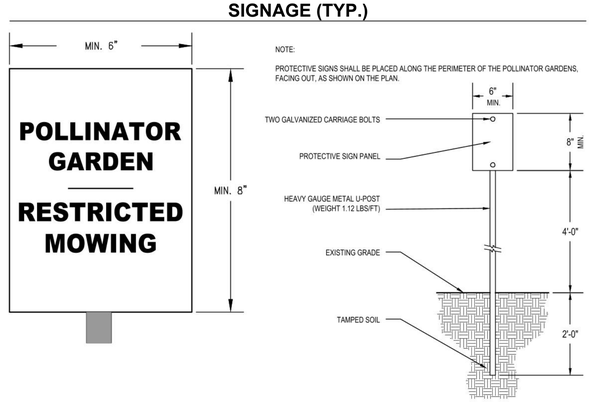
SEEDING SPECIFICATIONS FOR POLLINATOR GARDENS

VA NORTHERN COASTAL PLAIN UPL MEADOW MIX (ERNMX-871; OR EQUIVALENT)

COMMON NAME	SCIENTIFIC NAME	INDICATOR STATUS	HEIGHT AT MATURITY (FEET)	PERCENT IN MIX	PLANTING SPECIFICATION
LITTLE BLUESTEM	*SCHIZACHYRIUM SCOPARIUM*	FACU	4	68.4%	SEEDING RATE: 20 LB/ACRE SEED THIS MIX WITH OATS (*AVENA SATIVA*) AS A COMPANION CROP A AT 30 LB/ACRE. SEEDING METHOD: WEATHER AND SUB-CONTRACTOR DEPENDENT. SEED SHALL BE PROVIDED IN SEALED CONTAINERS CLEARLY LABELED WITH SEED NAME, WEIGHT, AND PERCENTAGES OF SEED MIXTURE. PRIOR TO SEEDING, ALL PROPOSED SEEDING AREAS SHALL BE RAKED OR DISKED TO MAXIMIZE SOIL-SEED CONTACT AND TO CLEAR SOIL OF STONES, DEBRIS, WEEDS, PRIOR PLANT GROWTH, STICKS, STUMPS, AND OTHER DEBRIS OR IRREGULARITIES WHICH MIGHT INTERFERE WITH THE SEEDING OPERATION, GROWTH OF PLANT SPECIES, OR SUBSEQUENT MAINTENANCE OF THE GRASS COVERED AREAS. MULCHING: STRAW MULCH TO BE APPLIED AT 3 TONS PER ACRE (OR 140 LBS PER 1,000 SQ. FT.) TO SEEDED AREAS WHEN NON-TACKIFIER SEEDING METHOD IS IMPLEMENTED. HAND APPLICATION OF MULCH IS ENCOURAGED.
VIRGINIA WILDRYE	*ELYMUS VIRGINICUS*	FAC	3	15.0%	
LANCELEAF COREOPSIS	*COREOPSIS LANCEOLATA*	UPL	2	3.0%	
BLACKEYED SUSAN	*RUDBECKIA HIRTA*	FACU	3	3.0%	
PARTRIDGE PEA	*CHAMAECRISTA FASCICULATA*	FACU	2	2.0%	
SLENDER LESPEDEZA	*LESPEDEZA VIRGINICA*	UPL	3	1.9%	
BUTTERFLY MILKWEED	*ASCLEPIAS TUBEROSA*	UPL	3	1.1%	
SENSITIVE PEA	*CHAMAECRISTA NICTITANS*	FACU	1	1.0%	
PURPLE LOVEGRASS	*ERAGROSTIS SPECTABILIS*	FACU	2	1.0%	
NARROWLEAF MOUNTAINMINT	*PYCANANTHEMUM TENUIFOLIUM*	FACW	2	1.0%	
CALICO ASTER	*ASTER LATERIFLORUS*	UPL	4	0.5%	
HEATH ASTER	*ASTER PILOSUS*	UPL	4	0.5%	
SPOTTED BEEBALM	*MONARDA PUNCTATA*	FACU	3	0.5%	
GRAY GOLDENROD	*SOLIDAGO NEMORALIS*	UPL	3	0.5%	
OXEYE SUNFLOWER	*HELIOPSIS HELIANTHOIDES*	UPL	4	0.3%	
COMMON MILKWEED	*ASCLEPIAS SYRIACA*	UPL	6	0.2%	
WHITE GOLDENROD	*SOLIDAGO BICOLOR*	UPL	4	0.1%	

NOTE: SEED MIXES ARE AVAILABLE FROM ERNST CONSERVATION SEEDS, 8884 MERCER PIKE, MEADVILLE, PA 16335. EQUIVALENT SEED MIX IS ACCEPTABLE.

SIGNAGE (TYP.)



POLLINATOR GARDEN MANAGEMENT NOTES

1. SITE PREPARATION
   1.1. PRIOR TO SEEDING, CONTRACTORS SHOULD ENSURE THAT THE SITE IS FREE OF CONSTRUCTION DEBRIS AND TRASH. CONTRACTORS SHOULD CARRY OUT SOIL RIPPING AND COMPOST AMENDMENT TO A DEPTH OF 6 INCHES TO REDUCE SOIL COMPACTION CAUSED BY CONSTRUCTION ACTIVITIES.
   1.2. TO REDUCE COMPETITION FROM INVASIVE OR UNDESIRABLE SPECIES, PLANTING AREAS CAN BE DISC HARROWED EVERY 2-4 WEEKS FOR 1-2 MONTHS. PLANTING SHOULD NOT TAKE PLACE UNTIL PERENNIAL WEEDS ARE COMPLETELY KILLED.
   1.3. IF HERBICIDES ARE USED TO CONTROL EXISTING VEGETATION, FOLLOW APPLICATION RATES AND FREQUENCY AS SPECIFIED ON THE PRODUCT LABEL.
2. SEEDING
   2.1. PLANTING CAN BE COMPLETED BY HAND SEEDING, BROADCAST SEEDING, HYDROSEEDING, OR DRILL SEEDING. SEEDING SHOULD FOLLOW MANUFACTURERS RECOMMENDED RATE AND SHOULD INCLUDE A NURSERY CROP AS RECOMMENDED BY THE MANUFACTURER.
   2.2. FALL OR SPRING SEEDING IS RECOMMENDED.
   2.3. PLANTING AREA SHOULD BE MULCHED IMMEDIATELY AFTER SEEDING WITH STRAW.
   2.4. MULTIPLE SEEDING EVENTS MAY BE REQUIRED TO ACHIEVE UNIFORM COVERAGE AND GERMINATION.
3. RECOMMENDED MAINTENANCE - FIRST GROWING SEASON
   3.1. WHENEVER CANOPY HEIGHT (OVERALL VEGETATION) REACHES 18"-24", TRIM THE MEADOW TO 8" USING A BRUSH HOG MOWER OR STRING TRIMMER. TRIMMING SHOULD CEASE BY MID-SEPTEMBER.
   3.2. UNDESIRABLE OR INVASIVE SPECIES SHOULD BE HAND PULLED OR SPOT SPRAYED USING AN APPROVED HERBICIDE.
4. RECOMMENDED MAINTENANCE - SECOND AND SUBSEQUENT GROWING SEASONS
   4.1. PRIOR TO NEW SPRING GROWTH REACHING 2", TRIM ANY REMAINING MATERIAL FROM THE PREVIOUS YEAR CLOSE TO THE GROUND (APPROXIMATELY 2").
   4.2. UNDESIRABLE OR INVASIVE SPECIES SHOULD BE HAND PULLED OR SPOT SPRAYED USING AN APPROVED HERBICIDE.

SOILS TABLE

SYMBOL[1]	NAME/DESCRIPTION[1]	HYDRIC SOIL[2]	HYDRIC COMPONENT[2]	PERCENTAGE OF MAPPING UNIT[2]	POSITION IN LANDSCAPE[2]
LhA	LENNI SILT LOAM, 0-2% SLOPES	YES	LENNI, DRAINED	50	FLATS, SWALES, DEPRESSIONS
			LENNI, UNDRAINED	30	
			CORSICA	5	DEPRESSIONS
RkA	ROCKAWALKIN LOAMY SAND, 0-2% SLOPES	NO			
RoA	ROSEDALE LOAMY SAND, 0-2% SLOPES	NO			

1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, SUSSEX COUNTY, DELAWARE. SOIL SURVEY DATA VERSION 21, DATED NOVEMBER 2024.
2. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE. HYDRIC SOILS LIST BY STATE. AVAILABLE AT *HTTPS://EFOTG.SC.EGOV.USDA.GOV/REFERENCES/PUBLIC/IL/STATE_LIST_NRCS_HYDRIC_SOILS_REPORT_DYNAMIC_DATA.HTML* AND ACCESSED ON DECEMBER 12, 2024.

NORTH

0' 25' 50' 100' 200'

SCALE: 1"=100'

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
PHONE: 410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM

© GEO-TECHNOLOGY ASSOCIATES, INC.

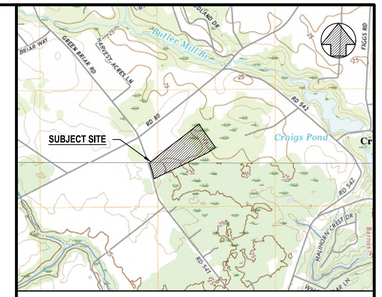
POLLINATOR GARDEN PLANTING PLAN

LONESOME ROAD

SUSSEX COUNTY, DELAWARE

REVISIONS:

JOB NO:	31242754
SCALE:	1"=100'
DATE:	MAY 16, 2025
DRAWN BY:	MAJ
DESIGN BY:	
REVIEW BY:	KRM
SHEET:	1 OF 1



VICINITY MAP

SCALE: 1"=2,000'

UNITED STATES GEOLOGICAL SURVEY, SEAFORD, DELAWARE AND SHARPTOWN, MARYLAND QUADRANGLES, 7.5 MINUTE TOPOGRAPHIC MAP SERIES, DATED 2023.

GENERAL INFORMATION

1. LOCATION: EAST OF LONESOME ROAD AND SOUTH OF WOODPECKER ROAD ROAD IN THE SEAFORD AREA OF SUSSEX COUNTY, DELAWARE

2. PLAN PREPARED FOR: LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC
203 CRESCENT STREET, SUITE 106
WALTHAM, MASSACHUSETTS 02453
ATTN: MS. MICHAEL REDDING

3. PLAN PREPARED BY: GEO-TECHNOLOGY ASSOCIATES, INC. (GTA)
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
ATTN: MR. MATTHEW JENNETTE
PHONE: 410-515-9446
EMAIL: MJENNETTE@GTAENG.COM

MORRIS AND RITCHIE ASSOCIATES, INC. (MRA)
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
ATTN: MR. TAYLOR BECKER
PHONE: 410-515-9000
EMAIL: TBECKER@MRAGTA.COM

4. AREA OF REVIEW: 28.0± ACRES

5. TAX PARCELS: 531-12.00-92.02

6. DEED REFERENCES: 5512/46

7. TOPOGRAPHIC INFORMATION AND PROPERTY BOUNDARIES WERE OBTAINED FROM SUSSEX COUNTY GIS APPLICATIONS.

8. ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 10005C0381K, EFFECTIVE MARCH 16, 2015 AND NUMBER 10005C0245L EFFECTIVE JUNE 20, 2018, THE SUBJECT SITE IS NOT LOCATED WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN.

9. SOILS SHOWN ON THIS PLAN WERE ADAPTED FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE'S WEB SOIL SURVEY, ACCESSED ON DECEMBER 12, 2024. AVAILABLE ONLINE AT <HTTPS://WEBSOILSURVEY.NRCS.USDA.GOV/APP/>.

10. WETLAND DELINEATION AND FOREST ASSESSMENT OF THE SUBJECT SITE WAS PERFORMED BY GTA IN DECEMBER 2024.

11. AS A RESULT OF THE REVIEW OF THE SITE, IT IS GTA'S PROFESSIONAL OPINION THAT THERE ARE NO JURISDICTIONAL "WATERS OF THE U.S.", INCLUDING WETLANDS, PRESENT WITHIN THE SUBJECT SITE.

12. GTA'S CONCLUSIONS REGARDING THIS SITE HAVE BEEN BASED ON OBSERVATIONS OF EXISTING CONDITIONS, PROFESSIONAL EXPERIENCE, AND GENERALLY ACCEPTED PROFESSIONAL ENVIRONMENTAL PRACTICE UNDER SIMILAR CIRCUMSTANCES. SEASONAL VEGETATION CYCLES AND FLUCTUATIONS IN PRECIPITATION OR WEATHER CONDITIONS CAN RESULT IN DIFFERENCES IN THE PERCEPTION OF HYDROLOGIC CONDITIONS AND THE PRESENCE OF PREDOMINANTLY HYDROPHYTIC VEGETATION, WHICH CAN ALTER GTA'S EVALUATION OF WETLANDS/WATERWAYS.

13. IT IS IMPORTANT TO NOTE THAT THIS EVALUATION IS GTA'S PROFESSIONAL OPINION, ONLY. DECISIONS REGARDING THE OFFICIAL JURISDICTIONAL STATUS OF WETLANDS/WATERWAYS ARE MADE BY FEDERAL, STATE, AND/OR LOCAL REGULATORY AGENCIES.

14. THIS PLAN WAS PREPARED BY GTA FOR THE SOLE AND EXCLUSIVE USE OF LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC. ANY REPRODUCTION OF THIS PLAN BY ANY OTHER PERSON WITHOUT THE EXPRESSED WRITTEN PERMISSION OF GTA AND LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC IS UNAUTHORIZED, AND SUCH USE IS AT SOLE RISK OF THE USER.

SOILS TABLE

SYMBOL[1]	NAME/DESCRIPTION[1]	HYDRIC SOIL[2]	HYDRIC COMPONENT[2]	PERCENTAGE OF MAPPING UNIT[2]	POSITION IN LANDSCAPE[2]
LhA	Lenni silt loam, 0 to 2 percent slopes	Yes	Lenni, drained	50	Flats, swales, depressions
			Lenni, undrained	30	
			Corsica	5	Depressions
RkA	Rockawalkin loamy and, 0 to 2 percent slopes	No			
RoA	Rosedale loamy sand, 0 to 2 percent slopes	No			

1, UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, SUSSEX COUNTY, DELAWARE, SOIL SURVEY DATA VERSION 25, DATED AUGUST 31, 2024.
2. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, HYDRIC SOILS LIST BY STATE, AVAILABLE AT *HTTPS://EFOTG.SC.EGOV.USDA.GOV/REFERENCES/PUBLIC/IL/STATE_LIST_NRCS_HYDRIC_SOILS_REPORT_DYNAMIC_DATA.HTML* AND ACCESSED ON DECEMBER 12, 2024.

LEGEND

- SUBJECT SITE
- EX. PROPERTY BOUNDARY
- EX. 1-FOOT CONTOUR
- EX. 5-FOOT CONTOUR
- EX. SOIL BOUNDARY
- EX. FORESTED AREAS

FOREST ASSESSMENT SUMMARY NARRATIVE

FOREST STAND A

STAND A IS A MID-SUCCESSIONAL STAGE FOREST, DOMINATED BY QUERCUS ALBA, QUERCUS FALCATA, AND *PINUS TAEDA*. *ILEX OPACA* AND NYSSA *SYLVATICA* ARE THE PRIMARY CODOMINANT SPECIES WITHIN STAND A. THE MAJORITY OF DOMINANT TREES IN THIS STAND EXHIBIT AVERAGE DBH'S IN THE 20 TO 29.9-INCH RANGE. THE UNDERSTORY IS DOMINATED BY *ILEX OPACA*. THE HERBACEOUS LAYER WAS DOMINATED BY *SMILAX ROTUNDIFOLIA, CLETHRA ALNIFOLIA, ILEX OPACA, AND CHASMANTHIUM LAXUM*. THE STAND DID NOT EXHIBIT A HIGH PRESENCE OF INVASIVE SPECIES. THE FOREST GENERALLY APPEARS HEALTHY AND RELATIVELY FREE OF DISEASE AND PESTS.

FOREST STAND AREAS

FOREST STAND #	ACREAGE
A	8.1 AC

FOREST STAND SUMMARY SHEET

STAND VARIABLE	STAND A
DOMINANT/ CODOMINANT SPECIES	DOMINANT: *PINUS TAEDA*, QUERCUS FALCATA, & *QUERCUS ALBA* CODOMINANT: *ILEX OPACA & NYSSA SYLVATICA*
SUCCESSIONAL STAGE	MID SUCCESSIONAL
SIZE CLASS OF DOMINANT SPECIES	20-29.9"
PERCENT CANOPY CLOSURE	100%
COMMON UNDERSTORY SPECIES	*ILEX OPACA*
PERCENT OF UNDERSTORY COVER 3' TO 20' TALL	40%
COMMON HERBACEOUS & WOODY PLANT COVER 0' TO 3' TALL	*CLETHRA ALNIFOLIA, SMILAX ROTUNDIFOLIA, ILEX OPACA, CHASMANTHIUM LAXUM*
PERCENT OF HERBACEOUS & WOODY PLANT COVER 0' TO 3' TALL	35%
LIST OF MAJOR INVASIVE PLANT SPECIES & PERCENT COVER	-
OCCURANCE OF STANDING DEAD TREES 6" DBH OPR GREATER	FEW
COMMENTS	-

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
PHONE: 410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM

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TAYLOR BECKER No. 10632 REGISTERED LANDSCAPE ARCHITECT STATE OF DELAWARE

FOREST ASSESSMENT

LONESOME ROAD

SUSSEX COUNTY, DELAWARE

REVISIONS:

JOB NO:	31242754
SCALE:	1"=100'
DATE:	APRIL 9, 2025
DRAWN BY:	DIA
DESIGN BY:	
REVIEW BY:	MAJ/TAS
SHEET:	1 OF 1

CONDITIONAL USE 2597

ECA SOLAR - LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC

September 2026

PREPARED BY:

BECKER MORGAN GROUP, INC.
309 S. GOVERNORS AVE.
DOVER, DE 19904

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1.2 Project Team
1.3 Project Data
1.4 Existing Conditions
1.5 Landscaping and Screening
1.6 Stormwater Management Requirements
1.7 Proposed Findings of Facts
1.8 Proposed Conditions

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2.3 Conditional Use Site Plan and Landscape Plan
2.4 Aerial Photo & Location
2.5 Zoning Map
2.6 Existing Land Use
2.7 Future Land Use
2.8 Strategies for State Policies Spending
2.9 Watersheds Waterways
2.10 FEMA Flood Insurance Rate Map (FIRM)
2.11 Soils Map
2.12 Property Value Impact Report
2.13 Fencing and Landscaping Buffer Rendering

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3.3 DelDOT Service Level Evaluation Response
3.4 Public Outreach Correspondence

1.0 Project Overview – (CONDITIONAL USE 2597 – LONESOME ROAD COMMUNITY ENERGY INIATIVE, LLC)

1.1 Executive Summary

The subject property is located on Lonesome Road in Sussex County, Delaware. The existing zoning is AR-1 – Agricultural Residential. The site is located within the Investment level 4 area, per the 2025 Delaware Strategies for State Policies and Spending. The 28.64 acre site is located within "Low Density" according to the Sussex County Comprehensive Plan, Future Land Use Map (2019).

The property has access from Lonesome Road at the northwestern corner of the property. The project will take access from Lonesome Road from a proposed entrance as part of the plan. The site is currently row crops with about 9.61 acres of woods on the eastern portion of the site. The property is bordered on the northeast by woods, owned by William F. Haines Tull. To the southeast the property is bordered by multiple parcels owned by Virginia D. Hearn, Marie & William Riggs, and Rachel L. Hicks which are a mix of residential and woods. To the northwest the parcel is bordered by multiple parcels of residential use owned by Andrew Lefort, James E. Sturgis, Donald R. Jr. & Shannon M. Benson, and Barry Edwards Hastings II. To the southwest the parcel is bordered by Lonesome Road.

The site will be served by Delmarva Power. Sewer and Water service is not necessary for this project.

The proposed Solar Energy System will occupy approximately 13.45 +/- Ac. of the parcel as stated in the conditional use application. The remaining lands will remain in the existing condition along with 2 areas of the site being converted into pollinator gardens.

1.2 Project Team – (CONDITIONAL USE 2597 – LONESOME ROAD COMMUNITY ENERGY INIATIVE, LLC

Applicant / Developer:	**Lonesome Road Community Energy Initiative LLC**	
	Contact:	Michael Redding, P.E.
		203 Crescent Street, Suite 106
		Waltham, MA 02453
	Telephone:	603-494-6801
	e-mail:	mr@ecasolar.com
Architect / Civil Engineer / Surveyor:	**Becker Morgan Group, Inc.**	
	Contact:	Michael Henry
		309 South Governors Avenue
		Dover, DE 19904
	Telephone:	(302) 734-7950
	e-mail:	mhenry@beckermogan.com

1.3 Project Data – (CONDITIONAL USE 2597 – LONESOME ROAD COMMUNITY ENERGY INITIATIVE, LLC

Total Site Area:	28.64 +/- Acres
Current Zoning District:	AR-1 (Agricultural Residential)
Proposed Zoning:	AR-1 (Agricultural Residential)
Proposed Use:	Community Solar Energy System
Tax Parcel:	531-12.00-92.02

Woodlands:	Existing:	9.61 + / - Acres
	To Remain:	9.61 + / - Acres

Setbacks:	**AR-1 (SOLAR)**	
	Front:	100 ft
	Side:	50 ft
	Rear:	50 ft

Maximum Building Height: AR-1 42 ft

Utilities:

Sewer:	N/A
Water:	N/A
Electric:	Delmarva Power
Communications:	Comcast

Access roads:	Lonesome Road (Local Road Maintained by DelDOT)
Floodplain:	Zone X is within the subject site.
Wetlands:	N/A

1.4 Existing Conditions – (CONDITIONAL USE 2597 – LONESOME ROAD COMMUNITY ENERGY INITIATIVE, LLC

Overview of Current Site Conditions:

The subject property currently consists of row crops and woods. A copy of the aerial photograph taken from Delaware DEMAC 2024 has been provided.

The existing topography indicates that the site is low in the southern portion of the site with higher elevations at the northeastern and southwestern portions of the property. The higher portions of the site drain to the south section of the property which flow off the property via sheet flow and onto the southern adjacent parcels.

The USDA Soil Survey of Sussex County, Delaware shows the site to be (59.6%) Lenni silt loam, 0 to 2 percent slopes. (7.3%) Rockawalkin loamy sand, 0 to 2 percent slopes. (33.1%) Rosedale loamy sand, 0 to 2 percent slopes.

1.5 Landscaping and Screening (CONDITIONAL USE 2597 – LONESOME ROAD COMMUNITY ENERGY INITIATIVE, LLC

Buffering is proposed on the northwestern and southwestern sides on the solar energy system area while woods will screen the solar energy system on the northeastern and southeastern sides. The buffer will be 30' wide and consist of 5 evergreen and 10 canopy trees per 100 linear feet. The ground will be covered with the same meadow mix within the fence line to prevent the growth of invasive species. Two pollinator gardens are also proposed in the southwestern and eastern parts of the site. A Landscape plan has been provided to show the internal seeding used within the fenced area and details regarding the planted tree buffer and pollinator gardens.

1.6 Stormwater Management Regulations– (CONDITIONAL USE 2597 – LONESOME ROAD COMMUNITY ENERGY INIATIVE, LLC

A Sediment and Stormwater Management Plan review is required through Sussex Conservation District and will include review of drainage, and erosion and sediment control. The site drains to the south and onto the adjacent parcels which border the site.

1.7 Proposed Finding of Facts – (CONDITIONAL USE 2597 – LONESOME ROAD COMMUNITY ENERGY INIATIVE, LLC

1. This is an application for the conditional use of AR-1 – Agricultural Residential per Sussex County, DE zoning code

2. The subject property is a 28.64 acre parcel of land located on Lonesome Road and owned by Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee.

3. The applicant is Lonesome Road Community Energy Initiative LLC.

4. The development is proposed on existing row crops.

5. The 2018 Sussex County Comprehensive Plan updated in 2019, designates the subject parcel as "low density" as shown on the 2045 Future Land Use Map.

6. The State Strategies for Policies and Spending identify the area as Investment Level 4.

7. The proposed community solar project generates electricity which is provided into the electrical grid where it can be purchased by local homes and businesses via local electrical distribution lines compared to larger centralized powerplants; the centralized powerplants push power onto high voltage transmission lines which carry electricity hundreds to thousands of miles away; that a key benefit of community solar projects such as this is they generate electricity in the communities where the power is consumed; that

this reduces the need for long transmission lines and other costly infrastructure; that by providing clean, renewable power close to the end user, it improves the resiliency of the local distribution grid and delivers the power at an all-end lower cost to the user; that another benefit of community solar projects is the smaller footprint of the projects; that this means a smaller impact; and that the proposed site will occupy tens of acres versus hundreds or even thousands of acres.

8. The project area is currently row crops with no existing structures; that the anticipated project will be less than 18-acres; that the capacity to the proposed project is 2.000 megawatts of alternating current; that this is considered a relatively small project; that the project is sized to meet the local distribution system; that this type of project is connecting to the distribution grid as opposed to the electrical transmission system; that the point of interconnection will be at the existing electric line running along Lonesome Road.

9. The equipment will consist of tracking systems, which are mounted on support posts, panels which are installed on top of the tracking systems, inverters/transformers, interconnection equipment, which are typical utility poles and a small weather station; that at the end of the proposed access drive there is a turnaround for fire trucks and emergency personnel; that there is proposed fencing surrounding the array.

10. Stormwater runoff will be tightly controlled in accordance with State and local regulations; that there are no impact to drainage patterns anticipated due to the ability of the arrays to conform to the existing topography, as well as the gaps between panels and space between arrays allow infiltration into the ground's surface.

11. Solar panels are constructed of silicon semiconductors, much like a computer chip; that when the sunlight hits the semiconductor material, it creates a charge, which is a direct current; that the direct current is converted to an alternating current through converters so it can be fed into the distribution grid for use in homes and business; that solar creates clean, renewable electricity without the use of water, creating emissions or producing waste products; that its low visual profile and quiet operations makes for a great neighbor; that solar projects place no demand on County infrastructure or services such as roads, water, sewer, emergency services or schools; that construction consist of minimal grading and disturbance; that there are no regular employees on site, only those attending for periodic visits for inspections, maintenance or repair of the solar panels; that the solar projects are built using steel posts or ground sleeves to support the solar panels versus concrete or other foundations; and that this allows the land to return to its previous agricultural use at the end of the project; that no significant noise or dust will be generated by this facility.

12. Fencing is proposed around the entire perimeter of the project; that the proposed fencing will be a 8 ft. high, agricultural type fencing; that in the agreement with the property owner it is stated that, should the project no longer be needed, Lonesome Road Community Energy Initiative LLC would handle the removing of all equipment where it would then be recycled leaving the property back to agricultural land; that the only noise

the project would create would be a slight hum when the panel retracts to the sun; that the inverters will create an occasional slight hum; and that the project will operate in conformance to all local noise ordinances. A Noise Study was completed by a third party consultant demonstrating project compliance with the Noise Regulations of the State of Delaware. Although not required to meet the Noise Regulation standards, the project proposes that both equipment pads be surrounded by a 10' tall timber noise barrier to further reduce potential noise propagation.

1.8 Proposed Conditions – (CONDITIONAL USE 2597 – LONESOME ROAD COMMUNITY ENERGY INIATIVE, LLC

1. No storage facility shall be constructed on the site.

2. The lighting on the facility shall only consist of lighting needed for security purposes. All lighting shall be downward screened so that it does not shine on neighboring properties or roadways.

3. One unlighted sign not to exceed 32 sq ft in size shall be permitted.

4. This site shall be secure by fencing with a gate with a knoxbox or similar device to accommodate emergency access by the local fire company or other emergency responders. The fence shall be shown on the final site plan.

5. Any transformers or similar equipment shall be located on the site away from any nearby residential uses.

6. All of the grounds including the area outside of the fence shall be maintained so that they do not become overgrown.

7. All buffering adjacent to neighboring residential uses shall be consistent with that shown on the landscape plan.

8. The final site plan shall be subject to the review and approval of the Sussex County Planning and Zoning Commission.

2.0 List of Exhibits – (CONDITIONAL USE 2597 – LONESOME ROAD COMMUNITY ENERGY INIATIVE, LLC)

2.1 Developer Summary
2.2 Application for Planning and Zoning Commission
2.3 Conditional Use Site Plan and Landscape Plan
2.4 Aerial Photo & Location
2.5 Zoning Map
2.6 Existing Land Use
2.7 Future Land Use

2.8 Strategies for State Policies Spending
2.9 Watersheds Waterways
2.10 FEMA Flood Insurance Rate Map (FIRM)
2.11 Soils Map
2.12 Property Value Impact Report
2.13 Fencing and Landscaping Buffer Rendering

2.1 Developer Summary

Lonesome Road Community Energy Initiative LLC
203 Crescent Street St, Suite 106
Waltham, MA 02453

CONDITIONAL USE APPLICATION FOR SOLAR ENERGY GENERATION FACILITY

Lonesome Road, Seaford DE

PARCEL ID: 531-12.00-92.02

Project Description

Lonesome Road Community Energy Initiative LLC ("Applicant") intends to design and construct a solar facility on parcel 531-12.00-92.02 accessed via Lonesome Road in Seaford, DE. The facility will consist of a 3.0089 MWAC / 2.000 MWDC solar array. The array will be a tracker type array with its orientation in a north to south direction with the panels following the sunrise and sunset. Refer to the attached pictures for samples of the tracker array. The site will be subjected to minor grading as necessary to smooth out and fill in irregular spots. No import or export of soil is proposed. The array will be held in place using driven posts and no excavation will be required to construct foundations. The racking will be assembled on top of the driven posts followed by placement of the panels. The project will consist of approximately 4,776 solar panels in total and one 39'x27' equipment pad area for electrical equipment. It is currently estimated that approximately 7 new utility poles are required to connect the project to the existing distribution infrastructure. An 8' tall fence will surround the array and equipment for security purposes. The array will be screened from public view to the northeast and southeast by the existing vegetation onsite. A proposed landscape buffer will screen the array from public view to the northwest and southwest. A green, woven mesh will be installed along the project fence line to supplement the existing and proposed vegetative buffers and further restrict views of the solar array from nearby land uses. This mesh is similar to that used at tennis courts.

We are proposing to use a knot-wire fence which is typically used by orchards and other agriculture farms. The fence will have a gate that will be locked but will include a quick-entry system so that the fire department can access the array.

Currently there is no improved access to the site. We are proposing a 16' wide gravel access road to provide access to the facility from Lonesome Road. The access road will be used for construction, as well as emergency and maintenance access once the facility is operational. Two hammerhead turnarounds are proposed to accommodate fire engines and utility trucks. One turnaround is proposed adjacent to the interconnection utility poles outside of the facility. The second turnaround is proposed adjacent to the equipment pad inside the facility. Once built, the project will have very little traffic and will require 1 or 2 visits per quarter by a solar technician and or a landscaper. When the panels are at full tilt, our proposed array will sit 2 feet off the ground on the low side and 9 to 10 feet on the high side.

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203 Crescent Street St, Suite 106
Waltham, MA 02453

Renewable power from the project will be exported to Delmarva Power through its distribution infrastructure. The renewable power will go back to the local substation and be available to local users.

Conditional Use

In support of our Conditional Use permit application the following standards were referenced to minimize our impact on the community.

The use is so designed, located and proposed to be operated that the public health, safety, welfare and convenience will be protected.

Fire and Explosion Hazards

The facility will be designed in accordance with the National Electric Code and the National Fire Protection Act. The facility will be constructed by and under the supervision of a Delaware licensed electrician. The facility will be subject to inspections by the local and state building inspectors. In the event of an emergency, the facility will be designed to discharge all energized sources to a neutral which allows for it to be grounded. The facility will be constructed with a gang-operated-air-brake (GOAB) as well as a recloser that allows for emergency disconnection of the facility from the grid; these can be operated manually and the GOAB can also be operated remotely. The facility will be equipped with a quick-entry key system so the fire department can access the facility. The facility will contain a perimeter access path that surrounds the facility and allows sufficient access by firefighting equipment. There will be no storage of combustible liquids. If required, the Applicant can assist the local fire department with training on how best to respond to an emergency at the facility as well as how to perform emergency shut of procedures for the solar array. All emergency shut off devices will be clearly labeled and instructions will be posted at the facility.

Radioactivity or Electric Disturbance

The construction and operation will follow all Federal, State and Local regulations as it pertains to the project. The solar system will be interconnected to the existing electric distribution lines that are located along Lonesome Road. Underground conduit will connect the proposed equipment pad to an estimated 7 utility poles that will be mounted with utility-required electrical equipment. Final location of utility poles will be determined by the utility and is subject to change. Any significant changes will be reviewed with the County code enforcement officer.

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203 Crescent Street St, Suite 106
Waltham, MA 02453

Noise

A third-party consultant completed a noise study for this project. The study is attached to this narrative for reference. The noise study modeled the effect of noise producing equipment (inverters, transformer, and array tracking motors) on the nearby environment. This model was then compared to the applicable State noise regulations for this development. The most stringent requirement is that sound levels must be limited to 50 dB(A) at the property line within the hours of 10pm to 7am. The study determined that a 7-ft tall timber barrier is required to meet the most stringent noise requirement. This project proposes a 10-ft tall timber barrier to further reduce potential noise propagation. The proposed equipment pad is located approximately 550 feet to the closest offsite structure. Please refer to the attached noise study for more information.

Lighting/Glare

Light fixtures are not proposed as part of the facility. There will be minimal to no glare from the solar panels as they are meant to absorb the sunlight, not reflect it. The panels will be black or dark blue and tilt upwards at a maximum angle of 52-degrees so that there is no direct glare on public Right-of-Ways. The panel glass is coated with an anti-glare film. The existing trees and shrubs surrounding the fenced area will further shield the panels from ground view.

A third-party consultant completed a glare study for this project. The study is attached to this narrative for reference. The glare study modeled the proposed array and its potential to generate glare impacts on the surrounding land uses. The model recorded no glare on the adjacent roadways and residences. Please refer to the attached glare study for more information.

Smoke

There will be no smoke emissions generated as part of normal operations.

Odors

There will be no odorous gasses or matter at any quantity generated as part of normal operations.

Other Forms of Air Pollution

There will be no emission of fly ash, dust, fumes, vapors, gases nor other forms of air pollutants as part of normal operations. Dust during construction will be mitigated as required using Best Management Practices (BMPs).

Surface and Ground Water Protection

Temporary septic facilities will be provided for construction workers. There will be no wells, drains or septic on site after construction. There are no discharges associated with the operations that could impact surface water or groundwater. The panels and electrical

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203 Crescent Street St, Suite 106
Waltham, MA 02453

equipment will be monitored 24 hours, 7 days per week through the internet. Performance data will alert us of any damages to the system. A technician can be dispatched within 72 hours to resolve any issues. Any panels or equipment that contain cracks or damage that could result in rainwater seeping through its mechanisms will be repaired or replaced immediately.

The use will not cause substantial injury to the value of other property in the neighborhood where it is to be located.

Based upon assessments performed by real estate professionals and certified appraisers, the solar array use will not cause substantial injury to the value of other property in the neighborhood. There have been several studies performed in the last 5 years assessing property value impacts from solar array facilities, especially when near or abutting residential or rural communities. Consistently these studies have found no substantial impact on property values. The attached fact sheet from the American Clean Power Association provides a summary of these studies.

Adequate landscaping and screening are provided as required and as otherwise provided in the ordinance.

The project area will be screened by existing vegetation to the northeast and southeast. A 25' wide staggered evergreen landscape buffer is proposed to the northwest and southwest of the project. At the greatest proximity, the edge of the solar panels will be approximately 205 feet from the edge of the nearest residence, which is located to the south of the project on Lonesome Road. The intent of the buffer will be to minimize major views of the solar array from residences and other nearby land uses. A green, woven mesh will be installed along the fence line to supplement the existing and proposed vegetative buffers and further restrict views of the solar array from residences and other nearby land uses. This mesh is similar to that used at tennis courts. Attached please find renderings showing views from key points of view. Example pictures of the fencing and mesh are also included for your reference.

Adequate off-street parking and loading is provided, and ingress and egress is so designed as to cause minimum interference with traffic on abutting streets.

Access to the solar array facility is proposed via a 16' wide gravel access road originating from Lonesome Road. Lonesome Road is maintained by the State of Delaware. Therefore, the access road entrance will be permitted with DelDOT to ensure appropriate construction standards, turning radii and line of sight distances. The operation of the solar array is minimal and for the most part is idle. Under normal operations, visits to the facility include quarterly performance checks by a solar technician as well as a landscaper for lawn and buffer maintenance. No off-street parking spaces, parking lots or loading areas are proposed. The proposed hammerhead

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203 Crescent Street St, Suite 106
Waltham, MA 02453

turnaround areas provide sufficient parking area for the short-term access needs and proposed operations and maintenance.

The use conforms with all applicable regulations governing the district where located, except as may other be determined for large-scale development.

Lighting and Storage

Light fixtures are not proposed as part of the facility. Storage at the facility may include a portable metal storage box for spare solar array parts and panels. All other electrical equipment will be enclosed in metal cabinets on a concrete pad within the fenced area. There will be no other storage of materials on site.

Waste Materials and Sewage Disposal

There will be no liquid, solid, toxic, radioactive or hazardous waste stored or disposed of on site. Any solid waste will be disposed of properly off-site. There will be portable toilets provided during construction and removed after construction is complete. Otherwise, no sewage disposal is required for normal operations of the solar array.

Lonesome Road Community Energy Initiative LLC
203 Crescent Street St, Suite 106
Waltham, MA 02453

ATTACHMENT 1 – Noise Study

JMS ACOUSTICS

1035 JETER AVENUE
BETHLEHEM, PA 18015
(610) 625-2420

9 July 2025

Mr. Nicholas Hetland
Lonesome Road Community Energy Initiative LLC
C/O ECA Solar
203 Crescent Street, Suite 106
Waltham, Massachusetts 02453
neh@ecasolar.com

Re: Lonesome Road Community Energy Initiative – Noise Study
Lonesome Road, Seaford, Sussex County, Delaware
Property Tax ID: 531-12.00-92.02
Reference No. L012025J003B

Dear Mr. Hetland:

This letter provides a summary of the expected sound levels due to the proposed ground based Solar Energy Facility at an undeveloped field located off Lonesome Road in Seaford, Sussex County, Delaware. JMS Acoustics prepared a SoundPLAN based acoustical model of the expected facility sound levels at the adjacent properties and in the neighboring community. The acoustical model considers the manufacturer provided sound levels for the inverters, transformer and tracking motors, the anticipated times of operations, the site topography and the distances from the equipment to the receiving locations in the adjacent community. As Sussex County does not have a noise ordinance, the results of the acoustical model are compared to the sound level limits of the Noise Regulations of the State of Delaware. Note that while the regulations limit sound to 65 dB(A)[1] during the daytime hours (7AM to 10PM) and 55 dB(A) during the nighttime hours (10PM to 7AM), the site sound sources produce tonal noise, which reduces the limits to 60 dB(A) and 50 dB(A) during the daytime and nighttime hours, respectively.

[1] A-Weighting, also noted as dB(A), is the most commonly used standardized sound level weighting network and has frequency characteristics similar to the response of human hearing for relatively quiet sounds.

Primary noise producing sources on the site include ten inverters, one 2000 kVA step-up transformer and three single axis tracking motors for the solar panels. The inverters will be co-located near the step-up transformer on a common concrete pad in an enclosed equipment area, as shown on the site plan drawing. The three tracking motors will be distributed across the site. The manufacturer provided sound data for the inverters indicates that the expected one-third octave band sound pressure levels from the inverters will meet the State's requirement for "pure tones[2]" in the 630 hertz one-third octave band, and therefore, the 5 dB(A) penalty shall apply, reducing the allowable maximum nighttime sound level from 55 dB(A) to 50 dB(A).

Without mitigation, sound levels are expected to vary between 53 dB(A) at the closest property line to the north, which exceeds the 50 dB(A) State nighttime noise limit, and 40 dB(A) at the closest building to the northwest. Therefore, a wood sound barrier is proposed to surround the equipment pad. While only a 7 foot tall wood sound barrier is necessary to meet the 50 dB(A) nighttime requirement at the closest property line, Lonesome Road Community Energy Initiative LLC has proposed a 10 foot tall wood sound barrier to achieve further sound level reduction. With the proposed 10 foot tall wood sound barrier, the sound levels are expected to vary between 49 dB(A) at the closest property line, and 40 dB(A) at the closest building, and be below the 50 dB(A) State nighttime noise limit. The analysis shows that with the planned sound mitigation, the maximum sound levels due to the facility will be in full compliance with the limits of the Noise Regulations of the State of Delaware.

[2] Pure tones are defined in the Noise Regulations of the State of Delaware as any sound which can be distinctly heard as a single pitch or a set of single pitches. For the purpose of this section, a pure tone shall exist if the one-third octave arithmetic average of the sound pressure levels of the two contiguous one-third octave bands [is exceeded] by 15 dB for bands with center frequencies less than 160 Hz, by 8 dB for bands with center frequencies of 160 Hz to 400 Hz, and by 5 dB for bands with center frequencies greater than 400 Hz.

1.0 SITE LAYOUT AND SOUND SOURCES

Lonesome Road Community Energy Initiative LLC is proposing to install a ground based ground based Solar Energy Facility on an approximate 28.6-acre parcel (Tax Parcel: 531-12.00-92.02) in Sussex County, Delaware. The parcel is located on the east side of Lonesome Road (Sussex County Road 541) and approximately 800 feet south from the intersection of Woodpecker Road (Sussex County Road 80) and Lonesome Road. The proposed site is located in an Agricultural Residential District (AR-1) zone and abuts numerous other parcels, also zoned AR-1. The project will add solar panel modules to the western portion of the parcel with three (3) Array Technologies DuraTrack® single axis tracking motors, and ten (10) Sungrow SG200HX-US (200 kW) inverters and one 2000 kVA step-up transformer, located on a common concrete pad, at grade on the north side of the proposed project area. The site plan drawing, labeled PROSPECTING SITE PLAN, prepared by ECA Solar and dated 01/29/2024, is enclosed at the end of this letter, and shows the general layout of the site, the subject property line, the location of the proposed solar panels, tracking motors, inverters, transformer and the planned wood sound barrier.

2.0 APPLICABLE NOISE REGULATIONS

Sussex County does not have a noise ordinance; however, the State of Delaware has a statewide noise ordinance. Therefore, the applicable sound level limits for the Solar Energy Facility are set forth in the Noise Regulations of the State of Delaware, which states the following in Section 6.1:

> No person(s) shall operate or cause to be operated any stationary source of sound in such a manner as to create a 24-hour equivalent[3] A-weighted sound level which exceeds the Leq limits set forth for the receiving land use category in Table 1 when measured at the point of complaint origination within the property boundary of the receiving land use. Any exceedence of these values shall constitute a noise disturbance.

Table 1 – Sound Levels by Receiving Land Use Zones, Leq (24) dB(A).				
Emitter(s)	**Receptor C**	**Receptor B**	**Receptor A 7 a.m. - 10 p.m.**	**Receptor A 10 p.m. - 7 a.m.**
A	65	65	65	55
B	75	75	65	55
C	85	75	65	55

As the project parcel and the adjacent parcels are in the AR-1 zoning district, which includes residential dwelling uses, both the Emitter and the Receptors for the proposed Solar Energy Facility are in Class A Emitter/Receptor Zones.

Note that per Section 6.3.1 of the noise regulations, "For any stationary source of sound which emits a pure tone, cyclically varying sound or repetitive impulse sound, the limits set forth in Section 6.0 herein shall be reduced by 5 dBA." The manufacturer provided sound data for the inverters indicates that the expected octave band sound pressure levels from the inverters will meet the State's requirement for "pure tones" in the 630 hertz one-third octave band, and

[3] Equivalent Continuous Sound Level, or Leq, is the constant sound level that would result in the same total sound energy as a time varying sound level over a given period. It is also referred to as the time-average sound level.

therefore, the 5 dB(A) penalty shall apply, reducing the allowable maximum nighttime sound level from 55 dB(A) to 50 dB(A).

Therefore, the Noise Regulations of the State of Delaware sets the maximum permitted Leq sound levels from the Solar Energy Facility at adjoining properties to the following:

7 AM to 10 PM (daytime)	60 dB(A)
10 PM to 7 AM (nighttime)	50 dB(A)

As the inverters and transformer will operate before 7 AM at times, the Solar Energy Facility must meet the more stringent 50 dB(A) nighttime limit of the Noise Regulations of the State of Delaware. It is important to note that the 50 dB(A) limit is based on an energy based average (Leq) over the nighttime hours. As the inverters and transformers will not operate at full load during the majority of the nighttime hours due to the lack of sunlight, the energy based average during the nighttime hours will be significantly lower than the maximum sound levels presented in this noise study.

3.0 ACOUSTICAL EVALUATION

A SoundPlan v9.1 acoustical model[4] (software for modeling outdoor sound propagation in compliance with ISO 9613-2:2024) was used to calculate the expected sound levels due to the Solar Energy Facility. The acoustical model incorporated the Google Maps elevation points for the site, the layout for the proposed inverters, transformer, and single axis tracking motors, as shown site plan drawing, labeled PROSPECTING SITE PLAN, prepared by ECA Solar and dated 01/29/2024, and manufacturer provided sound data for the ten (10) Sungrow SG200HX-US (200 kW) inverters, the NEMA TR-1 rating for the 2000 kVA transformer, and similar manufacturer sound data for the three (3) Array Technologies DuraTrack® single axis tracking motors.

As sound data for the Array Technologies DuraTrack® single axis tracking motors was not available, sound data for the similar NexTracker Horizon Single Axis Tracker motors was used. The tracking motors are rated at 69.6 dB(A) at 1 meter. The tested one-third octave band sound power level (L_w) of the Sungrow SG200HX-US inverters at 100% daytime working load were obtained directly from Sungrow[5], and the inverters will be located at a height of approximately 1.52 m (5 feet). Note that the anticipated nighttime sound levels due to the inverters (10% nighttime load) are at least 30 dB(A) lower than the daytime sound level. The 2000 kVA step-up transformer will meet the NEMA TR-1 rating of 61 dB(A)[6] at 0.3 meters (1 feet) and will have a height of approximately 6.25 feet. The transformer will produce significantly lower sound levels than the inverters.

[4] SoundPlan v9.1 is a software program that may be used to model outdoor sound propagation in compliance with ISO 9613-2:2024 Acoustics - Attenuation of sound during propagation outdoors - Part 2: Engineering method for the prediction of sound pressure levels outdoors.

[5] Sungrow Confidential Report No. SG230213-1.

[6] NEMA TR-1 ratings are the average sound level measured at a distance of 1 foot (0.3 m) from the transformer, except for portions of the transformer where there is forced air cooling, where the distance is increased to 6 feet (2 meters). NEMA Standards Publication TR 1-2013 (R2019): Transformers, Step Voltage Regulators and Reactors.

The acoustical evaluation considered the sound levels associated with all noise producing sources associated with the Solar Energy Facility, including: sound source location and height, distance from the sound sources to the receiving locations, attenuation due to the hemispherical spreading of sound, site topography, a mixed ground factor[7] (G=-0.6), attenuation by trees located east of the site and attenuation provided by sound barriers, where applicable. The evaluation is conservative as it assumes that all 10 inverters, the transformer, and all three tracking motors are operating simultaneously at maximum load. The evaluation is additionally conservative, as in addition to assuming all sources are operating simultaneously at maximum load, the evaluation assumes mixed ground (G-0.6) versus soft ground (G-1.0), and does not consider any attenuation provided by atmospheric sound absorption. The SoundPlan v9.1 acoustical model was used to generate sound level contours for the general vicinity of the site, both without sound mitigation, and with sound barriers of different heights.

Wood sound barrier heights of 7 feet and 10 feet were considered in the acoustical evaluation. The model assumed that the each barrier would be located along the edge of the proposed common concrete pad. The model also assumed that no sound absorption is used on the sides facing the inverters and transformer. Using a sound barrier with an interior sound absorbing surface will further decrease the expected sound levels. Any access doors through the barrier should be installed with ship-lapped panels on the interior, such that when the door is closed no gaps or holes exist in the barrier. Appropriate wood sound barriers include the Hoover Treated Wood Products' PLYWALL, or similar solid panel barrier with a minimum weight of 4 pounds per square foot. Appropriate sound barriers with sound absorbing interior faces include the Industrial Acoustics Company's Noishield Type FS/S, Noise Barrier's V-Stack Steel, SL Barrier, or H/P 42, or equal.

Figures 1 through 3 show the expected sound level contours on and near the site, with no mitigation, a 7 foot tall wood sound barrier and with a 10 foot tall wood sound barrier.

[7] Ground Factor Values (ISO 9613-2:2024) For "Hard Ground" G=0 and for "Soft Ground" G = 1. Hard ground is dense and absorbs little to no sound while soft ground is porous and absorbs sound. Examples of hard ground include water and parking lots, while examples of soft ground include grass, trees and other vegetation. For "Mixed Ground" a value of G between 0 and 1 is used that represents the fraction of the ground that is soft.

4.0 SUMMARY AND RESULTS

The ten inverters, one step-up transformer and three tracking motors associated with the Solar Energy Facility must meet the Noise Regulations of the State of Delaware nighttime sound level limit of 50 dB(A). It is important to note that the 50 dB(A) limit is based on an energy based average over the nighttime hours. As the inverters, transformer and tracking motors will not operate at full load during the majority of the nighttime hours due to the lack of sunlight, the energy based average sound level during the nighttime hours will be significantly lower than the maximum sound levels presented in this noise study.

As shown in Figure 1, the results of the noise study indicate that without mitigation, property line sound levels are expected to vary between 53 dB(A) at the closest property line to the north, which exceeds the 50 dB(A) State nighttime noise limit, and 40 dB(A) at the closest building to the northwest. Therefore, wood sound barriers are proposed to surround the equipment pad. Only a 7 foot tall wood sound barrier is necessary to meet the 50 dB(A) nighttime requirement, as shown in Figure 2. With a 7 foot tall sound barrier, the sound levels are expected to be 50 dB(A) at the closest property line and just meet the 50 dB(A) nighttime requirement. Finally, Lonesome Road Community Energy Initiative LLC has proposed a 10 foot tall wood sound barrier to achieve further sound level reduction. With the proposed 10 foot tall wood sound barrier, the sound levels are expected to vary between 49 dB(A) at the closest property line, and 40 dB(A) at the closest building, and be below the 50 dB(A) State nighttime noise limit. The analysis shows that with the proposed sound mitigation, the maximum sound levels due to the facility will be in full compliance with the limits of the Noise Regulations of the State of Delaware.

I trust that this information is sufficient for you present needs. Please call if you have any questions regarding this letter.

Yours sincerely,

JMS ACOUSTICS LLC

J. Michael Spencer
President and Principal Consultant

JMS:jms
Enclosures

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Figure 1 – Expected sound levels without mitigation, Lonesome Road, Seaford, Sussex County, Delaware.

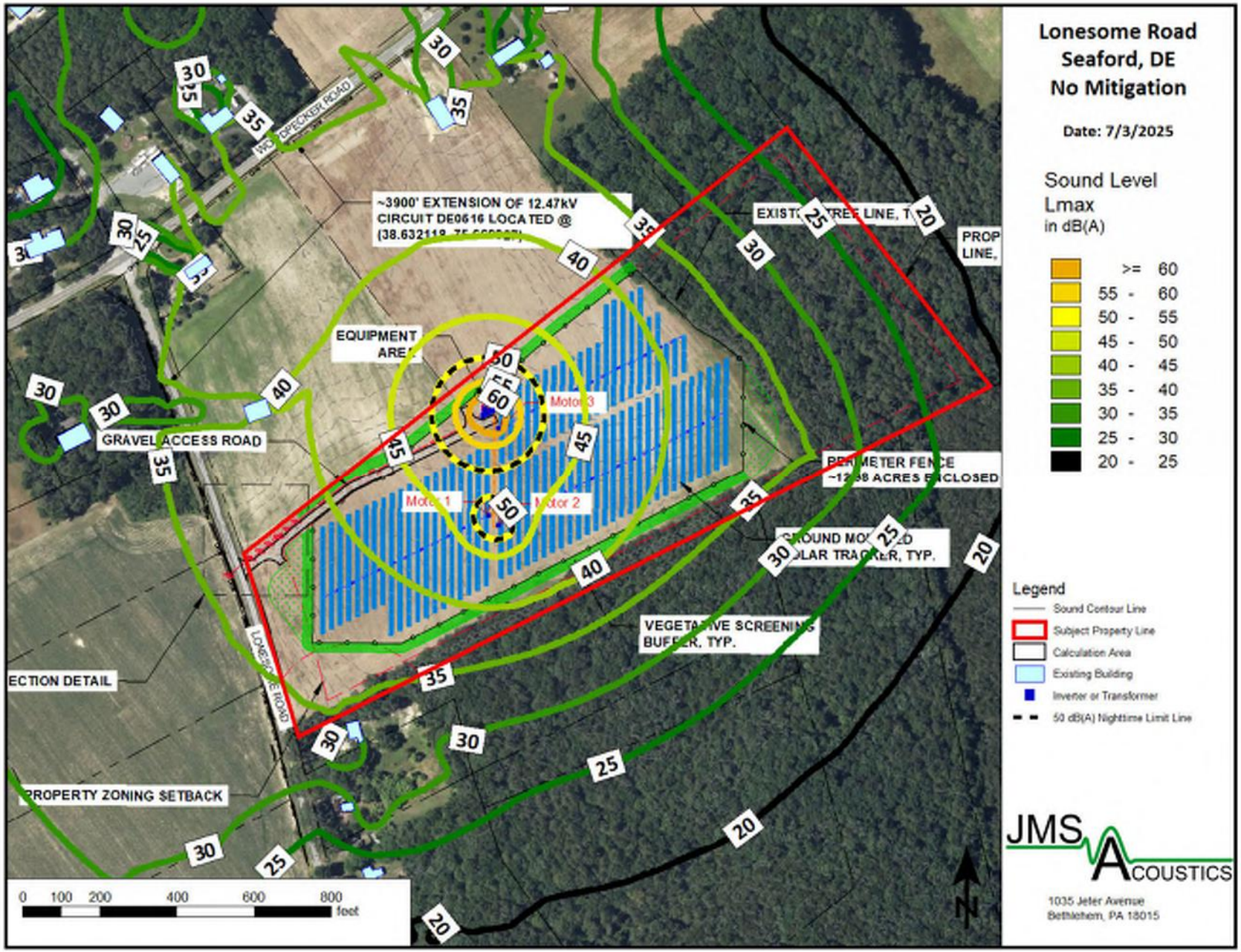


Figure 2 – Expected sound levels with a 7 ft equipment area sound barrier, Lonesome Road, Seaford, Sussex County, Delaware.

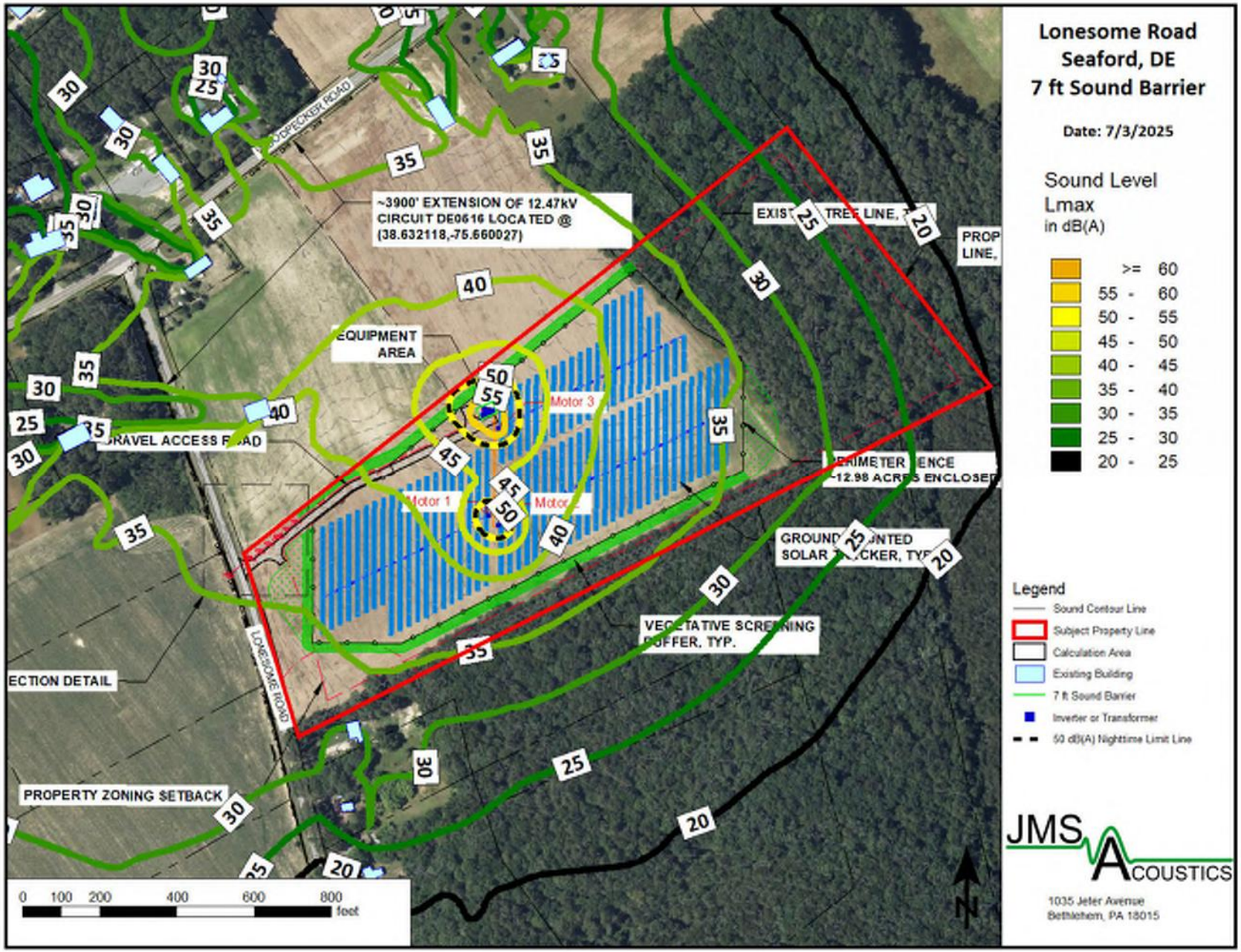
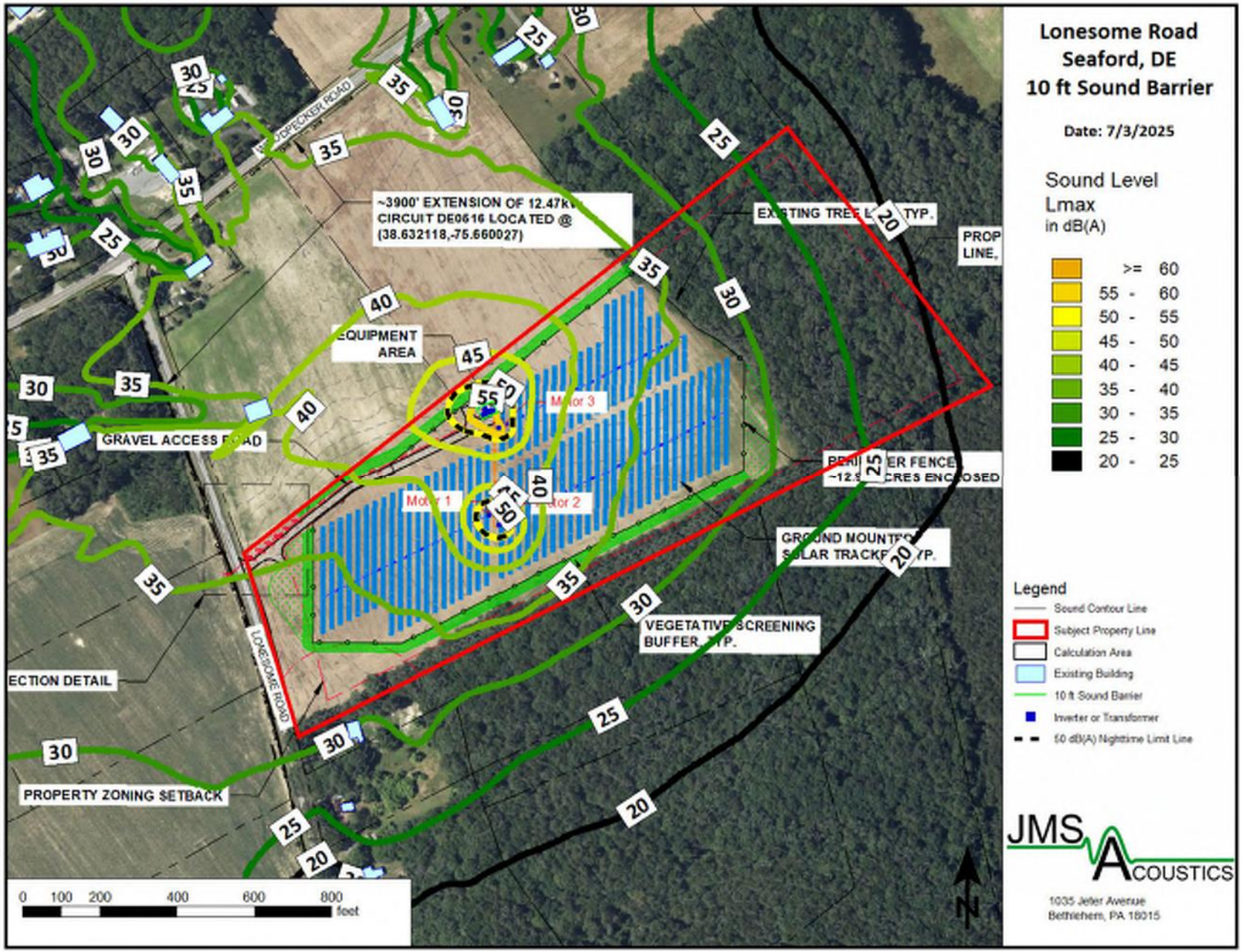


Figure 3 – Expected sound levels with a 10 ft equipment area sound barrier, Lonesome Road, Seaford, Sussex County, Delaware.



ENCLOSURES

PROSPECTING SITE PLAN, prepared by ECA Solar and dated 01/29/2025

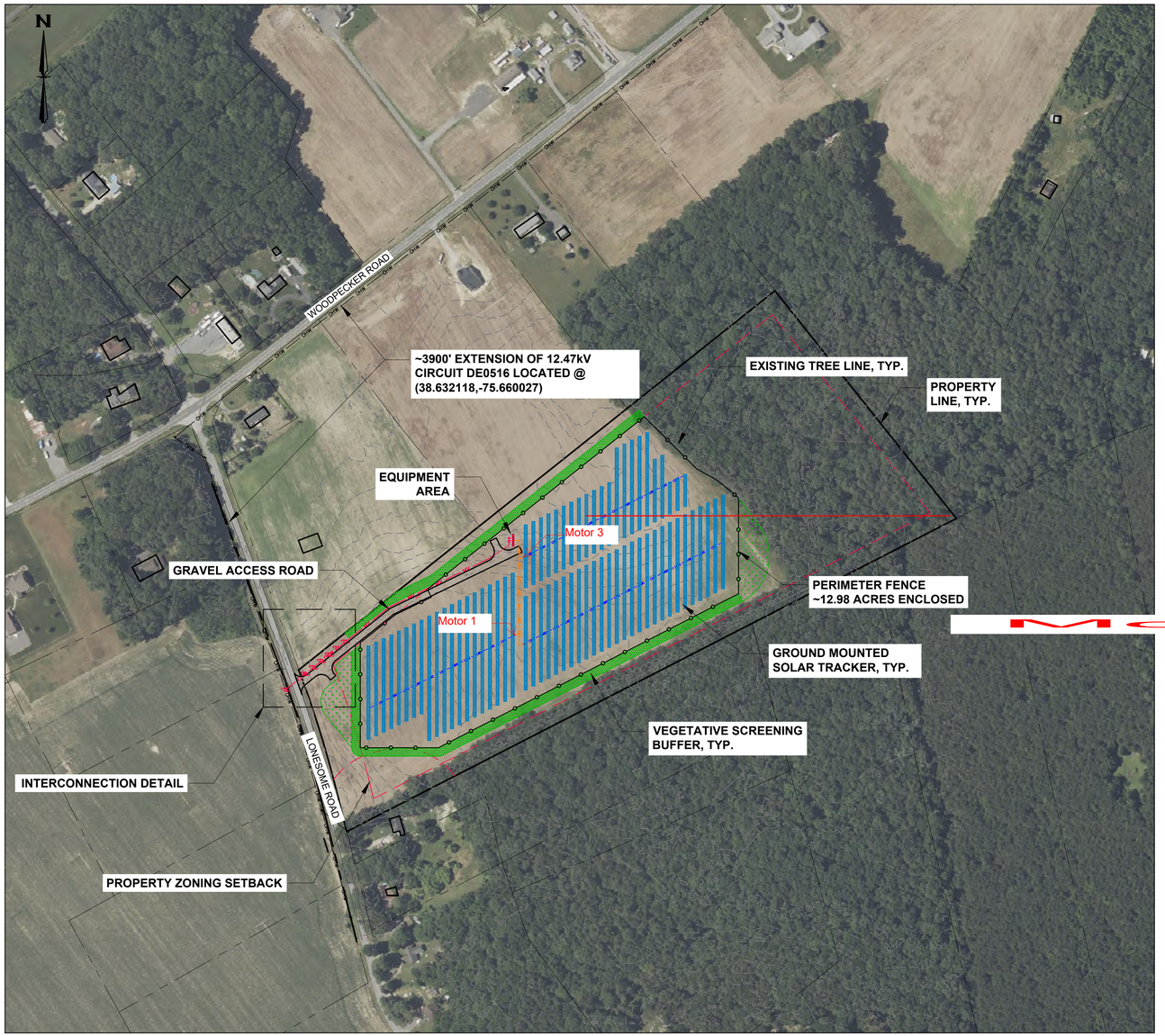
Product Literature for Hoover Treated Wood Products' PLYWALL

Product Literature for Industrial Acoustics Company's Noishield Type FS/S

Product Literature for Noise Barrier's V-Stack Steel, SL Barrier, or H/P 42

PHOTOVOLTAIC SYSTEM
TOTAL: 3.0089 MWDC (2.000 MWAC)
LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC
0 LONESOME ROAD, SEAFORD DE

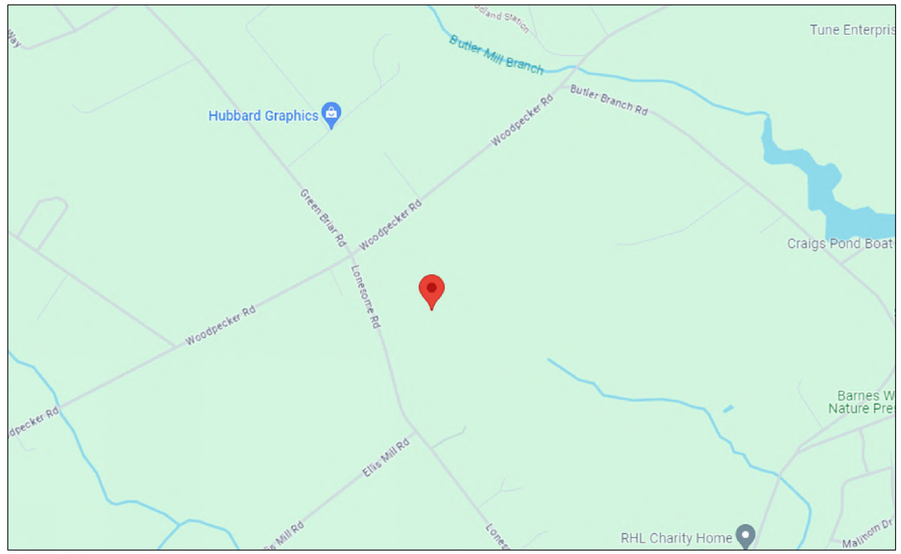
PV SYSTEM DESCRIPTION	
MODULE TYPE	HANWHA Q.CELLS Q.TRON XL-G2.3/BFG 630
QUANTITY	4776 (199 STRINGS OF 24 MODULES)
SYSTEM SIZE (DC)	3.0089 MW
SYSTEM SIZE (AC)	2.000 MW
INVERTER	SUNGROW SG200HX-US (200 KW) : 10 QTY
MOUNTING SYSTEM	SINGLE AXIS TRACKER
TILT ANGLE	+/-52°
ARRAY AZIMUTH (SOUTH = 180°)	180°
GCR	36.3%
PITCH	22.25'



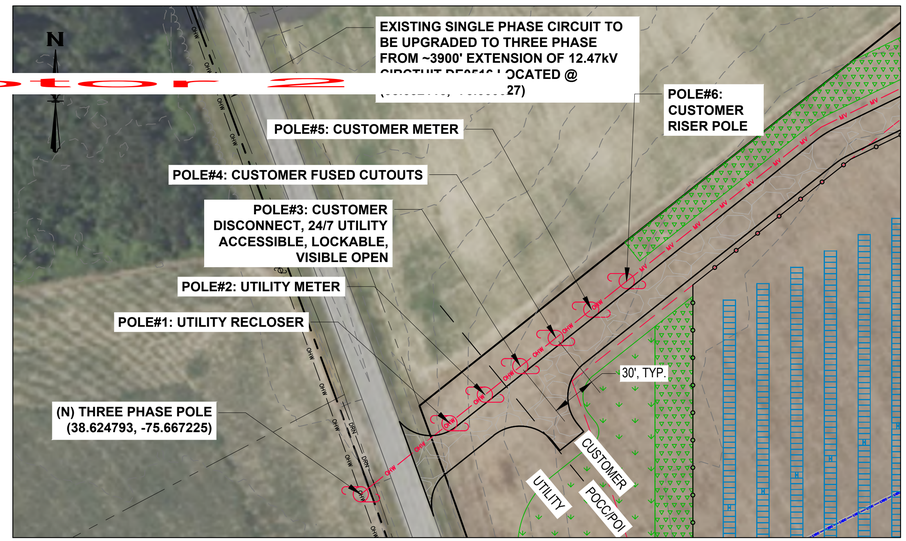
1 PRELIMINARY LAYOUT - LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC: 3.0089 MWDC (2.000 MWAC) PV SYSTEM

SCALE: 1" = 200'

100 0 100 200 300
SCALE IN FEET



2 LOCUS MAP



3 INTERCONNECTION DETAIL

SCALE: 1" = 50'

25 0 25 50 75
SCALE IN FEET

REV.	DESCRIPTION OF REVISION	DATE	APPR.
8	PRE SALES DESIGN III	04/05/25	CAL
7	INTERCONNECTION	02/25/25	NEH
6	PRE SALES DESIGN II	01/02/25	NEH
5	INTERCONNECTION	11/20/24	NEH
4	PRE SALES DESIGN I v2	11/20/24	NEH
3	INTERCONNECTION	01/26/24	PR
2	PRE SALES DESIGN I	01/24/24	CAL
1	LAND CONSTRAINT ANALYSIS	01/22/24	SM

eca solar

203 CRESCENT ST
WALTHAM, MASSACHUSETTS
02453

20 TRAFALGAR SQUARE
NASHUA, NEW HAMPSHIRE
03063

SCALE AS SHOWN

DRAWN BY NEH | DATE 01/26/2024

APPROVED BY PR | DATE 01/29/2024

LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC
ECA SOLAR LLC

PROSPECTING
SITE PLAN
LONESOME ROAD, SEAFORD, DE

PSD-1.0
SITE PLAN

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Residence

Location: Atlanta, GA
Dimensions: 6-16 feet high, 300 linear feet
Installed: 1984
Panel width: 12 feet and 8 feet

The peace and tranquility of the picturesque stone home on this site was interrupted in the early 1960's when I-285, the Atlanta perimeter road, was built next to the home. Later, the expressway was widened and a noise barrier was installed to reduce the noise level for the occupants. This is the oldest PLYWALL® barrier and as such demonstrates the treatment's longevity. There is no deterioration at the ground line, which is the area of severest decay and termite hazard. Noise measurements were taken before and after to confirm its acoustical effectiveness.

Bottling Plant

Location: Manchester, NH
Dimensions: 15 feet high, 480 linear feet
Installed: 1988
Panel width: 8 feet wide, 1-piece

This plant had been in operation for some time and had been receiving complaints from residential neighbors about noise and headlights. The owners decided to erect a screening/noise wall along the back of the plant, which included the loading dock area. Thanks to PLYWALL®, response from the neighbors has been positive.

PLYWALL®

is a **Hoover Treated Wood Product. Hoover** has developed a reputation for quality service and innovation specializing in high quality products. For more information on the PLYWALL® Engineered Wood Sound Barrier-Contact the PLYWALL® Sales Department.

HOOVER
TREATED WOOD PRODUCTS, INC.

154 Wire Road • Thomson, Georgia 30824
Toll Free: 1-800-531-5558 • Direct: (706) 595-1264 • Fax (706) 595-8462
www.plywall.com • e-mail: plywall@frtw.com

PLYWALL®

THE SOUND SOLUTION

Permanent Engineered Wood Sound Barriers

Stockbridge, Georgia
PLYWALL® Installation 1998

General Description

Hoover Treated Wood Products, Inc. is one of the largest producers of treated wood products in North America, specializing in government specifications, high retentions, and treatment of plywood. Utilizing Kiln Drying After Treatment (KDAT), Hoover produces wood products that are stronger, lighter, and pre-shrunk. CCA, the clean waterborne preservative choice for over 60 years, is used by Hoover because of its historical performance against termites and decay, excellent environmental qualities, and economy. Hoover is also a supplier of ACQ treated wood products.

Hoover engineers and fabricates PLYWALL® treated wood barrier systems for noise abatement and aesthetic screening for a multitude of environments. The PLYWALL® panels have been tested in accordance with ASTM E-90 and our performance is comparable to concrete and masonry. Designed for standard truck shipment (included in price), PLYWALL® can easily be delivered and unloaded on site, with installation being accomplished by local contractors or maintenance crews.

Engineering

Hainesport, New Jersey

PLYWALL® is engineered for customer-specified wind loading (PSF), with typical requirements ranging from 20-30 PSF, though up to 60 PSF is available at limited heights. PLYWALL® is adaptable to various heights, soils, climates, and terrains. Because of the warm natural appearance of wood and our specific design, our barrier system is aesthetically pleasing and well received by the public. Compared to other barriers, like concrete and steel, PLYWALL® has economical advantages, including material, installation, and repair costs.

Design Detail

Gaithersburg, Maryland

PLYWALL® is a post and panel system consisting of prefabricated pressure treated wood "sandwich" panels supported between pressure treated Parallam PSL engineered timber posts. The panels are typically 2-3/4 inches thick and secured to the posts within channels created by pressure treated 4X4" cleats that are spiked or lagged parallel to the posts.

Prefabricated panels are 8, 12, or 16 feet wide, covered on both sides with pressure treated, exterior-rated 4X8' Texture 1-11 plywood siding. Interior framing exists between the wood faces to provide sufficient structural stiffness for specified wind loading.

Fabricated height of the one-piece panels varies, depending on the customer requirements and specified panel width. Pressure treated Parallam PSL engineered timber posts support the panels at exposed heights to 24 feet, although 30 feet can be obtained under limited circumstances. Posts are embedded in the ground to a depth of roughly half the exposed height of the barrier and backfilled with crushed stone. Concrete may be an option in some instances and will not compromise the wood preservatives or the strength of the wood materials. While not as economical as standard timber posts initially, Parallam posts are much stronger and uptake preservatives far better, providing a much more durable, longer-lasting barrier.

PLYWALL®

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Highway Noise Barrier

Location: Lincoln, NE
Dimensions: 8-13 feet high, 1,400 linear feet
Installed: 1988
Panel width: 8 feet wide, 1-piece

When the Lincoln West Bypass was widened the Nebraska Department of Roads chose PLYWALL® to protect a stretch of residences adjoining the right of way. Barrier height varies from 8 to 13 feet high.

Temporary Barrier at Waste Water Treatment Plant

Location: New Bedford, MA
Dimensions: 15 feet high, 500 linear feet
Installed: 1993
Panel width: 8 feet wide, 1-piece

PLYWALL® was installed as a temporary construction barrier for a new multi-million dollar treatment plant in this historic port city. Adjoining a Navy School and a residential area, it was necessary to isolate them from the heavy construction activity. The barrier was erected early in the project and was removed after completion. The cleats were attached to the posts with lag screws for easy removal, and the posts were backfilled with soil for easy removal (standard design calls for gravel).

Highway Noise Barrier

Location: Baltimore, MD
Dimensions: 8 feet high, 2,800 linear feet
Installed: 1993
Panel width: 8 feet wide, 1-piece

This project is along I-95 in a wooded area where the Maryland Transportation Authority wanted to preserve as much forestry as possible. The contractor was allowed to zigzag the barrier to avoid individual trees, and the access road was just wide enough to maneuver a skid loader. One segment required placing the barrier along the top of a concrete traffic barrier, so sockets were cast into the concrete for the PLYWALL® posts. The traffic barrier followed a grade incline, so the bottom of each PLYWALL® panel had to be field-trimmed at an angle to fit the top of the traffic barrier. This was done with an ordinary circular saw.

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Bagel Plant Expansion

Location: Eatontown, NJ
Dimensions: 14 feet high, 550 linear feet
Installed: 1997
Panel width: 12 feet wide, 2-piece stacking

When this plant applied for a permit to expand, there was concern about its effect on adjoining residences so a 14-foot high PLYWALL® barrier was proposed. It was installed early in the project to screen the construction noise and activity. Response has been very favorable. Neighbors prefer the PLYWALL® barrier's appearance to concrete highway barriers in the area. 12-foot wide panels were used to reduce the number of posts and panels were stacked, with 8-foot high panels on the bottom and 6-foot high panels on top.

Grocery Superstore / Shopping Center

Location: Alpharetta, GA
Dimensions: 8-10 feet high, 1,100 feet long
Installed: 1996
Panel width: 8 feet wide, 1-piece

A new grocery superstore anchors this shopping center in trendy North Atlanta. It backs up to an upscale residential area and the owners wanted to be good neighbors so the PLYWALL® system was installed just beyond the service area at the rear of the buildings, much of which is at the crest of a high embankment. The wall serves as a visual and glare screen. The rear face of the wall was stained driftwood grey to make it blend in with the rear of the buildings.

Municipal Operations Headquarters

Location: Concord, NH
Dimensions: 8-10 feet high, 1,300 linear feet
Installed: 1989
Panel width: 8 feet wide, 1-piece

This facility houses the new public works headquarters for the City of Concord. Construction plans included PLYWALL® barriers to screen the facility from nearby homes. Soon after the facility opened, it also became the base for the buses of the Concord Public Schools. The bus parking area is adjacent to neighboring houses but the 10-foot high PLYWALL® has proven effective at mitigating the noise of diesel bus engines cranking up before dawn, as well as blocking the glare of their headlights.

Applications

- Highways
- Residential Developments
- Roadways
- Racetracks
- Industrial Sites
- Airport Noise/Jet Blast Fence
- Commercial Sites
- Zoning Restrictions
- Strip Malls
- Fast-Food Restaurants
- Shopping Centers
- Zoo/Amusement Parks
- School/Recreational Facilities
- Railroad Areas
- Utility Sites
- Permanent/Temporary Barriers

***Grovetown, Georgia** - PLYWALL® Installation 2000*

Installation Suggestions

PLYWALL® is shipped complete and ready-to-install, including posts, panels, cleats and spikes (or lag bolts). Installation is normally completed by a local contractor, often a commercial fence company, though PLYWALL® is well suited for installation by general contractors or maintenance personnel. No special skills or unique equipment is required.

A truck mounted auger works well for digging the post holes, with auger size varying with the post dimensions. Recommended backfill material is crushed stone, which provides excellent lateral support and allows the potential for relocation of the barrier. Concrete is not normally required. Posts are set on clear spacings, equal to panel width plus one inch erection tolerance. The unique panel-to-post attachment method, using spiked or lagged 4"x4" cleats to create a channel, provides an expansion joint and utilizes the exposed post face to add extra linear coverage.

Individual panels are lifted into place by hand or by crane using the built-in nylon loops at the top of each panel. One cleat is spiked or lagged to each post with the provided hot dipped ring shank spikes or lag bolts, after which a panel is swung into position and fixed by attachment of the opposing cleats. This method means the panels do not have to be lowered from the top of the posts. Holes are pre-drilled in each cleat for the spikes or lag bolts, saving time and measuring for the installer. Trimming the top of the posts and cutting off the nylon straps completes the installation.

Field cuts and modifications to PLYWALL® are easily performed to accommodate odd span widths, terrain contours, and other site conditions where a standard panel will not fit.

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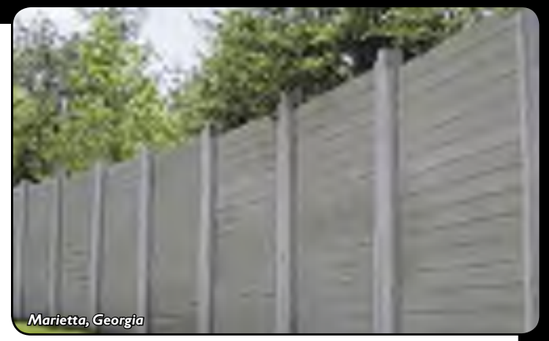
Maintenance & Finishing


Marietta, Georgia

PLYWALL® is designed and built for minimal maintenance. Permanent coloration and UV resistance is provided by the CCA or ACQ preservative, which also provides decades of protection against decay and termites.

If a special finish is desired, the T1-11 plywood's textured surface enhances adhesion. Neither staining nor painting is required due to the permanent protection and coloration provided by the preservative treatment.

PLYWALL® is easily repaired if damaged, usually with ordinary carpentry skills. New posts, panels, cleats and spikes can be shipped in a short period of time.

Benefits to Installers & Residents

Gaithersburg, Maryland

PLYWALL® is "neighborly" because it is identical in appearance and attractiveness from either side of the barrier, with no unsightly backside. In spite of its lighter weight and lower cost, PLYWALL®'s noise reduction is comparable to other heavier and more expensive materials.

Installers like PLYWALL®'s complete fabrication, comprehensive material package, relatively light weight, minimal labor and equipment requirements, and its simplicity.

Woodbine, Maryland

PLYWALL® THE SOUND SOLUTION

Case Studies

Condominium Project

Location: Fairfax, VA
Dimensions: 8-10 feet high, 740 linear feet
Installed: 1989
Panel width: 8 feet wide, 1-piece

This project is on busy I-395 near Washington, D.C., and the site plan included a PLYWALL® barrier along the right-of-way to mitigate the expressway noise and screen the expressway from view. Other barrier materials including concrete were considered but PLYWALL® was deemed most compatible with the planned landscaping and the natural wooded surroundings of the site, as well as most cost-effective. The barrier was installed during condominium construction, and its relatively lightweight and portability compared to precast concrete barrier systems.

Airport Noise Barrier / Jet Blast Fence

Location: Rockford, IL
Dimensions: 16 feet high, 360 linear feet
Installed: 1994
Panel width: 18 feet wide, 1-piece

This PLYWALL® barrier doubles as a wind screen for the jet wash from taxiing cargo planes at the air terminal. A parking lot is just beyond the barrier, which would have been unusable without noise and wind protection. Due to the unusually high wind load design, 50 PSF, the barrier's posts are oversized and are set 13' deep in 36" diameter concrete foundations. The structural framing of the panels is also unusually heavy, with edgewise 2 x 4 framing at 12" c/c spacing of flat wise 2 x 4 framing at 16" c/c spacing.

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About

DESIGN DETAIL

PLYWALL€ is a post and panel system consisting of prefabricated, preservative treated wood framed panels supported between preservative treated Parallam€ PSL engineered timber posts. Prefabricated preservative treated wood framed panels are 8, 12, or 16 feet wide, covered on both sides with preservative treated exterior-rated 4•x 8• Texture 1-11 plywood. The panels are typically 2 , inches thick and are secured to the posts within channels cr eated by pressure treated 4ƒ x 4ƒ cleats which are spiked or lagged parallel to the posts.

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Download Specifications:

Applications

- Highways

- Residential Developments
- Roadways
- Racetracks
- Industrial Sites
- Airport Noise / Jet Blast Fence
- Commercial Sites
- Zoning Restrictions
- Strip Malls
- Fast Food Restaurants
- Shipping Centers
- Zoos / Amusement Parks
- Railroad Areas
- Utility Sites
- Temporary Barriers

INSTALLATION SUGGESTIONS

PLYWALL€ is shipped complete and ready-to-install, including posts, panels, cleats and spikes (or lag bolts). Installation is normally completed by a local contractor, often a commercial fence company, though **PLYWALL€** is well suited for installation by general contractors or maintenance personnel. No special skills or unique equipment is required.

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not fit.

Download Installation Instructions:

ENGINEERING

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Pages

- About Plywall
- Image Gallery
- Contact Page

Documents

- Documents Page
- Specifications (.doc|.pdf)
- Installation (.doc|.pdf)
- Test Data (.pdf)
- Case Study (.pdf)

Links

- Hoover Treated Wood Products
- LearnAboutFRTW.com

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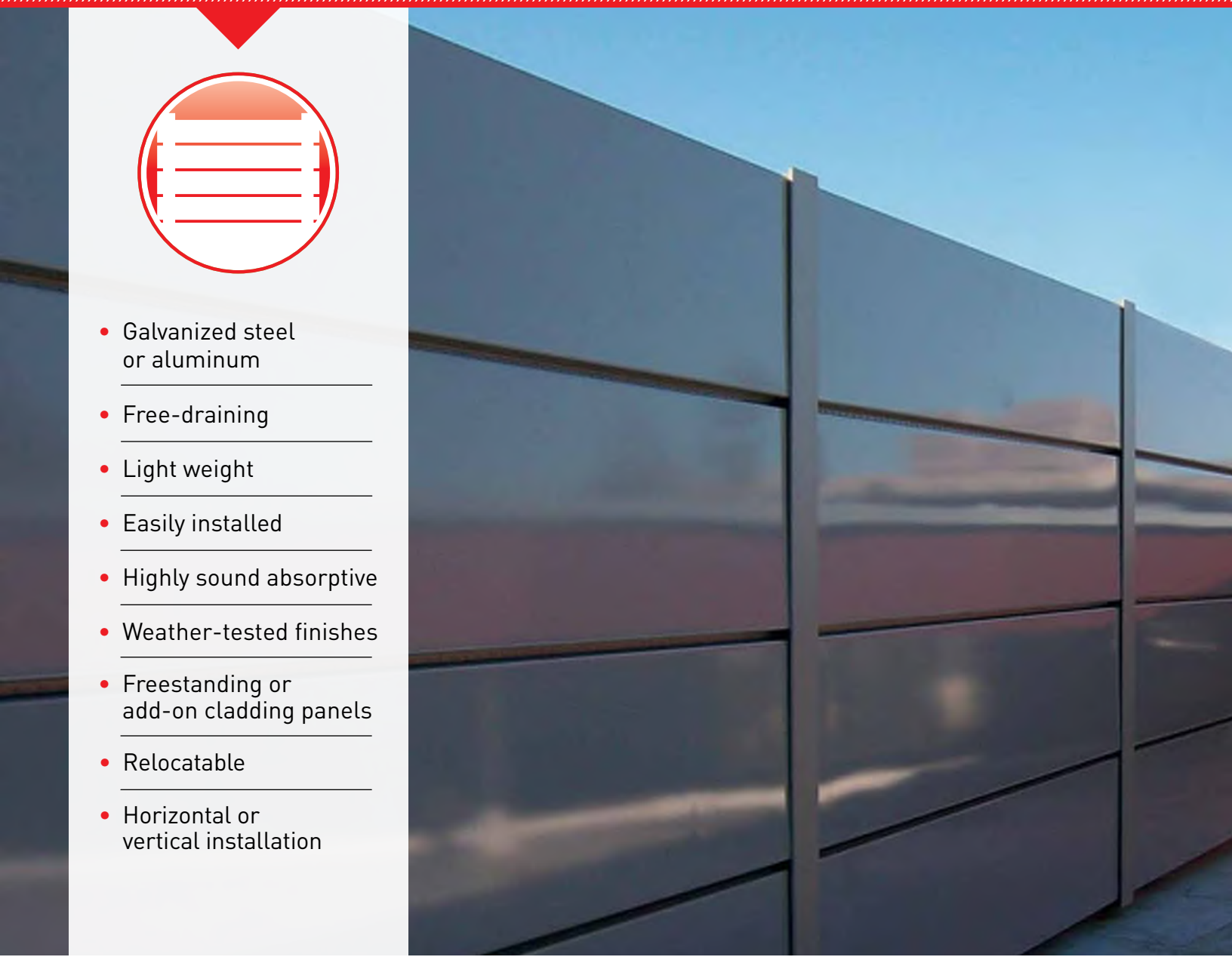
Noishield® Sound Barriers

Lab Rated Acoustic Performance and Durable Construction



- Galvanized steel or aluminum
- Free-draining
- Light weight
- Easily installed
- Highly sound absorptive
- Weather-tested finishes
- Freestanding or add-on cladding panels
- Relocatable
- Horizontal or vertical installation

iac acoustics

Noishield® Sound Barrier System

Effective and Attractive Sound Barrier Systems Using Field Proven & Durable Acoustically Rated Components

IAC Acoustics Noishield outdoor sound barrier systems protect communities and workers from noisy equipment by blocking line-of-sight sound transmission and absorbing sound energy radiating from the source. Noishield panels are performance rated for sound absorption, sound transmission loss and structural wind-loads, simplifying screen wall designs and allowing for the most cost effective and reliable sound barrier solutions available.

IAC Acoustics Noishield barrier panels combine multiple weather-resistant and aesthetic features in order to provide a highly durable and corrosion resistant all-weather outdoor barrier panel.

Pitched solid upper surfaces shed rain-water. Perforated lower surfaces allow any accumulated moisture to drain freely so the panel can dry quickly.

G-90 Galvanized steel materials of construction include a corrosion resistant zinc coating to protect the underlying steel components. A durable polyester powder coating suitable for exterior installations protects the steel from weathering and ensures an attractive finish in any of IAC Acoustics stock colors, or an industry standard RAL 4-digit color.

Roll-formed panels provide a uniform, flat profile suitable for architectural applications where an attractive appearance is a requirement. Consistent panel heights add to a crisp and neat visual aesthetic.

IAC Acoustics Noishield panels feature a deep cross section that provides greater resistance to wind-loading and a panel that can span supports up to 20 ft apart. IAC Acoustics provides a range of engineering data to assist with wall layout, including load tables for a range of support post spacing, wall heights and a variety of wind speeds.

Standard Features

- Laboratory Rated Acoustic Performance STC-30 to STC-33 / NRC 1.00 to 1.05
- Excellent weather & corrosion resistance. Galvanized steel materials with powder coated finish applied post assembly. Fully non-welded construction to avoid damage to galvanized coating.
- Freestanding, able to span supports of up to 20 feet depending on local codes & wind-speed requirements.

Noishield Barrier Systems Offer:

- Steel or aluminum materials of construction for a choice of economy or light-weight
- Powder-coated or mill-finish (in-coated) finishes for a range of options
- Multiple panel configurations and a range of sound transmission loss, STC & sound absorption performances to match each project's unique requirements
- "Continuline" specialty details to conceal support posts
- "Slim-Line" face-applied panels to permit utilization of existing support structures and installation from either the front or the rear of the support wall components

Typical Applications:

- Rooftop or ground mounted mechanical equipment screens
- Chiller, generator & compressor packages
- Transformer yards & utility substations
- Light-rail systems

Acoustic Performance

Noishield barrier panels are rated with sound transmission loss values fully compatible with typical acoustic screen performance requirements. All Noishield barrier panels incorporate sound absorbing materials to prevent noise reflections that degrade barrier performances. Type C modules are used to clad new or existing non-absorbing barriers while Type FS and SFS are free-standing walls that combine excellent sound transmission loss (used for 125 Hz insertion loss up to 10 dB) with high sound absorption ratings.

* Freestanding Type FSt is used for applications requiring 125 Hz insertion loss between 10 and 14 dB.

Barrier Model	1/3 Octave Band Center Frequency, Hz							
	125	250	500	1k	2k	4k	8k	**STC**
	Sound Transmission Loss, dB							
FS/S and SFS/S	21	34	40	33	32	26	37	30
FSt/S	24	38	41	33	35	29	34	33
FS/A and SFS/A	21	32	37	30	37	28	30	31
	Sound Absorption Coefficients							**NRC**
FS/S, FS/A and FSt/S	1.12	1.12	1.10	1.01	0.89	0.76	0.57	1.05
SFS/S and SFS/A	0.49	1.04	1.14	1.05	0.96	0.95	0.87	1.05
C/S and C/A	0.30	1.05	1.07	1.01	0.96	0.88	0.78	1.00
C12/S and C12/A	0.48	1.08	1.10	0.99	0.92	0.83	0.78	1.00
C38/S and C38/A	0.68	1.19	1.10	1.03	0.90	0.81	0.76	1.05

- Sound Transmission Loss: All data in accordance with ASTM E90 and E413
- Sound Absorption Coefficients: All data in accordance with ISO Standard 354, ASTM C423 and E413 with 120 ft^2 (11.15 m^2) test sample in 10,000 ft^3 (262 m^3) reverberation room. Type A mounting. Coefficients greater than 1.0 result from edge diffraction effects. Do not use sound absorption values greater than 0.95.

Durable Noishield Barrier Finishes

Noishield Barriers are finished with a tough, thermosetting, polyester powder coating which is not damaged by the harsh cleaning chemicals used to remove spray paint graffiti. A wide variety of standard colors allow complementary decorative schemes and attractive designs to reduce apparent wall height as perceived by the community.

- Tested for accelerated weathering per ASTM G23 for 2,400 hours with chalking not less than No. 8 rating (ASTM D 659) and color changes less than 5 NBS units (ASTM D 2244)
- Salt spray tested for checking, blistering, loss or adhesion, or evidence of corrosion per ASTM B117 for more than 4,000 hours without coating failure

Weather Shedding Construction

Noishield Sound Barrier Modules are constructed with solid top surfaces to minimize water infusion and perforated bottom surfaces to allow any entrapped water to escape. Infill is non-hygroscopic — water does not "wick" into the modules. Hence, traditional polymer fill protection is neither required or desirable due to adverse effects on sound absorbing characteristics.

Ground Mount / Roof Mount / Structure Mount

Noishield Sound Barriers are engineered from the foundation up for structural and acoustical integrity and economic installation. Low weight modules stack between posts to achieve required wall heights. Noishield Barriers can be installed with horizontal or vertical reveals to satisfy aesthetic and architectural considerations.

Freestanding Barriers

Noishield Types: FS and SFS Barriers — sound absorptive on one and two sides respectively — optimize sound transmission loss and sound absorption properties in a durable and attractive wall system in harmony with the community.

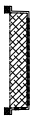
- Excellent low frequency absorption for heavy equipment
- Laboratory-rated sound absorption on one or both sides
- Low weight, rugged construction — ideal for wall or roof mounting
- 5" thick (127 mm) modular metal module system in steel or aluminum
- Abuse resistant dual-coated, galvanized steel or aluminum construction
- Withstands wind velocities of 110 mph (177 km/hr) — designs for specific wind loads are available
- Readily relocated in the event of expansion or other projects

Configuration		Type FS	Type SFS
		Thickness: 5" / 127 mm	Thickness: 5" / 127 mm
Weight lb / ft² (kg / m²)	Steel	FS/S – 6.5 (31.7)	SFS/S – 9.9 (48.3)
		FSt/S* – 8.6 (42.0)	–
	Aluminum	FS/A – 4.5 (22.0)	SFS/A – 5.2 (25.4)
Application		Freestanding alongside noisy equipment	Freestanding between multiple noise sources

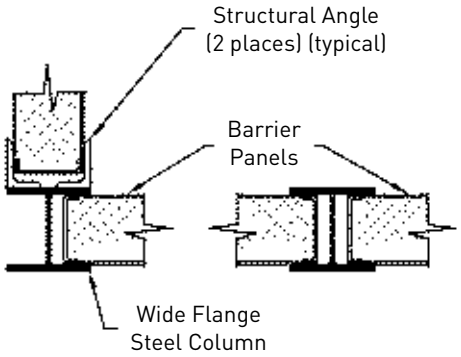
Sound Absorptive Treatment for New Construction & Retrofit Applications

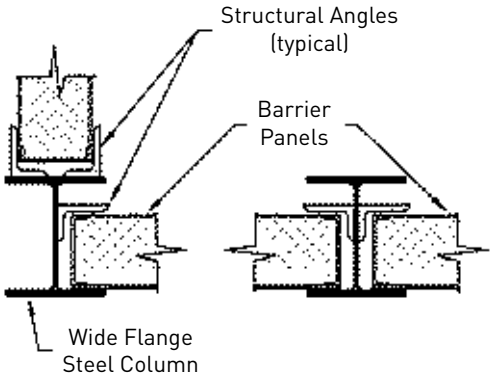
Noishield Type C Cladding Modules — sound absorptive to control reflections from acoustically hard barriers

- Apply to new or existing wood, concrete or steel barriers to reduce reflected noise levels in the community
- Retrofit existing barriers to eliminate or mitigate noise complaints
- Low weight, rugged construction — ideal for retrofit applications
- Laboratory-rated sound absorption coefficients
- 2-1/2" (64 mm) thick metal module system
- Abuse resistant galvanized steel or aluminum construction
- Individual modules readily manufactured and replaced if damaged

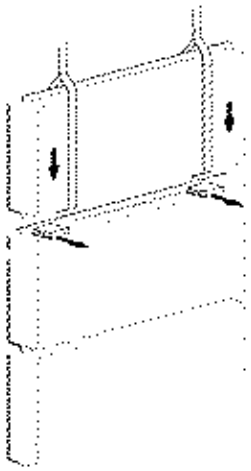
Configuration		Type C	Type C12	Type C38
		Thickness 2.5" / 64 mm	 Thickness 3" / 76 mm	Thickness 4" / 102 mm
Weight lb / ft² (kg / m²)	Steel	C/S – 3.25 (15.9)	C12/S – 3.55 (17.3)	C38/S – 4.05 (19.8)
	Aluminum	C/A – 1.1 (5.4)	C12/A – 1.4 (6.8)	C38/A – 1.9 (9.3)
Application		Apply to new or retrofit existing metal, wood, brick, concrete, stone or other noise-reflecting walls. Select Types C12 & C38 for enhanced 125 Hz sound absorption.		

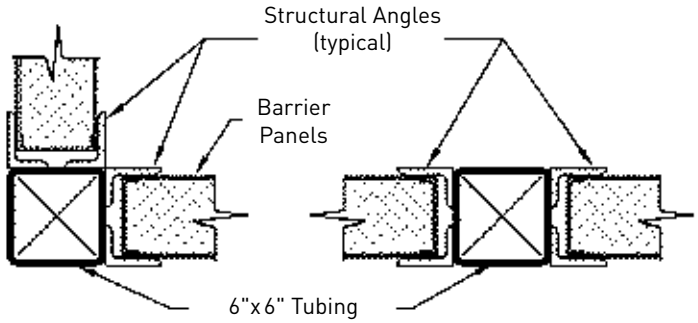
Barrier Supports & Installation

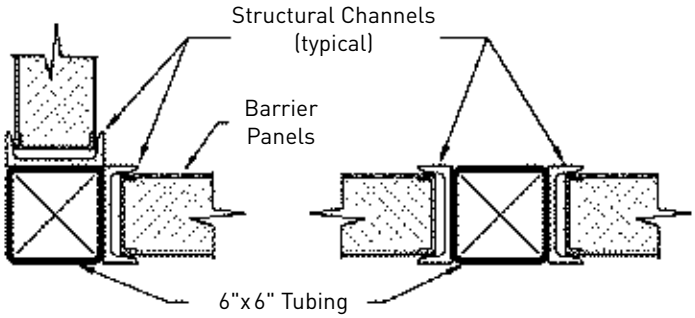




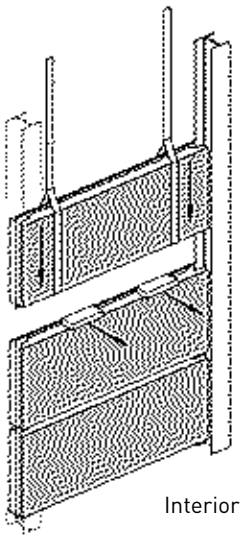
Standard Panel Installation

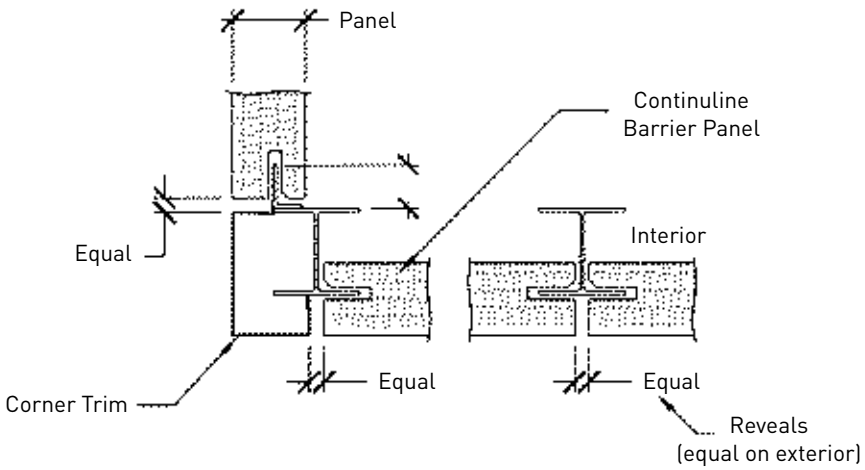




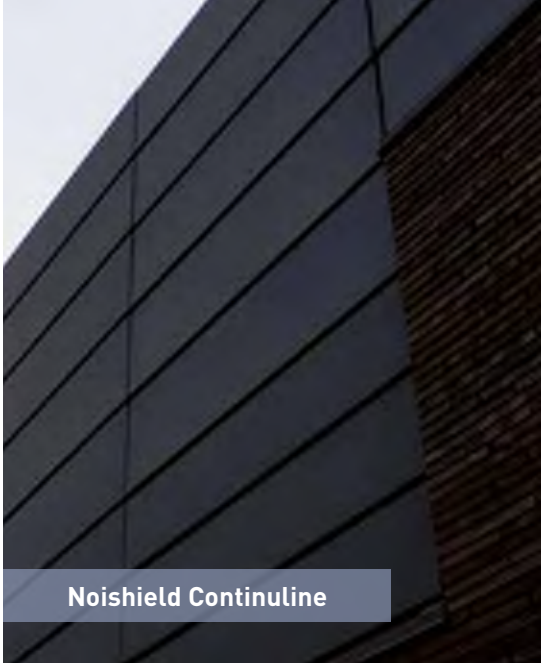


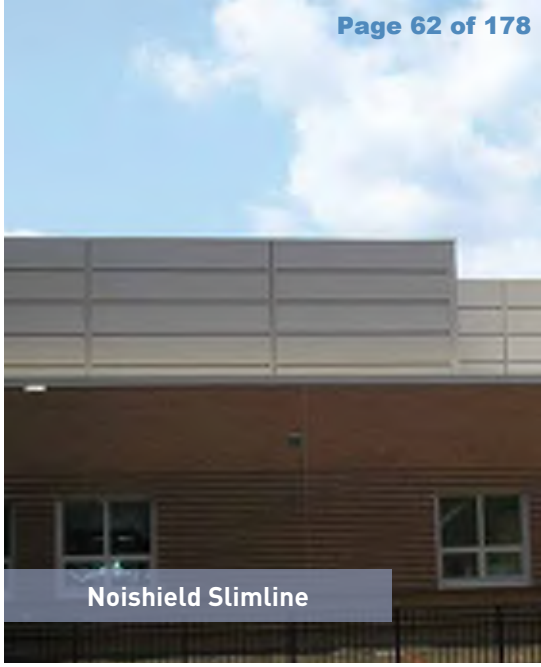
Continuline Panel Installation





Noishield Continuline


Noishield Continuline


Noishield Slimline

Noishield Continuline Detail for Concealed Columns

IAC's Continuline is more aesthetically pleasing than a traditional barrier wall — it allows architects and customers to conceal their structural members. The Continuline panels are the same construction as the standard FS panels. The key difference is the endcap — the endcap wraps the column; leaving an architecturally pleasing reveal that mimics the horizontal reveal already prevalent in the system. Continuline's primary applications include rooftop systems, train/rail and ground mounted.

- Superior aesthetic
- Special slotted end-caps
- Solid front face of panel conceals the column
- Acoustic & architectural screen in a single assembly & installation

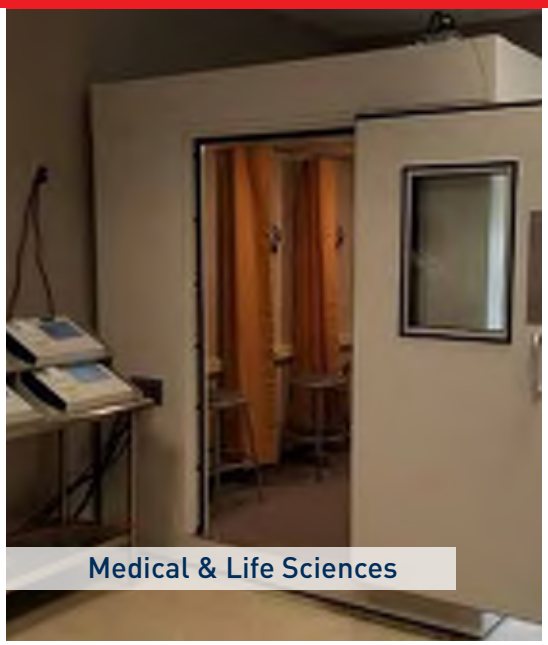
Noishield Slimline Detail for Surface Mounting

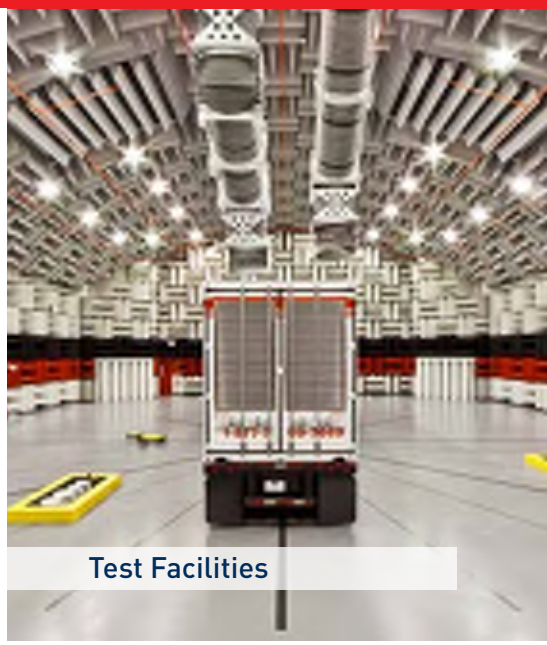
- Face or rear applied
- Reduced thickness of 2.5"
- Secured with Z & Hat channel
- Hat channel edge trim between adjacent panel stacks
- Z channel edge trim at end of panel stack

Making the World a Quieter Place

Markets Served by IAC Acoustics

Architectural


Medical & Life Sciences


Test Facilities

Industrial

Dyno Test Rooms

HVAC

www.iacacoustics.com

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Naperville, Illinois 60563
630.270.1790

INDUSTRIAL BARRIER WALLS

NOISE BARRIERS

QuietLine™
OIL & GAS

Oil and Gas Pump Enclosures

Absorptive noise control barriers provide maximum noise reduction with lightweight modular panels and/or louvers. The noise barrier system is easy to install and easy to relocate. Panels and louvers are constructed of galvanized steel or aluminum and finish painted in a weather and salt resistant polyester powder coating. The finish is also graffiti resistant and cleanable.

APPLICATIONS

- Oil Transfer Stations
- Jet Turbine Enclosures
- Pump Jack Enclosures
- Heavy Oil Dog Houses
- Compressor Enclosures
- Community Sensitive Enclosures
- Generators
- Loading Docks
- Rail Yards
- Power Plants
- Transformers
- Manufacturing Facilities

FEATURES

- Silenced Ventilation System
- Blast resistant
- Acoustic Louvers
- Pre-assembled or panelized
- Standard or custom designs to meet the requirements of your facility
- Lightweight
- Durable
- Galvanized, aluminum, or stainless steel
- Two, four, or five-inch thicknesses
- Easy installation and removal
- Horizontal or vertical installation
- Self-draining
- Open or enclosed versions available
- Blow-out panels optional
- Maximum acoustical performance
- All products independently tested (STC 37 & above, NRC 0.95 & above)
- Weather resistant
- Graffiti resistant
- Unlimited color selection
- 10 year warranty

QuietLine™

POWER & ELECTRIC

FREE-STANDING OR ELEVATED PANEL CONSTRUCTION

- Allows for maximum flexibility of design and utility on the ground or on the rooftop
- One or two-sided sound absorption
- Steel or aluminum construction
- Perfect for retrofit installation to solve existing noise problems
- Low-weight construction is ideal for roof mounted applications
- Designed to withstand high wind loads

ALL-WEATHER APPLICATIONS

- Barrier modules are designed and built to minimize water invasion
- Panels resist "wicking" moisture through the bottom and are self-draining
- Exterior finishes resist harsh cleaners, common chemicals and salt exposure
- Polyester powder coating

FEATURES:

- Lightweight & durable
- Galvanized, aluminum, or stainless steel
- Two, four, or five-inch thicknesses
- Easy installation and removal
- Horizontal or Vertical installation
- Self-draining
- Maximum acoustical performance
- All products independently tested (STC 37 & above, NRC 0.95 & above)
- Weather resistant
- Graffiti resistant

QuietLine™
TRANSPORTATION

ALL-WEATHER APPLICATIONS

- Barrier modules are designed and built to minimize water invasion
- Panels resist "wicking" moisture through the bottom and are self-draining
- Exterior finishes resist harsh cleaners,common chemicals and salt exposure
- Polyester powder coating
- Lightweight and durable
- Galvanized, aluminum, or stainless steel
- Two, four, or five-inch thicknesses
- Easy installation and removal
- Horizontal or vertical installation
- Self-draining
- Maximum acoustical performance
- All products independently tested (STC 37 & above, NRC 0.95 & above)
- 10 year warranty
- Weather resistant
- Graffiti resistant
- Unlimited color selection

FEATURES

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- Horizontal or vertical installation
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- Weather resistant
- Graffiti resistant
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FREE-STANDING OR ELEVATED PANEL CONSTRUCTION

- Allows for maximum flexibility of design and utility on the ground or on the rooftop
- One or two-sided sound absorption
- Steel or aluminum construction
- Perfect for retrofit installation to solve existing noise problems
- Low-weight construction ideal for roof or bridge mounted applications
- Designed to withstand high wind loads

Acoustical Performance Data Sound Transmission Loss Data, dB

1/3 Octave Band Center Frequency, Hz	125	250	500	1K	2K	4K	STC
V-Stack Aluminum	14	20	31	42	40	52	33
V-Stack Steel	22	26	35	45	47	48	38
SL Barrier	18	26	35	45	49	52	37
H/P 38	24	25	33	43	50	55	38
H/P 42	23	31	40	49	56	62	42
H/H 50	26	44	50	54	57	64	50
H/H 52	37	43	47	53	54	57	52

All tests performed by Riverbank Acoustical Laboratories, an independent NVLAP accredited acoustical testing facility. The test method conforms with ASTM Designations E90-99or E90-02 and E413-87.

Sound Absorption Coefficients

1/3 Octave Band Center Frequency, Hz	125	250	500	1K	2K	4K	NRC	
Barrier Panels								
V-Stack Aluminum	0.89	1.23	1.18	1.08	1.06	0.95	0.95	(1.15)
V-Stack Steel	0.86	1.20	1.17	1.07	1.08	1.02	0.95	(1.15)
SL Barrier	0.92	1.15	1.22	1.13	1.08	1.04	0.95	(1.15)
H/P 42	0.68	1.06	1.12	1.08	1.03	0.98	0.95	(1.05)
2" Thick Cladding Panels								
NB-II Aluminum	0.27	0.63	1.09	1.06	1.04	1.03	0.95	
NB-II	0.26	0.53	1.00	1.03	0.97	1.01	0.90	
NB-II-B	0.35	0.63	1.08	1.12	0.94	0.77	0.95	
NB-SII-B	0.47	0.65	0.96	1.03	0.94	0.76	0.90	
4" Thick Cladding Panels								
NB-II Aluminum	0.87	1.26	1.18	1.04	1.08	1.00	0.95	
NB-IV	0.78	1.10	1.19	1.04	1.02	0.81	0.95	(1.10)
NB-IV-B	0.70	1.08	1.15	1.05	1.05	1.01	0.95	(1.10)
NB-SIV-B	0.95	0.83	0.96	0.98	0.99	0.79	0.95	

All tests performed by Riverbank Acoustical Laboratories, an independent NVLAP accredited acoustical testing facility. The test method conforms with the requirements of the ASTM Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method: ASTM C423-90a and E795-00.

Lonesome Road Community Energy Initiative LLC
203 Crescent Street St, Suite 106
Waltham, MA 02453

ATTACHMENT 2 – Glare Study

BARRETT ENERGY RESOURCES GROUP
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WWW.BARRETTENERGYGROUP.COM

Technical Memorandum

To:	Lonesome Road Community Energy Initiative LLC c/o Nicholas Hetland, ECA Solar
From:	Stephen Barrett
Date:	August 5, 2026
RE:	Glare Study, Lonesome Road Solar Project, Seaford, DE

Executive Summary

Lonesome Road Community Energy Initiative LLC (LRCEI) is developing a ground-mounted, single axis tracking solar photovoltaic (PV) project northeast of Lonesome Road in Seaford, DE. LRCEI has engaged Barrett Energy Resources Group (BERG) to analyze potential impacts of glare from the project on nearby sensitive receptors.

BERG has utilized the Solar Glare Hazard Analysis Tool (SGHAT) which was developed by the US Department of Energy for the Federal Aviation Administration (FAA) to protect aviation sensitive receptors. For this project, SGHAT has been used to assess potential glare on residences and roadways near the project. Sixteen (16) receptors, which are representative of expected results from other potential receptors in the area, were selected for analysis.

The model recorded no glare on any of the receptors analyzed. The results are primarily a product of the single axis tracking system which directs any potential glare upward and away from receptors on the ground. The results demonstrate that the project will have no glare impacts. This Technical Memorandum describes the project, modeling methodology, and results.

Project Description

The Lonesome Road Solar Project would be located on undeveloped farmland northeast of Lonesome Road in Seaford, DE as shown in **Figure 1**. The proposed project is a ground-mounted, single axis tracking facility with a capacity of 3.0089 MW DC (2.000 MW AC). It would include landscape screening on the northern and western sides installed at a height of 6 feet above ground level (agl) at the time of planting to minimize visual impacts on adjacent land uses.

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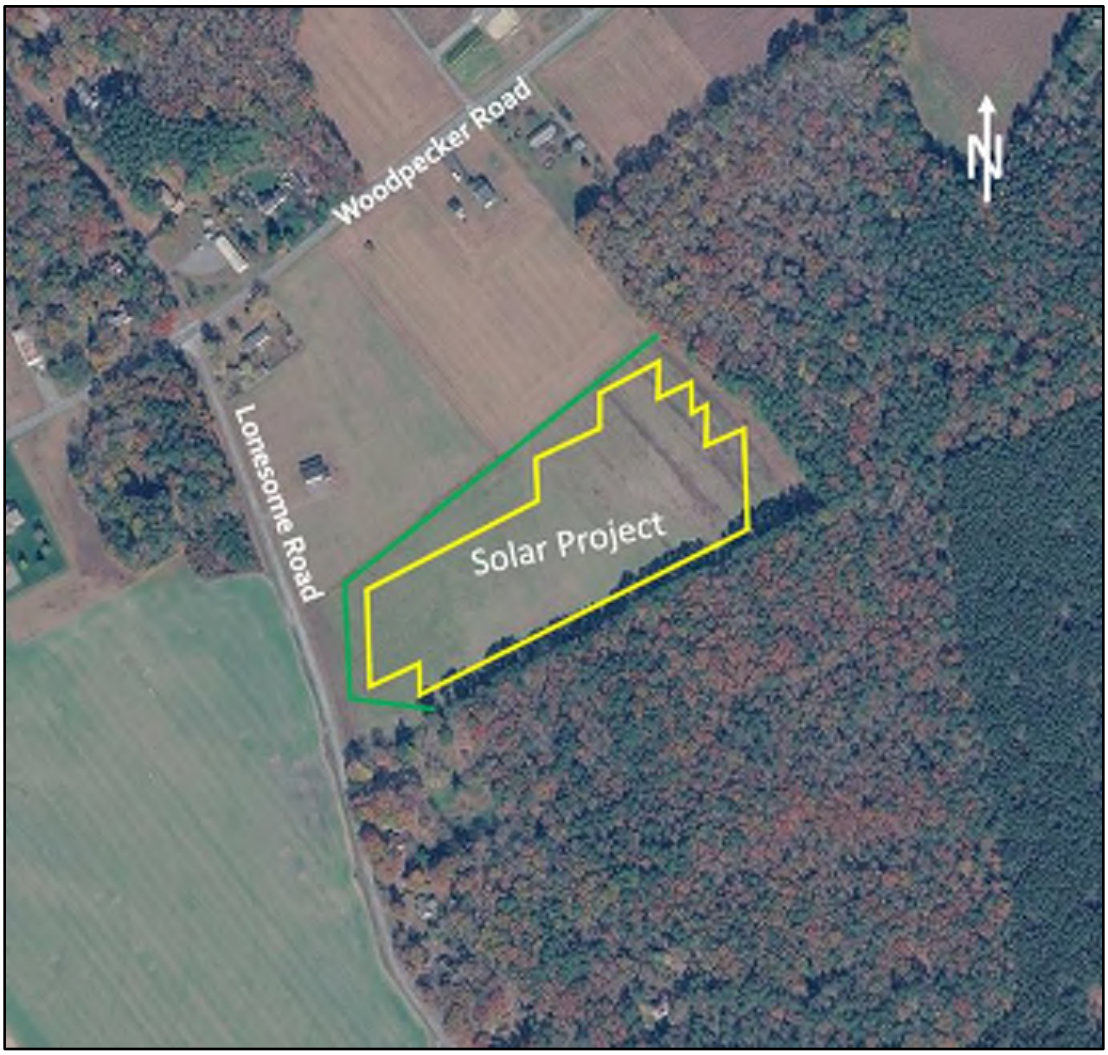

Figure 1. Lonesome Road Solar Project Locus

FAA Solar Policy

In 2013, the Federal Aviation Administration (FAA) published "Interim Policy, FAA Review of Solar Energy System Projects on Federally-Obligated Airport," which sets forth methods for assessing glare and the standards for determining impact for projects proposed on airport property. It also requires the use of modeling to assess glare and directs project proposers to the Solar Glare Hazard Analysis Tool (SGHAT) which was developed by the US Department of Energy at the request of the FAA. The Policy was issued as Final in May 2021. The US Department of Defense (DOD) also adopted SGHAT and the associated requirements to analyze glare under Instruction (DODI) 4165.57. Given the critical safety issues associated with aviation, the model produces a highly credible result that is being used to evaluate other glare sensitive receptors.

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Glare Methodology and Standard of Impact

Prediction of potential glare occurrence from a solar PV project requires knowledge of the sun position, observer location, and the solar module/array characteristics (e.g., location, extent, tilt, azimuth or orientation, etc.). The path of glare is governed by the law of reflection which states that the angle of incidence equals the angle of reflection (see **Figure 2**). Vector algebra is then used to determine if glare would be visible from the prescribed observation points.

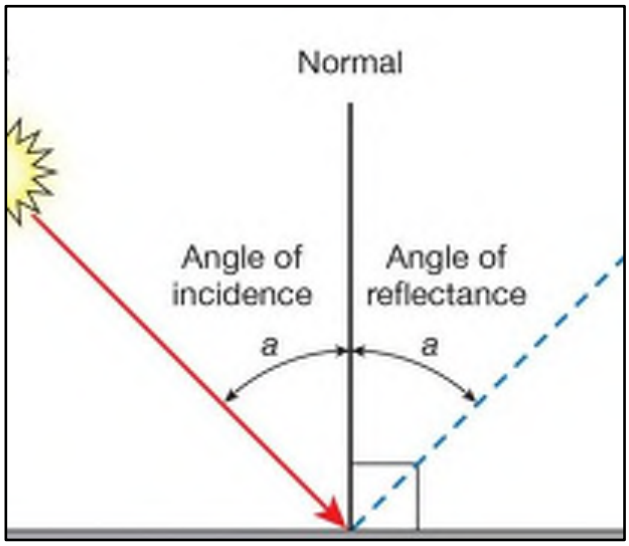

Figure 2. Law of Reflection

Figure 3 provides a simple representation of how the sun can produce glare on an automobile for a specific time and location. In accordance with the Law of Reflection, the angle of the light source from the sun must be equal to the angle of the reflection on a receptor. Therefore, when receptors are close to the ground (like a house or car), a reflection is only possible when the sun is also close to the ground (i.e., near sunrise or sunset). As the sun moves, the incidence of glare ends.

The SGHAT model is a credible tool for predicting glare based on the characteristics of the project and the identified receptor. It produces results including relative glare intensity identified by color based on three categories: green (low potential for an after-image), yellow (potential for an after-image), and red (retinal burn). While these categories apply to the FAA Policy for aviation receptors and are not specified in similar policies and ordinances for non-aviation receptors, it is appropriate to interpret the results, including the time and duration of occurrence, and draw a conclusion as to the significance of potential impact.

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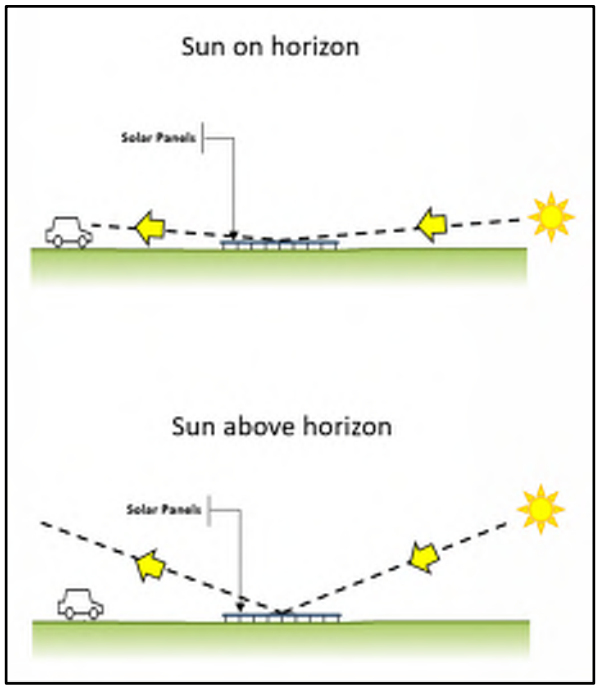

Figure 3. Geometric Representation of Potential Glare Impacts from the Sun

SGHAT Model Setup for Proposed Project

Regardless of the receptor to be analyzed, the model set-up requires locating the solar project, inputting its design characteristics, and identifying sensitive receptors for analysis. The position and movement of the sun throughout the year is built into the model.

For the Lonesome Road Solar Project, BERG used the PV project polygon tool to draw the footprint of the solar array on SGHAT's interactive Google map. The specific attributes of the solar array were then input into the model. As the project proposes a single axis tracking system, SGHAT provides relevant fields for the project characteristics, including an array orientation of 180°, maximum tracking angle of 60° and a resting (stowage) angle of 5°. The average panel height 10 feet above ground level (agl), and a panel surface with no anti-reflective coating were also input as a worst-case scenario. **Figure 4** is a schematic showing how the solar panels track the sun's position throughout the day. Landscape screening is also proposed to the north and west of the facility, and it has been included in the model with an installed height of 6 feet (agl) at the time of planting.

Sixteen (16) receptors, which are representative of expected results from others nearby, were selected for analysis. The sensitive receptors are motor vehicle traveling on Lonesome and Woodpecker Roads, and on nearby residences as shown in **Figure 5**.

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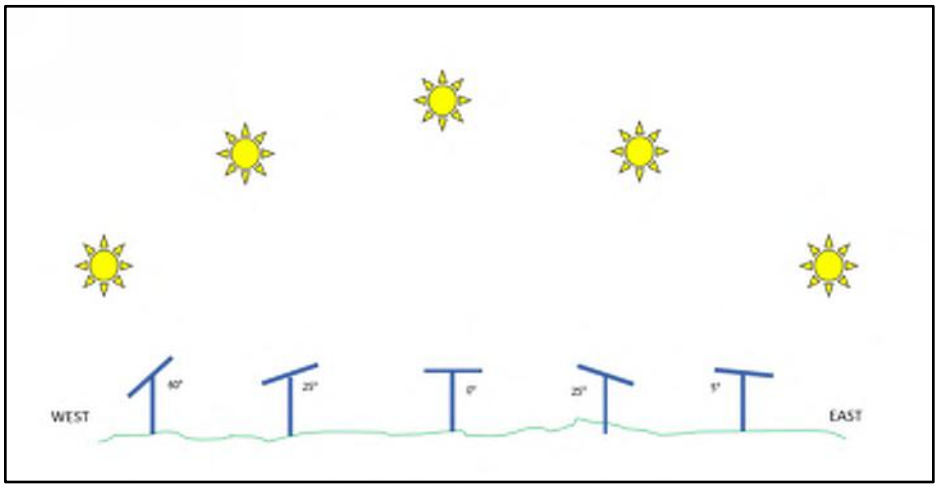

Figure 4. Schematic of the Single Axis Tracking System Follows the Sun During the Day

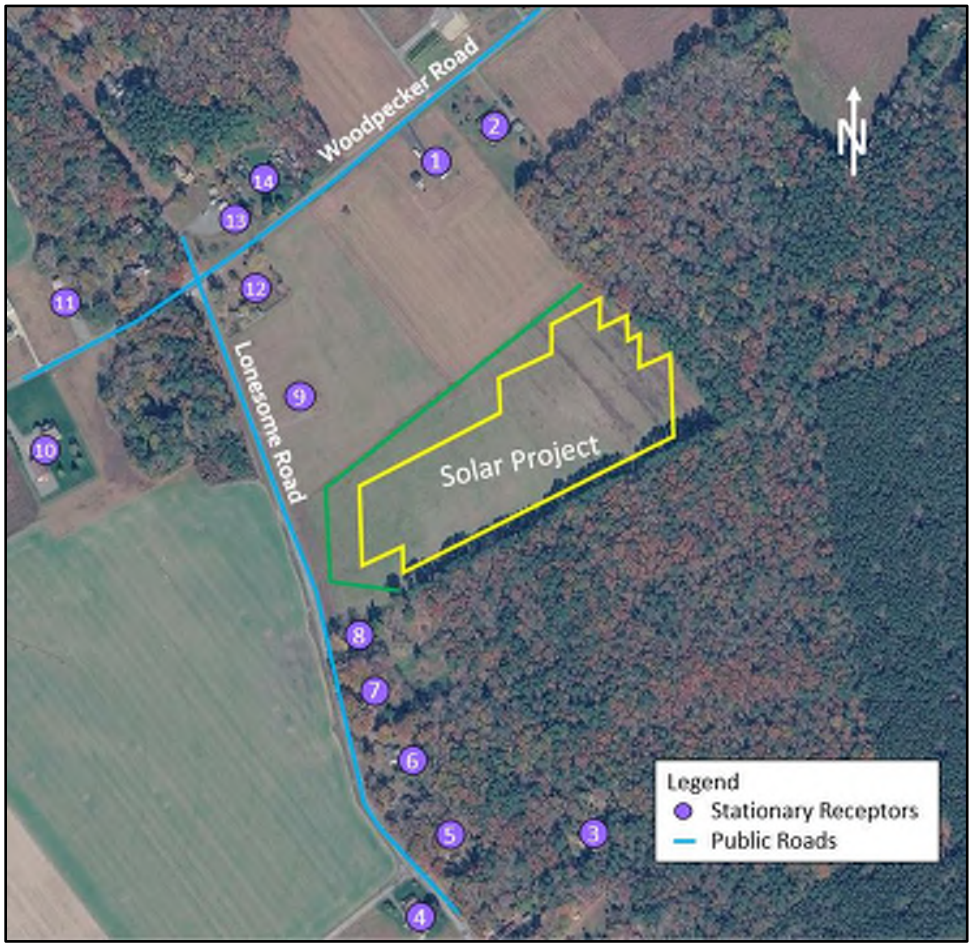

Figure 5. Residential and Motor Vehicle Receptor Evaluated in the Model

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The model's route tool was used to locate the segments of the roadways for analysis, and the observation point tool for individual stationary receptor points located on the Google map. For the motor vehicle analysis, the driver's height above the roadway was set at 4 feet agl to represent a passenger vehicle and for the residential receptor, 5 feet agl to represent a view from a person standing on the property. Forested areas surrounding the project were conservatively input at 30 feet agl.

The glare analysis button was activated, and the model evaluated glare from various sun angles at 1-minute intervals throughout the year to predict if glare could be observed from the sensitive receptors.

Glare Model Results

The final modeling report is provided in Attachment A. The results show no glare on any of the receptors analyzed.

Conclusions

Barrett Energy Resources Group (BERG) has used the SGHAT modeling tool developed by the US Department of Energy to assess the potential effects of glare from the Lonesome Road Solar Project on residences and roadways near the project. Sixteen (16) receptors, which are representative of expected results from others nearby, were analyzed.

The model recorded no glare on any of the receptors analyzed. The results are primarily a product of the single axis tracking system which directs any potential glare upward and away from receptors on the ground. They demonstrate that the project would have no glare impact and would be in compliance with the local zoning bylaw.

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Attachment A

Glare Modeling Results

Motor Vehicle and Residential Receptors

FORGESOLAR GLARE ANALYSIS

Project: **Lonesome Road Solar Project**
A ground-mounted, single axis tracking solar photovoltaic facility.

Site configuration: **Proposed**
Calculated via ForgeSolar Radiometric Physics Engine v3.2.1

Client: ECA Solar

Created 01 Aug, 2026
Updated 05 Aug, 2026
Time-step 1 minute
Timezone offset UTC-5
Minimum sun altitude 0.0 deg
DNI peaks at 1,000.0 W/m^2
Category 1 MW to 5 MW
Site ID 184698.30458

Ocular transmission coefficient 0.5
Pupil diameter 0.002 m
Eye focal length 0.017 m
Sun subtended angle 9.3 mrad
Min luminance threshold 5,000 cd/m^2

Summary of Results No glare predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	SA tracking	SA tracking	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Lonesome Road	0	0.0	0	0.0
Woodpecker Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0

Component Data

PV Arrays

Name: PV array 1
Description: Ground-mounted single axis tracking solar array
Axis tracking: Single-axis rotation
Backtracking: Shade
Tracking axis orientation: 180.0°
Max tracking angle: 60.0°
Resting angle: 5.0°
Ground Coverage Ratio: 0.5
Rated power: -
Panel material: Smooth glass without AR coating

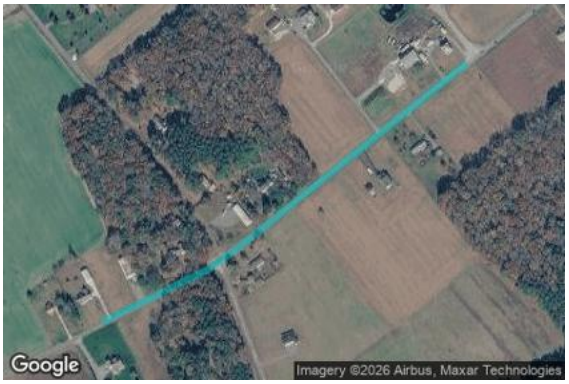
Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.626849	-75.663571	28.78	10.00	38.78
2	38.626669	-75.664150	30.67	10.00	40.67
3	38.626442	-75.664150	31.11	10.00	41.11
4	38.626224	-75.664810	31.75	10.00	41.75
5	38.625864	-75.664816	29.07	10.00	39.07
6	38.625210	-75.666468	26.09	10.00	36.09
7	38.624592	-75.666465	25.61	10.00	35.61
8	38.624749	-75.665974	24.73	10.00	34.73
9	38.624489	-75.665969	24.71	10.00	34.71
10	38.625734	-75.662783	26.00	10.00	36.00
11	38.626480	-75.662804	27.29	10.00	37.29
12	38.626354	-75.663222	29.06	10.00	39.06
13	38.626782	-75.663212	27.61	10.00	37.61
14	38.626656	-75.663587	29.83	10.00	39.83

Route Receptors

Name: Lonesome Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.627612	-75.668443	29.79	4.00	33.79
2	38.626690	-75.668035	34.30	4.00	38.30
3	38.624796	-75.667069	31.45	4.00	35.45
4	38.624226	-75.666941	31.64	4.00	35.64
5	38.622667	-75.666447	28.00	4.00	32.00
6	38.622315	-75.666254	27.07	4.00	31.07
7	38.621946	-75.666018	26.79	4.00	30.79
8	38.621124	-75.665138	30.20	4.00	34.20

Name: Woodpecker Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.629657	-75.663980	32.03	4.00	36.03
2	38.627277	-75.667756	34.19	4.00	38.19
3	38.626925	-75.668378	33.50	4.00	37.50
4	38.626237	-75.670159	33.35	4.00	37.35

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	38.628031	-75.665296	33.19	5.00
OP 2	2	38.628425	-75.664406	32.41	5.00
OP 3	3	38.621955	-75.663623	27.27	5.00
OP 4	4	38.621351	-75.665661	29.13	5.00
OP 5	5	38.621753	-75.665093	25.30	5.00
OP 6	6	38.622726	-75.665919	26.37	5.00
OP 7	7	38.623271	-75.666166	29.80	5.00
OP 8	8	38.623779	-75.666514	30.83	5.00
OP 9	9	38.625933	-75.666932	33.18	5.00
OP 10	10	38.625706	-75.669850	32.17	5.00
OP 11	11	38.627089	-75.668820	33.27	5.00
OP 12	12	38.626997	-75.667468	35.18	5.00
OP 13	13	38.627601	-75.667672	33.17	5.00
OP 14	14	38.628112	-75.667340	32.07	5.00

Obstruction Components

Name: Landscape Screening
Top height: 6.00 ft

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)
1	38.627072	-75.663636	27.53
2	38.625203	-75.666598	26.95
3	38.624529	-75.666571	26.18
4	38.624281	-75.665745	24.57

Glare Analysis Results

Summary of Results No glare predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	SA tracking	SA tracking	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Lonesome Road	0	0.0	0	0.0
Woodpecker Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0

PV: PV array 1 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Lonesome Road	0	0.0	0	0.0
Woodpecker Road	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0

PV array 1 and Route: Lonesome Road

No glare found

PV array 1 and Route: Woodpecker Road

No glare found

PV array 1 and OP 1

No glare found

PV array 1 and OP 2

No glare found

PV array 1 and OP 3

No glare found

PV array 1 and OP 4

No glare found

PV array 1 and OP 5

No glare found

PV array 1 and OP 6

No glare found

PV array 1 and OP 7

No glare found

PV array 1 and OP 8

No glare found

PV array 1 and OP 9

No glare found

PV array 1 and OP 10

No glare found

PV array 1 and OP 11

No glare found

PV array 1 and OP 12

No glare found

PV array 1 and OP 13

No glare found

PV array 1 and OP 14

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.
Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.
The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.
The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.
The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

ForgeSolar default analysis parameters and observer eye characteristics, listed for reference only. The values used for this analysis are given in the site summary above.

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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This analysis was conducted using the best available radiometric modeling at the time of generation. Future updates to the modeling methodology may yield different results.

2.2 Application for Planning and Zoning Commission

File #: _____

Planning & Zoning Commission 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)
Conditional Use ___
Zoning Map Amendment ___

Site Address of Conditional Use/Zoning Map Amendment

Lonesome Road, Seaford, DE 19973

Type of Conditional Use Requested:
Solar Energy Facility

Tax Map #: 531-12.00-92.02 **Size of Parcel(s)**: 28.64 AC.

Current Zoning: AR-1 **Proposed Zoning:** AR-1 **Size of Building**: 0 S.F.

Land Use Classification: LD (Low Density)

Water Provider: N/A **Sewer Provider:** N/A

Applicant Information

Applicant Name: Lonesome Road Community Energy Initiative LLC c/o Michael Redding, P.E.
Applicant Address: 203 Crescent St, Suite 106
City: Waltham State: MA ZipCode: 02453
Phone #: (603) 494-6801 E-mail: mr@ecasolar.com

Owner Information

Owner Name: Catherine A. Savage & Theodore R. Savage JR. & Randi N. Gootee c/o Catherine Savage
Owner Address: 9875 Sherwood Farm Road
City: Owings Mill State: MD Zip Code: 21117
Phone #: (302) 542-8871 E-mail: CathyS0598@hotmail.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Becker Morgan Group, Inc. c/o Michael Henry
Agent/Attorney/Engineer Address: 309 South Governors Ave.
City: Dover State: DE Zip Code: 19904
Phone #: (302) 734-7950 E-mail: mhenry@beckermorgan.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✓ **Completed Application**

✓ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✓ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✓ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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: 5/6/2025

Signature of Owner

Date: 05/01/25

For office use only:

Date Submitted: ___ Fee: Check #: ___

Staff accepting application: ___ Application & Case #: ___

Location of property: ___

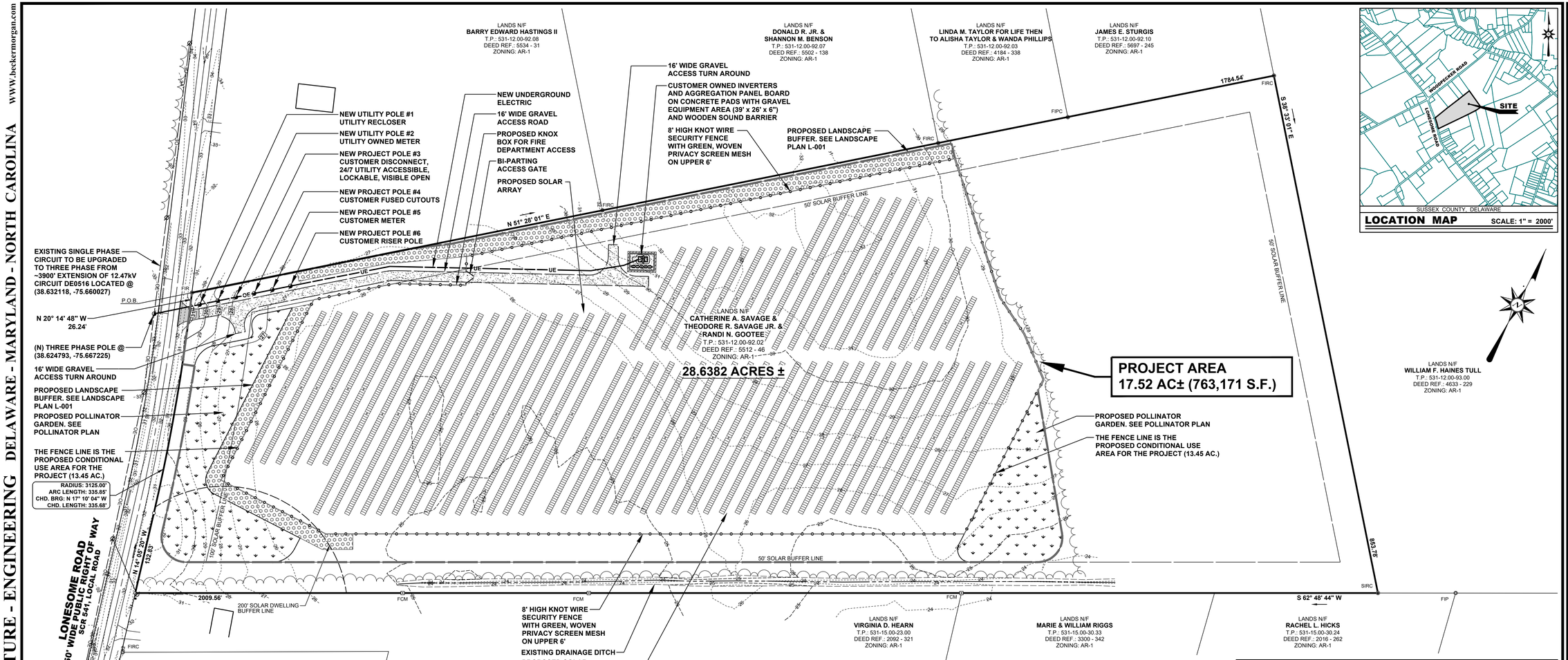
Subdivision: ___

Date of PC Hearing: ___ Recommendation of PC Commission: ___

Date of CC Hearing: ___ Decision of CC: ___

2.3 Conditional Use Site Plan and Landscape Plan

BECKER MORGAN GROUP ARCHITECTURE - ENGINEERING DELAWARE - MARYLAND - NORTH CAROLINA www.beckermorgan.com



LEGEND

ITEM	EXISTING	PROPOSED
CONCRETE CURB & GUTTER		
CONCRETE SIDEWALK, SLAB / PAVING		
IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT		N/A
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	
WIRE FENCE		
CHAINLINK FENCE		
STOCKADE FENCE		
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)		
DRAINAGE DITCH OR SWALE		
WETLAND BOUNDARY LINE		N/A
CONTOUR	49	55
ELEVATION SPOT SHOT	43.55	25.15
BENCH MARK		25.50 T.C. 25.00 B.C.
PROPERTY OR RIGHT-OF-WAY LINE		N/A
CENTERLINE		
LIGHT POLE		

ITEM	EXISTING	PROPOSED
SANITARY GRAVITY SEWER LINE (**S**) SIZE & FLOW DIRECTION	EX. 10"S	10" S
SANITARY SEWER FORCE MAIN (**F.M.**) SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
SANITARY SEWER MANHOLE (**S.S.M.H.**)		
SANITARY SEWER CLEANOUT (**C.O.**)		
WATER MAIN & SIZE	EX. 10" W	12" W
FIRE HYDRANT (**F.H.**)	F.H.	F.H.
WATER VALVE (**W.V.**) OR METER (**W.M.**)	W.M. W.V.	W.M. W.V.
STORM DRAIN MANHOLE (**S.D.M.H.**)		
STORM DRAIN LINE (**RMP**, **RCP**, **HDPE**)		
CATCH BASIN (**C.B.**)		
UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (**O.T.**), ELECTRIC (**O.E.**)		
UNDERGROUND ELECTRIC (**U.E.**)	U.E.	U.E.
UNDERGROUND TELEPHONE (**U.T.**)	U.T.	U.T.
UNDERGROUND GAS MAIN (**G**)	EX. 2" G	2" G

SHEET INDEX

C-001	CONDITIONAL USE SITE PLAN
L-001	LANDSCAPE PLAN
1 OF 1	POLLINATOR GARDEN PLANTING PLAN
1 OF 1	FOREST ASSESSMENT

OWNERS CERTIFICATION

WE, CATHERINE A. SAVAGE, THEODORE R. SAVAGE JR. & RANDI N. GOOTEE, HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

CATHERINE A. SAVAGE, AUTHORIZED SIGNATORY — DATE

ENGINEERS CERTIFICATION

I, J. MICHAEL RIEMANN, P.E. HEREBY CERTIFY THAT I AM A REGISTERED 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.

J. MICHAEL RIEMANN — P.E. NO. 13772 — DATE

GENERAL NOTES :

1. THE BOUNDARY & TOPOGRAPHIC DATA SHOWN HEREON WAS COMPILED FROM A FIELD SURVEY PERFORMED BY BECKER MORGAN GROUP, INC. , DOVER, DE. COMPLETED IN MARCH OF 2025
2. THE BOUNDARY LINES PORTRAYED HEREON HAVE BEEN ESTABLISHED BASED SOLELY ON PHYSICAL EVIDENCE DISCOVERED IN THE FIELD, IN CONJUNCTION WITH DETERMINATIONS DERIVED FROM SOURCE OF TITLE AND ADJACENT DEED RECORD INFORMATION.
3. THE ACCOMPANYING SURVEY WAS MADE ON THE GROUND AND CORRECTLY SHOWS THE LOCATION OF ALL BUILDINGS, STRUCTURES AND OTHER IMPROVEMENTS SITUATED ON THE ABOVE PREMISES; THAT THERE ARE NO VISIBLE ENCROACHMENTS ON THE SUBJECT PROPERTY OR UPON THE LAND ABUTTING SAID PROPERTY EXCEPT AS SHOWN HEREON.
4. A WETLAND DELINEATION OF THE SUBJECT SITE WAS PERFORMED BY GTA IN DECEMBER 2024. AS A RESULT OF THE REVIEW OF THE SUBJECT SITE, IT IS GTA'S PROFESSIONAL OPINION THAT THERE ARE NOT JURISDICTIONAL WETLANDS AND WATERBODIES PRESENT WITHIN THE SUBJECT SITE.
5. THE SUBJECT PROPERTY IS LOCATED WITHIN AN AREA HAVING A ZONE DESIGNATION "X" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAP NO. 10005C0245L WITH A DATE OF IDENTIFICATION OF JUNE 20, 2018.
6. THE SOLAR ARRAY LEASE AREA HAS DIRECT ACCESS TO LONESOME ROAD (SCR 541), A DEDICATED PUBLIC STREET, AS SHOWN HEREON.
7. NO VISIBLE EVIDENCE OF CEMETERY OR BURIAL GROUND OBSERVED AT TIME OF SURVEY ON LEASE AREA.
8. BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION HE MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM SUSSEX COUNTY, DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROLS (DNREC), DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT), SUSSEX CONSERVATION DISTRICT (SCD) AND ALL OTHER APPROPRIATE STATE AND COUNTY AGENCIES.
9. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO THE SUSSEX COUNTY AND THE STATE OF DELAWARE (DELDOT) STANDARDS AND CONSTRUCTION SPECIFICATIONS.
10. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
11. ALL WORK WITHIN STATE MAINTAINED ROAD RIGHT-OF-WAY SHALL MEET THE REQUIREMENTS AS SET FORTH IN THE CURRENT REVISION OF THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION BY THE DELAWARE DEPARTMENT OF TRANSPORTATION.
12. A FOREST ASSESSMENT OF THIS PARCEL (531-12.00-92.02) WAS PERFORMED BY GEO-TECHNOLOGY ASSOCIATES, INC. SEE PLAN TITLED " FOREST ASSESSMENT LONESOME ROAD", DATED APRIL 9, 2025.
13. NEITHER A DRAINAGE ASSESSMENT OR RESOURCE BUFFER MANAGEMENT PLAN ARE REQUIRED FOR THIS SITE AS THERE ARE NO AQUATIC RESOURCES ON THE SITE THAT NEEDED TO BE EVALUATED AS DETERMINED BY BY GEO-TECHNOLOGY ASSOCIATES, INC.
14. LONESOME ROAD COMMUNITY ENERGY INITIATIVE, LLC SHALL BE RESPONSIBLE FOR THE DECOMMISSIONING/ REMOVAL OF THE FACILITY.
15. IF TOPSOIL IS REMOVED FOR IMPROVEMENTS, IT SHALL REMAIN ON THE SITE.
16. NONINVASIVE, PERENNIAL VEGETATIVE GROUND COVER MUST BE MAINTAINED OR ESTABLISHED IN ALL AREAS CONTAINING SOLAR ARRAYS AND IN REQUIRED SETBACKS TO PREVENT EROSION AND MANAGE RUNOFF. A SEED MIX WILL BE USED TO PROMOTE THE GROWTH OF A GROUND COVER THAT IS FAVORABLE TO FUTURE USE OF THE LAND BY ANIMALS. THE HEIGHT OF THE VEGETATION GROWTH SHALL BE MAINTAINED AS TO REDUCE THE POSSIBILITY OF THE AIRBORNE SPREADING OF SEEDS AND SEEDS TRANSMITTED TO OTHER ADJACENT LANDS.
17. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.
18. ALL PROPOSED SIGNAGE SHALL REQUIRE A SEPARATE PERMIT FROM SUSSEX COUNTY.
19. NO SITE LIGHTING IS PROPOSED FOR THE PROJECT.
20. ALL AREAS INTENDED FOR PLANTING OF MEADOW / WILDFLOWER MIX GROUND COVER ON THE SITE (BOTH INSIDE AND OUTSIDE THE FENCED AREA) ARE INTENDED TO BE ALLOWED TO GROW BEYOND THE MAXIMUM ALLOWABLE GRASS HEIGHT AS LISTED IN THE SUSSEX COUNTY CODE FOR BOTH SEDIMENT / STORMWATER MANAGEMENT REQUIREMENTS AND TO PROVIDE HABITAT FOR INSECTS AND WILDLIFE. THE MEADOW AREAS BOTH OUTSIDE AND INSIDE THE FENCED AREA, ARE TO BE CUT ONLY BY THE OWNER BASED ON THEIR GENERAL MAINTENANCE SCHEDULE (GENERALLY 1 TO 2 TIMES PER YEAR).

SITE DATA

1.	OWNER OF RECORD:	CATHERINE A. SAVAGE & THEODORE R. SAVAGE JR. & RANDI N. GOOTEE 9875 SHERWOOD FARM ROAD OWINGS MILL, MD 21117 c/o CATHERINE SAVAGE
2.	EQUITABLE OWNER:	GREENPATH LONESOME ROAD LANDCO, LLC 203 CRESCENT ST, SUITE 106 WALTHAM, MA 02453 c/o MICHAEL REDDING, P.E.
3.	LESSEE:	LONESOME ROAD COMMUNITY ENERGY INITIATIVE, LLC 203 CRESCENT ST, SUITE 106 WALTHAM, MA 02453 c/o MICHAEL REDDING, P.E.
4.	ENGINEER / SURVEYOR:	BECKER MORGAN GROUP INC. 309 SOUTH GOVERNORS AVE. DOVER, DELAWARE 19904 302-734-7950
5.	PROPERTY ADDRESS:	LONESOME ROAD SEAFORD, DE 19973
6.	TAX PARCEL NUMBER:	531-12.00-92.02
7.	DEED REFERENCE :	5512 - 46
8.	SITE AREA SUMMARY:	28.6382 ACRES ±
9.	SITE AREA SUMMARY:	PROPERTY AREA = 28.64 ACRES ± TOTAL PROJECT AREA = 17.52 ACRES ± PROJECTED FENCED AREA (COND. USE AREA) = 13.45 ACRES ± PROJECT PANEL AREA = 9.62 ACRES ±
10.	WOODLAND AREA:	9.61 AC.
11.	IMPERVIOUS AREA:	EXISTING: 0.00 AC. PROPOSED: 0.36 AC.
12.	ZONING CLASSIFICATION:	EXISTING: AR-1 - AGRICULTURAL RESIDENTIAL PROPOSED: AR-1 - AGRICULTURAL RESIDENTIAL
13.	SETBACKS:	AR-1 - AGRICULTURAL RESIDENTIAL (AS AMENDED BY ORDINANCE NO. 2920) STREET YARD 100 FT SIDE YARD 50 FT REAR YARD 50 FT OFFSITE DWELLING 200 FT
14.	BULK STANDARDS:	AR-1- AGRICULTURE RESIDENTIAL MINIMUM LOT AREA: NA MINIMUM LOT WIDTH: 150 FT. BUILDING HEIGHT: 35 FT DENSITY: N/A
15.	PRESENT USE:	AGRICULTURE
16.	PRESENT USE:	COMMUNITY SOLAR ENERGY SYSTEM
17.	INVESTMENT LEVEL:	LEVEL 4
18.	DELDOT TID:	PARCEL LOCATED OUTSIDE OF ANY TRANSPORTATION IMPROVEMENT DISTRICT
19.	ROAD CLASSIFICATION:	LONESOME ROAD - LOCAL ROAD (50 M.P.H.)
20.	GROWTH ZONE:	PARCEL OUTSIDE GROWTH ZONE
21.	PROPERTY LOCATION:	LATITUDE: N 38° 37' 29.83" GRS80 - NAD83 (2011) LONGITUDE: W 75° 40' 01.52" GRS80 - NAD83 (2011)
22.	SURVEY DATUM:	NGS MONUMENTS VERTICAL: NAVD 88 - DEDO HORIZONTAL: NAD 83 (2011) DSP - DEDO
23.	SURVEY UNIT:	LINEAR: US SURVEY FOOT ANGULAR: DEGREES MINUTES SECONDS (DMS) COORDINATE: GROUND
24.	MONUMENTATION:	10 FOUND / 1 SET

BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700
Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100
North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600
www.beckermorgan.com

eca solar

PROJECT TITLE

LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC

LONESOME ROAD
SEAFORD HUNDRED
SUSSEX COUNTY, DELAWARE

SHEET TITLE

CONDITIONAL USE SITE PLAN

0 40 80 160
SCALE: 1" = 80'

ISSUE BLOCK		
MARK	DATE	DESCRIPTION

LAYER STATE: C001

PROJECT NO.:	2025036.00
DATE:	5-21-25
SCALE:	1" = 80'
DRAWN BY: A.J.S.	PROJ. MGR.: M.J.H.

SHEET
C-001

COPYRIGHT 2025

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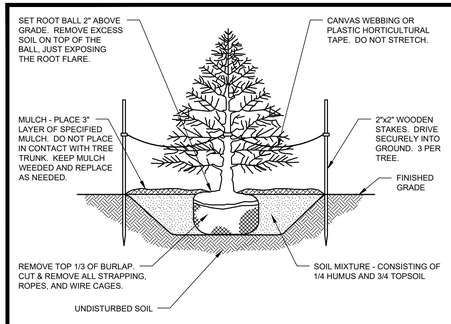
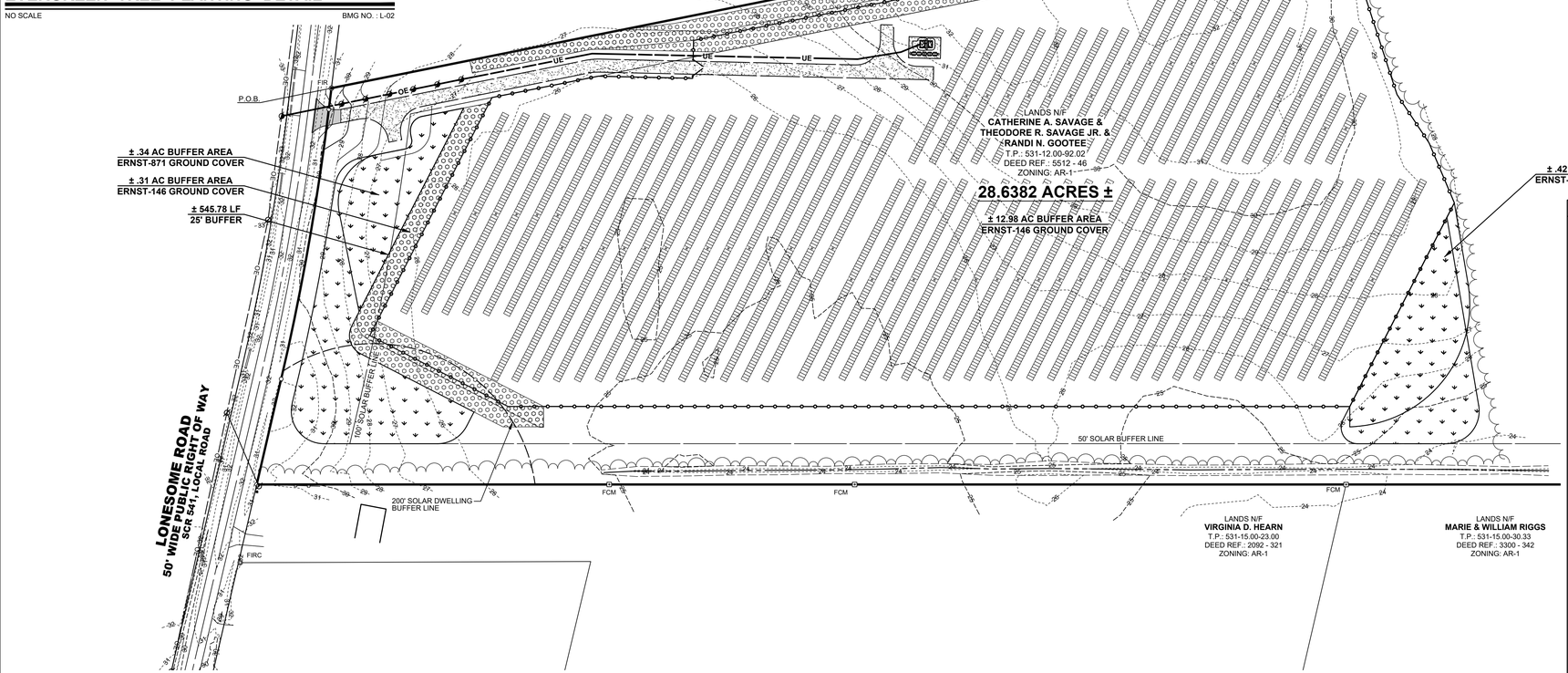
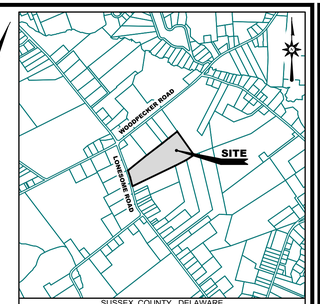


EVERGREEN TREE PLANTING DETAIL

NO SCALE BMG NO. : L-02





LOCATION MAP SCALE: 1" = 2000'

SOLAR BUFFER KEY

POLLINATOR GARDEN SEED MIX

GENERAL LANDSCAPE NOTES :

1. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN "AMERICAN STANDARDS FOR NURSERY STOCK."

   EVERGREEN TREES SHALL HAVE A FULL, WELL-BRANCHED, CONICAL FORM TYPICAL OF THE SPECIES.

   ALL DECIDUOUS SHADE TREES SHALL BRANCH A MINIMUM OF 7'-0" ABOVE GROUND LEVEL. TREES SHALL BE PLANTED AND STAKED IN ACCORDANCE WITH THE DETAIL SHOWN.

   PLANT MATERIALS DELIVERED TO THE SITE IN UNCOVERED TRUCKS WILL BE REJECTED.

   UNACCEPTABLE PLANT MATERIALS: MATERIALS WHICH HAVE DAMAGED OR CROOKED LEADERS, DEFORMED GROWTH HABIT, ABRASIONS OF THE BARK, SUN SCALD, WINDBURN, DISFIGURING NOT COMPLETELY CALLUSED WILL BE REJECTED. IN ADDITION, TREES HAVING THEIR CENTRAL LEADERS HEADED BACK WILL ALSO BE REJECTED. PLANTS WITH LOOSE OR CRACKED ROOT BALL OR CONTAINERS WILL BE REJECTED.

2. ALL PLANTS SHALL BE PLANTED IN TOPSOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACKFILLING PROGRESSES. NOTHING BUT SUITABLE TOPSOIL, FREE OF DRY SOD, STIFF CLAY, LITTER, STONES IN EXCESS OF ONE (1) INCH DIAMETER, ETC. SHALL BE USED FOR PLANTING.

   MULCH FOR PLANTING BEDS SHALL BE SHREDDED HARDWOOD BARK MULCH UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SHALL HAVE NO LEAVES, YOUNG GREEN GROWTH, BRANCHES, TWIGS, GREATER IN DIAMETER OF ½", WEEDS, SHAVINGS OR FOREIGN MATERIAL SUCH AS STONES, ETC. SHALL BE MIXED WITH THE MULCH. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS WITH A LIGHTLY COMPACTED DEPTH OF THREE (3) INCHES. ALL CONTAINER PLANTS ARE TO HAVE ROOTS CUT ON FOUR SIDES AND/ OR SPREAD OUT IN NEW SOIL MIXTURE.

3. ALL AREAS NOT STABILIZED IN PAVING OR PLANT MATERIALS SHOULD BE SEEDED AND MULCHED. (SEE EROSION & SEDIMENT CONTROL PLAN AND NOTES.)

4. LANDSCAPE BEDS NOT DEFINED BY CURBS, SIDEWALKS, WALLS OR OTHER STRUCTURES SHALL BE ENCLOSED BY ALUMINUM EDGING UNLESS OTHERWISE INDICATED.

5. AREAS DISTURBED BY LANDSCAPE OPERATIONS SHALL BE GRADED TO MATCH EXISTING TOPSOIL AND SEED OR SOD AS REQUIRED.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND MAY MAKE MINOR ADJUSTMENTS IN SPACING AND/OR LOCATION OF PLANT MATERIALS. CONTRACTOR TO VERIFY "AS BUILT" LOCATION OF ALL UTILITIES.

7. NO PLANT, EXCEPT GROUNDCOVERS, SHALL BE WITHIN THREE (3) FEET FROM SIDEWALKS.

8. NO TREE SHALL BE PLANTED CLOSER THAN TEN (10) FEET FROM ANY STRUCTURE OR BUILDING.

9. NO TREE SHALL BE PLANTED WITHIN TEN (10) FEET OF UNDERGROUND UTILITIES OR FIRE HYDRANTS.

10. ONLY TREES THAT REACH A HEIGHT AND SIZE AT MATURITY OF SMALL TO MEDIUM SHALL BE PLANTED UNDER POWER LINES.

11. THE CONTRACTOR SHALL WATER ALL PLANTS THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING, AND THEN WEEKLY OR MORE OFTEN, IF NECESSARY, DURING THE FIRST GROWING SEASON, UNLESS THE OWNER AGREES TO MAINTAIN AND WATER THEM.

12. TREES TO REMAIN ON-SITE SHALL BE PROTECTED WITH SNOW FENCE DURING CONSTRUCTION (SEE DETAIL). SNOW FENCING TO BE MAINTAINED DURING CONSTRUCTION BY CONTRACTOR.

13. THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.

14. NO SUBSTITUTIONS SHALL BE MADE WITHOUT APPROVAL OF THE OWNER AND/ OR THE LANDSCAPE ARCHITECT.

15. ALL NEW TREES SHALL BE GUARANTEED TO SURVIVE FOR ONE FULL YEAR AFTER INSTALLATION (FULL COST). ALL STAKES AND GUYS SHALL BE REMOVED FROM TREES AND SITE AS EARLY AS THREE (3) MONTHS, BUT NO LONGER THAN ONE (1) YEAR AFTER PLANTING.

SUSSEX COUNTY SOLAR - TREE DENSITY & BUFFER NOTES:

1. PERIMETER BUFFER PROVIDED : 1,568.34 LF OF OPAQUE EVERGREEN BUFFERING

   EACH EVERGREEN TREE SHALL BE PLANTED AT A HEIGHT OF NO LESS THAN 6'
   NO SPECIES SHALL COMPRISE OF MORE THAN 40% OF THE TOTAL WITHIN 100LF
   THE FOLLOWING SPECIES OF EVERGREEN TREES ARE ACCEPTABLE:

ILEX CRENATA	10' MATURE HEIGHT
ILEX OPACA	15-20' MATURE HEIGHT
CEDRUS ATLANTICA	30-40' MATURE HEIGHT
PLATYCLADUS ORIENTALIS	18-25' MATURE HEIGHT
THUJA OCCIDENTALIS 'TECHNY'	12-15' MATURE HEIGHT
THUJA X GREEN GIANT	30-40' MATURE HEIGHT

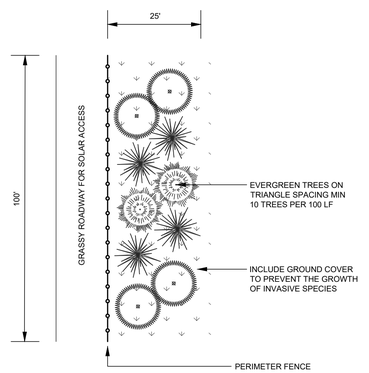
2. BUFFER TREES PROVIDED : 1,568.34 LF / 100 LF @ 25' WIDE = 15.68 BUFFER UNITS
   15.68 BUFFER UNITS X 10 TREES = 156.8 = 157 TREES (MIN)

3. GROUND COVER PROVIDED: SOLAR ARRAY AREA = 12.98 AC
   BUFFER AREA = .9 AC
   POLLINATOR GARDEN AREA = .76 AC
   TOTAL GROUND COVER ACREAGE: 14.64 ACRES

DELAWARE LANDSCAPE ARCHITECTS CERTIFICATION

I, CHAD D. CARTER, RLA, ASLA, HEREBY CERTIFY THAT I AM A LANDSCAPE ARCHITECT IN THE STATE OF DELAWARE, THAT THE LANDSCAPING INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF, REPRESENTS GOOD LANDSCAPING PRACTICES.

CHAD D. CARTER, RLA, ASLA S1-499 DATE



NOTES:

BUFFERYARD PLANTINGS SHALL BE ARRANGED IN A WAY THAT DIAMETER OF TREES SHALL OVERLAP WHEN VIEWED AT A PERPENDICULAR ANGLE TO EFFECTIVELY ACHIEVE AN OPAQUE VISUAL BARRIER.

EVERGREEN TREES SHALL PROVIDE A MINIMUM OF 3 SPECIES PER 100 LF OF BUFFER. NO PLANTED SPECIES SHALL MAKE UP MORE THAN 40% OF THE PLANTINGS.

SUSSEX CO. SOLAR BUFFERYARD DETAIL

NO SCALE BMG NO. : L-08

ERNST SEEDS

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: November 11, 2024

Fuzz & Buzz Mix - Standard - ERNMX-146

	Botanical Name	Common Name	Price/Lb
26.80 %	*Lolium perenne, 'Tetra Sweet', Tetraploid*	Perennial Ryegrass, 'Tetra Sweet', Tetraploid	3.60
21.00 %	*Dactylis glomerata, 'Pennlate'*	Orchardgrass, 'Pennlate'	4.44
18.90 %	*Poa pratensis, 'Ginger'*	Kentucky Bluegrass, 'Ginger' (pasture type)	4.20
12.40 %	*Bromus bieberstteinii, 'Fleet'*	Meadow Brome, 'Fleet'	6.24
5.70 %	*Trifolium hybridum*	Alske Clover	4.80
5.00 %	*Festuca elatior x Lolium perenne, Duo*	Festulolium, 'Duo'	3.60
4.80 %	*Trifolium pratense, Medium, Variety Not Stated*	Red Clover, Medium, Variety Not Stated	6.00
2.00 %	*Lotus corniculatus, 'Norcen'*	Bird's Foot Trefoil, 'Norcen'	10.80
1.00 %	*Linum perenne*	Perennial Blue Flax	48.00
0.90 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	28.80
0.60 %	*Cichorium intybus*	Blue Chicory	19.20
0.50 %	*Chrysanthemum leucanthemum*	Oxeye Daisy	40.80
0.40 %	*Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	264.00
100.00 %		**Mix Price/Lb Bulk:**	**$6.54**

Seeding Rate: Expect to apply about 40 lbs per acre with a cover crop of annual ryegrass 12 lbs/acre

Forage & Pasture Sites; Forage & Pasture Sites - Herbaceous Perennial; Solar Sites

The Fuzz & Buzz Mix-Standard was developed to address the unique nutritional needs of sheep, while providing a low-growing, easily maintained and sustainable vegetation solution for solar installations. The plant species were chosen with guidance from the American Solar Grazing Association (ASGA). The wildflowers in this mix support pollinators. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

ERNST SEEDS

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: April 24, 2025

VA Northern Coastal Plain UPL Meadow Mix - ERNMX-871

	Botanical Name	Common Name	Price/Lb
68.40 %	*Schizachyrium scoparium, Fort Indiantown Gap-PA Ecotype*	Little Bluestem, Fort Indiantown Gap-PA Ecotype	20.40
15.00 %	*Elymus virginicus, Madison-NY Ecotype*	Virginia Wildrye, Madison-NY Ecotype	11.10
3.00 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	31.20
3.00 %	*Rudbeckia hirta*	Blackeyed Susan	33.80
2.00 %	*Chamaecrista fasciculata, PA Ecotype*	Partridge Pea, PA Ecotype	13.00
1.90 %	*Lespedeza virginica, VA Ecotype*	Slender Lespedeza, VA Ecotype	234.00
1.10 %	*Asclepias tuberosa, PA Ecotype*	Butterfly Milkweed, PA Ecotype	468.00
1.00 %	*Chamaecrista nictitans, NC Ecotype*	Sensitive Pea, NC Ecotype	62.40
1.00 %	*Eragrostis spectabilis, RI Ecotype*	Purple Lovegrass, RI Ecotype	208.00
1.00 %	*Pycnanthemum tenuifolium*	Narrowleaf Mountainmint	260.00
0.50 %	*Aster lateriflorus*	Calico Aster	364.00
0.50 %	*Aster pilosus, PA Ecotype*	Heath Aster, PA Ecotype	286.00
0.50 %	*Monarda punctata, FL Ecotype*	Spotted Beebalm, FL Ecotype	338.00
0.50 %	*Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	312.00
0.30 %	*Heliopsis helianthoides, PA Ecotype*	Oxeye Sunflower, PA Ecotype	36.40
0.20 %	*Asclepias syriaca, PA Ecotype*	Common Milkweed, PA Ecotype	104.00
0.10 %	*Solidago bicolor, PA Ecotype*	White Goldenrod, PA Ecotype	312.00
100.00 %		**Mix Price/Lb Bulk:**	**$39.86**

Seeding Rate: Seed at 20 lbs/acre with a cover crop. For a cover crop use one of the following: grain oats (30 lbs/acre; 1 Jan to 30 Apr), brown top millet (10 lbs/acre; 1 May to 31 Aug), or Grain Rye (30 lbs/acre; 1 Sep to 31 Dec).

Grasses & Grass-like Species - Herbaceous Perennial; Herbaceous Flowering Species - Herbaceous Perennial; Pollinator Favorites; Uplands & Meadows

Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

eca solar

PROJECT TITLE

LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC

LONESOME ROAD
SEAFORD HUNDRED
SUSSEX COUNTY, DELAWARE

SHEET TITLE

LANDSCAPE PLAN

0 40 80 160

SCALE: 1" = 80'

ISSUE BLOCK

MARK	DATE	DESCRIPTION

LAYER STATE: L-001

PROJECT NO.:	2025036.00
DATE:	5-21-25
SCALE:	1" = 80'
DRAWN BY: P.R.R.	PROJ. MGR.: M.J.H.

SHEET

L-001

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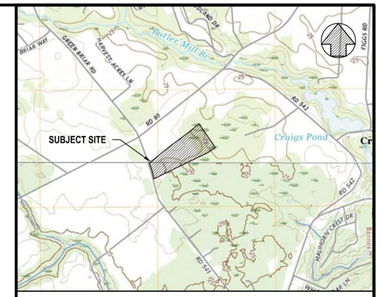


VICINITY MAP

SCALE: 1"=2,000'

UNITED STATES GEOLOGICAL SURVEY, SEAFORD, DELAWARE AND SHARPTOWN, MARYLAND QUADRANGLES, 7.5 MINUTE TOPOGRAPHIC MAP SERIES, DATED 2023.

GENERAL INFORMATION

1. PLAN PREPARED FOR: LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC
   203 CRESCENT STREET, SUITE 106
   WALTHAM, MASSACHUSETTS 02453
   ATTN: MR. MICHAEL REDDING
2. PLAN PREPARED BY: GEO-TECHNOLOGY ASSOCIATES, INC. (GTA)
   3445-A BOX HILL CORPORATE CENTER DRIVE
   ABINGDON, MARYLAND 21009
   ATTN: MR. MATTHEW JENNETTE
   PHONE: 410-515-9446
   EMAIL: MJENNETTE@GTAENG.COM
3. AREA OF REVIEW: 28.0± ACRES
4. THIS PLAN WAS PRODUCED ON A BASE MAP PROVIDED BY LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC.
5. THIS POLLINATOR PLANTING PLAN WAS PREPARED BASED ON RECOMMENDATIONS RECEIVED FROM BILL MCAVOY, BOTANIST AT THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL.
6. THERE ARE NO AREAS OF 100-YEAR FLOODPLAIN WITHIN THE SUBJECT SITE PER FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 24001002995, EFFECTIVE MAY 5, 2014.
7. THE SUBJECT SITE GENERALLY DRAINS SOUTHEAST TOWARDS BUTLER MILL BRANCH, A TRIBUTARY OF NANTICOKE RIVER.
8. A WETLAND DELINEATION OF THE SUBJECT SITE WAS PERFORMED BY GTA IN DECEMBER 2024.
9. GTA'S CONCLUSIONS REGARDING THIS SITE HAVE BEEN BASED ON OBSERVATIONS OF EXISTING CONDITIONS, PROFESSIONAL EXPERIENCE, AND GENERALLY ACCEPTED PROFESSIONAL ENVIRONMENTAL PRACTICE UNDER SIMILAR CIRCUMSTANCES. SEASONAL VEGETATION CYCLES AND FLUCTUATIONS IN PRECIPITATION OR WEATHER CONDITIONS CAN RESULT IN DIFFERENCES IN THE PERCEPTION OF HYDROLOGIC CONDITIONS AND THE PRESENCE OF PREDOMINANTLY HYDROPHYTIC VEGETATION, WHICH CAN ALTER GTA'S EVALUATION OF WETLANDS/WATERBODIES.
10. IT IS IMPORTANT TO NOTE THAT THIS EVALUATION IS GTA'S PROFESSIONAL OPINION, ONLY. DECISIONS REGARDING THE OFFICIAL JURISDICTIONAL STATUS OF WETLANDS/WATERBODIES ARE MADE BY FEDERAL, STATE, AND/OR LOCAL REGULATORY AGENCIES.
11. THIS PLAN WAS PREPARED BY GTA FOR THE SOLE AND EXCLUSIVE USE OF LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC. ANY REPRODUCTION OF THIS PLAN BY ANY OTHER PERSON WITHOUT THE EXPRESSED WRITTEN PERMISSION OF GTA AND LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC IS UNAUTHORIZED, AND SUCH USE IS AT THE SOLE RISK OF THE USER.

LEGEND

- SUBJECT SITE
- EX. PROPERTY BOUNDARY
- EX. 1-FOOT CONTOUR
- EX. 5-FOOT CONTOUR
- EX. TREELINE
- EX. SOIL BOUNDARY
- PR. FENCE
- PR. GRAVEL ROAD
- PR. UNDERGROUND ELECTRIC
- PR. OVERHEAD ELECTRIC
- PR. SCREENING BUFFER
- PR. POLLINATOR GARDEN
- PR. RESTRICTED MOWING SIGN

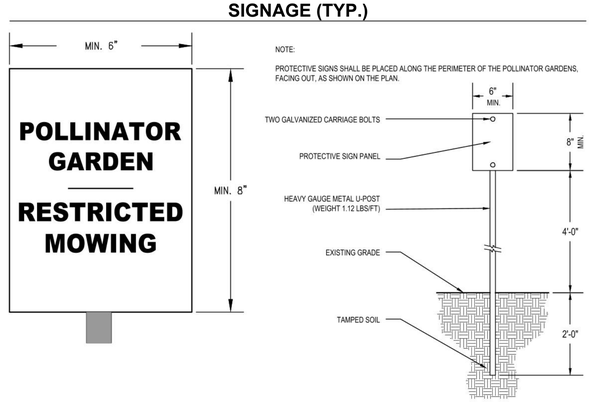
SEEDING SPECIFICATIONS FOR POLLINATOR GARDENS

VA NORTHERN COASTAL PLAIN UPL MEADOW MIX (ERNMX-871; OR EQUIVALENT)

COMMON NAME	SCIENTIFIC NAME	INDICATOR STATUS	HEIGHT AT MATURITY (FEET)	PERCENT IN MIX	PLANTING SPECIFICATION
LITTLE BLUESTEM	*SCHIZACHYRIUM SCOPARIUM*	FACU	4	68.4%	SEEDING RATE: 20 LB/ACRE SEED THIS MIX WITH OATS (*AVENA SATIVA*) AS A COMPANION CROP A AT 30 LB/ACRE. SEEDING METHOD: WEATHER AND SUB-CONTRACTOR DEPENDENT. SEED SHALL BE PROVIDED IN SEALED CONTAINERS CLEARLY LABELED WITH SEED NAME, WEIGHT, AND PERCENTAGES OF SEED MIXTURE. PRIOR TO SEEDING, ALL PROPOSED SEEDING AREAS SHALL BE RAKED OR DISKED TO MAXIMIZE SOIL-SEED CONTACT AND TO CLEAR SOIL OF STONES, DEBRIS, WEEDS, PRIOR PLANT GROWTH, STICKS, STUMPS, AND OTHER DEBRIS OR IRREGULARITIES WHICH MIGHT INTERFERE WITH THE SEEDING OPERATION, GROWTH OF PLANT SPECIES, OR SUBSEQUENT MAINTENANCE OF THE GRASS COVERED AREAS. MULCHING: STRAW MULCH TO BE APPLIED AT 3 TONS PER ACRE (OR 140 LBS PER 1,000 SQ. FT.) TO SEEDED AREAS WHEN NON-TACKIFIER SEEDING METHOD IS IMPLEMENTED. HAND APPLICATION OF MULCH IS ENCOURAGED.
VIRGINIA WILDRYE	*ELYMUS VIRGINICUS*	FAC	3	15.0%	
LANCELEAF COREOPSIS	*COREOPSIS LANCEOLATA*	UPL	2	3.0%	
BLACKEYED SUSAN	*RUDBECKIA HIRTA*	FACU	3	3.0%	
PARTRIDGE PEA	*CHAMAECRISTA FASCICULATA*	FACU	2	2.0%	
SLENDER LESPEDEZA	*LESPEDEZA VIRGINICA*	UPL	3	1.9%	
BUTTERFLY MILKWEED	*ASCLEPIAS TUBEROSA*	UPL	3	1.1%	
SENSITIVE PEA	*CHAMAECRISTA NICTITANS*	FACU	1	1.0%	
PURPLE LOVEGRASS	*ERAGROSTIS SPECTABILIS*	FACU	2	1.0%	
NARROWLEAF MOUNTAINMINT	*PYCANANTHEMUM TENUIFOLIUM*	FACW	2	1.0%	
CALICO ASTER	*ASTER LATERIFLORUS*	UPL	4	0.5%	
HEATH ASTER	*ASTER PILOSUS*	UPL	4	0.5%	
SPOTTED BEEBALM	*MONARDA PUNCTATA*	FACU	3	0.5%	
GRAY GOLDENROD	*SOLIDAGO NEMORALIS*	UPL	3	0.5%	
OXEYE SUNFLOWER	*HELIOPSIS HELIANTHOIDES*	UPL	4	0.3%	
COMMON MILKWEED	*ASCLEPIAS SYRIACA*	UPL	6	0.2%	
WHITE GOLDENROD	*SOLIDAGO BICOLOR*	UPL	4	0.1%	

NOTE: SEED MIXES ARE AVAILABLE FROM ERNST CONSERVATION SEEDS, 8884 MERCER PIKE, MEADVILLE, PA 16335. EQUIVALENT SEED MIX IS ACCEPTABLE.

SIGNAGE (TYP.)



POLLINATOR GARDEN MANAGEMENT NOTES

1. SITE PREPARATION
   - 1.1. PRIOR TO SEEDING, CONTRACTORS SHOULD ENSURE THAT THE SITE IS FREE OF CONSTRUCTION DEBRIS AND TRASH. CONTRACTORS SHOULD CARRY OUT SOIL RIPPING AND COMPOST AMENDMENT TO A DEPTH OF 6 INCHES TO REDUCE SOIL COMPACTION CAUSED BY CONSTRUCTION ACTIVITIES.
   - 1.2. TO REDUCE COMPETITION FROM INVASIVE OR UNDESIRABLE SPECIES, PLANTING AREAS CAN BE DISC HARROWED EVERY 2-4 WEEKS FOR 1-2 MONTHS. PLANTING SHOULD NOT TAKE PLACE UNTIL PERENNIAL WEEDS ARE COMPLETELY KILLED.
   - 1.3. IF HERBICIDES ARE USED TO CONTROL EXISTING VEGETATION, FOLLOW APPLICATION RATES AND FREQUENCY AS SPECIFIED ON THE PRODUCT LABEL.
2. SEEDING
   - 2.1. PLANTING CAN BE COMPLETED BY HAND SEEDING, BROADCAST SEEDING, HYDROSEEDING, OR DRILL SEEDING. SEEDING SHOULD FOLLOW MANUFACTURERS RECOMMENDED RATE AND SHOULD INCLUDE A NURSERY CROP AS RECOMMENDED BY THE MANUFACTURER.
   - 2.2. FALL OR SPRING SEEDING IS RECOMMENDED.
   - 2.3. PLANTING AREA SHOULD BE MULCHED IMMEDIATELY AFTER SEEDING WITH STRAW.
   - 2.4. MULTIPLE SEEDING EVENTS MAY BE REQUIRED TO ACHIEVE UNIFORM COVERAGE AND GERMINATION.
3. RECOMMENDED MAINTENANCE - FIRST GROWING SEASON
   - 3.1. WHENEVER CANOPY HEIGHT (OVERALL VEGETATION) REACHES 18"-24", TRIM THE MEADOW TO 8" USING A BRUSH HOG MOWER OR STRING TRIMMER. TRIMMING SHOULD CEASE BY MID-SEPTEMBER.
   - 3.2. UNDESIRABLE OR INVASIVE SPECIES SHOULD BE HAND PULLED OR SPOT SPRAYED USING AN APPROVED HERBICIDE.
4. RECOMMENDED MAINTENANCE - SECOND AND SUBSEQUENT GROWING SEASONS
   - 4.1. PRIOR TO NEW SPRING GROWTH REACHING 2", TRIM ANY REMAINING MATERIAL FROM THE PREVIOUS YEAR CLOSE TO THE GROUND (APPROXIMATELY 2").
   - 4.2. UNDESIRABLE OR INVASIVE SPECIES SHOULD BE HAND PULLED OR SPOT SPRAYED USING AN APPROVED HERBICIDE.

SOILS TABLE

SYMBOL[1]	NAME/DESCRIPTION[1]	HYDRIC SOIL[2]	HYDRIC COMPONENT[2]	PERCENTAGE OF MAPPING UNIT[2]	POSITION IN LANDSCAPE[2]
LhA	LENNI SILT LOAM, 0-2% SLOPES	YES	LENNI, DRAINED	50	FLATS, SWALES, DEPRESSIONS
			LENNI, UNDRAINED	30	
			CORSICA	5	DEPRESSIONS
RkA	ROCKAWALKIN LOAMY SAND, 0-2% SLOPES	NO			
RoA	ROSEDALE LOAMY SAND, 0-2% SLOPES	NO			

1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, SUSSEX COUNTY, DELAWARE. SOIL SURVEY DATA VERSION 21, DATED NOVEMBER 2024.
2. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE. HYDRIC SOILS LIST BY STATE. AVAILABLE AT *HTTPS://EFOTG.SC.EGOV.USDA.GOV/REFERENCES/PUBLIC/IL/STATE_LIST_NRCS_HYDRIC_SOILS_REPORT_DYNAMIC_DATA.HTML* AND ACCESSED ON DECEMBER 12, 2024.

NORTH

0' 25' 50' 100' 200'

SCALE: 1"=100'

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
PHONE: 410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM

© GEO-TECHNOLOGY ASSOCIATES, INC.

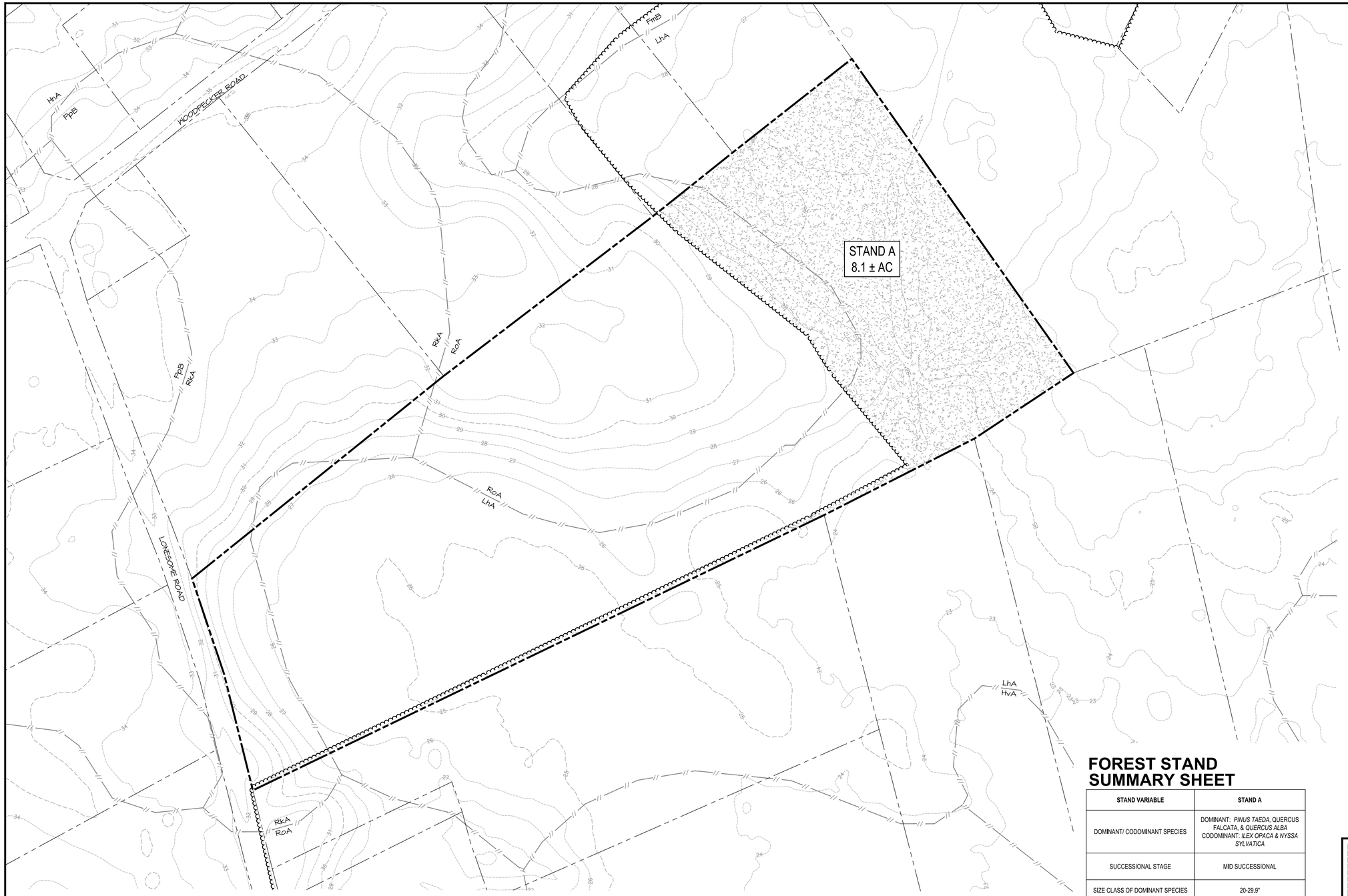
POLLINATOR GARDEN PLANTING PLAN

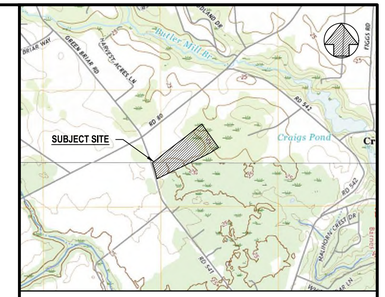
LONESOME ROAD

SUSSEX COUNTY, DELAWARE

REVISIONS:

JOB NO:	31242754
SCALE:	1"=100'
DATE:	MAY 16, 2025
DRAWN BY:	MAJ
DESIGN BY:	
REVIEW BY:	KRM
SHEET:	1 OF 1





VICINITY MAP

SCALE: 1"=2,000'

UNITED STATES GEOLOGICAL SURVEY, SEAFORD, DELAWARE AND SHARPTOWN, MARYLAND QUADRANGLES, 7.5 MINUTE TOPOGRAPHIC MAP SERIES, DATED 2023.

GENERAL INFORMATION

1. LOCATION: EAST OF LONESOME ROAD AND SOUTH OF WOODPECKER ROAD ROAD IN THE SEAFORD AREA OF SUSSEX COUNTY, DELAWARE

2. PLAN PREPARED FOR: LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC
203 CRESCENT STREET, SUITE 106
WALTHAM, MASSACHUSETTS 02453
ATTN: MS. MICHAEL REDDING

3. PLAN PREPARED BY: GEO-TECHNOLOGY ASSOCIATES, INC. (GTA)
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
ATTN: MR. MATTHEW JENNETTE
PHONE: 410-515-9446
EMAIL: MJENNETTE@GTAENG.COM

MORRIS AND RITCHIE ASSOCIATES, INC. (MRA)
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
ATTN: MR. TAYLOR BECKER
PHONE: 410-515-9000
EMAIL: TBECKER@MRAGTA.COM

4. AREA OF REVIEW: 28.0± ACRES

5. TAX PARCELS: 531-12.00-92.02

6. DEED REFERENCES: 5512/46

7. TOPOGRAPHIC INFORMATION AND PROPERTY BOUNDARIES WERE OBTAINED FROM SUSSEX COUNTY GIS APPLICATIONS.

8. ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 10005C0381K, EFFECTIVE MARCH 16, 2015 AND NUMBER 10005C0245L EFFECTIVE JUNE 20, 2018, THE SUBJECT SITE IS NOT LOCATED WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN.

9. SOILS SHOWN ON THIS PLAN WERE ADAPTED FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE'S WEB SOIL SURVEY, ACCESSED ON DECEMBER 12, 2024. AVAILABLE ONLINE AT <HTTPS://WEBSOILSURVEY.NRCS.USDA.GOV/APP/>.

10. WETLAND DELINEATION AND FOREST ASSESSMENT OF THE SUBJECT SITE WAS PERFORMED BY GTA IN DECEMBER 2024.

11. AS A RESULT OF THE REVIEW OF THE SITE, IT IS GTA'S PROFESSIONAL OPINION THAT THERE ARE NO JURISDICTIONAL "WATERS OF THE U.S.", INCLUDING WETLANDS, PRESENT WITHIN THE SUBJECT SITE.

12. GTA'S CONCLUSIONS REGARDING THIS SITE HAVE BEEN BASED ON OBSERVATIONS OF EXISTING CONDITIONS, PROFESSIONAL EXPERIENCE, AND GENERALLY ACCEPTED PROFESSIONAL ENVIRONMENTAL PRACTICE UNDER SIMILAR CIRCUMSTANCES. SEASONAL VEGETATION CYCLES AND FLUCTUATIONS IN PRECIPITATION OR WEATHER CONDITIONS CAN RESULT IN DIFFERENCES IN THE PERCEPTION OF HYDROLOGIC CONDITIONS AND THE PRESENCE OF PREDOMINANTLY HYDROPHYTIC VEGETATION, WHICH CAN ALTER GTA'S EVALUATION OF WETLANDS/WATERWAYS.

13. IT IS IMPORTANT TO NOTE THAT THIS EVALUATION IS GTA'S PROFESSIONAL OPINION, ONLY. DECISIONS REGARDING THE OFFICIAL JURISDICTIONAL STATUS OF WETLANDS/WATERWAYS ARE MADE BY FEDERAL, STATE, AND/OR LOCAL REGULATORY AGENCIES.

14. THIS PLAN WAS PREPARED BY GTA FOR THE SOLE AND EXCLUSIVE USE OF LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC. ANY REPRODUCTION OF THIS PLAN BY ANY OTHER PERSON WITHOUT THE EXPRESSED WRITTEN PERMISSION OF GTA AND LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC IS UNAUTHORIZED, AND SUCH USE IS AT SOLE RISK OF THE USER.

SOILS TABLE

SYMBOL[1]	NAME/DESCRIPTION[1]	HYDRIC SOIL[2]	HYDRIC COMPONENT[2]	PERCENTAGE OF MAPPING UNIT[2]	POSITION IN LANDSCAPE[2]
LhA	Lenni silt loam, 0 to 2 percent slopes	Yes	Lenni, drained	50	Flats, swales, depressions
			Lenni, undrained	30	
			Corsica	5	Depressions
RkA	Rockawalkin loamy and, 0 to 2 percent slopes	No			
RoA	Rosedale loamy sand, 0 to 2 percent slopes	No			

1, UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, SUSSEX COUNTY, DELAWARE, SOIL SURVEY DATA VERSION 25, DATED AUGUST 31, 2024.
2, UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, HYDRIC SOILS LIST BY STATE, AVAILABLE AT *HTTPS://EFOTG.SC.EGOV.USDA.GOV/REFERENCES/PUBLIC/IL/STATE_LIST_NRCS_HYDRIC_SOILS_REPORT_DYNAMIC_DATA.HTML* AND ACCESSED ON DECEMBER 12, 2024.

LEGEND

- SUBJECT SITE
- EX. PROPERTY BOUNDARY
- EX. 1-FOOT CONTOUR
- EX. 5-FOOT CONTOUR
- EX. SOIL BOUNDARY
- EX. FORESTED AREAS

FOREST ASSESSMENT SUMMARY NARRATIVE

FOREST STAND A

STAND A IS A MID-SUCCESSIONAL STAGE FOREST, DOMINATED BY QUERCUS ALBA, QUERCUS FALCATA, AND *PINUS TAEDA*. *ILEX OPACA* AND NYSSA *SYLVATICA* ARE THE PRIMARY CODOMINANT SPECIES WITHIN STAND A. THE MAJORITY OF DOMINANT TREES IN THIS STAND EXHIBIT AVERAGE DBH'S IN THE 20 TO 29.9-INCH RANGE. THE UNDERSTORY IS DOMINATED BY *ILEX OPACA*. THE HERBACEOUS LAYER WAS DOMINATED BY *SMILAX ROTUNDIFOLIA, CLETHRA ALNIFOLIA, ILEX OPACA, AND CHASMANTHIUM LAXUM*. THE STAND DID NOT EXHIBIT A HIGH PRESENCE OF INVASIVE SPECIES. THE FOREST GENERALLY APPEARS HEALTHY AND RELATIVELY FREE OF DISEASE AND PESTS.

FOREST STAND AREAS

FOREST STAND #	ACREAGE
A	8.1 AC

FOREST STAND SUMMARY SHEET

STAND VARIABLE	STAND A
DOMINANT/ CODOMINANT SPECIES	DOMINANT: *PINUS TAEDA*, QUERCUS FALCATA, & *QUERCUS ALBA* CODOMINANT: *ILEX OPACA & NYSSA SYLVATICA*
SUCCESSIONAL STAGE	MID SUCCESSIONAL
SIZE CLASS OF DOMINANT SPECIES	20-29.9"
PERCENT CANOPY CLOSURE	100%
COMMON UNDERSTORY SPECIES	*ILEX OPACA*
PERCENT OF UNDERSTORY COVER 3' TO 20' TALL	40%
COMMON HERBACEOUS & WOODY PLANT COVER 0' TO 3' TALL	*CLETHRA ALNIFOLIA, SMILAX ROTUNDIFOLIA, ILEX OPACA, CHASMANTHIUM LAXUM*
PERCENT OF HERBACEOUS & WOODY PLANT COVER 0' TO 3' TALL	35%
LIST OF MAJOR INVASIVE PLANT SPECIES & PERCENT COVER	-
OCCURANCE OF STANDING DEAD TREES 6" DBH OPR GREATER	FEW
COMMENTS	-

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
PHONE: 410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM

© GEO-TECHNOLOGY ASSOCIATES, INC.

TAYLOR BECKER No. 10632 REGISTERED LANDSCAPE ARCHITECT STATE OF DELAWARE

FOREST ASSESSMENT

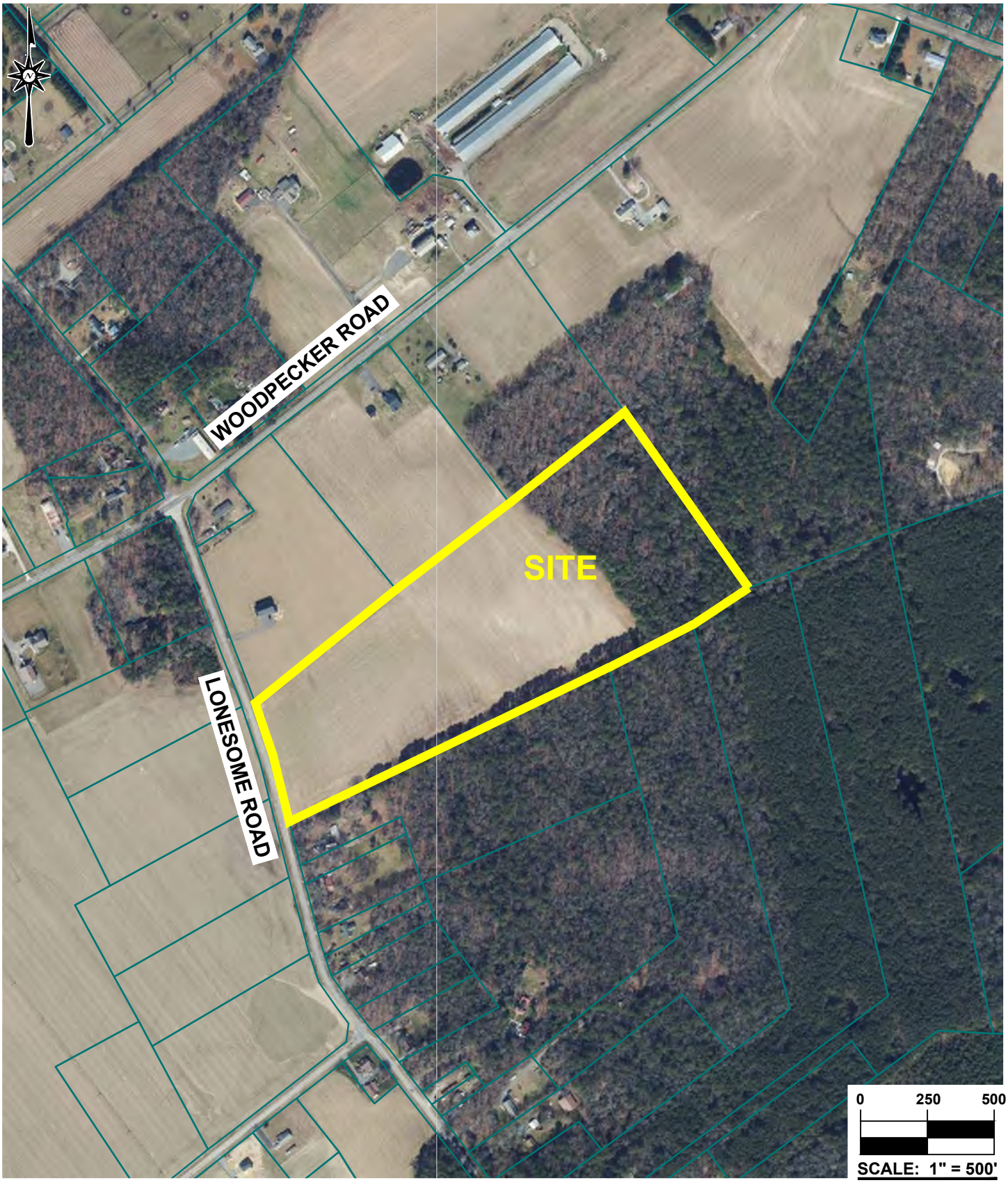
LONESOME ROAD

SUSSEX COUNTY, DELAWARE

REVISIONS:

JOB NO:	31242754
SCALE:	1"=100'
DATE:	APRIL 9, 2025
DRAWN BY:	DIA
DESIGN BY:	
REVIEW BY:	MAJ/TAS
SHEET:	1 OF 1

2.4 Aerial Photo and Location



LAYER STATE: AERIAL

AERIAL MAP
LONESOME ROAD
COMMUNITY ENERGY INITIATIVE
TOWN OF SEAFORD
SUSSEX COUNTY, DE

BECKER MORGAN GROUP

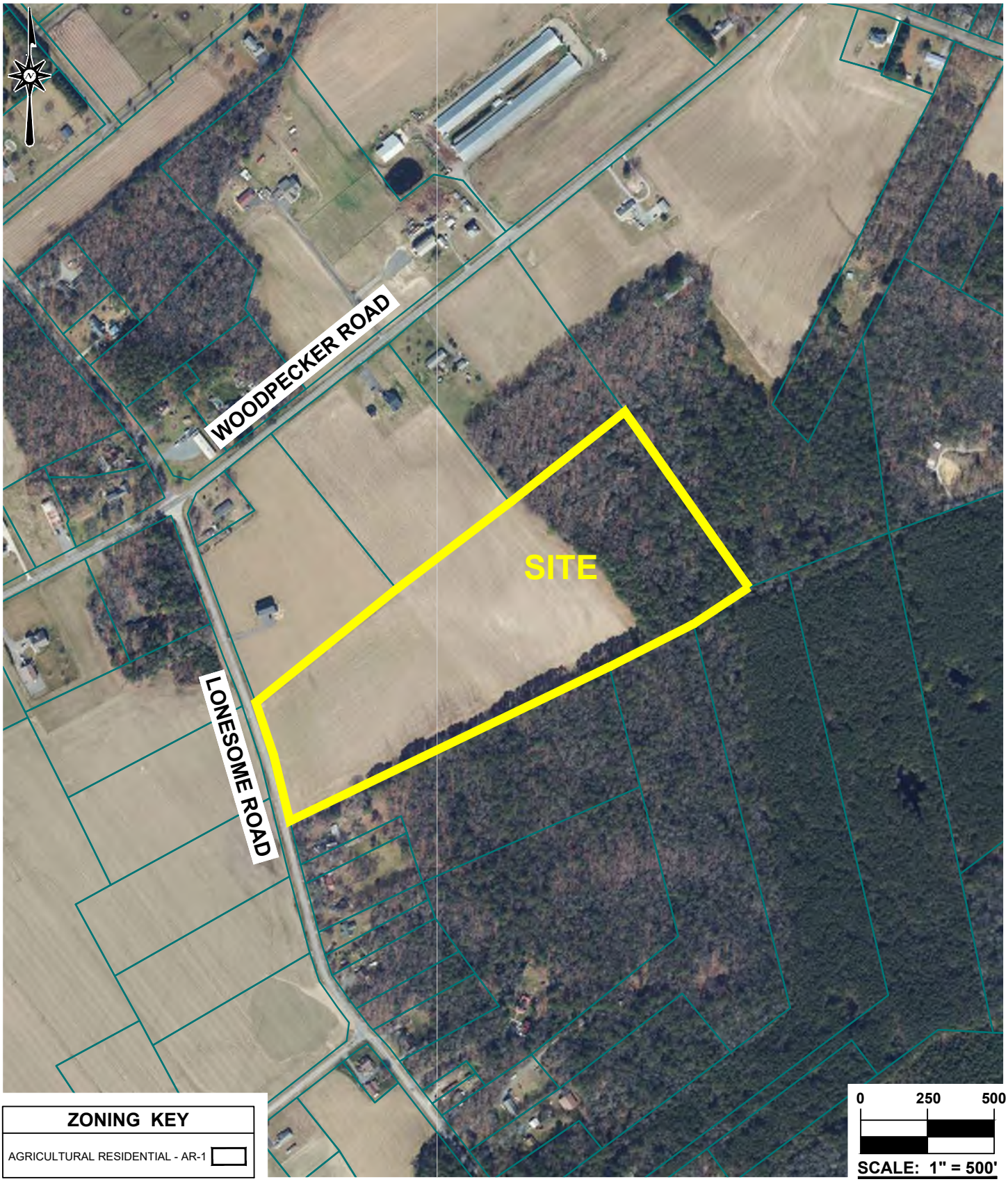
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2025036.00
SCALE: 1" = 500'
DATE: 6/18/2026
DRAWN BY: A.J.S.

AERIAL

F:\Projects\2025\202503600\10_Civil\DWG\Misc\CUB EXHIBITS.dwg, Jul 14, 2026 - 1:54pm

2.5 Zoning Map



LAYER STATE: ZONING

ZONING MAP
LONESOME ROAD COMMUNITY ENERGY INITIATIVE

TOWN OF SEAFORD
SUSSEX COUNTY, DE

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG:	2025036.00
SCALE:	1" = 500'
DATE:	6/18/2026
DRAWN BY:	A.J.S.

ZONING

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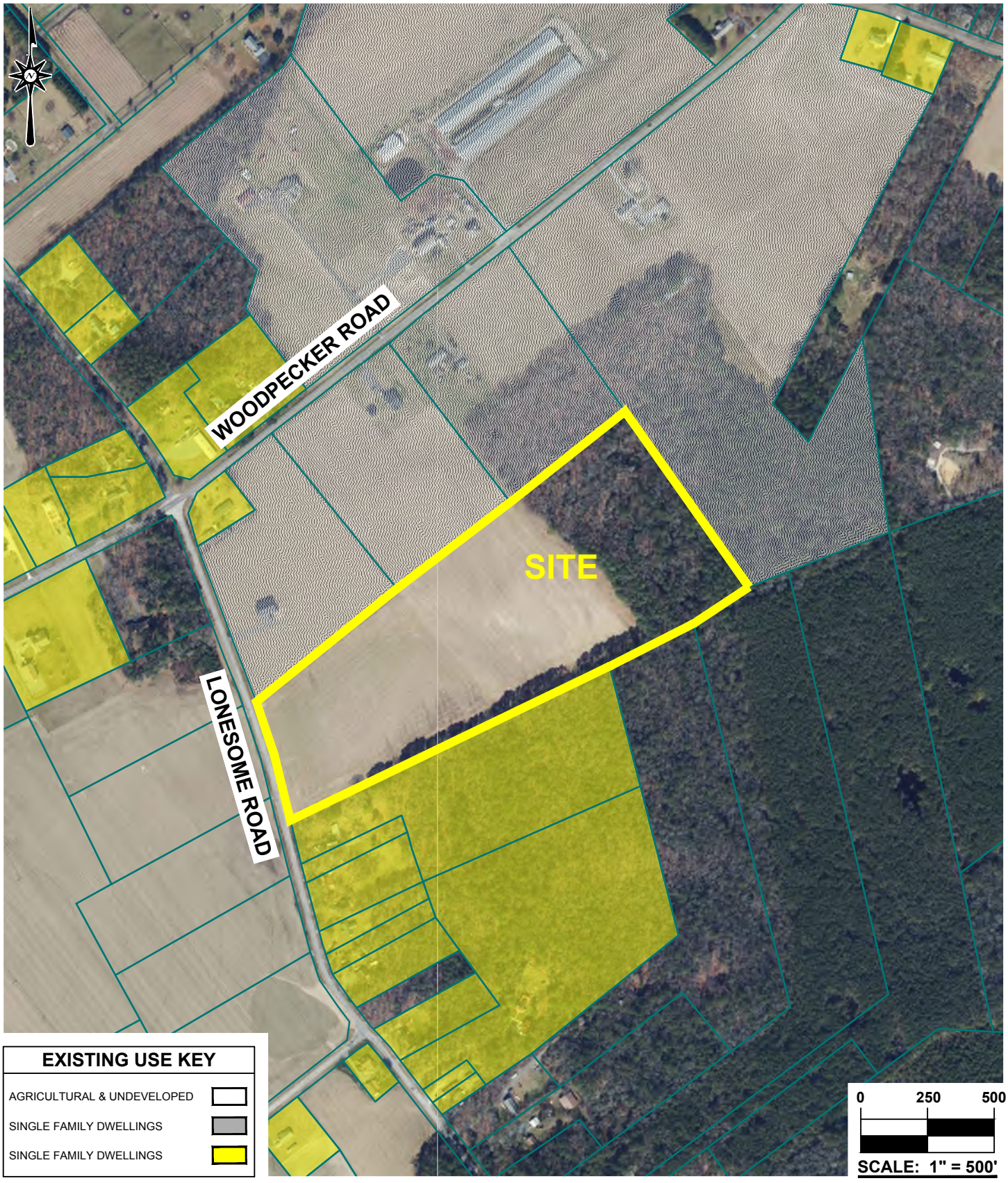
2.6 Existing Land Use



LAYER STATE: EX. LAND USE

EXISTING LAND USE - SITE LOCATION
LONESOME ROAD
COMMUNITY ENERGY INITIATIVE

TOWN OF SEAFORD
SUSSEX COUNTY, DE

BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2025036.00
SCALE: 1" = 500'
DATE: 6/18/2026
DRAWN BY: A.J.S.

EXISTING

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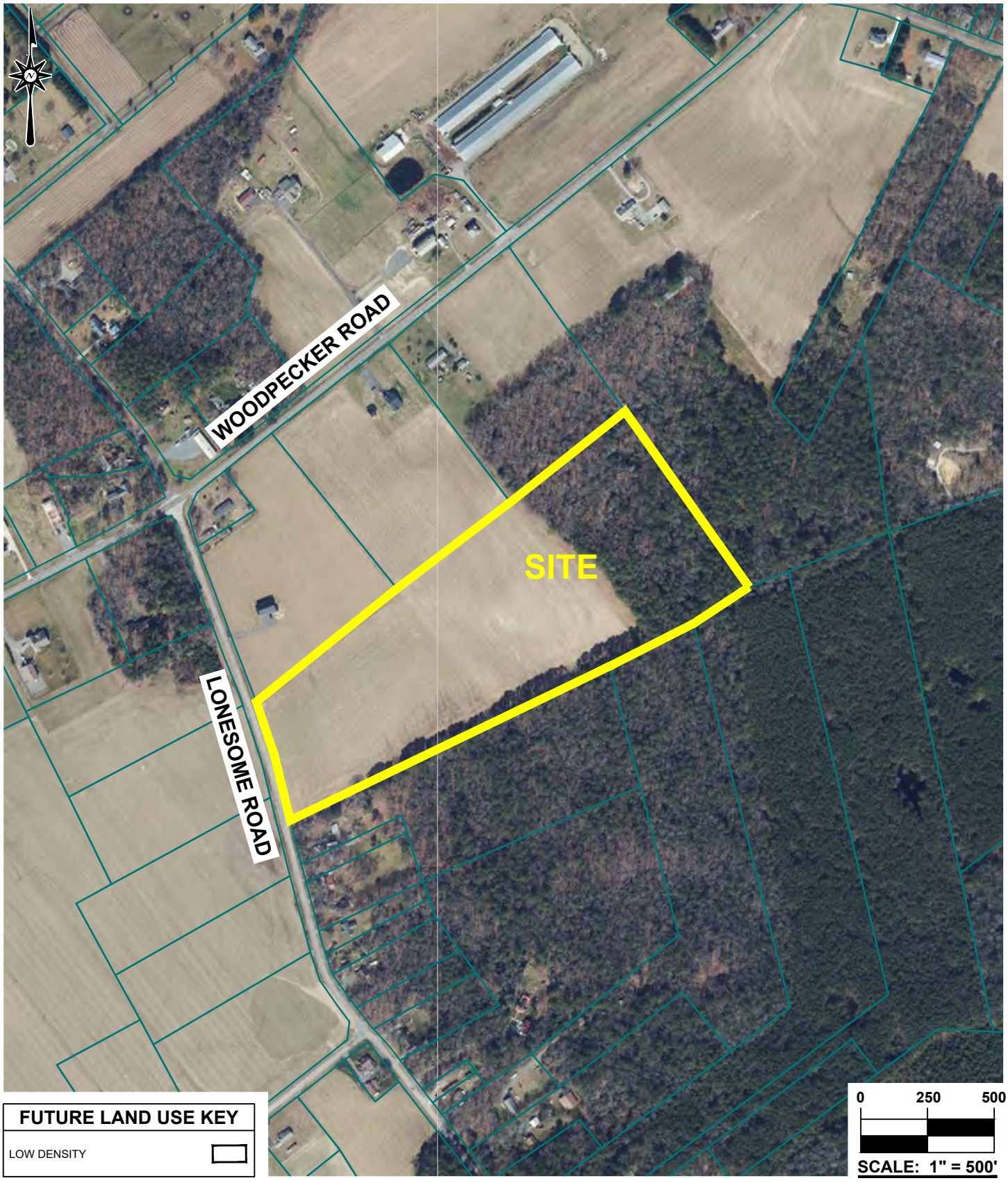
2.7 Future Land Use



LAYER STATE: FUTURE LAND USE

FUTURE LAND USE - SITE LOCATION
LONESOME ROAD COMMUNITY ENERGY INITIATIVE

TOWN OF SEAFORD
SUSSEX COUNTY, DE

BECKER MORGAN GROUP

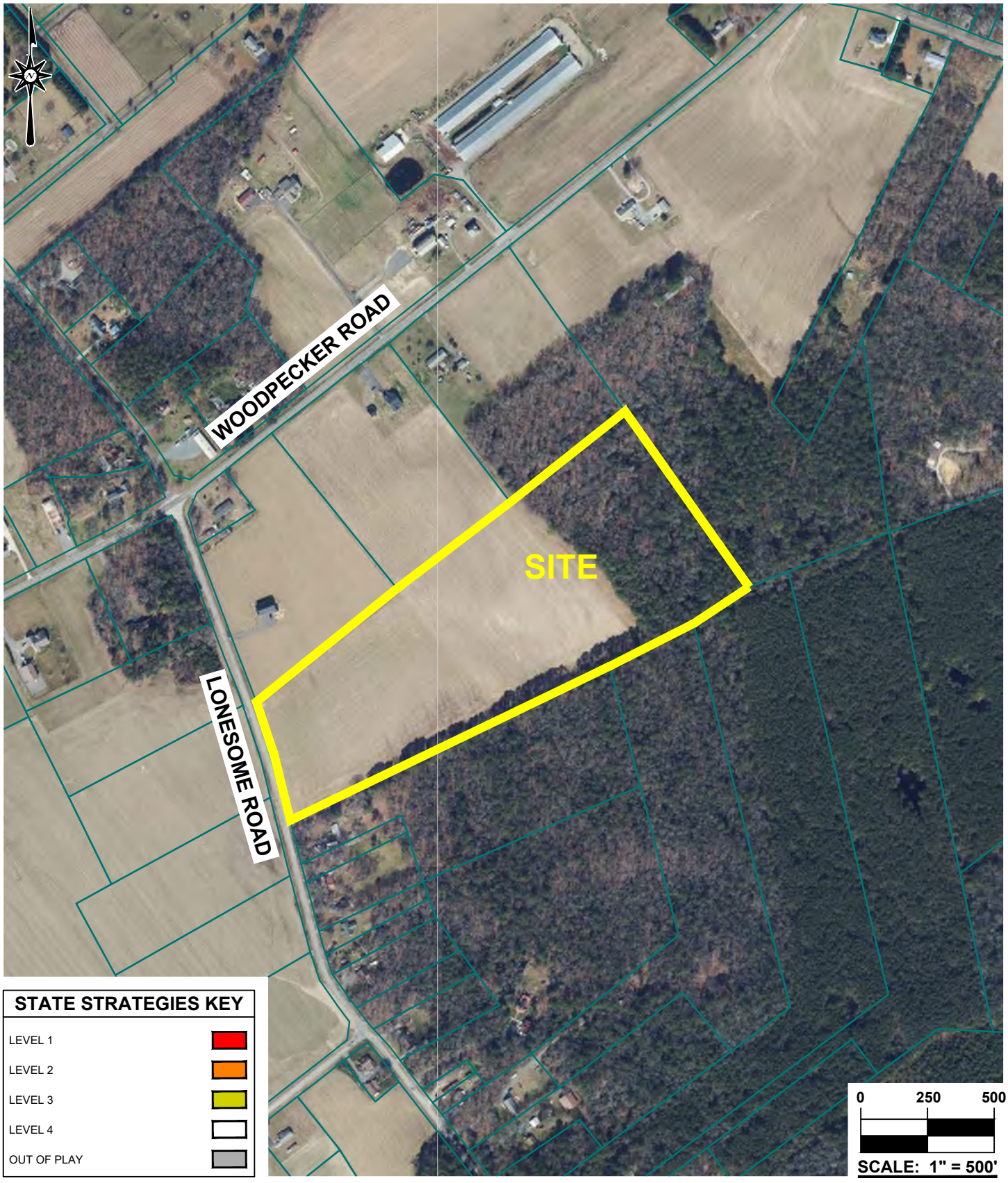
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2025036.00
SCALE: 1" = 500'
DATE: 6/18/2026
DRAWN BY: A.J.S.

FUTURE

F:\Projects\2025\202503600\10_Civil\DWG\Misc\CUB EXHIBITS.dwg, Jul 14, 2026 - 1:55pm

2.8 Strategies for State Policies Spending



LAYER STATE: STRATEGIES

STRATEGIES FOR STATE POLICIES & SPENDING - SITE LOCATION

LONESOME ROAD COMMUNITY ENERGY INITIATIVE

TOWN OF SEAFORD
SUSSEX COUNTY, DE

BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2025036.00
SCALE: 1" = 500'
DATE: 6/18/2026
DRAWN BY: A.J.S.

STRATEGIES

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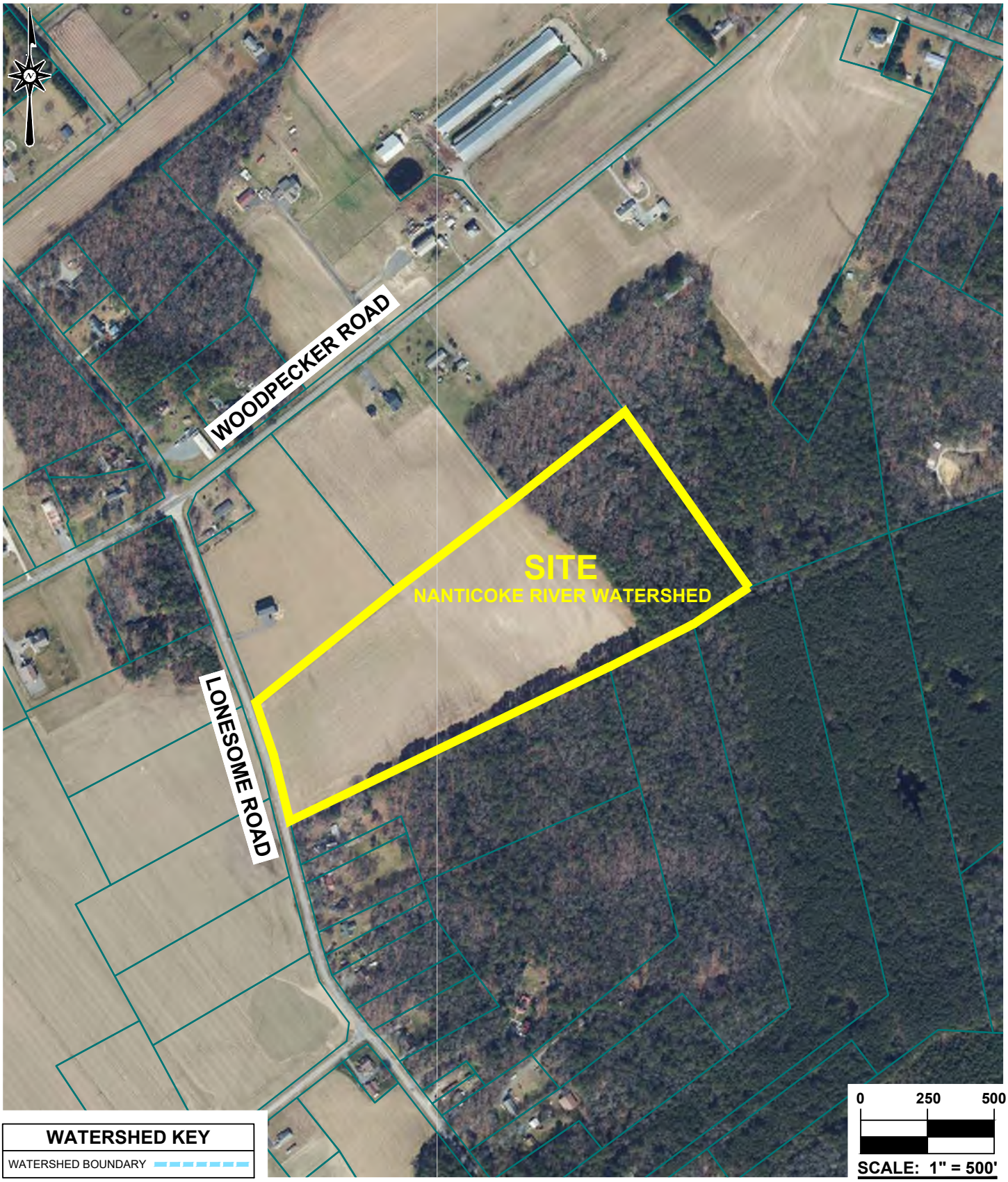
2.9 Watersheds / Waterways



LAYER STATE: WATERSHED

WATERSHED MAP
LONESOME ROAD COMMUNITY ENERGY INITIATIVE

TOWN OF SEAFORD
SUSSEX COUNTY, DE

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG:	2025036.00
SCALE:	1" = 500'
DATE:	6/18/2026
DRAWN BY:	A.J.S.

WATERSHED

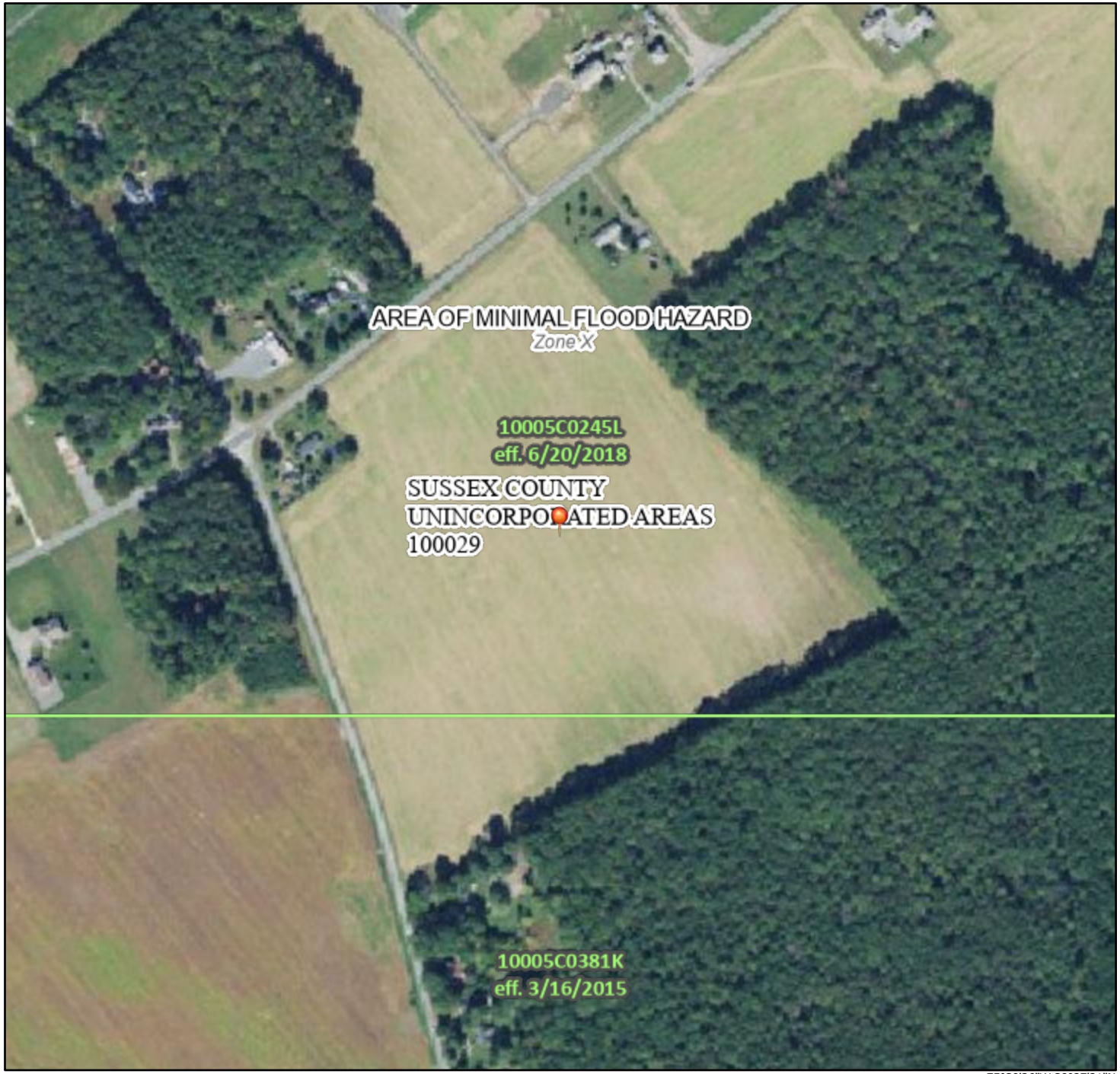
F:\Projects\2025\202503600\10_Civil\DWG\Misc\CUB EXHIBITS.dwg, Jul 14, 2026 - 1:59pm

2.10 FEMA Flood Insurance Rate Map (FIRM)

National Flood Hazard Layer FIRMette

FEMA

75°40'13"W 38°37'49"N



75°39'36"W 38°37'21"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 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 *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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 6/24/2026 at 12:47 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.

2.11 Soils Map

United States Department of Agriculture

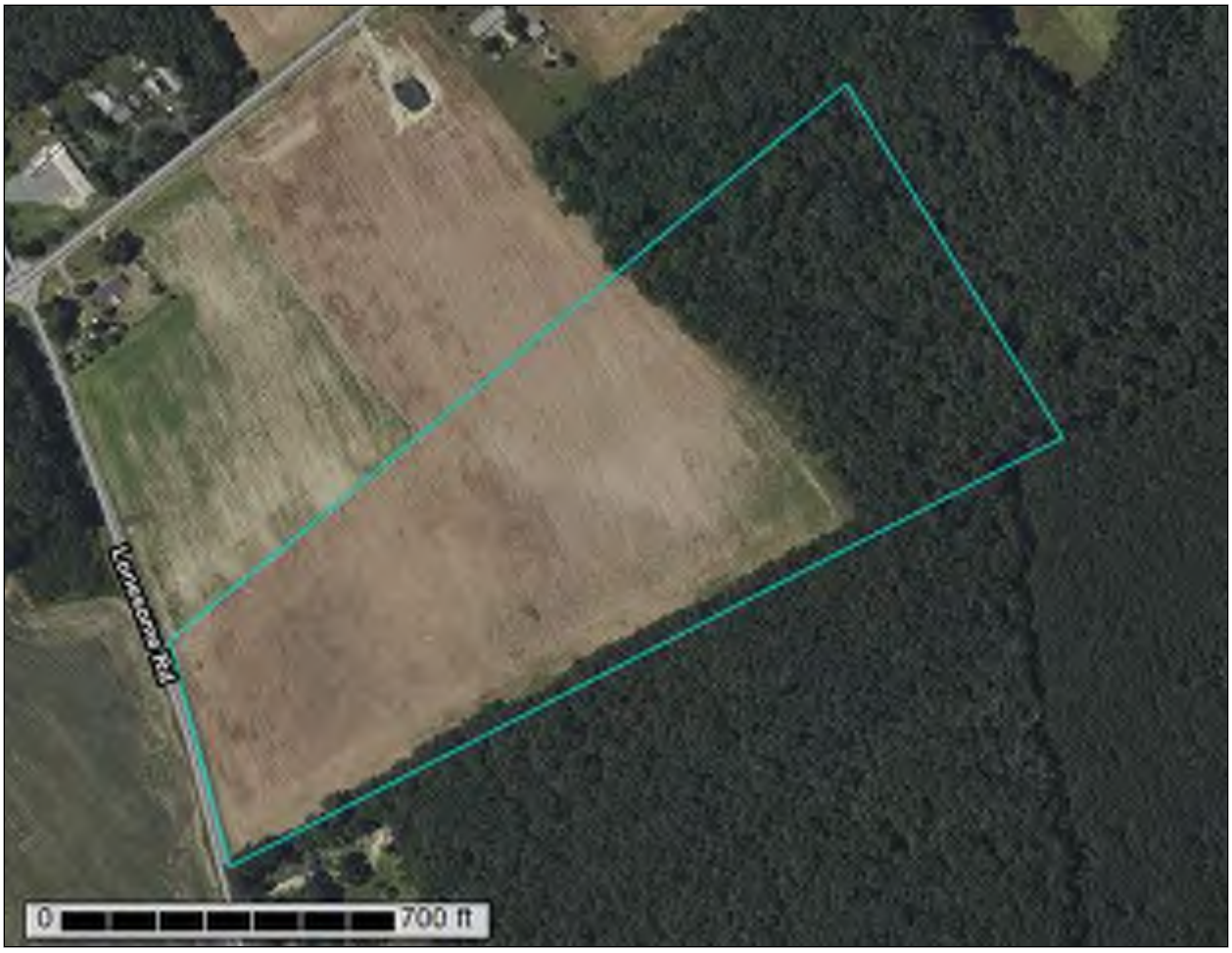
NRCS

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

Lonesome Road Community Energy Initiative



June 24, 2026

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.....5
Soil Map.....8
Soil Map.....9
Legend.....10
Map Unit Legend.....11
Map Unit Descriptions.....11
Sussex County, Delaware.....13
LhA—Lenni silt loam, 0 to 2 percent slopes.....13
RkA—Rockawalkin loamy sand, 0 to 2 percent slopes.....15
RoA—Rosedale loamy sand, 0 to 2 percent slopes.....16
References.....19

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

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

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: 1:4,220 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

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 26, Sep 9, 2025

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

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

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
LhA	Lenni silt loam, 0 to 2 percent slopes	17.2	59.6%
RkA	Rockawalkin loamy sand, 0 to 2 percent slopes	2.1	7.3%
RoA	Rosedale loamy sand, 0 to 2 percent slopes	9.6	33.1%
Totals for Area of Interest		**28.9**	**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 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

LhA—Lenni silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qthy
Landscape: Uplands, coastal plains
Elevation: 20 to 70 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

Lenni, drained, and similar soils: 50 percent
Lenni, undrained, and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lenni, Drained

Setting

Landscape: Uplands, coastal plains
Landform: Depressions, Swales, Flats
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Clayey fluviomarine sediments

Typical profile

Ap - 0 to 7 inches: silt loam
Eg - 7 to 14 inches: loam
Btg - 14 to 51 inches: clay
2Cg - 51 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.04 to 0.57 in/hr)
Depth to water table: About 10 to 20 inches
Frequency of flooding: None
Frequency of ponding: Rare
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Description of Lenni, Undrained

Setting

Landscape: Uplands, coastal plains
Landform: Depressions, Swales, Flats
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Clayey fluviomarine sediments

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 7 inches: silt loam
Eg - 7 to 14 inches: loam
Btg - 14 to 51 inches: clay
2Cg - 51 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.04 to 0.57 in/hr)
Depth to water table: About 0 to 10 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Minor Components

Crosiadore

Percent of map unit: 5 percent
Landform: Flats
Landform position (three-dimensional): Rise
Ecological site: F153CY020MD - Moist Loess Upland
Hydric soil rating: No

Mattapex

Percent of map unit: 5 percent
Landform: Flats
Landform position (three-dimensional): Rise
Ecological site: F153CY020MD - Moist Loess Upland
Hydric soil rating: No

Keyport

Percent of map unit: 5 percent
Landform: Flats
Landform position (three-dimensional): Rise
Ecological site: F149AY120MD - Moist Clayey Upland
Hydric soil rating: No

Corsica

Percent of map unit: 5 percent
Landform: Depressions
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

RkA—Rockawalkin loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qtjv
Landscape: Uplands
Elevation: 10 to 100 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

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

Description of Rockawalkin

Setting

Landscape: Uplands
Landform: Flats, Shallow depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy eolian deposits over fluviomarine sediments

Typical profile

Ap - 0 to 10 inches: loamy sand
E - 10 to 27 inches: loamy sand
Bt - 27 to 43 inches: sandy loam
BC - 43 to 70 inches: loamy sand
C - 70 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 20 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Minor Components

Pepperbox

Percent of map unit: 10 percent
Landform: Swales, Depressions, Intermingled flats
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Klej

Percent of map unit: 5 percent
Landform: Swales, Depressions, Flats
Ecological site: F153DY150NJ - Moist Sandy Upland
Hydric soil rating: No

Runclint

Percent of map unit: 5 percent
Landform: Ancient dunes, Knolls, Flats
Landform position (three-dimensional): Rise
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Woodstown

Percent of map unit: 5 percent
Landform: Intermingled flats, Depressions, Swales
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

RoA—Rosedale loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qtjx
Landscape: Uplands
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

Landscape: Uplands
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
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Minor Components

Evesboro

Percent of map unit: 10 percent
Landscape: Uplands
Landform: Flats
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Hambrook

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Fluviomarine terraces, Flats, Shallow depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F149AY170MD - Well Drained Fine-Loamy Upland
Hydric soil rating: No

Galloway

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Shallow depressions, Flats
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: F153DY150NJ - Moist Sandy Upland
Hydric soil rating: No

Klej

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Flats, Shallow depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F153DY150NJ - Moist Sandy Upland
Hydric soil rating: No

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2.12 Property Value Impact Report

Property Values and Utility-Scale Solar Facilities

Introduction

The utility-scale solar industry has seen significant growth over the past decade and demand for renewable energy continues to grow as utility companies increase their investment in solar energy to meet customer demand, keep electricity prices affordable, and diversify their energy portfolio. The solar industry drives economic development, especially in rural communities, and can benefit all property owners through tax payments for roads, schools, and community services. In 2020, utility-scale solar projects contributed $750 million in state and local taxes and land-lease payments to property owners and have invested nearly $116 billion total in projects nationwide.[1] The industry also supports 120,000 jobs across all 50 states.

Background

Utility-scale solar is the fastest growing source of renewable energy in the United States with 12 gigawatts (GW) of capacity added to the grid in 2020 and 15.5 GW of capacity added in 2021.[2] According to the U.S. Energy Information Administration (EIA), solar power will account for nearly half of new U.S. electric generating capacity in 2022 with an expected growth by 21.5 GW in 2022.[3] There is generally broad support across the United States to increase solar capacity. However, as utility-scale solar installations require large tracts of land, some communities have raised concerns a nearby solar facility may impact local property values. Real world experience has demonstrated this to not be true.

Research shows solar projects have not adversely impacted neighboring properties

Lawrence Berkeley National Laboratory (LBNL) partnered with the University of Texas at Austin to support student-led research on solar energy markets and economics. An LBNL partnered study from the University of Texas at Austin, LBJ School of Public Affairs[4] used geographic information systems (GIS) data to evaluate 956 unique solar projects completed in 2016 or earlier across the United States. The researchers surveyed approximately 400 property value assessors nationwide, asking if the assessor believed there was an impact on home prices, the scale and direction of those impacts, and the source of those impacts. The results indicate that most respondents believe that proximity to a solar installation has either no impact or a positive impact on home values. The study also found that the assessors who responded to the survey believe that some features of solar facilities may be associated with positive impacts, such as a location on land that previously had an unappealing use, or the presence of trees or other visual barriers around the array.[5] Furthermore, as the expected lifetime of a solar facility is at least thirty years, residents have assurance the nearby land will not be redeveloped for an unfavorable use.

The **University of Rhode Island** published, "Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island"[6] in September 2020.

[1]American Clean Power Association. 2021. Utility-scale Solar Power Facts. Accessed at https://cleanpower.org/facts/solar-power/.
[2]U.S. Energy Information Administration (EIA). 2022. Accessed at https://www.eia.gov/todayinenergy/detail.php?id=50818
[3]Ibid.
[4]Al-Hamoodah, Leila; Koppa, Kavita; Schieve, Eugenie; Reeves, D. Cale; Hoen, Ben; Seel, Joachim; and Rai, Varun. 2018. An Exploration of Property-Value Impacts Near Utility-Scale Solar Installations. Policy Research Project (PRP), LBJ School of Public Affairs, The University of Texas at Austin, May 2018. Accessed at https://emp.lbl.gov/sites/default/files/property-value_impacts_near_utility-scale_solar_installations.pdf.
[5]Al-Hamoodah et al. 2018.

The study sought to quantify the effect of proximity to solar on property values by examining existing solar installations in Massachusetts and Rhode Island. The study evaluated 208 solar facilities, 71,373 housing sales occurring within one-mile of solar facilities (Test Group), and 343,921 sales between one-to-three miles of a solar facility (Control Group). Because the authors used a regression analysis model commonly used in real estate pricing and quality adjustment for price indexes to estimate the impact that various factors have on the price or demand for property, it allowed them to isolate specific variables that could impact value, including isolating rural and non-rural locations.

The study defines **"Rural,"** as an area having a "population density of 850 people per square mile or fewer."

The study provides data which found no negative impact to residential home values near solar arrays in rural areas: "these results suggest that [the impacts on home sales in the Test Area] in rural areas is ***effectively zero*** (a statistically insignificant 0.1%), and that the negative externalities of solar arrays are only occurring in non-rural areas."[7] Further, the study tested to determine if the size of the solar installation impacted nearby property values, and found no evidence of differential property values impacts by the solar installation's size.

Similar results were found in a study published by Dr. Nino Abashidze, School of Economics, Georgia Institute of Technology, dated October 20, 2020, and titled "Utility Scale Solar Farms and Agricultural Land Values." Abashidze examined 451 solar farms in North Carolina. "Across many samples and specifications, we find no direct negative or positive spillover effect of a solar farm construction on nearby agricultural land values. Although there are no direct effects of solar farms on nearby agricultural land values, we do find evidence that suggests construction of a solar farm may create a small, positive, option-value for landowners that is capitalized into land prices. Specifically, after construction of a nearby solar farm, we find that agricultural land that is also located near transmission infrastructure may increase modestly in value."

Additionally, numerous property value studies have found no evidence of decreased property values after construction of a solar farm:

- Marous & Company studied the value of properties adjacent to solar projects in Wisconsin and concluded that concerns regarding negative property value impacts were not substantiated. There is no market data indicating a solar project will have a negative impact on either rural residential or agricultural property values in the surrounding area. Further, for agricultural properties that host photovoltaic panels, the study indicated that the additional income from the solar lease, from the solar leases and other solar agreements, may increase the value and marketability of those properties. The study also included an in-depth analysis of recent residential sales near existing solar farms in Minnesota, North Carolina, Indiana, Arizona, and Illinois. The analysis concluded that proximity of a solar farm does not have any measurable negative impact on surrounding residential property values.[8]

- The Chisago County (Minnesota) Assessor's Office conducted their own study on property prices adjacent to and in the close vicinity of the North Star solar farm in Chisago County, Minnesota. At the November 2017 Chisago County Board meeting, John Keefe, the Chisago County Assessor, presented data from his study. He concluded that the North Star solar farm had, "no adverse impact" on property values. His study encompassed 15 parcels that sold and were adjacent or in the close vicinity to the solar farm between January 2016 and October 2017; the control group used for comparison comprised of over 700 sales within the county. Almost all of the [Test Area] properties sold were at a price above the assessed value. He further stated that, "It seems conclusive that valuation has not suffered."[9]

[6]Gaur, V. and C. Lang. (2020). Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island. Submitted to University of Rhode Island Cooperative Extension on September 29, 2020. Accessed at https://web.uri.edu/coopext/valuing-sitingoptions-for-commercial-scale-solar-energy-in-rhode-island/.

[7]The University of Rhode Island study's conclusion that there may be an impact to non-rural communities is surmised is that "land is abundant in rural areas, so the development of some land into solar does little to impact scarcity, whereas in non-rural areas it makes a noticeable impact.

- CohnReznick, LLP has studied sale prices of single-family homes and agricultural land properties adjacent to solar farms in over 15 states, using appropriate Paired Sales methodology[10], as well as Before/After resale (appreciation rate) analysis, and concluded that the solar farms did not adversely affect property values in either the short or long term. Their research also includes reviewing published studies prepared by academia, as well as other appraisers, and conducting interviews with county assessors and local real estate professionals, who have experience with properties transacting near existing solar facilities in their respective communities. The consensus is that solar farms in their areas had not impacted property values.

- Kirkland Appraisals, LLC studied the value of properties adjacent to solar farms in North Carolina.[11] Kirkland's analyses strongly support the compatibility of solar farms with adjoining agriculture and residential uses and conclude that there was no impact in home values due to proximity of a solar farm.

- Donald Fisher, ARA who has served six years as Chair of the American Society of Farm Managers and Rural Appraisers, and has prepared several market studies examining the impact of solar on residential values was quoted in a press release dated February 15, 2021 stating, "Most of the locations were in either suburban or rural areas, and all of these studies found either a neutral impact or, ironically, a positive impact, where values on properties after the installation of solar farms went up higher than time trends."

- Christian P. Kaila & Associates studied the value of properties adjacent to solar farms in Virginia.[12] The analysis concluded that adjacent property value, (for both residential and agricultural property), was not adversely affected by construction and operation of solar facilities.

The utility-scale solar industry recognizes the importance of engaging with the host community to balance economic, environmental, safety, and social concerns when developing and operating their projects. In their siting and application process, successful solar developers have prioritized being a good neighbor and a long-term partner with host communities.

[8]Marous & Company. 2021. Market Impact Analysis: Koshkonong Solar Energy Center Dane County, Wisconsin. April 13, 2021. Accessed at https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=409444.
[9]Chisago County Press: County Board Real Estate Update Shows No "Solar Effects" (11/03/2017).
[10]Bell, Randall, PhD, MAI. Real Estate Damages. Third ed. Chicago, IL: Appraisal Institute, 2016. (Page 33).
[11]Kirkland, Richard C. 2018. Culpeper Solar Impact Study. Kirkland Appraisals, March 7, 2018.
[12]Christian P. Kaila & Associates. 2020. Property Impact Analysis of Round Hill Solar, Proposed Solar Power Plant Augusta County, Virginia. June 2020.

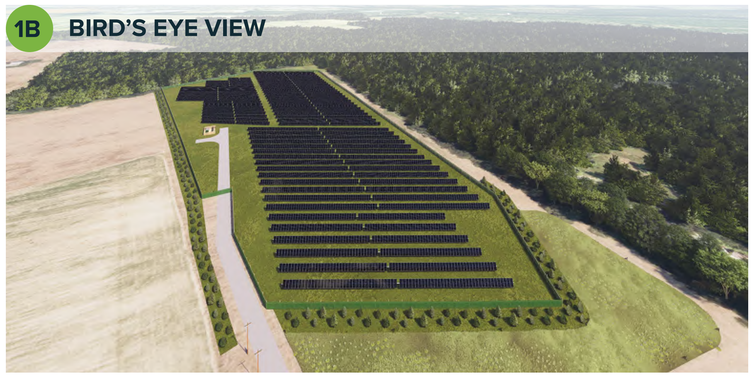
For more information, email
Hilary Clark, hclark@cleanpower.org

2.13 Fencing and Landscaping Buffer Rendering

VIEWSHED KEY MAP

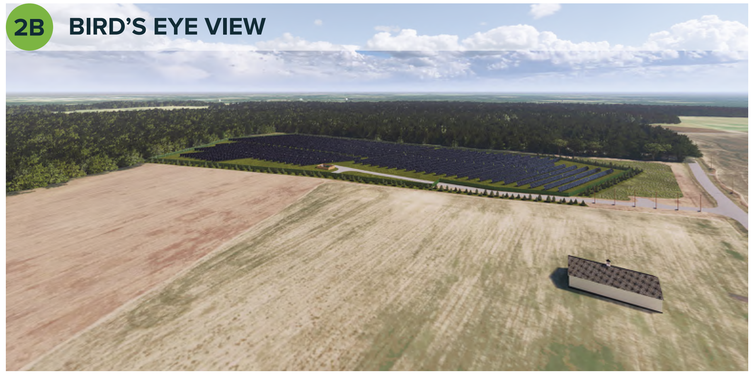
1A GROUND LEVEL VIEW

1B BIRD'S EYE VIEW

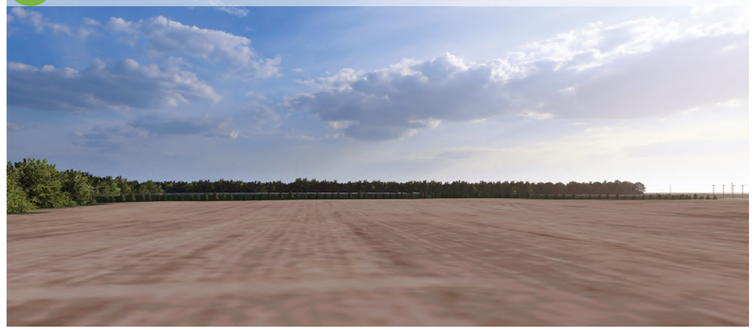


2A GROUND LEVEL VIEW

2B BIRD'S EYE VIEW



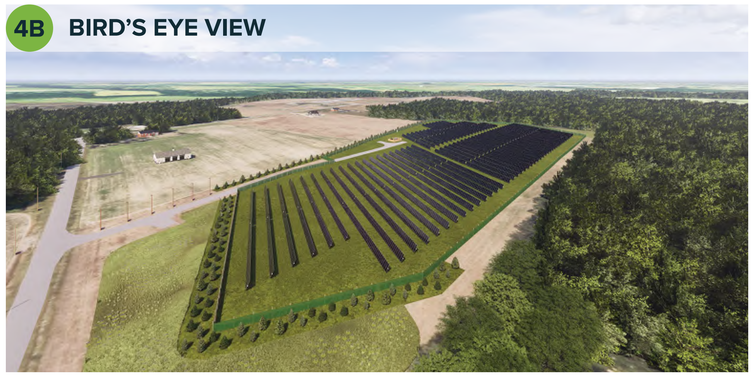
3A GROUND LEVEL VIEW



3B BIRD'S EYE VIEW

4A GROUND LEVEL VIEW

4B BIRD'S EYE VIEW



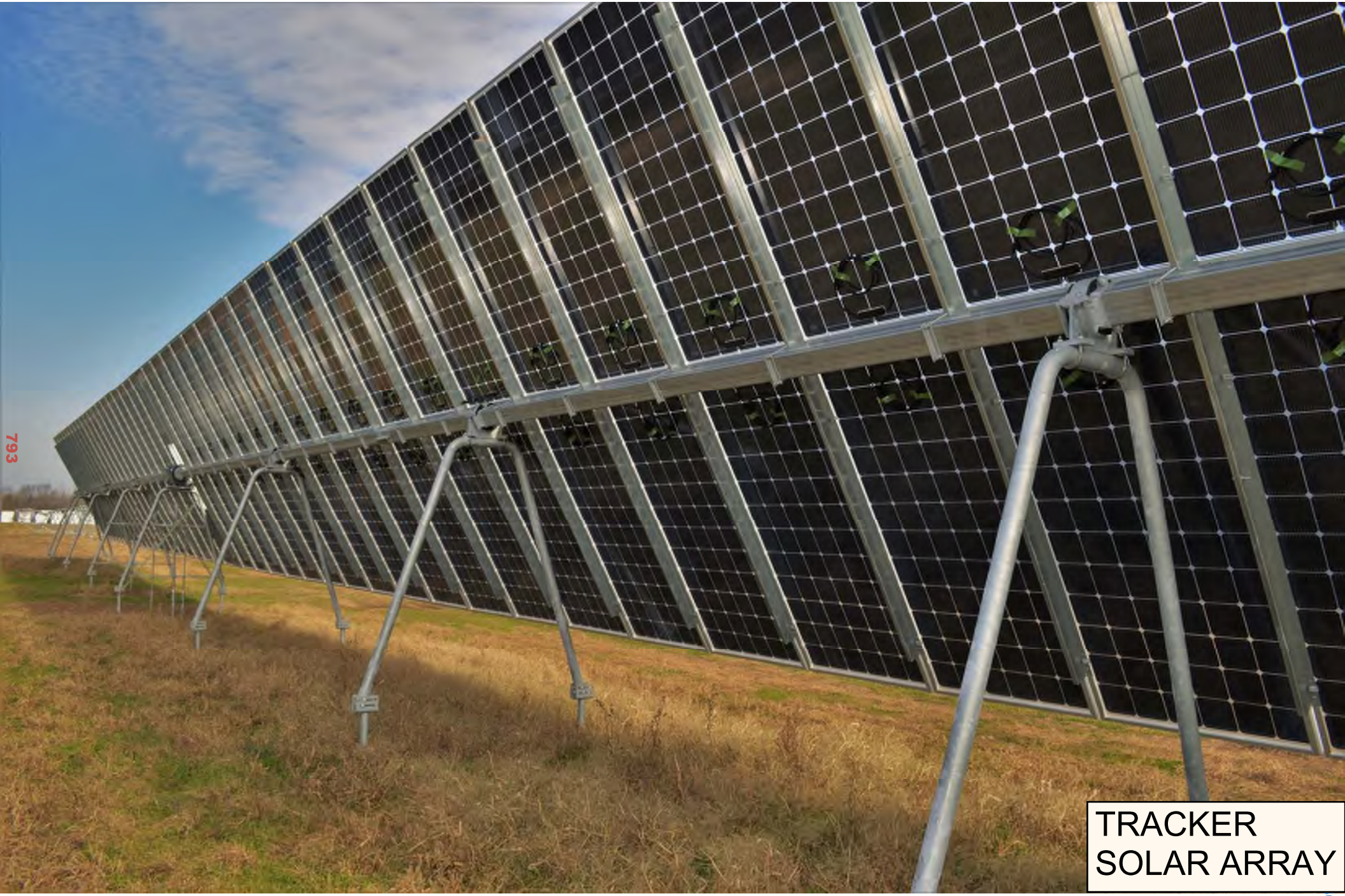
PRODUCED BY NLYTN ENERGY

LONESOME ROAD, SEAFORD, DE

SOLAR PV 3D RENDERING

eca power

TRACKER
SOLAR ARRAY

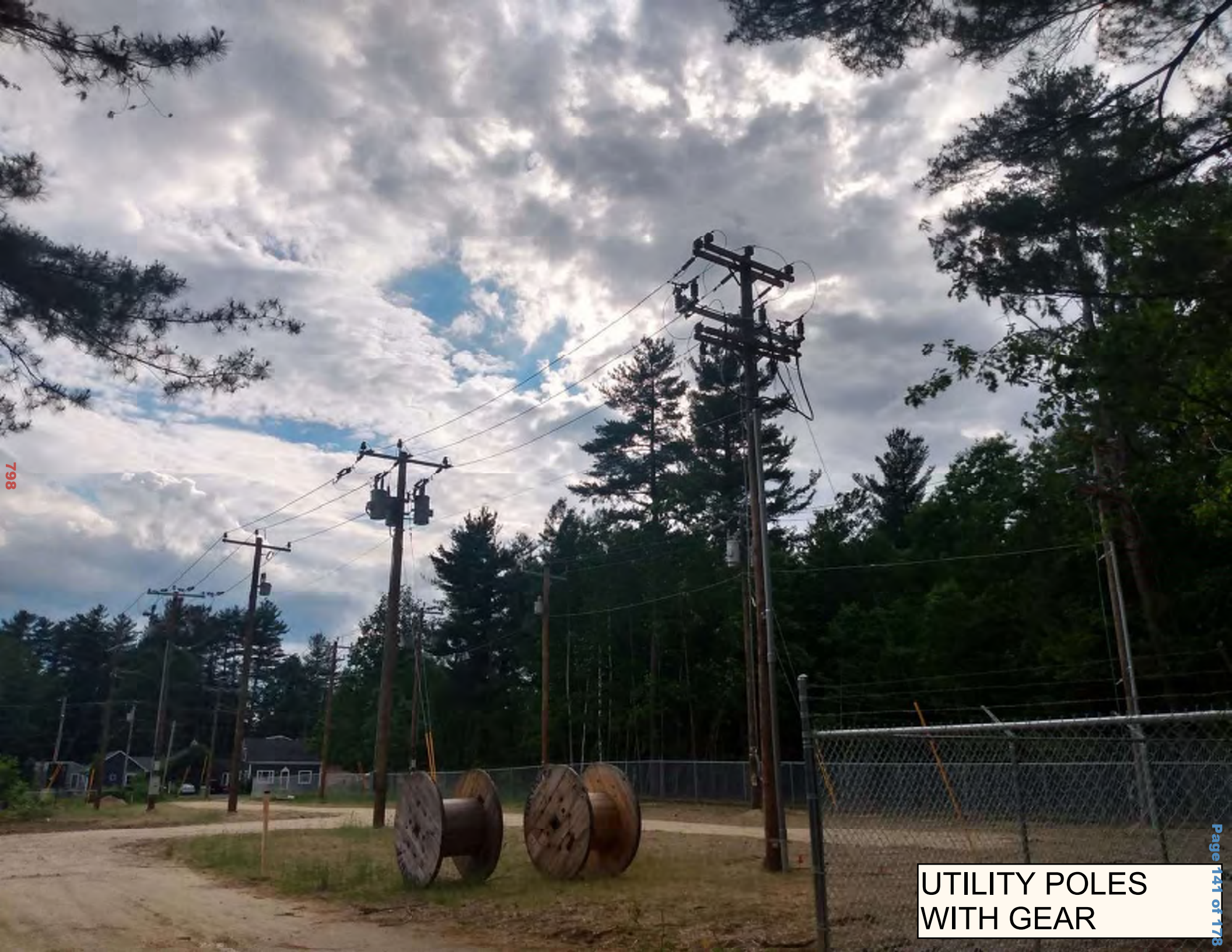

TRACKER
SOLAR ARRAY

TRACKER
SOLAR ARRAY

KNOT-WIRE FENCING
WILDLIFE FRIENDLY

GREEN WOVEN
FENCE MESH

ELECTRICAL EQUIPMENT



UTILITY POLES
WITH GEAR

3.0 List of Letters – (CONDITIONAL USE - 2597 – LONESOME ROAD COMMUNITY ENERGY INIATIVE LLC)

3.1 Legal Description and Deed
3.2 Conditional Use #2601 – Letter to Engineer
3.3 DelDOT Service Level Evaluation Response
3.4 Public Outreach Correspondence

3.1 Legal Description and Deed

Document# 2021000046362 BK: 5512 PG: 43
Recorder of Deeds, Scott Dailey On 7/21/2021 at 11:08:33 AM Sussex County, DE
Consideration: $0.00 County/Town: $0.00 State: $0.00 Total: $0.00
Doc Surcharge Paid Town: SUSSEX COUNTY

Tax Number: 5-31 12.00 92.02
PREPARED BY & RETURN TO:
Tunnell & Raysor, P.A.
30 E. Pine Street
Georgetown, DE 19947
File No. DO3780/ERM

NO TITLE SEARCH REQUESTED
NO TITLE SEARCH PERFORMED
NO TITLE GUARANTEE
DEED PREPARATION ONLY

THIS DEED, made this 19th day of July, 2021,

- BETWEEN -

PAMELA SAVAGE, AS TRUSTEE, OF THE TRUST CREATED UNDER ITEM II C OF THE LAST WILL AND TESTAMENT OF JEANETTE J. TULL, of 27547 Martin Farm Road, Milton, DE 19968, party of the first part,

- AND -

PAMELA SAVAGE, of 27547 Martin Farm Road, Milton, DE 19968, as sole owner, party of the second part.

WITNESSETH: That the said party of the first part, for and in consideration of the sum of **ONE DOLLAR ($1.00)**, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the party of the second part, and their heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

ALL that certain tract, piece or parcel of land, situate and lying in the Easterly right of way line of State Road 541 in Seaford Hundred, Sussex County, State of Delaware, more particularly described as follows, to wit:

BEGINNING at a point in the Easterly right of way line of State Road 541 and being also a corner for lands this day conveyed to George Henry Tull, etux.; thence by and with line of lands of George Henry Tull, etux. In a Northeasterly direction such a distance as will reach a point in line of lands of W. F. Haines Tull; thence turning and running by and with line of lands of W. F. Haines Tull in a general Southeasterly direction to a point

in line of lands now or formerly of John A. Moore, Jr.; thence by and with line of lands now or formerly of John A. Moore, Jr. in a general Southwesterly direction such a distance as will reach a point in the Easterly right of way of State Road 541; thence by and with the Easterly right of way of said road in a Northwesterly direction such a distance as will reach a point in line of lands this day conveyed to George Henry Tull, the point and place of beginning, said to contain by estimation the quantity of 28 acres of land be the same more or less.

BEING the same lands conveyed to Floyd A. Tull, Jr., from Floyd A. Tull and Virginia E. Tull, by Deed dated December 17, 1977, recorded in the Office of the Recorder of Deeds in and for Sussex County, Delaware, on December 20, 1977, in Deed Book 874, page 143.

THEREAFTER, the said Floyd A. Tull, Jr. departed this life on or about August 19, 2005, and by Second item of the Last Will and Testament of Floyd A. Tull, Jr. recorded in the Register of Wills office, Sussex County, Delaware, in Will Book 457, page 261, did devise the abovementioned lands unto his wife, Jeanette J. Tull, absolutely and in fee simple.

THEREAFTER, the said Jeanette J. Tull departed this life on or about August 13, 2016, and by Item II. Specific Bequest of the Last Will and Testament of Jeanette J. Tull, recorded in the Register of Wills Office, Sussex County, Delaware, did devise the abovementioned lands unto her daughter, Pamela Savage, as Trustee, for her benefit.

SUBJECT to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

IN WITNESS WHEREOF, the party of the first part has hereunto set her hand and seal the day and year first above written.

Signed, Sealed and Delivered
in the presence of:

Witness

Pamela Savage Trustee (SEAL)
Pamela Savage, Trustee

STATE OF DELAWARE, COUNTY OF SUSSEX: to-wit

BE IT REMEMBERED, that on July 19, 2021 personally came before me, the subscriber, Pamela Savage, as Trustee of the Trust created under Item II C of the Last Will and Testament of Jeanette J. Tull, party of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be her act and deed.

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

ETTA R. MAYERS
ATTORNEY AT LAW WITH
POWER TO ACT AS NOTARY PUBLIC
PER 29 DEL. C SEC 4323 (A)3

Notary Public
My Commission Expires: NA

TUNNELL RAYSOR, P.A.
Georgetown, Delaware

Document# 2021000046363 BK: 5512 PG: 46
Recorder of Deeds, Scott Dailey On 7/21/2021 at 11:08:33 AM Sussex County, DE
Consideration: $0.00 County/Town: $0.00 State: $0.00 Total: $0.00
Doc Surcharge Paid Town: SUSSEX COUNTY

Tax Number: 5-31 12.00 92.02
PREPARED BY & RETURN TO:
Tunnell & Raysor, P.A.
30 E. Pine Street
Georgetown, DE 19947
File No. DO3780/ERM

NO TITLE SEARCH REQUESTED
NO TITLE SEARCH PERFORMED
NO TITLE GUARANTEE
DEED PREPARATION ONLY

THIS DEED, made this 19th day of July, 2021,

- BETWEEN -

PAMELA SAVAGE, of 27547 Martins Farm Road, Milton, DE 19968, party of the first part,

- AND -

CATHERINE ANN SAVAGE, of 9875 Sherwood Farm Road, Owings Mills, MD 21117, **THEODORE ROBERT SAVAGE JR.**, of 27513 Martins Farm Road, Milton, DE 19968, and **RANDI NICOLE GOOTEE**, of 34010 Orchid Lane, Lewes, DE 19958, as tenants in common, parties of the second part.

WITNESSETH: That the said party of the first part, for and in consideration of the sum of **ONE DOLLAR ($1.00)**, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the parties of the second part, and their heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

ALL that certain tract, piece or parcel of land, situate and lying in the Easterly right of way line of State Road 541 in Seaford Hundred, Sussex County, State of Delaware, more particularly described as follows, to wit:

BEGINNING at a point in the Easterly right of way line of State Road 541 and being also a corner for lands this day conveyed to George Henry Tull, etux.; thence by and with line of lands of George Henry Tull, etux. In a Northeasterly direction such a distance as will reach a point in line of lands of W. F. Haines Tull; thence turning and running by and with

line of lands of W. F. Haines Tull in a general Southeasterly direction to a point in line of lands now or formerly of John A. Moore, Jr.; thence by and with line of lands now or formerly of John A. Moore, Jr. in a general Southwesterly direction such a distance as will reach a point in the Easterly right of way of State Road 541; thence by and with the Easterly right of way of said road in a Northwesterly direction such a distance as will reach a point in line of lands this day conveyed to George Henry Tull, the point and place of beginning, said to contain by estimation the quantity of 28 acres of land be the same more or less.

BEING the same lands conveyed to Pamela Savage from Pamela Savage, Trustee, of the Trust created under Item II C of the Last Will and Testament of Jeanette J. Tull, by Deed dated _____, 2021, recorded in the Office of the Recorder of Deeds in and for Sussex County, Delaware, on _____, 2021, in Deed Book _____, page _____.

SUBJECT to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

IN WITNESS WHEREOF, the party of the first part has hereunto set her hand and seal the day and year first above written.

Signed, Sealed and Delivered
in the presence of:

_____
Witness

_____(SEAL)
Pamela Savage

STATE OF DELAWARE, COUNTY OF SUSSEX: to-wit

BE IT REMEMBERED, that on July 19, 2021 personally came before me, the subscriber, Pamela Savage, party of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be her act and deed.

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

_____
Notary Public
My Commission Expires: NP

ETTA R. MAYERS
ATTORNEY AT LAW WITH
POWER TO ACT AS NOTARY PUBLIC
PER 29 DEL. C SEC 4323 (A)3

OWNER: Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee
PARCEL NO.: 531-12.00-92.02 (Portion of)

13.45 ACRES ±

Beginning at a point at a corner for this area, located within the lands of Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee, said point being North 66°09'02" East 197.25 feet as measured from a found iron rod at a corner for the lands of Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee and lands of Barry Edward Hastings II, thence leaving said point of beginning and running across said lands of Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee the following eleven courses and distances 1) North 51°28'01" East 133.02 feet to a point; thence 2) North 64°07'36" East 115.75 feet to a point; thence 3) North 25°52'24" West 46.50 feet to a point; thence 4) North 51°28'01" East 805.54 feet to a point; thence 5) South 45°08'44" East 236.24 feet to a point; thence 6) South 60°45'20" East 71.22 feet to a point; thence 7) South 50°04'01" East 79.84 feet to a point; thence 8) South 00°00'00" East 280.78 feet to a point; thence 9) South 62°49'09" West 1,032.43 feet to a point; thence 10) North 90°00'00" West 190.46 feet to a point; thence 11) North 00°00'00" East 328.03 feet to the point and place of beginning and containing 13.45 acres of land, be the same more or less.

202503600ad-desc-cond-use.docx

3.2 Letter to Engineer

JAMIE WHITEHOUSE, AICP
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

August 19, 2026

Becker Morgan Group, Inc.
c/o Michael Henry
South Governors Avenue
Dover, DE 19904

Email: mhenry@beckermorgan.com

C/U 2597 Lonesome Road Community Energy Initiative, LLC
AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT FOR SOLAR ARRAYS TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN SUSSEX COUNTY, CONTAINING 28.64 ACRES, MORE OR LESS. The parcel is lying on the east side of Lonesome Road (S.C.R. 541), approximately 800 feet south of Woodpecker Road (S.C.R. 80). 911 Address: N/A. Tax Map Parcel: 531-12.00-92.02.

Dear Becker Morgan Group, Inc., c/o Michael Henry:

The **Planning and Zoning Commission** will hold a Public Hearing on **Wednesday, September 16, 2026, at 3:00 p.m.** in the Sussex County Council Chambers located in the County Administrative Office at 2 The Circle, Georgetown, DE, 19947.

The **Sussex County Council** will hold a Public Hearing on **Tuesday, October 20, 2026, at 1:30 p.m.** in the Sussex County Council Chambers located in the County Administrative Office at 2 The Circle, Georgetown, DE, 19947.

Please be advised that as required by Rule 3 of the Rules of Procedure of the Sussex County Planning and Zoning Commission, a large public notice sign will be placed on your property reflecting the above public hearing dates and times. This sign shall not be removed and/or relocated until after the scheduled hearing before Sussex County Council. All large metal signs are the property of Sussex County and will be retrieved following the hearing.

It will be necessary for you the applicant to participate at the hearings before both the Commission and County Council. If you do not participate or are not represented, the Commission and/or County Council reserve the right to refuse to act on your application and may require that a new application be filed, and fees paid at your expense.

If an attorney, or agent, will be representing you, the applicant, it is your duty to notify them as to the dates and times of the hearings as herein set forth, as the Commission and County Council will not notify your counsel.

Further instructions describing the method of public participation and the manner of viewing the hearings will be contained within the Agenda that will be posted at least 7 days in advance of the meeting at sussexcountyde.gov. The County operates an electronic document management system whereby the public

and Applicants can review documents and public comments online. The Land Use Application Docket can be found at sussexcountyde.gov/planning-zoning.

Please be advised that the Office of Planning and Zoning is aware of third-party attempts to defraud applicants by using publicly accessible information to demand payment by means of a wire transfer.

The Planning & Zoning Department does not email invoices containing requests with wire transfer instructions. Also, all official email communication from the Planning & Zoning Department will have an email address ending in *sussexcountyde.gov*.

If at any point during or following your application or public hearing process, you receive a suspicious payment inquiry, please feel free to contact the office at the phone number, email address, or physical address on this letter to verify the validity of such a request.

Please feel free to contact the Planning & Zoning Department during our business hours of Monday through Friday, from 8:30 am to 4:30 pm.

Sincerely,
Planning and Zoning Department

3.3 DelDOT Service Level Evaluation Response

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

SHANTÉ A. HASTINGS
SECRETARY

May 20, 2025

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Lonesome Road Community Energy Initiative LLC** (Lonesome Road, Seaford, Delaware 19973**)** proposed land use application, which we received on April 22, 2025. This application is for an approximate 28.6-acre parcel (Tax Parcel: 531-12.00-92.02). The parcel is located on the east side of Lonesome Road (Sussex County Road 541) and approximately 800 feet south from the intersection of Woodpecker Road (Sussex County Road 80) and Lonesome Road. The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a conditional use approval to build a Solar Energy Facility.

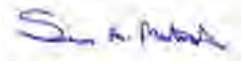
Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Lonesome Road, where the subject land is located, which is from Woodland Road (Sussex County Road 536) to Woodpecker Road, is 145 vehicles per day.

Based on our review, we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Tijah Jones, at tijah.jones@delaware.gov, if you have questions concerning this correspondence.

Sincerely,



Sireen Muhtaseb, PE
TIS Engineer
Development Coordination

SM:tjm
cc: Lonesome Road Community Energy Initiative LLC, Applicant
Ashley Paugh, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, M&O
James Argo, South District Project Reviewer, M&O
Tara Summers-Strong, South District Public Works Admin. M&O
Todd Sammons, Assistant Director, Development Coordination
John Pietrobono, Acting Sussex Review Coordinator, Dev Coord
Kevin Hickman, Sussex Reviewer, Development Coordination
Derek Sapp, Sussex Review Engineer, Development Coordination
Thomas Gagnon, Sussex Review Engineer, Development Coordination
José Quixtan, Sussex Review Engineer, Development Coordination
Annamaria Furmato, TIS Review Engineer, Development Coordination
Ben Fisher, TIS Review Engineer, Development Coordination
Tijah Jones, TIS Review Engineer, Development Coordination
DelDOT TIS Support

3.4 Public Outreach Correspondence

ECA Power
203 Crescent St., Suite 106
Waltham, MA 02453

Lonesome Road Community Energy Initiative LLC
Project Parcel Map Number: 531-12.00-92.02
Project Address: 0 Lonesome Road, Seaford DE 19973

Project narrative regarding community meetings

In January 2026, letters were sent to 10 direct abutters of the subject parcel where the solar project will be located. The letters invited the neighbors to set up one-on-one meetings with the project team to go over the project plans and discuss any of their questions or concerns. Responses were received from two neighbors: Kim McCane at 4708 Woodpecker Road and Shannon Benson at 4600 Woodpecker Road.

On January 22, the project team met with Kim McCane and her father at their home. We reviewed the solar site plan including the solar panel area, fence and mesh privacy screen, vegetation (existing and proposed plantings) and the access road. The family asked a few clarifying questions and ultimately supported the project. They asked what we planned to do with the wooded area at the back of the property (abutting their parcel) and we let them know it was going to remain wooded, and we will not be removing any of the trees.

On the same day, we met with Shannon and Don Benson at their home. They voiced concern about the project being in such proximity to their backyard where they had recently built their home. We went over the vegetated planting plans and showed a visual image of the mesh privacy screen and fence. They felt more at ease after seeing that these features are included as part of the project. We offered to plant an additional row (third row) of trees on the subject parcel, along the back edge of their property line.

The Bensons shared the phone number of the farmer who had previously been farming the subject parcel and the project team reached out to set up a farming lease for the 2026 planting season.

BECKER MORGAN GROUP

ARCHITECTURE ENGINEERING

PLANNING OUR CLIENTS' SUCCESS

May 21, 2025

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
2 The Circle, P.O. Box 417
Georgetown, Delaware 19947

RE: **Conditional Use Site Plan Submission**
LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC
Seaford, Delaware
2025036.00

Dear Mr. Whitehouse:

On behalf of our client, Lonesome Road Community Energy Initiative LLC, an affiliate of ECA Solar, LLC., we are hereby submitting a Conditional Use Site Plan Application for the above-mentioned project. We have included the following documents in support of the submission:

- Two (2) Paper sets - Conditional Use Site, Landscape, Pollinator & Forest Assessment Plans
- One (1) PDF set of Conditional Use Site, Landscape, Pollinator & Forest Assessment Plans (submitted via Email)
- One (1) Copy - Planning & Zoning Commission Application (Conditional Use)
- One (1) Copy - DelDOT Service Level Evaluation Response
- One (1) Copy – Conditional Use Area Legal Description
- One (1) Check (No. 1104) in the amount of $1,000.00
- One (1) Copy of The Decommissioning Plan
- PDF files of all documents (sent via email)

Please include this project on the earliest agenda opening for Planning Commission consideration. In addition, we intend to provide an optional exhibit booklet a minimum of ten (10) days prior to the scheduled Planning Commission meeting.

Please review the enclosed documents at your earliest convenience. If you have any comments and/or questions, please do not hesitate to contact me.

Sincerely,

BECKER MORGAN GROUP, INC.

Michael J. Henry, LEED AP
Senior Associate

MJH/

Cc: Michael Redding, P.E. (mr@ecasolar.com)

202503600ac-ltr-PandZ.docx

BECKER MORGAN GROUP, INC.
309 SOUTH GOVERNORS AVENUE
DOVER, DELAWARE 19904
302.734.7950

THE TOWER AT STAR CAMPUS
100 DISCOVERY BOULEVARD, SUITE 102
NEWARK, DELAWARE 19713
302.369.3700

FORT EXCHANGE
312 WEST MAIN STREET, SUITE 300
SALISBURY, MARYLAND 21801
410.546.9100

3333 JACKLE DRIVE, SUITE 120
WILMINGTON, NORTH CAROLINA 28403
910.341.7600

1942 EAST 7TH STREET, SUITE 240
CHARLOTTE, NORTH CAROLINA 28204
980.270.9100

314 EAST MAIN STREET
CLAYTON, NORTH CAROLINA 27520
919.243.1332

www.beckermorgan.com

File #: _____

Planning & Zoning Commission 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)
Conditional Use ___
Zoning Map Amendment ___

Site Address of Conditional Use/Zoning Map Amendment

Lonesome Road, Seaford, DE 19973

Type of Conditional Use Requested:
Solar Energy Facility

Tax Map #: 531-12.00-92.02 **Size of Parcel(s)**: 28.64 AC.

Current Zoning: AR-1 **Proposed Zoning:** AR-1 **Size of Building**: 0 S.F.

Land Use Classification: LD (Low Density)

Water Provider: N/A **Sewer Provider:** N/A

Applicant Information

Applicant Name: Lonesome Road Community Energy Initiative LLC c/o Michael Redding, P.E.
Applicant Address: 203 Crescent St, Suite 106
City: Waltham State: MA ZipCode: 02453
Phone #: (603) 494-6801 E-mail: mr@ecasolar.com

Owner Information

Owner Name: Catherine A. Savage & Theodore R. Savage JR. & Randi N. Gootee c/o Catherine Savage
Owner Address: 9875 Sherwood Farm Road
City: Owings Mill State: MD Zip Code: 21117
Phone #: (302) 542-8871 E-mail: CathyS0598@hotmail.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Becker Morgan Group, Inc. c/o Michael Henry
Agent/Attorney/Engineer Address: 309 South Governors Ave.
City: Dover State: DE Zip Code: 19904
Phone #: (302) 734-7950 E-mail: mhenry@beckermorgan.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✓ **Completed Application**

✓ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✓ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✓ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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: 5/6/2025

Signature of Owner

Catherine A Savage Date: 05/01/25

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

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

SHANTÉ A. HASTINGS
SECRETARY

May 20, 2025

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Lonesome Road Community Energy Initiative LLC** (Lonesome Road, Seaford, Delaware 19973**)** proposed land use application, which we received on April 22, 2025. This application is for an approximate 28.6-acre parcel (Tax Parcel: 531-12.00-92.02). The parcel is located on the east side of Lonesome Road (Sussex County Road 541) and approximately 800 feet south from the intersection of Woodpecker Road (Sussex County Road 80) and Lonesome Road. The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a conditional use approval to build a Solar Energy Facility.

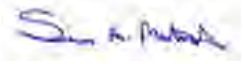
Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Lonesome Road, where the subject land is located, which is from Woodland Road (Sussex County Road 536) to Woodpecker Road, is 145 vehicles per day.

Based on our review, we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Tijah Jones, at tijah.jones@delaware.gov, if you have questions concerning this correspondence.

Sincerely,



Sireen Muhtaseb, PE
TIS Engineer
Development Coordination

SM:tjm
cc: Lonesome Road Community Energy Initiative LLC, Applicant
Ashley Paugh, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, M&O
James Argo, South District Project Reviewer, M&O
Tara Summers-Strong, South District Public Works Admin. M&O
Todd Sammons, Assistant Director, Development Coordination
John Pietrobono, Acting Sussex Review Coordinator, Dev Coord
Kevin Hickman, Sussex Reviewer, Development Coordination
Derek Sapp, Sussex Review Engineer, Development Coordination
Thomas Gagnon, Sussex Review Engineer, Development Coordination
José Quixtan, Sussex Review Engineer, Development Coordination
Annamaria Furmato, TIS Review Engineer, Development Coordination
Ben Fisher, TIS Review Engineer, Development Coordination
Tijah Jones, TIS Review Engineer, Development Coordination
DelDOT TIS Support

OWNER: Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee
PARCEL NO.: 531-12.00-92.02 (Portion of)

13.45 ACRES ±

Beginning at a point at a corner for this area, located within the lands of Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee, said point being North 66°09'02" East 197.25 feet as measured from a found iron rod at a corner for the lands of Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee and lands of Barry Edward Hastings II, thence leaving said point of beginning and running across said lands of Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee the following eleven courses and distances 1) North 51°28'01" East 133.02 feet to a point; thence 2) North 64°07'36" East 115.75 feet to a point; thence 3) North 25°52'24" West 46.50 feet to a point; thence 4) North 51°28'01" East 805.54 feet to a point; thence 5) South 45°08'44" East 236.24 feet to a point; thence 6) South 60°45'20" East 71.22 feet to a point; thence 7) South 50°04'01" East 79.84 feet to a point; thence 8) South 00°00'00" East 280.78 feet to a point; thence 9) South 62°49'09" West 1,032.43 feet to a point; thence 10) North 90°00'00" West 190.46 feet to a point; thence 11) North 00°00'00" East 328.03 feet to the point and place of beginning and containing 13.45 acres of land, be the same more or less.

202503600ad-desc-cond-use.docx

DECOMMISSIONING PLAN

LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC
LONESOME RD SEAFORD, MD

May 20, 2025

DECOMMISSIONING PLAN

Introduction

Lonesome Road Community Energy Initiative LLC developed this decommissioning plan for the Commercial Solar Energy Facility located off Lonesome Rd Seaford, DE (PARCEL ID 531-12.00-92.02). This plan will be implemented after the contracted lease term has ended or if deemed abandoned. ***Decommissioning of the Project will be the responsibility of Lonesome Road Community Energy Initiative LLC***. This plan is provided as part of the permitting conditions for the Special Exception Permit as approved by Sussex County.

Abandonment

If the Lonesome Road Community Energy Generating facility does not produce energy for a continuous period of one year or more, it shall be presumed to have been abandoned. Any Facility that has been abandoned must be decommissioned and removed within 180 days.

Decommissioning must consist of:

a. Physical removal of all solar photovoltaic facilities, structures, equipment, security barriers and transmission lines from the site.
b. Recycling or disposal of all solid and other waste in accordance with local, state, and federal regulations.
c. Stabilization or re- vegetation of the site as necessary to minimize erosion.
d. Gravel roads and landscaping planted as part of the solar facility will be removed as part of the decommissioning activities. The Landowner is authorized to allow the Solar Facility Owner or Operator to leave landscaping, gravel roads or designated below grade foundations in place if deemed useful to agriculture operations.

Decommissioning Activities

Decommissioning of the Lonesome Road Community Energy Generating facility will include removal of all above-ground infrastructure, including the arrays, inverter structures, concrete foundations and pads, electrical infrastructure and perimeter fences. Grading and re-vegetation will comply with all applicable rules and regulations. Concrete footings or foundations (if present) will be removed. Decommissioning activities will follow the Delaware Erosion & Sediment Control Handbook that are applied during project construction, or any new best management practices relevant at the time.

Lonesome Road Community Energy Initiative LLC will decommission the Project once the contracted lease term is over or if deemed abandoned. Lonesome Road Community Energy Initiative LLC will provide notice to Sussex County prior to the start of decommissioning.

Waste Disposal

Disposal of the solar array facility will include landfilling, metal recycling and solar panel recycling. The following is a general list of these items.

<u>Landfilling</u>
Wood fence posts
Wood utility poles
Concrete pads
Privacy mesh

<u>Metal Recycling</u>
Fence mesh
Wires
Racking
Metal electrical equipment

<u>Solar Panel Recycling</u>
Solar Panels

<u>Other Wastes</u>
Transformer oil (non-hazardous) – oil recycling facility
Pollinator gardens – yard waste at landfill or composting facility

The following is a list of disposal facilities that may be used for the decommissioning activities. This list is subject to change depending on facility requirements and permits.

Landfilling
Jones Rd Landfill Georgetown, DE
Sandtown Landfill Felton, DE

Metal Recycling
Sussex Scrap Metal Delmar, DE
Salisbury Scrap Metal Inc. Salisbury, MD

Solar Panel Recycling
Powerhouse Recycling Salisbury, NC
FirstAmerica Atlanta, GA

Other Wastes
Triumvirate Environmental Baltimore, MD (oils and hazardous waste)

Estimated Timeline and Cost

Decommissioning activities will be completed within 180 days from commencement of the decommissioning process as described herein. Lonesome Road Community Energy Initiative LLC estimates the cost of decommissioning to be approximately $345,791. This estimate assumes a potential secondary market for certain components of the Project equipment, and disposal or recycling of other components aligned with industry best practices. The salvage value is not included in the decommissioning estimate.

Our estimate was developed by Becker Morgan Group of Salisbury, MD. Becker Morgan Group developed a list of decommissioning items by reviewing the proposed civil and electrical plan sets. The estimate was developed using contractor quotes, past project data, and publicly available decommissioning costs for other solar projects. Becker Morgan Group also used RS Means published cost data for Heavy Construction for the solar racking and removal of foundation posts as well as other similar items.

Restoration of Land

Decommissioning consists of the removal of above and below ground facility components, management of excess wastes and materials, and the restoration of ground surface irregularities and herbaceous vegetation. In the event that commercial operations cease for over 12 months, the project area is to be restored in a manner consistent with its condition prior to facility construction. Decommissioning activities are expected to be completed within 180 days. Removal of all equipment will be done in accordance with applicable regulations at the time. Following the removal of all equipment, restoration of the land will consist of the following:

- Minor grading and filling of all holes, ruts, depressions and irregularities created in removal of the solar facility equipment.
- Removal of pollinator gardens and restoration of areas to allow for farming
- Raking and aerating or tilling (de-compaction) of travel pathways used during the operations and decommissioning.
- Seeding of all disturbed and unvegetated areas with a seed mix supportive of farming (e.g. winter rye).

Financial Instrument

Lonesome Road Community Energy Initiative LLC will provide a financial instrument to ensure the timely decommission of the project. This instrument shall be a performance bond, escrow, cash, certificate of deposit, irrevocable letter of credit, corporate guarantee or other equivalent. The financial instrument will provide payment to the landowner and County for the value of the decommissioning costs. The instrument will remain valid for the entire duration of the project. For all ownership changes, the financial instrument shall be replaced with no gap in coverage. The financial instrument shall be renewed and replaced if necessary to account for any changes in the total decommissioning cost. The financial instrument shall be

in place prior to the issuance of a Final Written Notice of Site Plan Approval by the County. The financial instrument shall be reviewed and renewed every five (5) years to ensure the amount reflects the current market decommissioning costs.

PROJECT DECOMMISIONING COST ESTIMATE

LONESOME RD COMMUNITY ENERGY INITIATIVE LLC
LONESOME RD SEAFORD, DE

SYSTEM SIZE (MW DC) **2.840**

Estimated Construction Costs				
Item	**Quantity**	**Units**	**Unit Cost**	**Total Cost**
Mobilization	1	LS	$ 10,000	$ 10,000
Site Preparation	1	LS	$ 5,000	$ 5,000
Electrical Permits	1	LS	$ 1,500	$ 1,500
Building Permits	1	LS	$ 1,500	$ 1,500
Pole Removal: Utility Poles	3	EA	$ 2,500	$ 7,500
Pole Removal: Project Poles	3	EA	$ 2,500	$ 7,500
Pole Gear Removal: Meters & GOAB	1	LS	$ 2,500	$ 2,500
Underground Conduit Removal: AC&DC	1425	LF	$ 10.00	$ 14,250
Concrete Pads Removal	1	EA	$ 2,000	$ 2,000
Transformers Removal	1	EA	$ 3,000	$ 3,000
Switchgear Removal	1	EA	$ 2,500	$ 2,500
Recloser Removal	1	EA	$ 2,500	$ 2,500
Inverters Removal	10	EA	$ 750	$ 7,500
Modules Removal	4776	EA	$ 7.69	$ 36,727
Racking Removal: Tracker Torque Tube	415	EA	$ 125	$ 51,875
Foundation Removal	1038	EA	$ 60	$ 62,280
Fence Removal	3260	LF	$ 2.50	$ 8,150
Gravel Access Road Removal	533	CY	$ 73	$ 38,909
Site Grading	13	AC	$ 1,800	$ 23,400
Hydroseeding and Mulch	13	AC	$ 2,000	$ 26,000
Module Transportation/Recycle	10	EA	$ 1,400	$ 14,000
Solid Waste Transportation and Disposal (Dumpsters)	10	EA	$ 700	$ 7,000
Recycling Disposal Transportation (Palletized Truckloads)	15	EA	$ 380	$ 5,700
Construction Management	1	LS	$ 3,000	$ 3,000
Project Administration	1	LS	$ 1,500	$ 1,500
DECOMMISSIONING TOTAL				**$ 345,791**

NOTES:
LF= liner feet
CY = cubic yards
EA = each
AC = acres
LS = lump sum

RECEIVED
MAY 30 2025
SUSSEX COUNTY
PLANNING & ZONING

DECOMMISSIONING PLAN

LONESOME ROAD COMMUNITY ENERGY INITIATIVE LLC
LONESOME RD SEAFORD, MD

May 20, 2025

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LONESOME RD COMMUNITY ENERGY INITIATIVE LLC
LONESOME RD SEAFORD, DE

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DECOMMISSIONING TOTAL				**$ 345,791**

NOTES:
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EA = each
AC = acres
LS = lump sum

eca solar

Document# 2021000046363 BK: 5512 PG: 46
Recorder of Deeds, Scott Dailey On 7/21/2021 at 11:08:33 AM Sussex County, DE
Consideration: $0.00 County/Town: $0.00 State: $0.00 Total: $0.00
Doc Surcharge Paid Town: SUSSEX COUNTY

Tax Number: 5-31 12.00 92.02
PREPARED BY & RETURN TO:
Tunnell & Raysor, P.A.
30 E. Pine Street
Georgetown, DE 19947
File No. DO3780/ERM

NO TITLE SEARCH REQUESTED
NO TITLE SEARCH PERFORMED
NO TITLE GUARANTEE
DEED PREPARATION ONLY

THIS DEED, made this 19th day of July, 2021,

- BETWEEN -

PAMELA SAVAGE, of 27547 Martins Farm Road, Milton, DE 19968, party of the first part,

- AND -

CATHERINE ANN SAVAGE, of 9875 Sherwood Farm Road, Owings Mills, MD 21117, **THEODORE ROBERT SAVAGE JR.**, of 27513 Martins Farm Road, Milton, DE 19968, and **RANDI NICOLE GOOTEE**, of 34010 Orchid Lane, Lewes, DE 19958, as tenants in common, parties of the second part.

WITNESSETH: That the said party of the first part, for and in consideration of the sum of **ONE DOLLAR ($1.00)**, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the parties of the second part, and their heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

ALL that certain tract, piece or parcel of land, situate and lying in the Easterly right of way line of State Road 541 in Seaford Hundred, Sussex County, State of Delaware, more particularly described as follows, to wit:

BEGINNING at a point in the Easterly right of way line of State Road 541 and being also a corner for lands this day conveyed to George Henry Tull, etux.; thence by and with line of lands of George Henry Tull, etux. In a Northeasterly direction such a distance as will reach a point in line of lands of W. F. Haines Tull; thence turning and running by and with

TUNNELL RAYSOR, P.A.
Georgetown, Delaware

line of lands of W. F. Haines Tull in a general Southeasterly direction to a point in line of lands now or formerly of John A. Moore, Jr.; thence by and with line of lands now or formerly of John A. Moore, Jr. in a general Southwesterly direction such a distance as will reach a point in the Easterly right of way of State Road 541; thence by and with the Easterly right of way of said road in a Northwesterly direction such a distance as will reach a point in line of lands this day conveyed to George Henry Tull, the point and place of beginning, said to contain by estimation the quantity of 28 acres of land be the same more or less.

BEING the same lands conveyed to Pamela Savage from Pamela Savage, Trustee, of the Trust created under Item II C of the Last Will and Testament of Jeanette J. Tull, by Deed dated _____, 2021, recorded in the Office of the Recorder of Deeds in and for Sussex County, Delaware, on _____, 2021, in Deed Book _____, page _____.

SUBJECT to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

IN WITNESS WHEREOF, the party of the first part has hereunto set her hand and seal the day and year first above written.

Signed, Sealed and Delivered
in the presence of:

_____
Witness

_____(SEAL)
Pamela Savage

STATE OF DELAWARE, COUNTY OF SUSSEX: to-wit

BE IT REMEMBERED, that on July 19, 2021 personally came before me, the subscriber, Pamela Savage, party of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be her act and deed.

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

_____
Notary Public
My Commission Expires: _____

ETTA R. MAYERS
ATTORNEY AT LAW WITH
POWER TO ACT AS NOTARY PUBLIC
PER 29 DEL. C SEC 4323 (A)3

TUNNELL
RAYSOR, P.A.
Georgetown, Delaware

RECEIVED

MAY 3 0 2025

SUSSEX COUNTY
PLANNING & ZONING

BECKER MORGAN GROUP

OWNER: Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee
PARCEL NO.: 531-12.00-92.02 (Portion of)

13.45 ACRES ±

Beginning at a point at a corner for this area, located within the lands of Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee, said point being North 66°09'02" East 197.25 feet as measured from a found iron rod at a corner for the lands of Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee and lands of Barry Edward Hastings II, thence leaving said point of beginning and running across said lands of Catherine A. Savage & Theodore R. Savage Jr. & Randi N. Gootee the following eleven courses and distances 1) North 51°28'01" East 133.02 feet to a point; thence 2) North 64°07'36" East 115.75 feet to a point; thence 3) North 25°52'24" West 46.50 feet to a point; thence 4) North 51°28'01" East 805.54 feet to a point; thence 5) South 45°08'44" East 236.24 feet to a point; thence 6) South 60°45'20" East 71.22 feet to a point; thence 7) South 50°04'01" East 79.84 feet to a point; thence 8) South 00°00'00" East 280.78 feet to a point; thence 9) South 62°49'09" West 1,032.43 feet to a point; thence 10) North 90°00'00" West 190.46 feet to a point; thence 11) North 00°00'00" East 328.03 feet to the point and place of beginning and containing 13.45 acres of land, be the same more or less.

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PLANNING & ZONING COMMISSION
HOLLY WINGATE, CHAIR
J. BRUCE MEARS, VICE-CHAIR
JEFF ALLEN
SCOTT COLLINS
JOHN PASSWATERS

Sussex County
DELAWARE
sussexcountyde.gov
302-855-7878 T
302-854-5079 F
JAMIE WHITEHOUSE, AICP, MRTPI
PLANNING & ZONING - DIRECTOR

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: September 2, 2026

Application:	C/U 2601 Woodpecker Road Community Energy Initiative LLC
Applicant:	Woodpecker Road Community Energy Initiative LLC (c/o Michael Redding P.E.)
Owner:	Denise O. Taylor, Richard A. Obier, Et Al, (c/o Denise Taylor)
Site Location:	The property is lying on the northwest side of Woodpecker Road (S.C.R. 80), approximately 0.29 mile south of West Stein Highway (Rt. 20)
Current Zoning:	Agricultural Residential (AR-1)
Proposed Use:	Solar array facility
Comprehensive Land Use Plan Reference:	Developing Area
Councilmanic District:	District 1 – Mr. Matt Lloyd
School District:	Seaford School District
Fire District:	(87) Seaford Fire Company
Sewer:	N/A
Water:	N/A
Site Area:	39.28 acre +/-
Tax Map ID.:	531-12.00-84.01

(CU 2601) - Solar Array
Woodpecker Road Community Energy Initiative LLC
TM# 531-12.00-84.01
Aerial Map

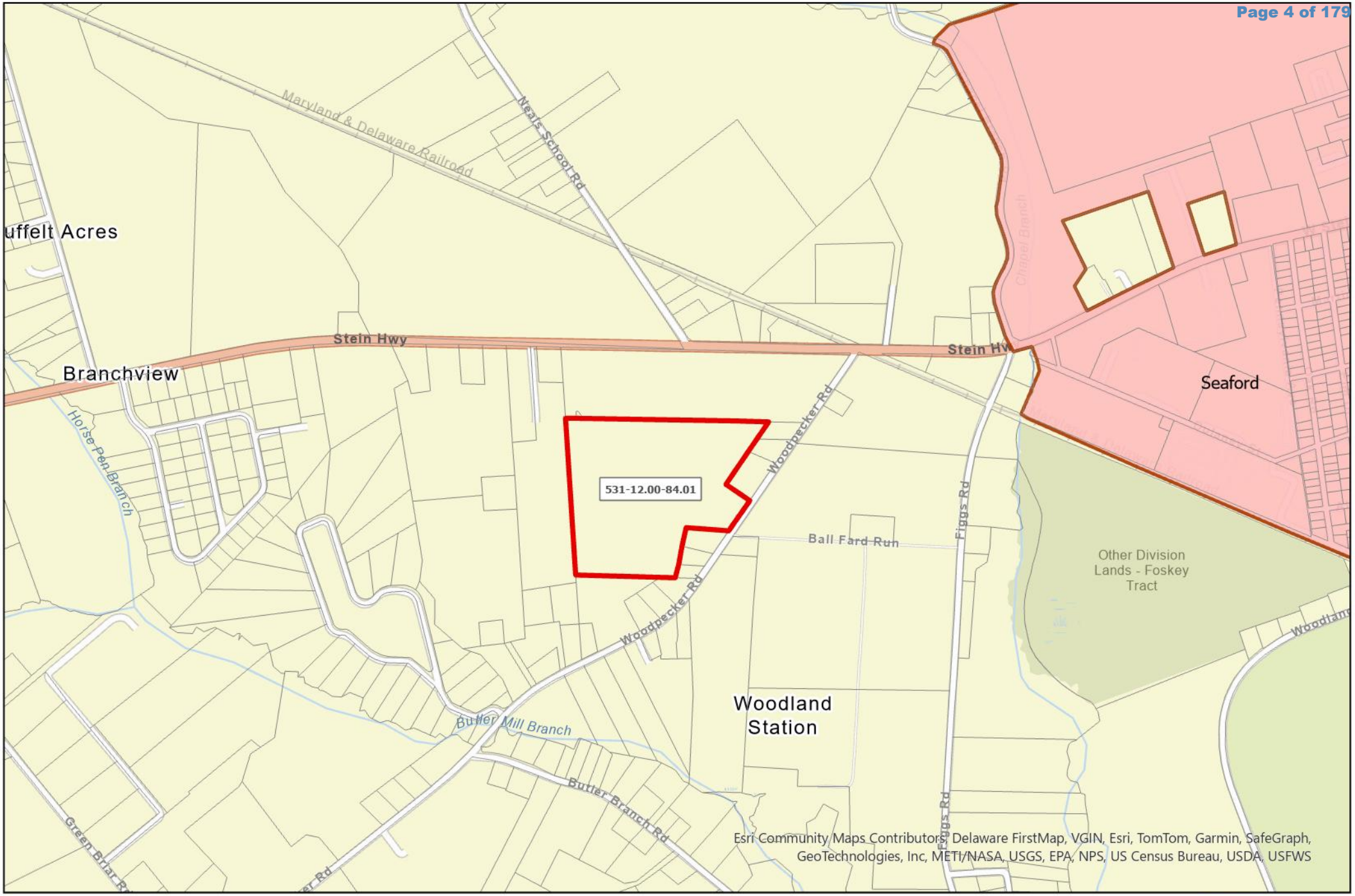
CU 2601 Woodpecker Road Solar

N

0 500 1,000 Feet

03/11/2025

(CU 2601) - Woodpecker Road Community Energy Initiative LLC
TM# 531-12.00-84.01 Aerial Map

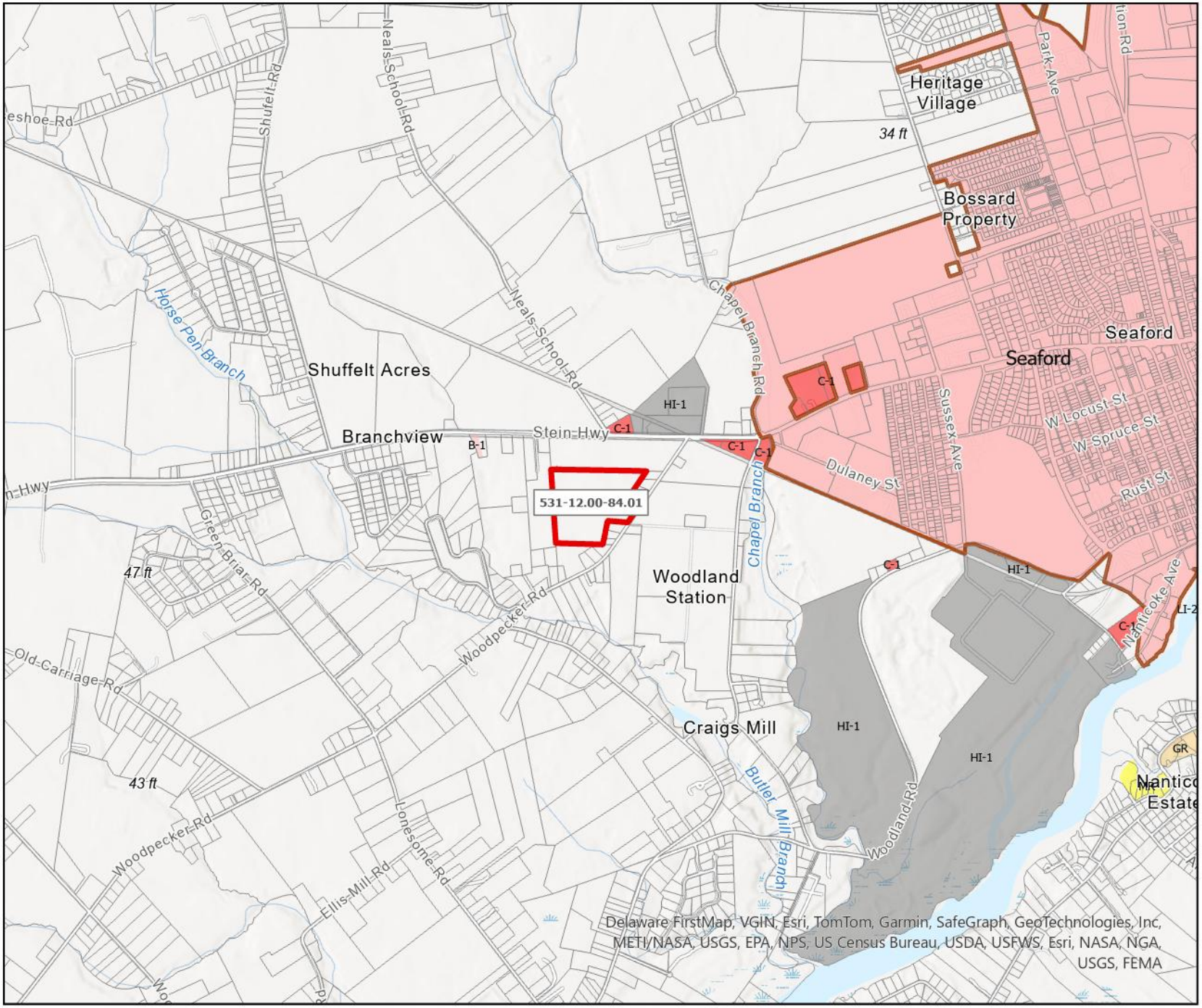


(CU 2601) - Solar Array
Woodpecker Road Community Energy Initiative LLC
TM# 531-12.00-84.01
Streets Map

CU 2601 Woodpecker Road Solar

N

0 1,500 3,000 Feet



Zoning

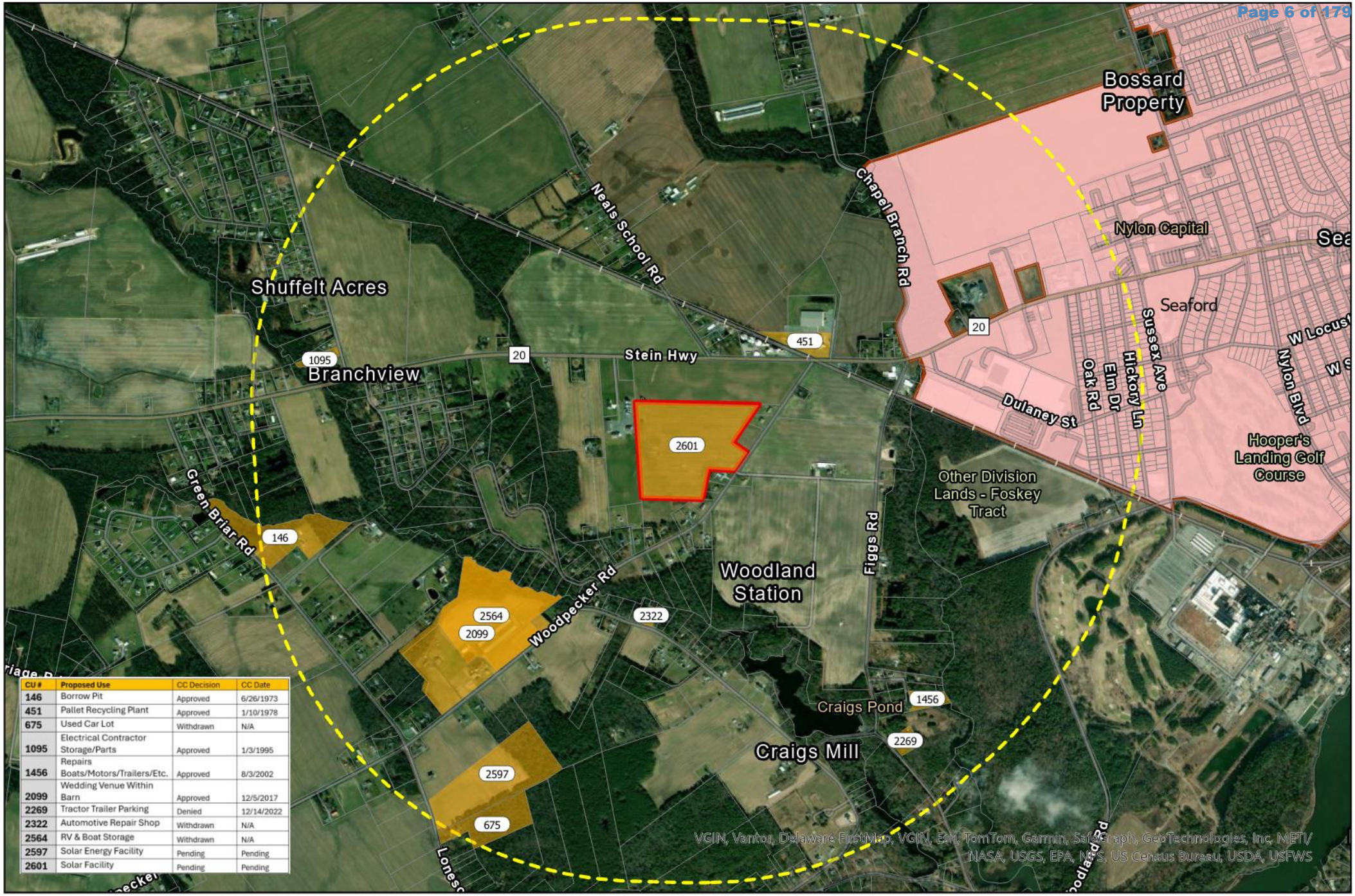
- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

(CU 2601) - Solar Array
Woodpecker Road Community Energy Initiative LLC
TM# 531-12.00-84.01
Zoning Map

CU 2601 Woodpecker Road Solar

N

0 0.5 1 Miles



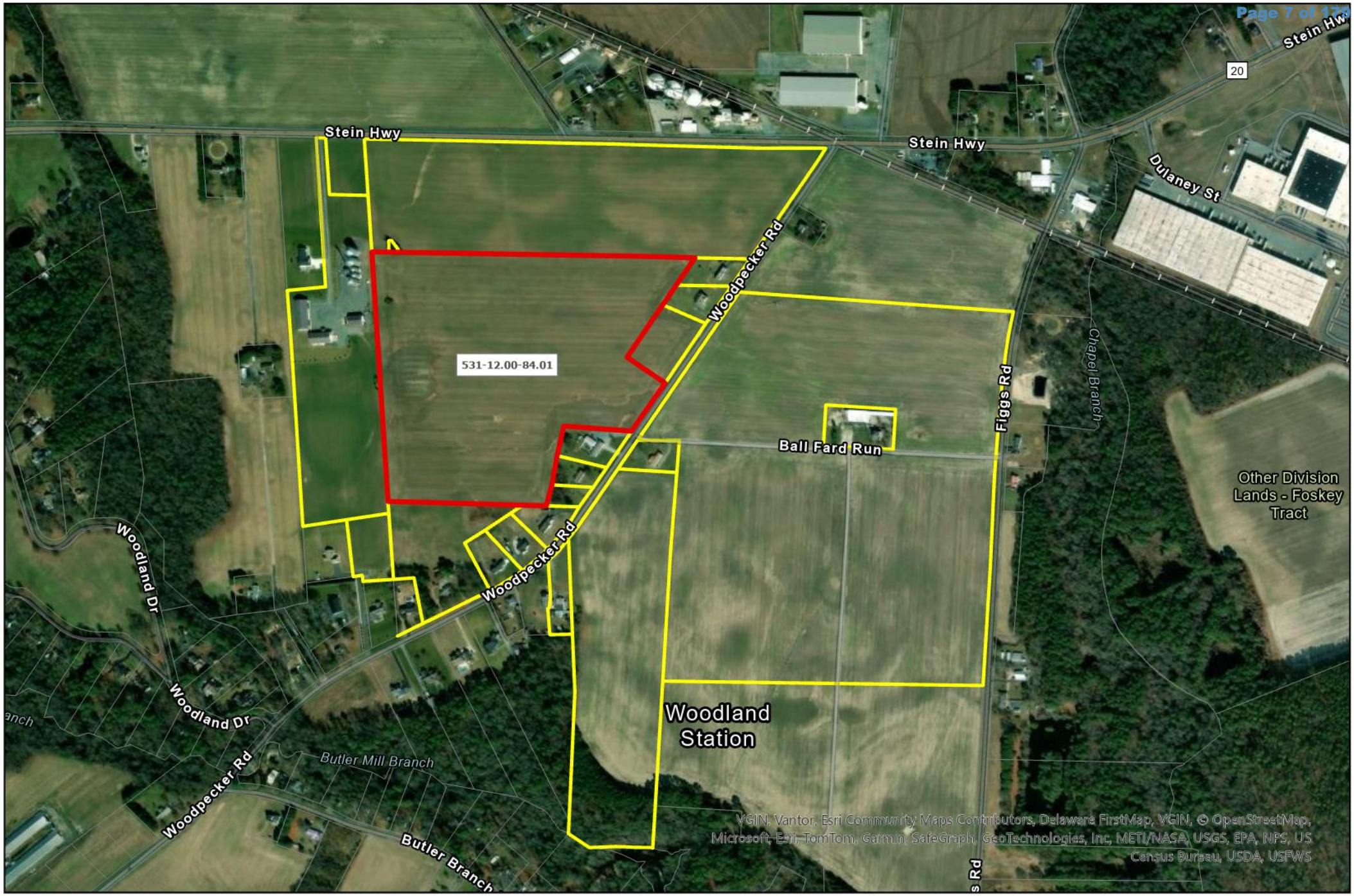
CU #	Proposed Use	CC Decision	CC Date
146	Borrow Pit	Approved	6/26/1973
451	Pallet Recycling Plant	Approved	1/10/1978
675	Used Car Lot	Withdrawn	N/A
1095	Electrical Contractor Storage/Parts	Approved	1/3/1995
1456	Repairs Boats/Motors/Trailers/Etc.	Approved	8/3/2002
2099	Wedding Venue Within Barn	Approved	12/5/2017
2269	Tractor Trailer Parking	Denied	12/14/2022
2322	Automotive Repair Shop	Withdrawn	N/A
2564	RV & Boat Storage	Withdrawn	N/A
2597	Solar Energy Facility	Pending	Pending
2601	Solar Facility	Pending	Pending

(CU 2601) - Solar Array
Woodpecker Road Community Energy Initiative LLC
TM# 531-12.00-84.01
Conditional Use History - Map

- CU 2601 Woodpecker Road Solar
- CU 2601 - CUs Vicinity - 1 Mile
- Municipal Boundaries

N

0 0.5 1 Miles



(CU 2601) - Solar Array
Woodpecker Road Community Energy Initiative LLC
TM# 531-12.00-84.01
Mailing List Map

CU 2601 Woodpecker Road Solar

CU 2601 - Mailing Parcels

N

0 1,000 2,000 Feet

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Planning and Zoning Commission Members
From: Mr. Michael Lowrey, Planner IV
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: July 24th, 2026
RE: Staff Analysis for C/U 2601 Woodpecker Road Community Energy Initiative LLC

The purpose of this memo is to provide background and analysis for the Planning and Zoning Commission to consider as a part of Application for C/U 2601 Woodpecker Road Community Energy Initiative LLC to be reviewed at the September 2nd, 2026, Planning and Zoning Commission Meeting. This analysis should be included in the record of this application and is subject to comments and information that may be presented during the public hearing.

Please note that the following staff analysis is for informational purposes only and does not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.

Tax Parcel ID: 531-12.00-84.01

Proposal: The request is for Conditional Use for a Tax Parcel #531-12.00-84.01 to allow for a solar array facility on a portion of the Parcel. The Parcel is located on the west side of Woodpecker Road (S.C.R 80) approximately 1000 feet south of West Stein Highway (Route 20) and the improvements are proposed on a (27.84) +/- acre portion of a Parcel comprised of a total of (39.28) acres +/-.

Zoning: The subject property is zoned Agricultural Residential (AR-1) District.

The parcels immediately adjacent surrounding the site are also within the Agricultural Residential (AR-1) District with a few isolated (C-1) General Commercial and (HI-1) Heavy Industrial zoned parcels to the east and bordering the jurisdictional boundary of the City of Seaford.

Future Land Use Map Designation w/in Comprehensive Plan: Developing Area

Applicability to Comprehensive Plan: The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use map in the plan indicates that the subject property is designated as a Growth Area and has a land use designation of "Developing Area." All Parcels immediately adjacent and surrounding are also "Developing Area"

As outlined in Sussex County's 2018 Comprehensive Plan "Developing Areas are newer, emerging growth areas that demonstrate the characteristics of developmental pressures" and "most of the proposed Developing Areas are adjacent to municipalities, within or adjacent to potential future

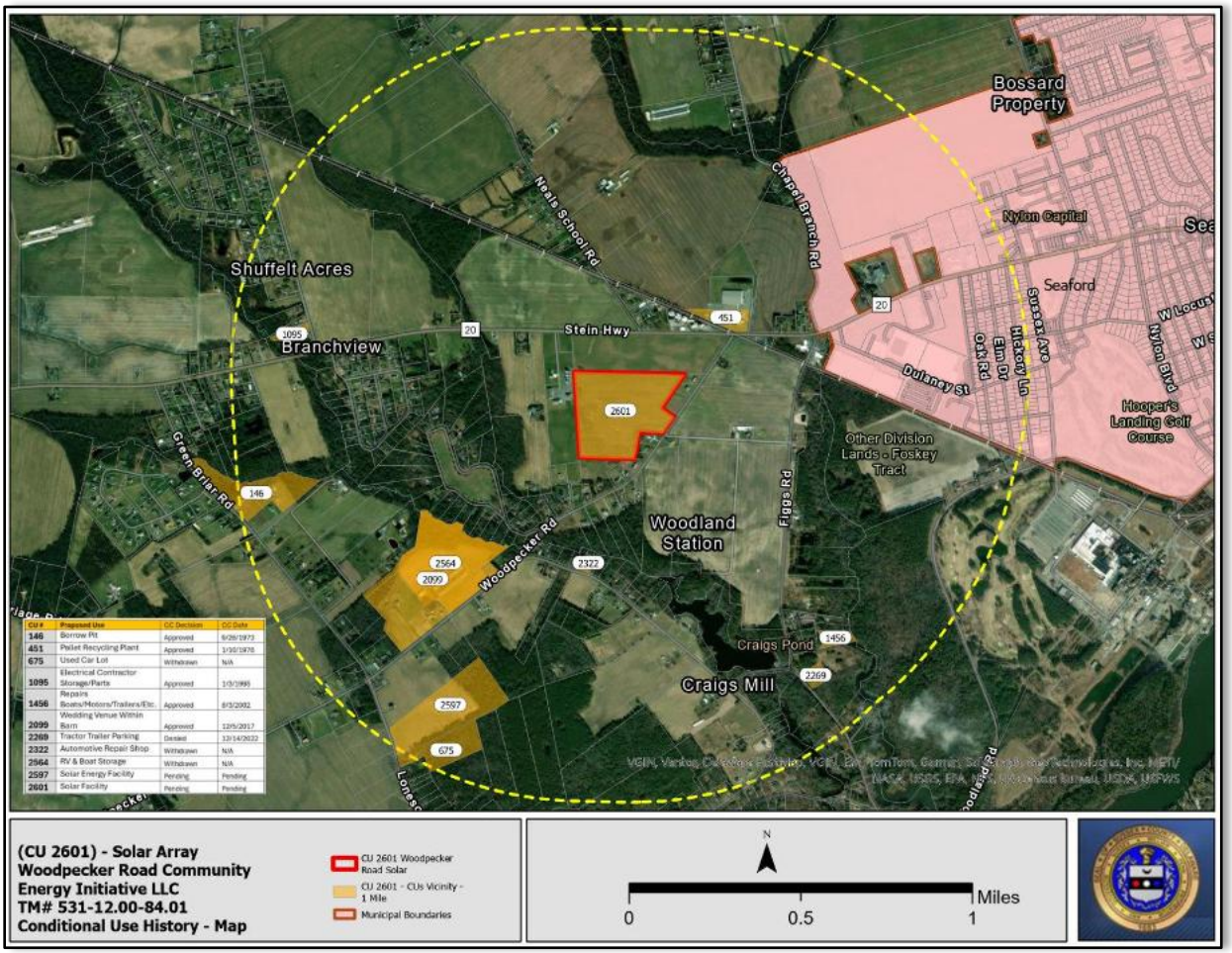
annexation areas of a municipality, or adjacent to Town Centers" (2018 Sussex County Comprehensive Plan, 4-14). The Plan further notes that a "range of housing types are appropriate including single-family homes, townhouses and multifamily units" and that "in selected areas and at appropriate intersections, commercial uses should be allowed" (2018 Sussex County Comprehensive Plan, 4-14). Additionally, the Plan notes, "Portions of the Developing Areas with good road access and few nearby homes should allow for business and industrial parks"

Further Site Considerations:

- **Density: N/A**
- **Open Space Provisions: N/A**
- **Agricultural Areas:** The site is within the vicinity of active agricultural lands. The Figgs Home Farm Expansion Agricultural Preservation District is adjacent to the east across Woodpecker Road.
- **Interconnectivity: N/A**
- **Transportation Improvement District (TID): N/A**
- **Forested Areas: N/A** - The are no existing forested areas on the site
- **Wetlands Buffers/Waterways:** County data indicates that no wetlands or waterways are present on the site.
- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):** The property is located within Flood Zones "X". Staff note that the Parcel is not within a Wellhead Protection Area. The Parcel's area is classified as within areas of "Fair" and "Poor" in terms of Groundwater Recharge Potential per data from the State of Delaware.

Based on the analysis provided, a Conditional Use to allow for a solar array facility could be considered as being consistent with the surrounding land use, zoning, and uses, subject to considerations of scale, impact, and the design for vehicular access.

Existing Conditional Uses within the Vicinity of the Subject Site: Staff have identified a history of (11) Conditional Use applications within a one (1) mile radius of the application site. A Data Table and Supplemental Map have been supplied to provide additional background regarding the approval status of Applications in the area to include the location of all current or previous Conditional Use Applications that are less than 1 mile distance from the subject site.



CU Number	Zoning	Proposed Use	CC Decision	CC Decision Date
146	AR-1	Borrow Pit	Approved	6/26/1973
451	AR-1	Pallet Recycling Plant	Approved	1/10/1978
675	AR-1	Used Car Lot	Withdrawn	N/A
1095	AR-1	Electrical Contractor Storage/Parts	Approved	1/3/1995
1456	AR-1	Repairs Boats/Motors/Trailers/Etc.	Approved	8/3/2002
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2322	AR-1	Automotive Repair Shop	Withdrawn	N/A
2564	AR-1	RV & Boat Storage	Withdrawn	N/A
2597	AR-1	Solar Energy Facility	Pending	Pending
2601	AR-1	Solar Facility	Pending	Pending

File #: CU 2601
2625090002

Planning & Zoning Commission 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

RECEIVED
JUL 02 2025
SUSSEX COUNTY
PLANNING & ZONING

Type of Application: (please check applicable)
Conditional Use ✔
Zoning Map Amendment ___

Site Address of Conditional Use/Zoning Map Amendment
5063 Woodpecker Road, Seaford, DE 19973

Type of Conditional Use Requested:
Solar Energy System

Tax Map #: 531-12.00-84.01 **Size of Parcel(s):** 39.281 AC.

Current Zoning: AR1 **Proposed Zoning:** AR1 **Size of Building:** 0 S.F.

Land Use Classification: Developing Area

Water Provider: N/A **Sewer Provider:** N/A

Applicant Information

Applicant Name: Woodpecker Road Community Energy Initiative LLC c/o Michael Redding, P.E.
Applicant Address: 203 Crescent St, Suite 106
City: Waltham State: MA ZipCode: 02453
Phone #: (603) 494-6801 E-mail: mr@ecasolar.com

Owner Information

Owner Name: Denise O. Taylor, Richard A. Obier, Et Al, c/o Denise Taylor
Owner Address: 5063 Woodpecker Road
City: Seaford State: DE Zip Code: 19973
Phone #: (302) 245-7703 E-mail: dtaylor7989@yahoo.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Becker Morgan Group Inc. c/o Michael Henry
Agent/Attorney/Engineer Address: 309 South Governors Avenue
City: Dover State: DE Zip Code: 19904
Phone #: (302) 734-7950 E-mail: mhenry@beckermorgan.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✓ **Completed Application**

✓ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✓ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✓ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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: 6/9/2025

Signature of Owner

Date: 06/10/2025

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

Sussex County Government
Treasury
2 The Circle, PO Box 601
Georgetown, DE 19947

07/07/2025 01:27PM Catherine
33029858-0040 001206820

PERMITS / INSPECTIONS
2025 20250900212010 $1,000.00

Subtotal	$1,000.00
Total	$1,000.00
CHECK	$1,000.00
Check Number79560259	$1,000.00
Change due	$0.00

Paid by: ECA SOLAR LLC

Thank you for your payment.

CUSTOMER COPY

RECEIVED

JUL 02 2025

SUSSEX COUNTY
PLANNING & ZONING

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

PLANNING OUR
CLIENTS' SUCCESS

July 1, 2025

Mr. Jamie Whitehouse, Director
Sussex County Planning & Zoning
2 The Circle, P.O. Box 417
Georgetown, Delaware 19947

RE: **Conditional Use Site Plan Submission**
WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC
Seaford, Delaware
2025123.00

Dear Mr. Whitehouse:

On behalf of our client, Woodpecker Road Community Energy Initiative LLC, an affiliate of ECA Solar, LLC., we are hereby submitting a Conditional Use Site Plan Application for the above-mentioned project. We have included the following documents in support of the submission:

- Two (2) Paper sets - Conditional Use Site and Landscape Plans
- One (1) PDF set of Conditional Use Site and Landscape Plans (submitted via Email)
- One (1) Copy - Planning & Zoning Commission Application (Conditional Use)
- One (1) Copy - DelDOT Service Level Evaluation Response
- One (1) Copy – Conditional Use Area Legal Description
- One (1) Check (No. 79560259) in the amount of $1,000.00
- One (1) Copy of The Decommissioning Plan
- PDF files of all documents (sent via email)

Please include this project on the earliest agenda opening for Planning Commission consideration. In addition, we intend to provide an optional exhibit booklet a minimum of ten (10) days prior to the scheduled Planning Commission meeting.

Please review the enclosed documents at your earliest convenience. If you have any comments and/or questions, please do not hesitate to contact me.

Sincerely,

BECKER MORGAN GROUP, INC.

Michael J. Henry, LEED AP
Senior Associate

MJH/

Cc: Michael Redding, P.E. (mr@ecasolar.com)

202512300ad-ltr-PandZ.docx

BECKER MORGAN GROUP, INC.

309 SOUTH GOVERNORS AVENUE
DOVER, DELAWARE 19904
302.734.7950

THE TOWER AT STAR CAMPUS
100 DISCOVERY BOULEVARD, SUITE 102
NEWARK, DELAWARE 19713
302.369.3700

PORT EXCHANGE
312 WEST MAIN STREET, SUITE 300
SALISBURY, MARYLAND 21801
410.546.9100

3333 JACKLE DRIVE, SUITE 120
WILMINGTON, NORTH CAROLINA 28403
910.341.7600

1942 EAST 7TH STREET, SUITE 240
CHARLOTTE, NORTH CAROLINA 28204
980.270.9100

314 EAST MAIN STREET
CLAYTON, NORTH CAROLINA 27520
919.243.1332

www.beckermorgan.com

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

SHANTÉ A. HASTINGS
SECRETARY

May 20, 2025

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Woodpecker Road Community Energy Initiative LLC** (Woodpecker Road, Seaford, Delaware 19973) proposed land use application, which we received on April 28, 2025. This application is for an approximate 39.9-acre parcel (Tax Parcel: 531-12.00-84.01). The parcel is located on the northwest side of Woodpecker Road (Sussex County Road 80) and approximately 1,550 feet south from the intersection of Stein Highway (Delaware Route 20) and Woodpecker Road. The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a conditional use approval to build a Solar Energy Facility.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Woodpecker Road, where the subject land is located, which is from Woodland Ferry Road (Sussex County Road 78) to Stein Highway, is 1,645 vehicles per day.

Based on our review, we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Tijah Jones, at tijah.jones@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Engineer
Development Coordination

SM:tjm
cc: Woodpecker Road Community Energy Initiative LLC, Applicant
Amy Hollis, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, M&O
James Argo, South District Project Reviewer, M&O
Tara Summers-Strong, South District Public Works Admin. M&O
Todd Sammons, Assistant Director, Development Coordination
John Pietrobono, Acting Sussex Review Coordinator, Dev Coord
Kevin Hickman, Sussex Reviewer, Development Coordination
Derek Sapp, Sussex Review Engineer, Development Coordination
Thomas Gagnon, Sussex Review Engineer, Development Coordination
José Quixtan, Sussex Review Engineer, Development Coordination
Annamaria Furmato, TIS Review Engineer, Development Coordination
Ben Fisher, TIS Review Engineer, Development Coordination
Tijah Jones, TIS Review Engineer, Development Coordination
DelDOT TIS Support

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

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **8/26/2026**

APPLICATION: **CU 2601 Woodpecker Road Community Energy Initiative, LLC**

APPLICANT: **Woodpecker Road Community Energy Initiative, LLC – C/O Michael Redding, P.E.**

FILE NO: **WSPA-5.02**

TAX MAP & PARCEL(S): **531.12.00-84.01**

LOCATION: **Lying on the northwest side of Woodpecker Road (SCR 80), approximately 0.29 mile south of West Stein Highway (Rt. 20).**

NO. OF UNITS: **Solar array facility**

GROSS ACREAGE: **39.28 +/-**

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 $10,700.00** 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 Conditional Use is located in the City of Seaford's Growth and Annexation Area.**

(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**

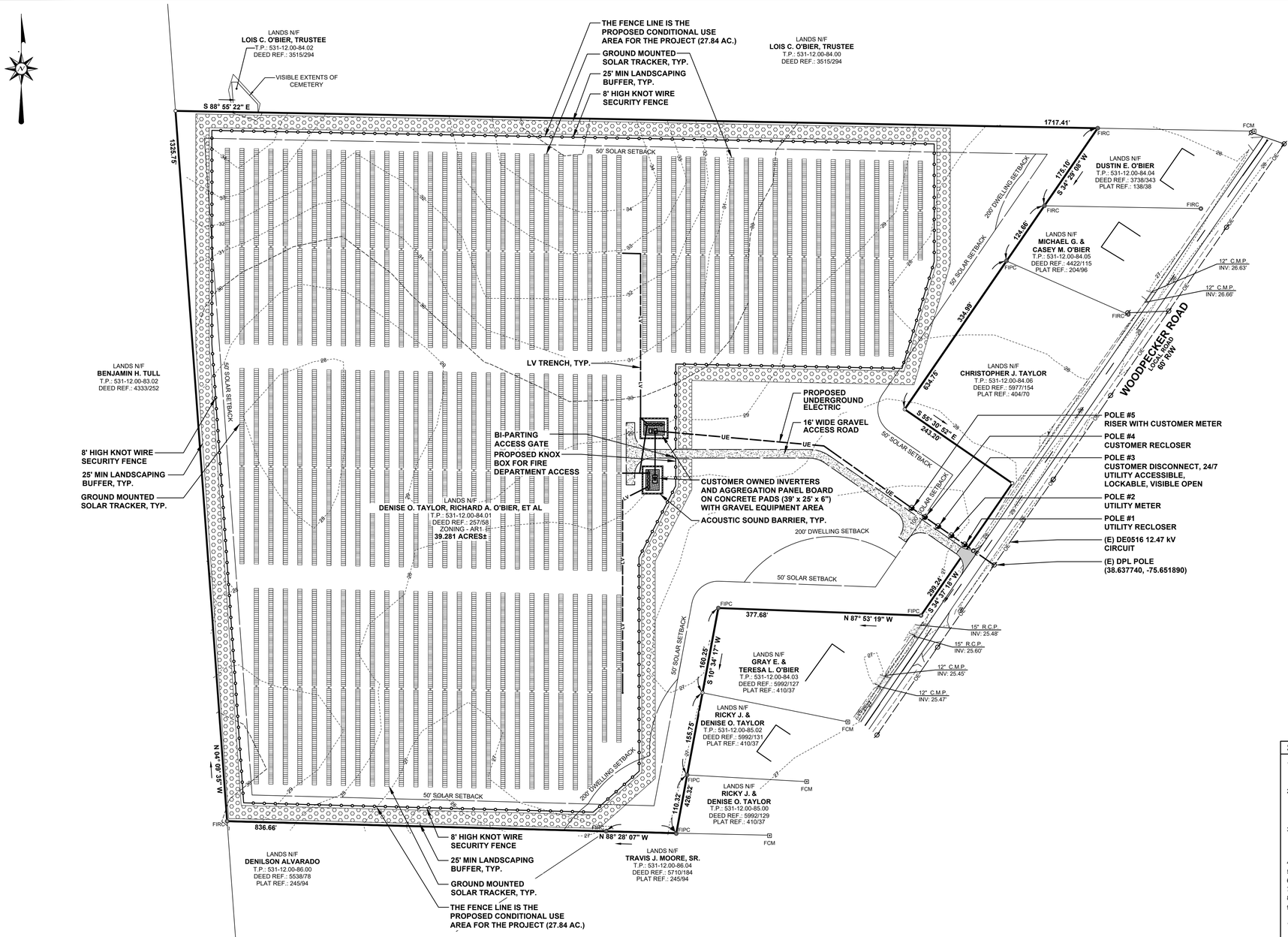
(11). **All residential roads must meet or exceed Sussex County minimum design standards.**

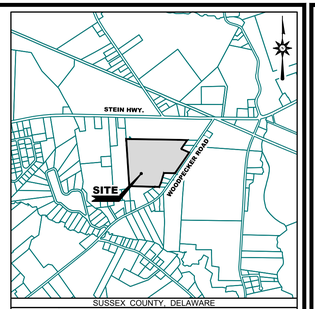
UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
No Permit Tech Assigned

BECKER MORGAN GROUP ARCHITECTURE - ENGINEERING DELAWARE MARYLAND NORTH CAROLINA www.beckermorgan.com





LOCATION MAP SCALE: 1" = 2000'

LEGEND

ITEM	EXISTING	PROPOSED
CONCRETE CURB & GUTTER		
CONCRETE SIDEWALK, SLAB / PAVING		
IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT		
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	N/A
WIRE FENCE	x x x	
CHAINLINK FENCE		
STOCKADE FENCE		
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)		
DRAINAGE DITCH OR SWALE		
WETLAND BOUNDARY LINE		N/A
CONTOUR	49	55
ELEVATION SPOT SHOT	43.55	25.50 T.C. 25.00 B.C.
BENCH MARK	25.15	N/A
PROPERTY OR RIGHT-OF-WAY LINE		
CENTERLINE		
LIGHT POLE		

ITEM	EXISTING	PROPOSED
SANITARY GRAVITY SEWER LINE (**S**) SIZE & FLOW DIRECTION	EX. 10"S	10" S
SANITARY SEWER FORCE MAIN (**F.M.**) SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
SANITARY SEWER MANHOLE (**S.S.M.H.**)		
SANITARY SEWER CLEANOUT (**C.O.**)		
WATER MAIN & SIZE	EX. 10" W	12" W
FIRE HYDRANT (**F.H.**)	F.H.	F.H.
WATER VALVE (**W.V.**) OR METER (**W.M.**)	W.M. W.V.	W.M. W.V.
STORM DRAIN MANHOLE (**S.D.M.H.**)		
STORM DRAIN LINE (**CMP**, **RCP**, **HDPE**)		
CATCH BASIN (**C.B.**)		
UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (**O.T.**), ELECTRIC (**O.E.**)		
UNDERGROUND ELECTRIC (**U.E.**)	U.E.	U.E.
UNDERGROUND TELEPHONE (**U.T.**)	U.T.	U.T.
UNDERGROUND GAS MAIN (**G**)	EX. 2" G	2" G

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO CONSTRUCT A COMMUNITY SOLAR ENERGY PROJECT WITH ASSOCIATED ELECTRICAL EQUIPMENT AND GRAVEL ACCESS DRIVES.
2. THE TOPOGRAPHICAL DATA SHOWN HEREON WAS COMPILED FROM A FIELD SURVEY PERFORMED BY BECKER MORGAN GROUP, INC., IN APRIL 2025.
3. THE BOUNDARY LINES PORTRAYED HEREON HAVE BEEN ESTABLISHED BASED SOLELY ON PHYSICAL EVIDENCE DISCOVERED IN THE FIELD IN CONJUNCTION WITH DETERMINATIONS DERIVED FROM SOURCE OF TITLE AND ADJACENT DEED RECORD INFORMATION.
4. THIS SURVEY DOES NOT VERIFY THE EXISTENCE OR NON-EXISTENCE OF EASEMENTS OR RIGHTS OF WAY AFFECTING THIS PARCEL.
5. A WETLANDS DELINEATION REPORT WAS PROVIDED BY GEO-TECHNOLOGY ASSOCIATES, LLC AND IT WAS DETERMINED THERE ARE NO WETLANDS ON THE SUBJECT PARCEL.
6. ALL UTILITIES SHOWN HEREON ARE BASED ON VISUAL OBSERVATIONS IN THE FIELD. UNDERGROUND UTILITIES WERE NOT MARKED BY A UTILITY LOCATOR. IF THE CONTRACTOR RELIES ON THE UTILITY LOCATIONS SHOWN HEREON, HE DOES SO AT HIS OWN RISK AND WILL NOT BE ENTITLED TO ADDITIONAL COMPENSATION DUE TO TIME DELAYS FROM SAID RELIANCE.
7. BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION HE MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM SUSSEX COUNTY, DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC), DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT), SUSSEX CONSERVATION DISTRICT (SCD) AND ALL APPROPRIATE STATE AND COUNTY AGENCIES.
8. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE TO THE SUSSEX COUNTY AND THE STATE OF DELAWARE (DELDOT) STANDARDS AND CONSTRUCTION SPECIFICATIONS.
9. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
10. ALL WORK WITHIN STATE MAINTAINED ROAD RIGHT-OF-WAYS SHALL MEET THE REQUIREMENTS AS SET FORTH IN THE CURRENT REVISION OF THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION BY THE DELAWARE DEPARTMENT OF TRANSPORTATION.

SHEET INDEX

C-001	CONDITIONAL USE PLAN
C-201	SITE PLAN
L-001	LANDSCAPE PLAN

OWNERS CERTIFICATION

I, DENISE O. TAYLOR, HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

DENISE O. TAYLOR _____ DATE _____

OWNERS CERTIFICATION

WE, WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC, HEREBY CERTIFY THAT WE ARE THE DEVELOPER/LESSEE OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

MICHAEL REDDING, P.E. _____ DATE _____

ENGINEERS CERTIFICATION

I, J. MICHAEL RIEMANN, P.E. HEREBY CERTIFY THAT I AM A REGISTERED 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.

J. MICHAEL RIEMANN, P.E. P.E. NO. 13772 _____ DATE _____

SITE DATA

1.	OWNER OF RECORD:	DENISE O. TAYLOR, RICHARD A. O'BIER, ET AL 5063 WOODPECKER RD. SEAFORD, DE 19973
2.	LESSEE:	WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC c/o MICHAEL REDDING, P.E. 203 CRESCENT STREET, SUITE 106 WALTHAM, MA, 02453 (603) 494 - 6801 mr@ecasolar.com
3.	ENGINEER / SURVEYOR:	BECKER MORGAN GROUP INC. 312 W. MAIN ST., #300 SALISBURY, MD 21801 (410) 546-9100
4.	PROPERTY MAP NUMBER:	531-12.00-84.01
5.	PROPERTY ADDRESS:	5063 WOODPECKER RD. SEAFORD, DE 19973
6.	DEED SUMMARY:	257/58
7.	PRESENT USE:	AGRICULTURE
8.	PROPOSED USE:	COMMUNITY SOLAR ENERGY SYSTEM
9.	ZONING CLASSIFICATION:	EXISTING: AR1 / (SUSSEX COUNTY) PROPOSED: AR1 / (SUSSEX COUNTY)
10.	BULK STANDARDS:	AR1 - SUSSEX COUNTY — SOLAR ORDINANCE NO. 2920 FRONT: 40 FT. — FROM STREET: 100 FT. SIDE: 15 FT. — FROM PROPERTY LINE: 50 FT. REAR: 20 FT. — FROM BUILDING: 200 FT.
11.	TOTAL SITE AREA:	39.281 ACRES±
12.	SITE AREA SUMMARY:	PROPERTY AREA = 39.28 AC. TOTAL PROJECT AREA = 31.59 AC. PROJECT FENCED AREA (COND. USE AREA) = 27.84 AC. PROJECT PANEL AREA = 21.82 AC.
13.	IMPERVIOUS COVERAGE:	EXISTING: 0 S.F. (0.00 AC) PROPOSED: 16,656 S.F. (0.38 AC) TOTAL AT COMPLETION: 16,656 S.F. (0.38 AC)
14.	WETLAND AREA:	0.00 AC
15.	WOODLAND AREA:	0.00 AC
16.	TOTAL DISTURBED AREA:	0.43 AC
17.	FLOOD ZONE:	SITE APPEARS TO BE LOCATED WITHIN FLOOD ZONE "X", AN AREA OF MINIMAL FLOOD HAZARD, PER FEMA PANELS 10005C0245L WITH AN EFFECTIVE DATE OF 06/20/2018 AND 10005C0244K WITH AN EFFECTIVE DATE OF 03/16/2015.
18.	ROAD CLASSIFICATION:	WOODPECKER ROAD (LOCAL ROAD)
19.	DELDOT TID:	PARCEL OUTSIDE OF DELDOT TRANSPORTATION IMPROVEMENT DISTRICT
20.	INVESTMENT LEVEL:	LEVEL 2
21.	SURVEY UNIT:	LINEAR: US SURVEY FOOT ANGULAR: DEGREES MINUTES SECONDS (DMS)
22.	MONUMENTATION:	9 FOUND
23.	SURVEY DATUM:	MINIMALLY CONSTRAINED POST PROCESSED STATIC GPS DATA USING MULTIPLE NGS CORS STATIONS VERTICAL: NAVD 88 HORIZONTAL: NAD83 (2011)
24.	PROPERTY LOCATION:	LATITUDE: 38° 38' 17.89" N LONGITUDE: 75° 39' 15.30" W
25.	SOLAR FIELD DATA:	ARRAY SIZE: 3,999 MW AC/ 6.0178 MW DC TOTAL TABLES: 398 (1X26') — TABLE TILT: TRACKER TOTAL MODULES: 9,552 — MODULE: 525W RACKING FOUNDATION: DRIVEN POST FENCED AREA= 27.84 AC. ± (1,212,518 S.F.) PANEL AREA= 21.82 AC. ± (950,625 S.F.)

BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Delaware
Dover
302.734.7950
Newark
302.369.3700
Maryland
Salisbury
410.546.9100
North Carolina
Charlotte
980.270.9100
Raleigh
919.243.1332
Wilmington
910.341.7600
www.beckermorgan.com

eca solar

PROJECT TITLE

WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC

5063 WOODPECKER ROAD
SEAFORD
SUSSEX COUNTY, DE
SEAFORD HUNDRED

SHEET TITLE

CONDITIONAL USE PLAN

0 50 100 200

SCALE: 1" = 100'

ISSUE BLOCK		
MARK	DATE	DESCRIPTION

LAYER/STATE: C-001

PROJECT NO.:	2025123.00
DATE:	7-1-25
SCALE:	1" = 100'
DRAWN BY: A.J.S.	PROJ. MGR.: M.J.H.

SHEET

C-001

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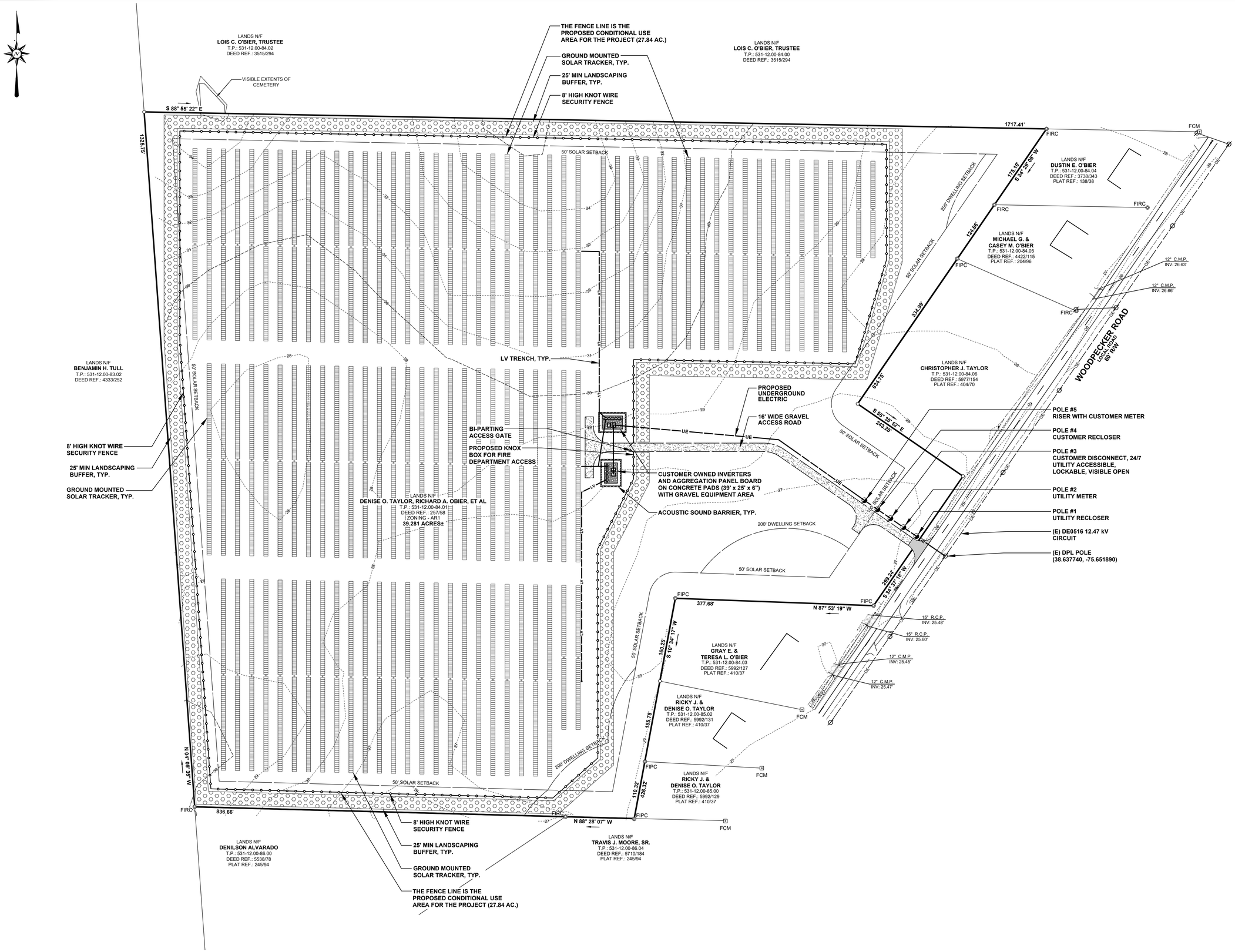

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ARCHITECTURE
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Delaware
Dover
302.734.7950
Newark
302.369.3700
Maryland
Salisbury
410.546.9100
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PROJECT TITLE

WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC

5063 WOODPECKER ROAD
SEAFORD
SUSSEX COUNTY, DE
SEAFORD HUNDRED

SHEET TITLE

SITE PLAN

0 40 80 160

SCALE: 1" = 80'

ISSUE BLOCK

MARK	DATE	DESCRIPTION

LAYER STATE: C-201

PROJECT NO.:	2025123.00
DATE:	7-1-25
SCALE:	1" = 80'
DRAWN BY: A.J.S.	PROJ. MGR.: M.J.H.

SHEET

C-201

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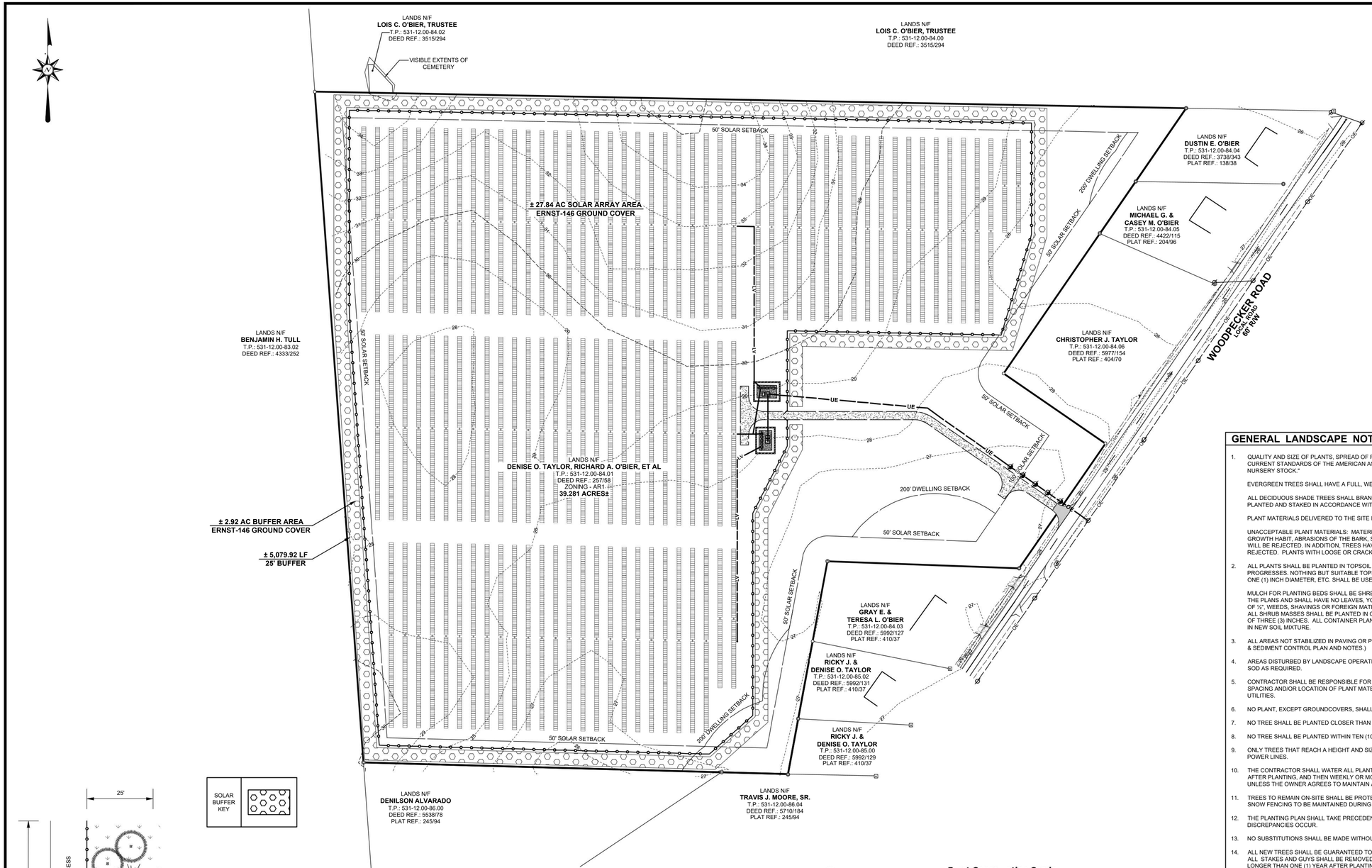


GENERAL LANDSCAPE NOTES :

1. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN "AMERICAN STANDARDS FOR NURSERY STOCK."

   EVERGREEN TREES SHALL HAVE A FULL, WELL-BRANCHED, CONICAL FORM TYPICAL OF THE SPECIES.

   ALL DECIDUOUS SHADE TREES SHALL BRANCH A MINIMUM OF 7'-0" ABOVE GROUND LEVEL. TREES SHALL BE PLANTED AND STAKED IN ACCORDANCE WITH THE DETAIL SHOWN.

   PLANT MATERIALS DELIVERED TO THE SITE IN UNCOVERED TRUCKS WILL BE REJECTED.

   UNACCEPTABLE PLANT MATERIALS: MATERIALS WHICH HAVE DAMAGED OR CROOKED LEADERS, DEFORMED GROWTH HABIT, ABRASIONS OF THE BARK, SUN SCALD, WINDBURN, DISFIGURING NOT COMPLETELY CALLUSED WILL BE REJECTED. IN ADDITION, TREES HAVING THEIR CENTRAL LEADERS HEADED BACK WILL ALSO BE REJECTED. PLANTS WITH LOOSE OR CRACKED ROOT BALL OR CONTAINERS WILL BE REJECTED.

2. ALL PLANTS SHALL BE PLANTED IN TOPSOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACKFILLING PROGRESSES. NOTHING BUT SUITABLE TOPSOIL, FREE OF DRY SOD, STIFF CLAY, LITTER, STONES IN EXCESS OF ONE (1) INCH DIAMETER, ETC. SHALL BE USED FOR PLANTING.

   MULCH FOR PLANTING BEDS SHALL BE SHREDDED HARDWOOD BARK MULCH UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SHALL HAVE NO LEAVES, YOUNG GREEN GROWTH, BRANCHES, TWIGS, GREATER IN DIAMETER OF ½", WEEDS, SHAVINGS OR FOREIGN MATERIAL SUCH AS STONES, ETC. SHALL BE MIXED WITH THE MULCH. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS WITH A LIGHTLY COMPACTED DEPTH OF THREE (3) INCHES. ALL CONTAINER PLANTS ARE TO HAVE ROOTS CUT ON FOUR SIDES AND/ OR SPREAD OUT IN NEW SOIL MIXTURE.

3. ALL AREAS NOT STABILIZED IN PAVING OR PLANT MATERIALS SHOULD BE SEEDED AND MULCHED. (SEE EROSION & SEDIMENT CONTROL PLAN AND NOTES.)

4. AREAS DISTURBED BY LANDSCAPE OPERATIONS SHALL BE GRADED TO MATCH EXISTING TOPSOIL AND SEED OR SOD AS REQUIRED.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND MAY MAKE MINOR ADJUSTMENTS IN SPACING AND/OR LOCATION OF PLANT MATERIALS. CONTRACTOR TO VERIFY "AS BUILT" LOCATION OF ALL UTILITIES.

6. NO PLANT, EXCEPT GROUNDCOVERS, SHALL BE WITHIN THREE (3) FEET FROM SIDEWALKS.

7. NO TREE SHALL BE PLANTED CLOSER THAN TEN (10) FEET FROM ANY STRUCTURE OR BUILDING.

8. NO TREE SHALL BE PLANTED WITHIN TEN (10) FEET OF UNDERGROUND UTILITIES OR FIRE HYDRANTS.

9. ONLY TREES THAT REACH A HEIGHT AND SIZE AT MATURITY OF SMALL TO MEDIUM SHALL BE PLANTED UNDER POWER LINES.

10. THE CONTRACTOR SHALL WATER ALL PLANTS THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING, AND THEN WEEKLY OR MORE OFTEN, IF NECESSARY, DURING THE FIRST GROWING SEASON, UNLESS THE OWNER AGREES TO MAINTAIN AND WATER THEM.

11. TREES TO REMAIN ON-SITE SHALL BE PROTECTED WITH SNOW FENCE DURING CONSTRUCTION (SEE DETAIL). SNOW FENCING TO BE MAINTAINED DURING CONSTRUCTION BY CONTRACTOR.

12. THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.

13. NO SUBSTITUTIONS SHALL BE MADE WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT.

14. ALL NEW TREES SHALL BE GUARANTEED TO SURVIVE FOR ONE FULL YEAR AFTER INSTALLATION (FULL COST). ALL STAKES AND GUYS SHALL BE REMOVED FROM TREES AND SITE AS EARLY AS THREE (3) MONTHS, BUT NO LONGER THAN ONE (1) YEAR AFTER PLANTING.

SUSSEX COUNTY SOLAR - TREE DENSITY & BUFFER NOTES:

1. PERIMETER BUFFER PROVIDED : 5,079.92 LF OF OPAQUE EVERGREEN BUFFERING

   EACH EVERGREEN TREE SHALL BE PLANTED AT A HEIGHT OF NO LESS THAN 6' NO SPECIES SHALL COMPRISE OF MORE THAN 40% OF THE TOTAL WITHIN 100LF THE FOLLOWING SPECIES OF EVERGREEN TREES ARE ACCEPTABLE:

ILEX OPACA	30' MATURE HEIGHT
MAGNOLIA GRANDIFLORA 'LITTLE GEM'	20' MATURE HEIGHT
MAGNOLIA VIRGINIANA	35' MATURE HEIGHT
THUJA OCCIDENTALIS 'TECHNY'	15' MATURE HEIGHT
THUJA X GREEN GIANT	40' MATURE HEIGHT

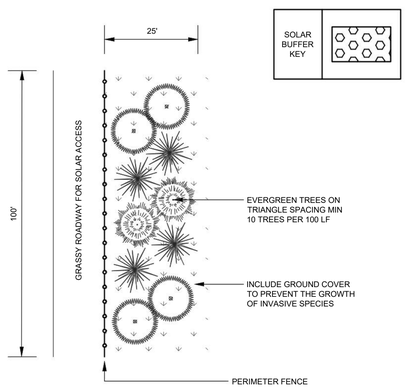
2. BUFFER TREES PROVIDED : 5,079.92 LF / 100 LF @ 25' WIDE = 50.80 BUFFER UNITS
   50.80 BUFFER UNITS X 10 TREES = 508 TREES (MIN)

3. GROUND COVER PROVIDED: SOLAR ARRAY AREA = 27.84 AC
   BUFFER AREA = 2.92 AC
   TOTAL GROUND COVER ACREAGE: 30.76 ACRES

DELAWARE LANDSCAPE ARCHITECTS CERTIFICATION

I, CHAD D. CARTER, RLA, ASLA, HEREBY CERTIFY THAT I AM A LANDSCAPE ARCHITECT IN THE STATE OF DELAWARE, THAT THE LANDSCAPING INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF, REPRESENTS GOOD LANDSCAPING PRACTICES.

CHAD D. CARTER, RLA, ASLA S1-499 DATE



SOLAR BUFFER KEY

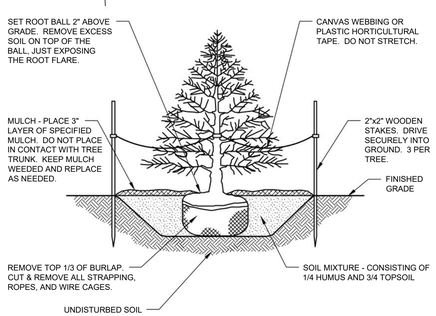
NOTES:

BUFFERYARD PLANTINGS SHALL BE ARRANGED IN A WAY THAT DIAMETER OF TREES SHALL OVERLAP WHEN VIEWED AT A PERPENDICULAR ANGLE TO EFFECTIVELY ACHIEVE AN OPAQUE VISUAL BARRIER.

EVERGREEN TREES SHALL PROVIDE A MINIMUM OF 3 SPECIES PER 100 LF OF BUFFER. NO PLANTED SPECIES SHALL MAKE UP MORE THAN 40% OF THE PLANTINGS.

SUSSEX CO. SOLAR BUFFERYARD DETAIL

NO SCALE BMG NO. : L-08



EVERGREEN TREE PLANTING DETAIL

NO SCALE BMG NO. : L-02

ERNST SEEDS

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: June 10, 2025

Fuzz & Buzz Mix - Standard - ERNMX-146

	Botanical Name	Common Name	Price/Lb
26.70 %	*Lolium perenne, 'Tetra Sweet', Tetraploid*	Perennial Ryegrass, 'Tetra Sweet', Tetraploid	3.64
21.00 %	*Dactylis glomerata, Potomac*	Orchardgrass, Potomac	4.23
18.80 %	*Poa pratensis, 'Ginger'*	Kentucky Bluegrass, 'Ginger' (pasture type)	4.55
12.40 %	*Bromus biebersteinii, 'Fleet'*	Meadow Brome, 'Fleet'	5.98
5.70 %	*Trifolium hybridum*	Alsike Clover	5.20
5.00 %	*Festuca elatior x Lolium perenne, Duo*	Festulolium, 'Duo'	3.90
4.80 %	*Trifolium pratense, Medium, Variety Not Stated*	Red Clover, Medium, Variety Not Stated	5.20
2.00 %	*Lotus corniculatus, 'Norcen'*	Bird's Foot Trefoil, 'Norcen'	11.70
1.00 %	*Linum perenne*	Perennial Blue Flax	52.00
0.90 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	31.20
0.80 %	*Cichorium intybus*	Blue Chicory	20.80
0.50 %	*Chrysanthemum leucanthemum*	Oxeye Daisy	44.20
0.30 %	*Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	312.00
0.10 %	*Pycnanthemum tenuifolium*	Narrowleaf Mountainmint	260.00
100.00 %		**Mix Price/Lb Bulk:**	**$6.82**

Seeding Rate: Expect to apply about 40 lbs per acre with a cover crop of annual ryegrass 12 lbs/acre

Forage & Pasture Sites; Forage & Pasture Sites - Herbaceous Perennial; Solar Sites

The Fuzz & Buzz Mix-Standard was developed to address the unique nutritional needs of sheep, while providing a low-growing, easily maintained and sustainable vegetation solution for solar installations. The plant species were chosen with guidance from the American Solar Grazing Association (ASGA). The wildflowers in this mix support pollinators. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950
The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

eca solar

PROJECT TITLE

WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC

5063 WOODPECKER ROAD
SEAFORD
SUSSEX COUNTY, DE
SEAFORD HUNDRED

SHEET TITLE

LANDSCAPE PLAN

0 50 100 200

SCALE: 1" = 100'

ISSUE BLOCK

MARK	DATE	DESCRIPTION

LAYER/STATE: L-101

PROJECT NO.: 2025123.00
DATE: 7-1-25
SCALE: 1" = 100'
DRAWN BY: P.R.R. PROJ. MGR.: M.J.H.

SHEET

L-101

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CONDITIONAL USE 2601

ECA SOLAR -WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC

September 2026

PREPARED BY:

BECKER MORGAN GROUP, INC.
309 S. GOVERNORS AVE.
DOVER, DE 19904

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2.5 Zoning Map
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1.0 Project Overview – (CONDITIONAL USE 2601 – WOODPECKER ROAD COMMUNITY ENERGY INIATIVE, LLC)

1.1 Executive Summary

The subject property is located on Woodpecker Road in Sussex County Delaware. The existing zoning is AR-1 – Agricultural Residential. The site is located within the Investment level 2 & 3 areas, per the 2025 Delaware Strategies for State Policies and Spending. The 39.281 acre site is located within a "Developing area" according to the Sussex County Comprehensive Plan, Future Land Use Map (2019).

The property has access from Woodpecker Road at the center of the property. The project will take access from Woodpecker Road from a proposed entrance as part of the plan. The site is currently entirely row crops. The property is bordered on the north by row crops, an agricultural use, owned by Lois C. O'Bier Trustee. To the South the property is bordered by 2 parcels owned by Denilson Alvarado & Elvia Alvarado-Perez, and Travis J. Moore Sr. which are both residential uses. To the East the parcel is bordered by multiple parcels of residential use owned by Ricky J. Taylor & Denise O. Taylor, Gray E. O'Bier & Teresa L. O'Bier, Christopher J. Taylor, Michael G. O'Bier & Casey M. O'Bier, and Dustin E. O'Bier. To the West the parcel is bordered by row crops and a processing factory, an agricultural use, owned by Benjamin H. Tull.

The site will be served by Delmarva Power. Sewer and Water service is not necessary for this project.

The proposed Solar Energy System will occupy approximately 27.84 +/- Ac. of the parcel as stated in the conditional use application. The remaining lands will remain in the existing condition.

1.2 Project Team – (CONDITIONAL USE 2601 – WOODPECKER ROAD COMMUNITY ENERGY INIATIVE, LLC

Applicant / Developer:	**Woodpecker Road Community Energy Initiative LLC**	
	Contact:	Michael Redding, P.E.
		203 Crescent Street, Suite 106
		Waltham, MA 02453
	Telephone:	603-494-6801
	e-mail:	mr@ecasolar.com
Architect / Civil Engineer / Surveyor:	**Becker Morgan Group, Inc.**	
	Contact:	Michael Henry
		309 South Governors Avenue
		Dover, DE 19904
	Telephone:	(302) 734-7950
	e-mail:	mhenry@beckermogan.com

1.3 Project Data – (CONDITIONAL USE 2601 – WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE, LLC

Total Site Area:	39.281 +/- Acres
Current Zoning District:	AR-1 (Agricultural Residential)
Proposed Zoning:	AR-1 (Agricultural Residential)
Proposed Use:	Community Solar Energy System
Tax Parcel:	531-12.00-84.01

Woodlands:	Existing:	0.00 + / - Acres
	To Remain:	0.00 + / - Acres

Setbacks:	**AR-1 (SOLAR)**	
	Front:	100 ft
	Side:	50 ft
	Rear:	50 ft

Maximum Building Height: AR-1 42 ft

Utilities:

Sewer:	N/A
Water:	N/A
Electric:	Delmarva Power
Communications:	Comcast

Access roads:	Woodpecker Road (Local Road Maintained by DelDOT)
Floodplain:	Zone X is within the subject site.
Wetlands:	N/A

1.4 Existing Conditions – (CONDITIONAL USE 2601 – WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE, LLC

Overview of Current Site Conditions:

The subject property currently consists of row crops. A copy of the aerial photograph taken from Delaware DEMAC 2024 has been provided.

The existing topography indicates that the site is low in the central west portion of the site with higher elevations at the North and Southwestern portions of the property. The higher portions of the site drain to the south and east sections of the property which flow off the property via sheet flow and eventually enter a roadside ditch on Woodpecker Road.

The USDA Soil Survey of Sussex County, Delaware shows the site to be (1.7%) Fort Mott loamy sand 2 to 5 percent slopes. (52.6%) Hambrook sandy loam, 0 to

2 percent slopes. (20.5%) Hambrook sandy loam, 2 to 5 percent slopes. (20.9%) Hammonton loamy sand, 0 to 2 percent slopes, Northern Tidewater Area. (0.1%) Hammonton sandy loam, 0 to 2 percent slopes. (4.0%) Henlopen-Rosedale complex, 2 to 5 percent slopes. (0.1%) Ingleside loamy sand, 0 to 2 percent slopes.

1.5 Landscaping and Screening (CONDITIONAL USE 2601 – WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE, LLC

Buffering is proposed on all sides on the solar energy system area there are no woods on the site which would provide screening to adjacent parcels. The buffer will be 30' wide and consist of 5 evergreen and 10 canopy trees per 100 linear feet. The ground will be covered with the same meadow mix within the fence line to prevent the growth of invasive species. A Landscape plan has been provided to show the internal seeding used within the fenced area and details regarding the planted tree buffer.

1.6 Stormwater Management Regulations– (CONDITIONAL USE 2601 – WOODPECKER ROAD COMMUNITY ENERGY INIATIVE, LLC

A Sediment and Stormwater Management Plan review is required through Sussex Conservation District and will include review of drainage, and erosion and sediment control. The site mostly drains offsite to a roadside ditch on Woodpecker Road on the east side of the property with a small portion draining offsite to the adjacent parcels on the southern border of the property.

1.7 Proposed Finding of Facts – (CONDITIONAL USE 2601 – WOODPECKER ROAD COMMUNITY ENERGY INIATIVE, LLC

1. This is an application for the conditional use of AR-1 – Agricultural Residential per Sussex County, DE zoning code

2. The subject property is a 39.281 acre parcel of land located on Woodpecker Road and owned by Denise O. Taylor, Richard A. O'Bier, Et Al.

3. The applicant is Woodpecker Road Community Energy Initiative LLC.

4. The development is proposed on existing row crops.

5. The 2018 Sussex County Comprehensive Plan updated in 2019, designates the subject parcel as "Developing Area" as shown on the 2045 Future Land Use Map.

6. The State Strategies for Policies and Spending identify the area as Investment Level 2 & 3.

7. The proposed community solar project generates electricity which is provided into the electrical grid where it can be purchased by local homes and businesses via local electrical distribution lines compared to larger centralized powerplants; the centralized powerplants push power onto high voltage transmission lines which carry electricity hundreds to thousands of miles away; that a key benefit of community solar projects such as this is they generate electricity in the communities where the power is consumed; that this reduces the need for long transmission lines and other costly infrastructure; that by providing clean, renewable power close to the end user, it improves the resiliency of the local distribution grid and delivers the power at an all-end lower cost to the user; that another benefit of community solar projects is the smaller footprint of the projects; that this means a smaller impact; and that the proposed site will occupy tens of acres versus hundreds or even thousands of acres.

8. The project area is currently row crops with no existing structures; that the anticipated project will be less than 32-acres; that the capacity to the proposed project is 3.999 megawatts of alternating current; that this is considered a relatively small project; that the project is sized to meet the local distribution system; that this type of project is connecting to the distribution grid as opposed to the electrical transmission system; that the point of interconnection will be at the existing electric line running along Woodpecker Road.

9. The equipment will consist of tracking systems, which are mounted on support posts, panels which are installed on top of the tracking systems, inverters/transformers, interconnection equipment, which are typical utility poles and a small weather station; that at the end of the proposed access drive there is a turnaround for fire trucks and emergency personnel; that there is proposed fencing surrounding the array.

10. Stormwater runoff will be tightly controlled in accordance with State and local regulations; that there are no impact to drainage patterns anticipated due to the ability of the arrays to conform to the existing topography, as well as the gaps between panels and space between arrays allow infiltration into the ground's surface.

11. Solar panels are constructed of silicon semiconductors, much like a computer chip; that when the sunlight hits the semiconductor material, it creates a charge, which is a direct current; that the direct current is converted to an alternating current through converters so it can be fed into the distribution grid for use in homes and business; that solar creates clean, renewable electricity without the use of water, creating emissions or producing waste products; that its low visual profile and quiet operations makes for a great neighbor; that solar projects place no demand on County infrastructure or services such as roads, water, sewer, emergency services or schools; that construction consist of minimal grading and disturbance; that there are no regular employees on site, only those attending for periodic visits for inspections, maintenance or repair of the solar panels; that the solar projects are built using steel posts or ground sleeves to support the solar panels versus concrete or other foundations; and that this allows the land to return to its previous agricultural use at the end of the project; that no significant noise or dust will be generated by this facility.

12. Fencing is proposed around the entire perimeter of the project; that the proposed fencing will be 8' high, agricultural type fencing; that in the agreement with the property owner it is stated that, should the project no longer be needed, Woodpecker Road Community Energy Initiative LLC would handle the removing of all equipment where it would then be recycled leaving the property back to agricultural land; that the only noise the project would create would be a slight hum when the panel retracts to the sun; that the inverters will create an occasional slight hum; and that the project will operate in conformance to all local noise ordinances. A Noise Study was completed by a third-party consultant demonstrating project compliance with the Noise Regulations of the State of Delaware. Although not required to meet the Noise Regulation standards, the project proposes that both equipment pads be surrounded by a 10' tall timber noise barrier to further reduce potential noise propagation.

1.8 Proposed Conditions – (CONDITIONAL USE 2601 – WOODPECKER ROAD COMMUNITY ENERGY INIATIVE, LLC

1. No storage facility shall be constructed on the site.

2. The lighting on the facility shall only consist of lighting needed for security purposes. All lighting shall be downward screened so that it does not shine on neighboring properties or roadways.

3. One unlighted sign not to exceed 32 sq ft in size shall be permitted.

4. This site shall be secure by fencing with a gate with a knoxbox or similar device to accommodate emergency access by the local fire company or other emergency responders. The fence shall be shown on the final site plan.

5. Any transformers or similar equipment shall be located on the site away from any nearby residential uses.

6. All of the grounds including the area outside of the fence shall be maintained so that they do not become overgrown.

7. All buffering adjacent to neighboring residential uses shall be consistent with that shown on the landscape plan.

8. The final site plan shall be subject to the review and approval of the Sussex County Planning and Zoning Commission.

2.0 List of Exhibits – (CONDITIONAL USE 2601 – WOODPECKER ROAD COMMUNITY ENERGY INIATIVE, LLC)

2.1 Developer Summary
2.2 Application for Planning and Zoning Commission
2.3 Conditional Use Site Plan and Landscape Plan
2.4 Aerial Photo & Location
2.5 Zoning Map
2.6 Existing Land Use
2.7 Future Land Use
2.8 Strategies for State Policies Spending
2.9 Watersheds Waterways
2.10 FEMA Flood Insurance Rate Map (FIRM)
2.11 Soils Map
2.12 Property Value Impact Report
2.13 Fencing and Landscaping Buffer Rendering

2.1 Developer Summary

Woodpecker Road Community Energy Initiative LLC
203 Crescent Street St, Suite 106
Waltham, MA 02453

CONDITIONAL USE APPLICATION FOR SOLAR ENERGY GENERATION FACILITY

Woodpecker Road, Seaford, DE

PARCEL ID: 531-12.00-84.01

Project Description

Woodpecker Road Community Energy Initiative LLC ("Applicant") intends to design and construct a solar facility on parcel 531-12.00-84.01 accessed via Woodpecker Road in Seaford, DE. The facility will consist of a 6.0178 MWAC / 3.999 MWDC solar array. The array will be a tracker type array with its orientation in a north to south direction with the panels following the sunrise and sunset. Refer to the attached pictures for samples of the tracker array. The site will be subjected to minor grading as necessary to smooth out and fill in irregular spots. No import or export of soil is proposed. The array will be held in place using driven posts and no excavation will be required to construct foundations. The racking will be assembled on top of the driven posts followed by placement of the panels. The project will consist of approximately 9,552 solar panels in total and two 39'x27' equipment pad areas for electrical equipment. It is currently estimated that approximately 5 new utility poles are required to connect the project to the existing distribution infrastructure. An 8' tall knot-wire fence will surround the array and equipment for security purposes. The array will be screened from public view via a 360 degree landscape buffer. A green, woven mesh will be installed along the project fence to supplement the proposed vegetative buffer and further restrict views of the solar array from nearby land uses. This mesh is similar to that used at tennis courts.

We are proposing to use a knot-wire fence which is typically used by orchards and other agriculture farms. The fence will have a gate that will be locked but will include a quick-entry system so that the fire department can access the array.

Currently there is no improved access to the site. We are proposing a 16' wide gravel access road to provide access to the facility from Woodpecker Road. The access road will be used for construction, as well as emergency and maintenance access once the facility is operational. Two hammerhead turnarounds are proposed to accommodate fire engines and utility trucks. One turnaround is proposed adjacent to the interconnection utility poles outside of the facility. The second turnaround is proposed adjacent to the equipment pad inside the facility. Once built, the project will have very little traffic and will require 1 or 2 visits per quarter by a solar technician and or a landscaper. When the panels are at full tilt, our proposed array will sit 2 feet off the ground on the low side and 9 to 10 feet on the high side.

Woodpecker Road Community Energy Initiative LLC
203 Crescent Street St, Suite 106
Waltham, MA 02453

Renewable power from the project will be exported to Delmarva Power through its distribution infrastructure. The renewable power will go back to the local substation and be available to local users.

Conditional Use

In support of our Conditional Use permit application the following standards were referenced to minimize our impact on the community.

The use is so designed, located and proposed to be operated that the public health, safety, welfare and convenience will be protected.

Fire and Explosion Hazards

The facility will be designed in accordance with the National Electric Code and the National Fire Protection Act. The facility will be constructed by and under the supervision of a Delaware licensed electrician. The facility will be subject to inspections by the local and state building inspectors. In the event of an emergency, the facility will be designed to discharge all energized sources to a neutral which allows for it to be grounded. The facility will be constructed with a gang-operated-air-brake (GOAB) as well as a recloser that allows for emergency disconnection of the facility from the grid; these can be operated manually and the GOAB can also be operated remotely. The facility will be equipped with a quick-entry key system so the fire department can access the facility. The facility will contain a perimeter access path that surrounds the facility and allows sufficient access by firefighting equipment. There will be no storage of combustible liquids. If required, the Applicant can assist the local fire department with training on how best to respond to an emergency at the facility as well as how to perform emergency shut of procedures for the solar array. All emergency shut off devices will be clearly labeled and instructions will be posted at the facility.

Radioactivity or Electric Disturbance

The construction and operation will follow all Federal, State and Local regulations as it pertains to the project. The solar system will be interconnected to the existing electric distribution lines that are located along Woodpecker Road. Underground conduit will connect the proposed equipment pad to an estimated 5 utility poles that will be mounted with utility-required electrical equipment. Final location of utility poles will be determined by the utility and is subject to change. Any significant changes will be reviewed with the County code enforcement officer.

Woodpecker Road Community Energy Initiative LLC
203 Crescent Street St, Suite 106
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Noise

A third-party consultant completed a noise study for this project. The study is attached to this narrative for reference. The noise study modeled the effect of noise producing equipment (inverters, transformer, and array tracking motors) on the nearby environment. This model was then compared to the applicable State noise regulations for this development. The most stringent requirement is that sound levels must be limited to 50 dB(A) at the property line within the hours of 10pm to 7am. The study determined that the project meets the State noise requirements without additional mitigation. This project proposes a 10-ft tall timber barrier to further reduce potential noise propagation. The proposed equipment pads are located approximately 430 feet to the closest offsite structure. Please refer to the attached noise study for more information.

Lighting/Glare

Light fixtures are not proposed as part of the facility. There will be minimal to no glare from the solar panels as they are meant to absorb the sunlight, not reflect it. The panels will be black or dark blue and tilt upwards at a maximum angle of 52-degrees so that there is no direct glare on public Right-of-Ways. The panel glass is coated with an anti-glare film. The existing trees and shrubs surrounding the fenced area will further shield the panels from ground view.

A third-party consultant completed a glare study for this project. The study is attached to this narrative for reference. The glare study modeled the proposed array and its potential to generate glare impacts on the surrounding land uses. The model recorded no glare on the adjacent roadways and residences. Please refer to the attached glare study for more information.

Smoke

There will be no smoke emissions generated as part of normal operations.

Odors

There will be no odorous gasses or matter at any quantity generated as part of normal operations.

Other Forms of Air Pollution

There will be no emission of fly ash, dust, fumes, vapors, gases nor other forms of air pollutants as part of normal operations. Dust during construction will be mitigated as required using Best Management Practices (BMPs).

Surface and Ground Water Protection

Temporary septic facilities will be provided for construction workers. There will be no wells, drains or septic on site after construction. There are no discharges associated with the operations that could impact surface water or groundwater. The panels and electrical

Woodpecker Road Community Energy Initiative LLC
203 Crescent Street St, Suite 106
Waltham, MA 02453

equipment will be monitored 24 hours, 7 days per week through the internet. Performance data will alert us of any damages to the system. A technician can be dispatched within 72 hours to resolve any issues. Any panels or equipment that contain cracks or damage that could result in rainwater seeping through its mechanisms will be repaired or replaced immediately.

The use will not cause substantial injury to the value of other property in the neighborhood where it is to be located.

Based upon assessments performed by real estate professionals and certified appraisers, the solar array use will not cause substantial injury to the value of other property in the neighborhood. There have been several studies performed in the last 5 years assessing property value impacts from solar array facilities, especially when near or abutting residential or rural communities. Consistently these studies have found no substantial impact on property values. The attached fact sheet from the American Clean Power Association provides a summary of these studies.

Adequate landscaping and screening are provided as required and as otherwise provided in the ordinance.

The project area will be completely encompassed by a 25' wide staggered evergreen landscape buffer. At the greatest proximity, the edge of the solar panels will be approximately 205 feet from the edge of the nearest residence on Woodpecker Road. The intent of the buffer will be to minimize major views of the solar array from residences and other nearby land uses. A green, woven mesh will be installed along the fence line to supplement the proposed vegetative buffer and further restrict views of the solar array from residences and other nearby land uses. This mesh is similar to that used at tennis courts. Attached please find renderings showing views from key points of view. Example pictures of the fencing and mesh are also included for your reference.

Adequate off-street parking and loading is provided, and ingress and egress is so designed as to cause minimum interference with traffic on abutting streets.

Access to the solar array facility is proposed via a 16' wide gravel access road originating from Woodpecker Road. Woodpecker Road is maintained by the State of Delaware. Therefore, the access road entrance will be permitted with DelDOT to ensure appropriate construction standards, turning radii and line of sight distances. The operation of the solar array is minimal and for the most part is idle. Under normal operations, visits to the facility include quarterly performance checks by a solar technician as well as a landscaper for lawn and buffer maintenance. No off-street parking spaces, parking lots or loading areas are proposed. The proposed hammerhead turnaround areas provide sufficient parking area for the short-term access needs and proposed operations and maintenance.

Woodpecker Road Community Energy Initiative LLC
203 Crescent Street St, Suite 106
Waltham, MA 02453

The use conforms with all applicable regulations governing the district where located, except as may other be determined for large-scale development.

Lighting and Storage

Light fixtures are not proposed as part of the facility. Storage at the facility may include a portable metal storage box for spare solar array parts and panels. All other electrical equipment will be enclosed in metal cabinets on a concrete pad within the fenced area. There will be no other storage of materials on site.

Waste Materials and Sewage Disposal

There will be no liquid, solid, toxic, radioactive or hazardous waste stored or disposed of on site. Any solid waste will be disposed of properly off-site. There will be portable toilets provided during construction and removed after construction is complete. Otherwise, no sewage disposal is required for normal operations of the solar array.

Woodpecker Road Community Energy Initiative LLC
203 Crescent Street St, Suite 106
Waltham, MA 02453

ATTACHMENT 1 – Noise Study

JMS ACOUSTICS

1035 JETER AVENUE
BETHLEHEM, PA 18015
(610) 625-2420

9 July 2025

Mr. Nicholas Hetland
Woodpecker Road Community Energy Initiative LLC
C/O ECA Solar
203 Crescent Street, Suite 106
Waltham, Massachusetts 02453
neh@ecasolar.com

Re: Woodpecker Road Community Energy Initiative (CEI) – Noise Study
Woodpecker Road, Seaford, Sussex County, Delaware
Property Tax ID: 531-12.00-84.01
Reference No. L012025J004B

Dear Mr. Hetland:

This letter provides a summary of the expected sound levels due to the proposed ground based Solar Energy Facility at an undeveloped field located off Woodpecker Road in Seaford, Sussex County, Delaware. JMS Acoustics prepared a SoundPLAN based acoustical model of the expected facility sound levels at the adjacent properties and in the neighboring community. The acoustical model considers the manufacturer provided sound levels for the inverters, transformers and tracking motors, the anticipated times of operations, the site topography and the distances from the equipment to the receiving locations in the adjacent community. As Sussex County does not have a noise ordinance, the results of the acoustical model are compared to the sound level limits of the Noise Regulations of the State of Delaware. Note that while the regulations limit sound to 65 dB(A)[1] during the daytime hours (7AM to 10PM) and 55 dB(A) during the nighttime hours (10PM to 7AM), the site sound sources produce tonal noise, which reduces the limits to 60 dB(A) and 50 dB(A) during the daytime and nighttime hours, respectively.

[1] A-Weighting, also noted as dB(A), is the most commonly used standardized sound level weighting network and has frequency characteristics similar to the response of human hearing for relatively quiet sounds.

Primary noise producing sources on the site include twenty (20) inverters, two (2) 2000 kVA step-up transformers and four (4) single axis tracking motors for the solar panels. The inverters and transformers will be located co-located on a concrete pad in two enclosed equipment areas, with each equipment area including one transformer and ten inverters, as shown on the site plan drawing. The four tracking motors will be distributed across the site. The manufacturer provided sound data for the inverters indicates that the expected one-third octave band sound pressure levels from the inverters will meet the State's requirement for "pure tones[2]" in the 630 hertz one-third octave band, and therefore, the 5 dB(A) penalty shall apply, reducing the allowable maximum nighttime sound level from 55 dB(A) to 50 dB(A).

Without mitigation, sound levels are expected to vary between 46 dB(A) at the closest property line to the southeast, which is below the 50 dB(A) State nighttime noise limit, and 44 dB(A) at the closest building to the southeast. Therefore, sound barriers are not necessary to surround the equipment pad. The minimum sound barrier height to provide some reduction in the equipment area sound levels is 7 feet. Woodpecker Road Community Energy Initiative LLC has proposed 10 foot tall wood sound barriers for each equipment area to achieve further sound level reduction. With the proposed 10 foot tall wood sound barriers, the sound levels are expected to vary between 43 dB(A) at the closest property line, and 42 dB(A) at the closest building, and be well below the 50 dB(A) State nighttime noise limit. The analysis shows that with the proposed sound mitigation, the maximum sound levels due to the facility will be in full compliance with the limits of the Noise Regulations of the State of Delaware.

[2] Pure tones are defined in the Noise Regulations of the State of Delaware as any sound which can be distinctly heard as a single pitch or a set of single pitches. For the purpose of this section, a pure tone shall exist if the one-third octave arithmetic average of the sound pressure levels of the two contiguous one-third octave bands [is exceeded] by 15 dB for bands with center frequencies less than 160 Hz, by 8 dB for bands with center frequencies of 160 Hz to 400 Hz, and by 5 dB for bands with center frequencies greater than 400 Hz.

1.0 SITE LAYOUT AND SOUND SOURCES

Woodpecker Road Community Energy Initiative LLC is proposing to install a ground based ground based Solar Energy Facility on an approximate 39.94-acre parcel (Tax Parcel: 531-12.00-84.01) in Sussex County, Delaware. The parcel is irregular shaped and located on the west side of Woodpecker Road (Sussex County Road 80), approximately 600 feet south of West Stein Highway (State Route 20). The proposed site is located in an Agricultural Residential District (AR-1) zone and abuts numerous other parcels, also zoned AR-1. The project will add solar panel modules to the majority of the parcel with four (4) Array Technologies DuraTrack® single axis tracking motors, and ten (20) Sungrow SG200HX-US (200 kW) inverters and two (2) 2000 kVA step-up transformers, co-located on concrete pads in two enclosed equipment areas, at grade near the center of the proposed project area. The undated site plan drawing, labeled PROSPECTING PHASE SITE PLAN, prepared by ECA Solar, is enclosed at the end of this letter, and shows the general layout of the site, the subject property line, the location of the proposed solar panels, tracking motors, inverters, transformers and proposed wood sound barriers.

2.0 APPLICABLE NOISE REGULATIONS

Sussex County does not have a noise ordinance; however, the State of Delaware has a statewide noise ordinance. Therefore, the applicable sound level limits for the Solar Energy Facility are set forth in the Noise Regulations of the State of Delaware, which states the following in Section 6.1:

> No person(s) shall operate or cause to be operated any stationary source of sound in such a manner as to create a 24-hour equivalent[3] A-weighted sound level which exceeds the Leq limits set forth for the receiving land use category in Table 1 when measured at the point of complaint origination within the property boundary of the receiving land use. Any exceedence of these values shall constitute a noise disturbance.

Table 1 – Sound Levels by Receiving Land Use Zones, Leq (24) dB(A).				
Emitter(s)	**Receptor C**	**Receptor B**	**Receptor A 7 a.m. - 10 p.m.**	**Receptor A 10 p.m. - 7 a.m.**
A	65	65	65	55
B	75	75	65	55
C	85	75	65	55

As the project parcel and the adjacent parcels are in the AR-1 zoning district, which includes residential dwelling uses, both the Emitter and the Receptors for the proposed Solar Energy Facility are in Class A Emitter/Receptor Zones.

Note that per Section 6.3.1 of the noise regulations, "For any stationary source of sound which emits a pure tone, cyclically varying sound or repetitive impulse sound, the limits set forth in Section 6.0 herein shall be reduced by 5 dBA." The manufacturer provided sound data for the inverters indicates that the expected octave band sound pressure levels from the inverters will meet the State's requirement for "pure tones" in the 630 hertz one-third octave band, and

[3] Equivalent Continuous Sound Level, or Leq, is the constant sound level that would result in the same total sound energy as a time varying sound level over a given period. It is also referred to as the time-average sound level.

therefore, the 5 dB(A) penalty shall apply, reducing the allowable maximum nighttime sound level from 55 dB(A) to 50 dB(A).

Therefore, the Noise Regulations of the State of Delaware sets the maximum permitted Leq sound levels from the Solar Energy Facility at adjoining properties to the following:

7 AM to 10 PM (daytime)	60 dB(A)
10 PM to 7 AM (nighttime)	50 dB(A)

As the inverters and transformer will operate before 7 AM at times, the Solar Energy Facility must meet the more stringent 50 dB(A) nighttime limit of the Noise Regulations of the State of Delaware. It is important to note that the 50 dB(A) limit is based on an energy based average (Leq) over the nighttime hours. As the inverters and transformers will not operate at full load during the majority of the nighttime hours due to the lack of sunlight, the energy based average during the nighttime hours will be significantly lower than the maximum sound levels presented in this noise study.

3.0 ACOUSTICAL EVALUATION

A SoundPlan v9.1 acoustical model[4] (software for modeling outdoor sound propagation in compliance with ISO 9613-2:2024) was used to calculate the expected sound levels due to the Solar Energy Facility. The acoustical model incorporated the Google Maps elevation points for the site, the layout for the proposed inverters, transformers, and single axis tracking motors, as shown on the undated site plan drawing, labeled PROSPECTING PHASE SITE PLAN, prepared by ECA Solar, and manufacturer provided sound data for the ten (20) Sungrow SG200HX-US (200 kW) inverters, the NEMA TR-1 rating for the two (2) 2000 kVA transformer, and similar manufacturer sound data for the four (4) Array Technologies DuraTrack® single axis tracking motors.

As sound data for the Array Technologies DuraTrack® single axis tracking motors was not available, sound data for the similar NexTracker Horizon Single Axis Tracker motors was used. The tracking motors are rated at 69.6 dB(A) at 1 meter. The tested one-third octave band sound power level (L_w) of the Sungrow SG200HX-US inverters at 100% daytime working load were obtained directly from Sungrow[5], and the inverters will be located at a height of approximately 1.52 m (5 feet). Note that the anticipated nighttime sound levels due to the inverters (10% nighttime load) are at least 30 dB(A) lower than the daytime sound level. The 2000 kVA step-up transformers will meet the NEMA TR-1 rating of 61 dB(A)[6] at 0.3 meters (1 feet) and will have a height of approximately 6.25 feet. The transformers will produce significantly lower sound levels than the inverters.

[4] SoundPlan v9.1 is a software program that may be used to model outdoor sound propagation in compliance with ISO 9613-2:2024 Acoustics - Attenuation of sound during propagation outdoors - Part 2: Engineering method for the prediction of sound pressure levels outdoors.

[5] Sungrow Confidential Report No. SG230213-1.

[6] NEMA TR-1 ratings are the average sound level measured at a distance of 1 foot (0.3 m) from the transformer, except for portions of the transformer where there is forced air cooling, where the distance is increased to 6 feet (2 meters). NEMA Standards Publication TR 1-2013 (R2019): Transformers, Step Voltage Regulators and Reactors.

The acoustical evaluation considered the sound levels associated with all noise producing sources associated with the Solar Energy Facility, including: sound source location and height, distance from the sound sources to the receiving locations, attenuation due to the hemispherical spreading of sound, site topography, a mixed ground factor[7] (G=-0.6), and attenuation provided by sound barriers, where applicable. The evaluation is conservative as it assumes that all 20 inverters, the two transformers, and all four tracking motors are operating simultaneously at maximum load. The evaluation is additionally conservative, as in addition to assuming all sources are operating simultaneously at maximum load, the evaluation assumes mixed ground (G-0.6) versus soft ground (G-1.0), and does not consider any attenuation provided trees, vegetation or by atmospheric sound absorption. The SoundPlan v9.1 acoustical model was used to generate sound level contours for the general vicinity of the site, both without sound mitigation, and with sound barriers of different heights.

Wood sound barrier heights of 7 feet and 10 feet were considered in the acoustical evaluation. The model assumed that the each barrier would be located along the edge of each proposed common concrete pad. The model also assumed that no sound absorption is used on the sides facing the inverters and transformer. Using sound barriers with interior sound absorbing surfaces will further decrease the expected sound levels. Any access doors through the barriers should be installed with ship-lapped panels on the interior, such that when the doors are closed no gaps or holes exist in the barriers. Appropriate wood sound barriers include the Hoover Treated Wood Products' PLYWALL, or similar solid panel barrier with a minimum weight of 4 pounds per square foot. Appropriate sound barriers with sound absorbing interior faces include the Industrial Acoustics Company's Noishield Type FS/S, Noise Barrier's V-Stack Steel, SL Barrier, or H/P 42, or equal.

Figures 1 through 3 show the expected sound level contours on and near the site, with no mitigation, with 7 foot tall wood sound barriers and with 10 foot tall wood sound barriers.

[7] Ground Factor Values (ISO 9613-2:2024) For "Hard Ground" G=0 and for "Soft Ground" G = 1. Hard ground is dense and absorbs little to no sound while soft ground is porous and absorbs sound. Examples of hard ground include water and parking lots, while examples of soft ground include grass, trees and other vegetation. For "Mixed Ground" a value of G between 0 and 1 is used that represents the fraction of the ground that is soft.

4.0 SUMMARY AND RESULTS

The twenty inverters, two step-up transformers and four tracking motors associated with the Solar Energy Facility must meet the Noise Regulations of the State of Delaware nighttime sound level limit of 50 dB(A). It is important to note that the 50 dB(A) limit is based on an energy based average over the nighttime hours. As the inverters, transformer and tracking motors will not operate at full load during the majority of the nighttime hours due to the lack of sunlight, the energy based average sound level during the nighttime hours will be significantly lower than the maximum sound levels presented in this noise study.

As shown in Figure 1, the results of the noise study indicate that without mitigation, property line sound levels are expected to vary between 46 dB(A) at the closest property line to the southeast, which is below the 50 dB(A) State nighttime noise limit, and 44 dB(A) at the closest building to the southeast. Therefore, sound barriers are not necessary to surround the equipment pad. The minimum sound barrier height to provide some reduction in the equipment area sound levels is 7 feet, as shown in Figure 2. With 7 foot tall wood sound barriers, the sound levels are expected to be 44 dB(A) at the closest property line and 43 dB(A) at the nearest building. Finally, Woodpecker Road Community Energy Initiative LLC has proposed 10 foot tall wood sound barriers to achieve further sound level reduction. With the proposed 10 foot tall wood sound barrier, the sound levels are expected to vary between 43 dB(A) at the closest property line, and 42 dB(A) at the closest building, and be well below the 50 dB(A) State nighttime noise limit. The analysis shows that even without sound mitigation, the maximum sound levels due to the Solar Energy Facility will be in full compliance with the nighttime limits of the Noise Regulations of the State of Delaware.

I trust that this information is sufficient for you present needs. Please call if you have any questions regarding this letter.

Yours sincerely,

JMS ACOUSTICS LLC

J. Michael Spencer
President and Principal Consultant

JMS:jms
Enclosures

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Figure 1 – Expected sound levels without mitigation, Woodpecker Road, Seaford, Sussex County, Delaware.

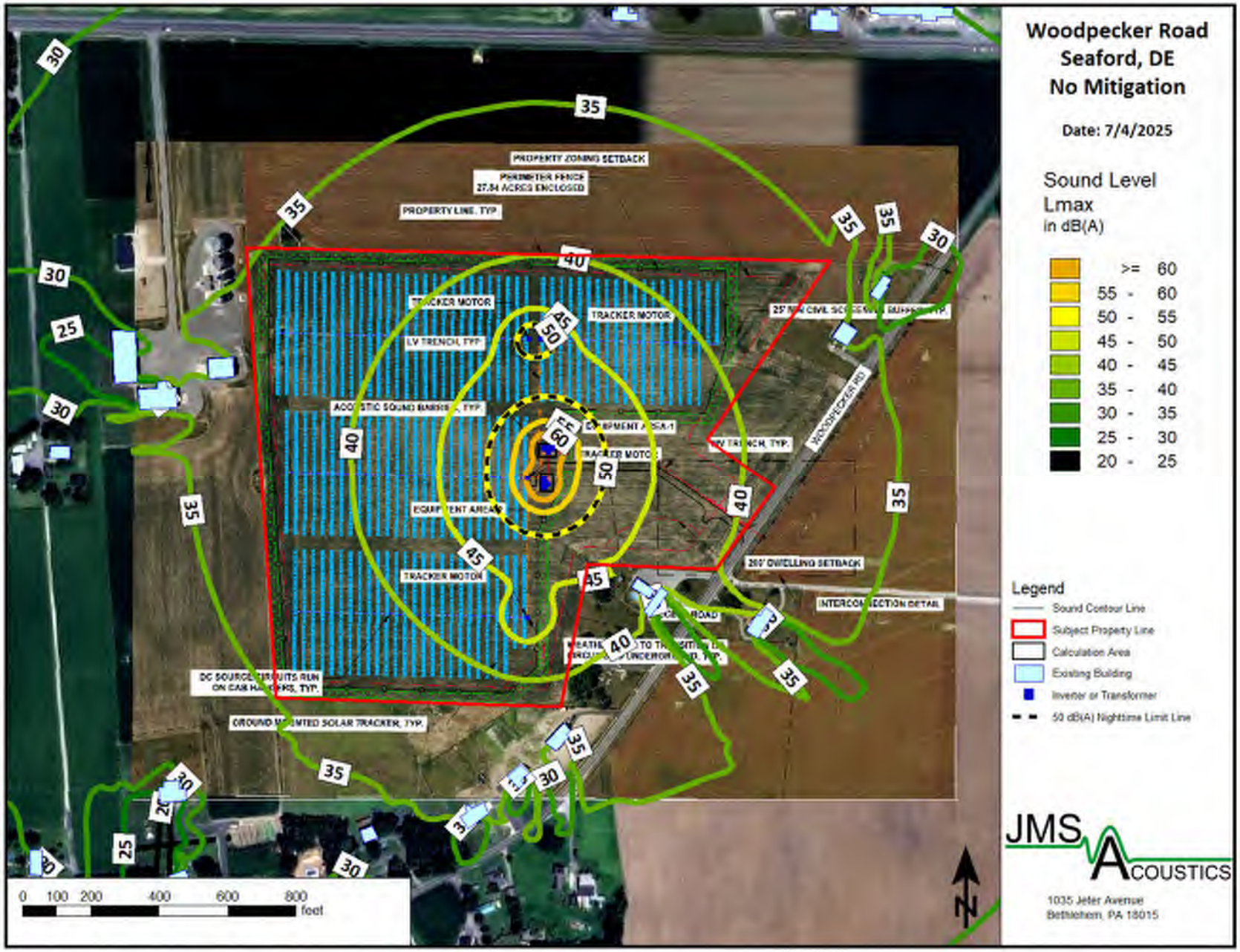


Figure 2 – Expected sound levels with 7 ft equipment area sound barriers, Woodpecker Road, Seaford, Sussex County, Delaware.

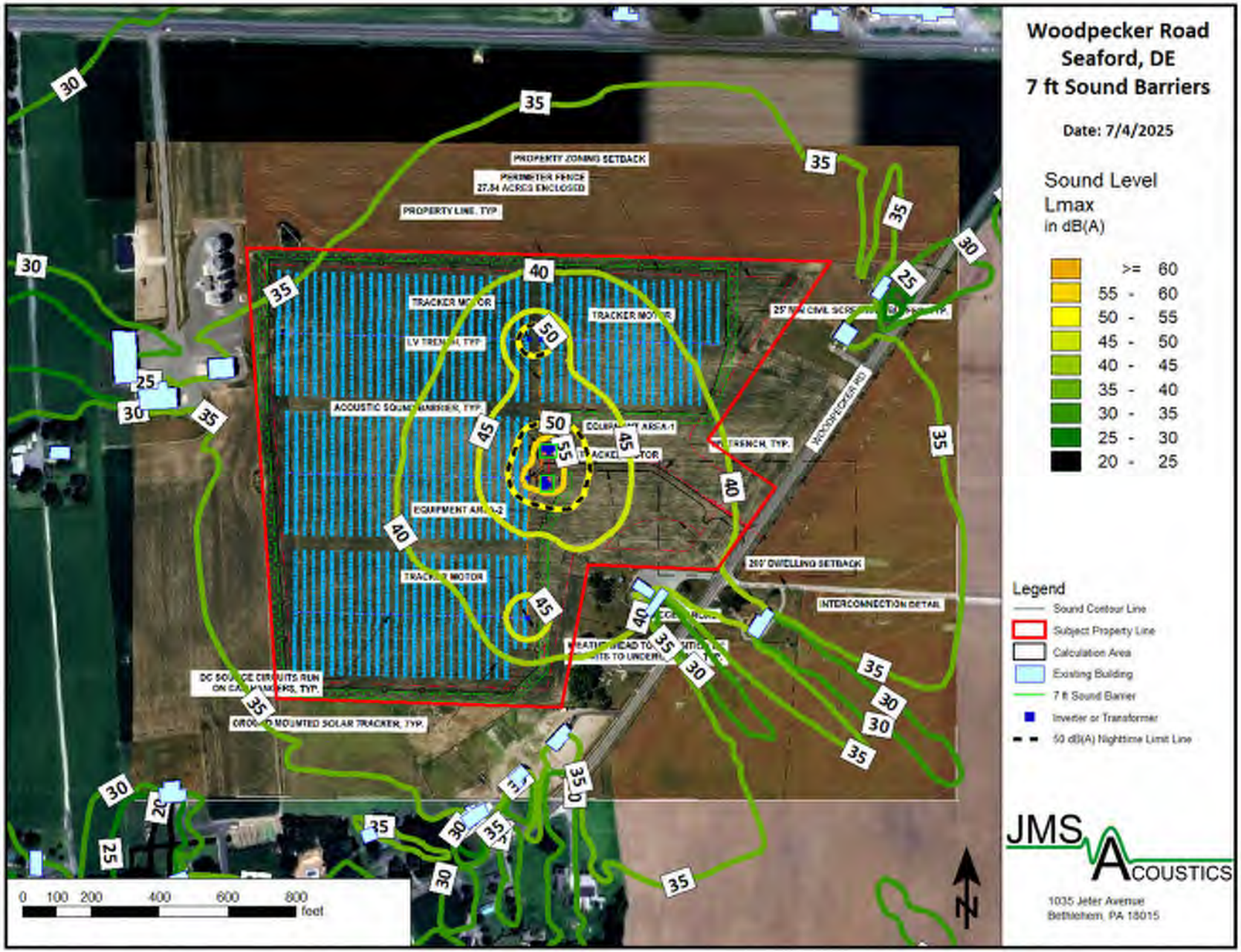
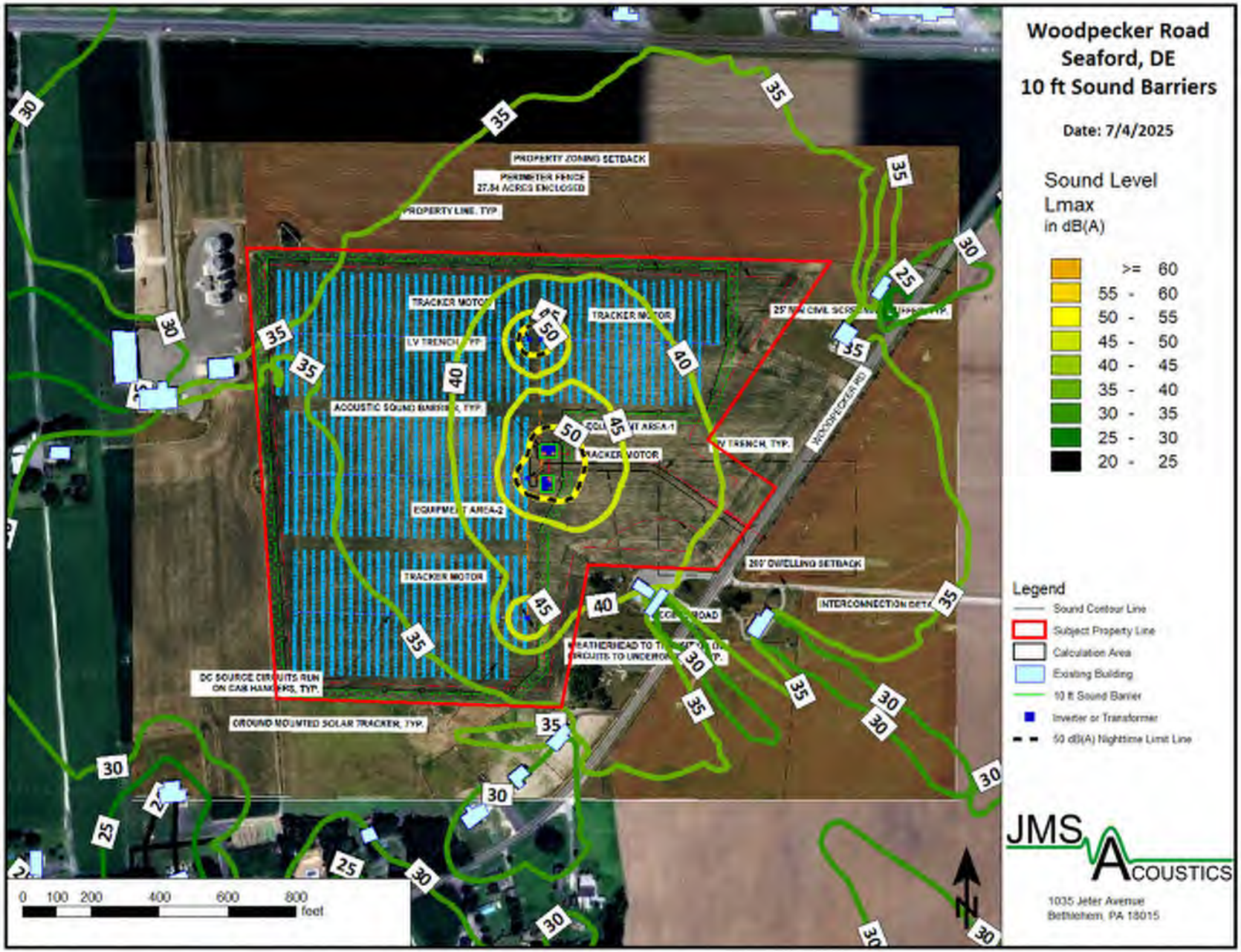


Figure 3 – Expected sound levels with 10 ft equipment area sound barriers, Woodpecker Road, Seaford, Sussex County, Delaware.



ENCLOSURES

PROSPECTING PHASE SITE PLAN, prepared by ECA Solar

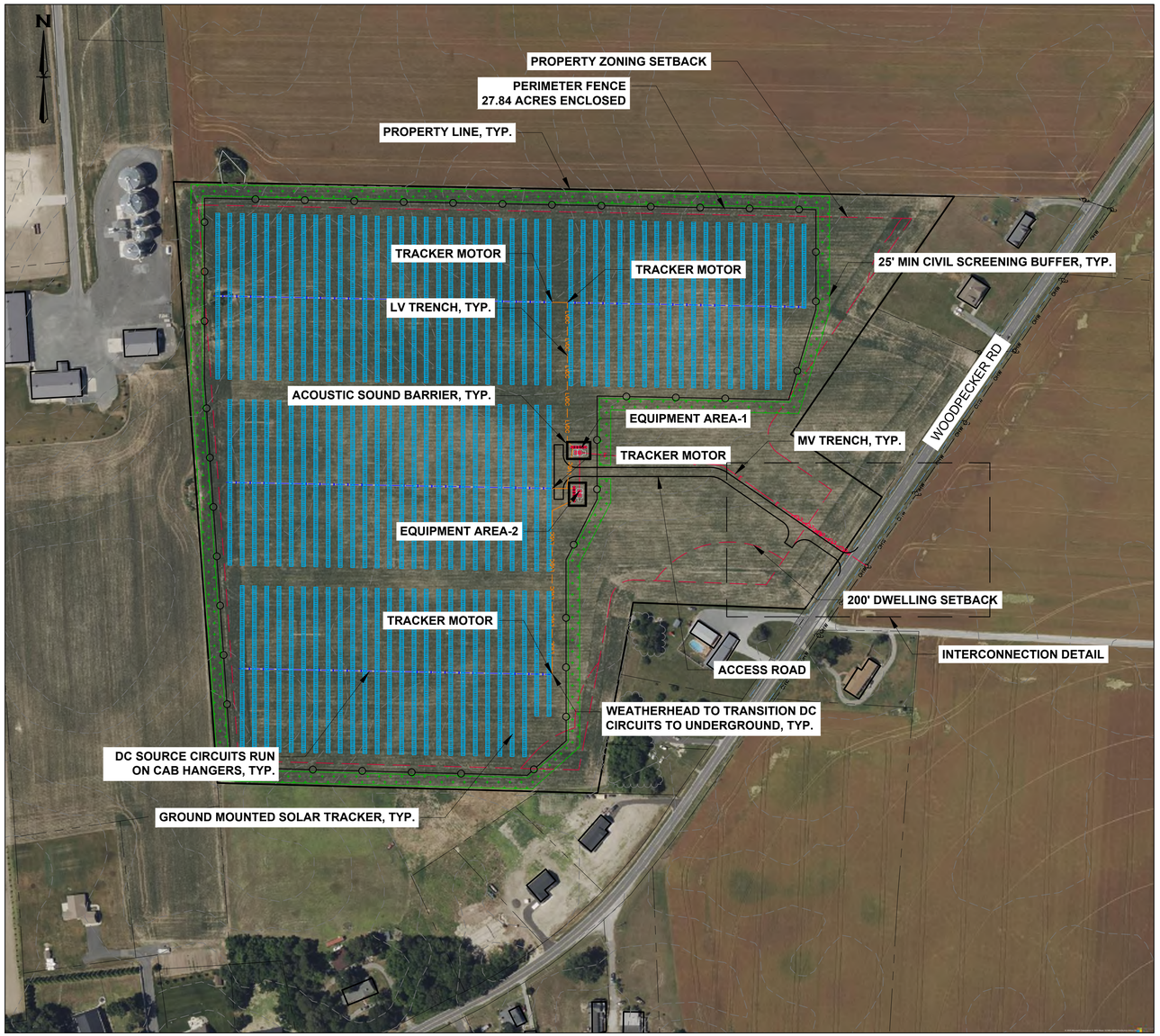
Product Literature for Hoover Treated Wood Products' PLYWALL

Product Literature for Industrial Acoustics Company's Noishield Type FS/S

Product Literature for Noise Barrier's V-Stack Steel, SL Barrier, or H/P 42

PHOTOVOLTAIC SYSTEM
TOTAL: 6.0178 MWDC (3.999 MWAC)
WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC
WOODPECKER RD SEAFORD, DE

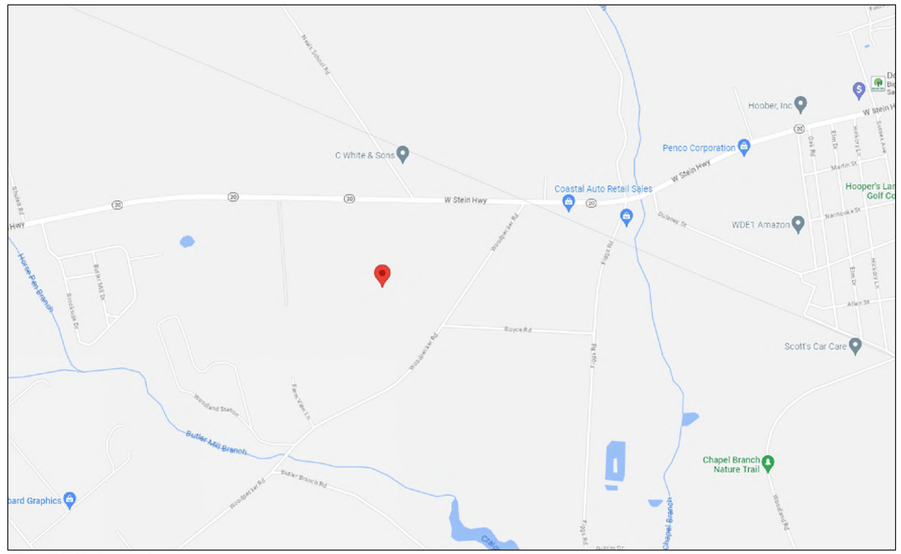
PV SYSTEM DESCRIPTION	
MODULE TYPE	Q CELLS-Q.TRON XL-G2.3/BFG 630
QUANTITY	9552 (398 STRINGS OF 24 MODULES)
SYSTEM SIZE (DC)	6.0178 MW
SYSTEM SIZE (AC)	3.999 MW
INVERTER	SUNGROW SG200HX-US (200 KW) : 19 QTY SUNGROW SG200HX-US (FACTORY DERATED TO 199 KW) : 1 QTY
MOUNTING SYSTEM	SINGLE AXIS TRACKER
TILT ANGLE	+/-52°
ARRAY AZIMUTH (SOUTH = 180°)	180°
GCR	29.9%
PITCH	27'



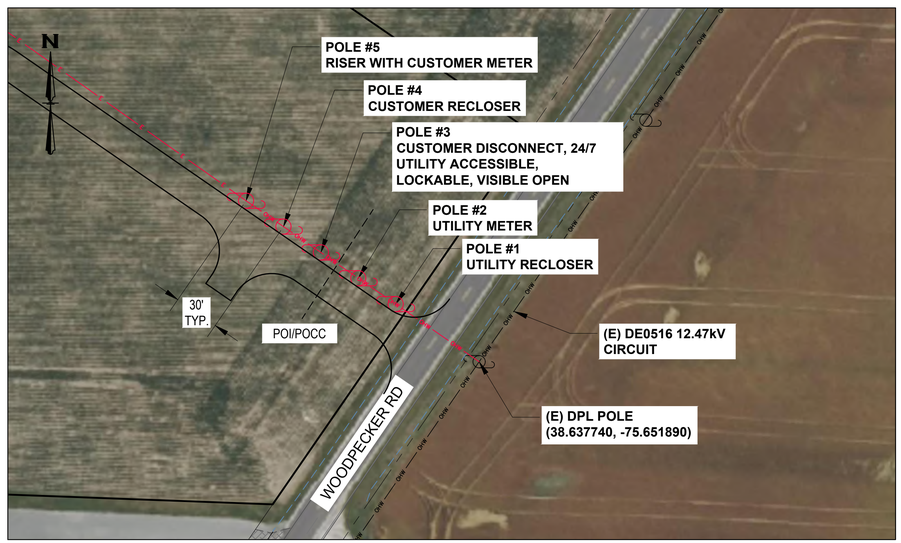
1 PRELIMINARY LAYOUT - WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC: 6.0178 MWDC (3.999 MWAC) PV SYSTEM

SCALE: 1" = 150'

75 0 75 150 225
SCALE IN FEET



2 LOCUS MAP



3 INTERCONNECTION DETAIL

SCALE: 1" = 50'

25 0 25 50 75
SCALE IN FEET

REV.	DESCRIPTION OF REVISION	DATE	DRAWN
11	PRE SALES DESIGN III	05/09/25	NEH
10	INTERCONNECTION SET	02/25/25	NEH
9	PRE SALES DESIGN II v3	01/03/25	NEH
8	INTERCONNECTION SET	11/19/24	NEH
7	PRE SALES DESIGN II v2	11/19/24	NEH
6	PRE SALES DESIGN II	01/24/24	CAL
5	INTERCONNECTION SET	10/19/23	CAL
4	PRE SALES DESIGN I v2	10/16/23	CAL
3	REVISED LCA W/LOT LINE ADJUSTMENT	10/02/23	MR

eca solar

203 CRESCENT STREET
WALTHAM, MA
02453

20 TRAFALGAR SQUARE
NASHUA, NEW HAMPSHIRE
03063

SCALE
AS SHOWN

WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC
ECA SOLAR LLC

PROSPECTING PHASE
SITE PLAN
WOODPECKER RD SEAFORD, DE

PSD-1.0
SITE PLAN

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Residence

Location: Atlanta, GA
Dimensions: 6-16 feet high, 300 linear feet
Installed: 1984
Panel width: 12 feet and 8 feet

The peace and tranquility of the picturesque stone home on this site was interrupted in the early 1960's when I-285, the Atlanta perimeter road, was built next to the home. Later, the expressway was widened and a noise barrier was installed to reduce the noise level for the occupants. This is the oldest PLYWALL® barrier and as such demonstrates the treatment's longevity. There is no deterioration at the ground line, which is the area of severest decay and termite hazard. Noise measurements were taken before and after to confirm its acoustical effectiveness.

Bottling Plant

Location: Manchester, NH
Dimensions: 15 feet high, 480 linear feet
Installed: 1988
Panel width: 8 feet wide, 1-piece

This plant had been in operation for some time and had been receiving complaints from residential neighbors about noise and headlights. The owners decided to erect a screening/noise wall along the back of the plant, which included the loading dock area. Thanks to PLYWALL®, response from the neighbors has been positive.

PLYWALL®

is a **Hoover Treated Wood Product. Hoover** has developed a reputation for quality service and innovation specializing in high quality products. For more information on the PLYWALL® Engineered Wood Sound Barrier-Contact the PLYWALL® Sales Department.

HOOVER TREATED WOOD PRODUCTS, INC.

154 Wire Road • Thomson, Georgia 30824
Toll Free: 1-800-531-5558 • Direct: (706) 595-1264 • Fax (706) 595-8462
www.plywall.com • e-mail: plywall@frtw.com

PLYWALL®

THE SOUND SOLUTION

Permanent Engineered Wood Sound Barriers

Stockbridge, Georgia
PLYWALL® Installation 1998

General Description

Hoover Treated Wood Products, Inc. is one of the largest producers of treated wood products in North America, specializing in government specifications, high retentions, and treatment of plywood. Utilizing Kiln Drying After Treatment (KDAT), Hoover produces wood products that are stronger, lighter, and pre-shrunk. CCA, the clean waterborne preservative choice for over 60 years, is used by Hoover because of its historical performance against termites and decay, excellent environmental qualities, and economy. Hoover is also a supplier of ACQ treated wood products.

Hoover engineers and fabricates PLYWALL® treated wood barrier systems for noise abatement and aesthetic screening for a multitude of environments. The PLYWALL® panels have been tested in accordance with ASTM E-90 and our performance is comparable to concrete and masonry. Designed for standard truck shipment (included in price), PLYWALL® can easily be delivered and unloaded on site, with installation being accomplished by local contractors or maintenance crews.

Engineering

Hainesport, New Jersey

PLYWALL® is engineered for customer-specified wind loading (PSF), with typical requirements ranging from 20-30 PSF, though up to 60 PSF is available at limited heights. PLYWALL® is adaptable to various heights, soils, climates, and terrains. Because of the warm natural appearance of wood and our specific design, our barrier system is aesthetically pleasing and well received by the public. Compared to other barriers, like concrete and steel, PLYWALL® has economical advantages, including material, installation, and repair costs.

Design Detail

Gaithersburg, Maryland

PLYWALL® is a post and panel system consisting of prefabricated pressure treated wood "sandwich" panels supported between pressure treated Parallam PSL engineered timber posts. The panels are typically 2-3/4 inches thick and secured to the posts within channels created by pressure treated 4X4" cleats that are spiked or lagged parallel to the posts.

Prefabricated panels are 8, 12, or 16 feet wide, covered on both sides with pressure treated, exterior-rated 4X8' Texture 1-11 plywood siding. Interior framing exists between the wood faces to provide sufficient structural stiffness for specified wind loading.

Fabricated height of the one-piece panels varies, depending on the customer requirements and specified panel width. Pressure treated Parallam PSL engineered timber posts support the panels at exposed heights to 24 feet, although 30 feet can be obtained under limited circumstances. Posts are embedded in the ground to a depth of roughly half the exposed height of the barrier and backfilled with crushed stone. Concrete may be an option in some instances and will not compromise the wood preservatives or the strength of the wood materials. While not as economical as standard timber posts initially, Parallam posts are much stronger and uptake preservatives far better, providing a much more durable, longer-lasting barrier.

PLYWALL®

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Highway Noise Barrier

Location: Lincoln, NE
Dimensions: 8-13 feet high, 1,400 linear feet
Installed: 1988
Panel width: 8 feet wide, 1-piece

When the Lincoln West Bypass was widened the Nebraska Department of Roads chose PLYWALL® to protect a stretch of residences adjoining the right of way. Barrier height varies from 8 to 13 feet high.

Temporary Barrier at Waste Water Treatment Plant

Location: New Bedford, MA
Dimensions: 15 feet high, 500 linear feet
Installed: 1993
Panel width: 8 feet wide, 1-piece

PLYWALL® was installed as a temporary construction barrier for a new multi-million dollar treatment plant in this historic port city. Adjoining a Navy School and a residential area, it was necessary to isolate them from the heavy construction activity. The barrier was erected early in the project and was removed after completion. The cleats were attached to the posts with lag screws for easy removal, and the posts were backfilled with soil for easy removal (standard design calls for gravel).

Highway Noise Barrier

Location: Baltimore, MD
Dimensions: 8 feet high, 2,800 linear feet
Installed: 1993
Panel width: 8 feet wide, 1-piece

This project is along I-95 in a wooded area where the Maryland Transportation Authority wanted to preserve as much forestry as possible. The contractor was allowed to zigzag the barrier to avoid individual trees, and the access road was just wide enough to maneuver a skid loader. One segment required placing the barrier along the top of a concrete traffic barrier, so sockets were cast into the concrete for the PLYWALL® posts. The traffic barrier followed a grade incline, so the bottom of each PLYWALL® panel had to be field-trimmed at an angle to fit the top of the traffic barrier. This was done with an ordinary circular saw.

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Bagel Plant Expansion

Location: Eatontown, NJ
Dimensions: 14 feet high, 550 linear feet
Installed: 1997
Panel width: 12 feet wide, 2-piece stacking

When this plant applied for a permit to expand, there was concern about its effect on adjoining residences so a 14-foot high PLYWALL® barrier was proposed. It was installed early in the project to screen the construction noise and activity. Response has been very favorable. Neighbors prefer the PLYWALL® barrier's appearance to concrete highway barriers in the area. 12-foot wide panels were used to reduce the number of posts and panels were stacked, with 8-foot high panels on the bottom and 6-foot high panels on top.

Grocery Superstore / Shopping Center

Location: Alpharetta, GA
Dimensions: 8-10 feet high, 1,100 feet long
Installed: 1996
Panel width: 8 feet wide, 1-piece

A new grocery superstore anchors this shopping center in trendy North Atlanta. It backs up to an upscale residential area and the owners wanted to be good neighbors so the PLYWALL® system was installed just beyond the service area at the rear of the buildings, much of which is at the crest of a high embankment. The wall serves as a visual and glare screen. The rear face of the wall was stained driftwood grey to make it blend in with the rear of the buildings.

Municipal Operations Headquarters

Location: Concord, NH
Dimensions: 8-10 feet high, 1,300 linear feet
Installed: 1989
Panel width: 8 feet wide, 1-piece

This facility houses the new public works headquarters for the City of Concord. Construction plans included PLYWALL® barriers to screen the facility from nearby homes. Soon after the facility opened, it also became the base for the buses of the Concord Public Schools. The bus parking area is adjacent to neighboring houses but the 10-foot high PLYWALL® has proven effective at mitigating the noise of diesel bus engines cranking up before dawn, as well as blocking the glare of their headlights.

Applications

- Highways
- Residential Developments
- Roadways
- Racetracks
- Industrial Sites
- Airport Noise/Jet Blast Fence
- Commercial Sites
- Zoning Restrictions
- Strip Malls
- Fast-Food Restaurants
- Shopping Centers
- Zoo/Amusement Parks
- School/Recreational Facilities
- Railroad Areas
- Utility Sites
- Permanent/Temporary Barriers

***Grovetown, Georgia** - PLYWALL® Installation 2000*

Installation Suggestions

PLYWALL® is shipped complete and ready-to-install, including posts, panels, cleats and spikes (or lag bolts). Installation is normally completed by a local contractor, often a commercial fence company, though PLYWALL® is well suited for installation by general contractors or maintenance personnel. No special skills or unique equipment is required.

A truck mounted auger works well for digging the post holes, with auger size varying with the post dimensions. Recommended backfill material is crushed stone, which provides excellent lateral support and allows the potential for relocation of the barrier. Concrete is not normally required. Posts are set on clear spacings, equal to panel width plus one inch erection tolerance. The unique panel-to-post attachment method, using spiked or lagged 4"x4" cleats to create a channel, provides an expansion joint and utilizes the exposed post face to add extra linear coverage.

Individual panels are lifted into place by hand or by crane using the built-in nylon loops at the top of each panel. One cleat is spiked or lagged to each post with the provided hot dipped ring shank spikes or lag bolts, after which a panel is swung into position and fixed by attachment of the opposing cleats. This method means the panels do not have to be lowered from the top of the posts. Holes are pre-drilled in each cleat for the spikes or lag bolts, saving time and measuring for the installer. Trimming the top of the posts and cutting off the nylon straps completes the installation.

Field cuts and modifications to PLYWALL® are easily performed to accommodate odd span widths, terrain contours, and other site conditions where a standard panel will not fit.

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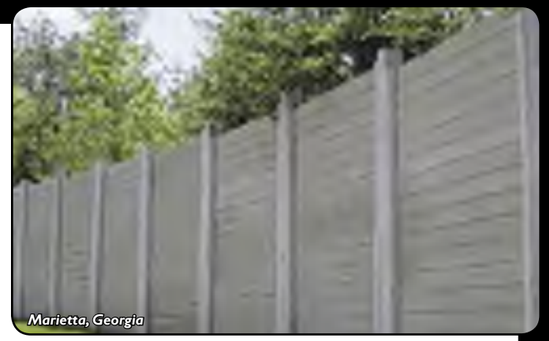
Maintenance & Finishing


Marietta, Georgia

PLYWALL® is designed and built for minimal maintenance. Permanent coloration and UV resistance is provided by the CCA or ACQ preservative, which also provides decades of protection against decay and termites.

If a special finish is desired, the T1-11 plywood's textured surface enhances adhesion. Neither staining nor painting is required due to the permanent protection and coloration provided by the preservative treatment.

PLYWALL® is easily repaired if damaged, usually with ordinary carpentry skills. New posts, panels, cleats and spikes can be shipped in a short period of time.

Benefits to Installers & Residents

Gaithersburg, Maryland

PLYWALL® is "neighborly" because it is identical in appearance and attractiveness from either side of the barrier, with no unsightly backside. In spite of its lighter weight and lower cost, PLYWALL®'s noise reduction is comparable to other heavier and more expensive materials.

Installers like PLYWALL®'s complete fabrication, comprehensive material package, relatively light weight, minimal labor and equipment requirements, and its simplicity.

Woodbine, Maryland

PLYWALL®
THE SOUND SOLUTION

Case Studies

Condominium Project

Location: Fairfax, VA
Dimensions: 8-10 feet high, 740 linear feet
Installed: 1989
Panel width: 8 feet wide, 1-piece

This project is on busy I-395 near Washington, D.C., and the site plan included a PLYWALL® barrier along the right-of-way to mitigate the expressway noise and screen the expressway from view. Other barrier materials including concrete were considered but PLYWALL® was deemed most compatible with the planned landscaping and the natural wooded surroundings of the site, as well as most cost-effective. The barrier was installed during condominium construction, and its relatively lightweight and portability compared to precast concrete barrier systems.

Airport Noise Barrier / Jet Blast Fence

Location: Rockford, IL
Dimensions: 16 feet high, 360 linear feet
Installed: 1994
Panel width: 18 feet wide, 1-piece

This PLYWALL® barrier doubles as a wind screen for the jet wash from taxiing cargo planes at the air terminal. A parking lot is just beyond the barrier, which would have been unusable without noise and wind protection. Due to the unusually high wind load design, 50 PSF, the barrier's posts are oversized and are set 13' deep in 36" diameter concrete foundations. The structural framing of the panels is also unusually heavy, with edgewise 2 x 4 framing at 12" c/c spacing of flat wise 2 x 4 framing at 16" c/c spacing.

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About

DESIGN DETAIL

PLYWALL€ is a post and panel system consisting of prefabricated, preservative treated wood framed panels supported between preservative treated Parallam€ PSL engineered timber posts. Prefabricated preservative treated wood framed panels are 8, 12, or 16 feet wide, covered on both sides with preservative treated exterior-rated 4•x 8• Texture 1-11 plywood. The panels are typically 2 , inches thick and are secured to the posts within channels cr eated by pressure treated 4ƒ x 4ƒ cleats which are spiked or lagged parallel to the posts.

Pressure treated Parallam€ PSL engineered timber posts support the panels at exposed heights to 24 feet (30 feet can be obtained under limited circumstances). Posts are embedded in the ground to a depth of roughly half the exposed height of the barrier and backfilled with crushed stone or concrete. Parallam€ posts are much stronger and uptake preservatives far better, providing a much more durable, longer lasting barrier.

Download Specifications:

Applications

- Highways

- Residential Developments
- Roadways
- Racetracks
- Industrial Sites
- Airport Noise / Jet Blast Fence
- Commercial Sites
- Zoning Restrictions
- Strip Malls
- Fast Food Restaurants
- Shipping Centers
- Zoos / Amusement Parks
- Railroad Areas
- Utility Sites
- Temporary Barriers

INSTALLATION SUGGESTIONS

PLYWALL€ is shipped complete and ready-to-install, including posts, panels, cleats and spikes (or lag bolts). Installation is normally completed by a local contractor, often a commercial fence company, though **PLYWALL€** is well suited for installation by general contractors or maintenance personnel. No special skills or unique equipment is required.

A truck mounted auger works well for digging the post holes, with auger size varying with the post dimensions. Recommended backfill material is crushed stone, which provides excellent lateral support and allows the potential for relocation of the barrier. Concrete is not normally required. Posts are set on clear spacings, equal to panel width plus one and one quarter inch erection tolerance. The unique panel-to-post attachment method, using spiked or lagged 4"x 4" cleats to create a channel, provides an expansion joint and utilizes the exposed post face to add extra linear coverage.

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Field modifications are easily performed to accommodate odd span widths, terrain contours, and other site conditions where a standard panel will

not fit.

Download Installation Instructions:

ENGINEERING

PLYWALL€ is engineered for customer-specified wind loading (PSF), with typical requirements ranging from 20-30 PSF, though up to 60 PSF is available at limited heights. **PLYWALL€** is adaptable to various heights, soils, climates, and terrains. Because of the warm natural appearance of wood and our specific design, our barrier system is aesthetically pleasing and well received by the public. Compared to other barriers, like concrete and steel, **PLYWALL€** has economical advantages, including material, repair, and installation costs.

Pages

- About Plywall
- Image Gallery
- Contact Page

Documents

- Documents Page
- Specifications (.doc|.pdf)
- Installation (.doc|.pdf)
- Test Data (.pdf)
- Case Study (.pdf)

Links

- Hoover Treated Wood Products
- LearnAboutFRTW.com

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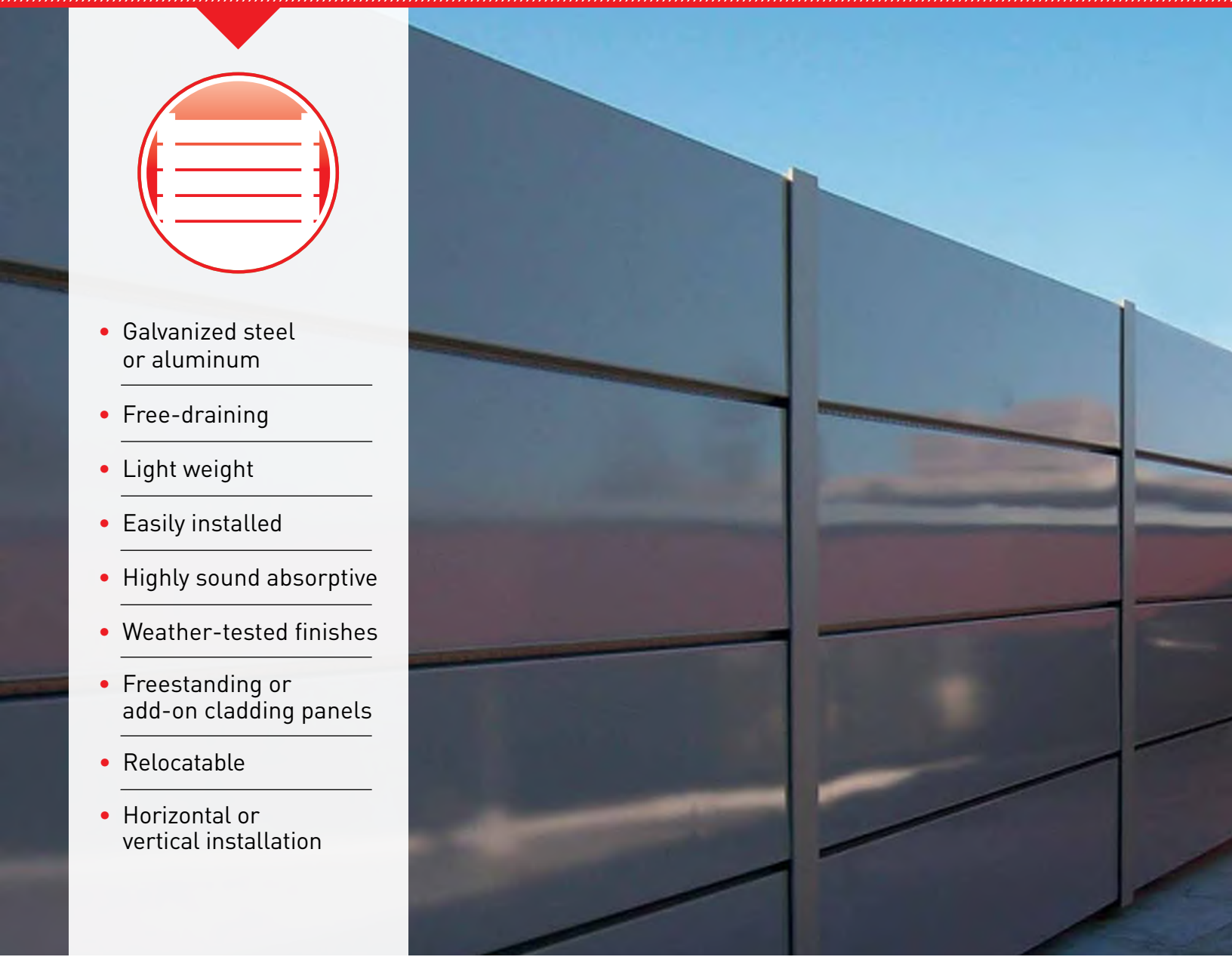
Noishield® Sound Barriers

Lab Rated Acoustic Performance and Durable Construction



- Galvanized steel or aluminum
- Free-draining
- Light weight
- Easily installed
- Highly sound absorptive
- Weather-tested finishes
- Freestanding or add-on cladding panels
- Relocatable
- Horizontal or vertical installation

iac acoustics

Noishield® Sound Barrier System

Effective and Attractive Sound Barrier Systems Using Field Proven & Durable Acoustically Rated Components

IAC Acoustics Noishield outdoor sound barrier systems protect communities and workers from noisy equipment by blocking line-of-sight sound transmission and absorbing sound energy radiating from the source. Noishield panels are performance rated for sound absorption, sound transmission loss and structural wind-loads, simplifying screen wall designs and allowing for the most cost effective and reliable sound barrier solutions available.

IAC Acoustics Noishield barrier panels combine multiple weather-resistant and aesthetic features in order to provide a highly durable and corrosion resistant all-weather outdoor barrier panel.

Pitched solid upper surfaces shed rain-water. Perforated lower surfaces allow any accumulated moisture to drain freely so the panel can dry quickly.

G-90 Galvanized steel materials of construction include a corrosion resistant zinc coating to protect the underlying steel components. A durable polyester powder coating suitable for exterior installations protects the steel from weathering and ensures an attractive finish in any of IAC Acoustics stock colors, or an industry standard RAL 4-digit color.

Roll-formed panels provide a uniform, flat profile suitable for architectural applications where an attractive appearance is a requirement. Consistent panel heights add to a crisp and neat visual aesthetic.

IAC Acoustics Noishield panels feature a deep cross section that provides greater resistance to wind-loading and a panel that can span supports up to 20 ft apart. IAC Acoustics provides a range of engineering data to assist with wall layout, including load tables for a range of support post spacing, wall heights and a variety of wind speeds.

Standard Features

- Laboratory Rated Acoustic Performance STC-30 to STC-33 / NRC 1.00 to 1.05
- Excellent weather & corrosion resistance. Galvanized steel materials with powder coated finish applied post assembly. Fully non-welded construction to avoid damage to galvanized coating.
- Freestanding, able to span supports of up to 20 feet depending on local codes & wind-speed requirements.

Noishield Barrier Systems Offer:

- Steel or aluminum materials of construction for a choice of economy or light-weight
- Powder-coated or mill-finish (in-coated) finishes for a range of options
- Multiple panel configurations and a range of sound transmission loss, STC & sound absorption performances to match each project's unique requirements
- "Continuline" specialty details to conceal support posts
- "Slim-Line" face-applied panels to permit utilization of existing support structures and installation from either the front or the rear of the support wall components

Typical Applications:

- Rooftop or ground mounted mechanical equipment screens
- Chiller, generator & compressor packages
- Transformer yards & utility substations
- Light-rail systems

Acoustic Performance

Noishield barrier panels are rated with sound transmission loss values fully compatible with typical acoustic screen performance requirements. All Noishield barrier panels incorporate sound absorbing materials to prevent noise reflections that degrade barrier performances. Type C modules are used to clad new or existing non-absorbing barriers while Type FS and SFS are free-standing walls that combine excellent sound transmission loss (used for 125 Hz insertion loss up to 10 dB) with high sound absorption ratings.

* Freestanding Type FSt is used for applications requiring 125 Hz insertion loss between 10 and 14 dB.

Barrier Model	1/3 Octave Band Center Frequency, Hz							
	125	250	500	1k	2k	4k	8k	**STC**
	Sound Transmission Loss, dB							
FS/S and SFS/S	21	34	40	33	32	26	37	30
FSt/S	24	38	41	33	35	29	34	33
FS/A and SFS/A	21	32	37	30	37	28	30	31
	Sound Absorption Coefficients							**NRC**
FS/S, FS/A and FSt/S	1.12	1.12	1.10	1.01	0.89	0.76	0.57	1.05
SFS/S and SFS/A	0.49	1.04	1.14	1.05	0.96	0.95	0.87	1.05
C/S and C/A	0.30	1.05	1.07	1.01	0.96	0.88	0.78	1.00
C12/S and C12/A	0.48	1.08	1.10	0.99	0.92	0.83	0.78	1.00
C38/S and C38/A	0.68	1.19	1.10	1.03	0.90	0.81	0.76	1.05

- Sound Transmission Loss: All data in accordance with ASTM E90 and E413
- Sound Absorption Coefficients: All data in accordance with ISO Standard 354, ASTM C423 and E413 with 120 ft^2 (11.15 m^2) test sample in 10,000 ft^3 (262 m^3) reverberation room. Type A mounting. Coefficients greater than 1.0 result from edge diffraction effects. Do not use sound absorption values greater than 0.95.

Durable Noishield Barrier Finishes

Noishield Barriers are finished with a tough, thermosetting, polyester powder coating which is not damaged by the harsh cleaning chemicals used to remove spray paint graffiti. A wide variety of standard colors allow complementary decorative schemes and attractive designs to reduce apparent wall height as perceived by the community.

- Tested for accelerated weathering per ASTM G23 for 2,400 hours with chalking not less than No. 8 rating (ASTM D 659) and color changes less than 5 NBS units (ASTM D 2244)
- Salt spray tested for checking, blistering, loss or adhesion, or evidence of corrosion per ASTM B117 for more than 4,000 hours without coating failure

Weather Shedding Construction

Noishield Sound Barrier Modules are constructed with solid top surfaces to minimize water infusion and perforated bottom surfaces to allow any entrapped water to escape. Infill is non-hygroscopic — water does not "wick" into the modules. Hence, traditional polymer fill protection is neither required or desirable due to adverse effects on sound absorbing characteristics.

Ground Mount / Roof Mount / Structure Mount

Noishield Sound Barriers are engineered from the foundation up for structural and acoustical integrity and economic installation. Low weight modules stack between posts to achieve required wall heights. Noishield Barriers can be installed with horizontal or vertical reveals to satisfy aesthetic and architectural considerations.

Freestanding Barriers

Noishield Types: FS and SFS Barriers — sound absorptive on one and two sides respectively — optimize sound transmission loss and sound absorption properties in a durable and attractive wall system in harmony with the community.

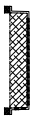
- Excellent low frequency absorption for heavy equipment
- Laboratory-rated sound absorption on one or both sides
- Low weight, rugged construction — ideal for wall or roof mounting
- 5" thick (127 mm) modular metal module system in steel or aluminum
- Abuse resistant dual-coated, galvanized steel or aluminum construction
- Withstands wind velocities of 110 mph (177 km/hr) — designs for specific wind loads are available
- Readily relocated in the event of expansion or other projects

Configuration		Type FS	Type SFS
		Thickness: 5" / 127 mm	Thickness: 5" / 127 mm
Weight lb / ft² (kg / m²)	Steel	FS/S – 6.5 (31.7)	SFS/S – 9.9 (48.3)
		FSt/S* – 8.6 (42.0)	–
	Aluminum	FS/A – 4.5 (22.0)	SFS/A – 5.2 (25.4)
Application		Freestanding alongside noisy equipment	Freestanding between multiple noise sources

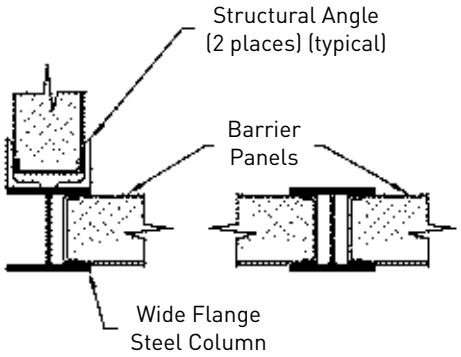
Sound Absorptive Treatment for New Construction & Retrofit Applications

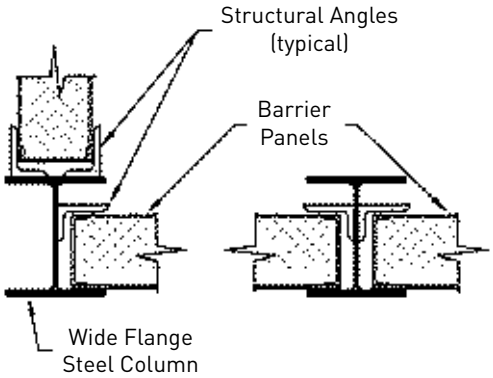
Noishield Type C Cladding Modules — sound absorptive to control reflections from acoustically hard barriers

- Apply to new or existing wood, concrete or steel barriers to reduce reflected noise levels in the community
- Retrofit existing barriers to eliminate or mitigate noise complaints
- Low weight, rugged construction — ideal for retrofit applications
- Laboratory-rated sound absorption coefficients
- 2-1/2" (64 mm) thick metal module system
- Abuse resistant galvanized steel or aluminum construction
- Individual modules readily manufactured and replaced if damaged

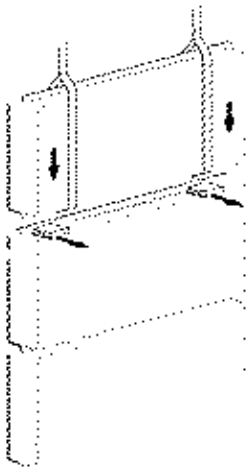
Configuration		Type C	Type C12	Type C38
		Thickness 2.5" / 64 mm	 Thickness 3" / 76 mm	Thickness 4" / 102 mm
Weight lb / ft² (kg / m²)	Steel	C/S – 3.25 (15.9)	C12/S – 3.55 (17.3)	C38/S – 4.05 (19.8)
	Aluminum	C/A – 1.1 (5.4)	C12/A – 1.4 (6.8)	C38/A – 1.9 (9.3)
Application		Apply to new or retrofit existing metal, wood, brick, concrete, stone or other noise-reflecting walls. Select Types C12 & C38 for enhanced 125 Hz sound absorption.		

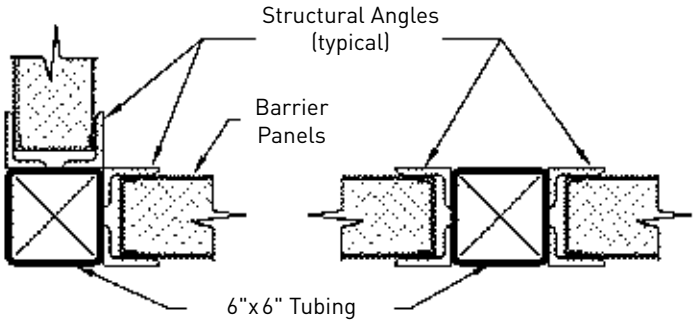
Barrier Supports & Installation

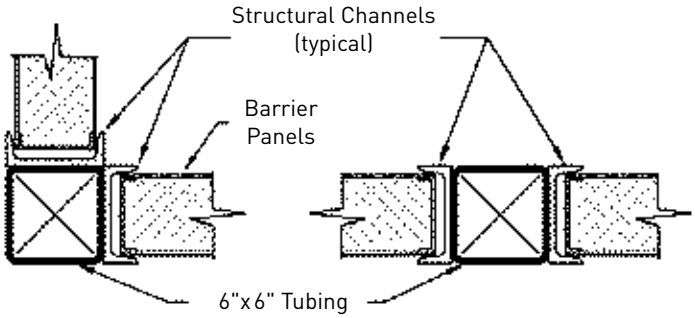




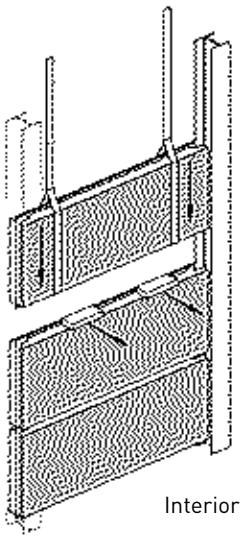
Standard Panel Installation

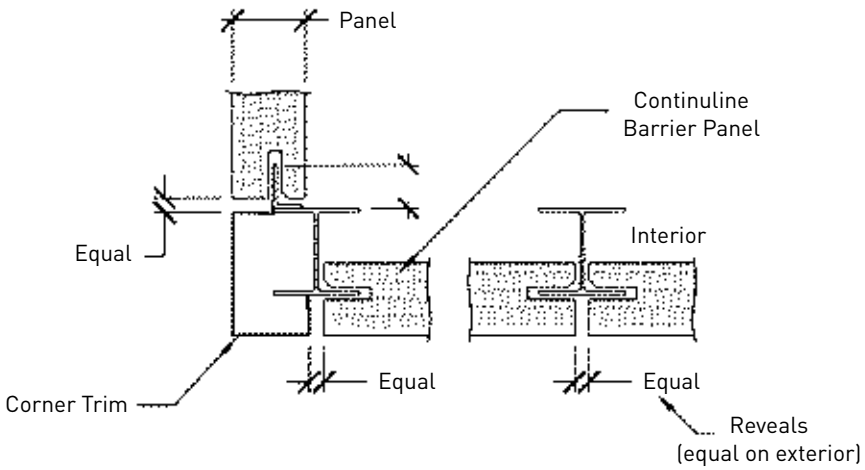




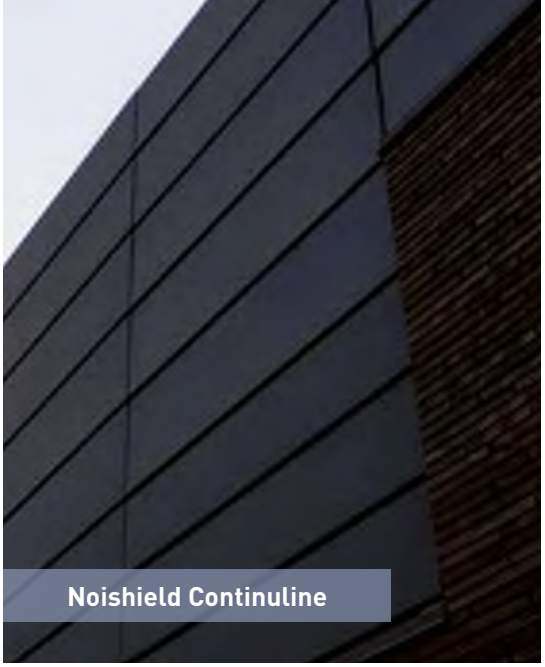


Continuline Panel Installation





Noishield Continuline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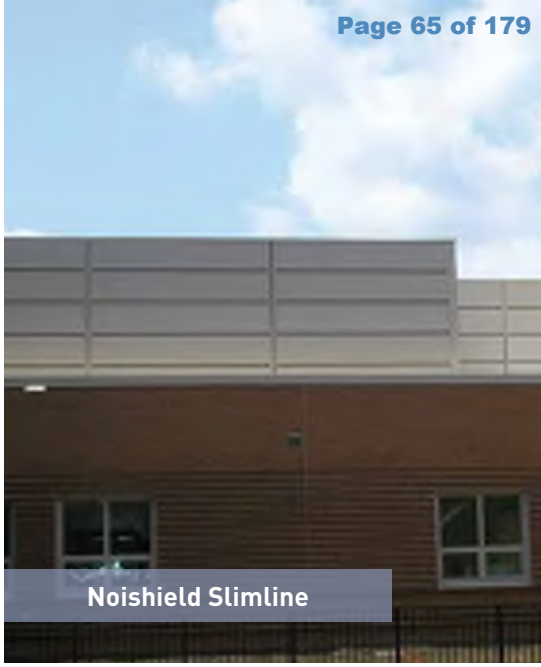
Noishield Slimline

Noishield Continuline Detail for Concealed Columns

IAC's Continuline is more aesthetically pleasing than a traditional barrier wall — it allows architects and customers to conceal their structural members. The Continuline panels are the same construction as the standard FS panels. The key difference is the endcap — the endcap wraps the column; leaving an architecturally pleasing reveal that mimics the horizontal reveal already prevalent in the system. Continuline's primary applications include rooftop systems, train/rail and ground mounted.

- Superior aesthetic
- Special slotted end-caps
- Solid front face of panel conceals the column
- Acoustic & architectural screen in a single assembly & installation

Noishield Slimline Detail for Surface Mounting

- Face or rear applied
- Reduced thickness of 2.5"
- Secured with Z & Hat channel
- Hat channel edge trim between adjacent panel stacks
- Z channel edge trim at end of panel stack

Making the World a Quieter Place

Markets Served by IAC Acoustics

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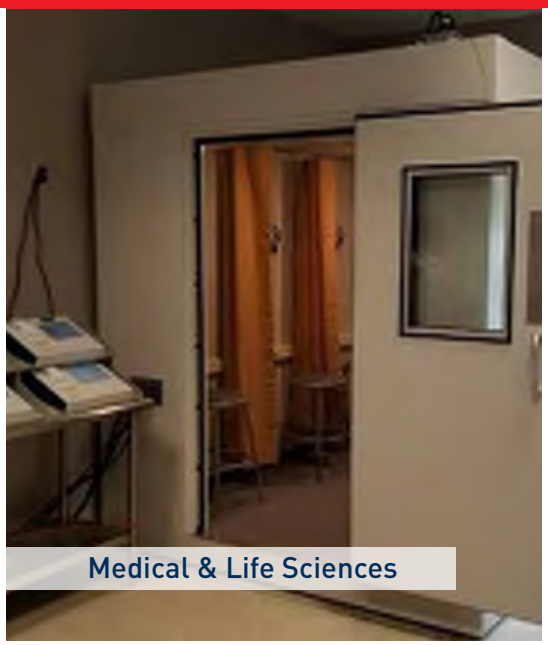
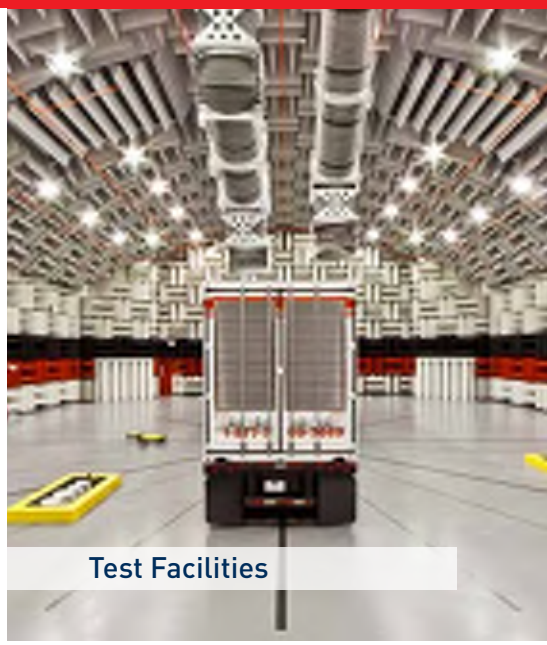

Medical & Life Sciences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INDUSTRIAL BARRIER WALLS

NOISE BARRIERS

QuietLine™
OIL & GAS

Oil and Gas Pump Enclosures

Absorptive noise control barriers provide maximum noise reduction with lightweight modular panels and/or louvers. The noise barrier system is easy to install and easy to relocate. Panels and louvers are constructed of galvanized steel or aluminum and finish painted in a weather and salt resistant polyester powder coating. The finish is also graffiti resistant and cleanable.

APPLICATIONS

- Oil Transfer Stations
- Jet Turbine Enclosures
- Pump Jack Enclosures
- Heavy Oil Dog Houses
- Compressor Enclosures
- Community Sensitive Enclosures
- Generators
- Loading Docks
- Rail Yards
- Power Plants
- Transformers
- Manufacturing Facilities

FEATURES

- Silenced Ventilation System
- Blast resistant
- Acoustic Louvers
- Pre-assembled or panelized
- Standard or custom designs to meet the requirements of your facility
- Lightweight
- Durable
- Galvanized, aluminum, or stainless steel
- Two, four, or five-inch thicknesses
- Easy installation and removal
- Horizontal or vertical installation
- Self-draining
- Open or enclosed versions available
- Blow-out panels optional
- Maximum acoustical performance
- All products independently tested (STC 37 & above, NRC 0.95 & above)
- Weather resistant
- Graffiti resistant
- Unlimited color selection
- 10 year warranty

QuietLine™

POWER & ELECTRIC

FREE-STANDING OR ELEVATED PANEL CONSTRUCTION

- Allows for maximum flexibility of design and utility on the ground or on the rooftop
- One or two-sided sound absorption
- Steel or aluminum construction
- Perfect for retrofit installation to solve existing noise problems
- Low-weight construction is ideal for roof mounted applications
- Designed to withstand high wind loads

ALL-WEATHER APPLICATIONS

- Barrier modules are designed and built to minimize water invasion
- Panels resist "wicking" moisture through the bottom and are self-draining
- Exterior finishes resist harsh cleaners, common chemicals and salt exposure
- Polyester powder coating

FEATURES:

- Lightweight & durable
- Galvanized, aluminum, or stainless steel
- Two, four, or five-inch thicknesses
- Easy installation and removal
- Horizontal or Vertical installation
- Self-draining
- Maximum acoustical performance
- All products independently tested (STC 37 & above, NRC 0.95 & above)
- Weather resistant
- Graffiti resistant

QuietLine™
TRANSPORTATION

ALL-WEATHER APPLICATIONS

- Barrier modules are designed and built to minimize water invasion
- Panels resist "wicking" moisture through the bottom and are self-draining
- Exterior finishes resist harsh cleaners,common chemicals and salt exposure
- Polyester powder coating
- Lightweight and durable
- Galvanized, aluminum, or stainless steel
- Two, four, or five-inch thicknesses
- Easy installation and removal
- Horizontal or vertical installation
- Self-draining
- Maximum acoustical performance
- All products independently tested (STC 37 & above, NRC 0.95 & above)
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- Graffiti resistant
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FEATURES

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- Maximum acoustical performance
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- Weather resistant
- Graffiti resistant
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FREE-STANDING OR ELEVATED PANEL CONSTRUCTION

- Allows for maximum flexibility of design and utility on the ground or on the rooftop
- One or two-sided sound absorption
- Steel or aluminum construction
- Perfect for retrofit installation to solve existing noise problems
- Low-weight construction ideal for roof or bridge mounted applications
- Designed to withstand high wind loads

Acoustical Performance Data Sound Transmission Loss Data, dB

1/3 Octave Band Center Frequency, Hz	125	250	500	1K	2K	4K	STC
V-Stack Aluminum	14	20	31	42	40	52	33
V-Stack Steel	22	26	35	45	47	48	38
SL Barrier	18	26	35	45	49	52	37
H/P 38	24	25	33	43	50	55	38
H/P 42	23	31	40	49	56	62	42
H/H 50	26	44	50	54	57	64	50
H/H 52	37	43	47	53	54	57	52

All tests performed by Riverbank Acoustical Laboratories, an independent NVLAP accredited acoustical testing facility. The test method conforms with ASTM Designations E90-99or E90-02 and E413-87.

Sound Absorption Coefficients

1/3 Octave Band Center Frequency, Hz	125	250	500	1K	2K	4K	NRC	
Barrier Panels								
V-Stack Aluminum	0.89	1.23	1.18	1.08	1.06	0.95	0.95	(1.15)
V-Stack Steel	0.86	1.20	1.17	1.07	1.08	1.02	0.95	(1.15)
SL Barrier	0.92	1.15	1.22	1.13	1.08	1.04	0.95	(1.15)
H/P 42	0.68	1.06	1.12	1.08	1.03	0.98	0.95	(1.05)
2" Thick Cladding Panels								
NB-II Aluminum	0.27	0.63	1.09	1.06	1.04	1.03	0.95	
NB-II	0.26	0.53	1.00	1.03	0.97	1.01	0.90	
NB-II-B	0.35	0.63	1.08	1.12	0.94	0.77	0.95	
NB-SII-B	0.47	0.65	0.96	1.03	0.94	0.76	0.90	
4" Thick Cladding Panels								
NB-II Aluminum	0.87	1.26	1.18	1.04	1.08	1.00	0.95	
NB-IV	0.78	1.10	1.19	1.04	1.02	0.81	0.95	(1.10)
NB-IV-B	0.70	1.08	1.15	1.05	1.05	1.01	0.95	(1.10)
NB-SIV-B	0.95	0.83	0.96	0.98	0.99	0.79	0.95	

All tests performed by Riverbank Acoustical Laboratories, an independent NVLAP accredited acoustical testing facility. The test method conforms with the requirements of the ASTM Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method: ASTM C423-90a and E795-00.

Woodpecker Road Community Energy Initiative LLC
203 Crescent Street St, Suite 106
Waltham, MA 02453

ATTACHMENT 2 – Glare Study

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Technical Memorandum

To:	Woodpecker Road Community Energy Initiative LLC c/o Nicholas Hetland, ECA Solar
From:	Stephen Barrett
Date:	August 4, 2026
RE:	Glare Study, Woodpecker Road Solar Project, Seaford, DE

Executive Summary

Woodpecker Road Community Energy Initiative LLC (WRCEI) is developing a ground-mounted, single axis tracking solar photovoltaic (PV) project west of Woodpecker Road in Seaford, DE. WRCEI has engaged Barrett Energy Resources Group (BERG) to analyze potential impacts of glare from the project on nearby sensitive receptors.

BERG has utilized the Solar Glare Hazard Analysis Tool (SGHAT) which was developed by the US Department of Energy for the Federal Aviation Administration (FAA) to protect aviation sensitive receptors. For this project, SGHAT has been used to assess potential glare on residences and roadways near the project. Twenty-five (25) receptors, which are representative of expected results from other potential receptors in the area, were selected for analysis.

The model recorded no glare on any of the receptors analyzed. This is primarily due to the single axis tracking system which deflects potential glare upward and away from sensitive receptors on the ground. The results demonstrate that the project will have no glare impacts. This Technical Memorandum describes the project, modeling methodology, and results.

Project Description

The Woodpecker Road Solar Project would be located on undeveloped farmland west of Woodpecker Road in Seaford, DE as shown in **Figure 1**. The proposed project is a ground-mounted, fixed tilt facility with a capacity of 6.0178 MW DC (3.999 MW AC). It would be surrounded by landscape screening installed at a height of 4 feet above ground level (agl) at the time of planting to minimize visual impacts on adjacent land uses.

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Figure 1. Woodpecker Road Solar Project Locus

FAA Solar Policy

In 2013, the Federal Aviation Administration (FAA) published "Interim Policy, FAA Review of Solar Energy System Projects on Federally-Obligated Airport," which sets forth methods for assessing glare and the standards for determining impact for projects proposed on airport property. It also requires the use of modeling to assess glare and directs project proposers to the Solar Glare Hazard Analysis Tool (SGHAT) which was developed by the US Department of Energy at the request of the FAA. The Policy was issued as Final in May 2021. The US Department of Defense (DOD) also adopted SGHAT and the associated requirements to analyze glare under Instruction (DODI) 4165.57. Given the critical safety issues associated with

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aviation, the model produces a highly credible result that is being used to evaluate other glare sensitive receptors.

Glare Methodology and Standard of Impact

Prediction of potential glare occurrence from a solar PV project requires knowledge of the sun position, observer location, and the solar module/array characteristics (e.g., location, extent, tilt, azimuth or orientation, etc.). The path of glare is governed by the law of reflection which states that the angle of incidence equals the angle of reflection (see **Figure 2**). Vector algebra is then used to determine if glare would be visible from the prescribed observation points.

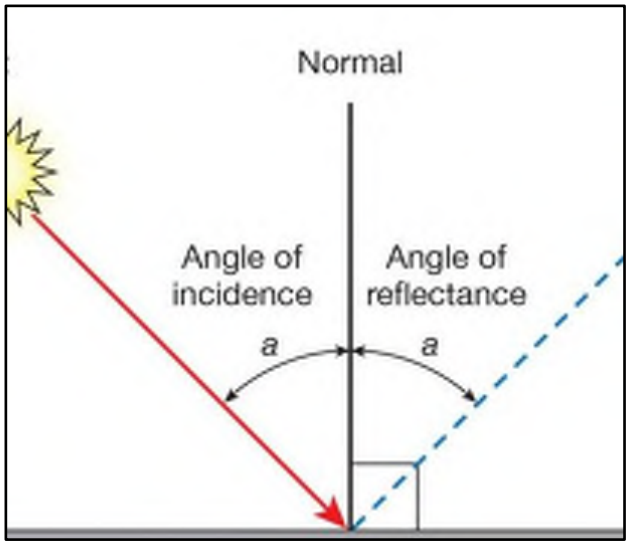

Figure 2. Law of Reflection

Figure 3 provides a simple representation of how the sun can produce glare on an automobile for a specific time and location. In accordance with the Law of Reflection, the angle of the light source from the sun must be equal to the angle of the reflection on a receptor. Therefore, when receptors are close to the ground (like a house or car), a reflection is only possible when the sun is also close to the ground (i.e., near sunrise or sunset). As the sun moves, the incidence of glare ends.

The SGHAT model is a credible tool for predicting glare based on the characteristics of the project and the identified receptor. It produces results including relative glare intensity identified by color based on three categories: green (low potential for an after-image), yellow (potential for an after-image), and red (retinal burn). While these categories apply to the FAA Policy for aviation receptors and are not specified in similar policies and ordinances for non-aviation receptors, it is appropriate to interpret the results, including the time and duration of occurrence, and draw a conclusion as to the significance of potential impact.

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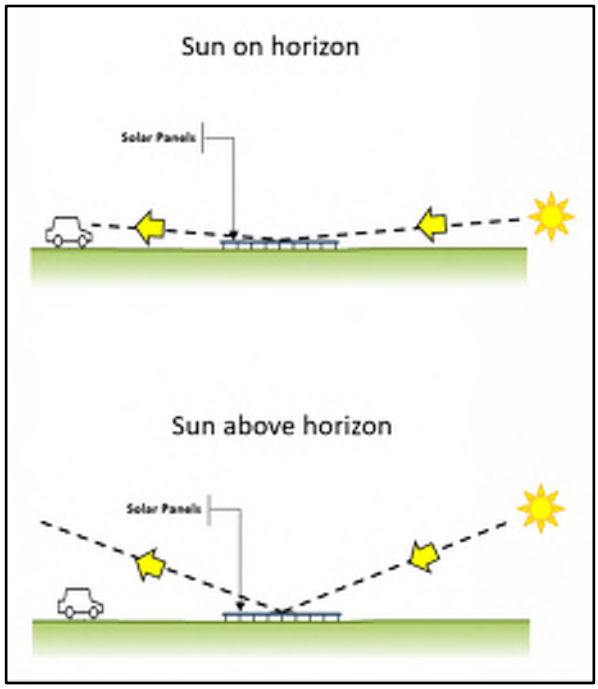

Figure 3. Geometric Representation of Potential Glare Impacts from the Sun

SGHAT Model Setup for Proposed Project

Regardless of the receptor to be analyzed, the model set-up requires locating the solar project, inputting its design characteristics, and identifying sensitive receptors for analysis. The position and movement of the sun throughout the year is built into the model.

For the Woodpecker Road Solar Project, BERG used the PV project polygon tool to draw the footprint of the solar array on SGHAT's interactive Google map. The specific attributes of the solar array were then input into the model. As the project proposes a single axis tracking system, SGHAT provides relevant fields for the project characteristics, including an array orientation of 180°, maximum tracking angle of 60° and a resting (stowage) angle of 5°. The average panel height 10 feet above ground level (agl), and a panel surface with no anti-reflective coating were also input as a worst-case scenario. **Figure 4** is a schematic showing how the solar panels track the sun's position throughout the day. Landscape screening is also proposed to surround the facility, and it has been included in the model with an installed height of 4 feet (agl) at the time of planting.

Twenty-five (25) receptors, which are representative of expected results from others nearby, were selected for analysis. The sensitive receptors are motor vehicle traveling on Woodpecker and Boyce Roads, and W Stein Highway, and on nearby residences as shown in **Figure 5**.

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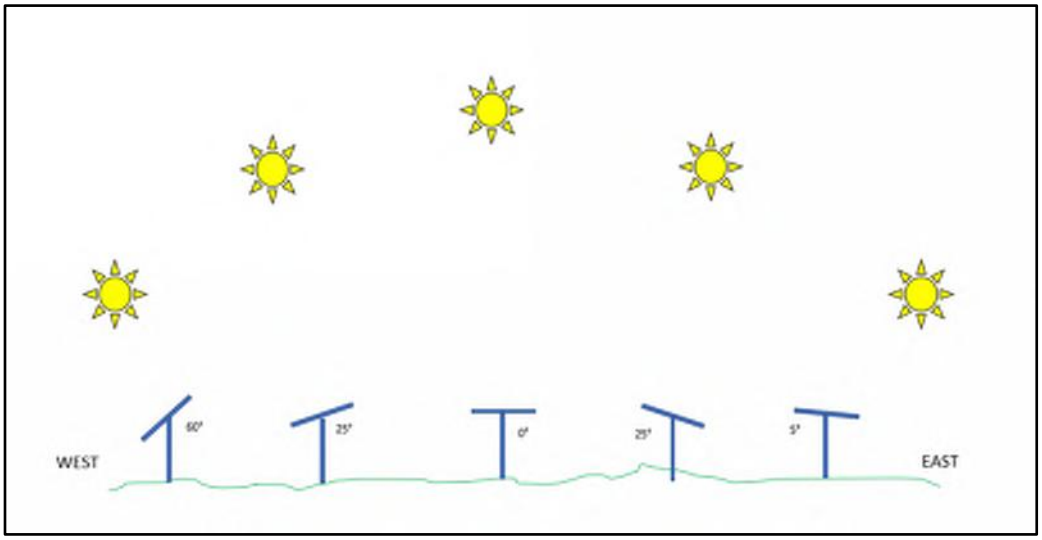

Figure 4. Schematic of the Single Axis Tracking System Follows the Sun During the Day

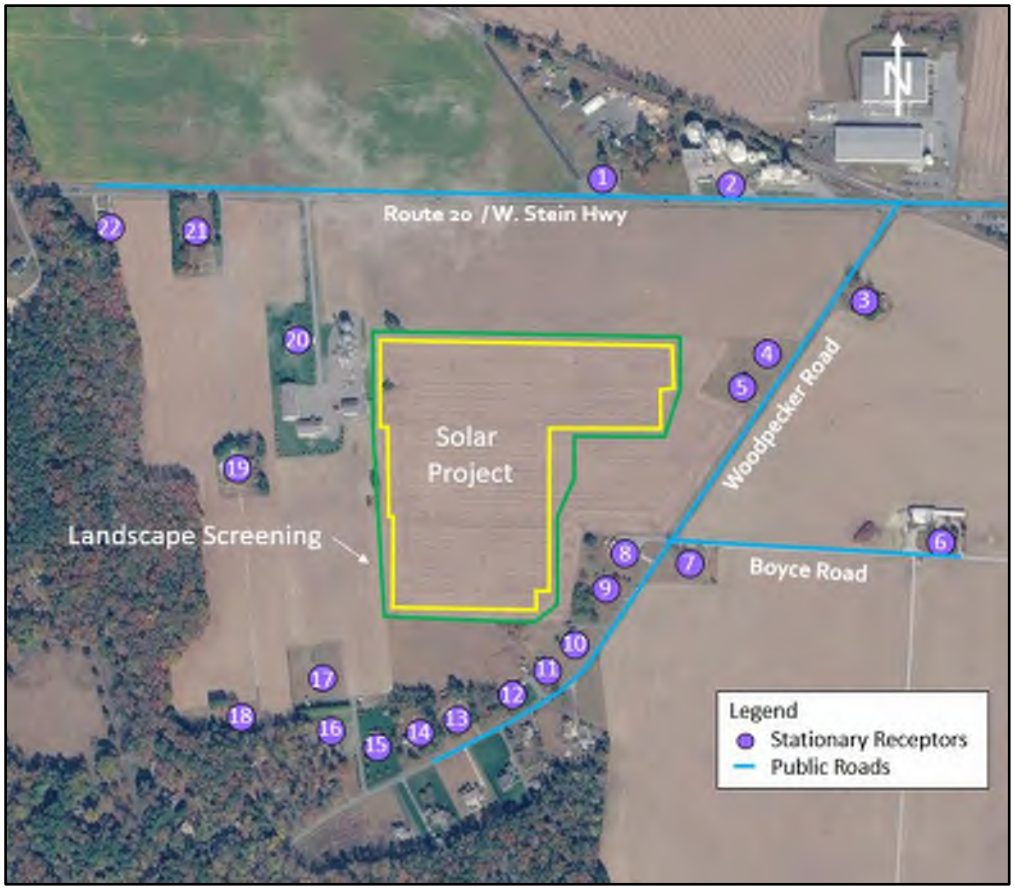

Figure 5. Residential and Motor Vehicle Receptor Evaluated in the Model

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The model's route tool was used to locate the segments of the roadways for analysis, and the observation point tool for individual stationary receptor points located on the Google map. For the motor vehicle analysis, the driver's height above the roadway was set at 4 feet agl to represent a passenger vehicle. For residential receptors, two heights were used: 5 feet agl for single story homes (1, 2, 5-14, 16, 18, and 22) to represent a person standing on the property; and 16 feet agl for two story homes (3-5, 15, 17, 19-21) to represent a person looking out a second story window. Forested areas surrounding the project were conservatively input at 30 feet agl.

The glare analysis button was activated, and the model evaluated glare from various sun angles at 1-minute intervals throughout the year to predict if glare could be observed from the sensitive receptors.

Glare Model Results

The final modeling report is provided in Attachment A. The results show no glare on any of the receptors analyzed. These results are primarily due to the single axis tracking system which deflects potential glare upward and over sensitive receptors on the ground.

Conclusions

Barrett Energy Resources Group (BERG) has used the SGHAT modeling tool developed by the US Department of Energy to assess the potential effects of glare from the Woodpecker Road Solar Project on residences and roadways near the project. Twenty-five (25) receptors, which are representative of expected results from others nearby, were analyzed.

The model recorded no glare on any of the receptors analyzed. These results demonstrate that the project will not result in glare impacts on nearby sensitive receptors.

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Attachment A

Glare Modeling Results

Motor Vehicle and Residential Receptors

FORGESOLAR GLARE ANALYSIS

Project: **Woodpecker Road Solar Project**
A ground-mounted, single axis tracking solar facility

Site configuration: **Proposed**
Calculated via ForgeSolar Radiometric Physics Engine v3.2.1

Client: ECA Solar

Created 28 Jul, 2026
Updated 04 Aug, 2026
Time-step 1 minute
Timezone offset UTC-5
Minimum sun altitude 0.0 deg
DNI peaks at 1,000.0 W/m^2
Category 1 MW to 5 MW
Site ID 184341.30401

Ocular transmission coefficient 0.5
Pupil diameter 0.002 m
Eye focal length 0.017 m
Sun subtended angle 9.3 mrad
Min luminance threshold 5,000 cd/m^2

Summary of Results No glare predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	SA tracking	SA tracking	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Boyce Road	0	0.0	0	0.0
Woodpecker Road	0	0.0	0	0.0
W Stein Hwy	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 21	0	0.0	0	0.0
OP 22	0	0.0	0	0.0

Component Data

PV Arrays

Name: PV array 1
Description: Ground-mounted single axis tracking solar array
Axis tracking: Single-axis rotation
Backtracking: Shade
Tracking axis orientation: 180.0°
Max tracking angle: 60.0°
Resting angle: 5.0°
Ground Coverage Ratio: 0.5
Rated power: -
Panel material: Smooth glass without AR coating

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.639919	-75.656949	33.57	10.00	43.57
2	38.639904	-75.652234	28.01	10.00	38.01
3	38.639418	-75.652234	27.12	10.00	37.12
4	38.639410	-75.652524	28.02	10.00	38.02
5	38.638698	-75.652502	27.78	10.00	37.78
6	38.638689	-75.654122	29.94	10.00	39.94
7	38.636662	-75.654192	26.40	10.00	36.40
8	38.636661	-75.654289	26.52	10.00	36.52
9	38.636542	-75.654291	26.52	10.00	36.52
10	38.636556	-75.656689	28.98	10.00	38.98
11	38.637759	-75.656716	27.46	10.00	37.46
12	38.637759	-75.656776	27.55	10.00	37.55
13	38.638844	-75.656806	28.34	10.00	38.34
14	38.638848	-75.656938	29.23	10.00	39.23

Route Receptors

Name: Boyce Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.637397	-75.652385	26.11	4.00	30.11
2	38.637263	-75.648362	27.36	4.00	31.36

Name: Woodpecker Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.641627	-75.648616	26.43	4.00	30.43
2	38.635510	-75.654002	26.24	4.00	30.24
3	38.635091	-75.654796	25.32	4.00	29.32
4	38.633984	-75.657671	18.47	4.00	22.47

Name: W Stein Hwy
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 90.0°

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.641814	-75.661577	28.29	4.00	32.29
2	38.641646	-75.648530	26.40	4.00	30.40

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	38.641924	-75.653440	32.25	5.00
OP 2	2	38.641866	-75.651302	30.53	5.00
OP 3	3	38.640412	-75.649307	28.06	16.00
OP 4	4	38.639767	-75.650830	26.34	16.00
OP 5	5	38.639398	-75.651270	26.44	16.00
OP 6	6	38.637437	-75.647901	28.69	5.00
OP 7	7	38.637060	-75.651989	26.72	5.00
OP 8	8	38.637261	-75.653073	26.45	5.00
OP 9	9	38.636917	-75.653373	26.12	5.00
OP 10	10	38.636163	-75.653985	25.56	5.00
OP 11	11	38.635819	-75.654403	24.05	5.00
OP 12	12	38.635585	-75.654789	24.93	5.00
OP 13	13	38.635258	-75.655766	26.30	5.00
OP 14	14	38.634919	-75.656500	24.72	5.00
OP 15	15	38.634877	-75.657100	23.43	16.00
OP 16	16	38.635087	-75.657787	25.53	5.00
OP 17	17	38.635749	-75.657916	25.60	16.00
OP 18	18	38.635279	-75.659321	23.80	5.00
OP 19	19	38.638422	-75.659236	32.48	16.00
OP 20	20	38.640006	-75.658366	29.47	16.00
OP 21	21	38.641255	-75.659954	28.56	16.00
OP 22	22	38.641464	-75.661467	28.21	5.00

Glare Analysis Results

Summary of Results No glare predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV array 1	SA tracking	SA tracking	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

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OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 21	0	0.0	0	0.0
OP 22	0	0.0	0	0.0

PV: PV array 1 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Boyce Road	0	0.0	0	0.0
Woodpecker Road	0	0.0	0	0.0
W Stein Hwy	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0
OP 21	0	0.0	0	0.0
OP 22	0	0.0	0	0.0

PV array 1 and Route: Boyce Road

No glare found

PV array 1 and Route: Woodpecker Road

No glare found

PV array 1 and Route: W Stein Hwy

No glare found

PV array 1 and OP 1

No glare found

PV array 1 and OP 2

No glare found

PV array 1 and OP 3

No glare found

PV array 1 and OP 4

No glare found

PV array 1 and OP 5

No glare found

PV array 1 and OP 6

No glare found

PV array 1 and OP 7

No glare found

PV array 1 and OP 8

No glare found

PV array 1 and OP 9

No glare found

PV array 1 and OP 10

No glare found

PV array 1 and OP 11

No glare found

PV array 1 and OP 12

No glare found

PV array 1 and OP 13

No glare found

PV array 1 and OP 14

No glare found

PV array 1 and OP 15

No glare found

PV array 1 and OP 16

No glare found

PV array 1 and OP 17

No glare found

PV array 1 and OP 18

No glare found

PV array 1 and OP 19

No glare found

PV array 1 and OP 20

No glare found

PV array 1 and OP 21

No glare found

PV array 1 and OP 22

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.
Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.
The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.
The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.
The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

ForgeSolar default analysis parameters and observer eye characteristics, listed for reference only. The values used for this analysis are given in the site summary above.

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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This analysis was conducted using the best available radiometric modeling at the time of generation. Future updates to the modeling methodology may yield different results.

2.2 Application for Planning and Zoning Commission

File #: _____

Planning & Zoning Commission 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)
Conditional Use ✓
Zoning Map Amendment ___

Site Address of Conditional Use/Zoning Map Amendment

5063 Woodpecker Road, Seaford, DE 19973

Type of Conditional Use Requested:
Solar Energy System

Tax Map #: 531-12.00-84.01 **Size of Parcel(s):** 39.281 AC.

Current Zoning: AR1 **Proposed Zoning:** AR1 **Size of Building:** 0 S.F.

Land Use Classification: Developing Area

Water Provider: N/A **Sewer Provider:** N/A

Applicant Information

Applicant Name: Woodpecker Road Community Energy Initiative LLC c/o Michael Redding, P.E.
Applicant Address: 203 Crescent St, Suite 106
City: Waltham State: MA ZipCode: 02453
Phone #: (603) 494-6801 E-mail: mr@ecasolar.com

Owner Information

Owner Name: Denise O. Taylor, Richard A. Obier, Et Al, c/o Denise Taylor
Owner Address: 5063 Woodpecker Road
City: Seaford State: DE Zip Code: 19973
Phone #: (302) 245-7703 E-mail: dtaylor7989@yahoo.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Becker Morgan Group Inc. c/o Michael Henry
Agent/Attorney/Engineer Address: 309 South Governors Avenue
City: Dover State: DE Zip Code: 19904
Phone #: (302) 734-7950 E-mail: mhenry@beckermorgan.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✓ **Completed Application**

✓ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✓ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✓ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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: 6/9/2025

Signature of Owner

Date: 06/10/2025

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

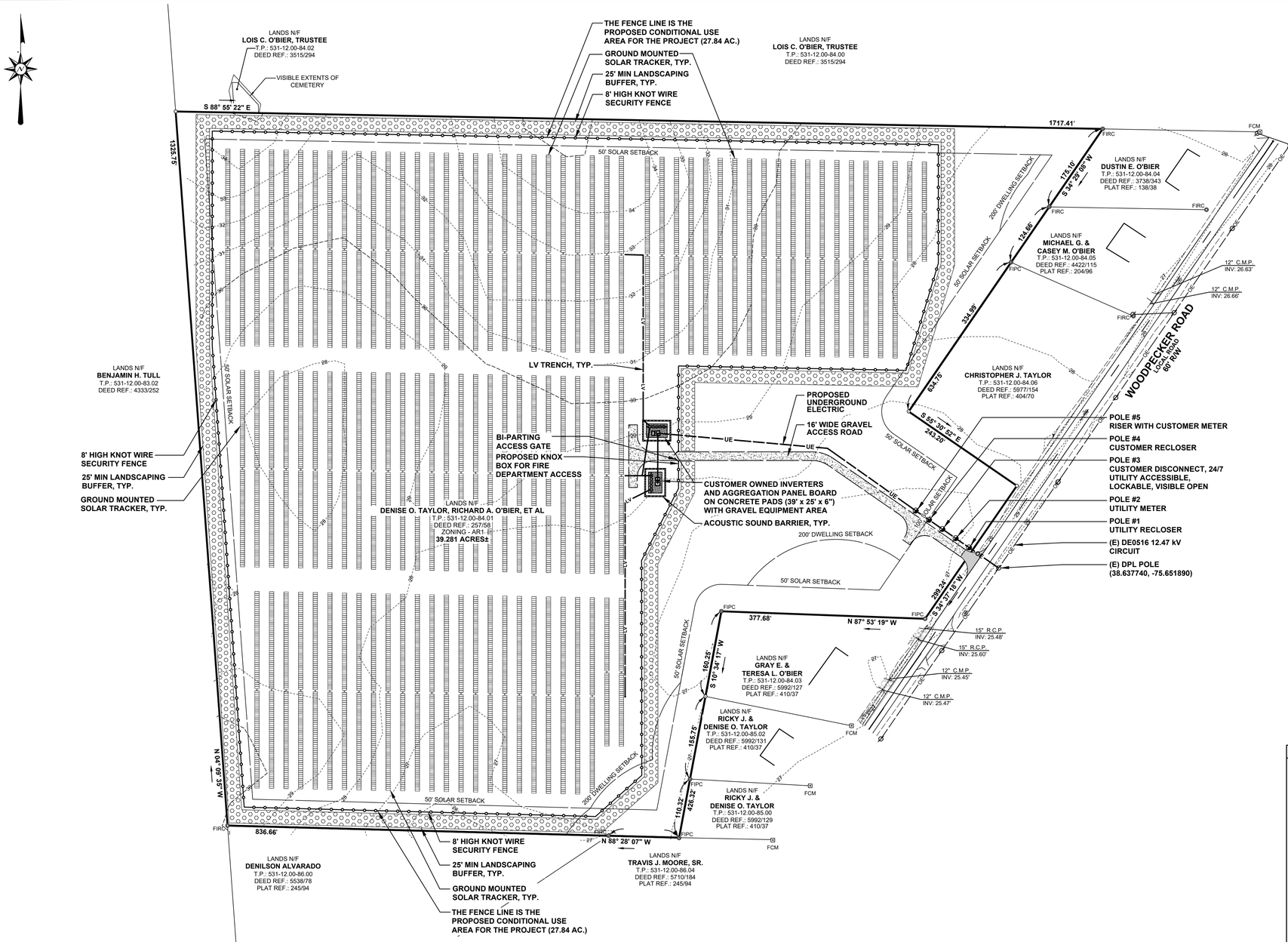
Subdivision: _____

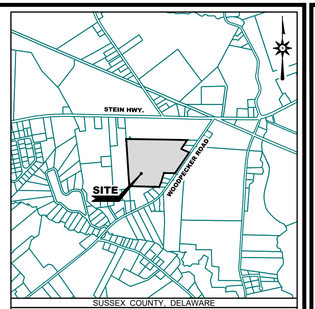
Date of PC Hearing: _____ Recommendation of PC Commission: _____

Date of CC Hearing: _____ Decision of CC: _____

2.3 Conditional Use Site Plan and Landscape Plan

BECKER MORGAN GROUP ARCHITECTURE - ENGINEERING DELAWARE MARYLAND NORTH CAROLINA www.beckermorgan.com





LOCATION MAP SCALE: 1" = 2000'

LEGEND

ITEM	EXISTING	PROPOSED
CONCRETE CURB & GUTTER		
CONCRETE SIDEWALK, SLAB / PAVING		
IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT		
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	N/A
WIRE FENCE	x x x	x x x
CHAINLINK FENCE	o o o	o o o
STOCKADE FENCE		
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)		
DRAINAGE DITCH OR SWALE		
WETLAND BOUNDARY LINE		N/A
CONTOUR	49	55
ELEVATION SPOT SHOT	43.55	25.50 T.C. 25.00 B.C.
BENCH MARK	25.15	N/A
PROPERTY OR RIGHT-OF-WAY LINE		
CENTERLINE		
LIGHT POLE		

ITEM	EXISTING	PROPOSED
SANITARY GRAVITY SEWER LINE (**S**) SIZE & FLOW DIRECTION	EX. 10"S	10" S
SANITARY SEWER FORCE MAIN (**F.M.**) SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
SANITARY SEWER MANHOLE (**S.S.M.H.**)		
SANITARY SEWER CLEANOUT (**C.O.**)		
WATER MAIN & SIZE	EX. 10" W	12" W
FIRE HYDRANT (**F.H.**)	F.H.	F.H.
WATER VALVE (**W.V.**) OR METER (**W.M.**)	W.M. W.V.	W.M. W.V.
STORM DRAIN MANHOLE (**S.D.M.H.**)		
STORM DRAIN LINE (**CMP**, **RCP**, **HDPE**)		
CATCH BASIN (**C.B.**)		
UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE (**O.T.**), ELECTRIC (**O.E.**)		
UNDERGROUND ELECTRIC (**U.E.**)	U.E.	U.E.
UNDERGROUND TELEPHONE (**U.T.**)	U.T.	U.T.
UNDERGROUND GAS MAIN (**G**)	EX. 2" G	2" G

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO CONSTRUCT A COMMUNITY SOLAR ENERGY PROJECT WITH ASSOCIATED ELECTRICAL EQUIPMENT AND GRAVEL ACCESS DRIVES.
2. THE TOPOGRAPHICAL DATA SHOWN HEREON WAS COMPILED FROM A FIELD SURVEY PERFORMED BY BECKER MORGAN GROUP, INC., IN APRIL 2025.
3. THE BOUNDARY LINES PORTRAYED HEREON HAVE BEEN ESTABLISHED BASED SOLELY ON PHYSICAL EVIDENCE DISCOVERED IN THE FIELD IN CONJUNCTION WITH DETERMINATIONS DERIVED FROM SOURCE OF TITLE AND ADJACENT DEED RECORD INFORMATION.
4. THIS SURVEY DOES NOT VERIFY THE EXISTENCE OR NON-EXISTENCE OF EASEMENTS OR RIGHTS OF WAY AFFECTING THIS PARCEL.
5. A WETLANDS DELINEATION REPORT WAS PROVIDED BY GEO-TECHNOLOGY ASSOCIATES, LLC AND IT WAS DETERMINED THERE ARE NO WETLANDS ON THE SUBJECT PARCEL.
6. ALL UTILITIES SHOWN HEREON ARE BASED ON VISUAL OBSERVATIONS IN THE FIELD. UNDERGROUND UTILITIES WERE NOT MARKED BY A UTILITY LOCATOR. IF THE CONTRACTOR RELIES ON THE UTILITY LOCATIONS SHOWN HEREON, HE DOES SO AT HIS OWN RISK AND WILL NOT BE ENTITLED TO ADDITIONAL COMPENSATION DUE TO TIME DELAYS FROM SAID RELIANCE.
7. BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION HE MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM SUSSEX COUNTY, DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC), DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT), SUSSEX CONSERVATION DISTRICT (SCD) AND ALL APPROPRIATE STATE AND COUNTY AGENCIES.
8. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE TO THE SUSSEX COUNTY AND THE STATE OF DELAWARE (DELDOT) STANDARDS AND CONSTRUCTION SPECIFICATIONS.
9. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
10. ALL WORK WITHIN STATE MAINTAINED ROAD RIGHT-OF-WAYS SHALL MEET THE REQUIREMENTS AS SET FORTH IN THE CURRENT REVISION OF THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION BY THE DELAWARE DEPARTMENT OF TRANSPORTATION.

SHEET INDEX

C-001	CONDITIONAL USE PLAN
C-201	SITE PLAN
L-001	LANDSCAPE PLAN

OWNERS CERTIFICATION

I, DENISE O. TAYLOR, HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

DENISE O. TAYLOR — DATE

OWNERS CERTIFICATION

WE, WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC, HEREBY CERTIFY THAT WE ARE THE DEVELOPER/LESSEE OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT OUR DIRECTION, AND THAT WE ACKNOWLEDGE THE SAME TO BE OUR ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

MICHAEL REDDING, P.E. — DATE

ENGINEERS CERTIFICATION

I, J. MICHAEL RIEMANN, P.E. HEREBY CERTIFY THAT I AM A REGISTERED 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.

J. MICHAEL RIEMANN, P.E. P.E. NO. 13772 — DATE

SITE DATA

1.	OWNER OF RECORD:	DENISE O. TAYLOR, RICHARD A. O'BIER, ET AL 5063 WOODPECKER RD. SEAFORD, DE 19973	
2.	LESSEE:	WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC c/o MICHAEL REDDING, P.E. 203 CRESCENT STREET, SUITE 106 WALTHAM, MA, 02453 (603) 494 - 6801 mr@ecasolar.com	
3.	ENGINEER / SURVEYOR:	BECKER MORGAN GROUP INC. 312 W. MAIN ST., #300 SALISBURY, MD 21801 (410) 546-9100	
4.	PROPERTY MAP NUMBER:	531-12.00-84.01	
5.	PROPERTY ADDRESS:	5063 WOODPECKER RD. SEAFORD, DE 19973	
6.	DEED SUMMARY:	257/58	
7.	PRESENT USE:	AGRICULTURE	
8.	PROPOSED USE:	COMMUNITY SOLAR ENERGY SYSTEM	
9.	ZONING CLASSIFICATION:	EXISTING: AR1 / (SUSSEX COUNTY) PROPOSED: AR1 / (SUSSEX COUNTY)	
10.	BULK STANDARDS:	AR1 - SUSSEX COUNTY FRONT: 40 FT. SIDE: 15 FT. REAR: 20 FT.	SOLAR ORDINANCE NO. 2920 FROM STREET: 100 FT. FROM PROPERTY LINE: 50 FT. FROM BUILDING: 200 FT.
11.	TOTAL SITE AREA:	39.281 ACRES±	
12.	SITE AREA SUMMARY:	PROPERTY AREA = 39.28 AC. TOTAL PROJECT AREA = 31.59 AC. PROJECT FENCED AREA (COND. USE AREA) = 27.84 AC. PROJECT PANEL AREA = 21.82 AC.	
13.	IMPERVIOUS COVERAGE:	EXISTING: 0 S.F. (0.00 AC) PROPOSED: 16,656 S.F. (0.38 AC) TOTAL AT COMPLETION: 16,656 S.F. (0.38 AC)	
14.	WETLAND AREA:	0.00 AC	
15.	WOODLAND AREA:	0.00 AC	
16.	TOTAL DISTURBED AREA:	0.43 AC	
17.	FLOOD ZONE:	SITE APPEARS TO BE LOCATED WITHIN FLOOD ZONE "X", AN AREA OF MINIMAL FLOOD HAZARD, PER FEMA PANELS 10005C0245L WITH AN EFFECTIVE DATE OF 06/20/2018 AND 10005C0244K WITH AN EFFECTIVE DATE OF 03/16/2015.	
18.	ROAD CLASSIFICATION:	WOODPECKER ROAD (LOCAL ROAD)	
19.	DELDOT TID:	PARCEL OUTSIDE OF DELDOT TRANSPORTATION IMPROVEMENT DISTRICT	
20.	INVESTMENT LEVEL:	LEVEL 2	
21.	SURVEY UNIT:	LINEAR: US SURVEY FOOT ANGULAR: DEGREES MINUTES SECONDS (DMS)	
22.	MONUMENTATION:	9 FOUND	
23.	SURVEY DATUM:	MINIMALLY CONSTRAINED POST PROCESSED STATIC GPS DATA USING MULTIPLE NGS CORS STATIONS VERTICAL: NAVD 88 HORIZONTAL: NAD83 (2011)	
24.	PROPERTY LOCATION:	LATITUDE: 38° 38' 17.89" N LONGITUDE: 75° 39' 15.30" W	
25.	SOLAR FIELD DATA:	ARRAY SIZE: 3,999 MW AC/ 6.0178 MW DC TOTAL TABLES: 398 (1'X26') TABLE TILT: TRACKER TOTAL MODULES: 9,552 MODULE: 525W RACKING FOUNDATION: DRIVEN POST FENCED AREA= 27.84 AC. ± (1,212,518 S.F.) PANEL AREA= 21.82 AC. ± (950,625 S.F.)	

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
Dover
302.734.7950
Newark
302.369.3700

Maryland
Salisbury
410.546.9100

North Carolina
Charlotte
980.270.9100
Raleigh
919.243.1332
Wilmington
910.341.7600

www.beckermorgan.com

eca solar

PROJECT TITLE

WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC

5063 WOODPECKER ROAD
SEAFORD
SUSSEX COUNTY, DE
SEAFORD HUNDRED

SHEET TITLE

CONDITIONAL USE PLAN

0 50 100 200

SCALE: 1" = 100'

ISSUE BLOCK		
MARK	DATE	DESCRIPTION

LAYER/STATE: C-001

PROJECT NO.:	2025123.00
DATE:	7-1-25
SCALE:	1" = 100'
DRAWN BY: A.J.S.	PROJ. MGR.: M.J.H.

SHEET

C-001

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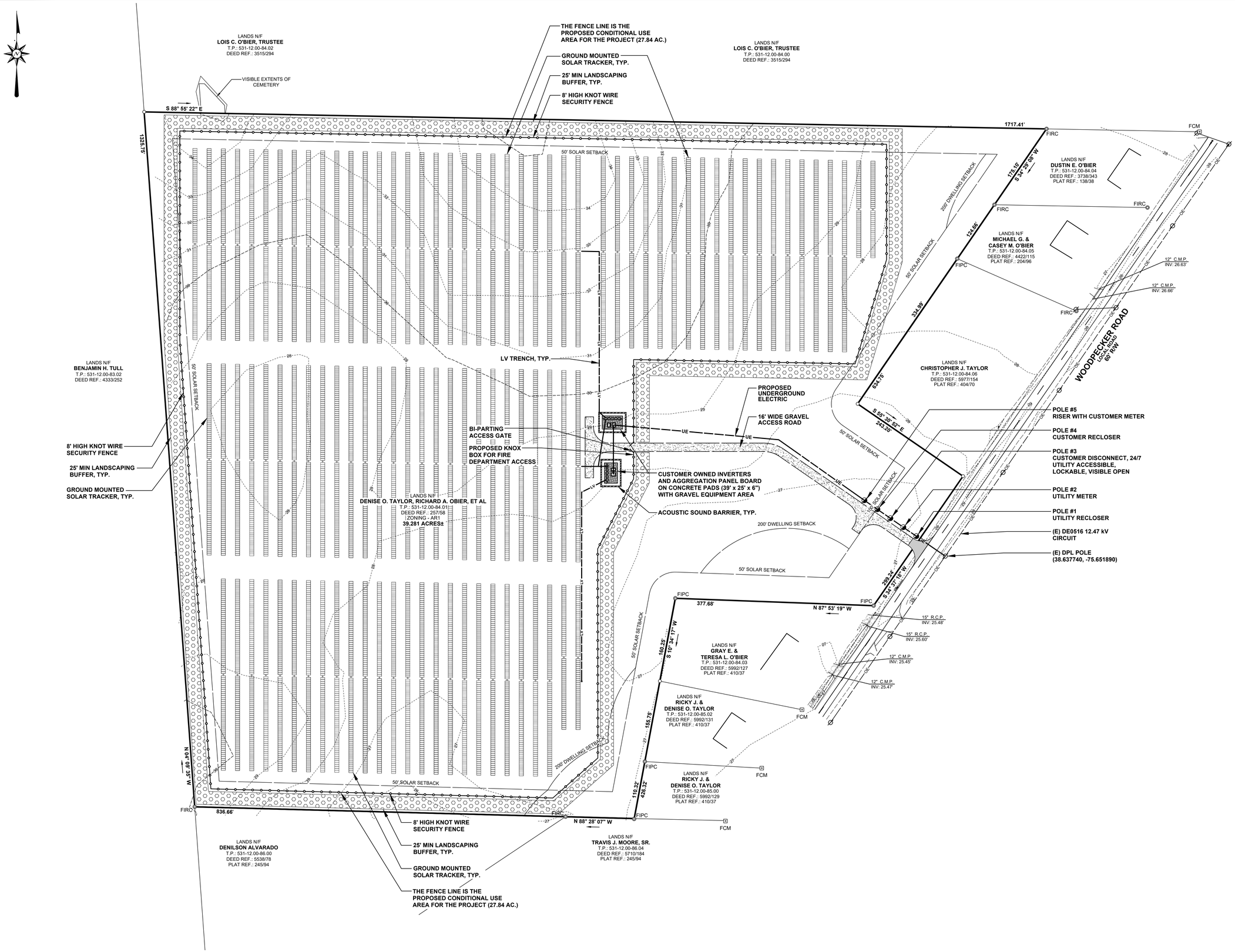

BECKER MORGAN GROUP

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Delaware
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302.734.7950
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eca solar

PROJECT TITLE

WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC

5063 WOODPECKER ROAD
SEAFORD
SUSSEX COUNTY, DE
SEAFORD HUNDRED

SHEET TITLE

SITE PLAN

0 40 80 160

SCALE: 1" = 80'

ISSUE BLOCK

MARK	DATE	DESCRIPTION

LAYER STATE: C-201

PROJECT NO.:	2025123.00
DATE:	7-1-25
SCALE:	1" = 80'
DRAWN BY: A.J.S.	PROJ. MGR.: M.J.H.

SHEET

C-201

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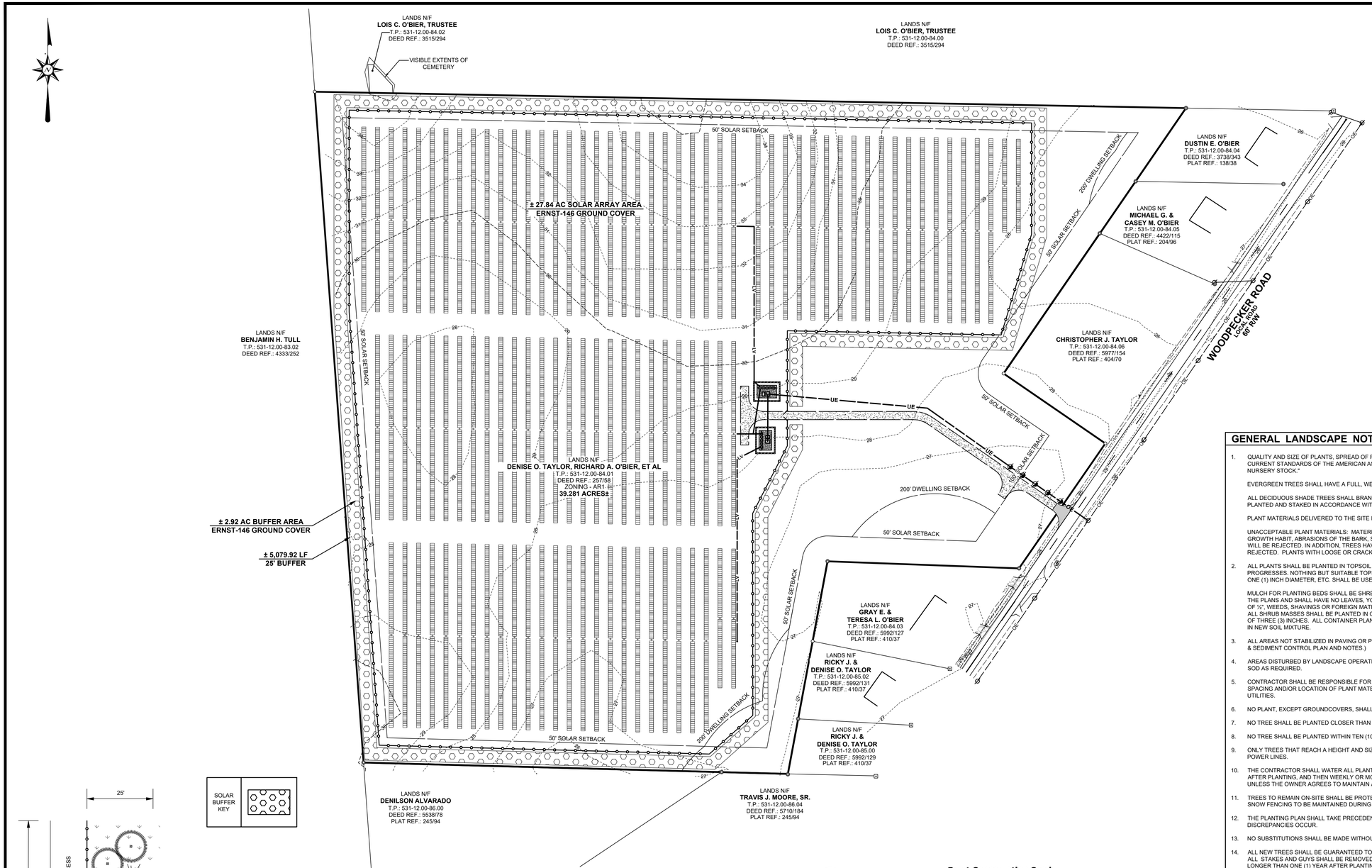


GENERAL LANDSCAPE NOTES :

1. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN "AMERICAN STANDARDS FOR NURSERY STOCK."

   EVERGREEN TREES SHALL HAVE A FULL, WELL-BRANCHED, CONICAL FORM TYPICAL OF THE SPECIES.

   ALL DECIDUOUS SHADE TREES SHALL BRANCH A MINIMUM OF 7'-0" ABOVE GROUND LEVEL. TREES SHALL BE PLANTED AND STAKED IN ACCORDANCE WITH THE DETAIL SHOWN.

   PLANT MATERIALS DELIVERED TO THE SITE IN UNCOVERED TRUCKS WILL BE REJECTED.

   UNACCEPTABLE PLANT MATERIALS: MATERIALS WHICH HAVE DAMAGED OR CROOKED LEADERS, DEFORMED GROWTH HABIT, ABRASIONS OF THE BARK, SUN SCALD, WINDBURN, DISFIGURING NOT COMPLETELY CALLUSED WILL BE REJECTED. IN ADDITION, TREES HAVING THEIR CENTRAL LEADERS HEADED BACK WILL ALSO BE REJECTED. PLANTS WITH LOOSE OR CRACKED ROOT BALL OR CONTAINERS WILL BE REJECTED.

2. ALL PLANTS SHALL BE PLANTED IN TOPSOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACKFILLING PROGRESSES. NOTHING BUT SUITABLE TOPSOIL, FREE OF DRY SOD, STIFF CLAY, LITTER, STONES IN EXCESS OF ONE (1) INCH DIAMETER, ETC. SHALL BE USED FOR PLANTING.

   MULCH FOR PLANTING BEDS SHALL BE SHREDDED HARDWOOD BARK MULCH UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SHALL HAVE NO LEAVES, YOUNG GREEN GROWTH, BRANCHES, TWIGS, GREATER IN DIAMETER OF ½", WEEDS, SHAVINGS OR FOREIGN MATERIAL SUCH AS STONES, ETC. SHALL BE MIXED WITH THE MULCH. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS WITH A LIGHTLY COMPACTED DEPTH OF THREE (3) INCHES. ALL CONTAINER PLANTS ARE TO HAVE ROOTS CUT ON FOUR SIDES AND/ OR SPREAD OUT IN NEW SOIL MIXTURE.

3. ALL AREAS NOT STABILIZED IN PAVING OR PLANT MATERIALS SHOULD BE SEEDED AND MULCHED. (SEE EROSION & SEDIMENT CONTROL PLAN AND NOTES.)

4. AREAS DISTURBED BY LANDSCAPE OPERATIONS SHALL BE GRADED TO MATCH EXISTING TOPSOIL AND SEED OR SOD AS REQUIRED.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND MAY MAKE MINOR ADJUSTMENTS IN SPACING AND/OR LOCATION OF PLANT MATERIALS. CONTRACTOR TO VERIFY "AS BUILT" LOCATION OF ALL UTILITIES.

6. NO PLANT, EXCEPT GROUNDCOVERS, SHALL BE WITHIN THREE (3) FEET FROM SIDEWALKS.

7. NO TREE SHALL BE PLANTED CLOSER THAN TEN (10) FEET FROM ANY STRUCTURE OR BUILDING.

8. NO TREE SHALL BE PLANTED WITHIN TEN (10) FEET OF UNDERGROUND UTILITIES OR FIRE HYDRANTS.

9. ONLY TREES THAT REACH A HEIGHT AND SIZE AT MATURITY OF SMALL TO MEDIUM SHALL BE PLANTED UNDER POWER LINES.

10. THE CONTRACTOR SHALL WATER ALL PLANTS THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING, AND THEN WEEKLY OR MORE OFTEN, IF NECESSARY, DURING THE FIRST GROWING SEASON, UNLESS THE OWNER AGREES TO MAINTAIN AND WATER THEM.

11. TREES TO REMAIN ON-SITE SHALL BE PROTECTED WITH SNOW FENCE DURING CONSTRUCTION (SEE DETAIL). SNOW FENCING TO BE MAINTAINED DURING CONSTRUCTION BY CONTRACTOR.

12. THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.

13. NO SUBSTITUTIONS SHALL BE MADE WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT.

14. ALL NEW TREES SHALL BE GUARANTEED TO SURVIVE FOR ONE FULL YEAR AFTER INSTALLATION (FULL COST). ALL STAKES AND GUYS SHALL BE REMOVED FROM TREES AND SITE AS EARLY AS THREE (3) MONTHS, BUT NO LONGER THAN ONE (1) YEAR AFTER PLANTING.

SUSSEX COUNTY SOLAR - TREE DENSITY & BUFFER NOTES:

1. PERIMETER BUFFER PROVIDED : 5,079.92 LF OF OPAQUE EVERGREEN BUFFERING

   EACH EVERGREEN TREE SHALL BE PLANTED AT A HEIGHT OF NO LESS THAN 6' NO SPECIES SHALL COMPRISE OF MORE THAN 40% OF THE TOTAL WITHIN 100LF THE FOLLOWING SPECIES OF EVERGREEN TREES ARE ACCEPTABLE:

ILEX OPACA	30' MATURE HEIGHT
MAGNOLIA GRANDIFLORA 'LITTLE GEM'	20' MATURE HEIGHT
MAGNOLIA VIRGINIANA	35' MATURE HEIGHT
THUJA OCCIDENTALIS 'TECHNY'	15' MATURE HEIGHT
THUJA X GREEN GIANT	40' MATURE HEIGHT

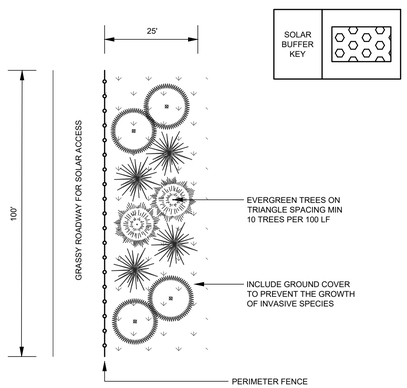
2. BUFFER TREES PROVIDED : 5,079.92 LF / 100 LF @ 25' WIDE = 50.80 BUFFER UNITS
   50.80 BUFFER UNITS X 10 TREES = 508 TREES (MIN)

3. GROUND COVER PROVIDED: SOLAR ARRAY AREA = 27.84 AC
   BUFFER AREA = 2.92 AC
   TOTAL GROUND COVER ACREAGE: 30.76 ACRES

DELAWARE LANDSCAPE ARCHITECTS CERTIFICATION

I, CHAD D. CARTER, RLA, ASLA, HEREBY CERTIFY THAT I AM A LANDSCAPE ARCHITECT IN THE STATE OF DELAWARE, THAT THE LANDSCAPING INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO MY BEST KNOWLEDGE AND BELIEF, REPRESENTS GOOD LANDSCAPING PRACTICES.

CHAD D. CARTER, RLA, ASLA S1-499 DATE



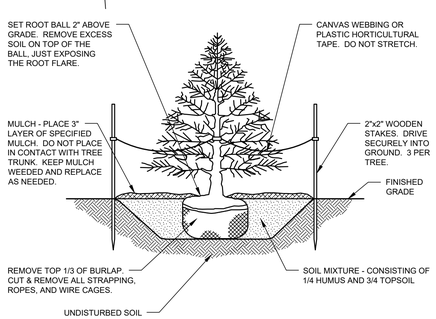
NOTES:

BUFFERYARD PLANTINGS SHALL BE ARRANGED IN A WAY THAT DIAMETER OF TREES SHALL OVERLAP WHEN VIEWED AT A PERPENDICULAR ANGLE TO EFFECTIVELY ACHIEVE AN OPAQUE VISUAL BARRIER.

EVERGREEN TREES SHALL PROVIDE A MINIMUM OF 3 SPECIES PER 100 LF OF BUFFER. NO PLANTED SPECIES SHALL MAKE UP MORE THAN 40% OF THE PLANTINGS.

SUSSEX CO. SOLAR BUFFERYARD DETAIL

NO SCALE BMG NO. : L-08



EVERGREEN TREE PLANTING DETAIL

NO SCALE BMG NO. : L-02

ERNST SEEDS

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: June 10, 2025

Fuzz & Buzz Mix - Standard - ERNMX-146

	Botanical Name	Common Name	Price/Lb
26.70 %	*Lolium perenne, 'Tetra Sweet', Tetraploid*	Perennial Ryegrass, 'Tetra Sweet', Tetraploid	3.64
21.00 %	*Dactylis glomerata, Potomac*	Orchardgrass, Potomac	4.23
18.80 %	*Poa pratensis, 'Ginger'*	Kentucky Bluegrass, 'Ginger' (pasture type)	4.55
12.40 %	*Bromus biebersteinii, 'Fleet'*	Meadow Brome, 'Fleet'	5.98
5.70 %	*Trifolium hybridum*	Alsike Clover	5.20
5.00 %	*Festuca elatior x Lolium perenne, Duo*	Festulolium, 'Duo'	3.90
4.80 %	*Trifolium pratense, Medium, Variety Not Stated*	Red Clover, Medium, Variety Not Stated	5.20
2.00 %	*Lotus corniculatus, 'Norcen'*	Bird's Foot Trefoil, 'Norcen'	11.70
1.00 %	*Linum perenne*	Perennial Blue Flax	52.00
0.90 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	31.20
0.80 %	*Cichorium intybus*	Blue Chicory	20.80
0.50 %	*Chrysanthemum leucanthemum*	Oxeye Daisy	44.20
0.30 %	*Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	312.00
0.10 %	*Pycnanthemum tenuifolium*	Narrowleaf Mountainmint	260.00
100.00 %		**Mix Price/Lb Bulk:**	**$6.82**

Seeding Rate: Expect to apply about 40 lbs per acre with a cover crop of annual ryegrass 12 lbs/acre

Forage & Pasture Sites; Forage & Pasture Sites - Herbaceous Perennial; Solar Sites

The Fuzz & Buzz Mix-Standard was developed to address the unique nutritional needs of sheep, while providing a low-growing, easily maintained and sustainable vegetation solution for solar installations. The plant species were chosen with guidance from the American Solar Grazing Association (ASGA). The wildflowers in this mix support pollinators. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

BECKER MORGAN GROUP

ARCHITECTURE
ENGINEERING

Delaware
309 South Governors Avenue
Dover, DE 19904
302.734.7950

The Tower at STAR Campus
100 Discovery Boulevard, Suite 102
Newark, DE 19713
302.369.3700

Maryland
312 West Main Street, Suite 300
Salisbury, MD 21801
410.546.9100

North Carolina
3333 Jaeckle Drive, Suite 120
Wilmington, NC 28403
910.341.7600

www.beckermorgan.com

eca solar

PROJECT TITLE

WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC

5063 WOODPECKER ROAD
SEAFORD
SUSSEX COUNTY, DE
SEAFORD HUNDRED

SHEET TITLE

LANDSCAPE PLAN

0 50 100 200

SCALE: 1" = 100'

ISSUE BLOCK

MARK	DATE	DESCRIPTION

LAYER/ESTATE: L-101

PROJECT NO.: 2025123.00
DATE: 7-1-25
SCALE: 1" = 100'
DRAWN BY: **P.R.R.** PROJ. MGR.: **M.J.H.**

SHEET

L-101

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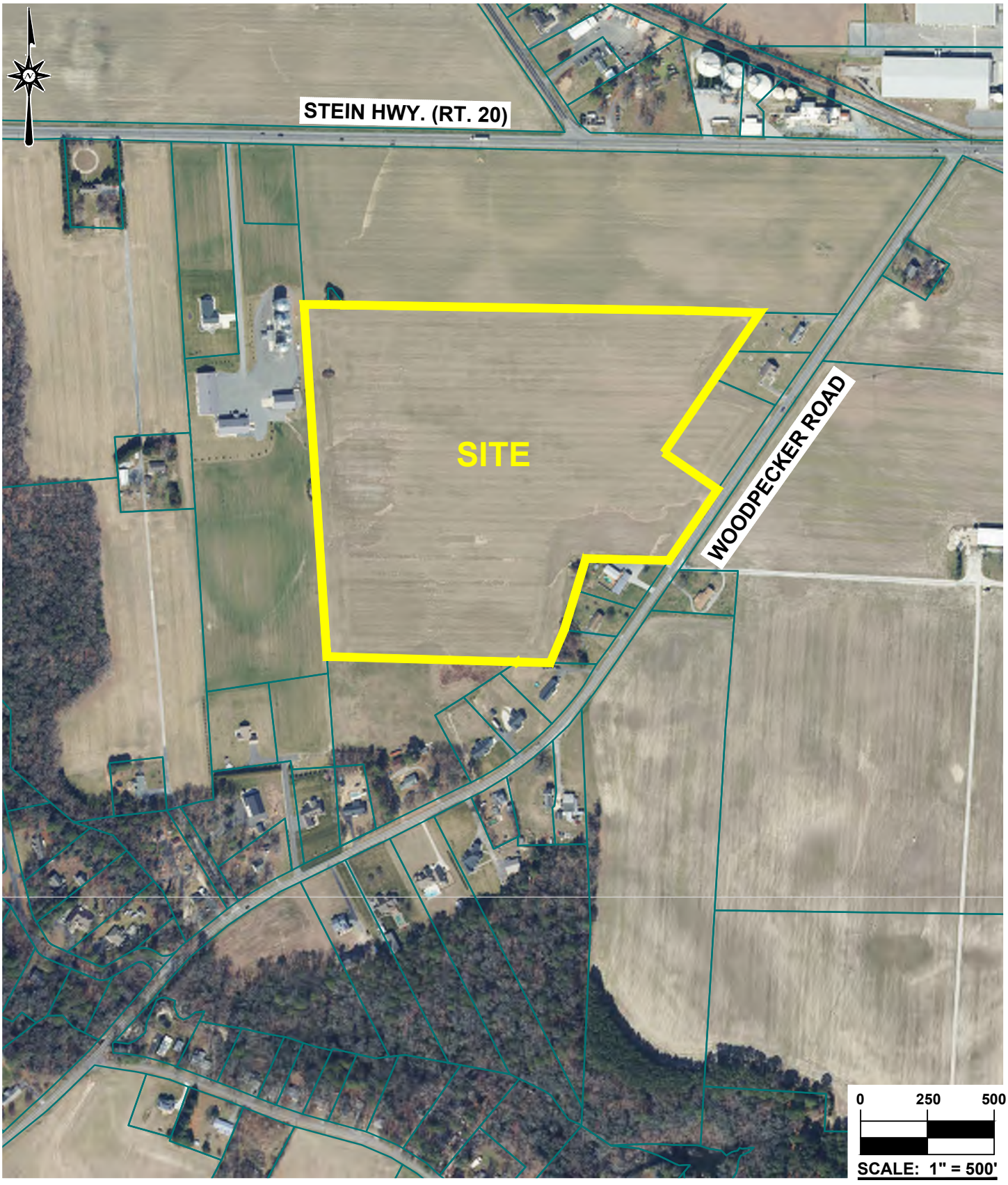
2.4 Aerial Photo and Location



LAYER STATE: AERIAL

AERIAL MAP
WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE
TOWN OF SEAFORD
SUSSEX COUNTY, DE

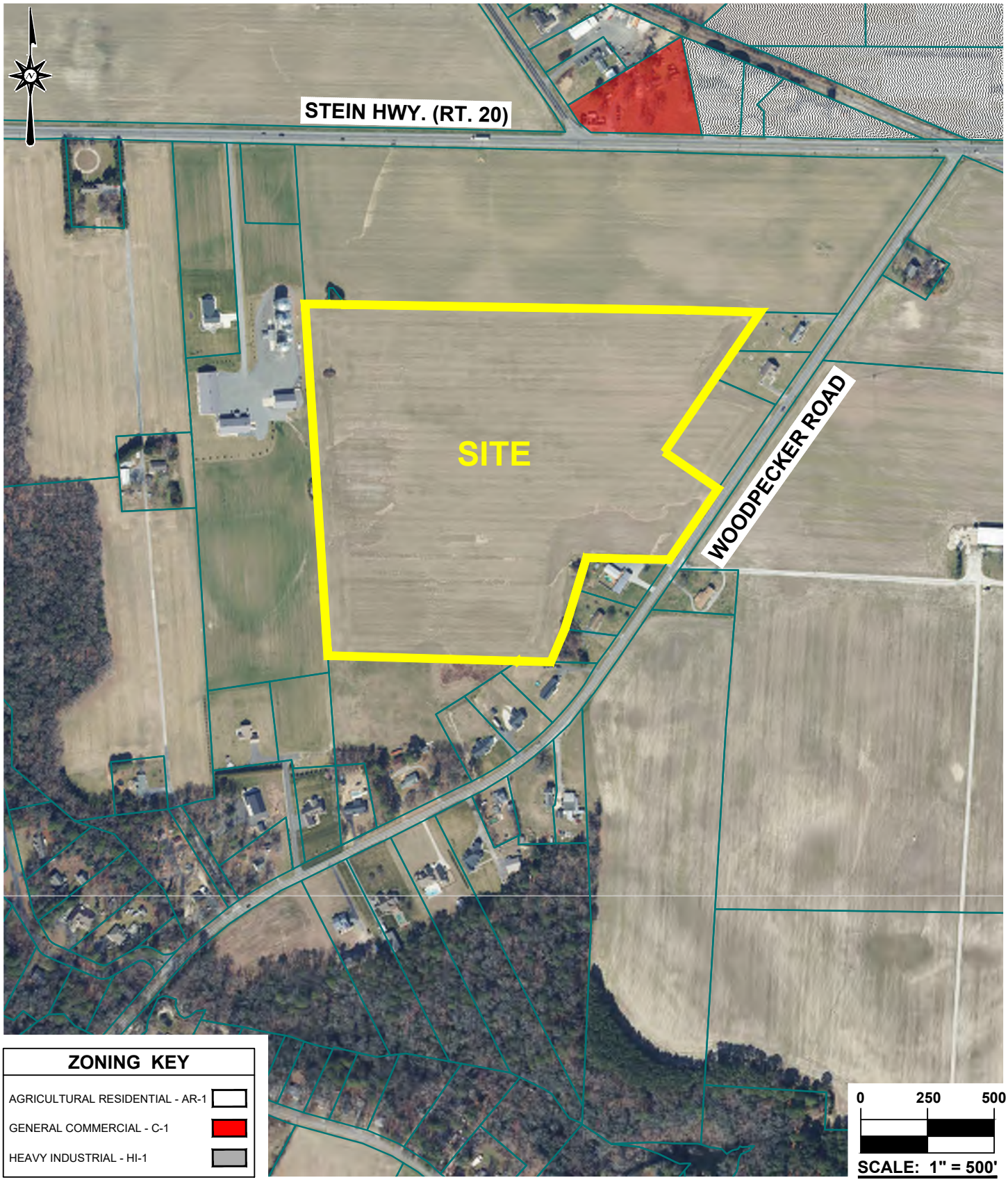
BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG:	2025123.00
SCALE:	1" = 500'
DATE:	6/18/2026
DRAWN BY:	A.J.S.

AERIAL

F:\Projects\2025\202512300\10_Civil\DWG\Misc\CUB-EXHIBITS.dwg, Jun 23, 2026 - 11:23am

2.5 Zoning Map



LAYER STATE: ZONING

ZONING MAP
WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE

TOWN OF SEAFORD
SUSSEX COUNTY, DE

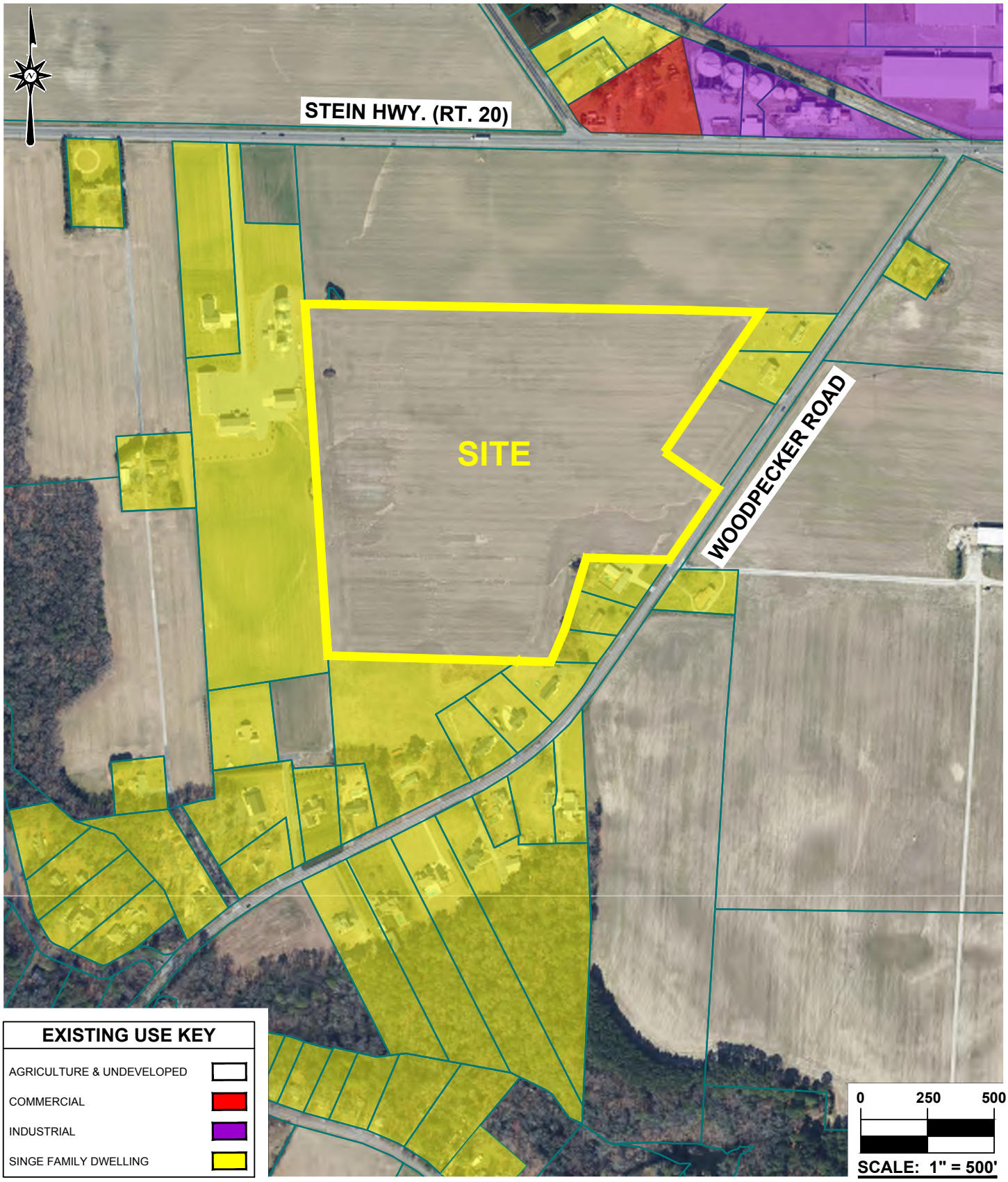
BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG:	2025123.00
SCALE:	1" = 500'
DATE:	6/18/2026
DRAWN BY:	A.J.S.

ZONING

F:\Projects\2025\202512300\10_Civil\DWG\Misc\CUB-EXHIBITS.dwg, Jul 14, 2026 - 1:43pm

2.6 Existing Land Use



LAYER STATE: EX. LAND USE

EXISTING LAND USE - SITE LOCATION
WOODPECKER ROAD
COMMUNITY ENERGY INITIATIVE
TOWN OF SEAFORD
SUSSEX COUNTY, DE

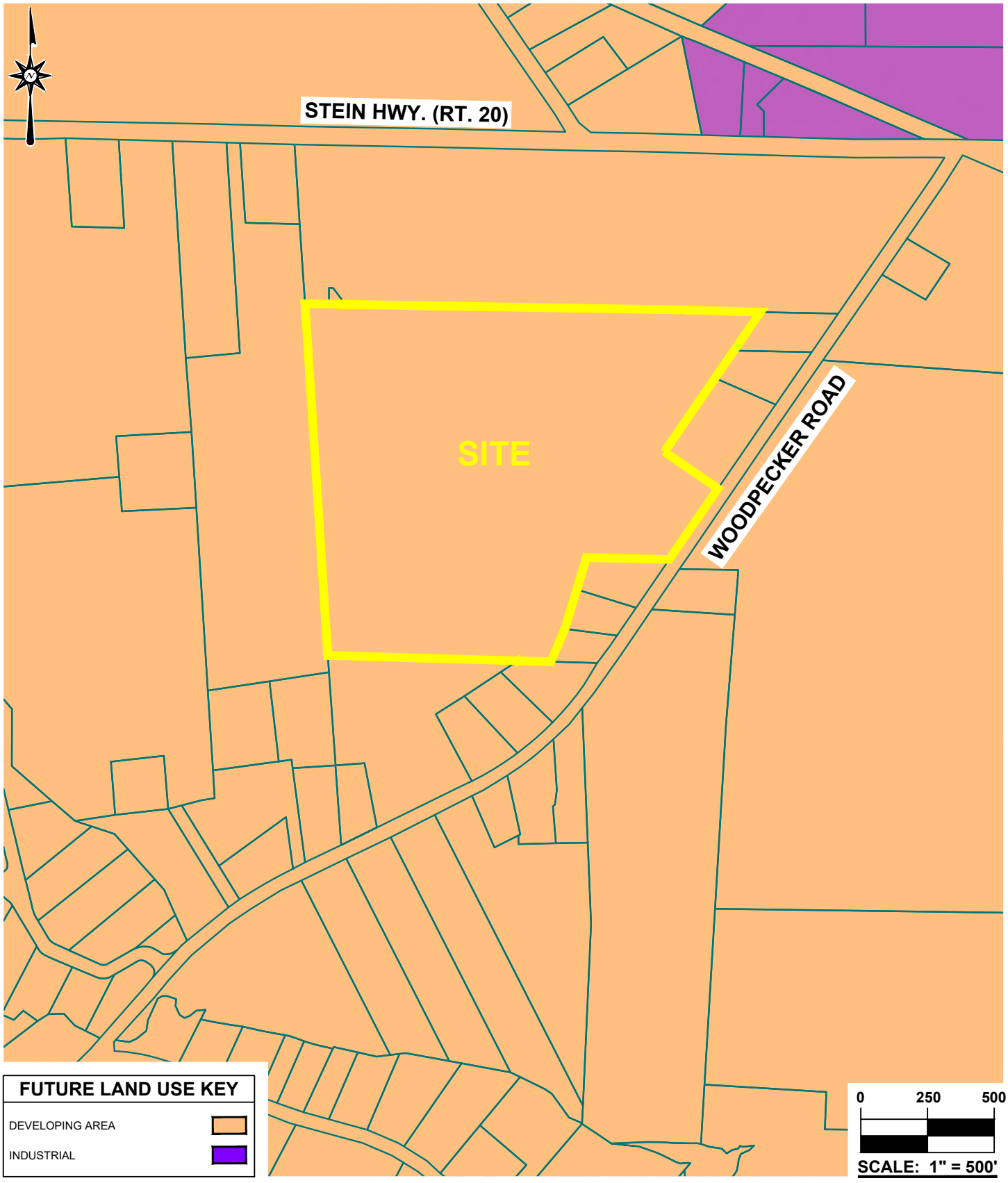
BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2025123.00
SCALE: 1" = 500'
DATE: 6/18/2026
DRAWN BY: A.J.S.

EXISTING

F:\Projects\2025\202512300\10_Civil\DWG\Misc\CUB-EXHIBITS.dwg, Aug 18, 2026 - 11:35am

2.7 Future Land Use



LAYER STATE: FUTURE LAND USE

FUTURE LAND USE - SITE LOCATION
WOODPECKER ROAD
COMMUNITY ENERGY INITIATIVE

TOWN OF SEAFORD
SUSSEX COUNTY, DE

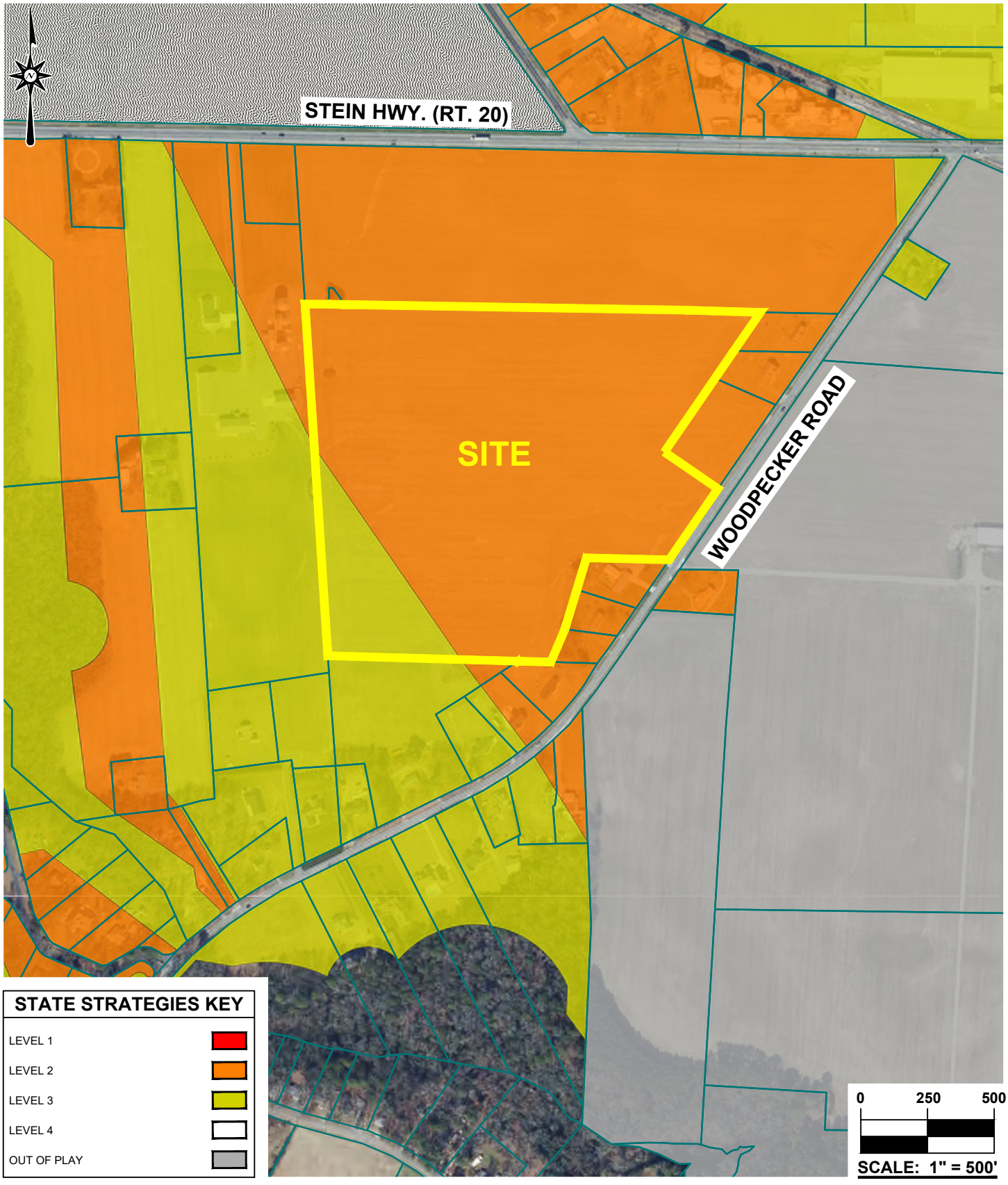
BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2025123.00
SCALE: 1" = 500'
DATE: 6/18/2026
DRAWN BY: A.J.S.

FUTURE

F:\Projects\2025\202512300\10_Civil\DWG\Misc\CUB-EXHIBITS.dwg, Jul 14, 2026 - 1:44pm

2.8 Strategies for State Policies Spending



LAYER STATE: STRATEGIES

STRATEGIES FOR STATE POLICIES & SPENDING - SITE LOCATION

WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE

TOWN OF SEAFORD
SUSSEX COUNTY, DE

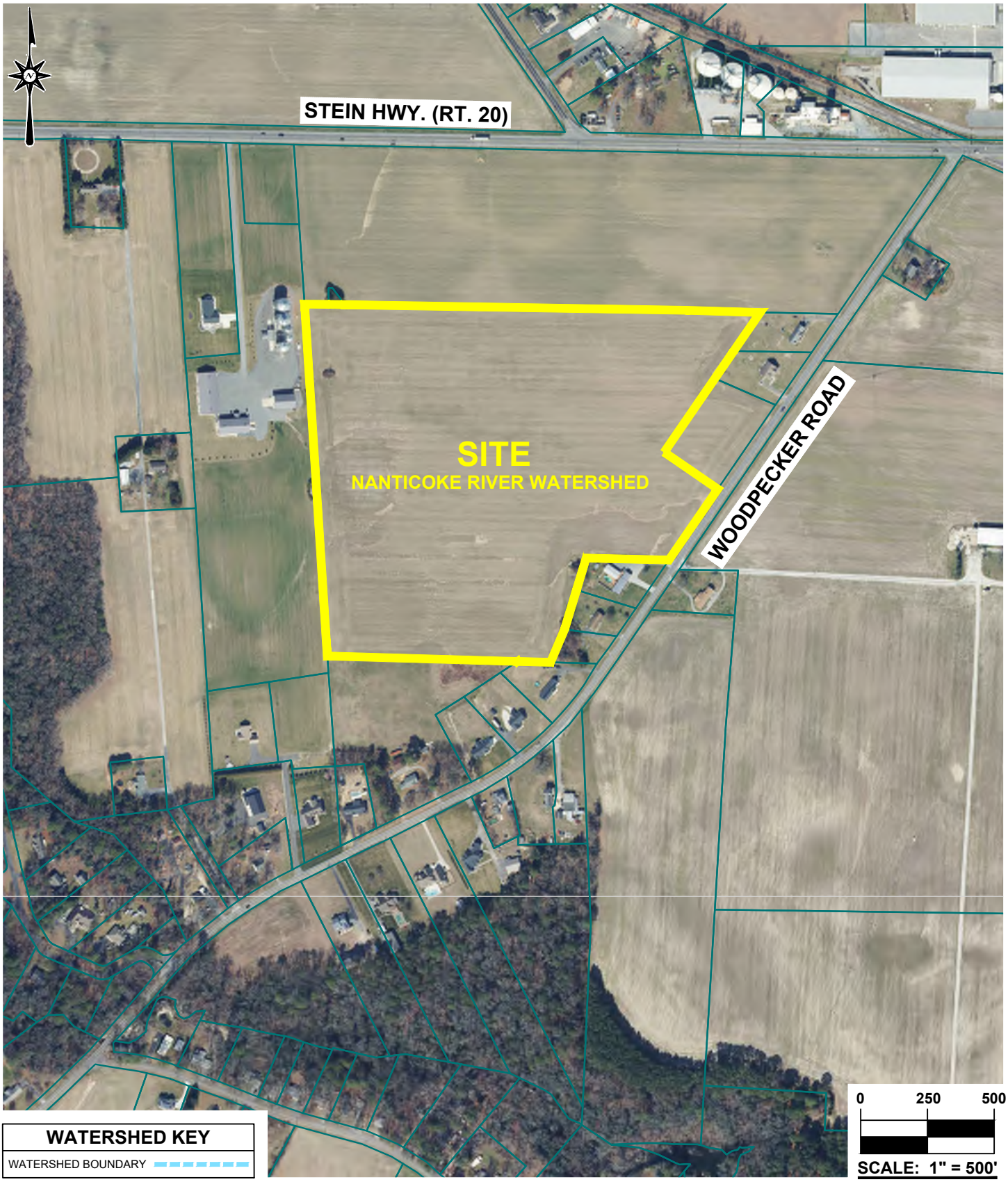
BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2025123.00
SCALE: 1" = 500'
DATE: 6/18/2026
DRAWN BY: A.J.S.

STRATEGIES

F:\Projects\2025\202512300\10_Civil\DWG\Misc\CUB-EXHIBITS.dwg, Jul 14, 2026 - 1:45pm

2.9 Watersheds / Waterways



LAYER STATE: WATERSHED

WATERSHED MAP
WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE
TOWN OF SEAFORD
SUSSEX COUNTY, DE

BECKER MORGAN GROUP
ARCHITECTURE
ENGINEERING
Dover, DE
309 S. Governors Ave.
Dover, DE 19904
Ph. 302.734.7950
Fax 302.734.7965

BMG: 2025123.00
SCALE: 1" = 500'
DATE: 6/18/2026
DRAWN BY: A.J.S.

WATERSHED

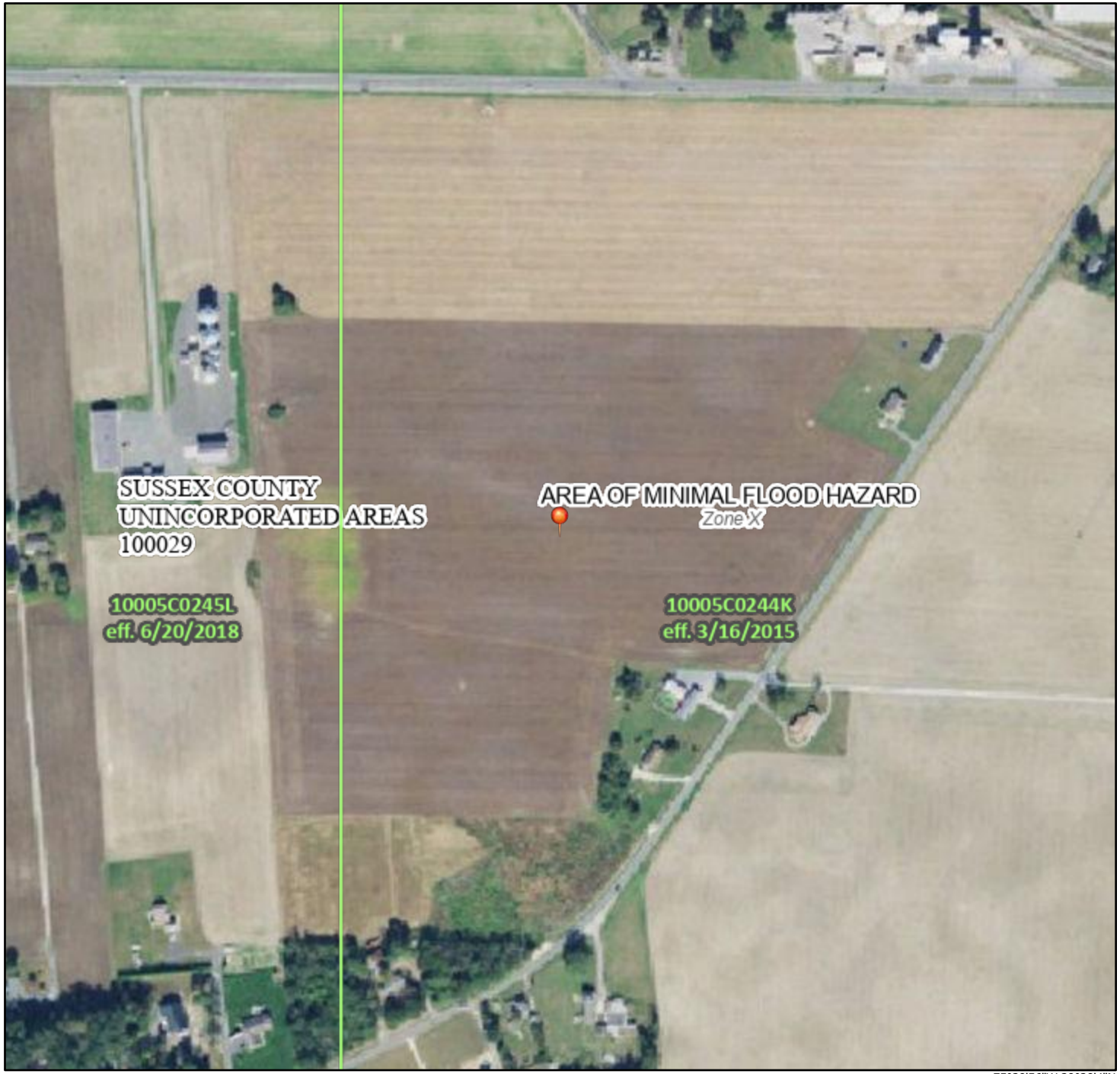
F:\Projects\2025\202512300\10_Civil\DWG\Misc\CUB-EXHIBITS.dwg, Jun 23, 2026 - 1:46pm

2.10 FEMA Flood Insurance Rate Map (FIRM)

National Flood Hazard Layer FIRMette

FEMA

75°39'34"W 38°38'32"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

75°38'56"W 38°38'4"N

Basemap Imagery Source: USGS National Map 2023

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 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 *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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 6/23/2026 at 6:00 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.

2.11 Soils Map

United States Department of Agriculture

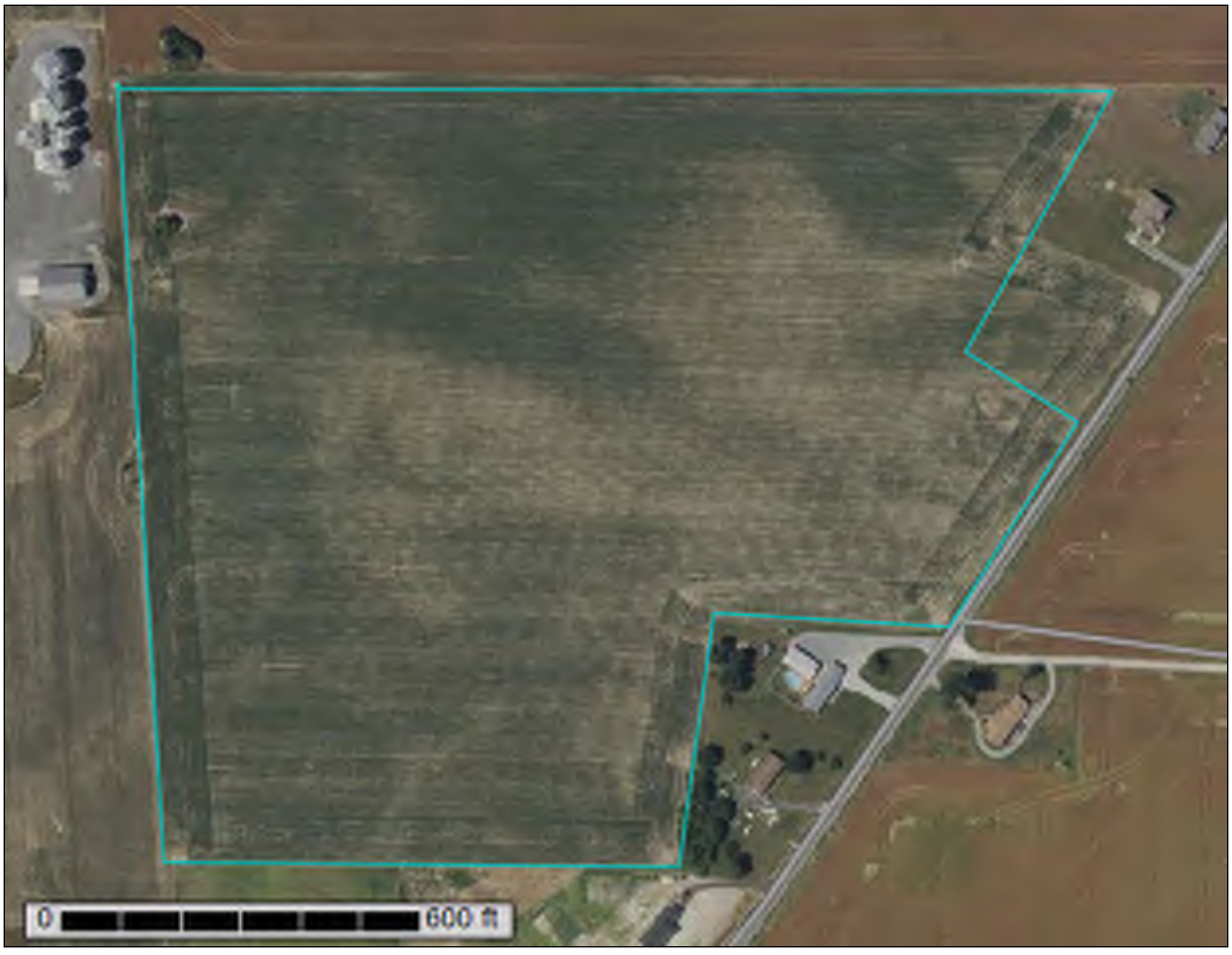
NRCS

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

Woodpecker Road - Community Energy Initiative



June 23, 2026

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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HbA—Hambrook sandy loam, 0 to 2 percent slopes.....14
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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

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

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: 1:3,370 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 45 90 180 270

Feet
0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
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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 26, Sep 9, 2025

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

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

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
FmB	Fort Mott loamy sand, 2 to 5 percent slopes	0.7	1.7%
HbA	Hambrook sandy loam, 0 to 2 percent slopes	20.5	52.6%
HbB	Hambrook sandy loam, 2 to 5 percent slopes	8.0	20.5%
HmAd	Hammonton loamy sand, 0 to 2 percent slopes, Northern Tidewater Area	8.2	20.9%
HnA	Hammonton sandy loam, 0 to 2 percent slopes	0.0	0.1%
HrB	Henlopen-Rosedale complex, 2 to 5 percent slopes	1.6	4.0%
IeA	Ingleside loamy sand, 0 to 2 percent slopes	0.1	0.1%
Totals for Area of Interest		**39.0**	**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 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

FmB—Fort Mott loamy sand, 2 to 5 percent slopes

Map Unit Setting

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

Map Unit Composition

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

Description of Fort Mott

Setting

Landscape: Uplands
Landform: Flats, Knolls, Fluviomarine terraces
Landform position (three-dimensional): Rise
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Sandy eolian deposits over fluviomarine sediments fluviomarine deposits

Typical profile

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

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (1.28 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Minor Components

Ingleside

Percent of map unit: 5 percent
Landscape: Coastal plains, uplands
Landform: Flats, Shallow depressions, Fluviomarine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Downer

Percent of map unit: 5 percent
Landscape: Uplands, coastal plains
Landform: Flats, Knolls, Fluviomarine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Rosedale

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Flats
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Runclint

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Flats, Fluviomarine terraces, Knolls, Ancient dunes
Landform position (three-dimensional): Rise
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

HbA—Hambrook sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qtgx
Landscape: Uplands
Elevation: 0 to 330 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

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

Description of Hambrook

Setting

Landscape: Uplands
Landform: Fluviomarine terraces, Flats, Shallow depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave

Typical profile

Ap - 0 to 10 inches: sandy loam
BE - 10 to 14 inches: loam
Bt - 14 to 28 inches: sandy clay loam
BC - 28 to 65 inches: loamy sand
2Cg - 65 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: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 42 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: F149AY170MD - Well Drained Fine-Loamy Upland
Hydric soil rating: No

Minor Components

Cedartown

Percent of map unit: 5 percent
Landscape: Uplands, coastal plains
Landform: Knolls, Ancient dunes, Flats
Landform position (three-dimensional): Rise, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Hammonton

Percent of map unit: 5 percent
Landscape: Uplands

Landform: Flats, Shallow depressions, Drainageways
Landform position (three-dimensional): Talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Sassafras

Percent of map unit: 5 percent
Landscape: Uplands, coastal plains
Landform: Fluviomarine terraces, Flats
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F149AY170MD - Well Drained Fine-Loamy Upland
Hydric soil rating: No

Woodstown

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Shallow depressions, Broad interstream divides, Fluviomarine terraces, Flats
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

HbB—Hambrook sandy loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1qtgy
Landscape: Uplands
Elevation: 0 to 330 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

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

Description of Hambrook

Setting

Landscape: Uplands
Landform: Flats, Fluviomarine terraces, Knolls, Shallow depressions
Landform position (three-dimensional): Rise
Down-slope shape: Linear, convex, concave

Across-slope shape: Linear, convex, concave

Typical profile

Ap - 0 to 10 inches: sandy loam
BE - 10 to 14 inches: loam
Bt - 14 to 28 inches: sandy clay loam
BC - 28 to 65 inches: loamy sand
2Cg - 65 to 80 inches: silt loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 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 7.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F149AY170MD - Well Drained Fine-Loamy Upland
Hydric soil rating: No

Minor Components

Cedartown

Percent of map unit: 5 percent
Landscape: Uplands, coastal plains
Landform: Knolls, Ancient dunes, Flats
Landform position (three-dimensional): Rise, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Hammonton

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Flats, Shallow depressions, Drainageways
Landform position (three-dimensional): Talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Sassafras

Percent of map unit: 5 percent
Landscape: Uplands, coastal plains
Landform: Fluviomarine terraces, Flats
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F149AY170MD - Well Drained Fine-Loamy Upland

Hydric soil rating: No

Woodstown

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Shallow depressions, Broad interstream divides, Fluviomarine terraces, Flats
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

HmAd—Hammonton loamy sand, 0 to 2 percent slopes, Northern Tidewater Area

Map Unit Setting

National map unit symbol: 2ztxt
Landscape: Coastal plains
Elevation: 0 to 70 feet
Mean annual precipitation: 41 to 49 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 190 to 260 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hammonton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hammonton

Setting

Landscape: Coastal plains
Landform: Drainageways on flats, Depressions on flats
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy fluviomarine deposits

Typical profile

Ap - 0 to 5 inches: loamy sand
BE - 5 to 20 inches: sandy loam
Bt - 20 to 28 inches: sandy loam
BC - 28 to 47 inches: sandy loam
Cg - 47 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): High (1.98 to 5.95 in/hr)
Depth to water table: About 20 to 39 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 6.2 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Minor Components

Ingleside

Percent of map unit: 5 percent
Landscape: Coastal plains
Landform: Flats, Fluviomarine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Hurlock, drained

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Drainageways on flats, Swales on flats, Depressions on flats
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Klej

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Shallow depressions on flats
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F153DY150NJ - Moist Sandy Upland
Hydric soil rating: No

HnA—Hammonton sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qth1
Landscape: Uplands
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: All areas are prime farmland

Map Unit Composition

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

Description of Hammonton

Setting

Landscape: Uplands
Landform: Flats, Drainageways, Shallow depressions
Landform position (three-dimensional): Talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Loamy fluviomarine sediments

Typical profile

Ap - 0 to 11 inches: sandy loam
Bt - 11 to 30 inches: sandy loam
Cg - 30 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 20 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Minor Components

Hurlock, drained

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Depressions, Swales, Flats
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Ingleside

Percent of map unit: 5 percent
Landscape: Coastal plains, uplands
Landform: Flats, Fluviomarine terraces
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Klej

Percent of map unit: 5 percent
Landscape: Coastal plains, uplands
Landform: Flats, Shallow depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F153DY150NJ - Moist Sandy Upland
Hydric soil rating: No

Rosedale

Percent of map unit: 5 percent
Landscape: Uplands
Landform: Flats
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

HrB—Henlopen-Rosedale complex, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1qth6
Landscape: Coastal plains, uplands
Elevation: 10 to 70 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

Henlopen and similar soils: 45 percent
Rosedale and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Henlopen

Setting

Landscape: Coastal plains, uplands
Landform: Marine terraces, Ancient dunes
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: Sandy eolian deposits and loamy fluviomarine sediments

Typical profile

Ap - 0 to 10 inches: loamy sand
E - 10 to 46 inches: loamy sand
Bt - 46 to 62 inches: sandy loam
C - 62 to 80 inches: sand

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Description of Rosedale

Setting

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

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: 2 to 5 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): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Minor Components

Ingleside

Percent of map unit: 5 percent
Landform: Flats
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Runclint

Percent of map unit: 5 percent
Landform: Ancient dunes, Knolls, Flats
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Fort mott

Percent of map unit: 5 percent
Landform: Flats, Knolls
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

IeA—Ingleside loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qthb
Landscape: Uplands
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

Landscape: Uplands
Landform: Flats, Shallow depressions, Fluviomarine 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
Hydrologic Soil Group: A
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Minor Components

Evesboro

Percent of map unit: 5 percent
Landform: Ancient dunes, Knolls, Flats
Landform position (three-dimensional): Rise
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Cedartown

Percent of map unit: 5 percent
Landform: Intermingled flats
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Woodstown

Percent of map unit: 5 percent

Landform: Flats, Shallow depressions, Swales
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Hammonton

Percent of map unit: 5 percent
Landform: Flats, Shallow depressions, Swales
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Downer

Percent of map unit: 5 percent
Landform: Intermingled flats
Landform position (three-dimensional): Rise
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

References

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2.12 Property Value Impact Report

Property Values and Utility-Scale Solar Facilities

Introduction

The utility-scale solar industry has seen significant growth over the past decade and demand for renewable energy continues to grow as utility companies increase their investment in solar energy to meet customer demand, keep electricity prices affordable, and diversify their energy portfolio. The solar industry drives economic development, especially in rural communities, and can benefit all property owners through tax payments for roads, schools, and community services. In 2020, utility-scale solar projects contributed $750 million in state and local taxes and land-lease payments to property owners and have invested nearly $116 billion total in projects nationwide.[1] The industry also supports 120,000 jobs across all 50 states.

Background

Utility-scale solar is the fastest growing source of renewable energy in the United States with 12 gigawatts (GW) of capacity added to the grid in 2020 and 15.5 GW of capacity added in 2021.[2] According to the U.S. Energy Information Administration (EIA), solar power will account for nearly half of new U.S. electric generating capacity in 2022 with an expected growth by 21.5 GW in 2022.[3] There is generally broad support across the United States to increase solar capacity. However, as utility-scale solar installations require large tracts of land, some communities have raised concerns a nearby solar facility may impact local property values. Real world experience has demonstrated this to not be true.

Research shows solar projects have not adversely impacted neighboring properties

Lawrence Berkeley National Laboratory (LBNL) partnered with the University of Texas at Austin to support student-led research on solar energy markets and economics. An LBNL partnered study from the University of Texas at Austin, LBJ School of Public Affairs[4] used geographic information systems (GIS) data to evaluate 956 unique solar projects completed in 2016 or earlier across the United States. The researchers surveyed approximately 400 property value assessors nationwide, asking if the assessor believed there was an impact on home prices, the scale and direction of those impacts, and the source of those impacts. The results indicate that most respondents believe that proximity to a solar installation has either no impact or a positive impact on home values. The study also found that the assessors who responded to the survey believe that some features of solar facilities may be associated with positive impacts, such as a location on land that previously had an unappealing use, or the presence of trees or other visual barriers around the array.[5] Furthermore, as the expected lifetime of a solar facility is at least thirty years, residents have assurance the nearby land will not be redeveloped for an unfavorable use.

The **University of Rhode Island** published, "Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island"[6] in September 2020.

[1]American Clean Power Association. 2021. Utility-scale Solar Power Facts. Accessed at https://cleanpower.org/facts/solar-power/.
[2]U.S. Energy Information Administration (EIA). 2022. Accessed at https://www.eia.gov/todayinenergy/detail.php?id=50818
[3]Ibid.
[4]Al-Hamoodah, Leila; Koppa, Kavita; Schieve, Eugenie; Reeves, D. Cale; Hoen, Ben; Seel, Joachim; and Rai, Varun. 2018. An Exploration of Property-Value Impacts Near Utility-Scale Solar Installations. Policy Research Project (PRP), LBJ School of Public Affairs, The University of Texas at Austin, May 2018. Accessed at https://emp.lbl.gov/sites/default/files/property-value_impacts_near_utility-scale_solar_installations.pdf.
[5]Al-Hamoodah et al. 2018.

The study sought to quantify the effect of proximity to solar on property values by examining existing solar installations in Massachusetts and Rhode Island. The study evaluated 208 solar facilities, 71,373 housing sales occurring within one-mile of solar facilities (Test Group), and 343,921 sales between one-to-three miles of a solar facility (Control Group). Because the authors used a regression analysis model commonly used in real estate pricing and quality adjustment for price indexes to estimate the impact that various factors have on the price or demand for property, it allowed them to isolate specific variables that could impact value, including isolating rural and non-rural locations.

The study defines **"Rural,"** as an area having a "population density of 850 people per square mile or fewer."

The study provides data which found no negative impact to residential home values near solar arrays in rural areas: "these results suggest that [the impacts on home sales in the Test Area] in rural areas is ***effectively zero*** (a statistically insignificant 0.1%), and that the negative externalities of solar arrays are only occurring in non-rural areas."[7] Further, the study tested to determine if the size of the solar installation impacted nearby property values, and found no evidence of differential property values impacts by the solar installation's size.

Similar results were found in a study published by Dr. Nino Abashidze, School of Economics, Georgia Institute of Technology, dated October 20, 2020, and titled "Utility Scale Solar Farms and Agricultural Land Values." Abashidze examined 451 solar farms in North Carolina. "Across many samples and specifications, we find no direct negative or positive spillover effect of a solar farm construction on nearby agricultural land values. Although there are no direct effects of solar farms on nearby agricultural land values, we do find evidence that suggests construction of a solar farm may create a small, positive, option-value for landowners that is capitalized into land prices. Specifically, after construction of a nearby solar farm, we find that agricultural land that is also located near transmission infrastructure may increase modestly in value."

Additionally, numerous property value studies have found no evidence of decreased property values after construction of a solar farm:

- Marous & Company studied the value of properties adjacent to solar projects in Wisconsin and concluded that concerns regarding negative property value impacts were not substantiated. There is no market data indicating a solar project will have a negative impact on either rural residential or agricultural property values in the surrounding area. Further, for agricultural properties that host photovoltaic panels, the study indicated that the additional income from the solar lease, from the solar leases and other solar agreements, may increase the value and marketability of those properties. The study also included an in-depth analysis of recent residential sales near existing solar farms in Minnesota, North Carolina, Indiana, Arizona, and Illinois. The analysis concluded that proximity of a solar farm does not have any measurable negative impact on surrounding residential property values.[8]

- The Chisago County (Minnesota) Assessor's Office conducted their own study on property prices adjacent to and in the close vicinity of the North Star solar farm in Chisago County, Minnesota. At the November 2017 Chisago County Board meeting, John Keefe, the Chisago County Assessor, presented data from his study. He concluded that the North Star solar farm had, "no adverse impact" on property values. His study encompassed 15 parcels that sold and were adjacent or in the close vicinity to the solar farm between January 2016 and October 2017; the control group used for comparison comprised of over 700 sales within the county. Almost all of the [Test Area] properties sold were at a price above the assessed value. He further stated that, "It seems conclusive that valuation has not suffered."[9]

[6]Gaur, V. and C. Lang. (2020). Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island. Submitted to University of Rhode Island Cooperative Extension on September 29, 2020. Accessed at https://web.uri.edu/coopext/valuing-sitingoptions-for-commercial-scale-solar-energy-in-rhode-island/.

[7]The University of Rhode Island study's conclusion that there may be an impact to non-rural communities is surmised is that "land is abundant in rural areas, so the development of some land into solar does little to impact scarcity, whereas in non-rural areas it makes a noticeable impact.

- CohnReznick, LLP has studied sale prices of single-family homes and agricultural land properties adjacent to solar farms in over 15 states, using appropriate Paired Sales methodology[10], as well as Before/After resale (appreciation rate) analysis, and concluded that the solar farms did not adversely affect property values in either the short or long term. Their research also includes reviewing published studies prepared by academia, as well as other appraisers, and conducting interviews with county assessors and local real estate professionals, who have experience with properties transacting near existing solar facilities in their respective communities. The consensus is that solar farms in their areas had not impacted property values.

- Kirkland Appraisals, LLC studied the value of properties adjacent to solar farms in North Carolina.[11] Kirkland's analyses strongly support the compatibility of solar farms with adjoining agriculture and residential uses and conclude that there was no impact in home values due to proximity of a solar farm.

- Donald Fisher, ARA who has served six years as Chair of the American Society of Farm Managers and Rural Appraisers, and has prepared several market studies examining the impact of solar on residential values was quoted in a press release dated February 15, 2021 stating, "Most of the locations were in either suburban or rural areas, and all of these studies found either a neutral impact or, ironically, a positive impact, where values on properties after the installation of solar farms went up higher than time trends."

- Christian P. Kaila & Associates studied the value of properties adjacent to solar farms in Virginia.[12] The analysis concluded that adjacent property value, (for both residential and agricultural property), was not adversely affected by construction and operation of solar facilities.

The utility-scale solar industry recognizes the importance of engaging with the host community to balance economic, environmental, safety, and social concerns when developing and operating their projects. In their siting and application process, successful solar developers have prioritized being a good neighbor and a long-term partner with host communities.

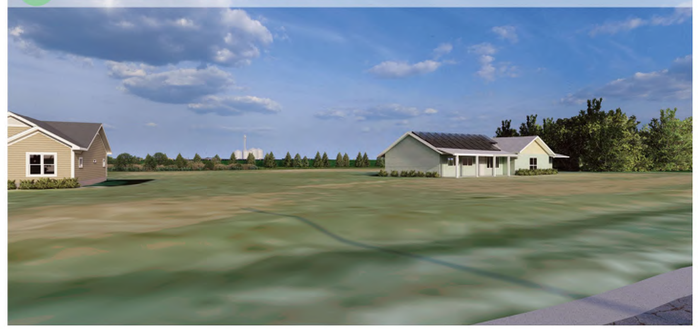
[8]Marous & Company. 2021. Market Impact Analysis: Koshkonong Solar Energy Center Dane County, Wisconsin. April 13, 2021. Accessed at https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=409444.
[9]Chisago County Press: County Board Real Estate Update Shows No "Solar Effects" (11/03/2017).
[10]Bell, Randall, PhD, MAI. Real Estate Damages. Third ed. Chicago, IL: Appraisal Institute, 2016. (Page 33).
[11]Kirkland, Richard C. 2018. Culpeper Solar Impact Study. Kirkland Appraisals, March 7, 2018.
[12]Christian P. Kaila & Associates. 2020. Property Impact Analysis of Round Hill Solar, Proposed Solar Power Plant Augusta County, Virginia. June 2020.

For more information, email
Hilary Clark, hclark@cleanpower.org

2.13 Fencing and Landscaping Buffer Rendering

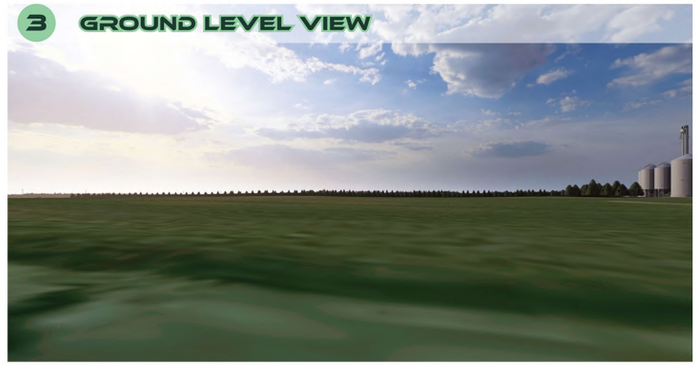
VIEW KEY MAP

1 GROUND LEVEL VIEW



2 GROUND LEVEL VIEW

3 GROUND LEVEL VIEW



4 GROUND LEVEL VIEW

1 BIRD'S EYE VIEW

2 BIRD'S EYE VIEW

3 BIRD'S EYE VIEW

4 BIRD'S EYE VIEW

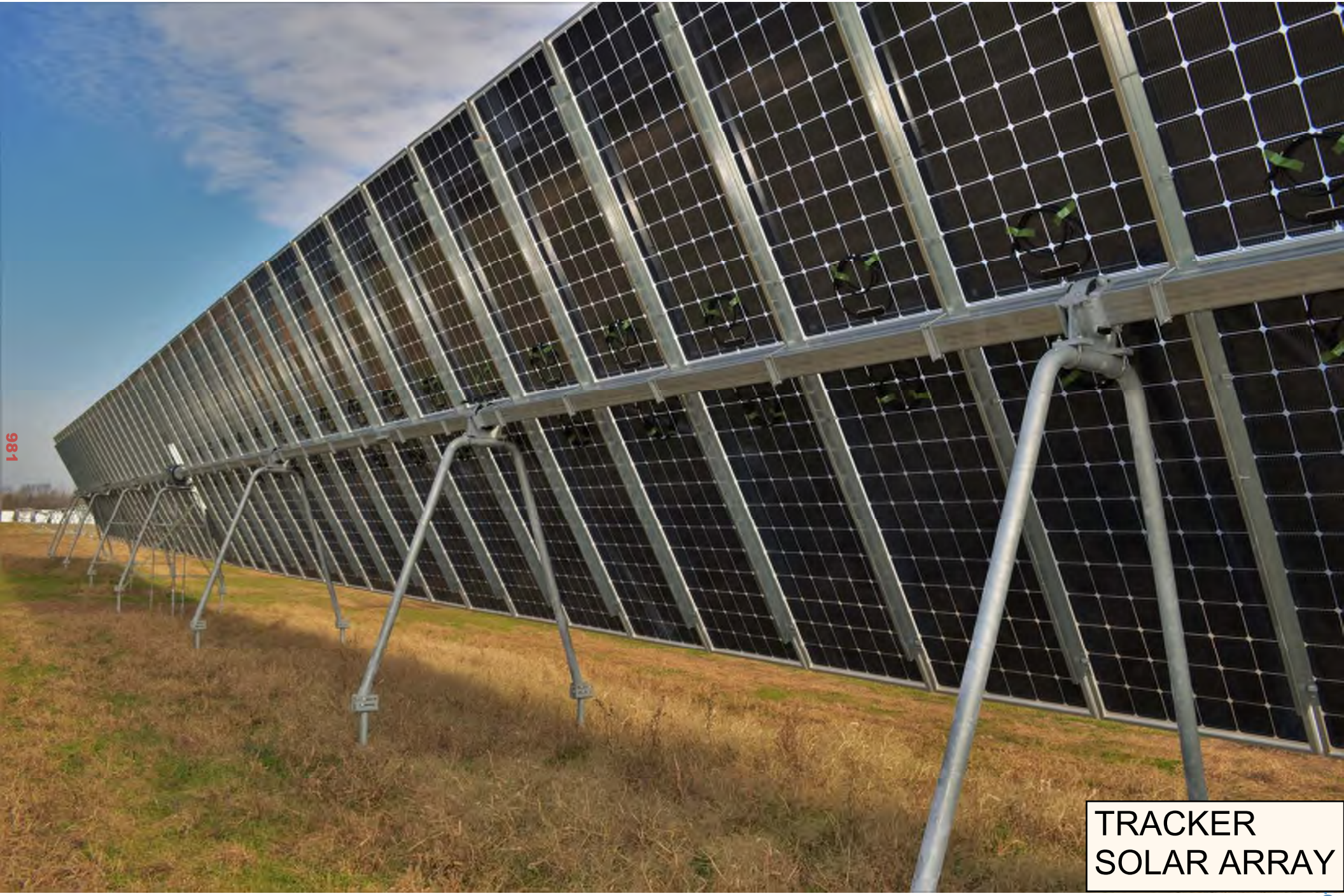
PRODUCED BY
NLYTN ENERGY

WOODPECKER RD SEAFORD, DE
SOLAR PV 3D RENDERING

979

eca power

TRACKER
SOLAR ARRAY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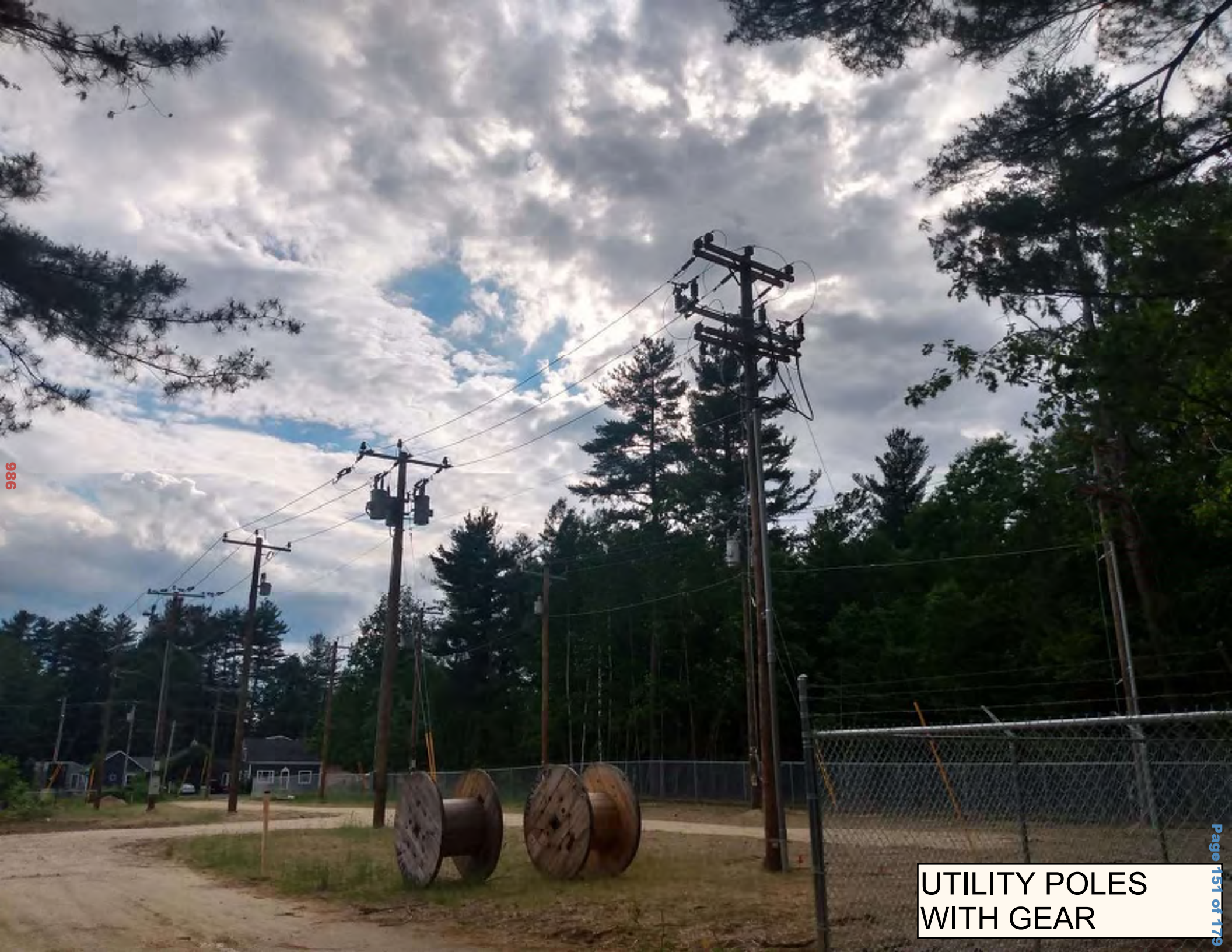
FENCE MESH

ELECTRICAL EQUIPMENT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UTILITY POLES
WITH GEAR
Page 151 of 179

3.0 List of Letters – (CONDITIONAL USE - 2601 – WOODPECKER ROAD COMMUNITY ENERGY INIATIVE LLC)

3.1 Legal Description and Deed
3.2 Conditional Use #2601 – Letter to Engineer
3.3 DelDOT Service Level Evaluation Response
3.4 Public Outreach Correspondence

3.1 Legal Description and Deed

OWNER: Denise O. Taylor, Richard A. O'Bier, Et Al
PARCEL NO.: 531-12.00-84.01 (Portion of)

Conditional Use Area - 27.84 ACRES ±

Beginning at a point at a corner for this area, located within the lands of Denise O. Taylor, Richard A. O'Bier, Et Al, said point being located as measured from a found iron pipe with cap in line with the westerly right of way line for Woodpecker Road and at a corner for the lands of Denise O. Taylor, Richard A. O'Bier, Et Al and lands of Gray E. & Teresa L. O'Bier the following two courses and distances; North 87°53'19" West 377.68 feet to a found iron pipe with cap; thence North 57°28'00" West 175.18 feet to said point of beginning; thence leaving said point of beginning and running across said lands of Denise O. Taylor, Richard A. O'Bier, Et Al the following eleven courses and distances 1) South 00°02'40" East 398.04 feet to a point; thence 2) South 48°23'54" West 114.62 feet to a point; thence 3) North 88°28'07" West 650.84 feet to a point; thence 4) North 03°57'50" West 855.97 feet to a point; thence 5) North 00°00'00" East 397.87 feet to a point; thence 6) South 88°55'22" East 1,345.14 feet to a point; thence 7) South 00°00'00" East 219.33 feet to a point; thence 8) South 16°47'01" West 207.30 feet to a point; thence 9) North 88°53'10" West 421.56 feet to a point; thence 10) South 00°00'00" East 226.94 feet to a point; thence 11) South 27°10'16" West 149.73 feet to the point and place of beginning and containing 27.84 acres of land, be the same more or less.

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his Heirs and Assigns that he the said party of the first part his Heirs all and singular the hereditaments and premises hereinabove described and granted or mentioned, or intended so to be, with the appurtenances unto the said party of the second part, his Heirs and Assigns against him the said party of the first part his Heirs and against all and every other person or persons whomsoever lawfully claiming or to claim the same or any part thereof, by, from, through or under him, shall and will by these presents Warrant and forever Defend. In Witness whereof the said party of the first part has hereunto set his Hand and Seal, Dated the day and year first above written.

Sealed and Delivered in the presence of William H. Wilson

U.S. I.R. C.R.L. 10/1/25 $2.00

Caleb R. Layton (Seal)

State of Delaware } ss. Be it Remembered that on
Sussex County } this first day of October in the year of our Lord One thousand nine hundred and twenty five, personally came before me, the subscriber a Notary Public for the State aforesaid, Caleb R. Layton widower party to this Indenture known to me personally to be such and acknowledged this Indenture to be his Deed. Given under my Hand and seal of Office the day and year aforesaid

William H. Wilson Notary Public Delaware appointed March 27-1925 for four years.

Received for Record Nov 30th A.D. 1925
Horace G. Firman Recorder.

William H. Wilson
Notary Public.

Purchasers Report made this 30th day Nov 1925, Board of Assessment of Sussex County per W. Elwood Wright Clerk. ✓

Mailed to L. L. Layton Georgetown Del 1/23/26

Deed:- Edwin C. Ryan Trustee to Landreth L. Layton.

This Indenture made this 11th day of June in the year of our Lord One thousand nine hundred and twenty three: Between Edwin C. Ryan, as Trustee in Bankruptcy of the estate of Theodore Burton and Fred H. Burton, individually and trading in the name, style and firm of Theodore Burton & Son Bankrupts, of Millsboro, in the County of Sussex and State of Delaware, party of the first part, and Landreth L. Layton of Georgetown, County and State aforesaid, party of the second part. Witnesseth: that Whereas, a petition in involuntary Bankruptcy

was filed in the District Court of the United States for the District of Delaware on the 27th day of November A.D. 1922 against Theodore Burton and Fred N. Burton individually and trading in the name, style and firm of Theodore Burton & Son and Whereas the said Theodore Burton and Fred N. Burton, individually and trading in the name, style and firm of Theodore Burton and Son were duly adjudicated Bankrupts on said petition on the 18th day of December A.D. 1922 and the said Edwin C. Ryan thereafter was duly appointed Trustee of the estate of said Bankrupts on the 22nd day of January A.D. 1923 and thereafter duly qualified as such and has continued to act and is now acting as such Trustee; and Whereas the said Edwin C Ryan, as Trustee in Bankruptcy of the estate of Theodore Burton and Fred N. Burton, individually and trading in the name, style and firm of Theodore Burton and Son, Bankrupts was duly authorized after notice to lienors and creditors by an order of Woodbury Martin Esquire Referee in Bankruptcy, dated the 26th day of April A.D. 1923 to sell and convey the property hereinafter mentioned at public auction free and clear of liens and the said sale having been duly held on the premises of the Bankrupts, in Millsboro Sussex County Delaware on the twenty-ninth day of May A.D. 1923 and the said sale having thereafter been confirmed by an order of Woodbury Martin, Esquire, Referee in Bankruptcy dated the 7th day of June A.D. 1923. Now Therefore Know ye, That I, the said Edwin C Ryan, as Trustee in Bankruptcy of Theodore Burton and Fred N. Burton, individually and trading in the name, style and firm of Theodore Burton & Son Bankrupts, by Virtue of the power and authority in me vested, as aforesaid and in Consideration of the sum of Two Hundred and Fifty Dollars ($250.00) to me in hand paid by the said party of the second part the receipt whereof is hereby acknowledged do hereby give, grant, bargain, sell and convey unto the said Landrelli L. Layton His Heirs and assigns forever. All that certain tract piece or parcel of land situate lying and being in Dagsboro Hundred Sussex County and State of Delaware adjoining lands of Ellis Lewis, Henry A Houston John Baker and others, containing twenty

three (23) acres be the same more or less, with no buildings or other improvements thereon.
Together with all and singular the tenements and hereditaments and appurtenances thereunto belonging or in any wise appertaining and the reversion and reversions, remainder and remainders rents issues and profits thereof, to have and to hold the said above granted premises with the appurtenances, thereof unto the said party of the second part, his Heirs and Assigns forever to him his own proper use and behoof as fully and absolutely as the said party of the first part can and ought to do pursuant to the Statute and his Authority as aforesaid, In witness whereof, the said party of the first part hereunto sets his hand and seal the day and year first above written.

Signed sealed and delivered in the presence of Theo Burton Sr

U.S.I.R. C.C.R. 6/9/25 .50

Edwin C. Ryan (seal)
Trustee

State of Delaware } ss.
Sussex County }

Be it Remembered that on this 11th day of June 19– personally came before me the Subscriber, A Notary Public of the State of Delaware, Edwin C. Ryan, Trustee in Bankruptcy of the estate of Theodore Burton and Fred H. Burton, individually and trading in the name style and firm of Theodore Burton and Sow Bankrupts party to this Indenture, personally known to me to be such and acknowledged this Indenture to be his act and deed as such Trustee and he further acknowledged under and by Virtue of an order of the Court of Bankruptcy. Given under my hand and seal of office this day and year aforesaid.

Theo Burton Sr. Millsboro Del Notary Public appointed Apr 12 1923 for four years.

Theo. Burton Sr.
Notary Public

Received for Record
Nov 30th A.D. 1925
Horace G. Firman Recorder.

Purchaser Report made this 30th day Nov 1925, Board of assessment of Sussex County per W. Elwood Wright clerk.

Mailed to L.L. Layton Georgetown Del 1/23/26

Deed:– Irenee DuPont etux to Henry L. Price etux.
This Deed, Made this Twenty seventh day of November in the year of our Lord one thousand nine hundred and twenty five Between Irenee DuPont and Irene DuPont his wife, of New Castle County and

3.2 Letter to Engineer

JAMIE WHITEHOUSE, AICP
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

August 19, 2026

Becker Morgan Group, Inc.
c/o Michael Henry
South Governors Avenue
Dover, DE 19904

Email: mhenry@beckermorgan.com

C/U 2601 Woodpecker Road Community Energy Initiative, LLC
AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN AN AR-1 AGRICULTURAL RESIDENTIAL DISTRICT FOR SOLAR ARRAYS TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN SUSSEX COUNTY, CONTAINING 39.281 ACRES, MORE OR LESS. The parcel is lying on the northwest side of Woodpecker Road (S.C.R. 80), approximately 0.29 mile south of West Stein Highway (Rt. 20). 911 Address: N/A. Tax Map Parcel: 531-12.00-84.01.

Dear Becker Morgan Group, Inc., c/o Michael Henry:

The **Planning and Zoning Commission** will hold a Public Hearing on **Wednesday, September 16, 2026, at 3:00 p.m.** in the Sussex County Council Chambers located in the County Administrative Office at 2 The Circle, Georgetown, DE, 19947.

The **Sussex County Council** will hold a Public Hearing on **Tuesday, October 20, 2026, at 1:30 p.m.** in the Sussex County Council Chambers located in the County Administrative Office at 2 The Circle, Georgetown, DE, 19947.

Please be advised that as required by Rule 3 of the Rules of Procedure of the Sussex County Planning and Zoning Commission, a large public notice sign will be placed on your property reflecting the above public hearing dates and times. This sign shall not be removed and/or relocated until after the scheduled hearing before Sussex County Council. All large metal signs are the property of Sussex County and will be retrieved following the hearing.

It will be necessary for you the applicant to participate at the hearings before both the Commission and County Council. If you do not participate or are not represented, the Commission and/or County Council reserve the right to refuse to act on your application and may require that a new application be filed, and fees paid at your expense.

If an attorney, or agent, will be representing you, the applicant, it is your duty to notify them as to the dates and times of the hearings as herein set forth, as the Commission and County Council will not notify your counsel.

Further instructions describing the method of public participation and the manner of viewing the hearings will be contained within the Agenda that will be posted at least 7 days in advance of the meeting at sussexcountyde.gov. The County operates an electronic document management system whereby the public

and Applicants can review documents and public comments online. The Land Use Application Docket can be found at sussexcountyde.gov/planning-zoning.

Please be advised that the Office of Planning and Zoning is aware of third-party attempts to defraud applicants by using publicly accessible information to demand payment by means of a wire transfer.

The Planning & Zoning Department does not email invoices containing requests with wire transfer instructions. Also, all official email communication from the Planning & Zoning Department will have an email address ending in *sussexcountyde.gov*.

If at any point during or following your application or public hearing process, you receive a suspicious payment inquiry, please feel free to contact the office at the phone number, email address, or physical address on this letter to verify the validity of such a request.

Please feel free to contact the Planning & Zoning Department during our business hours of Monday through Friday, from 8:30 am to 4:30 pm.

Sincerely,
Planning and Zoning Department

3.3 DelDOT Service Level Evaluation Response

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

SHANTÉ A. HASTINGS
SECRETARY

May 20, 2025

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Woodpecker Road Community Energy Initiative LLC** (Woodpecker Road, Seaford, Delaware 19973**)** proposed land use application, which we received on April 28, 2025. This application is for an approximate 39.9-acre parcel (Tax Parcel: 531-12.00-84.01). The parcel is located on the northwest side of Woodpecker Road (Sussex County Road 80) and approximately 1,550 feet south from the intersection of Stein Highway (Delaware Route 20) and Woodpecker Road. The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a conditional use approval to build a Solar Energy Facility.

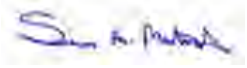
Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Woodpecker Road, where the subject land is located, which is from Woodland Ferry Road (Sussex County Road 78) to Stein Highway, is 1,645 vehicles per day.

Based on our review, we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Tijah Jones, at tijah.jones@delaware.gov, if you have questions concerning this correspondence.

Sincerely,



Sireen Muhtaseb, PE
TIS Engineer
Development Coordination

SM:tjm
cc: Woodpecker Road Community Energy Initiative LLC, Applicant
Amy Hollis, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, M&O
James Argo, South District Project Reviewer, M&O
Tara Summers-Strong, South District Public Works Admin. M&O
Todd Sammons, Assistant Director, Development Coordination
John Pietrobono, Acting Sussex Review Coordinator, Dev Coord
Kevin Hickman, Sussex Reviewer, Development Coordination
Derek Sapp, Sussex Review Engineer, Development Coordination
Thomas Gagnon, Sussex Review Engineer, Development Coordination
José Quixtan, Sussex Review Engineer, Development Coordination
Annamaria Furmato, TIS Review Engineer, Development Coordination
Ben Fisher, TIS Review Engineer, Development Coordination
Tijah Jones, TIS Review Engineer, Development Coordination
DelDOT TIS Support

3.4 Public Outreach Correspondence

ECA Solar
203 Crescent St., Suite 106
Waltham, MA 02453

Hello,

We are reaching out to invite you to an upcoming community information meeting and Q&A regarding a potential ground-mounted solar project being considered on Woodpecker Road in Seaford.

The purpose of this meeting is to share information about the project, answer questions, and most importantly, hear directly from nearby residents. We understand that projects like this can raise questions, and we want to listen carefully to your feedback. The meeting will start with a brief PowerPoint presentation, where we will show visuals and renderings. Upon completion of the presentation, we will open the discussion to questions.

Meeting details are below:
Date: June 23, 2026
Time: 5pm-7pm
Location: Seaford Volunteer Fire Department Banquet Hall: 302 E King St, Seaford DE

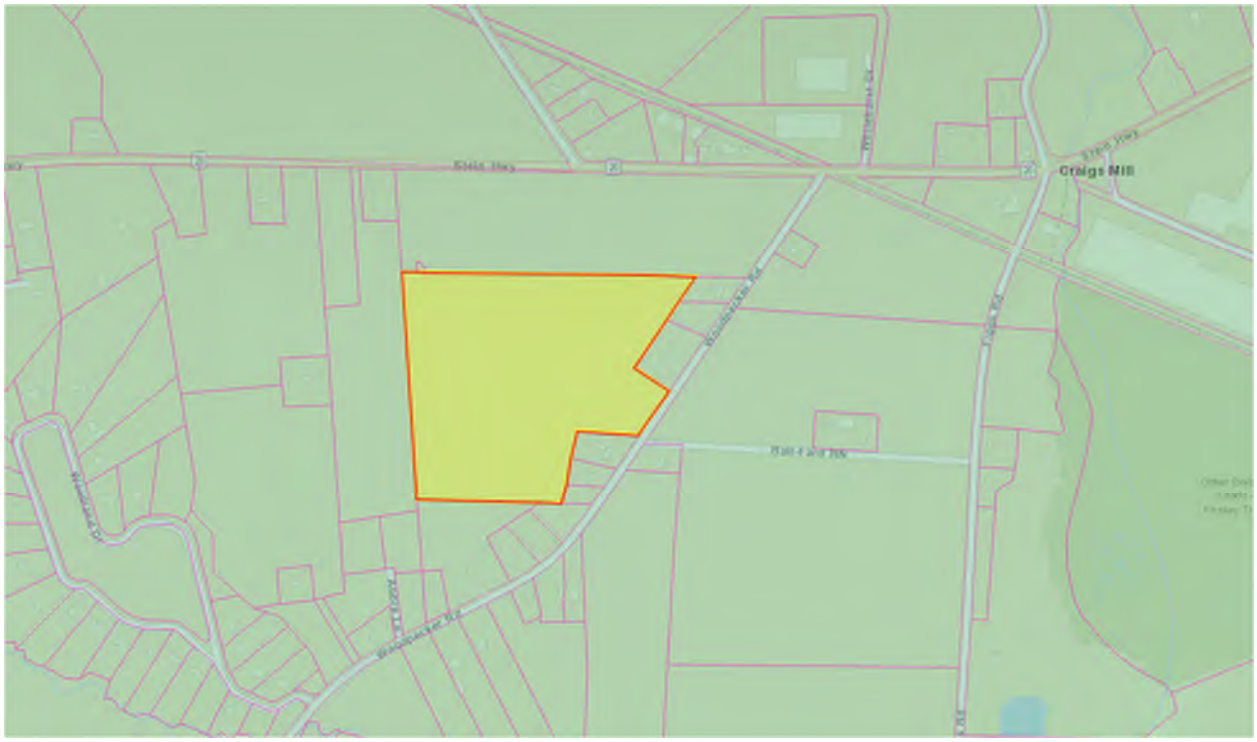
We hope you will join us.

Sincerely,

Martha Diezemann
ECA Solar
md@ecasolar.com

ECA Solar
203 Crescent St., Suite 106
Waltham, MA 02453

Subject property for proposed solar project on Woodpecker Rd



Ashley Paugh

From: Richard OBier <obierr567@gmail.com>
Sent: Wednesday, September 9, 2026 9:40 AM
To: Planning and Zoning
Attachments: 1000005295.jpg; 1000005286.jpg

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

Here you will find information from the owners of the land proposed for a conditional use permit on Woodpecker Rd. We wanted to explain how we looked for the best use of the land and the road we took to get here. Solar represents the future and a much need resource for future growth for the town, county and state. The solar company has addressed all facets of the project to our satisfaction and hopefully yours as well. Thank you for your attention to this matter. And we hope for your support with the project.

Solar Project on Woodpecker Rd.

I am one of the four owners of the land on Woodpecker Rd where a solar field is being proposed. Our family has watched in silence while friends, neighbors and people we don't kow have bashed us for wanting to sell our land. We want to set the story straight.

How did we get here.

We inherited this land from our Father and Mother, Floyd and Thelma O'Bier, some of you may know the names. Our Mother survived our Father and in her will stated the land should be sold public or private, that was her wish. There was no timeframe established for this to occur so we have held it jointly for 32 years. Time goes fast and we are now in our 60's and some approaching 70 years old. It has come time to honor our mother's wishes. Mom stipulated this for a good reason. We are now four owners and we all have different ideas. As some of you know it's hard for more than one person to come to a consensus on things, Mom knew this; so if we don't honor her wishes the next generation of O'Bier's will be 13 involved family members. Just try to get a consensus on that group.

Looking at the options.

Option One: We looked at the options that were available and the first thing we did was to offer the land by letter to the local farmers. We only had one response to the land in question. We felt the farmer tried to stand tall with the best offer he could, but to us it was not what we wanted to sell our property.

Option Two: We talked to land developers and there was some interest in the land for a housing development. We considered this option carefully but decided against this. We felt this would change area, an area where many of us and our children would still be living at, yes we live here.

Option Three: We had interest in selling to a buyer for a poultry operation. It would meet all the setbacks and as you know it is zoned Agricultural so that would comply. We really wouldn't have had a problem with this. We the O'Bier's have been in the poultry business for many years. I worked for an integrator for 31 years and we have had a farm since 1978. This, too, did not seem to be a good fit for the community. We realized that not everyone would like a poultry operation close, even though this land was suitable for a 4-5 house operation.

Option Four: We decided to have the property listed and see what developed. The land sat on the market for a considerable time for anyone to buy it. We were then presented an offer by ECA Solar group. We did not enter an agreement lightly and researched this option, and the company thoroughly. We liked what we heard and the way they had handled projects in other areas, they give back to the community, we liked that. The price was fair, not as much as developers had offered and not as much as a poultry operation would have yielded us, but fair. We thought that it would provide a lower impact to the area with less traffic. It would provide discounts for anyone that signed up. There would be no high towers or silos breaking up the skyline and making noise. The way the project would be laid out with fence and tree buffers would make it eye appealing. The people that attended the meeting saw some beautiful renderings of what it looked like and had all the questions answered that have shown up in articles and random posts. All things considered we all thought this was a good fit. Again, many of us and our children will be living here and are not going anywhere. Our Father gave us some wisdom as well " you can only sell it one time there are no second chances". We all felt this checked all the boxes

Hopefully you can see we did not make this move on impulse and really looked at all sides for about 4 years.

Takeaway

Others in the community have done as they wish with their property and we have never tried to tell them how to use their lands. Land they have bought, inherited, paid taxes and lived on. Others have developed in the area, which was farmland. The O'Bier's are good people we are descended from O'Bier's that have lived here for over 200 years. Our family has sold land though the years as they felt it was worth it for many uses both farm related and not.

This solar field represents change. Yes, it's change, but time doesn't stand still it marches on. This solar project will provide a needed resource to the community, county and state in the form of electricity that we are in need of. Cell towers were once frowned on which are a small foot print. What would we all do now without a cell phone? I wish there was a tower on or near Woodpecker Rd as the signal on the old Galestown Rd(another change) is terrible. So, to conclude, consider the time and effort we as a family have invested in doing the best thing for our family, neighbors and the community. Thank you for the time and effort you have invested in reading our side of the story.

Respectfully,

Denise O. Taylor, Richard A. O'Bier, Gray E. O'Bier, Vicki G. OBier

DECOMMISSIONING PLAN

WOODPECKER ROAD COMMUNITY ENERGY INITIATIVE LLC
WOODPECKER RD SEAFORD, DE

JUNE 9, 2025

RECEIVED
JUL 02 2025
SUSSEX COUNTY
PLANNING & ZONING

DECOMMISSIONING PLAN

Introduction

Woodpecker Road Community Energy Initiative LLC developed this decommissioning plan for the Commercial Solar Energy Facility located off Woodpecker Rd Seaford, DE (PARCEL ID 531-12.00-84.01). This plan will be implemented after the contracted lease term has ended or if deemed abandoned. ***Decommissioning of the Project will be the responsibility of Woodpecker Road Community Energy Initiative LLC***. This plan is provided as part of the permitting conditions for the Special Exception Permit as approved by Sussex County.

Abandonment

If the Woodpecker Road Community Energy Generating facility does not produce energy for a continuous period of one year or more, it shall be presumed to have been abandoned. Any Facility that has been abandoned must be decommissioned and removed within 180 days.

Decommissioning must consist of:

a. Physical removal of all solar photovoltaic facilities, structures, equipment, security barriers and transmission lines from the site.
b. Recycling or disposal of all solid and other waste in accordance with local, state, and federal regulations.
c. Stabilization or re- vegetation of the site as necessary to minimize erosion.
d. Gravel roads and landscaping planted as part of the solar facility will be removed as part of the decommissioning activities. The Landowner is authorized to allow the Solar Facility Owner or Operator to leave landscaping, gravel roads or designated below grade foundations in place if deemed useful to agriculture operations.

Decommissioning Activities

Decommissioning of the Woodpecker Road Community Energy Generating facility will include removal of all above-ground infrastructure, including the arrays, inverter structures, concrete foundations and pads, electrical infrastructure, gravel roads and perimeter fences. Grading and re-vegetation will comply with all applicable rules and regulations. Concrete footings or foundations (if present) will be removed. Decommissioning activities will follow the Delaware Erosion & Sediment Control Handbook that are applied during project construction, or any new best management practices relevant at the time.

Woodpecker Road Community Energy Initiative LLC will decommission the Project once the contracted lease term is over or if deemed abandoned. Woodpecker Road Community Energy Initiative LLC will provide notice to Sussex County prior to the start of decommissioning.

Waste Disposal

Disposal of the solar array facility will include landfilling, metal recycling and solar panel recycling. The following is a general list of these items.

<u>Landfilling</u>
Wood fence posts
Wood utility poles
Concrete pads
Privacy mesh

<u>Metal Recycling</u>
Fence mesh
Wires
Racking
Metal electrical equipment

<u>Solar Panel Recycling</u>
Solar Panels

<u>Other Wastes</u>
Transformer oil (non-hazardous) – oil recycling facility
Pollinator gardens – yard waste at landfill or composting facility

The following is a list of disposal facilities that may be used for the decommissioning activities. This list is subject to change depending on facility requirements and permits.

Landfilling
Jones Rd Landfill Georgetown, DE
Sandtown Landfill Felton, DE

Solar Panel Recycling
Powerhouse Recycling Salisbury, NC
FirstAmerica Atlanta, GA

Metal Recycling
Sussex Scrap Metal Delmar, DE
Salisbury Scrap Metal Inc. Salisbury, MD

Other Wastes
Triumvirate Environmental Baltimore, MD (oils and hazardous waste)

Estimated Timeline and Cost

Decommissioning activities will be completed within 180 days from commencement of the decommissioning process as described herein. Woodpecker Road Community Energy Initiative LLC estimates the cost of decommissioning to be approximately $620,350. This estimate assumes a potential secondary market for certain components of the Project equipment, and disposal or recycling of other components aligned with industry best practices. The salvage value is not included in the decommissioning estimate.

Our estimate was developed by Becker Morgan Group of Salisbury, MD. Becker Morgan Group developed a list of decommissioning items by reviewing the proposed civil and electrical plan sets. The estimate was developed using contractor quotes, past project data, and publicly available decommissioning costs for other solar projects. Becker Morgan Group also used RS Means published cost data for Heavy Construction for the solar racking and removal of foundation posts as well as other similar items.

Restoration of Land

Decommissioning consists of the removal of above and below ground facility components, management of excess wastes and materials, and the restoration of ground surface irregularities and herbaceous vegetation. In the event that commercial operations cease for over 12 months, the project area is to be restored in a manner consistent with its condition prior to facility construction. Decommissioning activities are expected to be completed within 180 days. Removal of all equipment will be done in accordance with applicable regulations at the time. Following the removal of all equipment, restoration of the land will consist of the following:

- Minor grading and filling of all holes, ruts, depressions and irregularities created in removal of the solar facility equipment.
- Removal of pollinator gardens and restoration of areas to allow for farming
- Raking and aerating or tilling (de-compaction) of travel pathways used during the operations and decommissioning.
- Seeding of all disturbed and unvegetated areas with a seed mix supportive of farming (e.g. winter rye).

Financial Instrument

Woodpecker Road Community Energy Initiative LLC will provide a financial instrument to ensure the timely decommission of the project. This instrument shall be a performance bond, escrow, cash, certificate of deposit, irrevocable letter of credit, corporate guarantee or other equivalent. The financial instrument will provide payment to the landowner and County for the value of the decommissioning costs. The instrument will remain valid for the entire duration of the project. For all ownership changes, the financial instrument shall be replaced with no gap in coverage. The financial instrument shall be renewed and replaced if necessary to account for any changes in the total decommissioning cost. The financial instrument shall be in place prior to the issuance of a Final Written Notice of Site Plan Approval by the County. The financial instrument shall be reviewed and renewed every five (5) years to ensure the amount reflects the current market decommissioning costs.

PROJECT DECOMMISIONING COST ESTIMATE

WOODPECKER RD COMMUNITY ENERGY INITIATIVE LLC
WOODPECKER RD SEAFORD, DE

			SYSTEM SIZE (MW DC)	6.018
Estimated Construction Costs				
Item	Quantity	Units	Unit Cost	Total Cost
Mobilization	1	LS	$ 10,000	$ 10,000
Site Preparation	1	LS	$ 5,000	$ 5,000
Electrical Permits	1	LS	$ 1,500	$ 1,500
Building Permits	1	LS	$ 1,500	$ 1,500
Pole Removal: Utility Poles	3	EA	$ 2,500	$ 7,500
Pole Removal: Project Poles	2	EA	$ 2,500	$ 5,000
Pole Gear Removal: Meters & GOAB	1	LS	$ 2,500	$ 2,500
Underground Conduit Removal: AC&DC	1375	LF	$ 10.00	$ 13,750
Concrete Pads Removal	2	EA	$ 2,000	$ 4,000
Transformers Removal	2	EA	$ 3,000	$ 6,000
Switchgear Removal	2	EA	$ 2,500	$ 5,000
Recloser Removal	1	EA	$ 2,500	$ 2,500
Inverters Removal	20	EA	$ 750	$ 15,000
Modules Removal	9552	EA	$ 7.69	$ 73,455
Racking Removal: Tracker Torque Tube	831	EA	$ 125	$ 103,875
Foundation Removal	2077	EA	$ 60	$ 124,620
Fence Removal	5000	LF	$ 2.50	$ 12,500
Gravel Access Road Removal	750	CY	$ 73	$ 54,750
Site Grading	30	AC	$ 1,800	$ 54,000
Hydroseeding and Mulch	30	AC	$ 2,000	$ 60,000
Module Transportation/Recycle	20	EA	$ 1,400	$ 28,000
Solid Waste Transportation and Disposal (Dumpsters)	20	EA	$ 700	$ 14,000
Recycling Disposal Transportation (Palletized Truckloads)	30	EA	$ 380	$ 11,400
Construction Management	1	LS	$ 3,000	$ 3,000
Project Administration	1	LS	$ 1,500	$ 1,500
DECOMMISSIONING TOTAL				**$ 620,350**

NOTES:
LF= liner feet
CY = cubic yards
EA = each
AC = acres
LS = lump sum

eca solar

Electronically Recorded Document# 2023000033081 BK: 5977 PG: 154
Recorder of Deeds, Alexandra Reed Baker On 9/21/2023 at 2:19:51 PM Sussex County, DE
Consideration: $0.00 County/Town: $0.00 State: $0.00 Total: $0.00
Doc Surcharge Paid Town: SUSSEX COUNTY

Tax Map #: P/O 531-12.00-84.01
Prepared by and Return to:
Sergovic Carmean Weidman McCartney
& Owens, P.A.
25 Chestnut Street
Georgetown, DE 19947

NO TITLE SEARCH OR LIEN SEARCH REQUESTED OR PERFORMED

THIS DEED, made this 16 day of September, 2023,

-BETWEEN-

DENISE O. TAYLOR, of 5063 Woodpecker Road, Seaford, Delaware 19973, **RICHARD A. O'BIER,** of 5667 Big Pine Road, Bridgeville, Delaware 19933, **GRAY E. O'BIER** of 4081 Woodpecker Road, Seaford, Delaware 19973 and **RONALD F. O'BIER,** of 5081 Woodpecker Road, Seaford, Delaware 19973, parties of the first part,

-AND-

CHRISTOPHER J. TAYLOR, of 5063 Woodpecker Road, Seaford, Delaware 19973, as the sole owner, party of the second part;

WITNESSETH, That the said parties of the first part, for and in consideration of the sum of ONE DOLLAR and 00/100 ($1.00) current lawful money of the United States of America and other good and valuable consideration, the receipt whereof is hereby acknowledged, hereby grant and convey unto the said party of the second part, his heirs or assigns the following described lands:

ALL that certain lot, piece or parcel of land situate, lying and being in Seaford Hundred, Sussex County, State of Delaware, and being known as Lot 1 on a plot entitled "Minor Subdivision Plan for Gray E. O'Bier, Richard A. O'Bier, Denise O. Taylor and Ronald F. O'Bier," prepared by Miller Lewis, Inc., Land Surveying, dated June 13, 2022 and filed for record in the Office of the Recorder of Deeds, in and for Sussex County, Georgetown, Delaware on July 20, 2023 in Plot Book 404, Page 70, said Lot 1 being more particularly bounded and described as follows, to wit:

BEGINNING at a pipe found on the northerly right-of-way line of Woodpecker Road (SCR 80) (60' R/W) a common corner for lands of Michael G. & Casey M. O'Bier (T.M. 531-12.00-84.05) said point being 886.7' +/- west of route 20; thence with said right-of-way line South 42°-56'-00" West a distance of 381.51 feet to a pipe set, a common corner for this lot and lands now or formerly of Richard A. O'Bier, Gray E. O'Bier, Ronald F. O'Bier and Denise O. Taylor (T.M. 531-12.00-84.01); thence turning and leaving said right-of-way and with two (2) new division lines through said O'Bier/Taylor lands (1) North 47°-04'-00" West a distance of 243.20 feet to a pipe set (2) North 42°-56'-00" East a distance of 334.95 feet to a pipe found a common corner for this lot and said Michael G. & Casey M. O'Bier lands; thence turning and with said

O'Bier lands South 57°-54'-19" East a distance of 247.62 feet home to the point and place of beginning, said to contain 2.000 acres of land, be the same more or less.

BEING a part of the same lands conveyed to Thelma G. O'Bier by deed of Thelma G. O'Bier dated October 28, 1988 and filed for record in the Office of the Recorder of Deeds, in and for Sussex County, Delaware in Deed Book 1608, page 162. The said Thelma G. O'Bier departed this life on or about June 25, 1994, and pursuant to Item III of her last Will and Testament, filed for record in the Office of the Register of Wills, in and for Sussex County, Delaware, in Will Book 257, page 58, she devised the property to her children, Ronald F. O'Bier, Richard A. O'Bier, Denise O. Taylor and Gray E. O'Bier.

SUBJECT to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds, in and for Sussex County, Georgetown, Delaware.

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

SIGNED, SEALED AND DELIVERED,
IN THE PRESENCE OF:

Witness _____ Denise O. Taylor (SEAL)

Witness _____ Richard A. O'Bier (SEAL)

Witness _____ Gray E. O'Bier (SEAL)

Witness _____ Ronald F. O'Bier (SEAL)

MELINDA A HUFFMAN
Notary Public
State of Delaware
My Commission Expires On
January 12, 2025

STATE OF DELAWARE :

: SS.

COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 16 day of September, 2023, personally came before me, The Subscriber, a Notary Public for the State and County aforesaid, **DENISE O. TAYLOR,** party to this Indenture known to me personally to be such, and acknowledged this Indenture to be her Deed.

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

MELINDA A HUFFMAN
Notary Public
State of Delaware
My Commission Expires On
January 12, 2025

Notary Public

Melinda A. Huffman
Print or Type Name

Comm. Expires: 1/12/2025

STATE OF DELAWARE :

: SS.

COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 16 day of September, 2023, personally came before me, The Subscriber, a Notary Public for the State and County aforesaid, **RICHARD A. O'BIER,** party to this Indenture known to me personally to be such, and acknowledged this Indenture to be his Deed.

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

Notary Public

Melinda A Huffman
Print or Type Name

MELINDA A HUFFMAN
Notary Public
State of Delaware
My Commission Expires On
January 12, 2025

Comm. Expires: 1/12/2025

STATE OF DELAWARE :

: SS.

COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 16 day of September, 2023, personally came before me, The Subscriber, a Notary Public for the State and County aforesaid, **GRAY E. O'BIER**, party to this Indenture known to me personally to be such, and acknowledged this Indenture to be his Deed.

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

Melinda A Huffman
Notary Public

MELINDA A HUFFMAN
Notary Public
State of Delaware
My Commission Expires On
January 12, 2025

Melinda A. Huffman
Print or Type Name

Comm. Expires: 1/12/25

STATE OF DELAWARE :

: SS.

COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 16 day of September, 2023, personally came before me, The Subscriber, a Notary Public for the State and County aforesaid, **RONALD F. O'BIER**, party to this Indenture known to me personally to be such, and acknowledged this Indenture to be his Deed.

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

Melinda A Huffman
Notary Public

MELINDA A HUFFMAN
Notary Public
State of Delaware
My Commission Expires On
January 12, 2025

Melinda A. Huffman
Print or Type Name

Comm. Expires: 1/12/25

BECKER MORGAN GROUP

OWNER: Denise O. Taylor, Richard A. O'Bier, Et Al
PARCEL NO.: 531-12.00-84.01 (Portion of)

Conditional Use Area - 27.84 ACRES ±

Beginning at a point at a corner for this area, located within the lands of Denise O. Taylor, Richard A. O'Bier, Et Al, said point being located as measured from a found iron pipe with cap in line with the westerly right of way line for Woodpecker Road and at a corner for the lands of Denise O. Taylor, Richard A. O'Bier, Et Al and lands of Gray E. & Teresa L. O'Bier the following two courses and distances; North 87°53'19" West 377.68 feet to a found iron pipe with cap; thence North 57°28'00" West 175.18 feet to said point of beginning; thence leaving said point of beginning and running across said lands of Denise O. Taylor, Richard A. O'Bier, Et Al the following eleven courses and distances 1) South 00°02'40" East 398.04 feet to a point; thence 2) South 48°23'54" West 114.62 feet to a point; thence 3) North 88°28'07" West 650.84 feet to a point; thence 4) North 03°57'50" West 855.97 feet to a point; thence 5) North 00°00'00" East 397.87 feet to a point; thence 6) South 88°55'22" East 1,345.14 feet to a point; thence 7) South 00°00'00" East 219.33 feet to a point; thence 8) South 16°47'01" West 207.30 feet to a point; thence 9) North 88°53'10" West 421.56 feet to a point; thence 10) South 00°00'00" East 226.94 feet to a point; thence 11) South 27°10'16" West 149.73 feet to the point and place of beginning and containing 27.84 acres of land, be the same more or less.

202512300ae-desc-cond-use.docx

PLANNING & ZONING COMMISSION
HOLLY WINGATE, CHAIR
SCOTT COLLINS, VICE CHAIR
JEFF ALLEN
JOHN PASSWATERS
DAVID PETTYJOHN

Sussex County

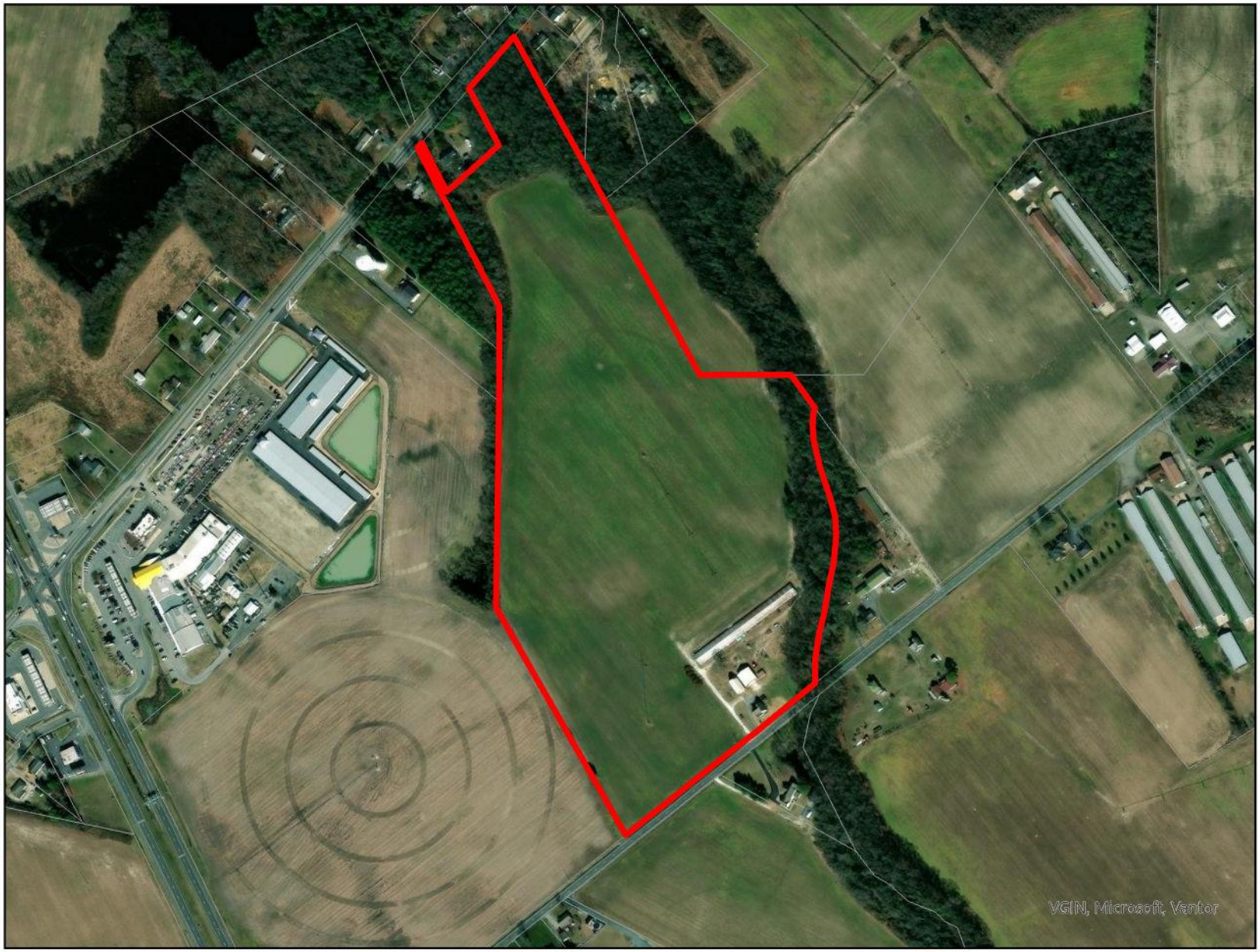
sussexcountyde.gov
pandz@sussexcountyde.gov

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: September 16, 2026

Application:	CU 2639 Sunrise Solar, Inc.
Applicant:	Sunrise Solar, Inc. 6408 Church Hill Road Chestertown, MD 21620
Owner:	Glen Givens 11270 Sycamore Road Laurel, DE 19956
Site Location:	Located on the north side of Sycamore Road (S.C.R. 466), approximately 0.27 miles east from Sussex Highway (Route 13).
Current Zoning:	Agricultural Residential (AR-1) Zoning District
Proposed Use:	Solar Arrays
Comprehensive Land Use Plan Reference:	Developing Area
Councilmanic District:	District 1 – Mr. Matt Lloyd
School District:	Laurel School District
Fire District:	Laurel Fire Company
Sewer:	N/A
Water:	N/A
Site Area:	47.20 Acres
Tax Map ID.:	232-12.00-100.00

EQUAL HOUSING OPPORTUNITY

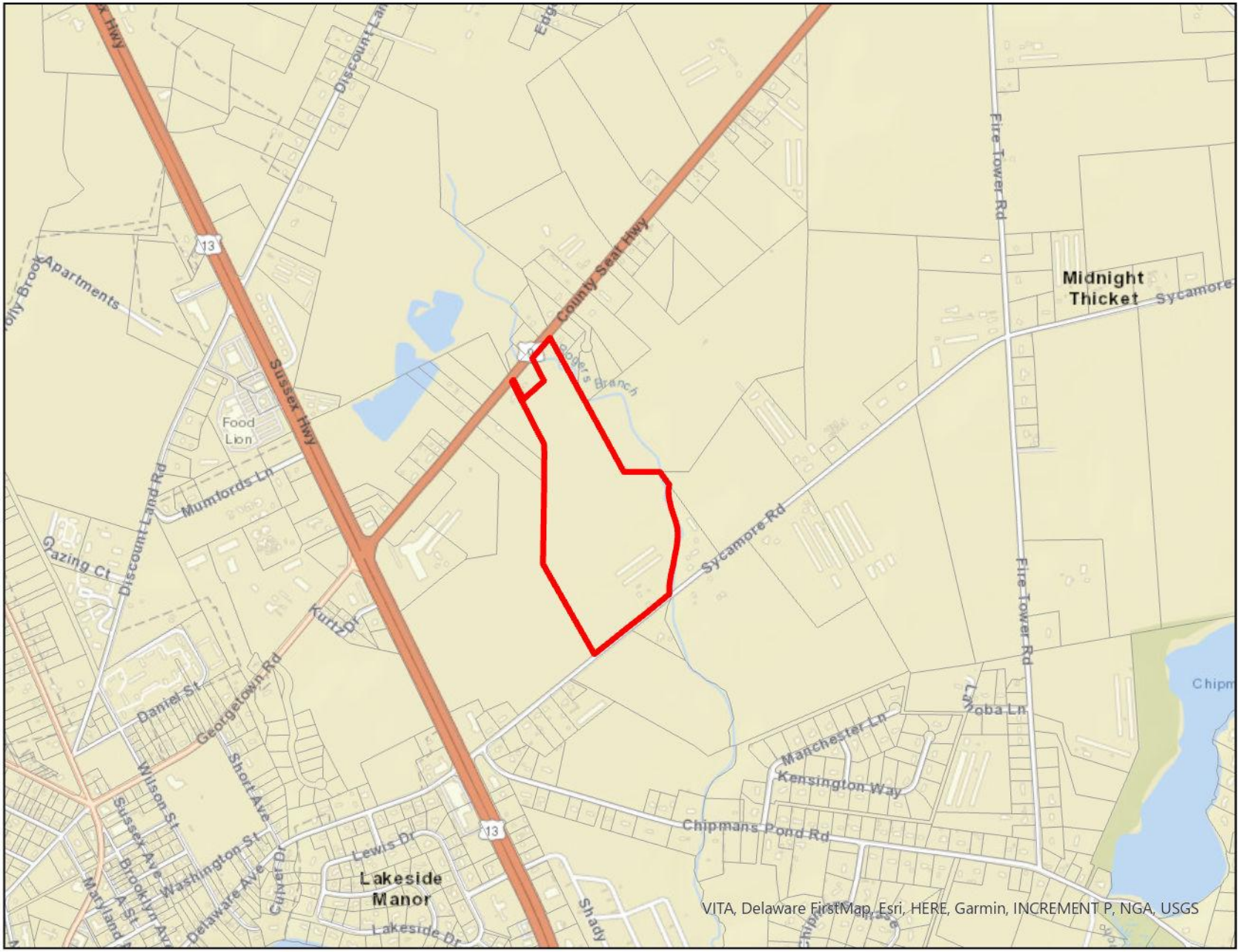
COUNTY ADMINISTRATIVE OFFICES
2 THE CIRCLE | PO BOX 417
GEORGETOWN, DELAWARE 19947



CU 2639 Sunrise Solar, Inc.
Aerial Map
Tax Map No. 232-12.00-100.00

N

0 0.13 0.25 0.5 Miles



CU 2639 Sunrise Solar, Inc.
Street Map
Tax Map No. 232-12.00-100.00

N

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CU 2639 Sunrise Solar, Inc.

Zoning

- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

CU 2639 Sunrise Solar, Inc.
Zoning Map
Tax Map No. 232-12.00-100.00

N

0 0.25 0.5 1 Miles

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Planning Commission Members
From: Ms. Susan Isaacs, Planner I
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: July 20, 2026
RE: Staff Analysis for C/U 2639 Sunrise Solar, Inc.

This memo is to provide background and analysis for the Planning Commission to consider as a part of Application C/U 2639 Sunrise Solar, Inc. to be reviewed during the September 16, 2026, Planning Commission Meeting. This analysis should be included in the record of this Application and is subject to comments and information that may be presented during the Public Hearing.

Please note that the following Staff Analysis is for informational purposes only and does not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.

Tax Parcel IDs: 232-12.00-100.00

Proposal: The request is for a Conditional Use for Tax Parcel 232-12.00-100.00 to allow for Solar Arrays to be located in an Agricultural Residential (AR-1) District. The property is lying on the north side of Sycamore Road (Road 466), approximately 0.27 miles east from Sussex Highway (Route 13). The Parcel consists of 47.20 acres +/-.

Zoning: The Parcel is zoned Agricultural Residential (AR-1) District. The adjacent parcels to the east, north, west, and south are all zoned Agricultural Residential (AR-1) District.

Future Land Use Map Designation w/in Comprehensive Plan: The subject property is located within the "Developing Area" as outlined in the Sussex County's 2018 Comprehensive Plan.

Applicability to Comprehensive Plan: The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use map in the plan indicates that the subject property is designated as a Growth Area and has a land use designation of "Developing Area." All adjacent parcels also have the "Developing Area" designation except for the adjacent parcels to the north and west having a land use designation of "Municipalities Area".

As outlined within the 2018 Sussex County Comprehensive Plan, *Developing Areas* are "newer, emerging growth areas that demonstrate the characteristics of developmental pressures. Most of the proposed Developing Areas are adjacent to municipalities, within or adjacent to potential future annexation areas of a municipality, or adjacent to Town Centers" (2018 Sussex County Comprehensive Plan, 4-14).

In terms of non-residential development, the Plan also provides guidelines for *Developing Areas* as follows:

> In selected areas and at appropriate intersections, commercial uses should be allowed. A variety of office uses would be appropriate in many areas. Portions of the Developing Areas with good road access and few nearby homes should allow for business and industrial parks. (2018 Sussex County Comprehensive Plan, 4-14).

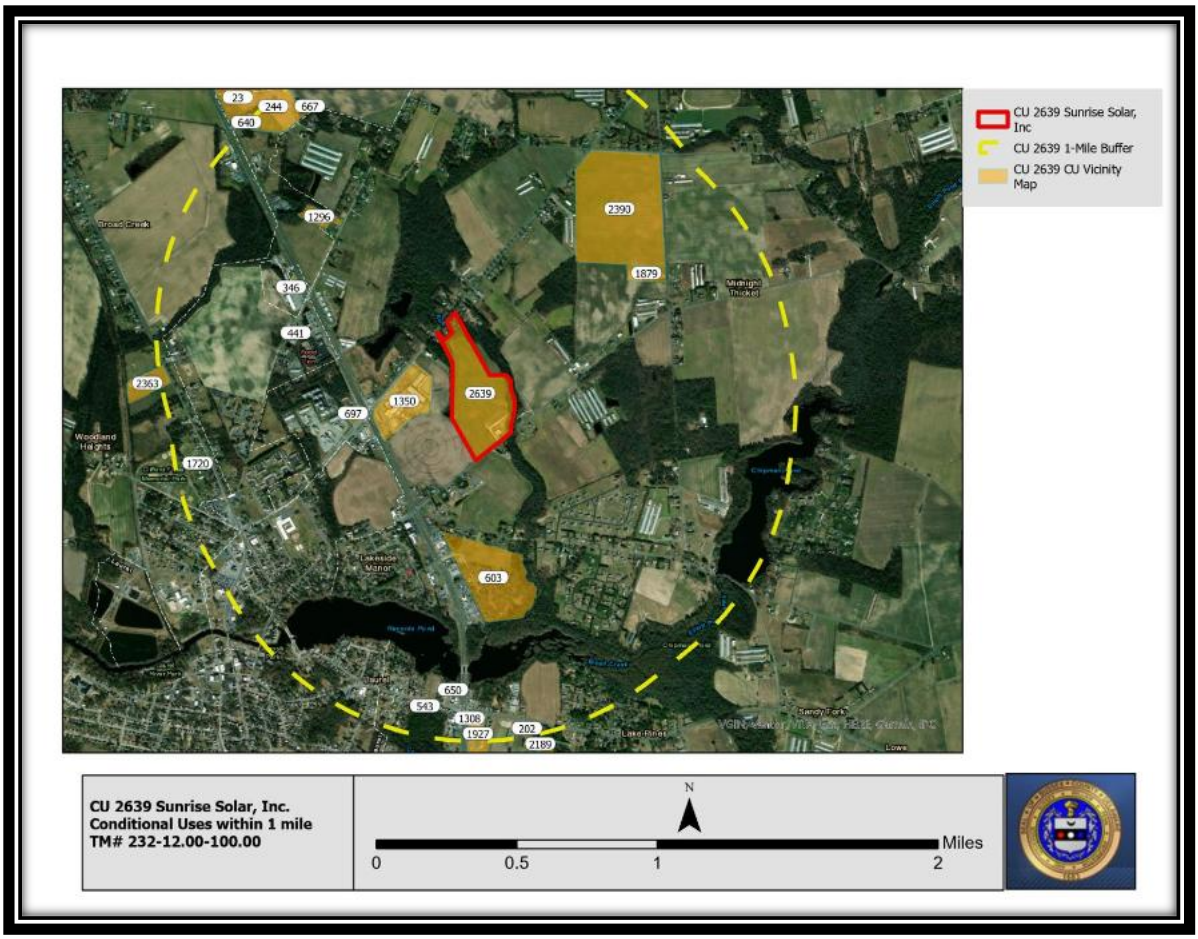
Further Site Considerations:

- **Density:** N/A
- **Open Space Provisions:** N/A
- **Agricultural Areas:** The site is within the vicinity of active agricultural lands.
- **Interconnectivity:** N/A
- **Transportation Improvement District (TID):** The parcel is not within the Henlopen Transportation Improvement District.
- **Forested Areas:** The site is located within the vicinity of forested areas.
- **Wetlands Buffers/Waterways:** N/A
- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):** The property is located within Flood Zones "X" and Staff note there are Wellhead Protection Areas located at the rear of the site. The Parcel is classified as within areas of "Fair" in terms of Groundwater Recharge Potential on the site per data from the State of Delaware.

Based on the analysis of the land use, surrounding zoning and uses, a Conditional Use Application to allow for a solar facility and associated site improvements, subject to considerations of scale and impact, could be considered as being consistent with the land use, area zoning and surrounding uses.

Existing Conditional Uses within the Vicinity of the Subject Site: Staff have identified a history of twenty (20) Conditional Use applications within a one (1) mile radius of the application site. A Data Table and Supplemental Map have been supplied to provide additional background regarding the approval status of Applications in the area to include the location of all current or previous Conditional Use Applications that are less than 1 mile distance from the subject site.

CU No.	APPLICANT	Tax Parcel #	Zoning	Proposed Use	CC Date	CC Decision
23	Albert L. Tanyer	232-12.00-57.03	AR-1	Manufactured Home Park	10/12/1971	Approved
202	Triple B Cycle Center	232-12.00-48.00	AR-1	Sale/repair/storage of motorcycles	4/23/1974	Denied
244	Albert L Tanyer	132-12.00-109.01	AR-1	Manufactured home park	11/12/1974	Approved
346	Robert Groton & Betty	232-12.00-60.01	AR-1	Atuo repair/sales & parts	6/1/1976	Approved
441	Schwans Sales Enterprises Inc	132-12.00-109.00	AR-1	Frozen food warehouse	10/11/1977	Approved
543	Richard & Trudy Hearn	132-12.00-110.00	AR-1	Sales of logging supplies	8/14/1979	Approved
603	Larry Willey	232-13.00-29.01	AR-1	Addition to Existing Manufactured Home Park	11/18/1980	Approved
640	Albert L. Tanyer	332-1.08-32.00	AR-1	Propane Tanks	9/1/1981	Approved
650	William Records	332-1.08-38.00	AR-1	Auto Sales Lot	10/27/1981	Approved
667	Robert Marvil	332-1.00-100.00	AR-1	Glass sales & repair shop	3/2/1982	Approved
697	Michael Atkins	232-12.00-105.00	AR-1	Flea market	9/14/1982	Denied
1296	Charles E. & Carol F. James	232-12.00-138.00	AR-1	Mobile diesel repair/cars/trucks/office	8/10/1999	Approved
1308	Joseph C. O'Neal	232-12.14-16.00	AR-1	Auction building	11/2/1999	Approved
1350	Delmarva Paintball c/o Dan Wallace	232-12.00-63.02	AR-1	Paintball games	9/12/2000	Approved
1720	Wayne & Janet Samsone	332-1.00-99.00	AR-1	Archery Repair & Sales	9/11/2007	Approved
1879	Laurel Fire Dept., Inc.	332-2.00-75.00	AR-1	Fire company substation	1/4/2011	Approved
1927	Two Farms, Inc.	332-1.00-100.00	C-1/AR-1	Convenience Store with Gas Pumps	4/17/2012	Approved
2189	Grace Malone	132-12.00-109.00	AR-1	Events venue		Withdrawn
2363	Laurel Wesleyan Church - Reverend M. S	232-12.10-3.00	AR-1	Electronic Message Center	6/14/2022	Approved
2390	Taylor Mill Road Solar 1, LLC	232-7.00-3.00	AR-1	Solar Farm	5/7/2023	Approved
2639	Sunrise Solar, Inc.	232-12.00-100.00	AR-1	Solar Facility		Pending


CU 2639 Sunrise Solar, Inc
CU 2639 1-Mile Buffer
CU 2639 CU Vicinity Map
23
244
667
640
1296
2390
1879
346
441
2363
1350
2639
697
1720
603
650
543
1308
1927
202
2189
Broad Creek
Woodland Heights
Lakeside Manor
Lake Pinet
Sandy Fork
CU 2639 Sunrise Solar, Inc.
Conditional Uses within 1 mile
TM# 232-12.00-100.00
N
0
0.5
1
2
Miles

File #: C/U 2639
2026002556

Planning & Zoning Commission 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

RECEIVED
- Digital Only -
MAR 09 2026
SUSSEX COUNTY
PLANNING & ZONING

Type of Application: (please check applicable)
Conditional Use ✔
Zoning Map Amendment ___

Site Address of Conditional Use/Zoning Map Amendment

11279 Sycamore Rd. Laurel, DE 19956

Type of Conditional Use Requested:

Install a 4 MW AC ground mounted single axis tracker for a community solar project.

Tax Map #: 232-12.00-100.00 **Size of Parcel(s):** 47.2 acres

Current Zoning: A-AG AR-1 **Proposed Zoning:** same AR-1 **Size of Building:** n/a

Land Use Classification: 101 Developing Area

Water Provider: _____ **Sewer Provider:** _____

Applicant Information

Applicant Name: Sunrise Solar, Inc. (Dan Baugher)
Applicant Address: 6408 Church Hill Rd.
City: Chestertown State: MD ZipCode: 21620
Phone #: 410-708-4824 E-mail: dan@sunrisesolarmd.com

Owner Information

Owner Name: Glen Givens
Owner Address: 11270 Sycamore Rd.
City: Laurel State: DE Zip Code: 19956
Phone #: 302-745-5149 E-mail: ggivens@verizon.net

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: SSI Sycamore Road Solar, LLC
Agent/Attorney/Engineer Address: 530 Gaither Rd. Suite 900
City: Rockville State: MD Zip Code: 20850
Phone #: 732-870-7860 E-mail: evan.smith@standardsolar.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✔ **Completed Application**

✔ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✔ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✔ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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

Daniel Baugher

Date: 3/6/2026

Signature of Owner

Glen Alan Givens (Mar 9, 2026 14:18:17 EDT)

Date: 03/09/26

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

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

SHANTÉ A. HASTINGS
SECRETARY

November 24, 2025

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **SSI Sycamore Road Solar LLC** (11279 Sycamore Road, Laurel, Delaware 19956**)** proposed land use application, which we received on November 05, 2025. This application is for an approximate 47.2-acre parcel (Tax Parcel: 232-12.00-100.00). The parcel is located on the north side of Sycamore Road (Sussex County Road 466) and is approximately 1,515 feet east from the intersection of Sussex Highway (Delaware Route 13) and Sycamore Road The parcel is located on the south side of County Seat Highway (Delaware Route 9) and approximately 1,880 feet east of the intersection of Delaware Route 9 and Delaware Route 13. The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks conditional use approval to build a 4.0-MW (AC) Single Axis Tracker Community Solar.

Per the 2024 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Sycamore Road, where the subject land is located, which is from Fire Tower Road (Sussex County Road 479) to Sussex Highway, is 2,106 vehicles per day. The annual average and summer daily traffic volumes along Sycamore Road, where the subject land is located, which is from Fire Tower Road (Sussex County Road 479) to Sussex Highway, is 8,559 and 11,676 vehicles per day, respectively.

Based on our review, we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in

other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Tijah Jones, at tijah.jones@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Engineer
Economic Development Coordination

SM:tjm
cc: SSI Sycamore Road Solar LLC, Applicant
Lauren Cecchine, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, M&O
James Argo, South District Project Reviewer, M&O
April Foster, South District Public Works Admin. M&O
Todd Sammons, Assistant Director, Economic Development Coordination
John Pietrobono, Acting Sussex Coordinator, Economic Development Coordination
Kevin Hickman, Sussex Reviewer, Economic Development Coordination
Derek Sapp, Sussex Review Engineer, Economic Development Coordination
Jose Quixtan, Sussex Review Engineer, Economic Development Coordination
Annamaria Furmato, TIS Review Engineer, Economic Development Coordination
Ben Fisher, TIS Review Engineer, Economic Development Coordination
Tijah Jones, TIS Review Engineer, Economic Development Coordination
DelDOT TIS Support

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

TO:	**Jamie Whitehouse**
REVIEWER:	**Chris Calio**
DATE:	**8/26/2026**
APPLICATION:	**CU 2639 Sunrise Solar, Inc.**
APPLICANT:	**Sunrise Solar, Inc.**
FILE NO:	**WSPA-5.02**
TAX MAP & PARCEL(S):	**232-12.00-100.00**
LOCATION:	**Lying on the north side of Sycamore Road (SCR 466), approximately 0.27 mile east of Sussex Highway (Rt. 13).**
NO. OF UNITS:	**Solar Arrays**
GROSS ACREAGE:	**47.20**

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 $10,700.00** 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 Conditional Use is located in the Town of Laurel's Growth and Annexation Area.**

(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
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
No Permit Tech Assigned

SYSTEM DESCRIPTION

DESIGN WIND SPEED:	118 MPH	HIGH TEMP:	33° C	LOW TEMP:	-14° C
EXP. / OCC. CATEGORY:	C / II	SOURCE:	SALISBURY WICOMICO CO AP		
ELEV. (ABOVE SEA LVL):	35'	SEISMIC DESIGN CATEGORY:			A
SNOW LOAD:	20 PSF (ASCE 7-16, SUSSEX COUNTY CODE)				
UTILITY TERRITORY:	DELMARVA POWER & LIGHT				
MODULE TYPE:	TALESUN BIPRO TM7G72M 590				
MODULE QUANTITY:	9,620 (370 STRINGS OF 26)				
SYSTEM SIZE (DC):	5,675.8 kW				
ESTIMATED YIELD (AC):	9,150.9 MWh/yr				
SPEC. PROD. RATIO:	1,612 kWh/kWp/yr				
METEO FILE	23-0204 SUNRISE LAUREL DE SAW V4_0				
MOUNTING SYSTEM:	ATI DURATRACK HZ V3 (36.5% GCR)				
FENCE LENGTH:	4,390' (22.5 ACRES ENCLOSED)				
TILT ANGLE:	± 52°				
ARRAY AZIMUTH:	0°				
INVERTER(S):	[16] CHINT CPS SCH250K-T-US-600 = 4,000 kW AC = 1.42 DC/AC RATIO				

NOTES: ASSUMED NEW 12.47kV, 3Φ SERVICE - COMBINED IMPACT AND FACILITIES STUDY REQUIRED PER UTILITY LETTER ON 2025, SEPTEMBER 24.

[2] 3,000A, 600V SWITCHBOARDS + [2] 3,000A, 600V MAIN CIRCUIT BREAKERS.
[2] 2,200kVA, 600V TO 12.47kV STEP-UP TRANSFORMERS.
[1] CUSTOMER RISER METER POLE WITH CTs & PTs.
[1] CUSTOMER RECLOSER POLE.
[1] CUSTOMER GOAB SWITCH POLE, UTILITY ACCESSIBLE.
[1] UTILITY METER POLE WITH CTs & PTs.
[1] UTILITY RECLOSER POLE.
[1] UTILITY DISCONNECT SWITCH POLE.
[2] 20'x40' CONRETE INVERTER PADS.
[2] 10'x20' CONCRETE EQUIPMENT PADS.
~1,765' MV AC TRENCHING FROM EQUIPMENT PADS TO RISER POLE.
~220' NEW 3Φ LINES FROM RISER POLE TO POI.
~42,800 SQ. FT. OF GRAVEL CONSTRUCTION ACCESS ROADS TO BE BUILT.
~0.20 ACRES OF TREE REMOVAL REQUIRED.

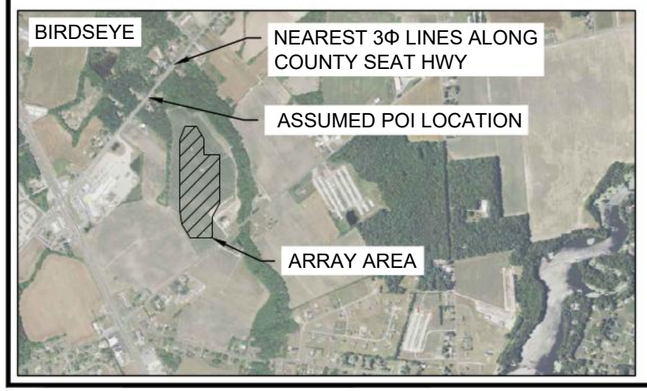
- FENCE LINE AND ROAD TO BE FINALIZED DURING DETAILED DESIGN.
- INVERTER CHANGE TO BE COORDINATED WITH UTILITY.
- FINAL POI CONFIGURATION TO BE COORDINATED WITH UTILITY.
- DIRECT TRANSFER TRIP AND TELEMETRY REQUIRED.
- LANDSCAPE PLAN AND DECOMMISSIONING PLAN TO BE PREPARED.
- NO PERMANENT PARKING PROPOSED.
- TOPOGRAPHY IN ARRAY AREA IS BELOW 5% SLOPE, SUITABLE FOR SOLAR.
- EXISTING LAND COVER SHOWN BY AERIAL IMAGERY.
- DESIGN SUBJECT TO CHANGE.

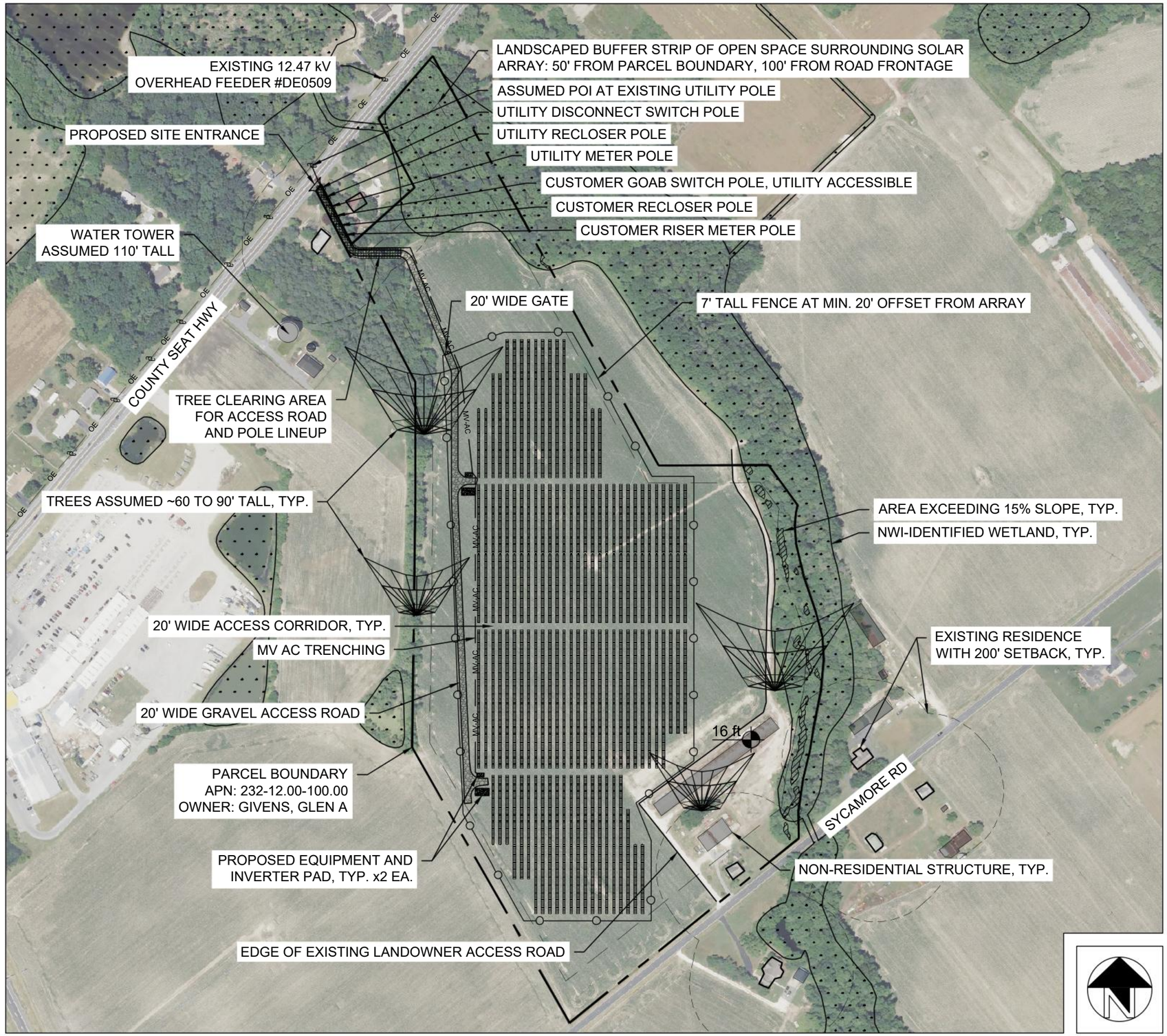
PROJECT ASSUMPTIONS

(OS) ONSITE | (NO) NONE | (A) ADJACENT | (N/A) UNKNOWN

SSI REQUIREMENTS:
- BAT BOX
- POLLINATOR SEED MIX
- SPARE MODULES
- SPARE INVERTERS

WETLANDS	A	3Φ DISTRIBUTION LINE(S)	A
CRITICAL HABITATS	NO	FEEDER LENGTH (MILES)	2.3
PROTECTED SPECIES	OS	EXISTING MAX GRADE (%)	15+%
FLOODPLAINS	NO	FAA FILING REQUIREMENT	N
SITE ACCESS	NEW: OFF OF COUNTY SEAT HWY		
COUNTY / AHJ	SUSSEX COUNTY		
FEEDER HOSTING CAPACITY	CIRCUIT #DE0509 HAS 9,620 kW AC AVAILABLE.		
SUBSTATION HOSTING CAP.	LAUREL SUB. HAS 10,980 kW AC AVAILABLE.		





STANDARD SOLAR
Clean Energy. Smart Business.
530 Gaither Road, Suite 900
Rockville, MD 20850
301-944-1200
www.StandardSolar.com

PROJECT TITLE
SUNRISE LAUREL DE

PROJECT ADDRESS
11279 SYCAMORE RD, LAUREL, DE 19956
38.5745, -75.5581

SHEET TITLE
PV BID PROPOSAL

ISSUED SET / REVISIONS

REV.	DESCRIPTION	DATE
0	INITIAL RELEASE BY TBM	03/20/2025
1	DESIGN UDPATE FOR PERMIT APP.	12/11/2025

DISCLAIMER
THIS DRAWING IS THE PROPERTY OF STANDARD SOLAR, INC. THIS INFORMATION IS CONFIDENTIAL AND IS TO BE USED ONLY IN CONNECTION WITH WORK DESCRIBED BY STANDARD SOLAR, INC. NO PART IS TO BE DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION FROM STANDARD SOLAR, INC.

PROJECT NUMBER
23-0204

DRAWN BY
AWS

REVIEWED & APPROVED BY
KNC

DATE
12/11/2025

ORIGINAL SHEET SIZE
11X17
SHOULD MEASURE 1/2":

SCALE
1" = 300'

DRAWING
PV1

Ashley Paugh

From: Kendrick Tice <tice@sunrisesolarmd.com>
Sent: Wednesday, April 22, 2026 9:37 AM
To: Planning and Zoning; Dan Baugher; Evan Smith
Subject: Request for Expedited Review – Reference No. C/U 2639 (Sunrise Solar, Inc.)

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

Hi Ashley

On behalf of Sunrise Solar, Inc. and Standard Solar regarding Conditional Use Application No. 202602556 (Reference No. C/U 2639). We respectfully request consideration for an expedited review of this application.

This project represents a meaningful opportunity to deliver direct and lasting benefits to Sussex County residents and the broader local economy, while also aligning closely with the goals and policy direction outlined in the Sussex County Comprehensive Plan. As noted in the Utilities Element (Section 7.5), along with Goal 7.3, Objective 7.3.2, and Strategies 7.3.2.1 and 7.3.2.2, the County has established a clear intent to encourage renewable energy development, expand energy options, and remain adaptive to evolving energy solutions. Community solar directly advances these objectives by providing utility-scale renewable energy that is accessible to a broader portion of Sussex County residents, including those who may not otherwise be able to install solar on their own properties.

As a community solar project, this development is specifically designed to provide participating households and businesses with access to discounted electricity compared to standard utility rates—helping to lower energy costs at a time when affordability remains a key concern. In addition to direct savings, the project supports broader energy system needs. The PJM grid is currently experiencing rapid growth in electricity demand alongside a tightening supply of generation resources. Solar energy remains one of the fastest and most efficient sources of new power to deploy, allowing Sussex County to benefit from increased energy reliability and resilience in the near term.

Beyond energy benefits, the project will generate tangible local economic value. It will provide ongoing property tax revenue to Sussex County, supporting public services and infrastructure. The landowner will benefit from a stable, long-term revenue stream, strengthening their economic position and enabling reinvestment into the local economy. In addition, Sunrise Solar is committed to utilizing Delaware and Maryland-based labor for the development and construction of this project, ensuring that job creation and economic activity remain within the region.

Taken together, these benefits—lower energy costs for residents, increased grid support, local job creation, new tax revenue, and strong alignment with the County's Comprehensive Plan—demonstrate how this project serves the broader public interest and supports Sussex County's long-term vision.

An expedited review would help ensure these community and economic benefits can be realized in a timely manner. We are committed to working closely with the County and are prepared to provide any additional information needed to facilitate your review.

We appreciate your time, thoughtful consideration, and continued leadership in serving the Sussex County community.

Kendrick Tice
COO Sunrise Solar, INC
www.sunrisesolarmd.com
Cell: 410-708-7373

1449

BK: 4085 PG: 147

TM #2-32-12.00-100.00
PREPARED BY & RETURN TO:
The Smith Firm, LLC
412 Laureltown
Laurel, DE 19956
File No. S12-146/

This Deed, made this 20th day of December, 2012,

- BETWEEN -

JUNE B. POWELL, CO-TRUSTEE and **SALVATORE JOSEPH RANIERI CO-TRUSTEES OF THE JUNE B. POWELL REVOCABLE TRUST DATED MARCH 28, 2011**, of 1001 Middleford Road, Seaford, DE 19973, parties of the first part,

- AND -

GLEN A. GIVENS and **JENNIFER F. GIVENS**, husband and wife, as tenants by the entirety with the right of survivorship and not as tenants in common, of 11270 Sycamore Road, Laurel, DE 19956, parties of the second part.

WITNESSETH: That the said parties of the first part, for and in consideration of the sum of **Four Hundred Thousand and 00/100 Dollars ($400,000.00)**, lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grant and convey unto the parties of the second part, and their heirs and assigns, in fee simple, the following described lands, situate, lying and being in Sussex County, State of Delaware:

ALL that certain tract, piece or parcel of land, together with all improvements thereon, erected, situate, lying and being in Broad Creek Hundred, Sussex County, Delaware, consisting of two parcels, more particularly bounded and described as follows, according to a certain surveyor's report and plot, prepared by Harold L. Cask, registered surveyor, under date of November 28, 1946:

BEGINNING at a concrete marker set in the northern boundary line of the aforesaid old country road, a corner for this parcel and also a corner for lands now

mw

in the tenure of Warren Lewis, aforesaid; thence by and with the line of lands of said Lewis, the following 3 courses: North 21 ¾ degrees West 56 6/10 rods to a concrete marker; thence North 8 ½ degrees East 62 4/10 rods to a concrete marker, and thence North 18 ¼ degrees West 37 2/10 rods to a stake set in the southern boundary line of Delaware State Highway leading from Laurel to Georgetown, Delaware; thence by and with the southern boundary line of said State Highway, North 48 degrees East 1 ¾ rods to a stake forming a corner for this parcel and lands now in the tenure of Loran Elliott, et ux; thence by and with the line of lands of said Elliotts, the following 3 courses: South 18 ¼ degrees East 12 ¾ rods to an iron axle; thence North 48 degrees East 12 ¾ rods to an iron axle; and thence North 18 ¼ degrees West 12 ¾ rods to a concrete marker set in the southern boundary line of the aforesaid Delaware State Highway; thence by and with the southern boundary line of the aforesaid State Highway, North 48 degrees East 16 ½ rods to a cedar stob, a corner for this parcel and lands of R.F. Brittingham; thence by and with the line of lands of said Brittingham and Paul Stahley, the following 2 courses: South 19 degrees East 87 7/10 rods to a stone; and thence South 80 degrees East 23 rods to the center of a ditch known as "Roger's Branch"; thence by and with the centerline of said ditch of branch in a southerly direction, to its point of intersection with the northern boundary line of the aforesaid old country road; thence by and with the northern boundary line of said old country road, South 59 degrees West 54 ¼ rods home to the point and place of beginning, containing 42 acres of land, more or less.

EXECEPTING AND RESERVING any and all outconveyances therefrom.

Said parcel being currently assessed as 47.26 acres of land, more or less.

BEING a portion of the same lands conveyed to June B. Powell and Salvatore Joseph Ranieri, Co-Trustees of the June B. Powell Revocable Trust dated March 28, 2011, from June A. Benson, by Deed dated September 23, 2011, recorded in the Office of the Recorder of Deeds in and for Sussex County, Delaware, on October 5, 2011, in Deed Book 3932, Page 168.

SUBJECT to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

BK: 4085 PG: 149

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

Signed, Sealed and Delivered
in the presence of:

June B. Powell (SEAL)
June B. Powell, Co-Trustee

(SEAL)
Salvatore Joseph Ranieri Co-Trustee

STATE OF DELAWARE, COUNTY OF SUSSEX: to-wit

BE IT REMEMBERED, that on December 20, 2012, personally came before me, the subscriber, June B. Powell, Co-Trustee and Salvatore Joseph Ranieri Co-Trustee, parties of the first part to this Indenture, known to me personally to be such, and acknowledged this Indenture to be their act and deed.

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

Notary Public

My Commission Expires: _____

ADMITTED TO DELAWARE BAR: 12/15/2[illegible]
ATTORNEY
MICHAEL R. SMITH
NOTARY
UNIFORM LAW ON NOTARIAL ACTS
PURSUANT TO 29 DEL. C. SEC 4323(3)

Consideration: 400,000.00

County	6,000.00
State	6,000.00
Town Total	12,000.00

Received: Margaret P Jan 11,2013

RECEIVED

JAN 11 2013

ASSESSMENT DIVISION
OF SUSSEX COUNTY

Recorder of Deeds
Scott Dailey
Jan 11,2013 12:53P
Sussex County
Doc. Surcharge Paid

PLANNING & ZONING COMMISSION
HOLLY J. WINGATE, CHAIR
G. SCOTT COLLINS, VICE-CHAIR
JEFF ALLEN
JOHN PASSWATERS
DAVID PETTYJOHN

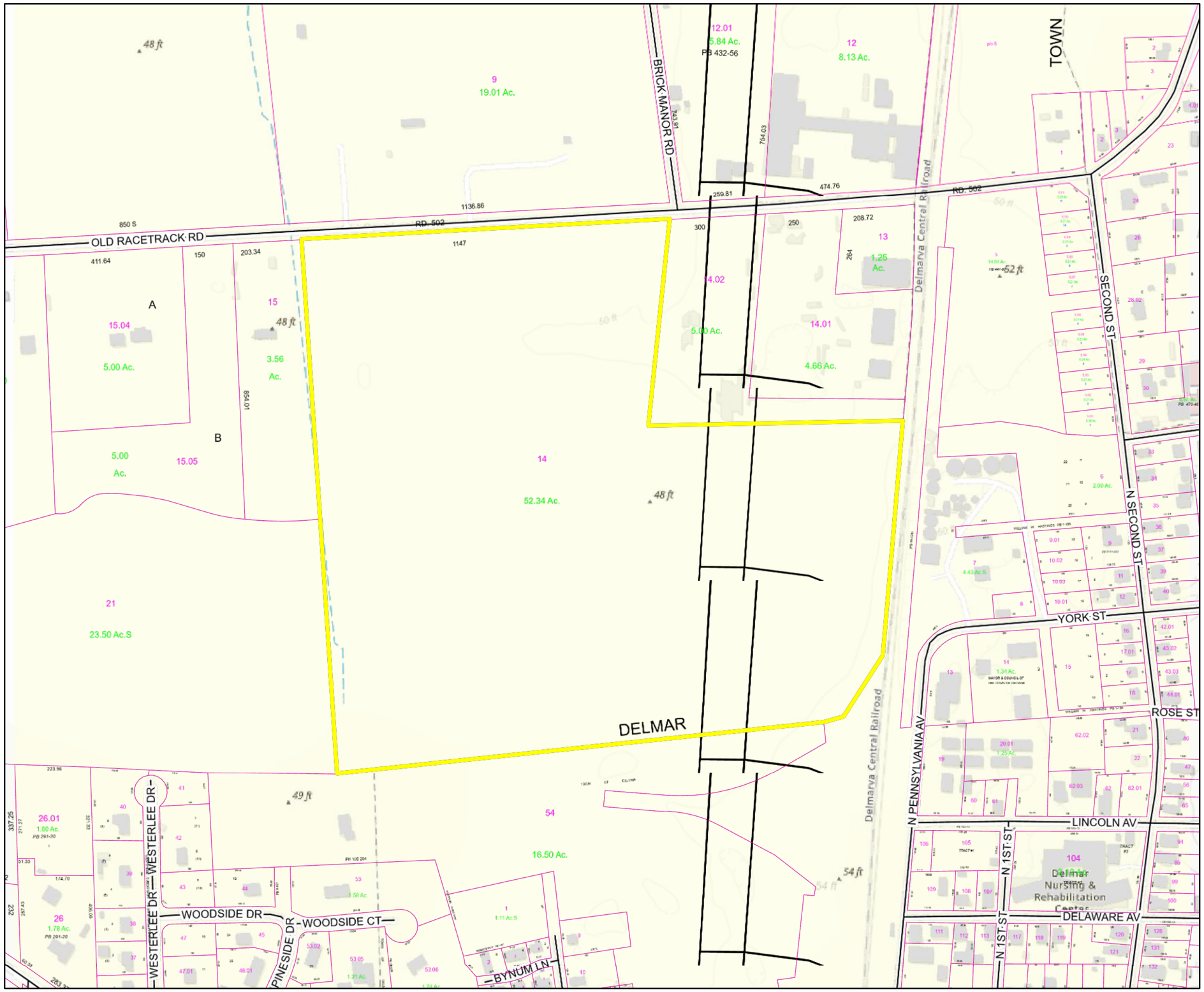
Sussex County
DELAWARE
SUSSEXCOUNTYDE.GOV
302-855-7878 T
302-854-5079 F
JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: September 16th, 2026
Sussex County Council Hearing Date: October 20th, 2026

Application:	CU 2652 Sussex CSG 3, LLC
Applicant:	Sussex CSG 3, LLC c/o Sam Younes 3050 Peachtree Road, Suite 350 Atlanta, GA 30305
Owner:	Shore Properties, Inc. 30339 Foskey Lane Delmar, MD 21875
Site Location:	Lying on the south side of Rifle Range Road (S.C.R. 545) approximately (1.14) miles east of Sussex Highway (Route 13).
Current Zoning:	Agricultural Residential (AR-1) Zoning District
Proposed Use:	Community Solar Farm Facility pursuant to §115-172(I) & §115-22. Amendment to previous C/U 2354 (also S-25-01) to add second Solar Farm Facility on the Parcel.
Comprehensive Land Use Plan Reference:	Industrial Area
Councilmanic District:	Mr. Matt Lloyd
School District:	Delmar School District
Fire District:	Delmar Fire Department (74)
Sewer:	N/A
Water:	N/A
Site Area:	52.34 acres +/- (p/o 13.68 acres +/-)
Tax Map ID:	532-20.00-14.00

EQUAL HOUSING OPPORTUNITY

A3 Landscape Parcel Details



Tax Parcels
TaxParcel
Encumbrance
Condo
Streets
County Boundaries
GIOLandRecords.PARCELFABRIC.Condo
Citations

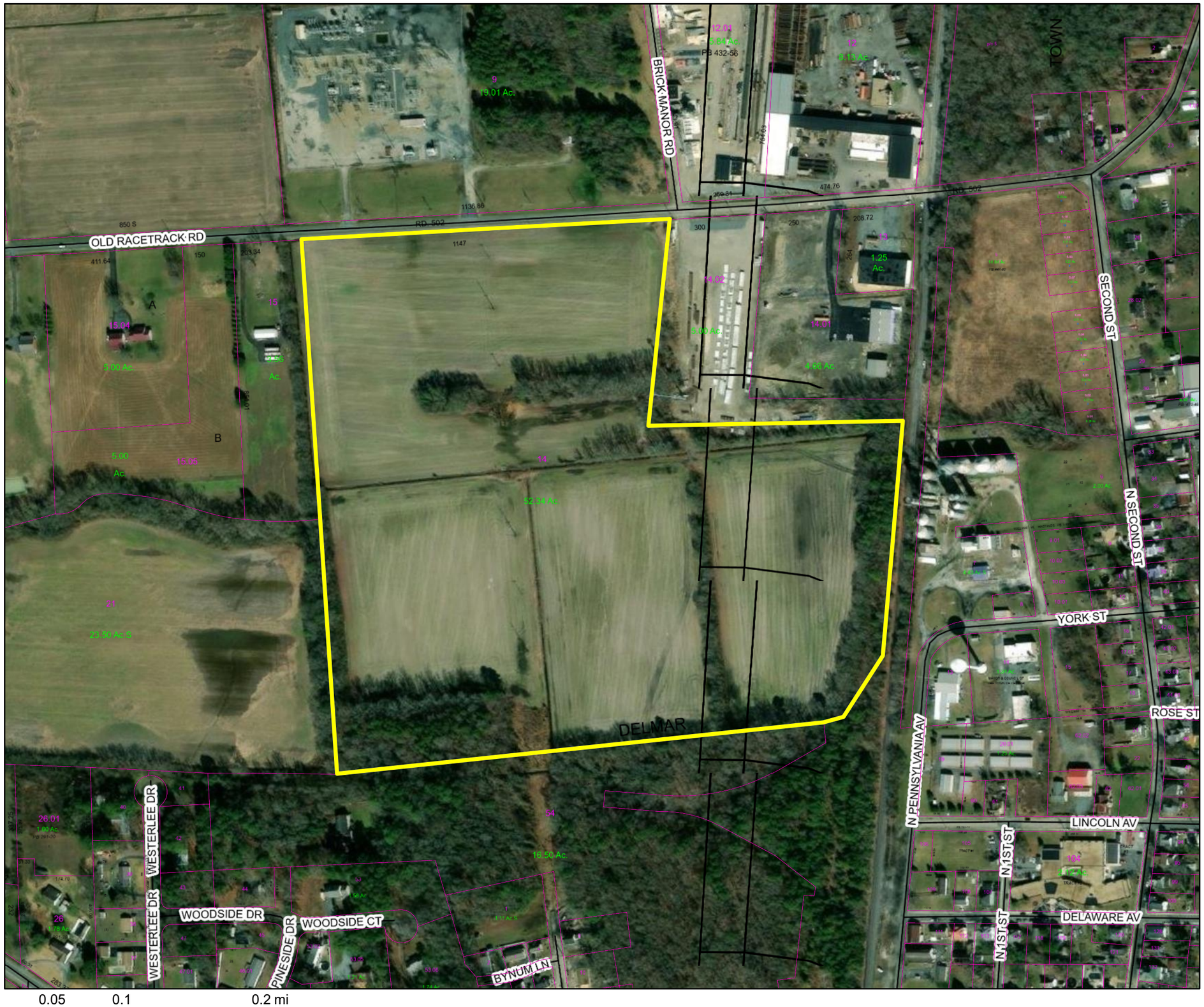
PIN:	532-20.00-14.00
Owner Name	SHORE PROPERTIES INC
Book	3927
Mailing Address	30339 FOSKEY LN
City	DELMAR
State	MD
Description	
Description 2	
Description 3	
Land Code	

1:

0 0.05 0.1 0.2 mi
0 0.07 0.15 0.3 km

August 11, 2026

A3 Landscape Parcel Details



PIN:	532-20.00-14.00
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August 11, 2026

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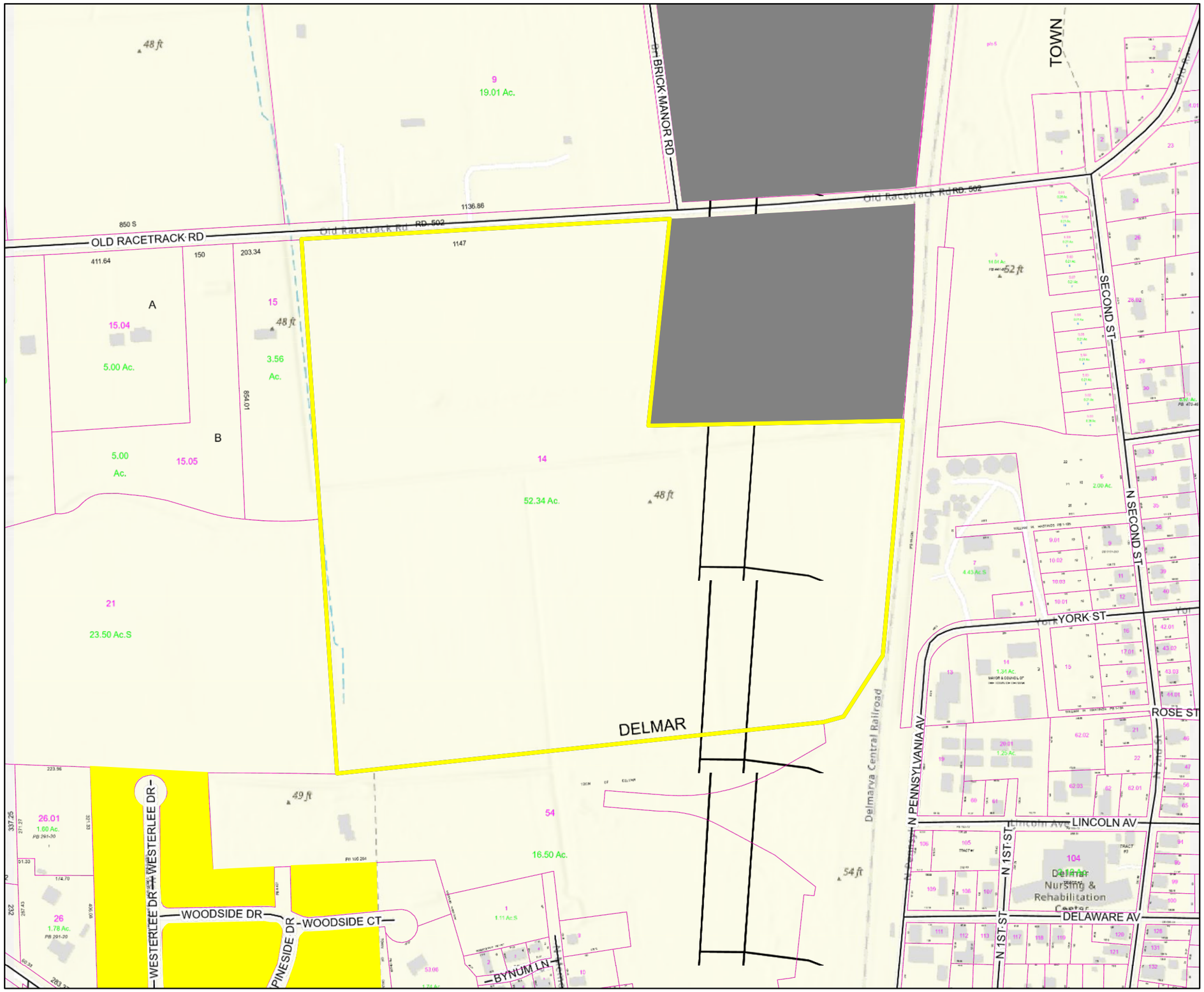

PIN:	532-20.00-14.00
Owner Name	SHORE PROPERTIES INC
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Description	
Description 2	
Description 3	
Land Code	

- Tax Parcels
- TaxParcel
- Encumbrance
- Condo
- Streets
- County Boundaries
- GIOLandRecords.PARCELFABRIC.Condo
- World_Hillshade

1:

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

August 11, 2026

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Planning and Zoning Commission Members
From: Ms. Lauren Cecchine, AICP, Planning & Zoning Manager
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: August 18th, 2026
RE: Staff Analysis for C/U 2652 Sussex CSG3, LLC

The purpose of this Memo is to provide background and analysis for the Planning and Zoning Commission to consider as a part of Application C/U 2652 Sussex CSG3, LLC (c/o Sam Youneszadeh) to be reviewed during the September 16th, 2026, Planning and Zoning Commission Meeting. This analysis should be included in the record of this Application and is subject to comments and information that may be presented during the public hearing.

The request is for a Conditional Use for Tax Parcel 532-20.00-14.00 to allow for a proposed Solar Farm. Specifically, the Application is for the expansion of an existing and installation and operation of a proposed Community Solar Farm Facility pursuant to §115-172(I) & §115-22 of the Sussex County Code in addition to a previously approved 4 megawatt +/- community solar facility consisting of photovoltaic solar panels affixed to steel racking and associated appurtenances. The property is located on the south side of Old Racetrack Road (S.C.R. 502), approximately 0.75-mile east of Delmar Road (Route 54). The site consists of 52.34 acres +/-with the Conditional Use area consisting of 21.42 acres +/- to be contained within the proposed fenced area.

Application History

This Application is an expansion of a previously approved Conditional Use Application. That Application was for Conditional Use No. 2354 Sussex CSG1, LLC. The Application was approved by the Sussex County Council at their meeting of Tuesday, October 10th, 2023, subject to eleven (11) Conditions of Approval and the change was adopted through Ordinance No. 2955.

The Preliminary Site Plan for the use (S-25-01) was approved by the Planning & Zoning Commission at their meeting of Wednesday, February 19th, 2025.

The Department of Planning & Zoning received a written request for a 6-month time extension for the Conditional Use on April 28th, 2026.

The Sussex County Council approved the 6-month Time Extension Request for Conditional Use No. 2354 at their meeting of Tuesday, June 2nd, 2026.

After the 6-month Time Extension Request was approved, the Applicant submitted an updated Conditional Use Application (Conditional Use No. 2652 Sussex CSG3, LLC) on June 2nd, 2026, to add a second Solar Farm Facility on the Parcel.

Site Considerations

It is worth noting that, according to the County's Online Mapping platform, the property is located within a Tax Ditch, (the Meadow Branch Tax Ditch,) and that there are two (2) associated Tax Ditch Rights-Of-Way (ROW) on the property. The first of these Rights-Of-Way is oriented horizontally and reaches west to east from adjacent Parcel 15.00 on the westernmost side of the property to the rail line which runs adjacent to and appears to be coincident with the property line on the easternmost side of the property. The other Right-Of-Way bisects half of the southern end of the property and runs vertically from the approximate mid-point of the property into Parcel 54.00 to the south of the subject property, which is located within the incorporated town limits of the Town of Delmar. Furthermore, staff note that this Tax Ditch ROW was reduced to a width of 50-ft through a related Court Order Change (Court Order Change #10). A Tax Ditch Report from DNREC's Division of Watershed Stewardship Drainage Program has been included as part of the record for further information on this Tax Ditch and Tax Ditch Rights-Of-Way.

The subject property is not located within any established Transportation Improvement Districts.

Additionally, the County's Online Mapping System confirms that the site is located within Flood Zone "X" – Areas determined to be outside the 1% annual chance flood and outside the 500-year floodplain. DNREC's Flood Planning Tool also indicates that the Parcel is located outside of the FEMA 100-year floodplain, is within the Wicomico River Watershed and the North Prong Wicomico River Subwatershed, and that the estimated Ground Elevation Height at the Parcel is anywhere from 46 to 53-ft.

A Supplemental Map has been provided which shows this information as provided through DNREC's Flood Planning Tool.

Comprehensive Plan Analysis: The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use Map in the plan indicates that the parcel has the Growth Area Future Land Use Map Designation of "Industrial Area." The surrounding and parcels to the north (on the opposite side of Old Racetrack Road (S.C.R. 502) and northeast of the subject property also contain the "Industrial Area" Future Land Use Map designation.

As outlined in the 2018 Sussex County Comprehensive Plan, " *ndustrial Areas are lands devoted to concentrations of larger industrial uses including heavier industry, light industry, warehousing, and flex space. Appropriate development in these areas could ta e the form of conventional industrial par s or planned business par s with a unified design that incorporates a combination of light industry and other business uses. arge, more intensive stand-alone industrial uses should also be directed to these areas"* (2018 Sussex County Comprehensive Plan, 4-17).

The Parcels to the west of the subject property have a Growth Area Future Land Use Designation of "Developing Area." The Plan notes that, *"Developing Areas are newer, emerging growth areas that demonstrate the characteristics of developmental pressures"* and further notes, *"most of the proposed Developing Areas are adjacent to municipalities"* as is the case in this location (2018 Sussex County Comprehensive Plan, 4-14).

The property is adjacent to the municipal boundary of the Town of Delmar, which surrounds the property on the south and east sides.

Zoning Information: The property contains a Rural Zoning classification of Agricultural Residential (AR-1) District.

Table 4.5-2 "Zoning Districts Applicable to Future Land Use Categories" in the 2018 Sussex County Comprehensive Plan notes that the Agricultural Residential District is an applicable Zoning District within the "Industrial Area" Future Land Use Map Designation.

There are approximately six (6) parcels to the northeast of the property which are zoned Heavy Industrial (HI-1) District. This includes three (3) parcels on the south side of Old Racetrack Road (S.C.R. 502) adjacent to the subject property and three (3) parcels on the north side of Old Racetrack Road (S.C.R. 502).

The balance of the remaining surrounding lands are also zoned Agricultural Residential (AR-1) District. There is an existing and previously approved Subdivision to the southwest of the property of which a portion of the Subdivision is within the Town of Delmar and the other portion is within the County's jurisdiction and those lands are zoned Medium Density Residential (MR) District.

As previously mentioned, all properties on the east side of the railroad track which is coincident with the eastern boundary line of the property are within the incorporated limits of the Town of Delmar.

Existing Conditional Uses within the Vicinity of the Subject Property

There have been **eleven (11) Conditional Uses** within a 1-mile radius of the Application site. Of these Applications, a total of nine (9) were approved by the Sussex County Council.

One (1) Application (C/U 479 David Johnson & Willard Prigge,) to allow for a hardware store and appliance repair shop was denied by the Sussex County Council at their meeting of Tuesday, August 29th, 1978.

A Supplemental Table has been provided which contains further information regarding the abovementioned Conditional Use Applications which are located within a 1-mile radius of the Application site.

Based on the analysis provided, the Conditional Use to allow for a proposed Solar Farm; specifically, the installation and operation of a 4 megawatt +/- community solar facility consisting of photovoltaic solar panels affixed to steel racking and associated appurtenances, in this location could be considered as being consistent with the surrounding land use, zoning, and uses, subject to consideration of scale and impact.

Conditional Use Applications (w/in a 1-mile radius of the subject site)*

Application Number	Applicant Name	Current Zoning	Proposed Use	P&Z Date	P&Z Recommendation	CC Date	CC Decision	Ordinance No.
C/U 4	William J. Cathell	AR-1	Automobile Raceway	N/A	N/A	7/6/1971	Approved	_
C/U 82	Houlihan Real Estates Inc.	AR-1	Extension to Existing Manufactured Home Park	N/A	N/A	11/14/1972	Approved	_
C/U 88	Delmar Volunteer Fire Company	UB	Fire House	N/A	N/A	10/24/1972	Approved	_
C/U 334	Robert Messick	AR-1	Sale of Farm Products & Supplies	N/A	N/A	4/13/1976	Approved	334
C/U 479	David Johnson & Willard Prigge	AR-1	Hardware Store & Appliance Repair Shop	N/A	N/A	8/29/1978	Denied	_
C/U 507	Robert Messick	AR-1	Store for Sale of Farm Products & Supplies	N/A	N/A	12/19/1978	Approved	_
C/U 580	Wayne Walbert	AR-1	Antique Shop	N/A	N/A	N/A	N/A	_
C/U 590	Daniel L. Ward	AR-1	Repair Shop	N/A	N/A	N/A	Approved	_
C/U 657	George & Phyllis Majors	AR-1	Data Processing Office	12/1/1981	Recommended Approval	12/1/1981	Approved	_
C/U 925	Robert J. Messick	AR-1	Expand C/U 507 Sales & Warehousing	12/28/1989	Recommended Approval	1/16/1990	Approved	_
C/U 2128	Larry Martin	AR-1	Auto Repair Shop	6/14/2018	Recommended Approval	10/23/2018	Approved	2607

File #: _____

Planning & Zoning Commission 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)
Conditional Use ✓
Zoning Map Amendment ___

Site Address of Conditional Use/Zoning Map Amendment

Old Racetrack Road, Delmar, Delaware 19940

Type of Conditional Use Requested:

Community Solar Farm Facility pursuant to Sections 115-172(I) & 115-22.

Tax Map #: 532-20.00-14.00 **Size of Parcel(s)**: +/- 52.34 AC; Net Development Area: +/- 13.68 AC

Current Zoning: AR-1 **Proposed Zoning:** AR-1 **Size of Building**: N/A

Land Use Classification: Industrial

Water Provider: Private - Not Applicable **Sewer Provider:** Private - Not Applicable

Applicant Information

Applicant Name: SUSSEX CSG 3 LLC c/o Sam Younes
Applicant Address: 3050 Peachtree Road, Suite 350
City: Atlanta State: GA ZipCode: 30305
Phone #: (877) 277-8560 E-mail: N/A

Owner Information

Owner Name: SHORE PROPERTIES INC.
Owner Address: 30339 Foskey Lane
City: Delmar State: MD Zip Code: 21875
Phone #: N/A E-mail: N/A

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Saul Ewing LLP c/o Mackenzie Sindelar Esq.
Agent/Attorney/Engineer Address: 1201 N. Market Street, Suite 2300
City: Wilmington State: DE Zip Code: 19801
Phone #: (302) 421-6826 E-mail: mackenzie.sindelar@saul.com

Applicant's Engineer:
Pennoni Associates Inc. c/o Alan Decktor, PE, Env Sp
18072 Davidson Drive
Milton, DE 19968
(302) 684-6241; adecktor@pennoni.com

Docusign Envelope ID: 0A0F2BDD-7A82-80F1-81F8-FB56C7AD330A

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✓ **Completed Application**

✓ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✓ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

To be provided **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✓ **DelDOT Service Level Evaluation Request Response**

N/A **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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

Sam Younes

Date: 6/1/2026

Signature of Owner

V.P

Date: 06/02/2024

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

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

SHANTÉ A. HASTINGS
SECRETARY

May 11, 2026

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Sussex CSG 3 LLC** (Old Racetrack Road, Delmar, Delaware 19940) proposed land use application, which we received on April 16, 2026. This application is for a 17-acre portion of an approximate 52.34-acre parcel (Tax Parcel: 532-20.00-14.00). The parcel is located on the south side of Old Racetrack Road (Sussex County Road 502) and approximately 1,230 feet west from the intersection with N 2nd Street (Sussex County Road 646). The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a conditional use to build a community solar farm.

Per the 2024 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Old Racetrack Road, where the subject land is located, which is from Bistate Boulevard (Sussex County Road 13) to Delmar Road (Delaware Route 54), is 862 vehicles per day.

Based on our review (Solar Farm, Utility Use), we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Annamaria Furmato, at Annamaria.Furmato@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Engineer
Economic Development Coordination
DelDOT

SAM:afw
cc: Sussex CSG 3 LLC, Applicant
Katherine Davidson, Applicant
Alan Decktor, Applicant
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
James Argo, South District Project Reviewer, M&O
April Foster, South District Public Works Admin. M&O
Matt Schlitter, South District Public Works Engineer, Economic Dev. Coordination
Brian Urbanek, Acting Sussex Coordinator, Economic Development Coordination
Derek Sapp, Sussex Review Engineer, Economic Development Coordination
Jose Quixtan, Sussex Review Engineer, Economic Development Coordination
Brian Williams, Sussex Reviewer, Economic Development Coordination
Kevin Hickman, Sussex Reviewer, Economic Development Coordination
Annamaria Furmato, TIS Review Engineer, Economic Development Coordination
Ben Fisher, TIS Review Engineer, Economic Development Coordination
DelDOT TIS Support

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

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **8/26/2026**

APPLICATION: **CU 2652 Sussex CSG 3, LLC**

APPLICANT: **Sussex CSG 3, LLC – c/o Sam Younes**

FILE NO: **WSPA-5.02**

TAX MAP & PARCEL(S): **532-20.00-14.00**

LOCATION: **Lying on the south side of Rifle Range Road (SCR 545), approximately 1.14 miles east of Sussex Highway (Rt. 13).**

NO. OF UNITS: **Community Solar Farm Facility pursuant to §115-172(I) & §115-22. Amendment to previous CU 2354 (also S-25-01) to add a second Solar Farm Facility on the same Parcel.**

GROSS ACREAGE: **52.34 +/- acres (p/o 13.68 +/- acres)**

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 $10,700.00** 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 Conditional Use is located in the Town of Delmar's Growth and Annexation Area.**

(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
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
No Permit Tech Assigned

DATA COLUMN:

1.	TAX MAP NUMBER:	532-20.00-14.00
2.	DEED REFERENCE:	D.B. 3927 PG. 195
3.	OWNER NAME:	SHORE PROPERTIES, INC. 30339 FOSKEY LANE DELMAR, MD 21875
4.	DEVELOPER NAME:	SUSSEX CSG 3 LLC C/O SAM YOUNES 3050 PEACHTREE ROAD, SUITE 350 ATLANTA, GA 30305
5.	SITE ADDRESS:	OLD RACETRACK ROAD DELMAR, DE 19940 LITTLE CREEK HUNDRED, SUSSEX COUNTY
6.	PRESENT ZONING:	AR-1/CU 2354/ORD. #2955
7.	PROPOSED ZONING:	AR-1/CU 2354/ORD. #2955 AND CUXXX
8.	PRESENT USE:	AGRICULTURAL / COMMUNITY SOLAR FARM FACILITY
9.	PROPOSED USE:	COMMUNITY SOLAR FARM FACILITY
	REQUIRED SETBACKS (B.R.L.): FRONT: SIDE: REAR: MINIMUM LOT WIDTH: MINIMUM LOT DEPTH	AR-1 40' 15' 20' 100' 100'
10.	MAX BUILDING HEIGHT:	42'.00
11.	WATER SUPPLY:	PRIVATE - NOT APPLICABLE
	SECTION 89: SOURCE WATER PROTECTION:	A. SUBJECT PROPERTY IS IN A "FAIR AND POOR" AREA OF GROUND WATER RECHARGE B. SUBJECT PROPERTY IS LOCATED IN A WELLHEAD PROTECTION AREA. TOTAL IMPERVIOUS COVER- 21,781 S.F. (±0.50 A.C.) (1.03 %)
12.	SEWER SUPPLY:	PRIVATE - NOT APPLICABLE
13.	POSTED SPEED LIMIT OLD TRACETRACK ROAD:	50 MPH
14.	LATITUDE AND LONGITUDE STATE PLANE COORDINATES: LONGITUDE: W 075° 34' 48.8760" LATITUDE: N 038° 27' 45.5681"	
15.	2025 STATE INVESTMENT LEVEL:	LEVEL 3
16.	2019 FUTURE LAND USE MAP:	INDUSTRIAL
17.	FIRE DISTRICT:	DELMAR FIRE CO.
18.	PROPOSED DISCHARGE LOCATION: WATERSHED:	MEADOW BRANCH TAX DITCH AREA LITTLE CREEK-BROAD CREEK HUC#8 - 02080110, HUC#10 - 0208011003
19.	PROPOSED TOTAL LIMIT OF DISTURBANCE	
	PROPOSED STONE ROAD	EX: 24,983 S.F. (± 0.57 A.C.) PR: 65,630 S.F. (± 1.51 A.C.)
	PROPOSED PAVED ENTRANCE	EX: 1,040 S.F. (± 0.02 A.C.) PR: 1,040 S.F. (± 0.02 A.C.)
	SOLAR PILES	EX: 130 S.F. (± 0.003 A.C.) PR: 200 S.F. (± 0.005 A.C.)
	TOTAL AREA	EX: 26,153 S.F. (±0.601 A.C.) PR: 66,870 S.F. (± 1.54 A.C.)
20.	SITE CALCULATION:	
	IMPERVIOUS AREA :	EX: 0.60 ± AC. (1.19%) PR: 1.51 ± AC. (2.99%)
	GRASS:	EX: 22.98 ± AC. (45.49%) PR: 41.37 ± AC. (81.91%)
	CROPS	EX: 18.93 ± AC. (37.48%) PR: 0.00 ± AC. (0.00%)
	WOODS:	EX: 8.00 ± AC. (15.84%) PR: 7.63 ± AC. (15.10%)
	TOTAL AREA:	EX: 50.51 ± AC. (100.00%) PR: 50.51 ± AC. (100.00%)
21.	CONDITIONAL USE AREA CUXXX:	
	IMPERVIOUS AREA:	EX: 0.00 ± AC. (0.00%) PR: 0.91 ± AC. (6.65%)
	GRASS:	EX: 0.00 ± AC. (0.00%) PR: 12.77 ± AC. (93.35%)
	CROPS	EX: 13.30 ± AC. (97.20%) PR: 0.00 ± AC. (0.00%)
	WOODS:	EX: 0.38 ± AC. (2.80%) PR: 0.00 ± AC. (0.00%)
	TOTAL AREA:	EX: 13.68 ± AC. (100.00%) PR: 13.68 ± AC. (100.00%)
22.	NET DEVELOPMENT AREA FOR CU 2354:	23.26 ± AC.
23.	NET DEVELOPMENT AREA FOR CUXXXX:	13.68 ± AC.
24.	DATUM:	HORIZONTAL = NAD83 VERTICAL = NAVD88
25.	FLOOD ZONE:	THIS PROPERTY IS LOCATED ON THE FEMA FLOOD INSURANCE RATE MAP NUMBER 10005C0575L, MAP REVISED JUNE 20, 2018. AREA DESIGNATED AS FLOOD ZONE "X" (UNSHADED)
26.	NONTIDAL WETLAND AREA: NONTIDAL WETLAND AREA IMPACTED:	0.64 ± AC. 0.00 ± AC.
27.	TID	NOT INCLUDED
28.	LOCAL GOVERNMENT RESPONSIBLE FOR LAND USE APPROVAL:	SUSSEX COUNTY

SOILS		
TYPE	DESCRIPTION	HYDROLOGIC SOIL
CoA	CORSICA MUCKY LOAM, 0 TO 2 PERCENT SLOPES	B/D
FadA	FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN TIDEWATER AREA	B/D
HnA	HAMMONTON SANDY LOAM, 0 TO 2 PERCENT SLOPES	B
HvA	HURLOCK SANDY LOAM, 0 TO 2 PERCENT SLOPES	A/D
LfA	LENNI SANDY LOAM, 0 TO 2 PERCENT SLOPES	D
LhA	LENNI SILT LOAM, 0 TO 2 PERCENT SLOPES	D

SUSSEX CSG 3 SOLAR FACILITY
PRELIMINARY PLAN SET

(S-XX) / (CU XX)
TM: 532-20.00-14.00
OLD RACETRACK ROAD (SCD 502)
DELMAR, DE 19940
SUSSEX COUNTY, DE

PREPARED FOR:

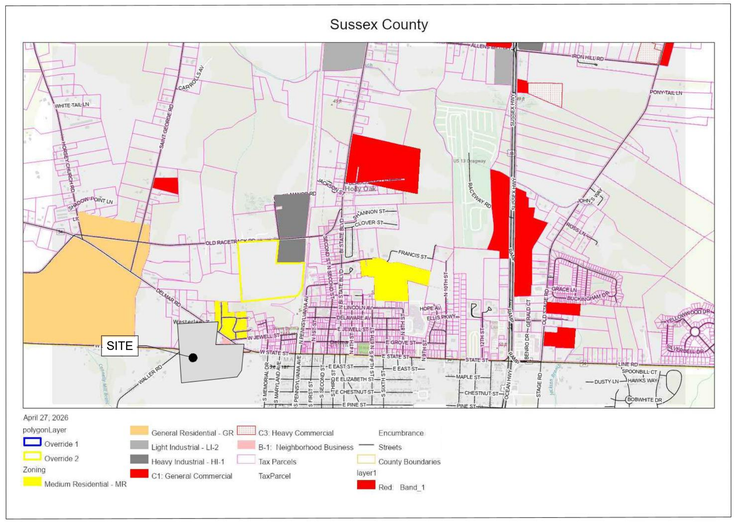
DEVELOPER

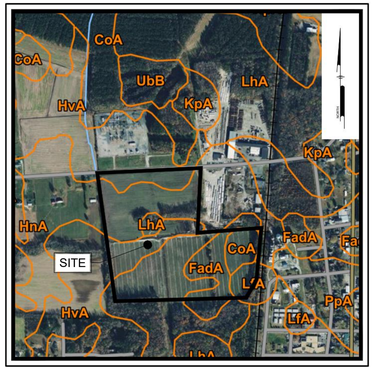
SUSSEX CSG 3 LLC

3050 PEACHTREE ROAD, SUITE 460

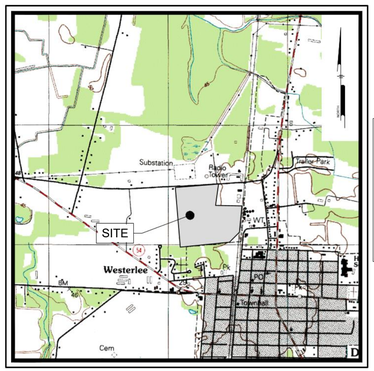
ATLANTA, GA 30305

(877) 277-8506, EXT: 27





SOILS MAP
Scale: 1" = 800'



USGS MAP
Scale: 1" = 2000'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		CURB
		EDGE OF PAVEMENT
		PAVEMENT
		EDGE OF GRAVEL
		EASEMENT
		FENCE
		PROPERTY LINE/ RIGHT OF WAY
		BUILDING RESTRICTION LINE
		PROPERTY, CORNER FOUND
		PROPERTY, ADJOINING LINED
		SITE, MAIL BOX
		SITE, TRAFFIC SIGN
		SOIL BOUNDARY
WaC		SOIL LABEL
		STORM SEWER, INLET
		STORM SEWER,HEADWALL
		STORM SEWER, MANHOLE
D D		STORM SEWER, UNDERGROUND
101	101	MINOR CONTOUR
100	100	MAJOR CONTOUR
X 100.5	35.00	SPOT ELEVATION
		TREE LINE
UE UE	E	POWER-UNDERGROUND ELECTRIC
		POWER, UTILITY POLE
		STREET LIGHT
		ROADWAY CENTERLINE
		NON-TIDAL WETLANDS (USACOE)
		CONCRETE SIDEWALK

Sheet List Table		
Sheet Number	Drawing Number	Sheet Title
1	PP0001	COVER SHEET
2	PP1001	KEY SHEET
3	PP1002	PRELIMINARY SITE PLAN
4	PP1003	PRELIMINARY SITE PLAN
5	PP1004	PRELIMINARY SITE PLAN

THIS PLAT SUPERSEDES PLAT BOOK 449, PAGE 68

THE PURPOSE OF THIS PLAN IS TO SHOW THE CHANGES OF THE SOLAR LAYOUT

AND PLAT BOOK 463, PAGE 55.

TO SHOW A SECOND SOLAR FACILITY ON THE SUBJECT PROPERTY PER CU#.

SOLAR PANEL ORDINANCE NO. 2920, COUNTY CODE § 115-172 (I)

1. THE SOLAR PANELS, SOLAR FARM OR SOLAR ARRAY AREA SHALL BE SURROUNDED BY A LANDSCAPED BUFFER STRIP OF OPEN SPACE A MINIMUM OF 100 FEET FROM ANY STREET LINES AND A MINIMUM DISTANCE OF 50 FEET FROM ALL PROPERTY LINES. THE LANDSCAPED BUFFER STRIP SHALL REMAIN FREE FROM ANY BUILDINGS OR STREETS WITH THE EXCEPTION OF ENTRANCE AREAS. THESE MEASUREMENTS SHALL BE TAKEN FROM THE PROPERTY LINE TO THE NEAREST POINT OF SOLAR PANELS OR THEIR SUPPORT STRUCTURES; PROVIDED, HOWEVER, THAT THE SETBACKS AND/OR BUFFERING MAY BE INCREASED OR WAIVED DUE TO PARTICULAR SITE-RELATED CONDITIONS.
2. THE SOLAR PANELS, SOLAR FARM OR SOLAR ARRAY AREA SHALL BE AT LEAST 200 FEET FROM ANY DWELLING ON PROPERTYOF OTHER OWNERSHIP.
3. ANY TRANSFORMERS OR SIMILAR EQUIPMENT AND STRUCTURES SHALL BE CENTRALLY LOCATED ON THE SITE AND SHALL BE AT LEAST 200 FEET FROM ANY DWELLING ON PROPERTY OF OTHER OWNERSHIP.
4. THE USE SHALL BE FOR A GROUND-MOUNTED SOLAR FARM AND THE STORAGE THROUGH BATTERIES OR SIMILAR MEANS OF SOLAR-GENERATED ELECTRICITY.
5. ONE UNLIGHTED SIGN, NOT TO EXCEED 32 SQUARE FEET IN SIZE, SHALL BE PERMITTED. THE SIGN SHALL IDENTIFY THE OPERATOR OF THE USE AND SHALL PROVIDE CONTACT INFORMATION AND INSTRUCTIONS TO FIRST RESPONDERS IN CASE OF EMERGENCY.
6. THE AREA OF THE SOLAR PANELS, SOLAR FARM OR SOLAR ARRAY SHALL BE SECURED BY FENCING WITH A GATE WITH AN EMERGENCY KEY BOX TO ACCOMMODATE EMERGENCY ACCESS BY THE LOCAL FIRE COMPANY OR OTHER EMERGENCY RESPONDERS. THE FENCE LINE SHALL BE SHOWN ON THE FINAL SITE PLAN.
7. IN ORDER TO ASSURE A COMPLETE RECLAMATION UPON THE ABANDONMENT, DISCONTINUANCE OR TERMINATION OF THE USE, THERE SHALL BE A DECOMMISSIONING PLAN THAT INCLUDES A FINANCIAL SECURITY SUFFICIENT TO ENSURE THAT FUNDS ARE AVAILABLE FOR DECOMMISSIONING AND REMOVAL OF THE SOLAR PANELS, SOLAR FARM OR SOLAR ARRAYS IN THEIR ENTIRETY.
8. PRIOR TO ISSUANCE OF A NOTICE TO PROCEED WITH DEVELOPMENT OF THE SOLAR PANELS, SOLAR FARM OR SOLAR ARRAY, A SITE PLAN SHALL BE SUBMITTED TO THE COMMISSION FOR REVIEW. THE SITE PLAN SHALL BE PREPARED IN COMPLIANCE WITH THIS SUBSECTION, ARTICLE XXVII OF THIS CHAPTER AND THE FOLLOWING:

8.A. SITE PLANS SHALL DESIGNATE THE EXISTING SITE CONDITIONS, INCLUDING THE EXISTING TOPOGRAPHY OF THE SITE, THE LOCATIONS OF ALL EXISTING WOODLANDS AND WETLANDS. THE SITE PLANS SHALL DESIGNATE THE PROPOSED AREA WHERE THE SOLAR PANELS OR SOLAR ARRAYS WILL BE LOCATED, THE BUFFER AREA, INCLUDING THE VEGETATION INCLUDED WITHIN THEM, AND THE PROPOSED DECOMMISSIONING PLAN.

8.B. APPROVALS SHALL BE REQUIRED FROM THE APPROPRIATE GOVERNMENT AGENCIES FOR THE USE, INCLUDING, BUT NOT LIMITED TO, THE STATE FIRE MARSHAL, THE DEPARTMENT OF TRANSPORTATION AND FOR ANY REQUIRED STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL.

CONDITIONS OF APPROVAL (CU No. 2354/ ORD. #2955)

APPROVAL WAS GRANTED BY SUSSEX COUNTY COUNCIL AT THEIR MEETING ON OCTOBER 10, 2023
SUBJECT TO THE FOLLOWING CONDITIONS:

A. THE USE SHALL BE FOR GROUND-MOUNTED SOLAR FARM. NO OTHER TYPES OF ELECTRIC GENERATION SHALL BE PERMITTED AT THE SITE.
B. THE FINAL SITE PLAN SHALL CLEARLY SHOW THE LIMITS OF THE CONDITIONAL USE AREA FOR THE SOLAR FARM AS WELL AS THE REMAINING ACREAGE THAT IS NOT PART OF THIS CONDITIONAL USE.
C. ANY LIGHTING ON THE FACILITY SHALL ONLY CONSIST OF PERIMETER LIGHTING NEEDED FOR SECURITY PURPOSES. ALL LIGHTING SHALL BE DOWNWARD SCREENED SO THAT IT DOES NOT SHINE ON NEIGHBORING PROPERTIES OR ROADWAYS.
D. ONE UNLIT SIGN, NOT TO EXCEED 32 SQUARE FEET IN SIZE, SHALL BE PERMITTED. THE SIGN SHALL IDENTIFY THE OPERATOR OF THE SOLAR FARM AND SHALL PROVIDE CONTACT INFORMATION IN CASE OF EMERGENCY.
E. THE SITE SHALL BE SECURED BY FENCING WITH A GATE WITH A "KNOX BOX" OR SIMILAR DEVICE TO ACCOMMODATE EMERGENCY ACCESS BY THE LOCAL FIRECOMPANY OR OTHER EMERGENCY RESPONDERS. THE FENCE LINE SHALL BE SHOWN ON THE FINAL PLAN.
F. THE LOCATION FOR ALL TRANSFORMERS OR SIMILAR EQUIPMENT OR STRUCTURE SHALL BE SHOWN ON THE FINAL SITE PLAN
G. THE ENTIRE SITE, INCLUDING THE AREA OUTSIDE THE FENCE, SHALL BE MAINTAINED SO THAT IT DOES NOT BECOME OVERGROWN.
H. STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE STATE AND COUNTY REQUIREMENTS. THESE FACILITIES SHALL BE OPERATED USING BEST MANAGEMENT PRACTICES
I. THE EXISTING TREE LINE ALONG THE NORTHERN, EASTERN, AND SOUTHERN PERIMETER OF THE SOLAR ARRAY AREA SHALL REMAIN TO SERVE AS A BUFFER WITH THE EXCEPTION OF REASONABLE TRIMMING TO ALLOW THE SOLAR ARRAYS TO FUNCTION PROPERLY. IN ADDITION, THERE SHALL BE A FORESTED BUFFER OF NO LESS THAN 20 FEET IN DEPTH PLANTED ALONG THE NORTHWEST SIDE OF THE SITE ADJACENT TO TAX PARCEL 532-20.00-15.00. THE LOCATION AND PLANTING DESIGN FOR THIS BUFFER SHALL BE SHOWN ON THE FINAL SITE PLAN.
J. THE FINAL SITE PLAN SHALL IDENTIFY A DECOMMISSIONING PLAN THAT INCLUDES A FINANCIAL SECURITY TO ENSURE THAT FUNDS ARE AVAILABLE FOR DECOMMISSIONING AND REMOVAL OF THE SOLAR FARM IN ITS ENTIRETY THROUGHOUT THE LIFE OF THE CONDITIONAL USE.
K. THE FINAL SITE PLAN SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE SUSSEX COUNTY PLANNING & ZONING COMMISSION.

CALL BEFORE YOU DIG
Call Miss Utility of Delmarva
800-282-8555
Ticket Number(s): 220460944

WETLAND STATEMENT

I, MICHAEL A. MARRA, PWS, DO HEREBY STATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF THAT THE INFORMATION CONTAINED IN THE PLANS SPECIFICATIONS AND REPORTS HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENVIRONMENTAL PRACTICES, IS TRUE AND CORRECT, AND IS IN CONFORMANCE WITH THE BOUNDARIES OF WATERS OF THE UNITED STATES INCLUDING WETLANDS SUBJECT TO THE CORPS OF ENGINEERS REGULATORY PROGRAM

MICHAEL A. MARRA, PWS No. 3557 Date
PENNONI ASSOCIATES, INC
18072 DAVIDSON DRIVE
MILTON, DE 19968
OFFICE (302) 684-8030 - FAX (302) 684-8054
(717) 620-5991 EMAIL:MMRRA@PENNONI.COM

ENGINEER CERTIFICATION:

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

SIGNATURE DATE
ALAN DECKTOR, PE (DE PE#17771)
PENNONI ASSOCIATES, INC
18072 DAVIDSON DRIVE
MILTON, DE 19968
OFFICE (302) 684-8030 - FAX (302) 684-8054
ADECKTOR@PENNONI.COM

OWNER'S CERTIFICATION:

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

SHORE PROPERTIES, INC. DATE
30339 FOSKEY LANE
DELMAR, MD 21875

DEVELOPER CERTIFICATION:

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

SUSSEX CSG 3 LLC DATE
C/O SAM YOUNES
3050 PEACHTREE ROAD, SUITE 460
ATLANTA, GA 30305
(877) 277-8506, EXT: 27
RD@DIMENSION-ENERGY.COM

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

SUSSEX CSG 3 SOLAR FACILITY
(S-XX) / (CU XX)
TM: 532-20.00-14.00
OLD RACETRACK ROAD (SCD 502)
DELMAR, DE 19940

COVER SHEET

SUSSEX CSG 3 LLC
3050 PEACHTREE ROAD, SUITE 460
ATLANTA, GA 30305

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATE; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	DMNSN26001
DATE	2026-04-24
DRAWING SCALE	AS SHOWN
DRAWN BY	ASM
APPROVED BY	AMD

PP0001

SHEET 1 OF 5

PROJECT STATUS: —
PLOTSTYLE: Pennoni MCS.stb
PLOTTED: 6/3/2026 4:29 PM BY: Ahmed Mohamed
U:\Accounts\DMNSN\DMNSN26001 - Dimension Energy - Sussex CSG 3 LLC\DESIGN_SHEETS\PP0001.dwg

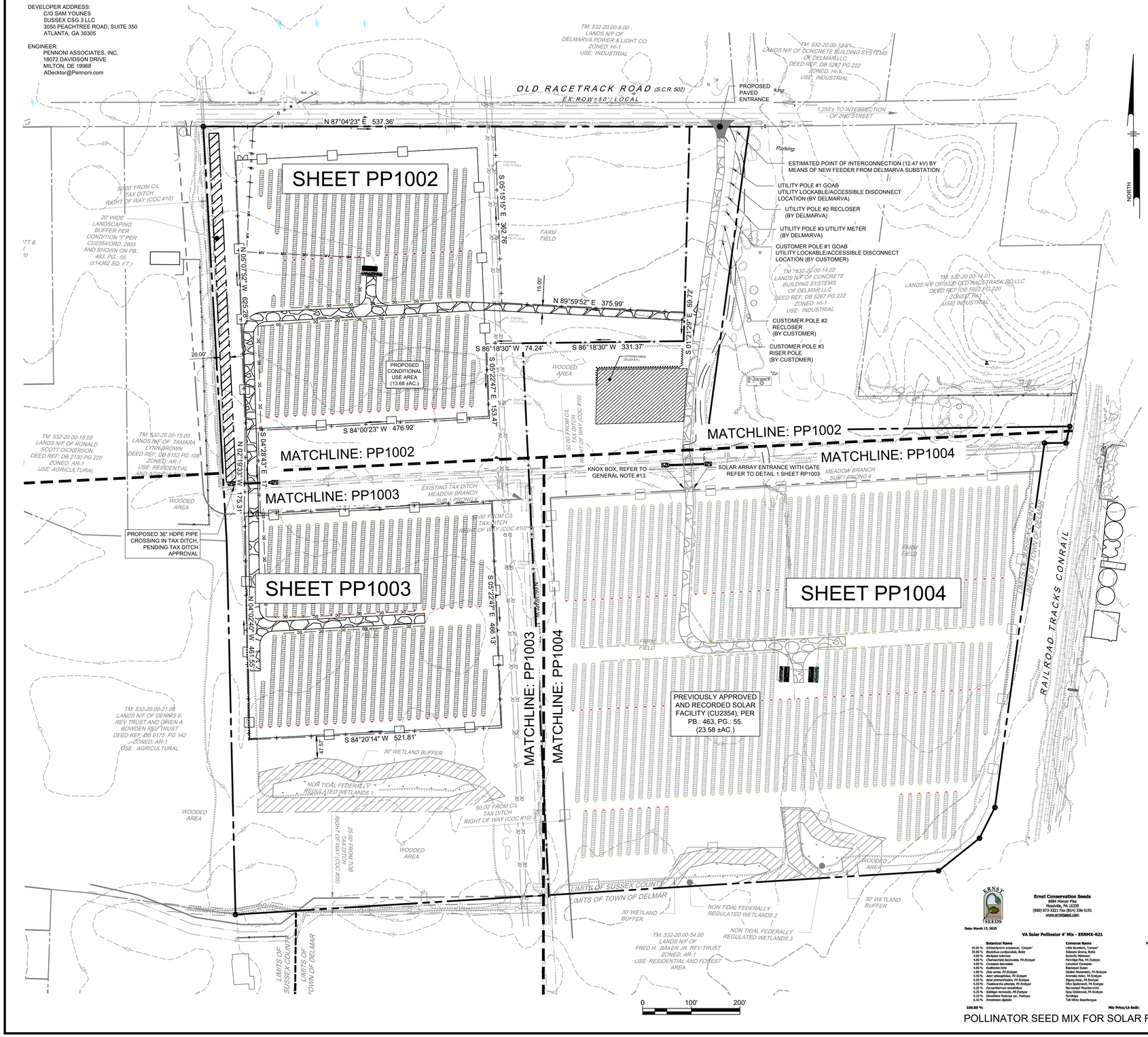
SITE INFORMATION:

SITE ADDRESS:
OLD RACETRACK ROAD
DELMAR, DE 19940
LITTLE CREEK HUNDRED, SUSSEX COUNTY

OWNER ADDRESS:
SHORE PROPERTIES INC.
30339 FOSKEY LANE
DELMAR, MD 21875

DEVELOPER ADDRESS:
C/O SAM YOUNES
SUSSEX CSG 3 LLC
3050 PEACHTREE ROAD, SUITE 350
ATLANTA, GA 30305

ENGINEER:
PENNONI ASSOCIATES, INC.
18072 DAVIDSON DRIVE
MILTON, DE 19968
ADeckter@Pennoni.com



GENERAL NOTES:

1. ALL EASEMENTS SHOWN ON THESE PLANS WERE FOUND OR PROVIDED THROUGH LOCAL RESEARCH AND INFORMATION PROVIDED TO US BY THEIR RESPECTIVE OWNERS. A TITLE SEARCH WAS PROVIDED TO PENNONI AND TITLE SURVEY WAS PERFORMED. THE EXTENT OF FURTHER EASEMENTS BURDENING THE PROPERTY IS THE RESPONSIBILITY OF THE LANDOWNERS AND WOULD NEED TO BE PRESENTED TO THE CONTRACTOR, DESIGN ENGINEER, SURVEYOR AND LOCAL AGENCIES PRIOR TO BEGINNING CONSTRUCTION. PLANS MAY NEED TO BE ADJUSTED FOR FURTHER APPROVAL IF EASEMENTS BURDENING THE PROPERTY ARE FOUND.
2. BASED UPON FLOOD INSURANCE RATE MAP (FIRM) NUMBER 10005C0575L, DATED JUNE 20TH, 2018, THE PROPERTY IS LOCATED IN AN AREA DESIGNATED AS FLOOD ZONE "X", UNSHADED, WHICH IS AN AREA DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAIN.
3. CLASS OF SURVEY: SUBURBAN
4. TOPOGRAPHIC SURVEY INFORMATION SHOWN FROM ACTUAL FIELD SURVEY BY AXIS GEOSPATIAL LLC, DATE MARCH 2022.
5. TAX DITCH INFORMATION SHOWN IS FROM CURRENT GIS DATA AVAILABLE FROM THE STATE OF DELAWARE FIRSTMAP.
6. THE SUBJECT PROPERTY CONSISTS OF ISOLATED WETLANDS THROUGHOUT THE PROPERTY WHICH HAVE BEEN DELINEATED BY PENNONI ASSOCIATES ON DECEMBER 6, 2021. REFER TO WETLAND AND WATERCOURSE INVESTIGATION REPORT BY PENNONI ASSOCIATES, INC. DATED JANUARY 10, 2022. THERE ARE NO IMPACTS TO THE EXISTING WETLANDS.
7. THE BOUNDARY INFORMATION SHOWN ON THIS PLAT WAS TAKEN FROM DEED BOOK 3927, PAGE 195; . AND PER ACTUAL FIELD SURVEY BY PENNONI ASSOCIATES, DATED DECEMBER 2021.
8. ALL MATERIALS SHALL BE NEW AND SHALL BE ASBESTOS AND VERMICULITE FREE. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE INTENDED WORK.
9. DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK TO BE PERFORMED. IT MUST BE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND ALL RULES AND REGULATIONS THERETO APPURTENANT
10. PRIOR TO CONSTRUCTION, CONTRACTOR TO FIELD LOCATE AND RECORD ANY DAMAGE TO EXISTING PAVING, SIDEWALK, CURB OR STRUCTURES NOT TO BE REMOVED OR REPLACED, ENGINEER TO VERIFY LOCATION AND EXTENT OF DAMAGE.
11. ALL SECURITY LIGHTING (IF NECESSARY) SHALL BE DOWNWARD SCREENED SO THAT IT DOES NOT SHINE ON NEIGHBORING PROPERTIES OR ROADWAYS.
12. ALL FIRE LANES, FIRE HYDRANTS, EXITS, STANDPIPE, FIRE DEPARTMENT CONNECTIONS AND SPRINKLER CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH STATE FIRE PREVENTION REGULATIONS. BUILDING CONSTRUCTION TO BE WOOD, STEEL, AND CONCRETE, AND WILL NOT HAVE SPRINKLERS.
13. LOCK BOX REQUIRED - CONTACT LOCAL FIRE CHIEF FOR ORDERING INFORMATION AND LOCATION OF BOX ON THE BUILDING.
14. MISS UTILITY SHALL BE NOTIFIED THREE (3) DAYS PRIOR TO EXCAVATION.
15. A 72 HOUR (MINIMUM) NOTICE SHALL BE GIVEN TO THE DISTRICT PERMIT SUPERVISOR PRIOR TO STARTING ROADWAY CONSTRUCTION.
16. THE PROJECT WILL BE BUILT IN 1 PHASE.
17. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO LOCATE PROPERTY LINES AND RIGHT OF WAY LINES PRIOR TO CONSTRUCTION AND AVOID CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY AND/OR RIGHTS OF WAYS WHERE SAID CONSTRUCTION IS PROHIBITED. THE CONTRACTOR MAY CONDUCT CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY PROVIDED IF HE HAS OBTAINED PRIOR WRITTEN PERMISSION FROM THE PROPERTY OWNER AND HAS SUBMITTED A COPY OF SAID WRITTEN PERMISSION TO THE OWNER.
18. FINAL SET OF APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES. FAILURE TO COMPLY WITH THIS PROVISION SHALL BE CONSIDERED CAUSE TO STOP THE WORK.
19. THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF CONTRACT DRAWINGS ON WHICH HE SHALL NOTE, IN RED, THE ALIGNMENTS AND INVERTS OF ALL UNDERGROUND UTILITIES INSTALLED OR ENCOUNTERED DURING THE PROSECUTION OF THE WORK. ALL DISCREPANCIES BETWEEN THE PLAN LOCATIONS AND ELEVATIONS OF BOTH THE EXISTING AND PROPOSED UTILITIES SHALL BE SHOWN ON THE AS-BUILT DRAWINGS TO BE MAINTAINED BY THE CONTRACTOR IN THE FIELD.
20. THE CONTRACTOR SHALL OPEN ONLY THAT SECTION OF TRENCH OR ACCESS PITS WHICH CAN BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY. STEEL PLATES SHALL BE USED ON ANY TRENCH OR ACCESS PITS WHICH MUST REMAIN OPEN OVERNIGHT. THIS REQUIREMENT DOES NOT APPLY TO AREAS COMPLETELY CLOSED AND SECURE FROM VEHICULAR OR PEDESTRIAN TRAFFIC.
21. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS, AND PRODUCTS. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE INTENDED WORK.
22. ROUTINE PERIODIC INSPECTIONS DURING CONSTRUCTION WILL BE PROVIDED BY THE OWNER. THESE INSPECTIONS DO NOT RELIEVE THE CONTRACTOR FROM HIS OBLIGATION AND RESPONSIBILITY FOR CONSTRUCTING ALL WORK IN STRICT ACCORDANCE WITH ALL STANDARDS AND SPECIFICATIONS AND CONSTRUCTION DOCUMENTS.
23. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION.
24. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING, TWO (2) WEEKS PRIOR TO THE START OF CONSTRUCTION:
    - THE OWNER
    - SUSSEX CONSERVATION DISTRICT
    - DELDOT
25. THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL MEASURES TO PROTECT STOCKPILE AREAS AND STORAGE AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE PROJECT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE STAGING AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED AND MULCHED TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH RE-ESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.
26. EQUIPMENT AND/OR STOCKPILE MATERIAL SHALL NOT BE STORED IN THE DRIPLINE AREA OF ANY TREE.
27. THE CONTRACTOR SHALL PROVIDE TEMPORARY SEED AND MULCH FOR ALL AREAS WHERE SOIL IS EXPOSED AND SILT FENCE IS NOT SPECIFIED, BY THE CLOSE OF EACH BUSINESS DAY.
28. THE CONTRACTOR SHALL MAINTAIN PUBLIC ROADS AND STREETS IN A BROOM SWEPT CONDITION AT ALL TIMES.
29. DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING THE EXCAVATION FOR STRUCTURES AND UTILITY LINES ON AND OFF SITE MUST BE REMOVED AND PROPERLY DISCARDED. ANY REMEDIAL ACTION REQUIRED IS THE RESPONSIBILITY OF THE CONTRACTOR.
30. THE CONTRACTOR SHALL REMOVE AND IMMEDIATELY REPLACE, RELOCATE, RESET OR RECONSTRUCT ALL OBSTRUCTIONS IN THE WORK AREA, INCLUDING, BUT NOT LIMITED TO, MAILBOXES, SIGNS, LANDSCAPING, LIGHTING, PLANTERS, CULVERTS, DRIVEWAYS, PARKING AREAS, CURBS, GUTTERS, FENCES, OR OTHER NATURAL OR MAN-MADE OBSTRUCTIONS. TRAFFIC CONTROL REGULATORY, WARNING AND INFORMATION SIGNS SHALL REMAIN FUNCTIONAL AND VISIBLE TO THE APPROPRIATE LANES OF TRAFFIC AT ALL TIMES, WITH THEIR RELOCATION KEPT TO A MINIMUM DISTANCE.
31. THE PROPOSED SIGN IS NOT APPROVED AS PART OF THIS SITE PLAN . A SEPARATE SUSSSEX COUNTY PERMIT IS REQUIRED.
32. FOR ANY NEW SUBDIVISION DEVELOPMENT LOCATED IN WHOLE OR IN PART WITHIN 300 FEET OF THE BOUNDARY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSE, THE OWNER OF THE DEVELOPMENT SHALL PROVIDE IN THE DEED RESTRICTION AND ANY LEASE OR AGREEMENTS OF SALE FOR ANY RESIDENTIAL LOT OR DWELLING UNIT THE FOLLOWING NOTICE: "THIS 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 OF AGRICULTURAL CHEMICALS AND NIGHTTIME FARM OPERATIONS. THE USE AND ENJOYMENT OF THIS PROPERTY IS EXPRESSLY CONDITIONED ON ACCEPTANCE OF ANY ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM SUCH NORMAL AGRICULTURAL USES AND ACTIVITIES."
33. FOR ANY NEW SUBDIVISION DEVELOPMENT LOCATED IN WHOLE OR IN PART WITHIN 500 FEET OF THE BOUNDARY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES, NO IMPROVEMENT REQUIRING AN OCCUPANCY APPROVAL FOR A RESIDENTIAL TYPE USE SHALL BE CONSTRUCTED WITHIN 50 FEET OF THE BOUNDARY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES.
35. THE MEADOW AREAS SHOWN SHALL BE RETAINED AND MAINTAINED FOR THE LIFE TIME OF THE SOLAR PROJECT
36. REMOVAL OF THE MEADOW AREAS IS NOT PERMITTED WITHOUT THE WRITTEN CONSENT OF THE SUSSEX COUNTY DISTRICT
37. SEEDING (PERMANENT):
    A. SHALL BE CONDUCTED AS SOON AS WEATHER PERMITS
    B. THE APPLICATION RATES OF FERTILIZER AND LIME SHOULD BE ACCORDING TO THE RECOMMENDATIONS OF THE ON SITE SOIL TESTS. IF THE SOIL TESTING IS NOT AVAILABLE, THEN THE FOLLOWING SPECIFIED RATES MAY BE USED.
    C. SEED BED PREPARATION: APPLY 23 LBS. OF 10-10-10 FERTILIZER PER 1000 SQ. FT.; HARROW OR DISC INTO SOIL TO A DEPTH OF 3 TO 4 INCHES; APPLY DOLOMITIC LIMESTONE AT 92 LBS. PER 1000 SQ. FT.
    D. SEEDING: APPLY 5.0 LBS. PER 1000 SQ. FT. OF KENTUCKY 31 TALL FESCUE ON A MOIST SEED BED WITH SUITABLE EQUIPMENT. MINIMUM COVERAGE 1/4 INCH.
    E. MULCHING: IMMEDIATELY AFTER SEEDING, UNIFORMLY MULCH ENTIRE AREA WITH UNWEATHERED SMALL GRAIN STRAW AT A RATE OF 92 LBS. PER 1000 SQ. FT. MULCH TO BE ANCHORED WITH MULCH ANCHORING TOOL ON THE CONTOUR.
38. THIS APPLICATION WAS THE SUBJECT OF A PREVIOUS CONDITIONAL USE APPLICATION (CONDITIONAL USE NO. 2354) FOR THE ESTABLISHMENT OF SOLAR FARM.THIS APPLICATION WAS RECOMMENDED APPROVAL BY PLANNING AND ZONNING COMMISION AT THEIR MEETING OF THURSDAY, MAY 23RD , 2023. THE APPLICATION WAS APPROVED BY THE SUSSEX COUNTY COUNCIL AT THEIR MEETING OF TUESDAY, OCTOBER 10, 2023, AND THE USE WAS ESTABLISHED THROUGH ORDINANCE NO 2955.

DELDOT RECORD NOTES, 3-21-2019:

1. ALL ENTRANCES SHALL CONFORM TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S (DELDOT'S) CURRENT DEVELOPMENT COORDINATION MANUAL (DCM) AND SHALL BE SUBJECT TO ITS APPROVAL.
2. NO LANDSCAPING SHALL BE ALLOWED WITHIN THE RIGHT-OF-WAY UNLESS THE PLANS ARE COMPLIANT WITH SECTION 3.7 OF THE DEVELOPMENT COORDINATION MANUAL.
3. 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.
4. UPON COMPLETION OF THE CONSTRUCTION OF THE SIDEWALK OR SHARED-USE PATH ACROSS THIS PROJECT'S FRONTAGE AND PHYSICAL CONNECTION TO ADJACENT EXISTING FACILITIES, THE DEVELOPER, THE PROPERTY OWNERS OR BOTH ASSOCIATED WITH THIS PROJECT, SHALL BE RESPONSIBLE TO REMOVE ANY EXISTING ROAD TIE-IN CONNECTIONS LOCATED ALONG ADJACENT PROPERTIES, AND RESTORE THE AREA TO GRASS. SUCH ACTIONS SHALL BE COMPLETED AT DELDOT'S DISCRETION, AND IN CONFORMANCE WITH DELDOT'S DEVELOPMENT COORDINATION MANUAL.
5. DRIVEWAYS WILL NOT BE PERMITTED TO BE PLACED AT CATCH BASIN LOCATIONS.
6. TO MINIMIZE RUTTING AND EROSION OF THE ROADSIDE DUE TO ON-STREET PARKING, DRIVEWAY AND BUILDING LAYOUTS MUST BE CONFIGURED TO ALLOW FOR VEHICLES TO BE STORED IN THE DRIVEWAY BEYOND THE RIGHT-OF-WAY, WITHOUT INTERFERING WITH SIDEWALK ACCESS AND CLEARANCE.
7. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MONUMENTS IN ACCORDANCE WITH DELDOT'S DEVELOPMENT COORDINATION MANUAL.
8. THE DEVELOPER SHALL BE REQUIRED TO FURNISH AND PLACE RIGHT-OF-WAY MARKERS TO PROVIDE A PERMANENT REFERENCE FOR RE-ESTABLISHING THE RIGHT-OF-WAY AND PROPERTY CORNERS ON LOCAL AND HIGHER ORDER FRONTAGE ROADS. RIGHT-OF-WAY MARKERS SHALL BE SET AND/OR PLACED ALONG THE FRONTAGE ROAD RIGHT-OF-WAY AT PROPERTY CORNERS AND AT EACH CHANGE IN RIGHT-OF-WAY ALIGNMENT IN ACCORDANCE WITH SECTION 3.2.4.2 OF THE *DEVELOPMENT COORDINATION MANUAL*.

ERNST SEEDS

Ernst Conservation Seeds
8884 Hanover Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: March 13, 2020

VA Solar Pollinator 4' Mix - ERNMX-621

Botanical Name	Common Name	Price/Lb
45.00 % *Schizachyrium scoparium, 'Camper'*	Little Bluestem, 'Camper'	34.00
35.00 % *Rudbeckia curtisonida, Butte*	Sideoats Grama, Butte	15.00
4.00 % *Asclepias tuberosa*	Butterfly Milkweed	33.00
4.00 % *Chamaecrista fasciculata, PA Ecotype*	Partridge Pea, PA Ecotype	7.00
4.00 % *Coreopsis lanceolata*	Lanceleaf Coreopsis	21.00
4.00 % *Eupatorium fistulosa*	Blackeyed Susan	31.00
1.00 % *Zizia aurea, PA Ecotype*	Golden Alexanders, PA Ecotype	72.00
0.50 % *Aster oblongifolius, PA Ecotype*	Aromatic Aster, PA Ecotype	336.00
0.50 % *Aster pronuncilaides, PA Ecotype*	Zigzag Aster, PA Ecotype	432.00
0.30 % *Penstemon digitalis, PA Ecotype*	Foxglove Beard, PA Ecotype	168.00
0.20 % *Pycnanthemum tenuifolium*	Narrowleaf Mountain Mint	168.00
0.20 % *Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	364.00
0.10 % *Dianthus fruticosa var. Fruticosa*	Sundrops	360.00
0.10 % *Penstemon digitalis*	Tall White Beardtongue	168.00
100.00 %	Mix Price/Lb Bulk:	$34.81

POLLINATOR SEED MIX FOR SOLAR FIELD

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

SUSSEX CSG 3 SOLAR FACILITY
(S-XX) / (C/U XX)
TM: 532-20.00-14.00
OLD RACETRACK ROAD (SCD 502)
DELMAR, DE 19940

KEY SHEET

SUSSEX CSG 3 LLC
3050 PEACHTREE ROAD, SUITE 460
ATLANTA, GA 30305

DATE	NO.	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	DMNSN26001
DATE	2026-04-24
DRAWING SCALE	1"=100'
DRAWN BY	ASM
APPROVED BY	AMD

PP1001

SHEET 2 OF 5

U:\Accounts\DMNSN\DMNSN0001 – Dominion Energy - Sussex CSG 3 LLC\DESIGN_SHEETS\PP1001.dwg PLOTTED: 6/2/2026 2:50 PM, BY: Ahmed Mohamed PLOTSTYLE: Pennoni NCS.stb PROJECT STATUS: —

SITE INFORMATION:

SITE ADDRESS:
OLD RACETRACK ROAD
DELMAR, DE 19940
LITTLE CREEK HUNDRED, SUSSEX COUNTY

OWNER ADDRESS:
SHORE PROPERTIES INC.
30339 FOSKEY LANE
DELMAR, MD 21875

DEVELOPER ADDRESS:
C/O SAM YOUNES
SUSSEX CSG 3 LLC
3050 PEACHTREE ROAD, SUITE 350
ATLANTA, GA 30305

ENGINEER:
PENNONI ASSOCIATES, INC.
18072 DAVIDSON DRIVE
MILTON, DE 19968
ADeckter@Pennoni.com

NORTH

OLD RACETRACK ROAD (S.C.R. 502)
EX. ROW = 50'/ LOCAL

EX. DITCH
O H W
N 87°04'23" E 537.36'
N 87°04'23" E 1122.97'
104.95'
102.37'
111.89'
106.25'
APPROXIMATE ROUTE OF NEW 12.47 kV UNDERGROUND CONDUCTORS FROM EQUIPMENT PAD TO THE RISER POLE
50.00' FROM C/L TAX DITCH RIGHT OF WAY (COC #10)
100.00'
20' WIDE LANDSCAPING BUFFER PER CONDITION "I" (±14362 SQ. FT.)
EX. DWELLING
N 05°57'42" W 635.28'
200.60'
N 05°57'42" W 654.01'
209.97'
EQUIPMENT PADS
EXISTING UTILITY POLE
S 05°15'15" E 326.76'
ESTIMATED POINT OF INTERCONNECTION (12.47 kV) BY MEANS OF NEW FEEDER FROM DELMARVA SUBSTATION
UTILITY POLE #1 GOAB UTILITY LOCKABLE/ACCESSIBLE DISCONNECT LOCATION (BY DELMARVA)
UTILITY POLE #2 RECLOSER (BY DELMARVA)
UTILITY POLE #3 UTILITY METER (BY DELMARVA)
CUSTOMER POLE #1 GOAB UTILITY LOCKABLE/ACCESSIBLE DISCONNECT LOCATION (BY CUSTOMER)
CUSTOMER POLE #2 RECLOSER (BY CUSTOMER)
CUSTOMER POLE #3 RISER POLE (BY CUSTOMER)
S 84°18'30" W 662.28'
FARM FIELD
EX. ELECTRIC LINE
15.00'
N 89°59'52" E 375.99'
S 01°21'29" E 59.72'
S 86°18'30" W 74.24'
EX. TREE LINE
S 86°18'30" W 331.37'
LAYDOWN AREA (20,223 S.F.)
PROPOSED CONDITIONAL USE AREA (13.68 ±AC.)
WOODED AREA
S 05°22'47" E 153.47'
S 84°00'23" W 476.92'
PROPOSED 36" HDPE PIPE CROSSING IN TAX DITCH, PENDING TAX DITCH APPROVAL
N 05°19'37" W 635.31'
N 84°01'39" E 477.82'
EXISTING TAX DITCH MEADOW BRANCH SUB 1 PRONG 4
50.00' FROM C/L TAX DITCH RIGHT OF WAY (COC #10)
MATCHLINE: SEE PP1003
MATCHLINE: SEE PP1004
TM: 532-20.00-15.00
LANDS N/F OF TAMARA LYNN BROWN
DEED REF: DB 6152 PG 108
ZONED: AR-1
USE: RESIDENTIAL AND AGRICULTURAL
TM: 532-20.00
LANDS N/F OF C
BUILDING SY
OF DELMAF
DEED REF; DB 52
ZONED: F
USE: INDUS
0 50' 100'

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

SUSSEX CSG 3 SOLAR FACILITY
(S-XX) / (C/U XX)
TM: 532-20.00-14.00
OLD RACETRACK ROAD (SCD 502)
DELMAR, DE 19940

PRELIMINARY SITE PLAN

SUSSEX CSG 3 LLC
3050 PEACHTREE ROAD, SUITE 460
ATLANTA, GA 30305

NO.	REVISIONS	BY	DATE

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	DMNSN26001
DATE	2026-04-24
DRAWING SCALE	1"=50'
DRAWN BY	ASM
APPROVED BY	AMD

PP1002

SHEET 3 OF 5

U:\Accounts\DMNSN\DMNSN26001 - Dimension Energy - Sussex CSG 3 LLC\DESIGN_SHEETS\PP1002.dwg PLOTTED: 6/2/2026 2:51 PM, BY: Ahmed Mohamed PLOTSTYLE: Pennoni NCS.ctb PROJECT STATUS: —

SITE INFORMATION:

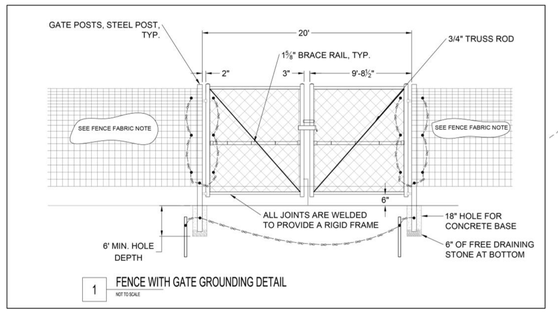
SITE ADDRESS:
OLD RACETRACK ROAD
DELMAR, DE 19940
LITTLE CREEK HUNDRED, SUSSEX COUNTY

OWNER ADDRESS:
SHORE PROPERTIES INC.
30339 FOSKEY LANE
DELMAR, MD 21875

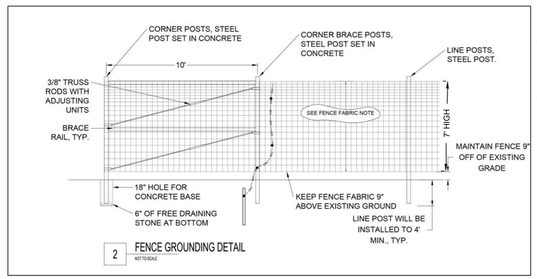
DEVELOPER ADDRESS:
C/O SAM YOUNES
SUSSEX CSG 3 LLC
3050 PEACHTREE ROAD, SUITE 350
ATLANTA, GA 30305

ENGINEER:
PENNONI ASSOCIATES, INC.
18072 DAVIDSON DRIVE
MILTON, DE 19968
ADeckter@Pennoni.com

NORTH



1 FENCE WITH GATE GROUNDING DETAIL
NOT TO SCALE



2 FENCE GROUNDING DETAIL
NOT TO SCALE

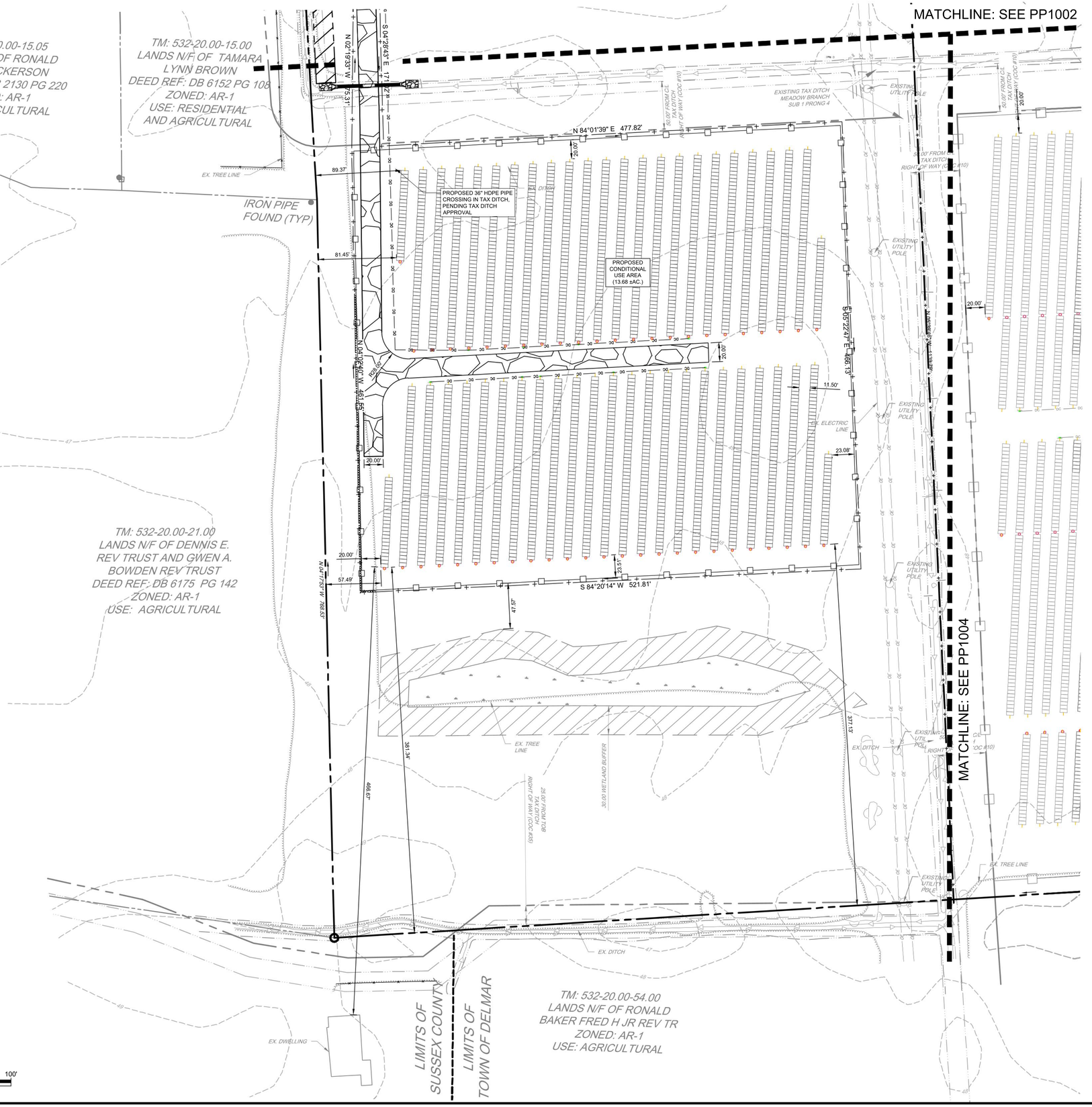
DETAIL- FENCE WITH GATE AND FENCE (1 / PP1003)
NOT TO SCALE

NOTES:

1. FENCE POSTS/MESH WITHIN 50' OF MEDIUM VOLTAGE PATHWAY SHALL BE GROUNDED EVERY 100' UNTIL THE FENCE SYSTEM IS OVER 50' AWAY FROM MEDIUM VOLTAGE PATHWAY.
2. A DRIVEN ROD LOCATED INSIDE THE FENCE LINE, AT LEAST 8' IN COPPER-CLAD, STAINLESS STEEL CLAD RODS SHALL BE AT LEAST 1/2" IN DIAMETER.
3. BONDING THE ROD TO A FENCE POST USING A CONDUCTOR SIZED APPROPRIATELY FOR THE DESIGN AND OPERATING CONDITIONS, BUT NOT SMALLER THAN A #2 AWG COPPER CONDUCTOR OR ALUMINUM OF THE SAME AMPACITY.
4. BARBED WIRE AND WIRE MESH SHALL ALSO BE BONDED TO THE FENCE POST AT THAT LOCATION, USING SAME SIZED COPPER WIRE.
5. GROUNDING AND BONDING CONNECTIONS SHALL BE CLAMPED, SPLIT RING, MECHANICAL, BRAZED, WELDED, OR COMPRESSION TYPE.
6. IF A GATE IN THE PERIMETER FENCE IS POSITIONED UNDERNEATH OVERHEAD LINES OR OVER MV TRENCH LINES, THEN FENCE POSTS ON BOTH SIDES OF THE GATE SHALL HAVE A GROUNDING KIT, OR ELSE AN UNDERGROUND JUMPER SHALL BE INSTALLED, AT LEAST 12" BELOW GRADE, EFFECTIVELY BONDING THE FENCE POST ON BOTH SIDES OF THE GATE.
7. ADDITIONAL FENCE BRACING MAY BE REQUIRED ON LONGER FENCE RUNS.

FENCE FABRIC NOTES:

1. ALL FENCE FABRIC, OTHER THAN GATES, SHALL BE BEKAERT SOLIDLOCK PRO HIGH TENSILE FIXED KNOT GAME FENCE OR APPROVED EQUAL.
2. FENCE FABRIC SHALL BE 75" HIGH, 9" SPACING OF VERTICAL WIRES.
3. FENCE FABRIC SHALL BE MOUNTED WITH LARGE OPENINGS AT THE BOTTOM TO ALLOW FOR SMALL ANIMAL PASSAGE.
4. FABRIC TO BE A DARK COLOR, BLACK, OR GRAY.
5. FABRIC TO BE FASTENED WITH MANUFACTURER APPROVED CORROSION RESISTANT STAPLES



0 50' 100'

PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

SUSSEX CSG 3 SOLAR FACILITY

(S-XX) / (C/U XX)
TM: 532-20.00-14.00
OLD RACETRACK ROAD (SCD 502)
DELMAR, DE 19940

PRELIMINARY SITE PLAN

SUSSEX CSG 3 LLC
3050 PEACHTREE ROAD, SUITE 460
ATLANTA, GA 30305

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES, AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	DMNSN26001
DATE	2026-04-24
DRAWING SCALE	1"=50'
DRAWN BY	ASM
APPROVED BY	AMD

PP1003

SHEET 4 OF 5

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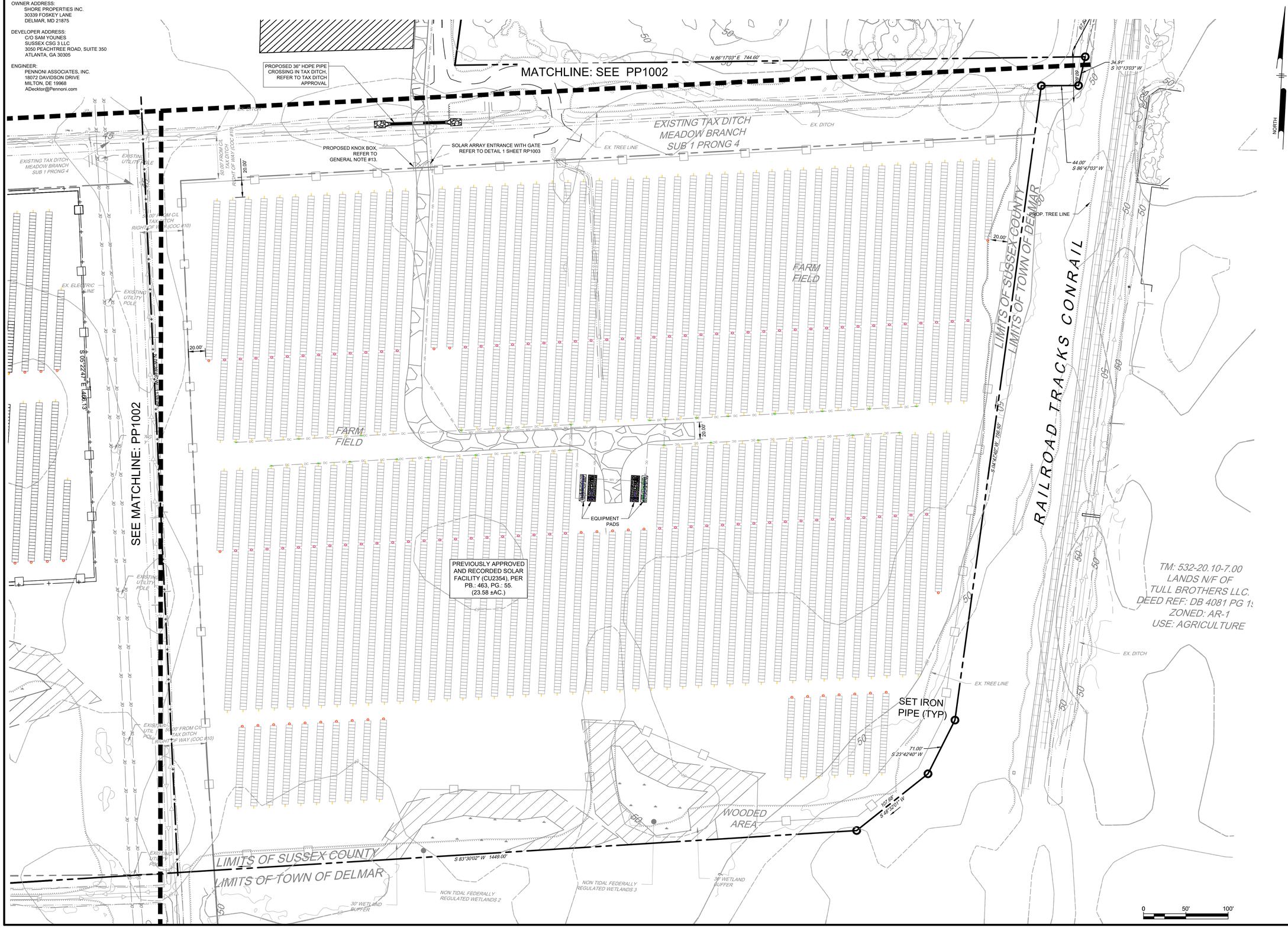
SITE INFORMATION:

SITE ADDRESS:
OLD RACETRACK ROAD
DELMAR, DE 19940
LITTLE CREEK HUNDRED, SUSSEX COUNTY

OWNER ADDRESS:
SHORE PROPERTIES INC.
30339 FOSKEY LANE
DELMAR, MD 21875

DEVELOPER ADDRESS:
C/O SAM YOUNES
SUSSEX CSG 3 LLC
3050 PEACHTREE ROAD, SUITE 350
ATLANTA, GA 30305

ENGINEER:
PENNONI ASSOCIATES, INC.
18072 DAVIDSON DRIVE
MILTON, DE 19968
ADecktor@Pennoni.com



PENNONI ASSOCIATES INC.
18072 Davidson Drive
Milton, DE 19968
T 302.684.8030 F 302.684.8054

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SUSSEX CSG 3 SOLAR FACILITY

(S-XX) / (C/U XX)
TM: 532-20.00-14.00
OLD RACETRACK ROAD (SCD 502)
DELMAR, DE 19940

PRELIMINARY SITE PLAN

SUSSEX CSG 3 LLC
3050 PEACHTREE ROAD, SUITE 460
ATLANTA, GA 30305

NO.	DATE	REVISIONS	BY

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PROJECT	DMNSN26001
DATE	2026-04-24
DRAWING SCALE	1"=50'
DRAWN BY	ASM
APPROVED BY	AMD

PP1004

SHEET 5 OF 5

U:\Accounts\DMNSN\DMNSN26001 - Dimension Energy - Sussex CSG 3 LLC\DESIGN_SHEETS\PP1004.dwg PLOTTED: 6/2/2026 2:11 PM, BY: Ahmed Mohamed PLOTSTYLE: Pennoni-NCS.ctb PROJECT STATUS: —

1201 N. Market St
Suite 1200
Wilmington, DE 19801
302.654.7444 302.656.8920
www.foxrothschild.com

MACKENZIE M. SINDELAR
Direct No: 302.442.7627
Email: msindelar@foxrothschild.com

August 25, 2026

VIA E-MAIL
Planning & Zoning Office
Attn: Jamie Whitehouse, Director
2 The Circle (P.O. Box 417)
Georgetown, DE 19947

Re: CU 2652 Sussex CSG3, LLC

Dear Director Whitehouse:

In preparation for Sussex CSG3 LLC's scheduled public hearings before the Sussex County Planning & Zoning Commission and Sussex County Council, I have attached a revised first page of the application reflecting my updated contact information.

Should you have any questions or need additional information, please contact me by phone at 302-442-7627 or by email at msindelar@foxrothschild.com.

Sincerely,

/s/ Mackenzie Sindelar

Mackenzie M. Sindelar, Esquire

MMS
Enclosure

File #: _____

Planning & Zoning Commission 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)
Conditional Use ✓
Zoning Map Amendment ___

Site Address of Conditional Use/Zoning Map Amendment

Old Racetrack Road, Delmar, Delaware 19940

Type of Conditional Use Requested:

Community Solar Farm Facility pursuant to Sections 115-172(I) & 115-22.

Tax Map #: 532-20.00-14.00 **Size of Parcel(s)**: +/- 52.34 AC; Net Development Area: +/- 13.68 AC

Current Zoning: AR-1 **Proposed Zoning:** AR-1 **Size of Building**: N/A

Land Use Classification: Industrial

Water Provider: Private - Not Applicable **Sewer Provider:** Private - Not Applicable

Applicant Information

Applicant Name: SUSSEX CSG 3 LLC c/o Sam Younes
Applicant Address: 3050 Peachtree Road, Suite 350
City: Atlanta State: GA ZipCode: 30305
Phone #: (877) 277-8560 E-mail: N/A

Owner Information

Owner Name: SHORE PROPERTIES INC.
Owner Address: 30339 Foskey Lane
City: Delmar State: MD Zip Code: 21875
Phone #: N/A E-mail: N/A

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Fox Rothschild LLP c/o Mackenzie Sindelar Esq.
Agent/Attorney/Engineer Address: 1201 N. Market Street, Suite 1200
City: Wilmington State: DE Zip Code: 19801
Phone #: (302) 442-7627 E-mail: msindelar@foxrothschild.com

Applicant's Engineer:
Pennoni Associates Inc. c/o Alan Decktor, PE, Env Sp
18072 Davidson Drive
Milton, DE 19968
(302) 684-6241; adecktor@pennoni.com

18072 Davidson Drive
Milton, DE 19968
T: 302-684-8030
F: 302-684-8054

www.pennoni.com

June 3, 2026
DMNSN26001

Ms. Lauren Cecchine
Sussex County Planning and Zoning Manager
2 The Circle
Georgetown, DE 19947

RE: P&Z Site Plan Application
Community Solar Farm Facility
Tax Map # 532-20.00-14.00
Little Creek Hundred
Delmar, DE 19940

Ms. Lauren Cecchine,

On behalf of Sussex CSG 3 LLC, Pennoni Associates Inc. (Pennoni) is pleased to submit the attached Preliminary Site Plan Application Package for your review. We are proposing to construct a second solar farm facility on subject project located along Old Racetrack Road (SCR 502). The property already has approval for a solar facility per CU #2354 / Ord. 2955 which will be starting construction. We had a pre-application meeting onm 5/21/2026 with P&Z staff. The site does not require water or sewer services and also won't require stormwater management due to the minimal land disturbance related to this type of the project. The site is bound by agricultural / residential properties to the south and west and Old Race track road to the north with an industrial zoned property to the northeast and railroad tracks to the east.

We have enclosed the following documents for review of the project.

Item	***Description***	***Last Revised***
Drawings Prepared by Pennoni Associates Inc.		
PP0001 – PP1004	Preliminary Major Subdivision Plan Set	4/24/2026

Additional Documents

- PZ Major Subdivision Application, Legal Description and Check ($1,000.00)
- SLER Response
- Preliminary Site Plans
- Solar Decommissioning Plan
- Operations & Maintenance Plan

If you have any comments or need additional information, please call us at (302) 684-8030.

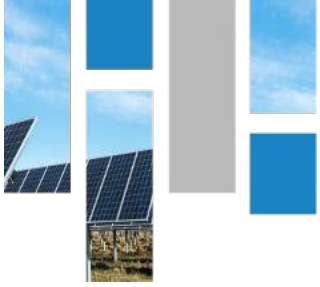
Sincerely,

PENNONI ASSOCIATES INC.

Alan Decktor, PE, ENV SP
Senior Engineer

CC.
U:\Accounts\DMNSN\DMNSN26001 - Dimension Energy - Sussex CSG 3 LLC\DELIVERABLES\PZ\0 2026-06+03 SUSSEX CSG3 Cover Sheet.docx

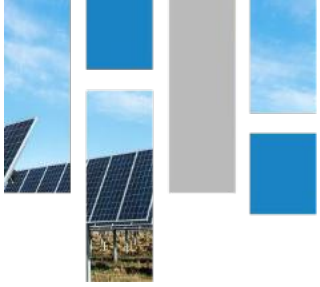
DIMENSION
RENEWABLE ENERGY



Sussex CSG 3 LLC Solar Pro ect Decommissioning Plan

Sussex CSG 3 LLC

DIMENSION
RENEWABLE ENERGY



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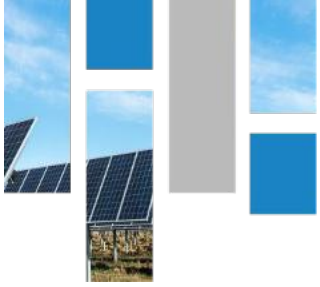


Introduction

Sussex CSG 3 LLC proposes to construct and operate a ground-mounted single-axis tracker photovoltaic (P) solar system, approximately 2.55MWac in capacity. The Sussex CSG 3 LLC Solar Pro ect (Pro ect) is proposed to be located on one privately owned parcel (Parcel ID: 532-20.00-14.00) in Sussex County, Delaware on Old acetrack d, Delmar, DE 19940.

Ground-mounted solar facilities are designed, engineered, and constructed to operate for at least 20 or 25 years and can operate for up to 35 years or more. During construction, portions of the site may be compacted, excavated, and graded for optimal installation and operation. This decommissioning plan outlines the steps that will be taken to remove the solar system and its associated appurtenances from the Pro ect site and return the parcels to conditions similar to pre-installation.

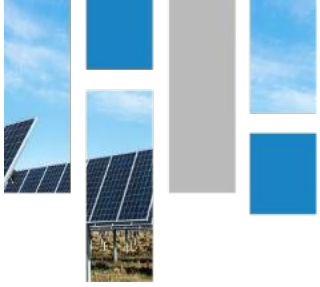
This Decommissioning Plan will be updated as necessary in the future to ensure that changes in technology and site restoration methods are taken into consideration.

System Decommissioning

Sussex CSG 3 LLC is responsible for decommissioning activities as outlined in the conditions of permit approval by the local regulatory agencies. Decommissioning and restoration activities will align with current regulations at time of decommissioning and conducted in accordance with local regulation. At the end of its operational life or if the system is abandoned or upon cessation of activity, the entire system will be disconnected from the grid, disassembled, and removed, and all materials will either be recycled or disposed of appropriately. Any necessary permits will be obtained from the County prior to decommissioning activity.

Abandonment Definitions

Written notice (from both Sussex CSG 3 LLC and the utility) will be provided to the County in the event the operation of the system is discontinued. The Applicant acknowledges that the system must be decommissioned if the Pro ect has not been verified to be active or in continuous service for the prior year, and that decommissioning notification will be provided by the Zoning Officer within six months of discontinued operation.



Timing equirements

Decommissioning and removal of the Pro ect will be completed within six months after the end of the Project's useful life (assumed to be 365 days after a period of no electrical generation). The soil and surface grade will be restored and revegetated with native seed mixes (excluding invasive species), excluding the access road area, landscaping details, and stormwater management facilities.

Equipment and Material emoval

Sussex CSG 3 LLC will remove all above-ground equipment (solar module panels, brackets, support structures, inverters, transformers, concrete pads for equipment) and underground equipment (buried electrical wiring and conduits, concrete foundations), structures, fencing, and access roads. All equipment and materials will be evaluated to determine the appropriate facility for salvage, recycling, or disposal.

P Modules

The P modules will be disconnected from the inverters and removed from the steel racking system. The P modules are made of silicon, glass, and aluminum and are not considered hazardous waste. P modules will be recycled or resold on the market if determined to still be usable.

Associated Electrical Appurtenances

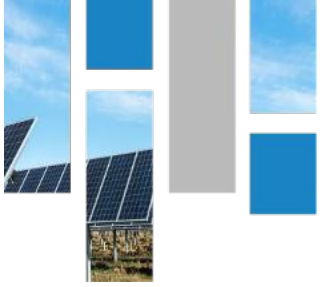
All associated electrical appurtenances (i.e. switchboards, transformers, meters) will be removed from their respective concrete pads or steel frames and disposed of at an approved facility.

Electric Wiring

All electric conductors made of copper and aluminum can be recycled. Above ground DC wires will be removed between the modules and inverters. nderground AC conductors will be pulled and removed. Above ground AC conductors back to the utility point of interconnection will be removed from the poles by the utility.

acking Equipment and encing

Metal fencing and racking equipment will be removed and recycled at an appropriate facility. All driven posts will be removed.



Concrete Pad

Concrete pads will be excavated to a depth of three feet below grade, or the depth to retrieve all rebar and foundation bolts. Clean concrete will be crushed and removed from the site. The remaining excavation will be filled with clean material, of similar character to surrounding soils. The soil and surface grade will be restored, and revegetated with native seed mixes, excluding invasive species.

Access oad

The access road will remain in place for future use on the site.

Disposal and ecycling of Materials

All hazardous waste will be disposed of in accordance with laws in effect at the time decommissioning is performed. Any solid waste generated during system dismantling or demolition will be disposed of as necessary to comply with the solid waste regulations then in place. All waste will be removed from the site.

Site estoration

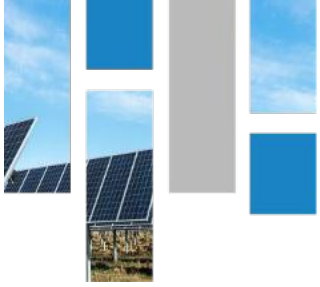
The site will be restored to a state consistent with its preconstruction condition. Any necessary construction stormwater permits will be obtained prior to decommissioning, and erosion and sediment control best management practices will be installed on site, as needed. After equipment is removed from site, soil will be de-compacted, and excavations will be filled with materials similar to soils on site. Any disturbed areas will be reseeded and erosion and sediment control BMPs will remain in place until the site is stabilized and then removed upon confirmed stabilization. The soil and surface grade will be restored, and revegetated with native seed mixes, excluding invasive species.

Stakeholder Notification and Construction

Decommissioning activities will require the use of equipment and vehicles similar to those used in support of construction activity. As necessary, interested stakeholders, such as ad acent landowners, will be notified prior to the start of work on site. As noise may be temporarily elevated by construction equipment and vehicles during decommissioning, activities will only be conducted during accepted County work hours. The site will be kept orderly and clean of refuse.

Decommissioning activity is anticipated to be completed within a 6-month timeframe.

List of Stakeholders to be notified:



Sussex County – Zoning Administrator
Neighbors owning the following ad acent parcels at the time of decommissioning:

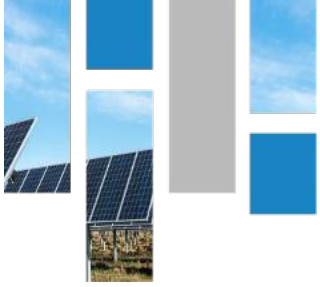
532-20.00-54.00 74-23
532-20.00-14.02
532-20.00-9.00
532-20.00-15.00
532-20.00-21.00

Decommissioning Bond Estimate and Abandonment

A decommissioning bond will be provided to Sussex County to provide for the restoration of the site in accordance with the decommissioning plan. The bond will be valued at the cost of removal of the solar system based on a cost estimate provided by a third party – included within this plan. The bond will be placed in service prior to Sussex County's issuance of a Building Permit for the Pro ect and will remain for the life of the solar energy system or for so long as necessary to complete decommissioning, whichever is longer.

The estimated decommissioning cost will be provided to the County upon receival, as estimated by a third-party engineer. The Applicant intends to bond 100 of the cost to decommission the pro ect at approximately one year after the Project's commercial operation date (COD).

In the event the system is abandoned and/or upon cessation of activity for a period of one year, the County may issue notice to the Pro ect. If no restorative action occurs within six months of such notice the County may use this decommissioning bond for removal of the system.



Acknowledgement and Approval

Sussex County hereby acknowledges receipt of this Decommissioning Plan and affirms that the Decommissioning Plan (assuming establishment of the form of surety agreed upon by Sussex County and Sussex CSG 3 LLC) satisfies the conditions of the applicable permit approvals relevant thereto.

Sussex C u

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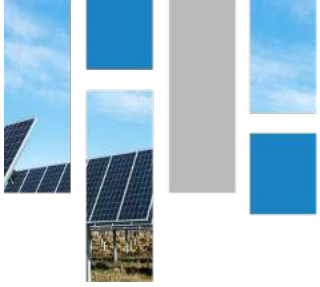

Exhibit A: Decommissioning Bond Standard Language

DECOMMISSIONING BOND
Bond No.

KNOW ALL BY THESE PRESENTS: That we, _____ as Principal, and , _____ an _____ corporation duly authorized under the laws of the State of _____, as Surety, are held and firmly bound unto _____, as Obligee in the maximum aggregate penal sum of _____ Dollars ($_____), lawful money of the United States of America, to be paid to the said Obligee, successors or assigns; for which payment, well and truly to be made, we bind ourselves, our heirs, executors, successors, administrators and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE OBLIGATION IS SUCH THAT:

Whereas, the Principal and Obligee have entered into an agreement whereby principal agrees to complete decommissioning in accordance with the _____, which said agreement, dated _____, is hereby referred to and made a part hereof; and

Whereas, said Principal is required under the terms of said agreement to furnish a bond for the faithful performance of the decommissioning referred to in said agreement.

Now, Therefore, the condition of this obligation is such that if the above bounded Principal, his or its heirs, executors, administrators, successors or assigns, shall in all thing stand to and abide by, and well and truly keep and perform the decommissioning provisions in the said agreement and any alteration thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the Obligee, its officers, agents and employees, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

Provided further, that if the Principal fails to respond to the Obligee's notice of default or fails to perform its Decommissioning responsibilities as outlined in said agreement the Surety shall promptly and at the Surety's election and expense take one of the following actions:

1. Arrange for the Principal, with consent of the Obligee, to perform and complete the Decommissioning; or
2. Undertake to perform and complete the Decommissioning itself, through its agents or through independent contractors; or

The surety may cancel this bond at any time by giving the Obligee sixty (60) days written notice of its desire to be relieved of Liability. Should the Principal fail to provide a replacement bond or alternate financial assurance acceptable to the Obligee within thirty (30) days of the receipt by the Obligee of the Notice of Cancellation, the surety may choose to reinstate this bond, otherwise the Surety will be in default and shall forfeit the full Penal Sum of this Bond to Obligee.

Nonpayment of the premiums associated with this Bond will not invalidate this Bond nor shall Obligee be obligated for the payment thereof.

DIMENSION
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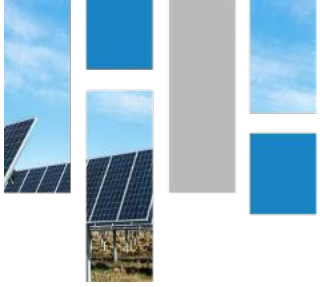

The liability of the Surety under this bond and all continuation certificates issued in connection therewith shall not be cumulative and shall in no event exceed the amount as set forth in this bond or in any additions, riders, or endorsements properly issued by the Surety as supplements thereto.

IN WITNESS WHEREOF, the signature of said Principal is hereto affixed and the corporate seal and the name of the Surety is hereto affixed and attested by its duly authorized Attorney-in-Fact, this _____ day of _____, 20__.

_____ _____

By: _____ By:_____

_____, Attorney-in-Fact

Sussex CSG 3 LLC Solar Pro ect Operations & Maintenance/Emergency Preparedness Plan

Sussex CSG 3 LLC

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I u

Sussex CSG 3 LLC proposes to construct and operate a ground-mounted, single-axis tracker photovoltaic (P) solar system, approximately 2.55 MWac in capacity (the Pro ect). The Pro ect is proposed to be located on one privately owned parcel (Parcel ID: 532-20.00-14.00) in Sussex County, Delaware on Old acetrack d, Delmar, DE 19940. The purpose of this plan is to outline the ongoing operations and maintenance activities that will be performed at the Pro ect site from the time it is operational until decommissioning.

The Operations and Maintenance Plan aims to outline a strategy for ensuring that Sussex CSG 3 LLC operates in a sustainable and safe manner utilizing industry best practices. These facilities are designed and built to last for 30 years of operations. Therefore, this plan outlines the necessary processes and procedures to ensure these operational ob ectives are achieved. This Operations & Maintenance Plan will be updated as necessary in the future to ensure that changes in technology, inspection, and maintenance methods will be taken into consideration.

S eM , e e eM e e l s e s

Sussex CSG 3 LLC will work with an Operations & Maintenance contractor. The system will be remotely monitored 24/7 and responds to all alarms and/or notifications indicating the facility is not operating properly. After identifying the nature of the issue, a technician may be deployed to the site to investigate within 24 hours. Technicians servicing the site have the appropriate licenses and training to be working on this equipment to ensure both their safety and optimal performance of the site, troubleshoot, and/or repair the issue. Staff will be continuously available to communicate with Delmarva Power's (the electric utility's) operations and local emergency personnel on a 24/7 basis furthermore, power to/from the pro ect can be shut down remotely during emergency situations.

The key to effective facility operations is to inspect equipment, clean, maintain, repair and/or replace according to approved procedures. egular inspections are scheduled at least twice a year to ensure that the site is clean and secure, and that equipment is running properly and securely. During each maintenance visit the site will be inspected for signs of erosion. Any areas of concern will be immediately communicated to Sussex CSG 3 LLC to evaluate and implement corrective measures.

R u eS e l s e

On a routine basis, a representative of the owner/operator will perform a site inspection with the Zoning Administrator and/or Inspector of Sussex County. The site inspection will include the following schedule of services:

R u eS e l s e	
E u e	**I s e e s**
P Panel Condition	Inspect for cleanliness, cracked/chipped/scratched/shattered panels, fading/discoloration, burn marks, seal condition, frame damage or rust
P Mounting Structure	Inspect mounts and mounting structures (loose panels, loose rack/clips missing hardware, rusted bolts, rack anchor condition)
P Array entilation	Inspect conditions under panels, removal of any large debris or pests visual check to ensure maximum ventilation under panels
P System oundations	isual inspection of grounds and vegetation, identify issues related to mud, water pooling, soil erosion
Balance of System	▪ Inspect conduit runs (separated/cracked conduits, misaligned wire runs) ▪ Inspect panel interconnectivity and string lines (wire/cable wear, wire fading, chewed wire due to pests, identify loose/detached wires) ▪ Inspect unction/combiner enclosure(s) condition (seals, rust, damage, locks) ▪ Inspect electrical equipment enclosure(s) (seals, rust, damage, door condition, locks, equipment pad(s))
Inverter(s)	▪ Inspect inverter structure(s) and enclosure(s) (seals, rust, damage, door condition, switch/handle condition, locks) ▪ Inspect inverter equipment pad(s) (cracks, base damage, soil erosion)
Data Acquisition System (DAS)	▪ Weather stations condition (alignment of irradiance sensor, condition of wind and temperature meters) ▪ DAS device condition (screen, seals, rust, damage)
Shading Conditions	isual inspection to identify any shading issues (trees/grass, landscape, structures)

R u eS e l s e	
E u e	I s e e s
System Security	▪ isually inspect fence line or confinement structures for wear, damage, breach, vandalism, or other problems ▪ Check condition of any locks, chains, or other protection measures preventing unauthorized access to the system.

s s S s e E u e : All equipment and materials will be evaluated to determine the appropriate facility for salvage, recycling, or disposal. Disposal and recycling of materials will occur at facilities outside of Sussex County. The P modules will be disconnected from the inverters and removed from the steel racking system. The P modules are made of silicon, glass, and aluminum and are not considered hazardous waste. P modules will be recycled or resold on the market if determined to still be usable. All electric conductors made of copper and aluminum can be recycled. All hazardous wastes, if any, will be disposed of in accordance with laws in effect at the time disposal is performed. Any solid waste generated during dismantling will be disposed of as necessary to comply with the solid waste regulations then in place.

S Re : Snow removal on access roads will be limited to times when equipment needs inspection/repair. outine snow removal will not be necessary, as the system is monitored remotely.

Ve e M e e

ollowing construction of the solar facility, the disturbed grounds will be re-seeded with low growth/low maintenance, native/non-invasive ground cover under and around the solar panels according to the Landscaping Plan. This is to provide foraging habitat beneficial to game birds, songbirds, and pollinators. The use of low growth vegetation will minimize the need for mowing. The site will be monitored so vegetation height does not reach above the lowest point of the solar modules - assumed max height of 24-30 inches. All vegetation planted for screening will be monitored during routine maintenance visits. Should any of the vegetative screening plantings need to be replaced due to declining condition, they will be replaced during the next seasonal growing cycle. Should the County have any concerns, the Zoning Administrator can reach out to the Pro ect owner and the issue will be addressed in a timely manner. At this time, the monitoring service is still being determined. inal emergency contact information will be given to the appropriate emergency response departments and to the Zoning Administrator and/or Inspector. Emergency contact information will be posted at the site.

The vegetative maintenance contractor will be responsible for inspecting and maintaining the vegetative integrity of the solar facility and will ad ust site maintenance frequency based on time

of year and weather conditions. Before mowing or cutting, maintenance staff will check the weather forecast and perform an on-site inspection to avoid rutting, erosion, and soil compaction. Any use of pesticides, herbicide, or other chemicals will follow all local, state, and federal regulations. Such treatments are not anticipated. In the event of any changes, a list will be provided to the Township to approve prior to application.

Ge e Ex e M e e: The fence line will be inspected for trash. Trash will be collected and disposed of offsite. egetative growth along the fence line will also be trimmed and maintained to prevent the growth of weeds or tall grasses. The condition of the fence and gates will be assessed, and necessary repairs made. Evidence of irregular activity such as trespassing, tampering, illegal dumping, or wildlife intrusion will be resolved. The access roads will be monitored and inspected for sediment buildup/obstruction, drainage issues, rutting and pitting or other failures. All stormwater practices should be inspected and maintained consistent with the approved SWPPP on record with the County.

Array Vegetation Maintenance: During the growing season, staff will utilize sheep-grazing for general vegetation management of the array area. The sheep will be brought to the array by an independent contractor. The sheep will forage on vegetation within the array area until the vegetation is roughly uniform in height. A water trough will be provided for sheep to drink from and sheep will utilize the shade areas underneath the panels for shelter.

In addition to sheep-grazing, staff will mow the site as needed. First, the mower trims the large areas. Second, trimmers are used to cut around structural elements and other places the mower and/or sheep could not reach. Finally, any vegetation that was thrown and stuck to the modules will be cleaned off. Additionally, staff may spot mow to reduce invasive plants while native species are becoming established. Spot-mowing will be done at a raised height to avoid damaging native plants. Should the mowing contractor notice areas of diminished/removed grass growth, they shall contact the Project owner/developer and ensure that this area is reseeded.

Ve e e S ee M e e: egetative screening will be planted at the facility per the landscaping plan provided to Sussex County. The contractor will be responsible for monitoring the general health of each plant, weed intrusion, and general appearance. If any planting fails to establish itself, the contractor will work with the responsible nursery to redeem the warranty and replace the deceased plant with another in accordance with the approved landscaping plan. eplacement plants will be installed according to the landscaping plan on record with the Township and will occur within the following growing season.

S e V s s Se e Re s

pon reasonable notice, the Sussex County Zoning Administrator and/or Inspector, or his or her designee, may enter the property for the purpose of determining compliance with any requirements or conditions of the Sussex County's code or any approval given, or permit issued pursuant to Sussex County law. Twenty-four (24) hours' notice by telephone to the owner/operator or designated contact person shall be deemed reasonable notice. urthermore,

Sussex CSG 3 LLC shall be inspected by a irginia State licensed Professional Engineer that has been approved by Sussex County at any time upon a determination by the County's Zoning Administrator or Inspector that damage to such system might have occurred, and a copy of the written inspection report shall be submitted to the Zoning Administrator. Any fee or expense associated with this inspection shall be borne entirely by Sussex CSG 3 LLC and shall be reimbursed to Sussex County within thirty 30 days after delivery to the permit holder of an invoice substantiating such charges. Sussex County reserves the right to levy all such un-reimbursed expenses onto the real property tax bill associated with the real property upon which the Solar Energy System is located.

S e e s

e: Operations & Maintenance
e: Sussex CSG 3 LLC epresentative
e u e : 1-404-800-0840
E : siteops@dimension-energy.com

e: Zoning Director
e: Jamie Whitehouse
e u e : (302)-855-7878
E : amie.whitehouse@sussexcountyde.gov

Purpose

Sussex CSG 3 LLC (Project) Emergency Response and Fire Safety Plan (ERFSP) describes actions to ensure the safety of Project employees, emergency service members serving the Project, and the surrounding community in the event of an emergency. ERFSP provides emergency personnel contact information and outlines procedures to prevent, mitigate, and effectively respond to an incident should one arise at the Project.

General Facility Information

The Project is an approximately 2.55MWac single-axis tracker, ground-mounted (PV) solar electric generation facility located in Sussex County, Delaware. The Project is owned by Sussex CSG 3 LLC, which is a wholly owned subsidiary of Dimension Energy LLC. Dimension Energy LLC (DRE) is the Operator of the Project. The proposed project site is located on one privately owned parcel (Parcel ID: 532-20.00-14.00) in Sussex County, Delaware on Old Racetrack Rd, Delmar, DE 19940 on one parcel that is approximately 50 acres, of which the Project occupies less than 12 acres. The project is situated on a parcel zoned in the AR-1 - Agricultural Residential District.

Access Roads

The access road will be installed using gravel substrate and will terminate with a hammerhead turnaround to accommodate maintenance vehicles. The road will also be wide enough to accommodate emergency vehicles and designed in compliance with County standards.

Fencing

The solar array and all balance of system equipment will be enclosed in a seven-foot-tall chain link fence in compliance with the National Electric Code. The fence will have at least one vehicle access gate at the boundary of the array, which will always remain locked, except during operations and maintenance activities.

The Project consists of approximately 5,175 solar panels oriented in linear rows spaced approximately 11.5 feet apart. Panels are connected by electrical cables hung on the underside of the panels and buried underground at various points. “Blocks” or “strings” of panels are connected to an inverter. The Project contains approximately 17 inverters that convert direct current (DC) electricity to alternating current (AC). The AC power is then routed via collector lines to the Project substation and utility switchyard (collectively, the Substation). Gravel roads are constructed throughout the Project to facilitate access for maintenance and repair as noted above.

Fire Detection

In the event of a fire, the appointed Operations Center will detect equipment faults which will then lead to dispatch site-personnel to investigate accordingly.

Shutoff Procedures and Locations

Entry of the Project should only be attempted at the direction of the Operator. Contact information for the Operator will be proved in the Operational Contacts section. In the event of an emergency requiring shutdown, the solar system may be de-energized/isolated remotely, but local disconnects require manual operation by a qualified DRE representative to confirm breaker open. Emergency responders shall not assume the system is de-energized nor attempt to deenergize equipment due to arc flash risk. DRE Representatives should execute any Lock out tag out.

In an emergency, only DRE representatives may disconnect power blocks within the solar arrays at each inverter according to the following procedures:

1. The ON/OFF switch on each inverter shall be manually turned to the OFF position,

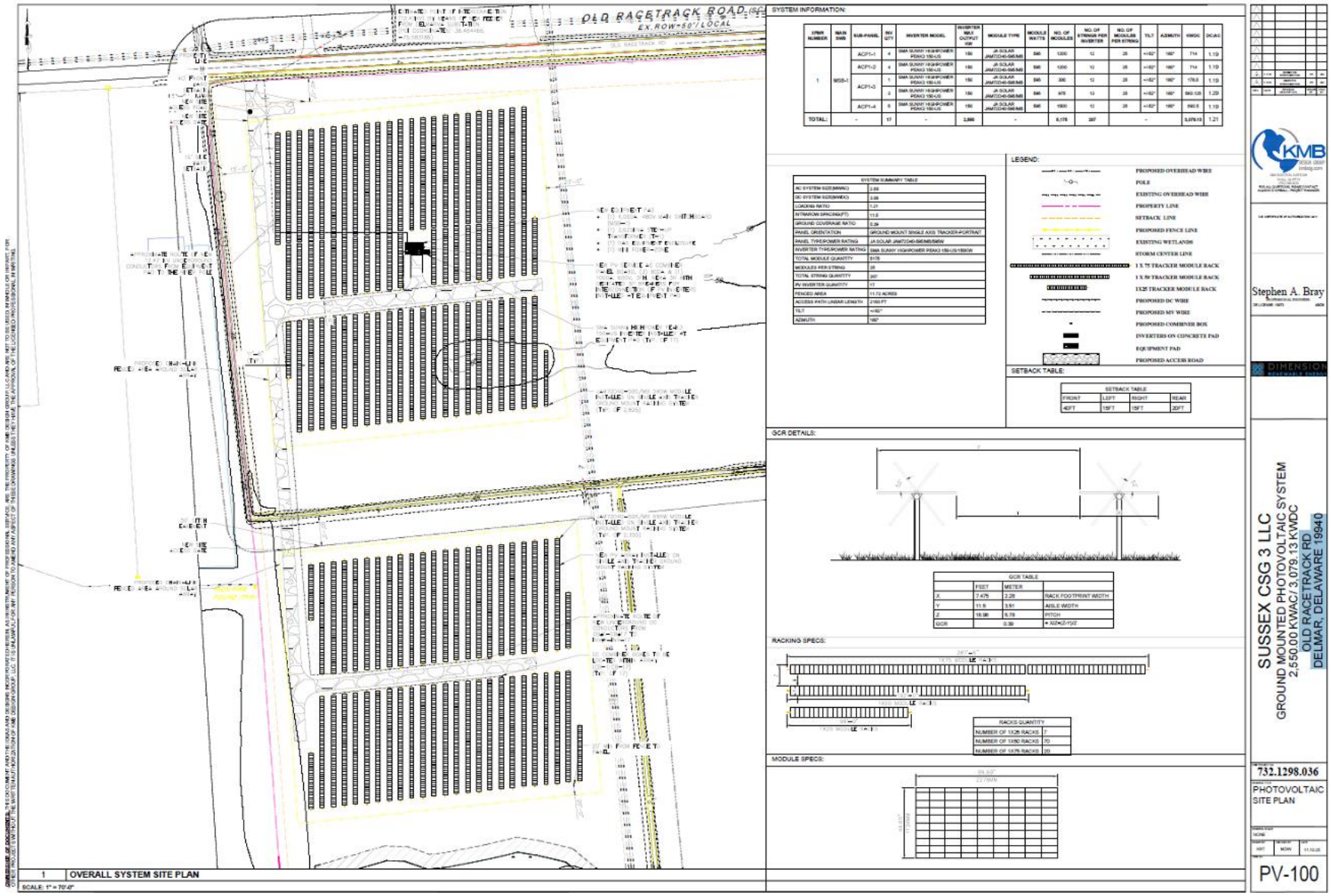
   shutting off both the AC and DC switches inside the inverter.

2. After the system has been turned off, the DC Disconnect Switch shall be turned off, and

   a lock placed on it to keep it from being re-energized.

Sussex CSG 3 LLC will coordinate with Sussex County regarding locking procedures for the inverters, and shutdown and locking procedures will be updated, as needed, in the final ERFSP. The final ERFSP will be completed prior to commencing Project operations and will be provided to Sussex County's Emergency Management Department and the Delmar Volunteer Fire Department.

FIGURE 1


OLD RACETRACK ROAD
EX.ROW=50'/LOCAL
SYSTEM INFORMATION:
SYSTEM SUMMARY TABLE
LEGEND:
PROPOSED OVERHEAD WIRE
POLE
EXISTING OVERHEAD WIRE
PROPERTY LINE
SETBACK LINE
PROPOSED FENCE LINE
EXISTING WETLANDS
STORM CENTER LINE
1 X 75 TRACKER MODULE RACK
1 X 50 TRACKER MODULE RACK
1X25 TRACKER MODULE RACK
PROPOSED DC WIRE
PROPOSED MV WIRE
PROPOSED COMBINER BOX
INVERTERS ON CONCRETE PAD
EQUIPMENT PAD
PROPOSED ACCESS ROAD
SETBACK TABLE:
SETBACK TABLE
FRONT
LEFT
RIGHT
REAR
40FT
15FT
15FT
20FT
SCR DETAILS:
SCR TABLE
RACKING SPECS:
RACKS QUANTITY
NUMBER OF 1X25 RACKS 7
NUMBER OF 1X50 RACKS 70
NUMBER OF 1X75 RACKS 20
MODULE SPECS:
1 OVERALL SYSTEM SITE PLAN
SCALE: 1" = 70'-0"
SUSSEX CSG 3 LLC
GROUND MOUNTED PHOTOVOLTAIC SYSTEM
2,550.00 KWAC/3,079.13 KWDC
OLD RACETRACK RD
DELMAR, DELAWARE 19940
732.1298.036
PHOTOVOLTAIC SITE PLAN
PV-100
Stephen A. Bray

Operational Contacts

The following people are responsible for the operation, maintenance, and safety of the Sussex CSG 3 LLC Solar Project. The Operator conducts local monitoring of the site on a regular basis. Should issues arise, central control will dispatch local operations personnel to the site, as necessary.

Sussex CSG 3 LLC Solar Project

Renewable Operations Center: 877-277-8506
The Renewable Operations Center is the primary contact for notification in the event of an emergency. Additional contacts that may require coordination regarding this plan and operation of the Project include the following departments and agencies.

Sussex County Emergency Management Division

POC: Robbie Murray, Emergency Management Director
Email: RMurray@sussexcountyde.gov
Phone number: (302) 855-1000
Address: Emergency Operations Center, 21911 Rudder Lane P.O. Box 589, Georgetown, DE 19947

Delmar Volunteer Fire Department

POC: Justin Elliott, Fire Chief
Email: jelliott@delmar74fire.com
Phone Number: (443) 614-0462
Address: 301 E Grove St, Delmar, DE 19940

General Safety and Operational Information

Solar panels, located throughout the Project, convert sunlight to electricity. The process involves solid-state technology that consumes no materials and is completely self-contained. As such, the primary concern for first responders is exposure to electrical components that present a hazard to electric shock. During a response, it should be assumed that:

- All solar equipment on site contains lethal AC and DC voltages;
- All inverters contain energy storage devices that require 15 minutes to safely discharge lethal voltages;
- Electricity is supplied from multiple sources; and

- The site should only be accessed by personnel or emergency responders under the direction of the Operator.

The following are the most hazardous locations within the Project:

- Inverters and disconnects;
- Vicinity of the solar electric photovoltaic panels;
- Field wiring, collection lines, and all electrical boxes associated with the system; and
- Substation

Precautions while in the vicinity of the Solar Electric System

1. Only trained personnel should work near the solar arrays, modules, electrical boxes, or wiring.
2. It is recommended to always have at least two persons present when working on the array or handling modules. Do not attempt to service or respond to an emergency unless another person capable of rendering first aid and cardiopulmonary resuscitation (CPR) is also present.
3. Any accidents should be immediately reported to the Operator, as soon as it is safe to do so.
4. Photovoltaic panels are made of glass and may break. If any cracks occur in the modules, touching a crack may expose a person to the full voltage and current of the array. **Do not touch the modules without wearing electrical insulating gloves**.

Orientation

Appropriate training of first responders is key to their understanding of the hazards that are present within the Project area and to mitigate potential risks to their life during a response. As such, first responders that could be dispatched to the Project in the event of an emergency will be trained prior to commencement of operation and on a periodic basis thereafter. The Operator will work with Fire and other Township Departments, as well as county and state safety officials, as appropriate, to provide biennial site-specific orientation to emergency response leadership and their assigned staff.

Emergency Situations

Emergency situation critical points:

- In the event of an emergency, dial 911.
- Entry and shutdown of the Project should only be attempted at the direction of the Operator.
- Solar and substation components are always hot and should always be considered electrically energized. DC voltage is always present (even at night).
- All inverters contain energy storage devices that require 15 minutes to safely discharge lethal voltages.
- Do not touch the modules without wearing electrical insulating gloves.

Fire Response

In the event of a fire, the individual discovering the emergency shall:

1. Assess the situation to determine potential safety concerns to life and the environment, with life safety as the priority.
2. Notify the appropriate local authorities by dialing 911 and direct them to the entry point identified on Figure 1.
3. Local authorities should contact the Operator to determine the appropriate response.

Upon arrival to the Project, responders shall:

1. Evacuate and secure the area and keep people a minimum of 300 feet away, provided there are no immediate threats to people or non-solar property.
2. Let the facility burn. Burning electrical equipment is already damaged and must be replaced.
3. Protect adjacent exposures, such as homes and forested areas, as needed, to limit the potential of the fire spreading.
4. If fire must be suppressed within the array fence line, the Operator will direct local authorities on how to proceed.

The following are the most important considerations when responding to a fire or other emergency at the Project:

- Solar and substation components are always hot and should always be considered electrically energized. DC voltage is always present, even at night.
- Identify and validate the hazard in order to minimize injury.
- Electrical components produce gas during combustion. All responders should use a self-contained breathing apparatus (SCBA).
- Before committing apparatus to the access roads within any of the fenced panel array enclosures, understand that turn arounds will often be well over 1,000 feet away.
- Under the direction of the Operator, isolate or shutdown the electrical power at the site of the fire, if possible.
- Do not assume the system is de-energized and do not attempt to de-energize any equipment.
- Do not open any inverter doors until at least 48 hours have passed since the initiation of the event or conditions are verified safe and entry is approved by the Operator.
- Leave the scene in a safe condition after mitigating hazards.

Natural Disasters

Severe weather events such as snowstorms, hurricanes, and tornadoes are possible at the Project. Although much less common, there is also the potential for minor earthquakes, flooding, or high wind events (e.g., microbursts). These events should have limited impact on the Project site. The Project is designed and constructed to withstand the extreme weather likely to occur at the Project site (e.g. high winds, hail, lightning, snowstorms, etc.). After an extreme weather event, the Operator will evaluate all equipment for damages and repair, as necessary, to restore full Project operations.

Public Safety

Access to the Project is limited to trained staff and maintenance personnel only. Solar panel arrays and the Substation are surrounded by a seven-foot-tall chain link fence per requirements of the National Electric Safety Code (NESC). Access to the Project site occurs through gates in the chain-link fence that are secured with a padlock (Knox Box or similar), and only Operator personnel have access to the Project.

In the event of personnel injury from electric shock or if personnel should become incapacitated while within the Project site, the following procedures should be followed:

1. Assess the area for hazards and secure the area to protect additional life from injury.
2. Notify the appropriate local authorities by dialing 911 and direct them to the Project access point identified on Figure 1.
3. Local authorities should contact the Operator to determine the appropriate response procedures and methods for shutting down the nearest components to ensure safe access.

18072 Davidson Drive
Milton, DE 19968
T: 302-684-8030
F: 302-684-8054

www.pennoni.com

METES AND BOUNDS

LANDS NOW OR FORMERLY OF SHORE PROPERTIES, INC.
LITTLE CREEK HUNDRED, SUSSEX COUNTY, DELAWARE

TM: 532-20.00-14.00

All that certain piece, tract and parcel lying in Little Creek Hundred, Sussex County, Delaware and being more particularly described as follows:

COMMENCING at an iron pipe, said iron pipe being a corner for this Parcel and lying on the easterly right-of-way of Old Racetrack Road; thence by and with this Parcel and the easterly right-of-way of Old Racetrack Road, **North 87 degrees, 04 minutes, 23 seconds East, 62.36 feet** to the **Point of Beginning**, said Point of Beginning being a corner for the Conditional Use Area; thence by and with the Conditional Use Area and Lands now or formerly of Shore Properties, Inc., the following fourteen (14) courses and distances:

1) **North 87 degrees, 04 minutes, 23 seconds East, 537.36 to a point,**
2) **South 05 degrees, 15 minutes, 15 seconds East, 362.76 feet to a point,**
3) **North 89 degrees, 59 minutes, 52 seconds East, 375.99 feet to a point,**
4) **South 01 degrees, 21 minutes, 29 seconds East, 59.72 feet to a point,**
5) **South 86 degrees, 18 minutes, 30 seconds West, 405.61 feet to a point,**
6) **South 05 degrees, 22 minutes, 47 seconds East, 153.47 feet to a point,**

7) **South 84 degrees, 00 minutes, 23 seconds East, 476.92 feet to a point,**
8) **South 04 degrees, 28 minutes, 43 seconds East, 171.02 feet to a point,**
9) **North 84 degrees, 01 minutes, 39 seconds East, 477.82 feet to a point,**
10) **South 05 degrees, 22 minutes, 47 seconds East, 466.13 feet to a point,**
11) **South 84 degrees, 20 minutes, 14 seconds West, 521.81 feet to a point,**
12) **North 04 degrees, 02 minutes, 40 seconds West, 461.55 feet to a point,**
13) **North 02 degrees, 19 minutes, 33 seconds West, 175.31 feet to a point,**
14) **North 05 degrees, 07 minutes, 52 seconds West, 625.28 feet to a point,**

said point being the **Point of Beginning** for this description.

This Conditional Use Area contains 596,024.71 square feet, or 13.68 acres, more or less.

2026-06-03
DMNSN26001
KMD:ked

PLANNING & ZONING COMMISSION
HOLLY WINGATE, CHAIR
SCOTT COLLINS, VICE-CHAIR
JEFF ALLEN
JOHN PASSWATERS
DAVID PETTYJOHN

Sussex County
DELAWARE
sussexcountyde.gov
302-855-7878
JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: October 7, 2026

Application:	CU 2548 Hickman
Applicant:	Foxlane Homes Delaware, LLC
Owner:	Trustee of Thomas R Mullen
Site Location:	38492 Hickman Road, Ocean View The parcel is lying on the south side of Hickman Road approximately 500 ft. east of the intersection with Cedar Neck Road (S.C.R. 357)
Current Zoning:	Medium-Density Residential (MR)
Proposed Use:	Multifamily Residential - (54) Units
Comprehensive Land Use Plan Reference:	Coastal Area
Councilmanic District:	District 4 – Mr. Doug Hudson
School District:	Indian River School District
Fire District:	(84) Millville Fire Co.
Sewer:	Sussex County
Water:	Sussex Shores Water
Site Area:	(12.8) acres
Tax Map ID.:	134-9.00-28.00

EQUAL HOUSING OPPORTUNITY

COUNTY ADMINISTRATIVE OFFICES
2 THE CIRCLE | PO BOX 417
GEORGETOWN, DELAWARE 19947

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Planning and Zoning Commission Members
From: Mr. Michael Lowrey, Planner IV
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: September 1st, 2026
RE: Staff Analysis for C/U 2548 Hickman (Foxlane Homes DE, LLC)

The purpose of this memo is to provide background and analysis for the Planning and Zoning Commission to consider as a part of Application for Hickman (Foxlane Homes DE, LLC) to be reviewed at the September 7th, 2026, Planning and Zoning Commission Meeting. This analysis should be included in the record of this application and is subject to comments and information that may be presented during the public hearing.

Please note that the following staff analysis is for informational purposes only and does not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.

Tax Parcel ID: 134-9.00-28.00

Proposal: The request is for Conditional Use for a portion of Tax Parcel #134-9.00-28.00 to allow for (54) multifamily residential units on the Parcel. The Parcel is located on the south side of Hickman Road approximately 500 ft. east of the intersection with Cedar Neck Road (S.C.R. 357) and comprised of a total of 12.8 acres +/-

Zoning: The subject property is zoned Medium-Density Residential (MR) District.

The parcels adjacent to the north, south, and east of the site are also within the Medium-Density Residential (MR) Zoning District with the parcel immediately to the west zoned General Commercial (C-1) Zoning District at the intersection of Hickman Road and Cedar Neck Road.

Future Land Use Map Designation w/in Comprehensive Plan: Coastal Area

Applicability to Comprehensive Plan: The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use map in the plan indicates that the subject property is designated as a Rural Area and has a land use designation of "Coastal Area". All Parcels adjacent and surrounding are also "Coastal Area".

As outlined within the 2018 Sussex County Comprehensive Plan, *Coastal Areas* are growth areas that the County encourages only the appropriate forms of concentrated new development, especially when environmental features are in play. The Coastal Area designation is intended to recognize the characteristics of both anticipated growth and ecologically important and sensitive

characteristics. The Plan notes, "this region contains ecologically important and sensitive characteristics as well as other coastal lands which help to absorb floodwaters and provide extensive habitat for native flora and fauna" (2018 Sussex County Comprehensive Plan, 4-15). Additionally, the Plan also notes that Coastal Areas "also has significant impact upon water quality within the adjacent bays and inlets as well as upon natural the region's various habitats" (2018 Sussex County Comprehensive Plan, 4-15) Additionally the Plan notes challenges in the Coastal Areas relating to safeguarding "genuine natural areas and mitigating roadway congestion without stifling the tourism and real estate markets which: a) provide many jobs; b) create business for local entrepreneurs; and c) help keep local tax rates low" (2018 Sussex County Comprehensive Plan, 4-15).

In terms of residential development in Coastal Areas, the Plan notes, "A range of housing types should be permitted in Coastal Areas, including single-family homes, townhouses, and multi-family units" (2018 Sussex County Comprehensive Plan, 4-15). In terms of density the Plan notes:

Medium and higher density could be supported in areas:

- *Where there is central water and sewer*
- *Near sufficient commercial uses and employment centers*
- *Where it is in keeping with the character of the area*
- *Where it is along a main road or at/or near a major intersection*
- *Where there is adequate Level of Service*
- *Or where other considerations exist that are relevant to the requested project and density*

(2018 Sussex County Comprehensive Plan, 4-16).

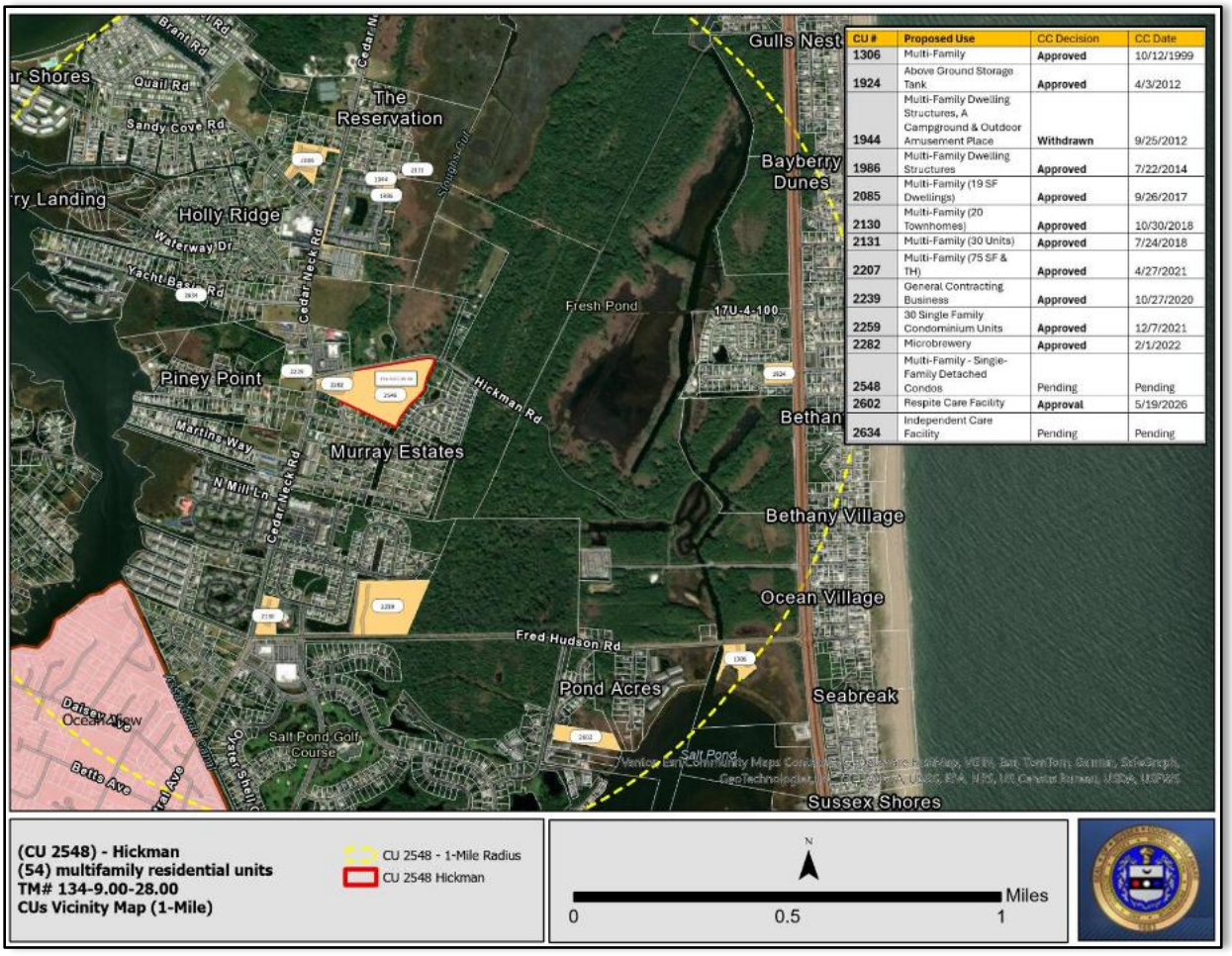
Further Site Considerations:

- **Density:** 4 DU/AC
- **Open Space Provisions:** (5.8) acres of Open Space proffered by the Plan
- **Agricultural Areas:** The site is within the vicinity of active agricultural lands.
- **Interconnectivity:** No interconnectivity is proposed – Applicant indicates the presence of commercial to the west and groundwater issues to the east in their response to the Staff review regarding the design
- **Transportation Improvement District (TID): N/A**
- **Forested Areas:** A limited portion the Parcel's exterior boundaries with adjoining parcels is forested (Totaling 2.69 acres), situated at the southern boundary and eastern corner of the site. The plan proposes removal of (1.196) acres of forest (44%) with (1.498) acres to remain (56%).
- **Wetlands Buffers/Waterways:** The Plan indicates (0.45) acres of Tidal Wetlands and (0.071) acres of Non-Tidal wetlands on the site. The Plan proposes buffers in accordance with the requirements of County Code for Resource Protection in §115-193.
- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):** The property is located within Flood Zones "X" and "AE" . Staff note

that the Parcel is not within a Wellhead Protection Area. The Parcel's area is classified as within areas of "Good" and "Excellent" in terms of Groundwater Recharge Potential per data from the State of Delaware. The limited area of "excellent" is along the eastern boundary of the Parcel.

Based on the analysis provided, a Conditional Use to allow for multifamily units could be considered as being consistent with the surrounding land use, zoning, and uses, subject to considerations of scale, impact, and the design for vehicular access.

Existing Conditional Uses within the Vicinity of the Subject Site: Staff have identified a history of (13) Conditional Use applications within a one (1) mile radius of the application site. A Data Table and Supplemental Map have been supplied to provide additional background regarding the approval status of Applications in the area to include the location of all current or previous Conditional Use Applications that are less than 1 mile distance from the subject site.



CU #	Proposed Use	CC Decision	CC Date
1306	Multi-Family	Approved	10/12/1999
1924	Above Ground Storage Tank	Approved	4/3/2012
1944	Multi-Family Dwelling Structures, A Campground & Outdoor Amusement Place	Withdrawn	9/25/2012
1986	Multi-Family Dwelling Structures	Approved	7/22/2014
2085	Multi-Family (19 SF Dwellings)	Approved	9/26/2017
2130	Multi-Family (20 Townhomes)	Approved	10/30/2018
2131	Multi-Family (30 Units)	Approved	7/24/2018
2207	Multi-Family (75 SF & TH)	Approved	4/27/2021
2239	General Contracting Business	Approved	10/27/2020
2259	30 Single Family Condominium Units	Approved	12/7/2021
2282	Microbrewery	Approved	2/1/2022
2548	Multi-Family - Single-Family Detached Condos	Pending	Pending
2602	Respite Care Facility	Approval	5/19/2026
2634	Independent Care Facility	Pending	Pending

CU Number	Application Name	Zoning District	Proposed Use	CC Decision	CC Decision Date
1306	DMV Partnership	MR	Multi-Family	**Approved**	10/12/1999
1924	Colony Pool Service Inc.	MR	Above Ground Storage Tank	**Approved**	4/3/2012
1944	Castaways Bethany, LLC	C-1, CR-1, MR & AR-1	Multi-Family Dwelling Structures, A Campground & Outdoor Amusement Place	**Withdrawn**	9/25/2012
1986	Castaways Bethany, LLC	MR	Multi-Family Dwelling Structures	**Approved**	7/22/2014
2085	Land and Materials Corp (Salt Aire)	GR	Multi-Family (19 SF Dwellings)	**Approved**	9/26/2017
2130	The Evergreene Companies, LLC (pallots corner)	MR	Multi-Family (20 Townhomes)	**Approved**	10/30/2018
2131	CBB Cedar Pines, LLC	MR	Multi-Family (30 Units)	**Approved**	7/24/2018
2207	CBB Cedar Pines, LLC (Marlin Run)	MR	Multi-Family (75 SF & TH)	**Approved**	4/27/2021
2239	Coastal Properties LLC	B-1/GR	General Contracting Business	**Approved**	10/27/2020
2259	The Evergreen Companies, LLC	MR	30 Single Family Condominium Units	**Approved**	12/7/2021
2282	Lawrence Davies	C-1	Microbrewery	**Approved**	2/1/2022
2548	Hickman Foxlane Homes Delaware, LLC	MR	Multi-Family - Single-Family Detached Condos	**Pending**	Pending
2602	Sunset Bridge Corporation	MR	Respite Care Facility	**Approval**	5/19/2026
2634	Yacht Basin Partners, LLC	GR	Independent Care Facility	**Pending**	Pending

(CU 2548) - Hickman
(Foxlane Homes DE LLC)
TM# 134-9.00-28.00
Aerial Map

CU 2548 Hickman
Tax Parcels

N

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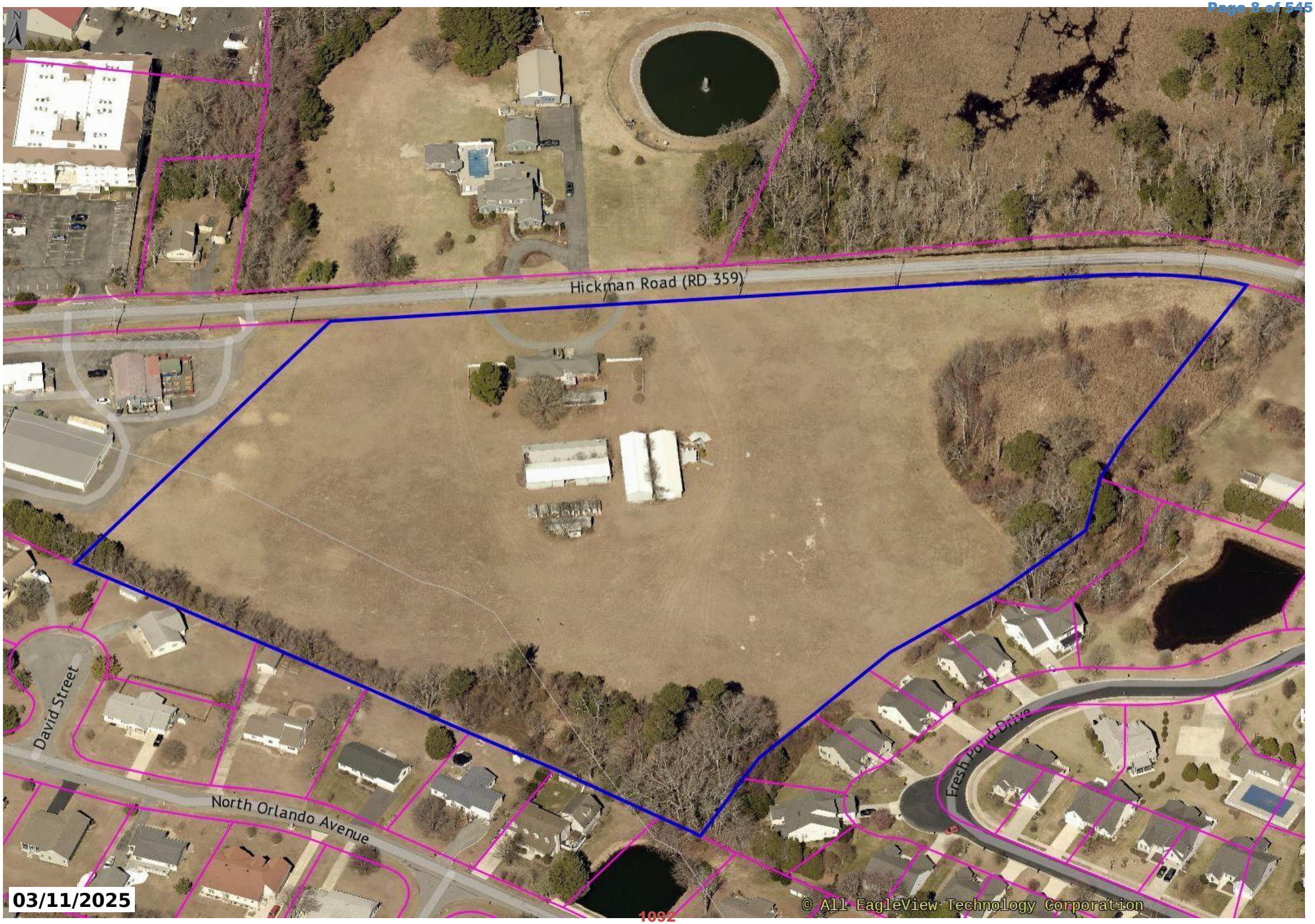
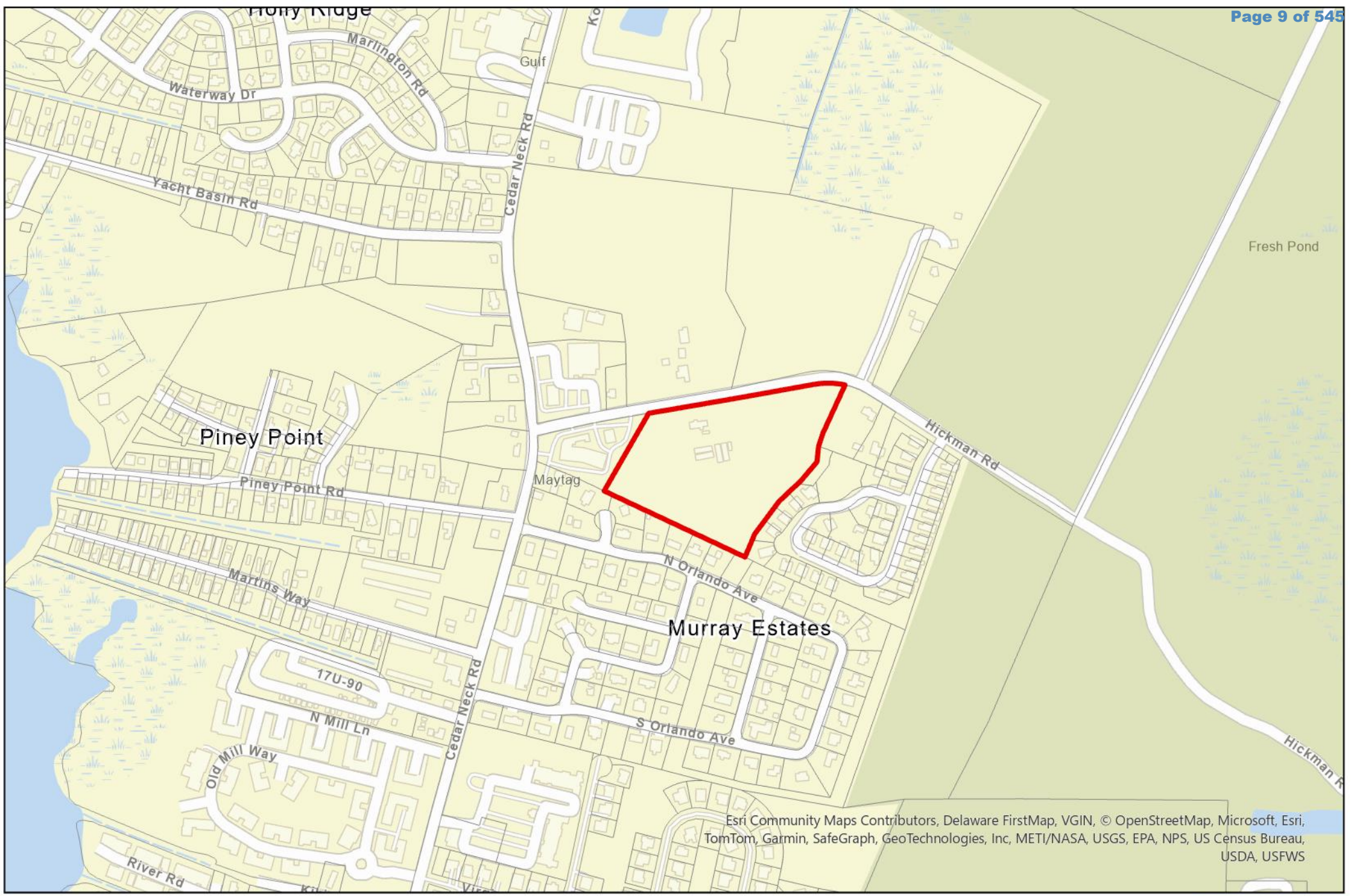

Hickman Road (RD 359)
David Street
North Orlando Avenue
Fresh Pond Drive
03/11/2025
© All EagleView Technology Corporation



(CU 2548) - Hickman
(Foxlane Homes DE LLC)
TM# 134-9.00-28.00
Street Map

CU 2548 Hickman
Tax Parcels

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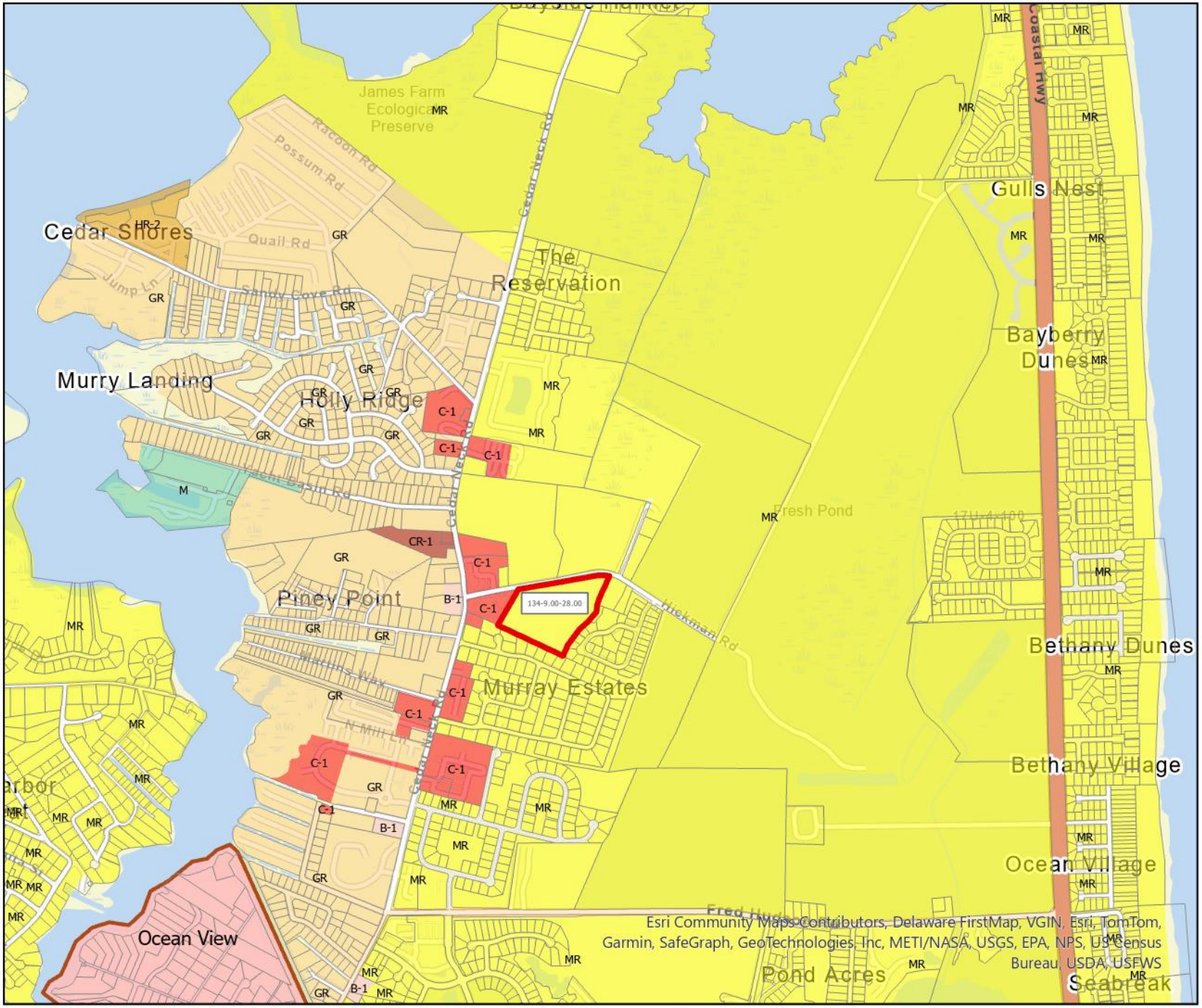


Zoning

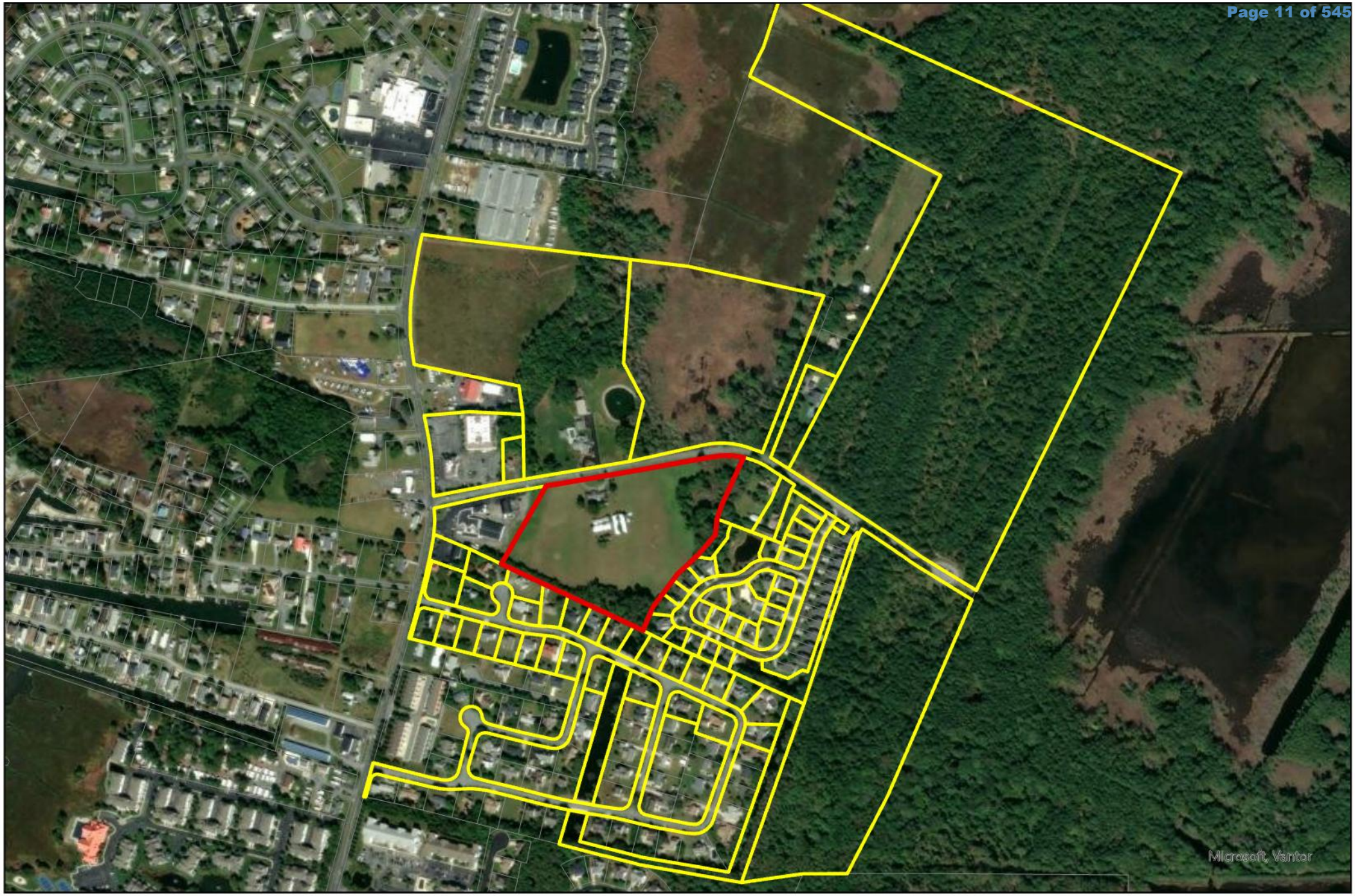
- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

(CU 2548) - Hickmam
(Foxlane Homes DE LLC)
TM# 134-9.00-28.00
Zoning Map

- CU 2548 Hickman
- Tax Parcels

N

0 0.5 1 Miles



(CU 2548) - Hickman
(Foxlane Homes DE LLC)
TM# 134-9.00-28.00
Mailing List Map

CU 2548 Hickman
CU 2548 - Mailing Parcels
Tax Parcels

N

0 1,000 2,000 Feet

PLANNING & ZONING COMMISSION
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DAVID PETTYJOHN

Sussex County
DELAWARE
sussexcountyde.gov
302-855-7878
JAMIE WHITEHOUSE, AICP, MRTPI
DIRECTOR

June 10, 2026

Mr. Jason Palkewicz, P.E.
Solutions IPEM
303 North Bedford Street
Georgetown, DE 19947

By email to: jpalkewicz@solutionsipem.com

RE: Staff Review of the Conditional Use Site Plan for Hickman (Foxlane Homes DE, LLC) (C/U 2548) to include (54) multifamily residential units to be located on a parcel lying on the south side of Hickman Road approximately 500 ft. east of the intersection with Cedar Neck Road (S.C.R. 357) and comprised of a total of 12.8 acres +/-
Tax Parcel: 134-9.00-28.00

Dear Mr. Palkewicz,

Further to your submission of August 13th, 2024, Staff have reviewed the Conditional Use Site Plan for Hickman (Foxlane Homes DE, LLC) (C/U 2548) which proposes (54) multifamily residential units, internal roads, stormwater management, wetland resource buffers as well as an amenity area with a pool and bathhouse. The Parcel is comprised of (12.8) acres and within the Medium-Density (MR) Zoning District. Staff have reviewed the Conditional Use site plan for compliance with the Sussex County Zoning Code and have the following comments:

Please note that the following review comments are for informational purposes only and do not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.

Chapter 115 – Zoning

Preliminary Site Plan

1. Please denote a (30) foot right-of-way (ROW) for all internal roads on the plan per guidance from the County Attorney relating to all plan submitted to the Planning & Zoning Commission in order to reflect the State of Delaware road standards.
2. Please note, if a Conditional Use for the multifamily units were to be approved by County Council and prior to the subsequent review and or potential approval of any preliminary or final site plan, the Plan will be required to show easements and paving all the way to the parcel boundary with adjacent parcels where interconnectivity is required.
3. Please include detail as to how the proposed Plan will meet the interconnectivity requirement (§115-221(B)(16)). Staff recommend the Applicant consider including stubs or easements on the Plan to provide interconnectivity with the adjacent parcels with frontage

on Hickman Road (S.C.R. 359) if improvements were to occur on these adjacent parcels in the future.

4. Please include a note on the Plan referencing the Drainage Assessment report by title, author and date as required under (§115-220(B)(17)(g)).
5. Please provide any correspondence with IRSD relating to provision of a bus stop.
6. Staff request the plan clarify if units are to be rented or be under separate ownership (§115-188(C)).
7. If units are proposed to be under separate ownership, please include a limited individual element for each individual unit drawn on the Plan. Please include this in any draft HOA documents as well. Staff have concerns in terms of the clarity of buildable area for future residents who may seek building permits for accessory structures (patios, hot tubs, sitting walls, fences, sheds, etc.) adjacent to the rear of units. Several building restriction lines impact the rear area of units including Tax Ditch ROWs, Resource Buffers, and Perimeter buffers (§115-188(E)(3))
8. Please include Limited Common Elements (LCE) envelope and/or Limited Individual Element (LIE) showing any areas where individual units owners/renters may propose to locate accessory structures.
9. Please include notation on the Plan relating to any Limited Common/Individual Elements on the Plan indicating that accessory improvements or cutting of vegetation by individual residents outside of their respective individual LCE/LIE is prohibited.
10. Please include an item in the Site Data Colum indicating that any accessory structures shall be subject to site plan review including the Code section reference of (§115-188(E)(3)).
11. Please include dimensioning for the proposed parking stalls adjacent to the amenities area (§115-166(A)(1)) & (§115-166(C)).
12. Please include details regarding the material and location of the required fencing around the proposed pool (§115-185(D)).
13. Please include as much detail as possible relating to the proposed amenities area to include dimensioning for the pool, the paved patio, and proposed "Poolhouse" (§115-162(B)(10)).
14. Please note amenities need to be completed in the timeframe required per (§115-194.5). Please include a note indicating the proposed amenities (pool & poolhouse) and the associated parking areas shall be constructed and open to use by the residents of a development on or before the issuance of the residential building permit representing 60% of the total residential building permits for the development.
15. Please include dimensioning for the proposed multifamily structures (§115-220(B)(8)).
16. Please include the proposed number of bedrooms in each unit as well as if any required parking is to be included in garages if applicable (§115-162(B)(1))
17. Please indicate if any phases are proposed for the project (§115-220(B)(12)).
18. Please address all comments in the SCED review of the Drainage Assessment Report (DAR).
19. Please include as clear Limit of Disturbance Line (LOD) on the Plan.
20. Please include the proposed locations for the required resource buffer signage on the Plan and please include detail of a typical sign on the Plan (§115-193(A)(4)).
21. Staff note that the multifamily structures do not meet the separation distance required under (§115-188(E)(2)).

22. While units are not proposed on individual lots, Staff note that the multifamily structures do not meet the requirement of a (10) foot side yard setbacks (for each unit) as required under (Chapter 115 Zoning – Table II- Multifamily Structures in MR).
23. Staff note that the proposed individual units largely meet the aggregate (40) setback requirements for front and rear yards for townhouses as required under (§115-188(D)(2)).
24. Staff recommend plantings to screen the amenities and mailbox area parking from proposed units #36 through #54 to shield these units from noise and/or vehicle headlights.
25. Please include a detailed bulk grading plan for the entire site as lots are not being created and therefore individual units will not be required to provide individual lot grading plans for each unit as would be the process with a major subdivision including (46) single family detached units (§115-221(B)(17)).
26. Please include a breakdown of the open space areas on the plans with respective acreages (Open Space "A," "B," "C," etc.) (§115-220(B)(15)).
27. Please include the (MR) Zoning District setbacks in the Site Data Column.
28. Staff request details as to whether the bus stop included on the Plan is for the local school district. Please include any communications with IRSD relating to the provision and location of any proposed school bus stop area. Additionally, please include any proposed public transportation facilities on the Plan.
29. Staff recommend the Plan include dedicated parking stalls for the cemetery area along proposed "Road C" adjacent to fencing around burial area (§115-194.3(E)).
30. Please clarify and include the location and nature of any proposed postal areas/facilities for the community.
31. Please include the proposed locations for utilities and resource buffer easements on the Plan.
32. Please include a Resource and Resource Buffer Management Plan (RRBMP) (§115-193(H)(1))

Please feel free to contact the Department with any questions during business hours, 8:30 A.M. – 4:30 P.M., Monday through Friday at 302-855-7878.

Sincerely,

Mr. Michael Lowrey
Planner IV

Attached:
- TAC Comments
- SCED Comments (6.9.26)- Drainage Assessment Report (DAR)

Ashley Paugh

From: Jason Palkewicz <jpalkewicz@solutionsipem.com>
Sent: Thursday, July 9, 2026 9:38 AM
To: Michael Lowrey
Cc: Planning and Zoning; Valerie Thompson
Subject: Hickman Road CU 2548
Attachments: 24006 - 06.25.2026 - Hickman Rd. - SCD Meeting Minutes.pdf; SCD Memo Response.pdf

Categories: Ashley

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

Good morning.

In response to the DAR concerns regarding the non-jurisdictional wet area, we met with Jessica Watson from Sussex Conservation District.

Attached is the meeting minutes and an email from Jessica where she is agreeing with the meeting minutes.

In short, we will work with the District to ensure that water from off-site is handled appropriately. Please note that we are not disturbing the wet wooded area within the Excellent Groundwater Recharge area.

Let us know if you have any questions.

Thanks

Jason Palkewicz | PE, LEED AP | CEO |

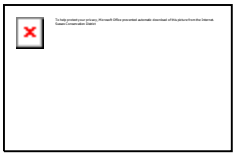
Solutions IPEM | 303 N Bedford Street | Georgetown, DE 19947 | ph 302.297.9215 | www.solutionsipem.com

Jason Palkewicz

From: jessica.watson@sussexconservation.org
Sent: Wednesday, July 8, 2026 11:29 AM
To: Jim Eriksen
Cc: 'John Murray'; Jason Palkewicz
Subject: RE: Hickman Road - Meeting Minutes

This is acceptable to SCD. Thank you.

Jessica



Jessica Watson

Director of Sediment and Stormwater Program

jessica.watson@sussexconservation.org

23818 Shortly Road

Georgetown, DE 19947

302-856-2105 ext. 107 (office)

302-381-6136 (cell)

sussexconservation.org

From: Jim Eriksen <jeriksen@solutionsipem.com>
Sent: Wednesday, July 8, 2026 11:17 AM
To: jessica.watson@sussexconservation.org
Cc: 'John Murray' <jmurray@foxlanehomes.com>; Jason Palkewicz <jpalkewicz@solutionsipem.com>
Subject: RE: Hickman Road - Meeting Minutes

Hi Jessica,

The minutes have been adjusted to incorporate your comments. Please let me know i you have any additional revisions or confirm that these are acceptable.

Thanks,

Jim Eriksen | PE | Principal o Engineering |

Solutions IPEM | 303 N. Bed ord Street | Georgetown, DE 19947 | ph 302.297.9215 |

From: jessica.watson@sussexconservation.org <jessica.watson@sussexconservation.org>
Sent: Wednesday, July 8, 2026 8:24 AM
To: Jim Eriksen <jeriksen@solutionsipem.com>
Cc: 'John Murray' <jmurray@foxlanehomes.com>; Jason Palkewicz <jpalkewicz@solutionsipem.com>
Subject: RE: Hickman Road - Meeting Minutes

Hello Jim,

My comments have been added. Please let me know if you have any questions.

Jessica

Jessica Watson

Director of Sediment and Stormwater Program

jessica.watson@sussexconservation.org

23818 Shortly Road

Georgetown, DE 19947

302-856-2105 ext. 107 (office)

302-381-6136 (cell)

sussexconservation.org

From: Jim Eriksen <jeriksen@solutionsipem.com>
Sent: Tuesday, July 7, 2026 2:39 PM
To: Jessica Watson (jessica.watson@sussexconservation.org) <jessica.watson@sussexconservation.org>
Cc: John Murray <jmurray@foxlanehomes.com>; Jason Palkewicz <jpalkewicz@solutionsipem.com>
Subject: Hickman Road - Meeting Minutes

Hi Jessica,

Please find the attached meeting minutes from our meeting on June 25 regarding parcel 134-9.00-28.00. Can you please review the meeting minutes and verify that everything is correctly represented? If you have any revisions, please let me know, and we will update the minutes accordingly.

Thanks,

Jim Eriksen | PE | Principal of Engineering |

Solutions IPEM | 303 N. Bedford Street | Georgetown, DE 19947 | ph 302.297.9215 |

Hickman – Drainage Coordination Meeting
(Microsoft Teams Meeting)
June 25, 2026
Attendees:

Jessica Watson (SCD)
Jim Eriksen (Solutions IPEM)
Jason Palkewicz (Solutions IPEM)
John Murray (Development Team)

Minutes:

- Meeting was held to discuss the County's Drainage Assessment Report and determine the design parameters and conditions that may be required for this project.
- The County expressed concerns regarding the proposed pond located within the existing wooded sump in the northeastern portion of the site. The County GIS identifies the sump as wetlands, but the approved jurisdictional determination for the project confirms it is not jurisdictional wetlands.
- Similarly, the ephemeral drainage ditch is not federally regulated per the approved jurisdictional determination.
- The County expressed concerns regarding the Bethany Preserve subdivision's adjacent pond outfall discharging into this area, and how the proposed project would impact the performance and functionality of the Bethany Preserve pond.
- SCD confirmed the Bethany Preserve pond discharges as described in the County's Drainage Assessment Report.
- Solutions IPEM requested that SCD provides the stormwater management plans and reports for the Bethany Preserve Subdivision.
- SCD agreed to provide the files, and the files were provided on June 25, 2026.

- Given the approved jurisdictional determination, SCD confirmed that the construction of the proposed stormwater facility as shown in the preliminary site plan is permitted. SCD suggested providing enhanced vegetation within the facility and providing beneficial species to improve water quality. Pending final BMP selection, Solutions IPEM is not opposed to providing suitable, beneficial plantings as feasible for the facility.
- Solutions IPEM identified the area of excellent groundwater recharge that is shown in the area of woods to remain and explained the intention was to preserve the woods within that area.
- Solutions IPEM and SCD discussed the design parameters of the subject property. Those parameters are identified below:
    - All stormwater management design will be performed in accordance with DNREC regulations.
    - The proposed stormwater facility shown in a portion of the existing wooded sump is a permitted BMP and will be designed in accordance with DNREC regulations
    - The stormwater discharges from the Bethany Preserve subdivision shall be considered and incorporated into the stormwater management design for the subject property. The files provided by SCD will be utilized for these purposes.
    - The stormwater design for the subject property shall verify that development of the property will have no adverse impact on the Bethany Preserve subdivision's stormwater management facilities.
    - The discharge for the proposed stormwater management design will be the tidal wetlands to the northeast. The tidal wetlands are located within DelDOT right of way. As is typical for any project with discharge into DelDOT right of way, the stormwater design will also need to be approved by DelDOT in accordance with their standards and regulations.

File #: CU 2548
202411849

Planning & Zoning Commission 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)
Conditional Use ✓
Zoning Map Amendment ___

Site Address of Conditional Use/Zoning Map Amendment

38492 Hickman Road, Ocean View, DE

Type of Conditional Use Requested:

Multi-family as single-family detached homes.

Tax Map #: 134-9.00-28.00 **Size of Parcel(s):** 12.8

Current Zoning: MR **Proposed Zoning:** MR **Size of Building:** ____

Land Use Classification: Coastal Area per Future Land Use

Water Provider: Sussex Shores **Sewer Provider:** Sussex County

Applicant Information

Applicant Name: Foxlane Homes Delaware, LLC (Attn: John Murray)
Applicant Address: 32191 Nassau Road, #2
City: Lewes State: DE ZipCode: 19958
Phone #: (302) 291-7784 E-mail: jmurray@foxlanehomes.com

Owner Information

Owner Name: Trustee of Thomas R Mullen
Owner Address: 16301 Camden Lakes Circle
City: Naples State: FL Zip Code: 34110
Phone #: ____ E-mail: mackenzie.peet@saul.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Glenn Mandalas
Agent/Attorney/Engineer Address: 1413 Savannah Road, Suite 1
City: Lewes State: DE Zip Code: 19958
Phone #: (320) 645-2262 E-mail: glenn@bmbde.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✓ **Completed Application**

✓ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✓ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✓ **DelDOT Service Level Evaluation Request Response**

✓ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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

John Murray Digitally signed by John Murray DN: C=US, E=jmurray@fairlanehomes.com, OU=Fairlane Homes, CN=John Murray Reason: I agree to the terms defined by the placement of my signature on this document Date: 2024.07.23 09:51:11-04'00'

Date: 7/23/24

Signature of Owner

_____ Date: _____

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

Sussex County Government
Treasury
2 The Circle, PO Box 601
Georgetown, DE 19947

08/13/2024 03:38PM Megan D.
33027781-0119

PERMITS / INSPECTIONS
CONDITIONAL USE - FEE
2024 Item: 202411849|ZONE $1,000.00

Subtotal	$1,000.00
Total	$1,000.00
CHECK	$1,000.00
Check Number000231	$1,000.00
Change due	$0.00

Paid by: FOXLANE HOMES AT DELAWARE LLC

Thank you for your payment.

Sussex County Government COPY
DUPLICATE RECEIPT

Transmittal Letter

Solutions, IPEM
Jason Palkewicz, PE
303 North Bedford Street
Georgetown, DE 19947
p: 302.297.9215
e: jpalkewicz@solutionsipem.com

solutions
Integrated Planning
Engineering & Management, LLC

August 12, 2024
To:
Sussex County, Planning and Zoning
2 The Circle
Georgetown, DE 19947

Attention: Lauren DeVore/Michael Lowery

Re: Hickman Road

Job Number: G24006

We are sending you:	
☒ Enclosed	☐ Under Separate Cover

Delivery via:					
☐ UPS	☐ US Mail	☐ Fed Ex	☒ Hand Carried	☐ Picked up	☐ Other

Quantity	Description
2	Full Size CU Site Plan
1	Change of Zone Application and Fee
1	DRAFT HOA Documents – Via Email
1	Drainage Assessment Report
1	Statement of Compliance of Coastal Area Overlay Zone
1	State PLUS Comments

These are transmitted as checked below			
☐ As requested	☒ For your use	☐ Resubmit copies for review	☐ Resubmit copies for approval

Comments:

Electronic copies to be submitted via email.

Copy to:

	Signature

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

NICOLE MAJESKI
SECRETARY

August 13, 2024

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Foxlane Homes Delaware, LLC c/o John Murray (38492 Hickman Road, Ocean View, DE 19970)** proposed land use application, which we received on August 1, 2024. This application is for an approximate 12.8-acre parcel (Tax Parcel: 134-9.00-28.00). The parcel is located on the south side of Hickman Road (Sussex County Road 359) and approximately 560 feet east of the intersection of Cedar Neck Road (Sussex County Road 357) and Hickman Road. The parcel is currently zoned MR (Medium-Density Residential District), and the applicant seeks a Conditional Use approval to place 55-Single Family Condos units, on the parcel.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volume along Hickman Road where the subject land is located, which is from Cedar Neck Road to the cul-de-sac to the east, is 284 of vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 215 / Units 55), we estimate that the above land use will generate fewer than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day. These numbers of trips are DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. Because the proposed land use would not meet these warrants, we consider the development's traffic impact to be **negligible** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as negligible with regard to warranting a TIS does not mean that it is negligible in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Mr. Philip Lindsey, at philip.lindsey@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SAM:plm
cc: Foxlane Homes Delaware, LLC c/o John Murray, Applicant
Ashley Paugh, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Tara Summers-Strong, South District Public Works Admin., Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination
Derek Sapp, Sussex County Subdivision Reviewer, Development Coordination
Thomas Gagnon, Sussex County Subdivision Reviewer, Development Coordination
José Quixtan, Sussex County Subdivision Reviewer, Development Coordination
Annamaria Furmato, TIS Group Engineer, Development Coordination
Ben Fisher, TIS Group Engineer, Development Coordination
Philip Lindsey, TIS Group Engineer, Development Coordination

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

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **9/21/2026**

APPLICATION: **CU 2548 Hickman**

APPLICANT: **Foxlane Homes Delaware, LLC**

FILE NO: **CN-1.05**

TAX MAP & PARCEL(S): **134-9.00-28.00**

LOCATION: **Lying on the south side of Hickman Road approximately 500' east of Cedar Neck Road (SCR 357)**

NO. OF UNITS: 54

GROSS ACREAGE: **12.8**

SYSTEM DESIGN ASSUMPTION, MAXIMUM NO. OF UNITS/ACRE: **4**

SEWER:

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

Yes ☒ No ☐

a. If yes, see question (2).
b. If no, see question (7).

(2). Which County Tier Area is project in? **Tier 1**

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

(4). Is a Construction Agreement required? **Yes** 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? Is it likely that additional SCCs will be required? **Yes**
If yes, the current System Connection Charge Rate is **Unified $10,700.00** per EDU. Please contact **Ashley Evans** 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? **N/A**

(8). Comments:

(9). Is a Sewer System Concept Evaluation required? **Already Completed, See Attached**

(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

(11). **All residential roads must meet or exceed Sussex County minimum design standards.**

UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
Ashley Evans

ENGINEERING DEPARTMENT

JOHN J. ASHMAN
DIRECTOR OF UTILITY PLANNING & DESIGN REVIEW

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

Sussex County
DELAWARE
sussexcountyde.gov

MIKE HARMER, P.E.
SUSSEX COUNTY ENGINEER

SEWER SERVICE CONCEPT EVALUATION (SSCE)
UTILITY PLANNING & DESIGN REVIEW

Applicant: Solutions IPEM, LLC

Date: 5/23/2024

Reviewed by: **Chris Calio**

Agreement #:**1281**

Project Name: **Hickman Road**

Tax Map & Parcel(s): **134-9.00-28.00**

Sewer Tier: Tier 1 - Sussex County Unified Sanitary Sewer District

Proposed EDUs: **55**

Pump Station(s) Impacted: **PS 172, PS 99**

Facility treating and disposing of the wastewater: South Coastal Regional Wastewater Facility

List of parcels to be served, created from the base parcel: **N/A**

List of additional parcels to be served (Parcels required for continuity must be served with infrastructure):**N/A**

Connection Point(s): **Option A: 8" lateral from MH 83 (SSMH-11273);**
Option B: MH 2 (SSMH-11274

Use of Existing Infrastructure Agreement required? Yes ☒ or No ☐

Annexation Required? Yes ☐ or No ☒

Easements Required? Yes ☒ or No ☐

Fee for annexation (based on acreage):**N/A**

Current Zoning: **MR** Zoning Proposed: **MR w/Conditional Use**

Acreage: **12.8 +/-**

Additional Information: **With Option A, depending on design, private grinder pumps may be required on the eastern portion of the property. OPTION A connection depth is +/- 7' deep, and OPTION B is +/- 11' deep. Field verification of depths is required.**

* No capacity is guaranteed until System Connection Fees are paid

All connections to existing infrastructure must be field verified, failure to do so will result in a revision fee and delay in construction. All gravity sewers with three (3) or more minor branches shall be designed at minimum slope and maximum depth.

Sussex County will be assessing bonding and inspection on projects on a unit cost approach per phase. Recordation of Phasing Plans will now be required, each phase must be recorded prior to issuance of the Notice to Proceed. Any revisions to the phase will require the plan be re-recorded.

Once Construction Drawings are completed with all of the above information satisfied, please submit to:

Sussex County Utility Planning & Design Review
2 The Circle
P.O. Box 589
Georgetown DE 19947

CC: John Ashman
Jordan Dickerson
Denise Burns

Michael Lowrey

From: Valerie Thompson
Sent: Friday, July 10, 2026 10:20 AM
To: Michael Lowrey
Subject: RE: Hickman Road CU 2548 - RE SCED DAR Review of 6.9.26 - Response from Applicant 7.9.26

Hi Michael,

They have addressed all issues I had with the DAR. They've discussed the impacts from the adjoining subdivision with SCD- they'll have to take it form here.

Valerie

From: Michael Lowrey <michael.lowrey@sussexcountyde.gov>
Sent: Friday, July 10, 2026 10:18 AM
To: Valerie Thompson <valerie.thompson@sussexcountyde.gov>
Subject: FW: Hickman Road CU 2548 - RE SCED DAR Review of 6.9.26 - Response from Applicant 7.9.26

Valerie,

Good morning.
Keep me updated once you have reviewed the submitted materials in the coming weeks.
No urgency.

Apologies for the redundant email on this, I saw they copied you on the original email, I just wanted to have an email to SCED sent directly from P&Z requesting the SCED review of the new materials so I can include it the file/record.

Let me know if you have any questions – have a good weekend.
Mike

Michael Lowrey
Planner IV
Sussex County Planning and Zoning Department
2 The Circle
PO Box 417
Georgetown, DE 19947
302-855-7878
michael.lowrey@sussexcountyde.gov

SUSSEX COUNTY
DELAWARE

The Planning Division has updated it's fee schedule for applications and services as of July 1, 2022. The updated fee schedule can be found at:
https://sussexcountyde.gov/sites/default/files/PDFs/Planning_and_Zoning_Fees.pdf
Much of the County's Planning and Zoning Information can be found online at:
https://sussexcountyde.gov/sussex-county-mapping-applications
Information on the 2018 Sussex County Comprehensive Plan can be found at:
https://sussexcountyde.gov/2018-comp-plan-documents

From: Jason Palkewicz <jpalkewicz@solutionsipem.com>
Sent: Thursday, July 9, 2026 9:38 AM
To: Michael Lowrey <michael.lowrey@sussexcountyde.gov>
Cc: Planning and Zoning <pandz@sussexcountyde.gov>; Valerie Thompson <valerie.thompson@sussexcountyde.gov>
Subject: Hickman Road CU 2548

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

Good morning.

In response to the DAR concerns regarding the non-jurisdictional wet area, we met with Jessica Watson from Sussex Conservation District.

Attached is the meeting minutes and an email from Jessica where she is agreeing with the meeting minutes.

In short, we will work with the District to ensure that water from off-site is handled appropriately. Please note that we are not disturbing the wet wooded area within the Excellent Groundwater Recharge area.

Let us know if you have any questions.

Thanks

Jason Palkewicz | PE, LEED AP | CEO |

Solutions IPEM | 303 N Bedford Street | Georgetown, DE 19947 | ph 302.297.9215 | www.solutionsipem.com

RECEIVED
CU 2548
JUN 09 2026
SUSSEX COUNTY
PLANNING & ZONING

HICKMAN ROAD DEVELOPMENT TECHNICAL COMMENTS

As part of Sussex County's review of the proposed Hickman Road development, I reviewed the Drainage Assessment Report prepared by Geo-Technology Associates, Inc. (GTA) dated July 31, 2024 and submitted pursuant to Sussex County Code §115-193(F). Based on my review, I believe the report generally satisfies the requirements of §115-193(F), which are focused on identifying unstable streambanks and conveyances, blockages, sediment deposition, and other impediments to drainage requiring remediation. The report concludes that Wetlands A, B, and C, along with the ephemeral drainage ditch located on the property, are stable and do not require remediation.

While I do not dispute the report's conclusions relative to the requirements of §115-193(F), I have concerns regarding the proposed conversion of a portion of the wetland into a stormwater management facility and the potential impacts on adjacent stormwater infrastructure, drainage patterns, and the long-term hydrologic function of the area.

The submitted reports identified palustrine forested wetlands within the northeastern and southeastern portions of the property, connected by an ephemeral drainage ditch along the eastern property boundary. Historical aerial photography reviewed as part of the DAR review process indicated that these wetland features have existed on the property for many decades, with wooded wetland areas and associated drainage features visible on aerial photography dating back to at least 1937. The wetland delineation report further noted that the wetlands drain south toward an off-site pond and ultimately toward Fresh Pond and Indian River Bay, while a separate open-water ditch located along Hickman Road appeared to drain north toward Beach Cove and Indian River Bay. The drainage assessment report characterized these wetland and drainage systems as stable and functioning.

Of particular concern is the relationship between the proposed eastern stormwater facility and the adjacent Bethany Preserve subdivision. Based on my review of the approved plans and available record drawings, Stormwater Management Pond No. 2 discharges through a concrete outlet structure and weir directly into the wetland proposed for modification. I was unable to identify a designed downstream conveyance or outfall associated with this wetland. As a result, the existing wetland appears to function as the primary receiving area for runoff from the Bethany Preserve facility rather than merely serving as a conveyance to another receiving waterbody.

This distinction is important because the proposed project would not simply modify an isolated wetland feature. It would alter a wetland that currently serves an established drainage function and receives runoff from an existing permitted stormwater management facility. While the Approved Jurisdictional Determination establishes the federal regulatory status of the wetlands on the site, it does not evaluate the role of the wetland within the local drainage network or its relationship to existing stormwater infrastructure. The available documentation does not address how modification of this receiving area may affect the functionality, long-term performance, or maintenance of the existing Bethany

Preserve stormwater management system. Accordingly, additional evaluation of the potential impacts associated with modifying the wetland appears warranted.

On June 9, 2026, I met with Jessica Watson of the Sussex Conservation District to discuss these concerns. During that discussion, she expressed similar concerns regarding the interaction between the proposed stormwater facility and the existing Bethany Preserve discharge. At the time of the meeting, the project had not yet been submitted to the District for formal stormwater review.

These comments are not intended to suggest that the project cannot be designed in compliance with applicable regulations, nor are they intended to challenge the findings of the Drainage Assessment Report relative to §115-193(F). Their purpose is to document concerns regarding the modification of a wetland system that currently serves as the receiving area for runoff from an adjacent permitted stormwater facility.

It is anticipated that the applicant's engineer and the Sussex Conservation District will further evaluate these issues during the stormwater review process and determine what analyses, design modifications, or other measures may be necessary to demonstrate compliance with the Delaware Sediment and Stormwater Regulations and other applicable requirements. Particular consideration should be given to the wetland's existing role within the drainage network, potential impacts to the Bethany Preserve stormwater system, long-term maintenance and ownership responsibilities, and the overall hydrologic function of the area.

Accordingly, these comments are provided for the record to ensure that these issues are fully considered during subsequent stages of project review and permitting.

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT
1650 ARCH STREET
PHILADELPHIA PA 19103-2004

February 6, 2026

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination NAP-2026-00032-103
38485 Hickman Road SX
Center coordinates (39.512062°, -75.604408°)

William Twupack
Watershed ECO, LLC
651 N. Broad Street
Middletown, Delaware 19709

Dear Mr. Riding:

This Approved Jurisdictional Determination (AJD) is provided in response to your request on July 24, 2025 for a determination of Federal jurisdiction by this office. The site associated with your request is located at 38485 Hickman Road, Ocean View, Sussex County, Delaware. The property is identified as Sussex County Tax Parcel No. 134-9.00-28.00.

The findings of this AJD are documented in the **enclosed** AJD Form. The findings are also depicted on the **enclosed** plan(s) identified as “Jurisdictional Wetland Delineation Plan”; prepared by Solutions Engineering; dated July 21, 2025; unrevised; 2 sheets.

A Department of the Army permit is required for work or structures in “navigable waters of the United States” pursuant to Section 10 the Rivers and Harbors Act (RHA) of 1899 and the discharge of dredged or fill material into “waters of the United States” pursuant to Section 404 of the Clean Water Act (CWA). Any proposal to perform these activities within areas of Federal jurisdiction requires prior approval by this office.

Food Security Act statement: The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

This AJD is valid for a period of five (5) years. This AJD is issued in accordance with current Federal regulations and is based upon the existing site conditions and information provided by you in your application. This office reserves the right to reevaluate and modify this AJD at any time should the existing site conditions or Federal regulations change, or should the information provided by you prove to be false, incomplete or inaccurate.

You may request an administrative appeal of this AJD if you **do not** accept this determination. **Enclosed** you will find a combined Notification of Appeal Process (NAP) and Request for Appeal (RFA) form. Should you wish to appeal this determination, you must submit a completed RFA form to the North Atlantic Division Office within 60 days of the date on the form. Additionally, for the appeal to be accepted, the Corps must determine that it is complete and that it meets the criteria for appeal under 33 CFR Part 331.5. The form should be submitted to Andrew Dangler, Regulatory Program Manager, at Andrew.C.Dangler@usace.army.mil. If you do not have the means to submit this form electronically, you may send it by mail to the Division office at:

US Army Corps of Engineers North Atlantic Division
Attn: Andrew Dangler (CENAD-PD-OR)
Fort Hamilton Military Community
301 John Warren Avenue, First Floor
Brooklyn, NY 11252-6700

If you have any questions regarding this matter, please contact James A. Colligan at 32-518-9480 or James.A.Colligan@usace.army.mil.

Sincerely,

Date:
2026.02.06
10:51:58 -05'00'

Todd A. Hoernemann
Chief, Applications Section I

Enclosures

cc:
Wetlands and Waterways Section, DDNREC

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT
1650 ARCH STREET
PHILADELPHIA, PENNSYLVANIA 19103-2004

CENAP-OPR February 6, 2026

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (Corps) Approved Jurisdictional Determination in accordance with the "Revised Definition of 'Waters of the United States'"; (88 FR 3004 (January 18, 2023) as amended by the "Revised Definition of 'Waters of the United States'; Conforming" (8 September 2023) ,[1] NAP-2026-00032-103

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.[2] AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.[3]

On January 18, 2023, the Environmental Protection Agency (EPA) and the Department of the Army ("the agencies") published the "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule"). On September 8, 2023, the agencies published the "Revised Definition of 'Waters of the United States'; Conforming", which amended the 2023 Rule to conform to the 2023 Supreme Court decision in *Sackett v. EPA*, 598 U.S., 143 S. Ct. 1322 (2023) ("*Sackett*").

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a Corps AJD as defined in 33 CFR §331.2. For the purposes of this AJD, we have relied on Section 10 of the Rivers and Harbors Act of 1899 (RHA),[4] the 2023 Rule as amended, as well as other applicable guidance, relevant case law, and longstanding practice in evaluating jurisdiction.

[1] While the Revised Definition of "Waters of the United States"; Conforming had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.
[2] 33 CFR 331.2.
[3] Regulatory Guidance Letter 05-02.
[4] USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

CENAP-OPR
SUBJECT: 2023 Rule, as amended, Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), NAP-2026-00032-103

1. SUMMARY OF CONCLUSIONS.

   a. Provide a list of each individual feature within the review area and the jurisdictional status of each one (i.e., identify whether each feature is/is not a water of the United States and/or a navigable water of the United States).

      i. Wetlands "A", jurisdictional, Section 10 and Section 404

      ii. Wetlands "B", non-jurisdictional

      iii. Ephemeral Drainage Ditch, non-jurisdictional

      iv. Wetlands "C", jurisdictional, Section 404

2. REFERENCES.

   a. "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule")

   b. "Revised Definition of 'Waters of the United States'; Conforming" 88 FR 61964 (September 8, 2023)

   c. *Sackett v. EPA*, 598 U.S. 651, 143 S. Ct. 1322 (2023)

3. REVIEW AREA. The property is located at 38485 Hickman Road, Ocean View, Sussex County, Delaware. The property is identified as Sussex County Tax Parcel No. 134-9.00-28.00 consisting of approximately 12.5 Acres. The limit of investigation is 12.5 Acres within the property. The property consists of an uninhabited single-family dwelling, agricultural fields, and forested wetlands. A site visit with James Colligan – USACE and Will Twupack – Watershed Eco was conducted on June 23, 2025. For additional notes regarding the site visit, see "2026-00032_Field_MFR".

4. NEAREST TRADITIONAL NAVIGABLE WATER (TNW), THE TERRITORIAL SEAS, OR INTERSTATE WATER TO WHICH THE AQUATIC RESOURCE IS CONNECTED. White Creek. White Creek is influenced by the ebb and flow of the tide.[5]

[5] This MFR should not be used to complete a new stand-alone TNW determination. A stand-alone TNW determination for a water that is not subject to Section 9 or 10 of the Rivers and Harbors Act of 1899 (RHA) is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established.

5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, THE TERRITORIAL SEAS, OR INTERSTATE WATER. Resources on the review area flow into White Creek through two different flow paths. Wetlands "A" drains off site to the north through a culvert under Hickman Road into White Creek. Wetlands "C" drains off site to the south into a man made lagoon system within Fresh Pond state park, which drains into White Creek.

6. SECTION 10 JURISDICTIONAL WATERS[6]: Describe aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899. Include the size of each aquatic resource or other feature within the review area and how it was determined to be jurisdictional in accordance with Section 10.[7]

    1. Wetlands "A" is a 0.04 acre tidal emergent wetland located entirely within the review area. Wetlands "A" is tidally influenced by White Creek. This feature drains outside the review area to the north under Hickman Road though a culvert. Wetlands "A" is influenced by the ebb and flow of the tide, making it Section 10 jurisdictional.

7. SECTION 404 JURISDICTIONAL WATERS: Describe the aquatic resources within the review area that were found to meet the definition of waters of the United States in accordance with the 2023 Rule as amended, consistent with the Supreme Court's decision in *Sackett*. List each aquatic resource separately, by name, consistent with the naming convention used in section 1, above. Include a rationale for each aquatic resource, supporting that the aquatic resource meets the relevant category of "waters of the United States" in the 2023 Rule as amended. The rationale should also include a written description of, or reference to a map in the administrative record that shows, the lateral limits of jurisdiction for each aquatic resource, including how that limit was determined, and incorporate relevant references used. Include the size of each aquatic resource in acres or linear feet and attach and reference related figures as needed.

    a. Traditional Navigable Waters (TNWs) (a)(1)(i): N/A

[6] 33 CFR 329.9(a) A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in § 329.8(b) of this part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions.
[7] This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

b. The Territorial Seas (a)(1)(ii): N/A

c. Interstate Waters (a)(1)(iii): N/A

d. Impoundments (a)(2): N/A

e. Tributaries (a)(3): N/A

f. Adjacent Wetlands (a)(4):

1. Wetlands "A" is a 0.04 tidal emergent wetland located entirely within the review area. This feature drains outside the review area to the north through a culvert under Hickman Road. This feature has a continuous surface connection to White Creek outside the review area. Wetlands "A" directly abuts an (a)(1) through (a)(3) water, thereby meeting the definition of an (a)(4) adjacent wetland.

2. Wetlands "C" is a 0.07 acre forested wetland located on the south portion of the review area and continues outside the review area to the south. This feature directly abuts a tidal man-made lagoon directly outside the review area. This connection was observed from within the review area and is visible on aerial imagery and lidar. Wetlands "C" directly abuts an (a)(1) through (a)(3) water, thereby meeting the definition of an (a)(4) adjacent wetland.

g. Additional Waters (a)(5): N/A

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

a. Describe aquatic resources and other features within the review area identified in the 2023 Rule as amended as not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5). Include the type of excluded aquatic resource or feature, the size of the aquatic resource or feature within the review area and describe how it was determined to meet one of the exclusions listed in 33 CFR 328.3(b).[8]

1. Ephemeral Drainage Ditch is an approximately 365 linear foot ephemeral feature located on the east portion of the property. This feature did not

[8] 88 FR 3004 (January 18, 2023)

exhibit relatively standing or flowing water during the site visit. This feature did not exhibit an ordinary high water mark. This feature does not carry a relatively permanent flow of water, thereby meeting the definition of a (b)(3) Ditch.

b. Describe aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the 2023 Rule as amended (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).

1. Wetlands "B" is a 1.38 acre forested wetland located on the northeast portion of the review area and continues outside the review area to the east. During the site visit, this feature was observed continuing east outside the review area. From aerial and lidar imagery, this feature appeared to be adjacent, but not abutting, a man-made stormwater pond. This does not constitute a connection to an (a)(1) through (a)(3) waters. This feature does not have any connections to other aquatic resources, leaving it isolated. Because this feature does not have a continuous surface connection to an (a)(1) through (a)(3) waters it does not meet the definition of an (a)(4) adjacent wetland.

9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.

a. USACE site visit on June 23, 2025.

b. Delineation Plan entitled "Jurisdictional Wetland Delineation Plan"; prepared by Solutions Engineering; dated July 21, 2025; unrevised; 2 sheets.

c. Delineation Report entitled "Wetland Delineation – Mullens Property"; prepared by Watershed ECO; dated April 15, 2024.

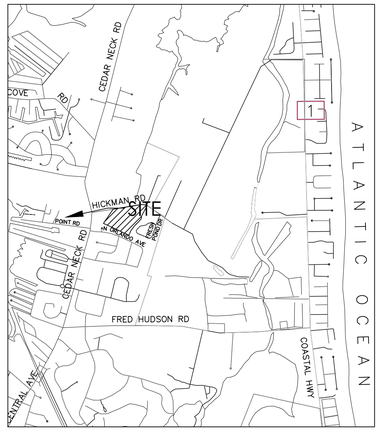
d. Flow Path Plan entitled "2026-00032_Flow_Path"; prepared by USACE.

e. Lidar Imagery entitled "2026-00032_Lidar"; prepared by USACE

10. OTHER SUPPORTING INFORMATION. N/A

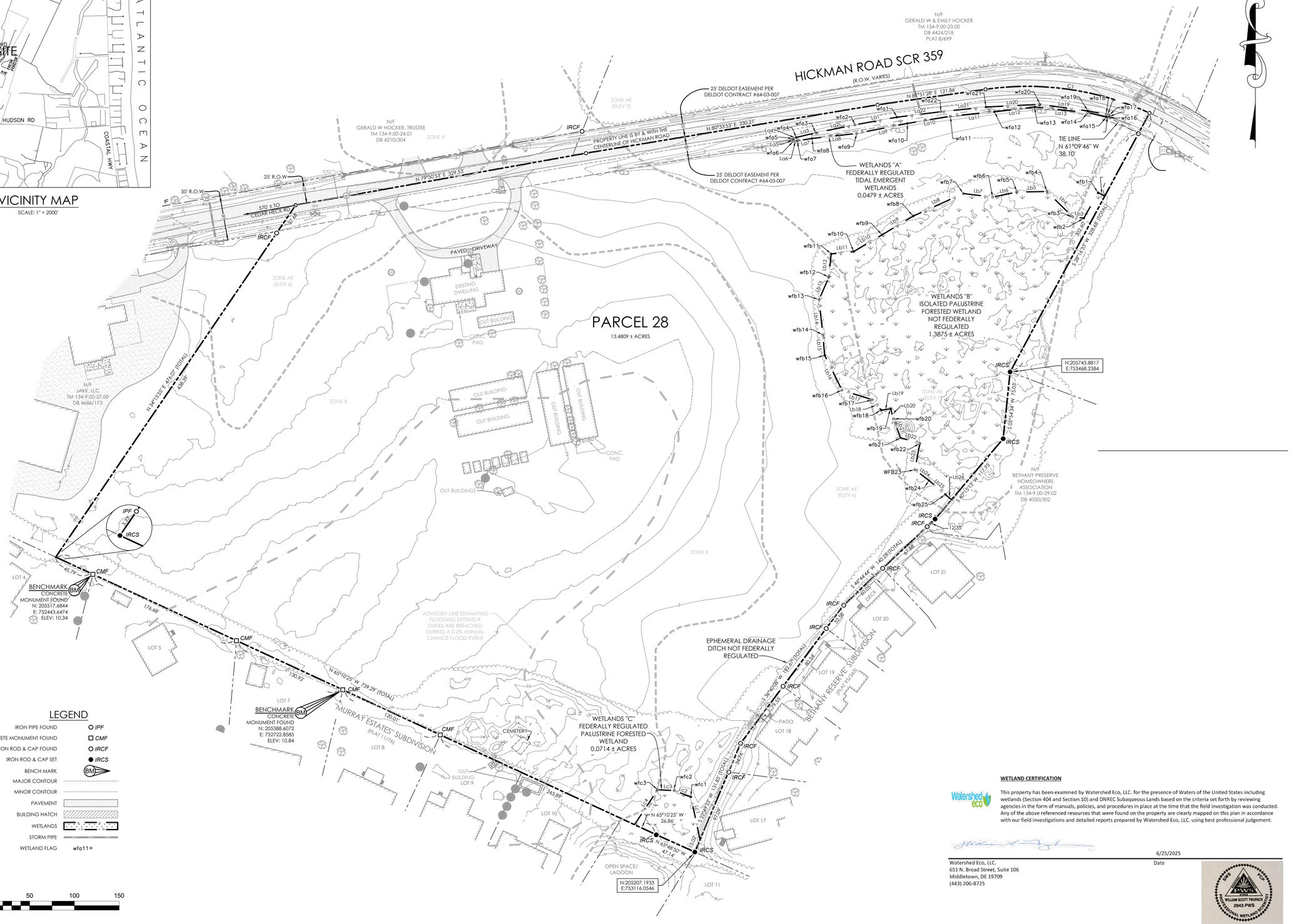
11. NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be

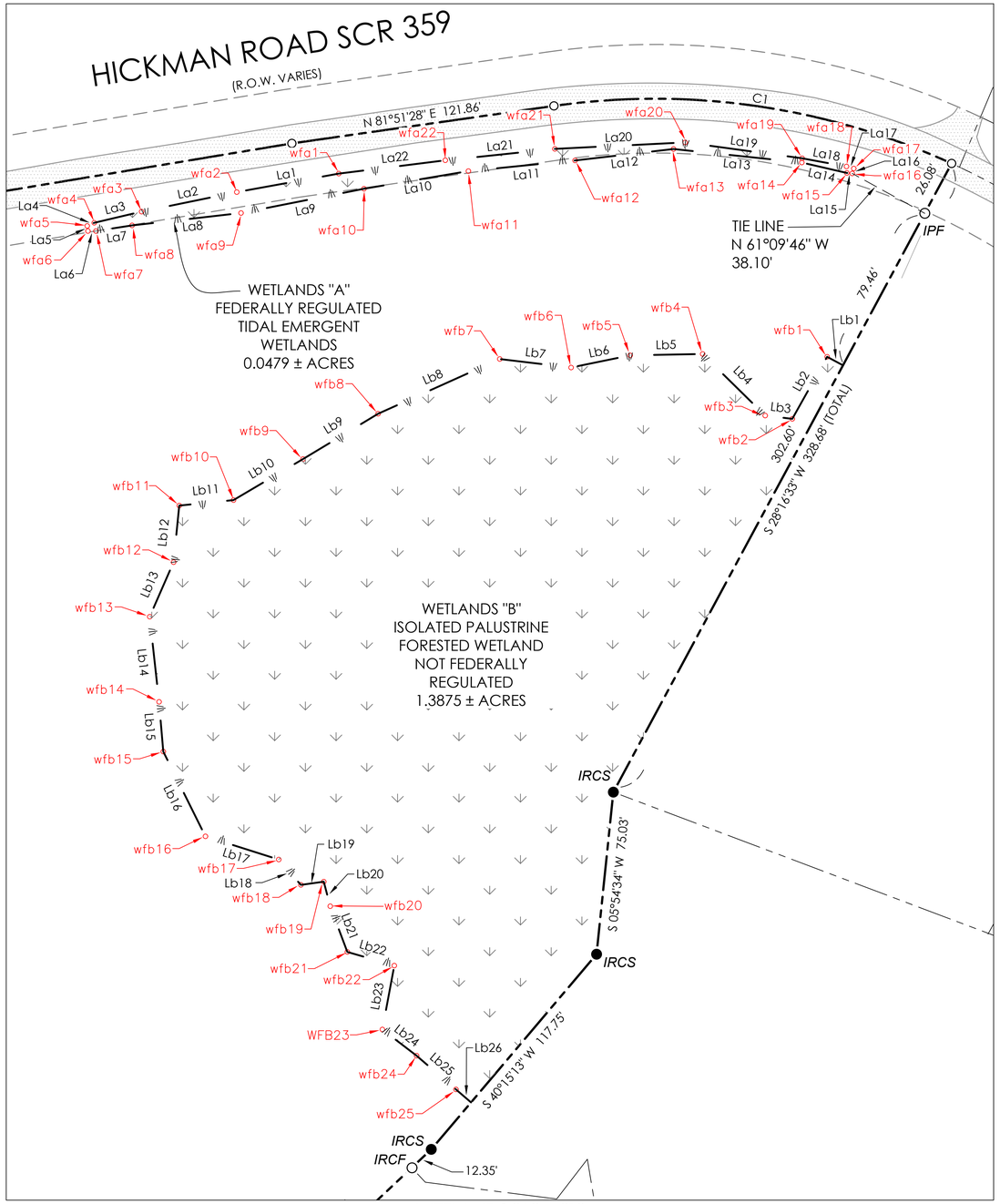
subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.



VICINITY MAP

SCALE: 1" = 2000'

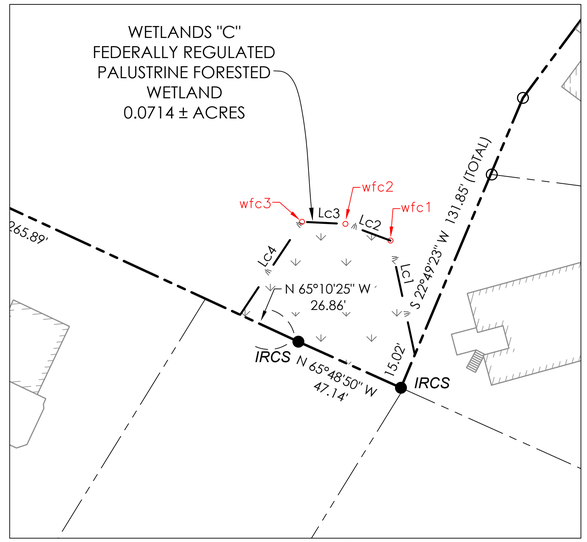

HICKMAN ROAD SCR 359
(R.O.W. VARIES)
N/F
GERALD W & EMILY HOCKER
TM 134-9.00-23.00
DB 4424/218
PLAT 8/699
N/F
GERALD W HOCKER, TRUSTEE
TM 134-9.00-24.01
DB 4210/304
ZONE X
ZONE AE
(ELEV 7')
ZONE AE
(ELEV 6)
IRCF
PROPERTY LINE IS BY & WITH THE CENTERLINE OF HICKMAN ROAD
N 80°33'53" E 330.21'
N 79°50'53" E 329.53'
25' DELDOT EASEMENT PER
DELDOT CONTRACT #64-03-007
25' R.O.W
50' R.O.W
570' ± TO
CEDAR NECK RD
PAVED DRIVEWAY
EXISTING
DWELLING
OUT BUILDING
CONC.
PAD
PARCEL 28
13.4809 ± ACRES
OUT BUILDINGS
N 24°15'55" E 412.07' (TOTAL)
438.39'
N/F
JAKK, LLC
TM 134-9.00-27.00
DB 4686/173
IPF
IRCS
45.79'
CMF
BENCHMARK
CONCRETE
MONUMENT FOUND
N: 205517.6844
E: 752443.6474
ELEV: 10.34
BM
176.68'
LOT 4
LOT 5
N 65°10'25" W 739.29' (TOTAL)
130.92'
120.01'
BENCHMARK
CONCRETE
MONUMENT FOUND
N: 205388.6072
E: 752722.8585
ELEV: 10.84
LOT 7
LOT 8
MURRAY ESTATES SUBDIVISION
(PLAT 11/76)
CEMETERY
OUT
BUILDING
LOT 9
LOT 10
265.89'
ADVISORY LINE ESTIMATING
FLOODING EXTENTS IF
DUNES ARE BREACHED
DURING A 0.2% ANNUAL
CHANCE FLOOD EVENT
WETLANDS "A"
FEDERALLY REGULATED
TIDAL EMERGENT
WETLANDS
0.0479 ± ACRES
WETLANDS "B"
ISOLATED PALUSTRINE
FORESTED WETLAND
NOT FEDERALLY
REGULATED
1.3875 ± ACRES
WETLANDS "C"
FEDERALLY REGULATED
PALUSTRINE FORESTED
WETLAND
0.0714 ± ACRES
EPHEMERAL DRAINAGE
DITCH NOT FEDERALLY
REGULATED
TIE LINE
N 61°09'46" W
38.10'
N:205743.8817
E:753468.2384
N 65°10'25" W
26.86'
N 65°48'30" W
47.14'
N:205207.1933
E:753116.0546
S 38°40'08" W 182.81' (TOTAL)
S 38°40'08" W 138.54'
S 38°40'08" W 44.27'
S 38°40'08" W 67.88'
S 38°40'08" W 68.35'
S 38°40'08" W 32.38'
S 38°40'08" W 68.54'
S 38°40'08" W 94.76'
S 38°40'08" W 67.88'
S 38°40'08" W 140.28' (TOTAL)
S 46°44'46" W 140.28' (TOTAL)
S 38°40'08" W 328.46' (TOTAL)
S 38°40'08" W 75.03'
S 65°15'15" W 117.75'
S 27°49'23" W 133.85' (TOTAL)
S 27°49'23" W 27.05'
S 65°10'25" E 15.00'
S 65°10'25" E 27.00'
S 65°10'25" E 27.00'
S 65°10'25" E 27



WETLANDS "A" & "B"

SCALE: 1" = 30'

DELAWARE STATE GRID NORTH NAD 83



WETLANDS "C"

SCALE: 1" = 30'

WETLANDS "A"

LINE	BEARING	DISTANCE
La1	S 79°42'19" W	47.73'
La2	S 78°24'15" W	44.73'
La3	S 76°46'51" W	22.39'
La4	S 65°47'07" W	3.53'
La5	S 07°19'35" E	2.38'
La6	N 89°47'02" E	3.69'
La7	N 81°09'03" E	16.84'
La8	N 83°31'34" E	50.49'
La9	N 78°49'28" E	57.67'
La10	N 80°24'46" E	48.76'
La11	N 84°17'08" E	49.33'
La12	N 83°22'12" E	45.64'
La13	S 83°58'38" E	59.37'
La14	S 76°59'38" E	21.30'
La15	S 85°07'22" E	2.49'
La16	N 16°57'09" E	2.34'
La17	N 74°18'34" W	3.47'
La18	N 79°28'39" W	20.78'
La19	N 82°16'36" W	54.34'
La20	S 87°09'30" W	60.04'
La21	S 84°02'27" W	50.71'
La22	S 82°53'11" W	49.40'

WETLANDS "B"

LINE	BEARING	DISTANCE
Lb1	N 61°43'27" W	8.29'
Lb2	S 29°17'47" W	32.76'
Lb3	N 83°11'37" W	12.57'
Lb4	N 45°25'31" W	40.42'
Lb5	S 88°54'27" W	33.38'
Lb6	S 78°20'27" W	27.73'
Lb7	N 83°11'00" W	33.08'
Lb8	S 65°45'51" W	61.41'
Lb9	S 58°53'38" W	40.36'
Lb10	S 59°26'10" W	37.16'
Lb11	S 84°12'58" W	25.09'
Lb12	S 05°46'49" W	26.20'
Lb13	S 23°36'04" W	27.39'
Lb14	S 04°15'36" E	39.45'
Lb15	S 04°51'47" E	22.97'
Lb16	S 26°26'16" E	43.57'
Lb17	S 72°25'02" E	35.40'
Lb18	S 41°11'14" E	15.50'
Lb19	N 82°05'48" E	10.62'
Lb20	S 14°43'36" E	11.66'
Lb21	S 20°32'52" E	22.48'
Lb22	S 73°42'58" E	22.50'
Lb23	S 10°33'57" W	29.91'
Lb24	S 52°31'29" E	19.85'
Lb25	S 49°23'51" E	23.85'
Lb26	S 49°23'51" E	9.17'

COORDINATE TABLE - WETLAND "A"

(FLAGS A1 - A22)

Description	Northing	Easting
wf/a1	206028.6639	753341.8486
wf/a2	206020.1362	753294.8880
wf/a3	206011.1460	753251.0753
wf/a4	206006.0262	753229.2796
wf/a5	206004.5739	753226.0676
wf/a6	206002.2107	753226.3714
wf/a7	206002.2246	753230.0617
wf/a8	206004.8147	753246.6980
wf/a9	206010.5069	753296.8613
wf/a10	206021.6834	753353.4341
wf/a11	206029.8039	753401.5098
wf/a12	206034.7163	753450.5995
wf/a13	206039.9852	753495.9301
wf/a14	206033.7560	753554.9717
wf/a15	206028.9626	753575.7238
wf/a16	206028.7507	753578.2071
wf/a17	206030.9885	753578.8892
wf/a18	206031.9283	753575.5438
wf/a19	206035.7224	753555.1173
wf/a20	206043.0247	753501.2725
wf/a21	206040.0479	753441.3016
wf/a22	206034.7833	753390.8680

COORDINATE TABLE - WETLAND "B"

(FLAGS B1 - B25)

Description	Northing	Easting
wf/b1	205944.3210	753566.6380
wf/b2	205915.7540	753550.6090
wf/b3	205917.2440	753538.1260
wf/b4	205945.6140	753509.3320
wf/b5	205944.9780	753475.9570
wf/b6	205939.3730	753448.7950
WF/B7	205943.2990	753415.9510
WF/B8	205918.0890	753359.9510
WF/B9	205897.2380	753325.3930
WF/B10	205878.3420	753293.3950
WF/B11	205875.8130	753268.4320
WF/B12	205849.7460	753265.7930
WF/B13	205824.6470	753254.8270
WF/B14	205785.4330	753259.1280
WF/B15	205762.5490	753261.0750
WF/B16	205723.5310	753280.4760
WF/B17	205712.8380	753314.2200
WF/B18	205701.1760	753324.4250
WF/B19	205702.6360	753334.9450
WF/B20	205691.3540	753337.9100
WF/B21	205670.3050	753345.8000
WF/B22	205663.9950	753367.4024
WF/B23	205634.5920	753361.9180
WF/B24	205622.5123	753377.6746
WF/B25	205606.9884	753395.7851

wfa11

Ashley Paugh

From: Jason Palkewicz <jpalkewicz@solutionsipem.com>
Sent: Thursday, July 9, 2026 9:38 AM
To: Michael Lowrey
Cc: Planning and Zoning; Valerie Thompson
Subject: Hickman Road CU 2548
Attachments: 24006 - 06.25.2026 - Hickman Rd. - SCD Meeting Minutes.pdf; SCD Memo Response.pdf

Categories: Ashley

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

Good morning.

In response to the DAR concerns regarding the non-jurisdictional wet area, we met with Jessica Watson from Sussex Conservation District.

Attached is the meeting minutes and an email from Jessica where she is agreeing with the meeting minutes.

In short, we will work with the District to ensure that water from off-site is handled appropriately. Please note that we are not disturbing the wet wooded area within the Excellent Groundwater Recharge area.

Let us know if you have any questions.

Thanks

Jason Palkewicz | PE, LEED AP | CEO |

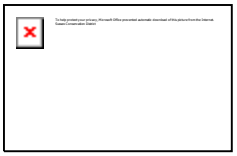
Solutions IPEM | 303 N Bedford Street | Georgetown, DE 19947 | ph 302.297.9215 | www.solutionsipem.com

Jason Palkewicz

From: jessica.watson@sussexconservation.org
Sent: Wednesday, July 8, 2026 11:29 AM
To: Jim Eriksen
Cc: 'John Murray'; Jason Palkewicz
Subject: RE: Hickman Road - Meeting Minutes

This is acceptable to SCD. Thank you.

Jessica



Jessica Watson

Director of Sediment and Stormwater Program

jessica.watson@sussexconservation.org

23818 Shortly Road

Georgetown, DE 19947

302-856-2105 ext. 107 (office)

302-381-6136 (cell)

sussexconservation.org

From: Jim Eriksen <jeriksen@solutionsipem.com>
Sent: Wednesday, July 8, 2026 11:17 AM
To: jessica.watson@sussexconservation.org
Cc: 'John Murray' <jmurray@foxlanehomes.com>; Jason Palkewicz <jpalkewicz@solutionsipem.com>
Subject: RE: Hickman Road - Meeting Minutes

Hi Jessica,

The minutes have been adjusted to incorporate your comments. Please let me know i you have any additional revisions or confirm that these are acceptable.

Thanks,

Jim Eriksen | PE | Principal o Engineering |

Solutions IPEM | 303 N. Bed ord Street | Georgetown, DE 19947 | ph 302.297.9215 |

From: jessica.watson@sussexconservation.org <jessica.watson@sussexconservation.org>
Sent: Wednesday, July 8, 2026 8:24 AM
To: Jim Eriksen <jeriksen@solutionsipem.com>
Cc: 'John Murray' <jmurray@foxlanehomes.com>; Jason Palkewicz <jpalkewicz@solutionsipem.com>
Subject: RE: Hickman Road - Meeting Minutes

Hello Jim,

My comments have been added. Please let me know if you have any questions.

Jessica

Jessica Watson

Director of Sediment and Stormwater Program

jessica.watson@sussexconservation.org

23818 Shortly Road

Georgetown, DE 19947

302-856-2105 ext. 107 (office)

302-381-6136 (cell)

sussexconservation.org

From: Jim Eriksen <jeriksen@solutionsipem.com>
Sent: Tuesday, July 7, 2026 2:39 PM
To: Jessica Watson (jessica.watson@sussexconservation.org) <jessica.watson@sussexconservation.org>
Cc: John Murray <jmurray@foxlanehomes.com>; Jason Palkewicz <jpalkewicz@solutionsipem.com>
Subject: Hickman Road - Meeting Minutes

Hi Jessica,

Please find the attached meeting minutes from our meeting on June 25 regarding parcel 134-9.00-28.00. Can you please review the meeting minutes and verify that everything is correctly represented? If you have any revisions, please let me know, and we will update the minutes accordingly.

Thanks,

Jim Eriksen | PE | Principal of Engineering |

Solutions IPEM | 303 N. Bedford Street | Georgetown, DE 19947 | ph 302.297.9215 |

Hickman – Drainage Coordination Meeting
(Microsoft Teams Meeting)
June 25, 2026
Attendees:

Jessica Watson (SCD)
Jim Eriksen (Solutions IPEM)
Jason Palkewicz (Solutions IPEM)
John Murray (Development Team)

Minutes:

- Meeting was held to discuss the County's Drainage Assessment Report and determine the design parameters and conditions that may be required for this project.
- The County expressed concerns regarding the proposed pond located within the existing wooded sump in the northeastern portion of the site. The County GIS identifies the sump as wetlands, but the approved jurisdictional determination for the project confirms it is not jurisdictional wetlands.
- Similarly, the ephemeral drainage ditch is not federally regulated per the approved jurisdictional determination.
- The County expressed concerns regarding the Bethany Preserve subdivision's adjacent pond outfall discharging into this area, and how the proposed project would impact the performance and functionality of the Bethany Preserve pond.
- SCD confirmed the Bethany Preserve pond discharges as described in the County's Drainage Assessment Report.
- Solutions IPEM requested that SCD provides the stormwater management plans and reports for the Bethany Preserve Subdivision.
- SCD agreed to provide the files, and the files were provided on June 25, 2026.

- Given the approved jurisdictional determination, SCD confirmed that the construction of the proposed stormwater facility as shown in the preliminary site plan is permitted. SCD suggested providing enhanced vegetation within the facility and providing beneficial species to improve water quality. Pending final BMP selection, Solutions IPEM is not opposed to providing suitable, beneficial plantings as feasible for the facility.
- Solutions IPEM identified the area of excellent groundwater recharge that is shown in the area of woods to remain and explained the intention was to preserve the woods within that area.
- Solutions IPEM and SCD discussed the design parameters of the subject property. Those parameters are identified below:
    - All stormwater management design will be performed in accordance with DNREC regulations.
    - The proposed stormwater facility shown in a portion of the existing wooded sump is a permitted BMP and will be designed in accordance with DNREC regulations
    - The stormwater discharges from the Bethany Preserve subdivision shall be considered and incorporated into the stormwater management design for the subject property. The files provided by SCD will be utilized for these purposes.
    - The stormwater design for the subject property shall verify that development of the property will have no adverse impact on the Bethany Preserve subdivision's stormwater management facilities.
    - The discharge for the proposed stormwater management design will be the tidal wetlands to the northeast. The tidal wetlands are located within DelDOT right of way. As is typical for any project with discharge into DelDOT right of way, the stormwater design will also need to be approved by DelDOT in accordance with their standards and regulations.

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

NICOLE MAJESKI
SECRETARY

MEMORANDUM

TO: John Pietrobono, Acting Sussex County Review Coordinator

FROM: Sireen Muhtaseb, TIS Group Manager

DATE: November 21, 2024

SUBJECT: **Hickman Road**
(Protocol Tax Parcel # 134-9.00-28.00)
Area Wide Study Fee (AWSF) and Off-site Improvements

The subject development meets DelDOT's volume warrants to pay the Area Wide Study Fee in lieu of doing a Traffic Impact Study (TIS). This memorandum is to address the amount of that fee and the off-site improvements that should be required of the developer in the absence of a TIS. The fee and improvements presented below are an alternative to the developer doing a TIS and the improvements identified through DelDOT's review of that study.

1. The proposed development consists of 55 dwelling units of single-family housing. Based on our review, using Land Use Code 210 of the 11th edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual, the proposed development would generate 582 average vehicle daily trips (ADT) and 57 vehicle trips during the p.m. peak hour. The fee is calculated at ten dollars per daily trip. For the proposed development, the fee would be $5,820.

2. The developer shall improve the State-maintained Roads on which they front (Hickman Road, Sussex Road 359), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road**.** "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in

Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

3. Section 2.2.2.2 of the Development Coordination Manual allows DelDOT to accept the AWSF in lieu of a TIS, but only if the local land use agency does not require a TIS. If the County requires a TIS for this development, DelDOT will support that requirement and will not accept the AWSF.

If you have any additional questions or comments, please let me know.

SAM: km
cc: John Murray, Foxlane Homes Delaware
Jason Palkewicz, Solutions IPEM
Jamie Whitehouse, Sussex County Planning & Zoning
Lauren DeVore, Sussex County Planning & Zoning
Michael Simmons, Chief of Project Development South, DOTS
Wendy Carpenter, Traffic Calming & Subdivision Relations Manager, Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Alastair Probert, South District Engineer, South District
Matthew Schlitter, South District Public Works Manager, South District
Travis Schirmer, South District Public Works Supervisor, Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
Thomas Gagnon, Sussex Subdivision Engineer, Development Coordination, Planning
Annamaria Furmato, TIS Group Engineer, Development Coordination, Planning
Benjamin Fisher, TIS Group Engineer, Development Coordination, Planning
Tanner Chiamprasert, TIS Group Engineer, Development Coordination, Planning

JAMIE WHITEHOUSE, AICP, MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Technical Advisory Committee
From: Ashley Paugh, Planning Technician
Date: August 21, 2024
RE: Multi-Family Conditional Use for TAC Review

PLEASE NOTE: All e-mailed responses shall be directed to PANDZ@SUSSEXCOUNTYDE.GOV. Each application can be directed to the planner assigned.

The Sussex County Planning and Zoning Office has received one (1) application for a multi-family (54 Units) that requires review by the Sussex County Technical Advisory Committee. Please review the application and provide comments back to the Planning and Zoning Office on or before **October 7, 2024.**

C/U 2548 Foxlane Homes Delaware, LLC (Hickman)
AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN AN MR MEDIUM-DENSITY RESIDENTIAL DISTRICT FOR MUTLI-FAMILY (54 UNITS) TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN BALTIMORE HUNDRED, SUSSEX COUNTY, CONTAINING 12.8 ACRES, MORE OR LESS. The property is lying the south side of Hickman Road (S.C.R. 359), approximately 560 feet east of Cedar Neck Road (S.C.R. 357). 911 Address: 38492 Hickman Road, Ocean View. Tax Map Parcel: 134-9.00-28.00.

Planner Assigned: Michael Lowrey – Planner III
michael.lowrey@sussexcountyde.gov

Please feel free to contact the office with any questions at (302) 855-7878.

PARKOWSKI GUERKE & SWAYZE

MEMORANDUM

TO: Michael Lowrey - Planner III

FROM: Vince Robertson, Esq., Assistant County Attorney
Elio Battista, Jr., Esq.

DATE: October 22, 2024

RE: C/U 2548 Foxlane Homes Delaware, LLC (Hickman)

I am in receipt of your e-mails dated August 21, 2024, which included the Application for a conditional use of land in a MR Residential District for 54 multi-family units (hereinafter the "Application") and the Conditional Use Plan (hereinafter "Plan") for the project identified above. I have reviewed all the information for compliance with the requirements of the Sussex County Subdivision Code, including §§ 99-06 (General Requirements and Restrictions), 99-22 (General Requirements), 99-23 (Information to be Shown), 99-24 (Supporting Statements) and 99-27 (Supporting Statements).

My review specifically addressed the following areas:

(1) Private streets and road maintenance (9 *Del. C.* § 9623; 17 *Del. C.* § 131; Sussex County Code § 99-27).

(2) Storm water management, erosion, and sedimentation control facilities maintenance (Sussex County Code § 99-27).

(3) Water supply, sanitary sewer or other facilities maintenance (Sussex County Code § 99-27).

(4) Forested buffer strips maintenance (Sussex County Code §§ 99-16(D), 99-24(F)).

(5) Agricultural use protection notice (Sussex County Code § 99-6(G)).

(6) State or Federal wetlands disclosures and notice (Sussex County Code § 99-6(H)).

(7) Special restriction on mobile homes as a single family dwelling in AR-1 zones on lots of more than 3/4 acre (Sussex County Code § 115-20(A)).

As a result of the review described above, I offer the following comments:

- This is an application for a Conditional Use for Multi-Family.
- Proposed restrictive covenants were submitted with the Application.
- The proposed project is within a MR (Medium Residential) District and is comprised of fifty-four town homes. The Plan indicates that the lots will be served by Sussex Shores Water Company for water service and the Sussex County Unified Sanitary Sewer District for sanitary sewer service.
- The proposed project does not appear to be adjacent to agricultural farmland but does appear to provide a resource buffer strip. The proposed restrictions include a statement specifically providing for the perpetual maintenance of the buffer (Sussex County Code § 99-24(F)).
- The Plan does indicate that no structure will be constructed within fifty (50) feet of lands used for agricultural purposes; additional setbacks established by Sussex County Code § 99-6(G)(2) will apply.
- There is no agricultural use protection notice provided for in Sussex County Code § 99-6(G)(1) contained in the proposed restrictive covenants.
- The proposed restrictions provide for the maintenance of the streets and roadways.
- The proposed restrictions must address the maintenance of all common areas, including the maintenance of the storm water management areas, surface drainage facilities, erosion and sedimentation control facilities and buffer areas.
- It appears from the Plan that there are wetlands on this site. The proposed restrictive covenants do not contain a notice that the property contains regulated wetlands. Activities within these wetlands may require a permit from the U.S. Army Corps of Engineers and/or the State of Delaware.

Cc: Foxlane Homes Delaware, LLC

Sussex County, Delaware
Technical Advisory Committee

Comment Sheet

****

DATE OF REVIEW: August 21, 2024

REVIEWING AGENCY: **Delaware State Fire Marshal's Office, Sussex Office**

INDIVIDUAL REVIEWERS: **William C. Kelly II, CFI, Asst. Chief Technical Services**
Desiree B. McCall, CFI, Sr. Fire Protection Specialist
John A. Colpo, Sr. Fire Protection Specialist
Daniel E. Louder, Fire Protection Specialist
Walter L. Johnson, Fire Protection Specialist

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

RE: CU 2548 Foxlane Homes Delaware, LLC (Hickman)

The reasons and conditions applied to this pro ect and their sources are itemi ed below

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

a. **Fire Protection Water Requirements**:
- Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Mercantile)
- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly and Townhouses)
- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One & Two- Family Dwelling)
  - One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**
- All structures over 10,000 sqft aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sqft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.

- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR
- For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan.

c. **Accessibility**
- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Hickman Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door. Streets designed without parking need to develop a plan for enforcement once HOA takes charge. Fire apparatus still need to negotiate the streets.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The use of open bridge or covered bridge shall be designed to DEDOT standards and accessible by all fire department apparatus.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**
- Provide type of fuel proposed and show locations of bulk containers on plan.

e. **Required Notes**:
- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Townhouse 2-hr separation wall details shall be shown on site plans
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications, or brochures.

THIS DOC MENT IS INFORMATIONA ON , AND DOES NOT CONSTIT TE AN T PE OF APPROVAL FROM THE DELAWARE STATE FIRE MARSHAL'S OFFICE

ENGINEERING DEPARTMENT

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

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

Sussex County
DELAWARE
sussexcountyde.gov

Date: **August 30, 2024**

REF: **T. A. C. COMMENTS**
HICKMAN
SUSSEX COUNTY ENGINEERING DEPARTMENT
SUSSEX COUNTY TAX MAP NUMBER
134-9.00 PARCEL 28.00
AGREEMENT NO. 1281

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

DESIGN REVIEW COMMENTS

1. Proposed developments with private roads or projects required to meet or exceed the County street design requirements shall be regulated by and conform to Sussex County Code and the comments here listed.

2. This project **is not** located within the limits of a Ground Water Management Zone (GMZ). Projects located within a GMZ must be forwarded to the County Engineer for review and comment.

3. Project Construction Drawings shall show, in detail, the proposed improvements. The work required includes preparation and delivery of an AutoCAD 2012 digitized plan showing existing and proposed lines, grades, topography, and features in a given area, which was utilized in preparing plans for construction. The individual sheet types will be in a separate design to show plan views on sheets separate from profile views. In addition, each sheet of the plans shall be submitted in a PDF format.

4. All work shall be geo-referenced to the Delaware State Grid System NAD-83 (HARN) and provided in an AutoCAD 2012 format. North Arrow required to identify northern direction and viewport should be best fit for the project.

5. Topographic contours at one-foot intervals shall be shown and referenced to United States Geological Survey Mean Sea Level Datum NAVD 1988 Datum.

6. The plans shall be provided on 24" x 36" drawing sheets at a scale of 1" = 50' or less.

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

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

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

8. Plans shall show the seal and signature of a registered Delaware land surveyor or registered Delaware professional engineer.

9. The plan requires a Certification Signature and/or a Certification Block for the following:

    a. Delaware Professional Engineer or Delaware Land Surveyor.
    b. Owner or Representative of the Owner.
    c. Professional Wetlands Delineator.

10. The name, address, phone number and contact person's name of the Owner of Record, the Developer and the Engineer or Surveyor preparing the plan.

11. Indicate the location of all wetlands, both state and federal, in order to facilitate compliance with County, State and Federal requirements.

12. Define the courses and distances of the property perimeter and the approximate acreage contained therein. Establish and set in the field two (2) CONCRETE MONUMENT project benchmarks, preferably at property perimeter corners, geo-referenced to the Delaware State Plane Coordinate system NAD 83 and show the location including the North and East coordinates of the marks on the plans.

13. Indicate the development construction phases proposed showing the boundaries of each phase. Phasing boundaries shall include buildings, residential units, amenities, roads, storm water management facilities, wastewater systems and all other improvements and utilities required to service each phase and shall be recorded prior to being issued a notice to proceed.

14. Show the layout, width and names of all streets, alleys, crosswalks and easements proposed to be dedicated for private or public use. Street names shall not duplicate nor closely resemble existing street names in the same hundred or postal district, except for extensions of existing streets. Sussex County Mapping & Addressing will have final say on proposed street names.

15. When on site individual septic tank systems are to be used and the lot topography is to be modified by cuts and fills it is required that the Design Engineer contact the Delaware Department of Natural Resources and Environmental Control, Division of Groundwater Water Discharge Section, 21305 Berlin Road, Suite 2, Georgetown, DE 19947 phone number 302-856-4561 subject to mass grading operations for documented approval.

16. Provide the limits and elevations of the 100-year flood. This may require the design engineer to complete an analysis and provide a report including the depiction of the subject watershed(s), calculations and other technical data necessary to determine the limits and elevations of the base flood.

17. False berms shall not be utilized to create roadside drainage swale back slopes.

18. For parking lots and drives, provide spot elevations at the edge of pavement, right-of-way, or travel way centerline, at changes in grade, and high points and low points, to the nearest drainage facilities. Show the limits of the various surface materials and provide construction sections.

19. Provide and show the locations and details of all ADA pedestrian connections.

20. If the site has a cemetery located on it the Developer shall contact the Delaware State Historic Preservation Office and satisfy the requirements of that Office prior to beginning any construction activity. This area shall not be disturbed by this project. Adequate access to the site and buffers to protect the site, shall be provided.

21. Private rights-of-way adjacent to and abutting parcels not part of the project shall be located and designed to provide adequate buffer so that construction activities do not encroach onto adjacent properties.

22. Provide statements explaining how and when the developer proposes to provide and install the required water supply, sewers or other means of sewage disposal, street pavement, drainage structures and any other required improvements.

23. Provide statements concerning any proposed deed restrictions to be imposed by the owner.

24. Where special physical conditions exist, which may act as constraints on normal development or may preclude development, the developer may be required to submit special technical data, studies or investigations. This information must be prepared by individuals technically qualified to perform such work. Additional information may include but is not limited to the following: on-site sanitary sewage disposal feasibility, water supply surveys, such as test well drilling, storm water runoff computations and identification of areas subject to periodic flooding.

25. If special conditions are found to exist, the Engineering Department may elect to withhold approval of a construction plan until it is determined that it is technically feasible to overcome such conditions. The Engineering Department may then require the developer to incorporate specific improvement design criteria into the plat as a condition to its approval.

26. When special studies or investigations pertain to a regulatory program of another public agency, the developer shall submit the results of these studies or investigations to said public agencies for technical review and approval. Approvals and/or written comments from these agencies shall be supplied to Sussex County by the developer.

SEWER SPECIFIC COMMENTS

LOCATION: Hickman Road 600 feet east of Cedar Neck Road.

NO. OF UNITS: 54 Townhomes

GROSS ACREAGE: 65.66 Acres

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

Yes ☒ No ☐

(2). Which County Tier Area is project in? **Tier 1**

(3). Is wastewater capacity available for the project? **Yes**

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

(5). Are there any System Connection Charge (SCC) credits for the project? **No**

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

(7). Is project adjacent to the Unified Sewer District? **N/A**

(8). Comments: **Parcel located in Cedar Neck Expansion SSD**

(9). Is a Sewer System Concept Evaluation required? **Already Completed, See Attached**

(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

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

ENGINEERING DEPARTMENT

JOHN J. ASHMAN
DIRECTOR OF UTILITY PLANNING & DESIGN REVIEW

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

Sussex County
DELAWARE
sussexcountyde.gov

MIKE HARMER, P.E.
SUSSEX COUNTY ENGINEER

SEWER SERVICE CONCEPT EVALUATION (SSCE)
UTILITY PLANNING & DESIGN REVIEW

Applicant: Solutions IPEM, LLC

Date: 5/23/2024

Reviewed by: **Chris Calio**

Agreement #:**1281**

Project Name: **Hickman Road**

Tax Map & Parcel(s): **134-9.00-28.00**

Sewer Tier: Tier 1 - Sussex County Unified Sanitary Sewer District

Proposed EDUs: **55**

Pump Station(s) Impacted: **PS 172, PS 99**

Facility treating and disposing of the wastewater: South Coastal Regional Wastewater Facility

List of parcels to be served, created from the base parcel: **N/A**

List of additional parcels to be served (Parcels required for continuity must be served with infrastructure):**N/A**

Connection Point(s): **Option A: 8" lateral from MH 83 (SSMH-11273);**
Option B: MH 2 (SSMH-11274

Use of Existing Infrastructure Agreement required? Yes ☒ or No ☐

Annexation Required? Yes ☐ or No ☒

Easements Required? Yes ☒ or No ☐

Fee for annexation (based on acreage):**N/A**

Current Zoning: **MR** Zoning Proposed: **MR w/Conditional Use**

Acreage: **12.8 +/-**

Additional Information: **With Option A, depending on design, private grinder pumps may be required on the eastern portion of the property. OPTION A connection depth is +/- 7' deep, and OPTION B is +/- 11' deep. Field verification of depths is required.**

* No capacity is guaranteed until System Connection Fees are paid

All connections to existing infrastructure must be field verified, failure to do so will result in a revision fee and delay in construction. All gravity sewers with three (3) or more minor branches shall be designed at minimum slope and maximum depth.

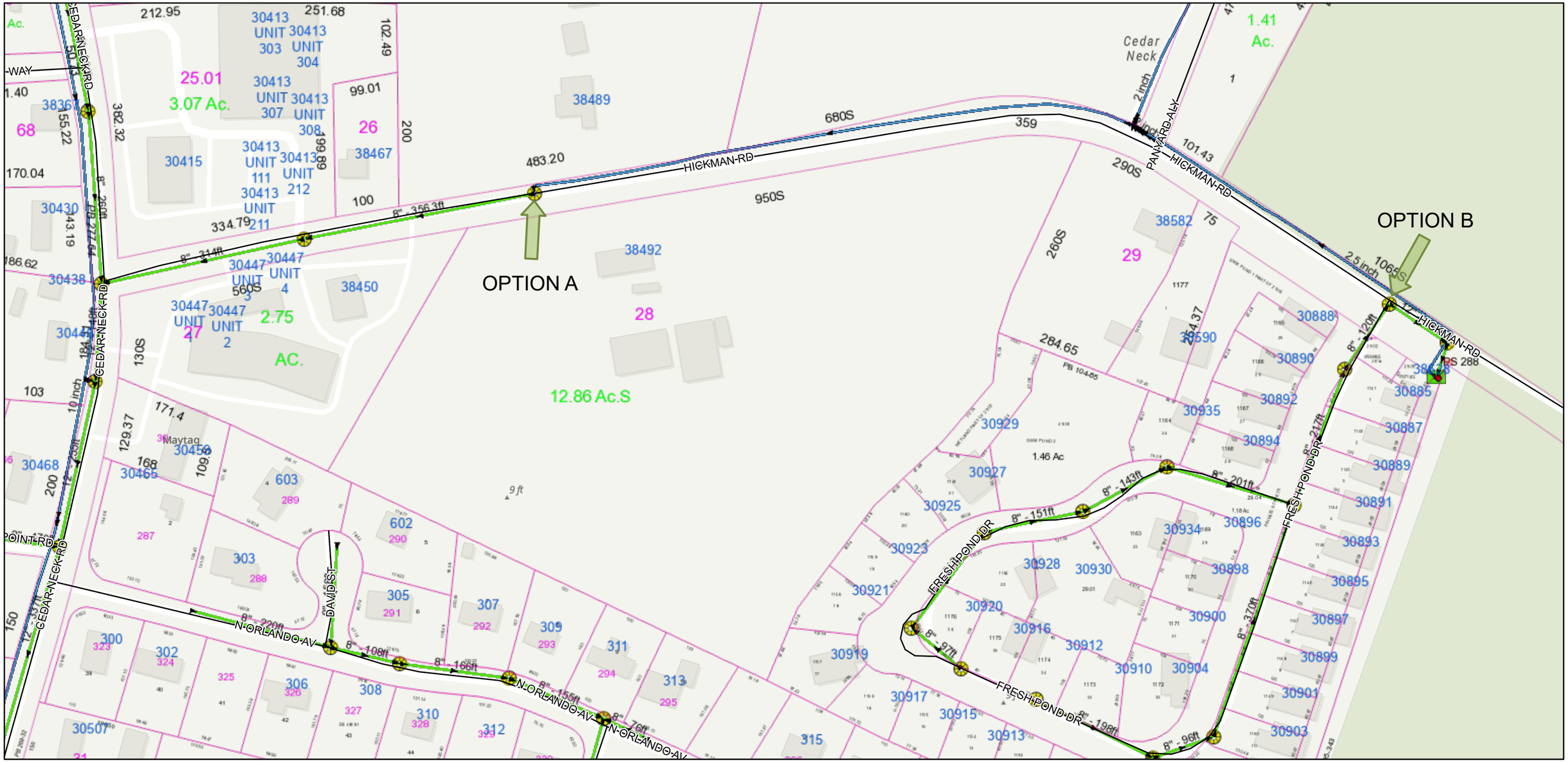
Sussex County will be assessing bonding and inspection on projects on a unit cost approach per phase. Recordation of Phasing Plans will now be required, each phase must be recorded prior to issuance of the Notice to Proceed. Any revisions to the phase will require the plan be re-recorded.

Once Construction Drawings are completed with all of the above information satisfied, please submit to:

Sussex County Utility Planning & Design Review
2 The Circle
P.O. Box 589
Georgetown DE 19947

CC: John Ashman
Jordan Dickerson
Denise Burns

Sussex County, DE Web Map



5/24/2024, 3:20:07 PM

1:2,257

0 0.02 0.04 0.08 mi

0 0.03 0.07 0.13 km

- Streets
- 911 Address
- Tax Parcels
- Electric Cabinet Boundary
- Electric Distribution Line
- Electric Distribution SubnetLine
- Electric
- Fiber
- High Voltage Meter

Electric Distribution Device

- Circuit Breaker
- Generation
- Light
- Switch
- Transformer
- Electric Distribution Junction
- Structure Junction
- Electric Transmission Junction
- Catch Basin

Stormwater

- Culvert, In Service
- Open Channel, In Service
- Pipe, Abandoned
- Pipe, In Service
- Unknown, In Service

Manhole

- Abandoned
- In Service

Main

- Active
- Active, City Of Rehoboth Beach
- Abandoned

LateralLine

- Abandoned, Service Lateral
- Active, Fire Service Lateral
- Active, Hydrant Lateral
- Active, Service Lateral
- TreatmentPlant
- Structure
- Casing
- Toning Wire Box
- Septic Tank
- Treatment Plant

Lift Station

- <all other values>
- Abandoned
- Active
- Inactive
- Removed

Manhole

- Active, Sussex County
- Abandoned, Sussex County
- Active, Delaware
- Active, Other
- Active, Other Agency

Sussex County Government, Esri Community Maps Contributors, Delaware FirstMap, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Sussex County Mapping and Addressing

Web AppBuilder for ArcGIS

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STATE OF DELAWARE
DEPARTM ENT OF NATURAL RESOURCES AND
ENVIRONM ENTAL CONTROL
DIVISION OF WATERSHED STEWARDSHIP
21309 BERLIN RD
UNIT #6
GEORGETOWN, DE 19947

DRAINAGE PROGRAM

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

August 21, 2024

Michael Lowrey
michael.lowrey@sussexcountyde.gov
Sussex County
Department of Planning and Zoning
2 The Circle
P.O. Box 417
Georgetown, DE 19947

RE: Parcel # 134-9.00-28.00; Hickman

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

The Drainage Program has performed a preliminary review and offers the following guidance:

1. This project is not within a Tax Ditch Watershed

2. All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site storm water.

3. Environmental permit or exemption coverage may be necessary from the County Conservation District (Erosion & Sediment Control Approval), DNREC Sediment and Stormwater (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Subaqueous Lands Section prior to clearing and/or excavating ditch channels.

4. This area has no previous documented drainage concerns in our DNREC drainage concern database.

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

Sincerely,

Karyssa Gortz
Karyssa Gortz
Planner II- Permit & Data Specialist

cc: Jordan Watson, Planner IV

Hickman- Aerial Map

8/21/2024, 1:09:35 PM

Parcels - Sussex

1:2,257

0 0.01 0.03 0.06 mi

0 0.02 0.04 0.09 km

Maxar, Microsoft, Esri Community Maps Contributors, Delaware FirstMap, VGIN, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

DNREC, Division of Watershed Stewardship, Drainage Program

These maps do not replace the official documents on file in the Prothonotary Office, and not to be used for engineering purposes

Ashley Paugh

From: Savage, Lisa A:(DPL) <Lisa.Savage@delmarva.com>
Sent: Monday, August 26, 2024 11:05 AM
To: Ashley Paugh
Subject: RE: [EXTERNAL]Sussex County TAC Memo - Foxlane Homes Delaware, LLC (Hickman) - 134-9.00-28.00

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

No comments.

Lisa A. Savage
Sr. Real Estate Representative

delmarva power℠
AN EXELON COMPANY

Delmarva Power & Light Company
2530 N. Salisbury Boulevard
Salisbury, MD 21801
T 667-313-2682
lisa.savage@delmarva.com | delmarva.com

From: Ashley Paugh <ashley.paugh@sussexcountyde.gov>
Sent: Wednesday, August 21, 2024 12:21 PM
To: C. Daniel Parsons <dparsons@sussexcountyde.gov>; Carlton Hall <carlton.hall@delaware.gov>; Dawn Budinger <dawn.budinger@delaware.gov>; Dean Holden - Chesapeake Electric <dholden@chpk.com>; John J. Ashman <jashman@sussexcountyde.gov>; Jordan T. Dickerson <jordan.dickerson@sussexcountyde.gov>; Karyssa Gortz - DNREC Watershed <Karyssa.gortz@delaware.gov>; Lisa M. Walls <lwalls@sussexcountyde.gov>; Savage, Lisa A:(DPL) <Lisa.Savage@delmarva.com>; Marvina Cephas - Air Quality <marvina.cephas@delaware.gov>; Megan Nehrbas <mnehrbas@sussexcountyde.gov>; Michael S. Tholstrup (DNREC) <Michael.Tholstrup@delaware.gov>; Milton Melendez <milton.melendez@delaware.gov>; Monica Bonilla <monica.bonilla@delaware.gov>; Rachel Yocum (DNREC) <rachel.yocum@delaware.gov>; Richard McCabe <richard.mccabe@delaware.gov>; Mack, Stephanie T:(DPL) <Stephanie.Mack@exeloncorp.com>; Subdivision Delaware <subdivision@delaware.gov>; Taryn Davidson <taryn.davidson@delaware.gov>; Thelton Savage <thelton.savage@usda.gov>; Trevor Clark <trevor_clark@fws.gov>; Troy Dickerson - DE Electric Coop <TDickerson@decoop.com>; Vince Robertson <vrobertson@pgslegal.com>; William Kelly <William.kelly@delaware.gov>
Cc: Michael Lowrey <michael.lowrey@sussexcountyde.gov>; Planning and Zoning <pandz@sussexcountyde.gov>
Subject: [EXTERNAL]Sussex County TAC Memo - Foxlane Homes Delaware, LLC (Hickman) - 134-9.00-28.00

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Good Morning All,

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Please provide comments on or before, Monday, October 7th, 2024.

Please send all comments to pandz@sussexcountyde.gov.

Kind Regards,

Ashley Paugh
Planning Technician
Sussex County
Planning & Zoning Dept.
2 The Circle (PO Box 417)
Georgetown, DE 19947
(302)-855-7878

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Ashley Paugh

From: Dickerson, Troy <TDickerson@delaware.coop>
Sent: Wednesday, August 21, 2024 2:17 PM
To: Ashley Paugh
Subject: RE: Sussex County TAC Memo - Foxlane Homes Delaware, LLC (Hickman) - 134-9.00-28.00

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Good afternoon,

This development is located within DP&L's service territory.

Thanks!

Troy W. Dickerson, P.E.
Vice President of Engineering
Delaware Electric Cooperative, Inc.
o: 302.349.3125 m: 302.535.9048
a: 14198 Sussex Highway, Greenwood, DE 19950
w: www.delaware.coop e: tdickerson@delaware.coop

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Kind Regards,

Ashley Paugh

Planning Technician

Sussex County

Planning & Zoning Dept.

2 The Circle (PO Box 417)

Georgetown, DE 19947

(302)-855-7878

PARKOWSKI GUERKE & SWAYZE

MEMORANDUM

TO: Michael Lowrey - Planner III

FROM: Vince Robertson, Esq., Assistant County Attorney
Elio Battista, Jr., Esq.

DATE: October 22, 2024

RE: C/U 2548 Foxlane Homes Delaware, LLC (Hickman)

I am in receipt of your e-mails dated August 21, 2024, which included the Application for a conditional use of land in a MR Residential District for 54 multi-family units (hereinafter the "Application") and the Conditional Use Plan (hereinafter "Plan") for the project identified above. I have reviewed all the information for compliance with the requirements of the Sussex County Subdivision Code, including §§ 99-06 (General Requirements and Restrictions), 99-22 (General Requirements), 99-23 (Information to be Shown), 99-24 (Supporting Statements) and 99-27 (Supporting Statements).

My review specifically addressed the following areas:

(1) Private streets and road maintenance (9 *Del. C.* § 9623; 17 *Del. C.* § 131; Sussex County Code § 99-27).

(2) Storm water management, erosion, and sedimentation control facilities maintenance (Sussex County Code § 99-27).

(3) Water supply, sanitary sewer or other facilities maintenance (Sussex County Code § 99-27).

(4) Forested buffer strips maintenance (Sussex County Code §§ 99-16(D), 99-24(F)).

(5) Agricultural use protection notice (Sussex County Code § 99-6(G)).

(6) State or Federal wetlands disclosures and notice (Sussex County Code § 99-6(H)).

(7) Special restriction on mobile homes as a single family dwelling in AR-1 zones on lots of more than 3/4 acre (Sussex County Code § 115-20(A)).

As a result of the review described above, I offer the following comments:

- This is an application for a Conditional Use for Multi-Family.
- Proposed restrictive covenants were submitted with the Application.
- The proposed project is within a MR (Medium Residential) District and is comprised of fifty-four town homes. The Plan indicates that the lots will be served by Sussex Shores Water Company for water service and the Sussex County Unified Sanitary Sewer District for sanitary sewer service.
- The proposed project does not appear to be adjacent to agricultural farmland but does appear to provide a resource buffer strip. The proposed restrictions include a statement specifically providing for the perpetual maintenance of the buffer (Sussex County Code § 99-24(F)).
- The Plan does indicate that no structure will be constructed within fifty (50) feet of lands used for agricultural purposes; additional setbacks established by Sussex County Code § 99-6(G)(2) will apply.
- There is no agricultural use protection notice provided for in Sussex County Code § 99-6(G)(1) contained in the proposed restrictive covenants.
- The proposed restrictions provide for the maintenance of the streets and roadways.
- The proposed restrictions must address the maintenance of all common areas, including the maintenance of the storm water management areas, surface drainage facilities, erosion and sedimentation control facilities and buffer areas.
- It appears from the Plan that there are wetlands on this site. The proposed restrictive covenants do not contain a notice that the property contains regulated wetlands. Activities within these wetlands may require a permit from the U.S. Army Corps of Engineers and/or the State of Delaware.

Cc: Foxlane Homes Delaware, LLC

ENGINEERING DEPARTMENT

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

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

Sussex County
DELAWARE
sussexcountyde.gov

Date: **August 30, 2024**

REF: **T. A. C. COMMENTS**
HICKMAN
SUSSEX COUNTY ENGINEERING DEPARTMENT
SUSSEX COUNTY TAX MAP NUMBER
134-9.00 PARCEL 28.00
AGREEMENT NO. 1281

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

DESIGN REVIEW COMMENTS

1. Proposed developments with private roads or projects required to meet or exceed the County street design requirements shall be regulated by and conform to Sussex County Code and the comments here listed.

2. This project **is not** located within the limits of a Ground Water Management Zone (GMZ). Projects located within a GMZ must be forwarded to the County Engineer for review and comment.

3. Project Construction Drawings shall show, in detail, the proposed improvements. The work required includes preparation and delivery of an AutoCAD 2012 digitized plan showing existing and proposed lines, grades, topography, and features in a given area, which was utilized in preparing plans for construction. The individual sheet types will be in a separate design to show plan views on sheets separate from profile views. In addition, each sheet of the plans shall be submitted in a PDF format.

4. All work shall be geo-referenced to the Delaware State Grid System NAD-83 (HARN) and provided in an AutoCAD 2012 format. North Arrow required to identify northern direction and viewport should be best fit for the project.

5. Topographic contours at one-foot intervals shall be shown and referenced to United States Geological Survey Mean Sea Level Datum NAVD 1988 Datum.

6. The plans shall be provided on 24" x 36" drawing sheets at a scale of 1" = 50' or less.

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

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

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

8. Plans shall show the seal and signature of a registered Delaware land surveyor or registered Delaware professional engineer.

9. The plan requires a Certification Signature and/or a Certification Block for the following:

    a. Delaware Professional Engineer or Delaware Land Surveyor.
    b. Owner or Representative of the Owner.
    c. Professional Wetlands Delineator.

10. The name, address, phone number and contact person's name of the Owner of Record, the Developer and the Engineer or Surveyor preparing the plan.

11. Indicate the location of all wetlands, both state and federal, in order to facilitate compliance with County, State and Federal requirements.

12. Define the courses and distances of the property perimeter and the approximate acreage contained therein. Establish and set in the field two (2) CONCRETE MONUMENT project benchmarks, preferably at property perimeter corners, geo-referenced to the Delaware State Plane Coordinate system NAD 83 and show the location including the North and East coordinates of the marks on the plans.

13. Indicate the development construction phases proposed showing the boundaries of each phase. Phasing boundaries shall include buildings, residential units, amenities, roads, storm water management facilities, wastewater systems and all other improvements and utilities required to service each phase and shall be recorded prior to being issued a notice to proceed.

14. Show the layout, width and names of all streets, alleys, crosswalks and easements proposed to be dedicated for private or public use. Street names shall not duplicate nor closely resemble existing street names in the same hundred or postal district, except for extensions of existing streets. Sussex County Mapping & Addressing will have final say on proposed street names.

15. When on site individual septic tank systems are to be used and the lot topography is to be modified by cuts and fills it is required that the Design Engineer contact the Delaware Department of Natural Resources and Environmental Control, Division of Groundwater Water Discharge Section, 21305 Berlin Road, Suite 2, Georgetown, DE 19947 phone number 302-856-4561 subject to mass grading operations for documented approval.

16. Provide the limits and elevations of the 100-year flood. This may require the design engineer to complete an analysis and provide a report including the depiction of the subject watershed(s), calculations and other technical data necessary to determine the limits and elevations of the base flood.

17. False berms shall not be utilized to create roadside drainage swale back slopes.

18. For parking lots and drives, provide spot elevations at the edge of pavement, right-of-way, or travel way centerline, at changes in grade, and high points and low points, to the nearest drainage facilities. Show the limits of the various surface materials and provide construction sections.

19. Provide and show the locations and details of all ADA pedestrian connections.

20. If the site has a cemetery located on it the Developer shall contact the Delaware State Historic Preservation Office and satisfy the requirements of that Office prior to beginning any construction activity. This area shall not be disturbed by this project. Adequate access to the site and buffers to protect the site, shall be provided.

21. Private rights-of-way adjacent to and abutting parcels not part of the project shall be located and designed to provide adequate buffer so that construction activities do not encroach onto adjacent properties.

22. Provide statements explaining how and when the developer proposes to provide and install the required water supply, sewers or other means of sewage disposal, street pavement, drainage structures and any other required improvements.

23. Provide statements concerning any proposed deed restrictions to be imposed by the owner.

24. Where special physical conditions exist, which may act as constraints on normal development or may preclude development, the developer may be required to submit special technical data, studies or investigations. This information must be prepared by individuals technically qualified to perform such work. Additional information may include but is not limited to the following: on-site sanitary sewage disposal feasibility, water supply surveys, such as test well drilling, storm water runoff computations and identification of areas subject to periodic flooding.

25. If special conditions are found to exist, the Engineering Department may elect to withhold approval of a construction plan until it is determined that it is technically feasible to overcome such conditions. The Engineering Department may then require the developer to incorporate specific improvement design criteria into the plat as a condition to its approval.

26. When special studies or investigations pertain to a regulatory program of another public agency, the developer shall submit the results of these studies or investigations to said public agencies for technical review and approval. Approvals and/or written comments from these agencies shall be supplied to Sussex County by the developer.

SEWER SPECIFIC COMMENTS

LOCATION: Hickman Road 600 feet east of Cedar Neck Road.

NO. OF UNITS: 54 Townhomes

GROSS ACREAGE: 65.66 Acres

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

Yes ☒ No ☐

(2). Which County Tier Area is project in? **Tier 1**

(3). Is wastewater capacity available for the project? **Yes**

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

(5). Are there any System Connection Charge (SCC) credits for the project? **No**

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

(7). Is project adjacent to the Unified Sewer District? **N/A**

(8). Comments: **Parcel located in Cedar Neck Expansion SSD**

(9). Is a Sewer System Concept Evaluation required? **Already Completed, See Attached**

(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

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

ENGINEERING DEPARTMENT

JOHN J. ASHMAN
DIRECTOR OF UTILITY PLANNING & DESIGN REVIEW

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

Sussex County
DELAWARE
sussexcountyde.gov

MIKE HARMER, P.E.
SUSSEX COUNTY ENGINEER

SEWER SERVICE CONCEPT EVALUATION (SSCE)
UTILITY PLANNING & DESIGN REVIEW

Applicant: Solutions IPEM, LLC

Date: 5/23/2024

Reviewed by: **Chris Calio**

Agreement #:**1281**

Project Name: **Hickman Road**

Tax Map & Parcel(s): **134-9.00-28.00**

Sewer Tier: Tier 1 - Sussex County Unified Sanitary Sewer District

Proposed EDUs: **55**

Pump Station(s) Impacted: **PS 172, PS 99**

Facility treating and disposing of the wastewater: South Coastal Regional Wastewater Facility

List of parcels to be served, created from the base parcel: **N/A**

List of additional parcels to be served (Parcels required for continuity must be served with infrastructure):**N/A**

Connection Point(s): **Option A: 8" lateral from MH 83 (SSMH-11273);**
Option B: MH 2 (SSMH-11274

Use of Existing Infrastructure Agreement required? Yes ☒ or No ☐

Annexation Required? Yes ☐ or No ☒

Easements Required? Yes ☒ or No ☐

Fee for annexation (based on acreage):**N/A**

Current Zoning: **MR** Zoning Proposed: **MR w/Conditional Use**

Acreage: **12.8 +/-**

Additional Information: **With Option A, depending on design, private grinder pumps may be required on the eastern portion of the property. OPTION A connection depth is +/- 7' deep, and OPTION B is +/- 11' deep. Field verification of depths is required.**

* No capacity is guaranteed until System Connection Fees are paid

All connections to existing infrastructure must be field verified, failure to do so will result in a revision fee and delay in construction. All gravity sewers with three (3) or more minor branches shall be designed at minimum slope and maximum depth.

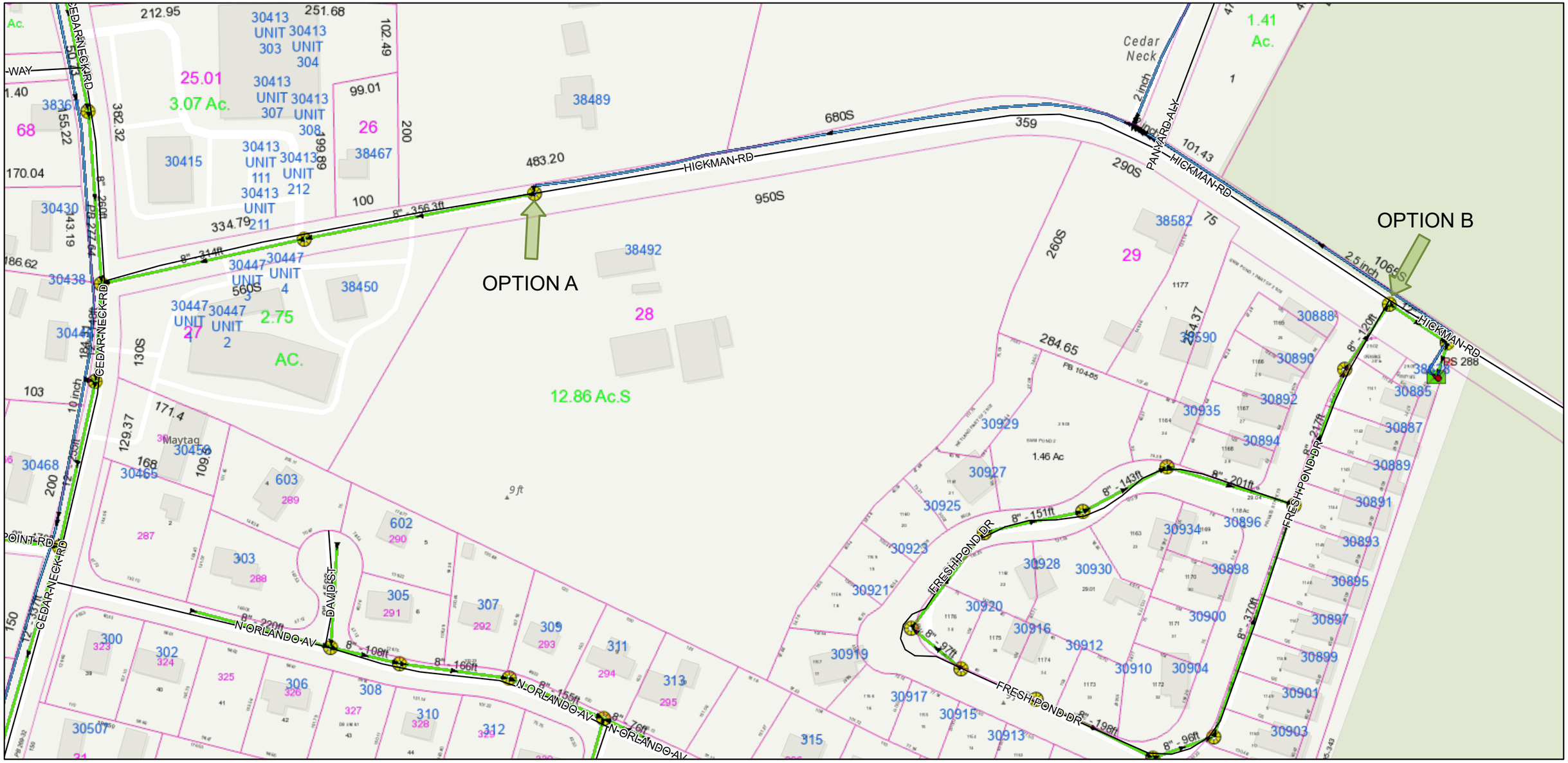
Sussex County will be assessing bonding and inspection on projects on a unit cost approach per phase. Recordation of Phasing Plans will now be required, each phase must be recorded prior to issuance of the Notice to Proceed. Any revisions to the phase will require the plan be re-recorded.

Once Construction Drawings are completed with all of the above information satisfied, please submit to:

Sussex County Utility Planning & Design Review
2 The Circle
P.O. Box 589
Georgetown DE 19947

CC: John Ashman
Jordan Dickerson
Denise Burns

Sussex County, DE Web Map



5/24/2024, 3:20:07 PM

1:2,257

0 0.02 0.04 0.08 mi

0 0.03 0.07 0.13 km

- Streets
- 911 Address
- Tax Parcels
- Electric Cabinet Boundary
- Electric Distribution Line
- Electric Distribution SubnetLine
- Electric
- Fiber
- High Voltage Meter

Electric Distribution Device

- Circuit Breaker
- Generation
- Light
- Switch
- Transformer
- Electric Distribution Junction
- Structure Junction
- Electric Transmission Junction
- Catch Basin

Stormwater

- Culvert, In Service
- Open Channel, In Service
- Pipe, Abandoned
- Pipe, In Service
- Unknown, In Service

Manhole

- Abandoned
- In Service

Main

- Active
- Active, City Of Rehoboth Beach
- Abandoned

LateralLine

- Abandoned, Service Lateral
- Active, Fire Service Lateral
- Active, Hydrant Lateral
- Active, Service Lateral
- TreatmentPlant
- Structure
- Casing
- Toning Wire Box
- Septic Tank
- Treatment Plant

Lift Station

- <all other values>
- Abandoned
- Active
- Inactive
- Removed

Manhole

- Active, Sussex County
- Abandoned, Sussex County
- Active, Delaware
- Active, Other
- Active, Other Agency

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Web AppBuilder for ArcGIS

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Ashley Paugh

From: Savage, Lisa A:(DPL) <Lisa.Savage@delmarva.com>
Sent: Monday, August 26, 2024 11:05 AM
To: Ashley Paugh
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Ashley Paugh
Planning Technician
Sussex County
Planning & Zoning Dept.
2 The Circle (PO Box 417)
Georgetown, DE 19947
(302)-855-7878

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STATE OF DELAWARE
DEPARTM ENT OF NATURAL RESOURCES AND
ENVIRONM ENTAL CONTROL
DIVISION OF WATERSHED STEWARDSHIP
21309 BERLIN RD
UNIT #6
GEORGETOWN, DE 19947

DRAINAGE PROGRAM

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

August 21, 2024

Michael Lowrey
michael.lowrey@sussexcountyde.gov
Sussex County
Department of Planning and Zoning
2 The Circle
P.O. Box 417
Georgetown, DE 19947

RE: Parcel # 134-9.00-28.00; Hickman

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

The Drainage Program has performed a preliminary review and offers the following guidance:

1. This project is not within a Tax Ditch Watershed

2. All precautions should be taken to ensure the project does not hinder any off-site drainage upstream of the project or create any off-site drainage problems downstream by the release of on-site storm water.

3. Environmental permit or exemption coverage may be necessary from the County Conservation District (Erosion & Sediment Control Approval), DNREC Sediment and Stormwater (eNOI/NOT), Army Corp of Engineers, and/or DNREC Wetlands and Subaqueous Lands Section prior to clearing and/or excavating ditch channels.

4. This area has no previous documented drainage concerns in our DNREC drainage concern database.

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

Sincerely,

Karyssa Gortz
Karyssa Gortz
Planner II- Permit & Data Specialist

cc: Jordan Watson, Planner IV

Hickman- Aerial Map

8/21/2024, 1:09:35 PM

Parcels - Sussex

1:2,257

0 0.01 0.03 0.06 mi

0 0.02 0.04 0.09 km

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DNREC, Division of Watershed Stewardship, Drainage Program

These maps do not replace the official documents on file in the Prothonotary Office, and not to be used for engineering purposes

Sussex County, Delaware
Technical Advisory Committee

Comment Sheet

****

DATE OF REVIEW: August 21, 2024

REVIEWING AGENCY: **Delaware State Fire Marshal's Office, Sussex Office**

INDIVIDUAL REVIEWERS: **William C. Kelly II, CFI, Asst. Chief Technical Services**
Desiree B. McCall, CFI, Sr. Fire Protection Specialist
John A. Colpo, Sr. Fire Protection Specialist
Daniel E. Louder, Fire Protection Specialist
Walter L. Johnson, Fire Protection Specialist

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

RE: CU 2548 Foxlane Homes Delaware, LLC (Hickman)

The reasons and conditions applied to this pro ect and their sources are itemi ed below

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

a. **Fire Protection Water Requirements**:
- Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Mercantile)
- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly and Townhouses)
- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One & Two- Family Dwelling)
  - One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**
- All structures over 10,000 sqft aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sqft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.

- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR
- For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan.

c. **Accessibility**
- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Hickman Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door. Streets designed without parking need to develop a plan for enforcement once HOA takes charge. Fire apparatus still need to negotiate the streets.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The use of open bridge or covered bridge shall be designed to DEDOT standards and accessible by all fire department apparatus.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**
- Provide type of fuel proposed and show locations of bulk containers on plan.

e. **Required Notes**:
- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Townhouse 2-hr separation wall details shall be shown on site plans
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications, or brochures.

THIS DOC MENT IS INFORMATIONA ON , AND DOES NOT CONSTIT TE AN T PE OF APPROVA FROM THE DE A ARE STATE FIRE MARSHA 'S OFFICE

JAMIE WHITEHOUSE, AICP, MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878 T
(302) 854-5079 F
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Technical Advisory Committee
From: Ashley Paugh, Planning Technician
Date: August 21, 2024
RE: Multi-Family Conditional Use for TAC Review

PLEASE NOTE: All e-mailed responses shall be directed to PANDZ@SUSSEXCOUNTYDE.GOV. Each application can be directed to the planner assigned.

The Sussex County Planning and Zoning Office has received one (1) application for a multi-family (54 Units) that requires review by the Sussex County Technical Advisory Committee. Please review the application and provide comments back to the Planning and Zoning Office on or before **October 7, 2024.**

C/U 2548 Foxlane Homes Delaware, LLC (Hickman)
AN ORDINANCE TO GRANT A CONDITIONAL USE OF LAND IN AN MR MEDIUM-DENSITY RESIDENTIAL DISTRICT FOR MUTLI-FAMILY (54 UNITS) TO BE LOCATED ON A CERTAIN PARCEL OF LAND LYING AND BEING IN BALTIMORE HUNDRED, SUSSEX COUNTY, CONTAINING 12.8 ACRES, MORE OR LESS. The property is lying the south side of Hickman Road (S.C.R. 359), approximately 560 feet east of Cedar Neck Road (S.C.R. 357). 911 Address: 38492 Hickman Road, Ocean View. Tax Map Parcel: 134-9.00-28.00.

Planner Assigned: Michael Lowrey – Planner III
michael.lowrey@sussexcountyde.gov

Please feel free to contact the office with any questions at (302) 855-7878.

Ashley Paugh

From: Dickerson, Troy <TDickerson@delaware.coop>
Sent: Wednesday, August 21, 2024 2:17 PM
To: Ashley Paugh
Subject: RE: Sussex County TAC Memo - Foxlane Homes Delaware, LLC (Hickman) - 134-9.00-28.00

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

Good afternoon,

This development is located within DP&L's service territory.

Thanks!

Troy W. Dickerson, P.E.
Vice President of Engineering
Delaware Electric Cooperative, Inc.
o: 302.349.3125 m: 302.535.9048
a: 14198 Sussex Highway, Greenwood, DE 19950
w: www.delaware.coop e: tdickerson@delaware.coop

From: Ashley Paugh <ashley.paugh@sussexcountyde.gov>
Sent: Wednesday, August 21, 2024 12:21 PM
To: C. Daniel Parsons <dparsons@sussexcountyde.gov>; Carlton Hall <carlton.hall@delaware.gov>; Dawn Budinger <dawn.budinger@delaware.gov>; Dean Holden - Chesapeake Electric <dholden@chpk.com>; John J. Ashman <jashman@sussexcountyde.gov>; Jordan T. Dickerson <jordan.dickerson@sussexcountyde.gov>; Karyssa Gortz - DNREC Watershed <Karyssa.gortz@delaware.gov>; Lisa M. Walls <lwalls@sussexcountyde.gov>; Lisa Savage - Delmarva Power <lisa.savage@delmarva.com>; Marvina Cephas - Air Quality <marvina.cephas@delaware.gov>; Megan Nehrbas <mnehrbas@sussexcountyde.gov>; Michael S. Tholstrup (DNREC) <Michael.Tholstrup@delaware.gov>; Milton Melendez <milton.melendez@delaware.gov>; Monica Bonilla <monica.bonilla@delaware.gov>; Rachel Yocum (DNREC) <rachel.yocum@delaware.gov>; Richard McCabe <richard.mccabe@delaware.gov>; Stephanie Mack - Delmarva Power <Stephanie.Mack@exeloncorp.com>; Subdivision Delaware <subdivision@delaware.gov>; Taryn Davidson <taryn.davidson@delaware.gov>; Thelton Savage <thelton.savage@usda.gov>; Trevor Clark <trevor_clark@fws.gov>; Dickerson, Troy <TDickerson@delaware.coop>; Vince Robertson <vrobertson@pgslegal.com>; William Kelly <William.kelly@delaware.gov>
Cc: Michael Lowrey <michael.lowrey@sussexcountyde.gov>; Planning and Zoning <pandz@sussexcountyde.gov>
Subject: Sussex County TAC Memo - Foxlane Homes Delaware, LLC (Hickman) - 134-9.00-28.00

Good Morning All,

The Sussex County Planning & Zoning Department has received one (1) application that requires TAC review.

Please see the attached memo regarding the application, as well as the submitted site plan and drafted HOA regulations.

Please provide comments on or before, Monday, October 7th, 2024.

Please send all comments to pandz@sussexcountyde.gov.

Kind Regards,

Ashley Paugh

Planning Technician

Sussex County

Planning & Zoning Dept.

2 The Circle (PO Box 417)

Georgetown, DE 19947

(302)-855-7878

Sussex County, Delaware
Technical Advisory Committee

Comment Sheet

****

DATE OF REVIEW: August 21, 2024

REVIEWING AGENCY: **Delaware State Fire Marshal's Office, Sussex Office**

INDIVIDUAL REVIEWERS: **William C. Kelly II, CFI, Asst. Chief Technical Services**
Desiree B. McCall, CFI, Sr. Fire Protection Specialist
John A. Colpo, Sr. Fire Protection Specialist
Daniel E. Louder, Fire Protection Specialist
Walter L. Johnson, Fire Protection Specialist

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THIS DOC MENT IS INFORMATIONA ON , AND DOES NOT CONSTIT TE AN T PE OF APPROVAL FROM THE DELAWARE STATE FIRE MARSHAL'S OFFICE

STATE OF DELAWARE
OFFICE OF MANAGEMENT AND BUDGET
OFFICE OF STATE PLANNING COORDINATION

July 24, 2024

Jason Palkewicz, PE
Solutions IPEM
303 N Bedford St,
Georgetown, DE 19947

RE: PLUS review – 2024-06-02; Hickman

Dear Mr. Palkewicz:

Thank you for meeting with State agency planners on June 26th to discuss the Hickman project. According to the information received, you are seeking review of a proposed Site Plan with a conditional use for the construction of 55 single-family detached condominiums on 12.8 acres zoned MR (Medium Density Residential). The proposed subdivision is to be located south of Hickman Road and east of Cedar Neck Road.

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

Strategies for State Policies and Spending

This project is located within Investment Levels 2 and 3 according to the 2020 Strategies for State Policies and Spending. If applicable, add: This site is also located in the Coastal Areas according to the SC Comprehensive plan.

Based on its location in a Level 2 and Level 3 investment area, this project may be consistent with the 2020 Strategies for State Policies and Spending. Investment Level 2 reflects areas where growth is anticipated by local, county, and state plans in the near-term future. Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer-term future, or areas that may have environmental or other constraints to development.

In the Level 3 area, DNREC has noted that the preliminary plan shows seventeen lots occurring directly within the 100-year floodplain, either entirely or partially, as well as the entrance to the development. The entire eastern portion of the development and associated lots are also vulnerable to permanent inundation from sea level rise. Within the 30-year mortgage period, sea level rise, coupled with an increased frequency of intense rainfall, is expected to expand the area of the floodplain in this region and exacerbate the existing flooding and drainage issues on this site. Building in this manner is considered unsafe for residents due to the future vulnerability of this particular location. Roads are essential for first responders in the event of an emergency and could become impassable during flooding events. It is noteworthy that the 100-year floodplain is currently considered to be Out of Play in New Castle County, Kent County, and several municipalities due to these types of risks.

Drainage issues have been documented on nearby properties, with poorly drained soils (Hydrologic Soil Group D) occurring in the eastern third of the property. These soil types are anticipated to only worsen any existing drainage issues, especially in areas where tree removal is proposed.

The state requests that the applicant and the local jurisdiction work with state agencies to design the site with respect to those environmental features which will help create a more sustainable development.

Code Requirements/Agency Permitting Requirements

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The site access on all State maintained roads must be designed in accordance with DelDOT's Development Coordination Manual, which is available at http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes.

- Pursuant to Section 1.3 of the Development Coordination Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is located at https://www.deldot.gov/Business/subdivisions/pdfs/Meeting_Request_Form.pdf?08022017.

- Section 1.7 of the Development Coordination Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.

- In terms of traffic analysis, based on the expected trip generation this project will qualify for the Area Wide Study Fee (AWSF).

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Development Coordination Manual, DelDOT will require dedication of right-of-way along the site's frontage. By this regulation, this dedication is to provide a minimum of 30 feet of right-of-way from the physical centerline of Hickman Road. The following right-of-way dedication note is required, "**An X-foot wide strip of right-of-way from the centerline is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation."**

- In accordance with Section 3.2.5.1.2 of the Development Coordination Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation."**

- Referring to Section 3.4.2.1 of the Development Coordination Manual, the following items, among other things, are required on the Record Plan:

    - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.

    - Depiction of all existing entrances within 300 feet of the proposed entrances on Hickman Road.

    - Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted.

- In accordance with Section 3.8 of the Development Coordination Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 20 feet from the ultimate State right-of-way along all State maintained roads.

- In accordance with Section 5.2.9 of the Development Coordination Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrances and how long those lanes should be. The worksheet can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.4 of the Development Coordination Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.14 of the Development Coordination Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Special Flood Hazard Area

- Seventeen lots within the proposed development lie directly within the 100-year floodplain, designated as zone AE. Building in this manner is considered unsafe for residents due to the future vulnerability of this particular location. Roads are essential for first responders in the event of an emergency and could become impassable during flooding events. The following requirements apply:

  The applicant must comply with the local floodplain ordinance and regulations applicable to development or construction within the 100-year floodplain. In determining the boundary of the floodplain, use the most recent FIRM maps available, which can be found at https://floodplanning.dnrec.delaware.gov/

- If fill is to be placed in floodplain to increase grade elevation to raise proposed development out of mapped floodplain, a Certified Letter of Map Revision – Fill (CLOMR-Fill) request should be submitted to FEMA for review followed by an application to FEMA for a Letter of Map Revision (LOMR) at completion. Please note that a property will not be officially recognized by FEMA as being located out of the mapped floodplain until a LOMR has been issued.

- Homeowners with mortgages for homes within the floodplain may be required to purchase flood insurance. Additionally, homes located outside the floodplain might be required by lenders to purchase flood insurance, based on proximity.

Contact: DNREC Shoreline and Waterway Management Section at (302) 739-9921.
Website: https://dnrec.delaware.gov/watershed-stewardship/waterways/floodplains/

Wetlands and Waterways
Maps from the Statewide Wetlands Mapping Project indicate the potential presence of non-tidal forested wetlands on the northeastern corner and far southern corner of the site. The application indicates that wetlands have been delineated, with an estimated 1.5 acres of wetlands on the site. The applicant proposes approximately 0.01 acres of disturbance.

- State permits from the DNREC Wetlands and Waterways Section may be necessary if dredge, fill, or structures are proposed in streams or State Subaqueous Lands.

- Federal permits from the U.S. Army Corps of Engineers may be necessary if dredge or fill is proposed in non-tidal wetlands or streams. A delineation of waterways and wetlands may be required, to be completed by a qualified professional hired by the landowner. In certain cases, permits from the US Army Corps of Engineers may trigger additional certifications from DNREC (Coastal Zone Federal Consistency Certification and 401 Water Quality Certification). Work with the U.S. Army Corps of Engineers to determine the appropriate permitting requirements if federal permits are required.

Federal Contact: U.S. Army Corps of Engineers (Dover Office) at (267) 240-5278.
Website: https://www.nap.usace.army.mil/Missions/Regulatory/Contacts/
State Contact: DNREC Wetlands and Waterways Section at (302) 739-9943.
Website: https://dnrec.delaware.gov/water/wetlands/

Standard Stormwater Management Requirements
The project proposes greater than 5,000 square feet of land disturbing activities and will be subject to Delaware's *Sediment and Stormwater Regulations*.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.

- Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically https://enoi.dnrec.delaware.gov/, select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219.
Website: https://www.sussexconservation.org/
General Stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

Wastewater Disposal Systems – Large Systems

- For wastewater conveyance offsite by way of new sewer connection, flow rates exceeding 2,500 gallons of liquid waste per day will require a Wastewater Pollution Collection and Conveyance (WPCC) permit from the Commercial and Government Services section.

Contact: DNREC Commercial and Government Services section at (302) 739-9948.
Website: https://dnrec.delaware.gov/water/commercial-government/

Electric Vehicle Charging

- Electric vehicle charging infrastructure is now required for all residential dwellings in Delaware (see 80 Del. Laws, c. 145 § 8001- § 8006) for which:

  1. A building permit is issued on or after January 1, 2024 (single family), or
  2. The final site plan is approved on or after January 1, 2025 (multi-family).

- Requirements are summarized below. Consult the Delaware Code directly for further details.

Single-family Dwellings, effective 2024:

- The developer of a single-family residential dwelling shall install at least one electric vehicle capable parking space at each single-family residential dwelling constructed.

- If the single-family residential dwelling does not have an attached or detached garage, an electric vehicle capable parking space must be provided in the driveway, assigned parking space for the dwelling, or at an unassigned non-street residential parking space constructed as part of the project.

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

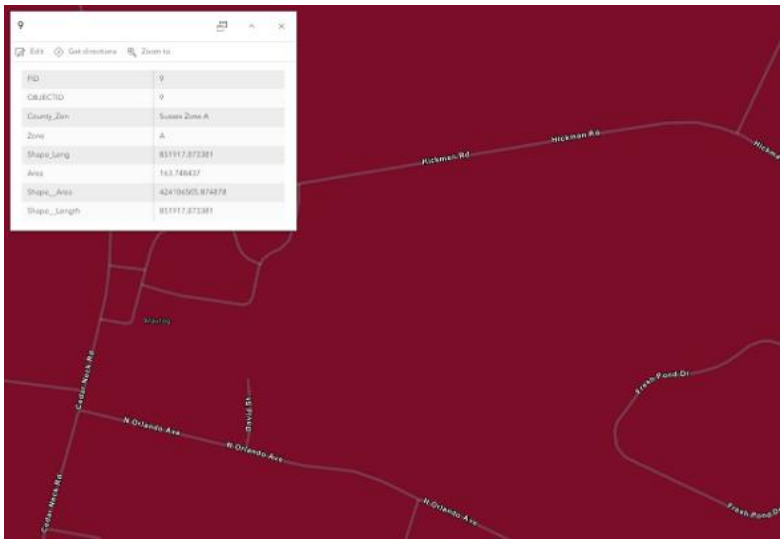
Proposed Project Parcel Flood Concern

- The majority of this parcel is located within an area of **Minimal Flood Concern of 1000 years or greater**. However, it appears to be surrounded on three sides by Flood Zone

AE, identified as a special flood hazard area, also known as the 100-year flood plain or 1% annual chance flood hazard. It does appear that several parcels will exist within this flood zone. Any residential home with a mortgage requires an NFIP flood insurance policy, separate from a standard home insurance policy.

Parcel Status within County Evacuation Zone Location

- The parcel is located within Sussex County's Evacuation Zone A.



Parcel Status within the 10-mile Emergency Planning Zone (EPZ) for the Salem Nuclear Power Plant

- The parcel **is not** located within the 10-mile EPZ for the Salem Nuclear Power Plant.

State Historic Preservation Office – Contact Carlton Hall 302-736-7400

- There is a moderate potential for both precontact and historic period archaeological sites on the previously undeveloped portion of this property. Part of the property is mapped has having well drained soils and is in close proximity to known sites in similar contexts on Cedar Neck. There may be sites(s) associated with the earlier farmstead and orchard shown on early 20th century maps and aerials, or with 19th century properties shown in the general vicinity on earlier maps.

- There is an unverified report of a cemetery, associated with the Richards family, in the southeast corner of the property. SHPO recommends an archaeological survey be conducted by a qualified archaeological consultant, starting with additional background research and site visit to further assess the archaeological potential of the property, and to determine if a cemetery is in fact on the property. SHPO further recommends avoidance or further investigation of any sites identified. If a cemetery is present, an archaeological investigation to define its boundaries is necessary to ensure no unmarked burials are disturbed. Please note that Ground Penetrating Radar survey, alone is not sufficient for this purpose. Please provide our office with a copy of the archaeological survey reports for our records.

  If any project or development proceeds, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law (Del. C. Title 7, Ch.54). If there are any questions, inquiries, or concerns, feel free to contact the Delaware State Historic Preservation Office for assistance at 302-736-7400.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

This document is for information purposes only and does not constitute any type of approval from the Delaware State Fire Marshal's Office.

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Required Notes:

- Provide a note on the final plans submitted for review to read “All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”

- Proposed Use

- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units

- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.

- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision dates of March 21, 2019 and March 16, 2021. The notes can be found at https://www.deldot.gov/Business/subdivisions/

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Flooding and Sea Level Rise
Seventeen lots are proposed within the 100-year floodplain (designated as zone AE), and the entrance to the development also lies within the 100-year floodplain. By 2050, mean sea levels are projected to rise by 0.7 – 1.9 feet; by end of century sea levels are projected to increase by

1.7 – 5.0 feet. As mean sea levels rise, the frequency and severity of tidal flooding events is also expected to increase.

The entire eastern portion of the development and associated lots are also vulnerable to permanent inundation from sea level rise. Additionally, lots near the current floodplain are vulnerable to intermittent or routine flooding episodes due to the combined effects of climate driven sea level rise and heavy precipitation events.

Locating primary access routes and permanent structures in this vulnerable area may place property, infrastructure, and lives at risk. Likewise, there is no guarantee of public funding for future repairs or drainage projects.
DNREC reviewers encourage consideration of the following to mitigate the flood concerns:

- Locate all houses, lots, and roadways outside of the floodplain and eliminate lots 4-7, 10-17, and 33-37.

- Avoid increasing the grade elevation and bulk grading on the site. Such practices have the potential to worsen flooding on adjacent properties, which have already been documented to have drainage issues, as described below in the section on Drainage Issues and Poorly Drained Soils.

- Relocate the entrance to the development to the western side of the site. DNREC reviewers discourage placement of roadways within floodplain areas, as they are essential for first responders in the event of an emergency and could become impassable during flood events. These events are likely anticipated to intensify through time due to impacts from climate change.

- Ensure unimpeded access to and from the amenity area. These structures are becoming increasingly important as emergency resilience hubs. For this reason, consider locating the amenity area at the highest elevation of the site.

- DNREC reviewers recommend that hydrologic and hydraulic engineering analyses are conducted for this site. These studies will determine base flood elevations and floodway delineations.

Contact: DNREC Climate and Sustainability Section at (302) 735-3480.
Website: https://dnrec.delaware.gov/coastal-programs/planning-training/adapting-to-sea-level-rise/

Drainage Issues and Poorly Drained Soils
Drainage issues have been documented on properties to the north, east, and south of this project. Poorly drained soils (Hydrologic Soil Group D) have also been identified in the eastern third of the property, where a total of 15 homes and an internal roadway are proposed. These soil types could worsen existing drainage issues.

- Limit removal of trees. Removal of trees in certain areas along the far southern corner of the property could worsen drainage issues. Tree removal is proposed in areas that likely contain poorly drained soils (Lots 17 – 24).

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream or create any off-site drainage problems downstream due to increases in stormwater.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/

Special Considerations for Stormwater Management
The preliminary plan proposes a stormwater management facility to be placed on the highest elevation of the site at the center of the development.

- It is recommended to work with the Sussex Conservation District to locate a more appropriate location for the stormwater management facility while considering the most suitable outlet.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219.
Website: https://www.sussexconservation.org/
General Stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

Wetlands and Vegetated Buffer Zones
Maps from the Statewide Wetlands Mapping Project indicate the potential presence of forested wetlands on the northeastern and far southern portion of the site. This habitat type is known to support an array of plants and animals, most notably wetland dependent species such as amphibians.

- While no disturbance is proposed directly to wetland areas, it is recommended to increase the vegetated buffer zone to 100 feet from the edge of wetlands and sensitive habitats across the site.

- Vegetated buffer zones placed adjacent to waterways and wetlands help improve water quality by reducing sediment and pollutants loads, and in this case will help to buffer against flooding. Vegetated buffers are not equivalent to setbacks, as residential lots, walkways, and stormwater management facilities should not be contained within the vegetated buffer zone.

- Vegetated buffer zones should be left undisturbed during construction and should be identified outside of the Limit of Disturbance on the engineering plans. In some instances, stormwater outfalls, conveyances, and emergency spillways may cross through these zones, and will require temporary disturbance during construction.

- Maintain vegetated buffer zones as either grasslands/meadows or forest. Buffer zones should be planted exclusively with native trees and plants. Native plants are well-suited to our climate and require limited maintenance. They also provide an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Grass cutting for vegetated buffer zones, if maintained as meadow, should not occur between April 1st to July 31st to reduce impacts to nesting birds and other wildlife species that utilize meadows and grasslands for breeding habitat.

- Design the project to exclude curbs. If road curbing is part of the design, select curbing that allows small animals, such as turtles and salamanders, to climb out of the roadbed (Type 2 or Cape Cod curbing).

- Use wide, open bottom box culverts to allow for passage of amphibians.

- Maintain habitat connections to undeveloped open space, which are especially important for species movement across the landscape.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600. Website: https://dnrec.delaware.gov/fish-wildlife/conservation/

Sustainable Practices

- To improve public safety and the wellbeing of future residents, follow all recommendations above regarding flooding and sea level rise.

- Avoid clearing of trees and consider planting stands of native trees. Native trees improve air, water, and soil quality. Planting and nurturing trees is also a nature-based solution to reducing the greenhouse gases that drive climate change. In addition, native

trees have an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Offer the option to install solar energy systems for each home. This allows a purchaser to incorporate the cost into their mortgage, making it more affordable. For community facilities, such as the proposed amenity area, consider using renewable energy infrastructure, like solar, to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available for Delmarva Power customers through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities (https://dnrec.delaware.gov/climate-coastal-energy/renewable/assistance/).

- Use efficient Energy Star rated products and materials in construction and redevelopment. Energy efficient appliances use less energy over time. This saves consumers and businesses money, while also helping to reduce pollution from power generation.

- Use structural paint coatings that are low in Volatile Organic Compounds to help protect air quality. Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers.

- Use recycled materials, such as reclaimed asphalt pavement, to reduce heat island effects on paved surfaces, prevent landfill waste, and lower material costs.

Contact: DNREC Division of Climate, Coastal & Energy at (302) 735-3480.
Website: https://dnrec.delaware.gov/climate-coastal-energy/

Concerns Identified Outside of the Development Footprint
Sea level rise along Hickman Road is anticipated impede travel to and from the development, starting at the 3-foot inundation level. This is projected to occur before the end of the century according to current models.

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

Population

- The county has a population density of 265.60 per square mile based on the US 2020 Census report; an increase from 2010 at 208.90 persons per square mile. The specific census block(s) the project is located on has a total population of 131, though, with development, this will undoubtedly change. The 9 adjacent blocks aggregated bring the area to a total population of 596.

FEMA National Risk Index

- The FEMA National Risk Index is an online mapping application that identifies communities most at risk to 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hal, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather. The FEMA National Risk Index is calculated by multiplying the Expected Annual Loss times the Social Vulnerability and dividing that by the Community Resilience.

- According to FEMA's National Risk Index, the parcel **is** considered **relatively moderate** for overall natural hazards risks.

- Community Resilience is a consequence reduction risk component and a community risk factor that represents the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions and withstand/recover rapidly from disruptions. Social Vulnerability is a consequence-enhancing risk factor that represents the susceptibility of social groups to the adverse impacts of natural hazards.

- Its community resilience is rated as **relatively moderate** whereas its social vulnerability is rated at **relatively low.**

Renewable Energy Commitment

- Regarding energy use and consumption, the census tract utilizes **electricity** as the predominant fuel type for heating purposes, though oil and propane gas come in a close second and third respectively.

- DEMA strongly encourages the use of renewable energies and high-efficiency appliances and utilities. Regarding utilities, DEMA suggests incorporating 90% series furnaces/HVAC systems; the closer to 99%, the better, as well as A/C units of 20 Seer or greater. DEMA recommends using tankless water heaters, and battery backup systems for sump pumps to reduce potential water damage from power failure. Lastly, DEMA encourages the integration of modern and emerging technologies, such as the potential for electric vehicles in garages/parking lots, green roofs or solar panels where applicable and allowable, and the like.

- In reference to the floodplain, it seems several of the lots are being built directly within a 100-year flood plain. DEMA strongly discourages construction of any type directly within a 100-year floodplain. If the homes are being constructed at flood level or below and a mortgage is obtained, an NFIP insurance policy is also required. Furthermore, there are additional lots in close proximity to the floodzone. In reference to those lots, DEMA does not recommend construction within close proximity to a floodplain as water knows no bounds. Regardless of whether within or adjacent to a floodplain, should construction continue, we recommend utilizing additional mitigation strategies to reduce the risk. This could include, but isn't limited to, wet/dry floodproofing, elevating the home out of the flood plain, elevating mechanicals/HVAC/Electricity out of the flood waters, mass notification systems, large drainage systems (increased diameter pipes, ditches, basins, etc.) and other similar methods.

- Lastly, in reference to the evacuation zone, DEMA recommends the zone's designation and the information behind it be made readily available to all persons on the parcel, which can be done by simply placing a sign or having pamphlets readily accessible.

Delaware State Housing Authority - Contact Alex Modeas 952-255-9579 ext. 251

- This conditional use proposal is for 55 market-rate condominium ownership units in single-family structures on 12.8 acres south of Hickman Road and east of Cedar Neck Road east of the Town of Ocean View.

- According to DSHA's Housing Reform Map, this parcel is in an Area of Opportunity. This means that this area has high-quality schools, supportive infrastructure, and the capacity to support diverse and affordable housing types. The applicant stated that he anticipates occupants to be both permanent residents and vacationers. Research from across the country has shown that the conversion of residential units into short-term rentals can result in less availability of affordable housing options and higher rents for long-term renters in the community. We encourage the developer to exercise awareness related to how increased vacation units can exacerbate concerns of affordability and sprawl in eastern Sussex County.

- DSHA takes this opportunity to highlight the critical need for affordable housing in this area. According to the U.S. Department of Housing and Urban Development (HUD), zero of the 2,616 housing units recorded in Ocean View in 2020 are affordable for households earning less than 80% of the Median Family Income (MFI). DSHA encourages residential developers to sustainably build housing units in eastern Sussex County that are affordable to low-to-moderate income households.

If you have questions or would like more information on the above recommendations, please feel free to call me at ext. 302-574-3656 or via e-mail at Alexander.Modeas@delaware.gov

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394
Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

The Agency would prefer to review the pool and clubhouse as a separate submittal. Using a future phase option on the original shows the place holder for the amenity.

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

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

Sincerely,

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

Attachments:

- Sussex County Planning & Zoning Comments
- Sussex County Housing & Community Development Comments
- Sussex Engineering Comments

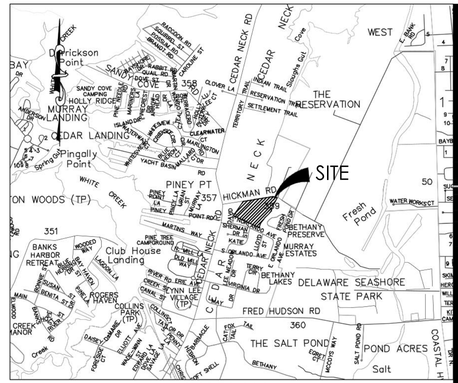
LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
EASEMENT		
R.O.W. LINE		
IRON PIPE FOUND	IPF	N/A
CONCRETE MONUMENT FOUND	CMF	N/A
IRON ROD & CAP FOUND	IRCF	N/A
IRON ROD & CAP SET	IRCS	N/A
BENCH MARK	BM	N/A
SPOT ELEV. LABEL	+19.25	N/A
MAJOR CONTOUR	-5-	-5-
MINOR CONTOUR	-1-	-1-
ROAD CENTERLINE		
CURB	N/A	
PAVEMENT		
CONCRETE		N/A
GRAVEL		N/A
BUILDING OUTLINE		
BUILDING HATCH		
SIDEWALK		
FENCE LINE	X	X
SIGN		N/A
MAILBOX		N/A
EDGE OF POND	N/A	
WETLANDS		N/A
FLOOD PLAIN		N/A
CATCH BASIN	N/A	
STORM DRAIN MANHOLE	N/A	D
STORM PIPE		SD
CENTERLINE OF DITCH		N/A
SANITARY MANHOLE	S	S
SANITARY CLEANOUT	C/O	C/O
SANITARY PIPE	SS	SS
FORCE MAIN	FM	N/A
WATER VALVE	WV	N/A
WATER PIPE	W	W
FIRE HYDRANT		
OVERHEAD ELECTRIC	E	N/A
UTILITY POLE		N/A
ELECTRIC SERVICE BOX	ELEC	N/A
GUY WIRE		N/A
TELEPHONE PEDESTAL	T	N/A
DECIDUOUS TREE		N/A
CONIFEROUS TREE		N/A
TREE LINE		
RESOURCE BUFFER A	N/A	
RESOURCE BUFFER B	N/A	
GROUNDWATER RECHARGE LIMITS		N/A

CONDITIONAL USE SITE PLAN
FOR
HICKMAN

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

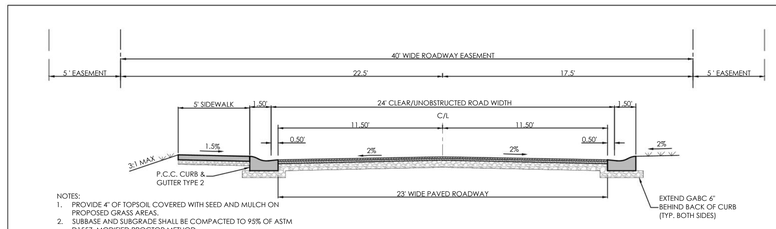
SITE
SCALE: 1"=150'



KEY PLAN
SCALE: 1"=2000'

SITE DATA:

- OWNER: THOMAS R. MULLEN, TRUSTEE
  16301 CAMDEN LAKES CIRCLE
  NAPLES, FL 16301
- DEVELOPER: FOXLANE HOMES DELAWARE, LLC
  32191 NASSAU ROAD, #2
  LEWES, DE 19958
  CONTACT: JOHN MURRAY
- ENGINEER/ LAND PLANNER: SOLUTIONS IPEM, LLC
  303 NORTH BEDFORD STREET
  GEORGETOWN, DE 19947
  PHONE: 302.297.9215
  CONTACT: JASON PALKEWICZ, PE
- TAX MAP 134-9.00-28.00
  DEED REFERENCE: 5294/107
- EXISTING ZONING: MR (MEDIUM RESIDENTIAL DISTRICT)
- MR SETBACKS (FOR MUTLIFAMILY STRUCTURES OF 2 OR MORE UNITS SHARING A COMMON WALL)
  FRONT: 40' (AGGREGATE FRONT + REAR)
  SIDE: 10'
  REAR: 10'
- PROPOSED ZONING: MR WITH A CONDITIONAL USE
- MAX. BUILDING HEIGHT = 42'
- NO WELLHEAD PROTECTION AREAS LOCATED ON THE SITE.
- THE SITE IS LOCATED WITHIN EXCELLENT AND GOOD GROUNDWATER RECHARGE AREAS (NO DEVELOPMENT IN EXCELLENT GROUNDWATER RECHARGE AREA).
- SOIL TYPES
  AsA - ASKECKSY LOAMY SAND - HYDROLOGIC SOIL GROUP A/D
  IeB - INGLESIDE LOAING SAND - HYDROLOGIC SOIL GROUP A
  RuB - RUNCLINT LOAMY SAND - HYDROLOGIC SOIL GROUP A
- PROPERTY IS LOCATED IN FLOOD ZONE AE (EL 6 & EL7) - SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD AND FLOOD ZONE X (UNSHADED) - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, PER FIRM MAP NUMBER 10005C0504K, MAP REVISED MARCH 16, 2015.
- BOUNDARY AND TOPOGRAPHY AS SHOWN HEREON ARE AS PROVIDED BY SOLUTIONS IPEM LLC
- ANTICIPATED WATER SUPPLY:
  SUSSEX SHORES WATER COMPANY
- ANTICIPATED SANITARY SEWER:
  SUSSEX COUNTY UNIFIED SANITARY SEWER DISTRICT
- TIDAL WETLANDS AREA = 0.045 AC.± (2087.9 S.F.)
- NON-TIDAL WETLANDS AREA = 0.071 AC.± (3108.8 S.F.)
- PARCEL AREA = 13.481 AC.±
  ALLOWABLE NET DENSITY = 12 DU/AC
  161 UNITS PERMITTED
- PROPOSED UNITS:
  SINGLE FAMILY HOMES = 54
  NET DENSITY = 4.00 DU/AC
- PROPOSED BEDROOM/GARAGE SPACE COUNTS:
  HOME TYPE A: 2/1
  HOME TYPE B: 3/1
  HOME TYPE C: 4/2
  HOME TYPE D: 3/2
- AREAS:
  AMENITY PARCEL = 0.253 AC.±
  DELDOT R.O.W.= 0.672 AC.±
  OPEN SPACE AREA = 5.801 AC.± (43% ±)
  EXISTING WOODS: 2.694 AC.±
  WOODS TO BE REMOVED = 1.196 AC.± (44%)
  WOODS TO REMAIN = 1.498 AC.± (56%)
- ANY ACCESSORY STRUCTURES SHALL BE SUBJECT TO A SEPARATE SITE PLAN REVIEW PER (§115-188(E)(3)).
- THE AMENITY AREA SHALL BE CONSTRUCTED AND OPEN TO USE BY THE RESIDENTS OF THE DEVELOPMENT BEFORE THE ISSUANCE OF THE RESIDENTIAL BUILDING PERMIT REPRESENTING 60% OF THE TOTAL RESIDENTIAL BUILDING PERMITS FOR THE DEVELOPMENT.



NOTES:
1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.

RESIDENTIAL STREET TYPICAL SECTION
NOT TO SCALE

THERE SHALL BE NO CLEARING OR ACCESSORY STRUCTURES LOCATED OUTSIDE THE LIMITS OF THE LIMITED COMMON ELEMENT AREA.

LIMITED COMMON ELEMENTS AREAS
1"=50'

NOTES:

1. DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL WORK MUST BE PERFORMED IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
2. EXISTING CONTOURS, WETLANDS, AND OTHER FEATURES SHOWN HEREON ARE PROVIDED BY SOLUTIONS IPEM LLC
3. STORMWATER WILL BE HANDLED ONSITE AND WILL MEET THE CURRENT STATE OF DELAWARE REGULATIONS. ALL STORMWATER FACILITIES WILL BE PRIVATE AND MAINTAINED BY THE DEVELOPER UNTIL A HOMEOWNERS ASSOCIATION CAN ASSUME OWNERSHIP AND RESPONSIBILITY FOR THE STORMWATER FACILITIES.
4. ALL INTERNAL ROADWAYS AND SIDEWALKS ARE "PRIVATE" AND WILL BE MAINTAINED BY THE DEVELOPER UNTIL A HOMEOWNERS OR CONDOMINIUM ASSOCIATION CAN ASSUME OWNERSHIP AND RESPONSIBILITY FOR THE ROADWAYS AND SIDEWALKS.
5. FOR ANY NEW DEVELOPMENT LOCATED IN WHOLE OR IN PART WITH 50 FEET OF THE BOUNDARY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES, NO IMPROVEMENT REQUIRING AN OCCUPANCY APPROVAL FOR A RESIDENTIAL TYPE USE SHALL BE CONSTRUCTED WITHIN 50 FEET OF THE BOUNDARY OF THE LANDS USED PRIMARILY FOR AGRICULTURAL PURPOSES.
6. RIGHT-OF-WAYS SHALL HAVE 5' WIDE EASEMENTS ALONG BOTH SIDES.
7. A DRAINAGE ASSESSMENT REPORT ENTITLED (*HICKMAN ROAD PROPERTY*) HAS BEEN PREPARED BY GEO-TECHNOLOGY ASSOCIATES, INC. (GTA), DATED JULY 10, 2026.

SHEET INDEX

1 COVER SHEET
2 EXISTING CONDITIONS
3 CONDITIONAL USE SITE PLAN
4 BULK GRADING PLAN
5 RESOURCE BUFFER MANAGEMENT PLAN

REVISIONS

NO.	DATE	DESCRIPTION
1	8/12/25	PLAN UPDATE BASED ON CEMETERY AND WETLANDS
2	6/16/26	REVISED PER PZ COMMENTS DATED 6-10-26

solutions
Integrated Planning & Engineering Management, LLC
303 North Bedford Street
Georgetown, DE 19947
T. 302.297.9215
3003 Merritt Mill Road
Salisbury, MD 21804
T. 410.572.8833
www.solutionsipem.com

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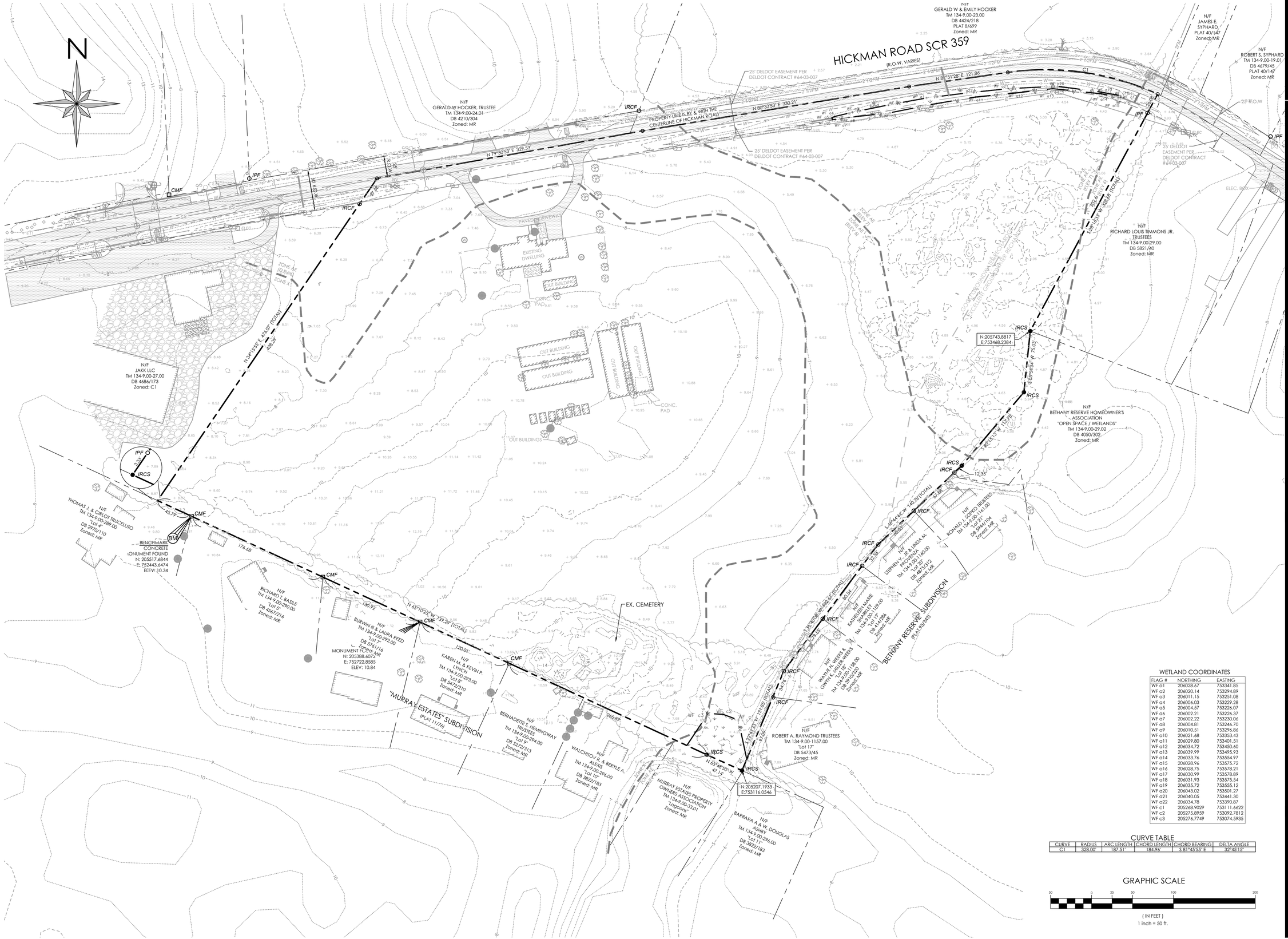
CONDITIONAL USE COVER SHEET
for
HICKMAN
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	7/9/24
Job Number:	G24006
Scale:	AS NOTED
Drawn By:	MIL
Designed By:	JP
Approved By:	JP

Sheet No.: 1

File Name: 24006-cond-cover



WETLAND COORDINATES

FLAG #	NORTHING	EASTING
WF a1	206028.67	753341.85
WF a2	206020.14	753294.89
WF a3	206011.15	753251.08
WF a4	206006.03	753229.28
WF a5	206004.57	753226.07
WF a6	206002.21	753226.37
WF a7	206002.22	753230.06
WF a8	206004.81	753246.70
WF a9	206010.51	753296.86
WF a10	206021.68	753353.43
WF a11	206029.80	753401.51
WF a12	206034.72	753450.60
WF a13	206039.99	753495.93
WF a14	206033.76	753554.97
WF a15	206028.96	753575.72
WF a16	206028.75	753578.21
WF a17	206030.99	753578.89
WF a18	206031.93	753575.54
WF a19	206035.72	753555.12
WF a20	206043.02	753501.27
WF a21	206040.05	753441.30
WF a22	206034.78	753390.87
WF c1	205268.9029	753111.6622
WF c2	205275.8959	753092.7812
WF c3	205276.7749	753074.5935

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	328.00'	187.51'	184.96'	S 81°45'55" E	32°45'15"

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

solutions
303 North Bedford Street
Georgetown, DE 19947
T. 302.297.9215

3003 Merrift Mill Road
Salisbury, MD 21804
T. 410.572.8833

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REVISIONS

NO.	DATE	DESCRIPTION
1	8/12/25	PLAN UPDATE BASED ON CEMETERY AND WETLANDS
2	6/16/26	REVISED PER PZ COMMENTS DATED 6-10-26

EXISTING CONDITIONS

for

HICKMAN

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	7/9/24
Job Number:	G24006
Scale:	1"=50'
Drawn By:	MJL
Designed By:	JP
Approved By:	JP

Sheet No.: 2

File Name: 24006-EXST-SITE

NOTES:
1. 20' WIDE RESOURCE BUFFER ACCESS EASEMENT.

N

HICKMAN ROAD SCR 359
(R.O.W. VARIES)

N/F
GERALD W & EMILY HOCKER
TM 134-9.00-23.00
DB 4424/218
PLAT 8/699
Zoned: MR

N/F
JAMES E. SYPHARD
PLAT 40/147
Zoned: MR

N/F
GERALD W HOCKER, TRUSTEE
TM 134-9.00-24.01
DB 4210/304
Zoned: MR

50' WIDE RESOURCE BUFFER A

50' WIDE RESOURCE BUFFER B

TIDAL WETLAND

BUS STOP

10' MIN. (TYP.)

ROAD A
40' PRIVATE EASEMENT

ROAD B
40' PRIVATE EASEMENT

ROAD C
40' PRIVATE EASEMENT

OPEN SPACE A
1.280 AC.±

POOL, BATHROOMS, POOL EQUIPMENT AND MAILBOX FACILITY

SWM

OPEN SPACE B
4.521 AC.±

SWM

N/F
RICHARD LOUIS TIMMONS JR. TRUSTEES
TM 134-9.00-29.00
DB 5821/40
Zoned: MR

N/F
JAKK LLC
TM 134-9.00-27.00
DB 4686/173
Zoned: C1

20' WIDE PROPOSED VEGETATED BUFFER (TYP.)

N/F
BETHANY RESERVE HOMEOWNER'S ASSOCIATION
"OPEN SPACE / WETLANDS"
TM 134-9.00-29.02
DB 4050/302
Zoned: MR

20' WIDE PROPOSED VEGETATED BUFFER (TYP.)

N/F
THOMAS J. & CIRLOT TRUCELLITO
TM 134-9.00-289.00
1 Lot 2
DB 2970/110
Zoned: MR

N/F
RICHARD T. BASILE
TM 134-9.00-290.00
1 Lot 2
DB 4467/214
Zoned: MR

N/F
BURWIN III & LAURA REED
TM 134-9.00-292.00
1 Lot 2
DB 5761/16
Zoned: MR

N/F
KAREN M. & KEVIN P. LYNCH
TM 134-9.00-293.00
1 Lot 2
DB 5477/210
Zoned: MR

"MURRAY ESTATES" SUBDIVISION
(PLAT 11/76)

PROVIDE FENCE AROUND EX. CEMETERY

N/F
BERNADETTE S. HEMINGWAY TRUSTEE
TM 134-9.00-294.00
1 Lot 2
DB 5272/313
Zoned: MR

N/F
WALCHITOV R. & BERYLE A. ALEXIS
TM 134-9.00-296.00
1 Lot 10
DB 3822/183
Zoned: MR

15' WIDE RESOURCE BUFFER B

15' WIDE RESOURCE BUFFER A

NOTE 1

NON-TIDAL WETLAND

N/F
ROBERT A. RAYMOND TRUSTEES
TM 134-9.00-1157.00
1 Lot 17
DB 5473/45
Zoned: MR

N/F
MURRAY ESTATES PROPERTY OWNERS ASSOCIATION
TM 134-9.00-33.01
1 Common
Zoned: MR

N/F
BARBARA A & W. DOUGLAS ASHBY
TM 134-9.00-296.00
1 Lot 11
DB 3822/183
Zoned: MR

N/F
WAYNE A. WEEKS & GWYNN L. MILLER-WEEKS
TM 134-9.00-11.58.00
1 Lot 16
DB 3910/0000
Zoned: MR

"BETHANY RESERVE" SUBDIVISION
(PLAT 95/340)

N/F
KATHLEEN MARIE SPARKS
TM 134-9.00-1159.00
1 Lot 19
DB 4472/86
Zoned: MR

N/F
STEPHEN V. JR. & LINDA M. PROVENZA
TM 134-9.00-1160.00
1 Lot 18
DB 4852/312
Zoned: MR

N/F
RONALD J. SOPKO TRUSTEES
TM 134-9.00-1161.00
1 Lot 17
DB 5364/1104
Zoned: MR

ZONE AE (ELEV 8) ZONE X

ZONE AE (ELEV 7) ZONE X (ELEV 8)

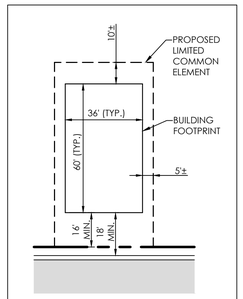
ZONE AE (ELEV 8) ZONE X (ELEV 9)

EXCELLENT GROUNDWATER RECHARGE

RESOURCE BUFFER TABLE

	REQUIRED	PROPOSED
RESOURCE BUFFER A	13,781.3 S.F.	13,781.3 S.F.
RESOURCE BUFFER B	24,526.5 S.F.	24,526.5 S.F.

TYPICAL UNIT LAYOUT DETAIL
N.T.S.



GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

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REVISIONS

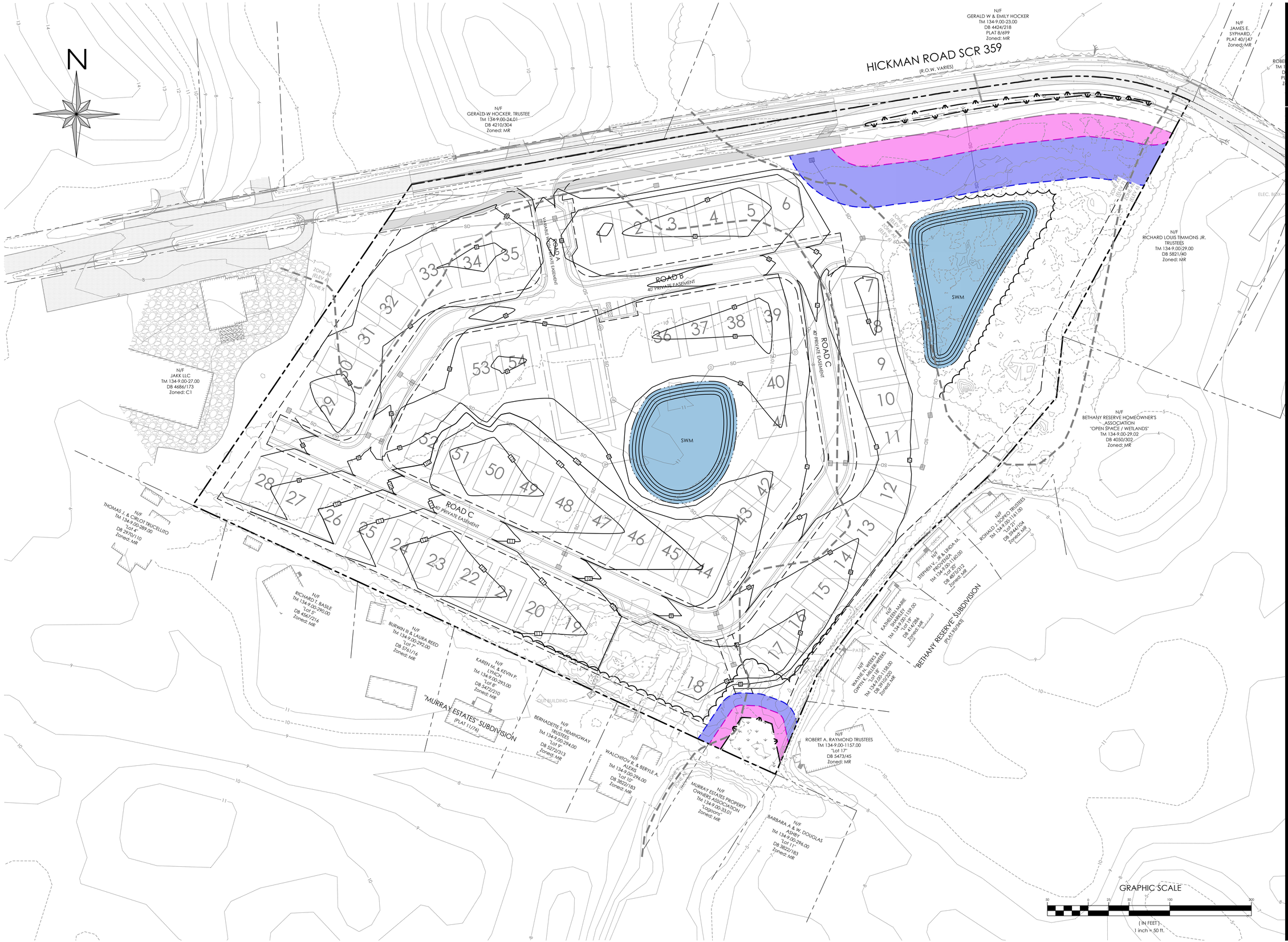
NO.	DATE	DESCRIPTION
1	8/12/25	PLAN UPDATE BASED ON CEMETERY AND WETLANDS
2	6/16/26	REVISED PER PZ COMMENTS DATED 6-10-26

CONDITIONAL USE SITE PLAN
for
HICKMAN
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	7/9/24
Job Number:	G24006
Scale:	1"=50'
Drawn By:	MIL
Designed By:	JP
Approved By:	JP

Sheet No.: 3

File Name: 24006-cond-SITE



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REVISIONS

NO.	DATE	DESCRIPTION
1	8/12/25	PLAN UPDATE BASED ON CEMETERY AND WETLANDS
2	6/16/26	REVISED PER PZ COMMENTS DATED 6-10-26

BULK GRADING PLAN
for
HICKMAN
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	7/9/24
Job Number:	G24006
Scale:	1"=50'
Drawn By:	ML
Designed By:	JP
Approved By:	JP

Sheet No.: 3

File Name: 24006-cond-SITE

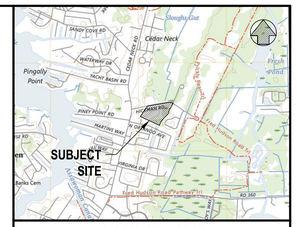
PR. RESOURCE BUFFER A (TYP.)

HICKMAN ROAD

EX. TIDAL WETLAND (TYP.)

EX. NONTIDAL WETLAND (TYP.)

PR. RESOURCE BUFFER B (TYP.)



VICINITY MAP

SCALE: 1" = 2,000'

UNITED STATES GEOLOGICAL SURVEY, BETHANY BEACH, DE QUADRANGLE, 7.5 MINUTE TOPOGRAPHIC MAP SERIES, DATED 2023.

GENERAL INFORMATION

1. PLAN PREPARED FOR: FOXLANE HOMES DELAWARE, 32191 NASSAU ROAD #2, LEWES, DELAWARE 19958, ATTN: JOHN MURRAY

2. PLAN PREPARED BY: GEO-TECHNOLOGY ASSOCIATES, INC. (GTA), 3445-A BOX HILL CORPORATE CENTER DRIVE, ABINGDON, MARYLAND 21009, ATTN: MS. KIMBERLEY MCNEW, PHONE: 410-515-9446, EMAIL: KMCNEW@GTAENG.COM

3. THE SUBJECT SITE ENCOMPASSES APPROXIMATELY 12.86 ACRES AND IS LOCATED AT 38492 HICKMAN ROAD IN THE OCEAN VIEW AREA OF SUSSEX COUNTY, DELAWARE. THE SUBJECT SITE IS IDENTIFIED AS TAX PARCEL 134-9.00-28.00.

4. THIS PLAN WAS PRODUCED ON A BASE MAP PROVIDED BY SOLUTIONS IPEM, LLC. EXISTING TOPOGRAPHIC INFORMATION SHOWN HEREON WAS PROVIDED BY SOLUTIONS IPEM, LLC AND SUSSEX COUNTY GIS.

5. ACCORDING TO FEMA FIRM MAP NUMBER 10005C0504K, EFFECTIVE MARCH 16, 2015, PORTIONS OF THE SUBJECT SITE ARE LOCATED WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN.

6. A WETLAND DELINEATION OF THE SUBJECT SITE WAS PERFORMED BY WATERSHED ECO, LLC IN APRIL 2024. WETLAND FLAG LOCATIONS WITHIN THE SUBJECT SITE WERE SURVEY LOCATED BY SOLUTIONS IPEM, LLC. A JURISDICTIONAL DETERMINATION WAS ISSUED BY THE U.S. ARMY CORPS OF ENGINEERS ON FEBRUARY 6, 2026 (NAP-2026-00032-103).

7. GTA PERFORMED A DRAINAGE ASSESSMENT IN JULY 2024 TO REVIEW EXISTING DRAINAGE CONVEYANCES WITHIN THE SUBJECT SITE TO EVALUATE THEIR CONDITION AND IDENTIFY IMPEDIMENTS IN GENERAL ACCORDANCE WITH THE CODE OF SUSSEX COUNTY, CHAPTER 115, ARTICLE XXV §115-193.

8. THIS PLAN WAS PREPARED BY GTA FOR THE SOLE AND EXCLUSIVE USE OF FOXLANE HOMES DELAWARE. ANY REPRODUCTION OF THIS PLAN BY ANY OTHER PERSON WITHOUT THE EXPRESSED WRITTEN PERMISSION OF GTA AND FOXLANE HOMES DELAWARE IS UNAUTHORIZED, AND SUCH USE IS AT THE SOLE RISK OF THE USER.

ARTICLE XXV §115-193(A(4)) RESOURCE BUFFER MARKERS

9. SIGNAGE, AS DISPLAYED ON THE RESOURCE BUFFER MANAGEMENT PLAN, WILL BE INSTALLED EVERY 100 FEET WITH THE TEXT FACING AWAY FROM THE RESOURCE BUFFER AREA.

ARTICLE XXV §115-193(B) RESOURCE BUFFER AVERAGING

10. RESOURCE BUFFERS ARE LISTED ON THE FINAL SITE PLAN AS "RESOURCE BUFFER A" AND "RESOURCE BUFFER B." ACCESS TO RESOURCE BUFFERS WILL BE PROVIDED BY RIGHT-OF-WAYS AND EASEMENTS.

11. RESOURCE BUFFER WIDTH AVERAGING WAS NOT UTILIZED IN THIS PLAN FOR ZONE B. ALL ZONE B AVERAGING IS ACHIEVED WITHIN THE PROPOSED BOUNDARIES.

ARTICLE XXV §115-193(C) PERMITTED ACTIVITIES

12. PERMITTED ACTIVITIES WITHIN THE RESOURCE BUFFER CAN BE FOUND WITHIN SUSSEX COUNTY CODE ARTICLE XXV §115-193C.

ARTICLE XXV §115-193(D) RESOURCE BUFFER STANDARDS

13. THE RESOURCE BUFFERS WITHIN THE SUBJECT SITE CONTAIN NATURAL FORESTS WHICH WILL BE MAINTAINED BY THE HOMEOWNERS' ASSOCIATION. THE FOREST WILL BE PRESERVED, PROTECTED, AND MAINTAINED IN ITS NATURAL STATE.

14. NONFOREST MEADOWS DO NOT EXIST WITHIN THE RESOURCE BUFFERS WITHIN THE SUBJECT SITE. IF CONDITIONS CHANGE AND THESE AREAS DEVELOP WITHIN A RESOURCE BUFFER, THEY SHOULD BE ALLOWED TO RETURN TO A FORESTED STATE.

15. GRAZED PASTURES, MANAGED TURF, ACTIVE CROPLAND, OR AREAS OF BARE EARTH NOT STABILIZED WITH VEGETATIVE COVER DO NOT EXIST WITHIN THE RESOURCE BUFFERS WITHIN THE SUBJECT SITE. IF CONDITIONS CHANGE AND THESE AREAS DEVELOP WITHIN A RESOURCE BUFFER, THEY SHOULD BE ALLOWED TO RETURN TO A FORESTED STATE.

ARTICLE XXV §115-193(E) INVASIVE SPECIES

16. INVASIVE SPECIES, IF OBSERVED, MAY BE REMOVED BY A QUALIFIED PROFESSIONAL.

ARTICLE XXV §115-193(F) MAINTENANCE OF DRAINAGE CONVEYANCES

17. DRAINAGES WITHIN THE SUBJECT SITE ARE POSITIVE CONVEYANCES AND DO NOT REQUIRE RESTORATION IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE, AND COUNTY REQUIREMENTS. DRAINAGES LOCATED WITHIN THE DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT) RIGHT OF WAY EASEMENT SHALL BE MAINTAINED BY DELDOT.

ARTICLE XXV §115-193(H) RESOURCE BUFFER MAINTENANCE AND MANAGEMENT

18. THE DEVELOPMENT WITHIN THE SUBJECT SITE REQUIRES RESOURCE BUFFERS FROM NON-TIDAL WETLANDS. THE REQUIREMENTS FOR RESOURCE BUFFERS HAVE BEEN MET BY PRESERVING EXISTING NATURAL FOREST. NO ADDITIONAL PLANTINGS ARE REQUIRED.

19. THE HOMEOWNERS' ASSOCIATION WILL BE RESPONSIBLE FOR PRESERVING AND MAINTAINING THE EXISTING NATURAL FOREST IN THE BUFFER AREAS. GTA RECOMMENDS ANNUAL EVALUATIONS OF THE RESOURCE BUFFERS BY QUALIFIED PROFESSIONALS. THE DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT) SHALL BE RESPONSIBLE FOR THE RESOURCE AND RESOURCE BUFFERS LOCATED WITHIN THE DELDOT RIGHT OF WAY EASEMENT.

20. PERMITTED ACTIVITIES WITHIN THE RESOURCE BUFFER CAN BE FOUND WITHIN SUSSEX COUNTY CODE ARTICLE XXV §115-193C.

21. THE RESOURCE BUFFERS IDENTIFIED ON THE SUBJECT SITE SHALL BE DESIGNATED AS ACCESS EASEMENTS AS STATED IN SUSSEX COUNTY CODE ARTICLE XXV §115-193F(1). THESE EASEMENTS WILL EXIST AS LONG AS THE BUFFER IS REQUIRED. EASEMENTS WILL BE MAINTAINED BY THE DEVELOPER AND THE HOMEOWNERS' ASSOCIATION FOR EASE OF MAINTENANCE ACCESS.

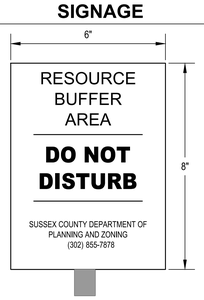
ARTICLE XXV §115-193(4K) MODIFICATIONS AND EXCEPTIONS, REQUIREMENTS, VIOLATIONS AND PENALTIES

22. THE REQUIREMENTS ESTABLISHED BY SUSSEX COUNTY CODE ARTICLE XXV §115-193 HAVE BEEN MET.

23. THIS PROJECT IS CONSIDERED A MAJOR SUBDIVISION AS GOVERNED BY CHAPTER 99 IN THE SUSSEX COUNTY CODE.

24. ANY VIOLATIONS TO THE COVENANT AND RESTRICTIONS PUT INTO PLACE BY THE HOMEOWNERS' ASSOCIATION WILL BE AT THE SOLE RESPONSIBILITY AND EXPENSE OF THE VIOLATING PARTY.

SIGNAGE



NOTES:
SIGNAGE SHOULD BE INSTALLED EVERY 100 FEET WITH THE TEXT FACING AWAY FROM THE RESOURCE BUFFER AREA.

NORTH

0 15' 30' 60'

SCALE: 1"=30'

LEGEND

- EX. SUBJECT SITE
- EX. PROPERTY BOUNDARY
- EX. 1-FOOT CONTOUR
- EX. 5-FOOT CONTOUR
- EX. BUILDING
- EX. EDGE OF PAVEMENT
- EX. EASEMENT
- EX. SOIL BOUNDARY
- EX. TREE LINE
- EX. FEMA 100-YEAR FLOODPLAIN
- EX. NONTIDAL WETLAND
- EX. TIDAL WETLAND
- EX. CULVERT
- PR. FENCE
- PR. EASEMENT
- PR. ROAD EDGE
- PR. STORM DRAIN
- PR. TREE LINE
- PR. SEWER LINE
- RESOURCE BUFFER A
- RESOURCE BUFFER B
- PR. STORMWATER POND

SOILS CHART

SYMBOL[1]	NAME/DESCRIPTION[1]	HYDRIC SOIL[2]	HYDRIC COMPONENT[2]	PERCENTAGE OF MAPPING UNIT[2]	POSITION IN LANDSCAPE[2]
AsA	ASKECKSY LOAMY SAND, 0-2% SLOPES	YES	HURLOCK, UNDRAINED	10	DEPRESSIONS, SWALES, FLATS
			MULLICA, UNDRAINED	5	SWALES, DRAINAGEWAYS, DEPRESSIONS FLATS
IeB	INGLESIDE LOAMY SAND, 2-5% SLOPES	NO	-	-	-
RuB	RUNCLINT LOAMY SAND, 2-5% SLOPES	YES	HURLOCK, DRAINED	5	FLATS, DEPRESSIONS, SWALES

1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, SUSSEX COUNTY, DELAWARE, SOIL SURVEY DATA VERSION 24, DATED SEPTEMBER 12, 2025.
2. HYDRIC SOILS INFORMATION AVAILABLE FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE SOIL DATA ACCESS HYDRIC SOILS LIST. ACCESSED JULY 22, 2024.

RESOURCE BUFFER TABLE

RESOURCE TYPE	BUFFER TYPE	BUFFER REQUIRED	BUFFER PROVIDED
NON-TIDAL WETLAND	BUFFER A	13,781.3 SF	13,781.3 SF
NON-TIDAL WETLAND	BUFFER B	24,526.5 SF	24,526.5 SF

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM
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RESOURCE BUFFER MANAGEMENT PLAN

HICKMAN ROAD PROPERTY

SUSSEX COUNTY, DELAWARE

REVISIONS:

JOB NO:	31241554
SCALE:	1"=30'
DATE:	JULY 16, 2026
DRAWN BY:	BCW
DESIGN BY:	
REVIEW BY:	MAJ/TAS
SHEET:	1 OF 1

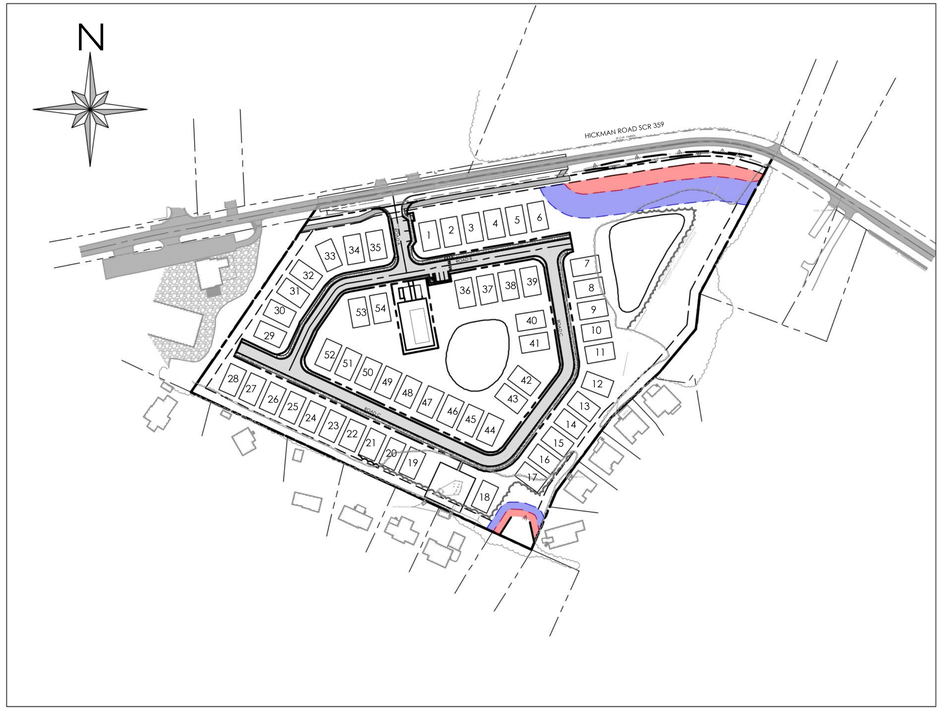
L:\GIS\PROJECT FILES\2024\31241554 - HICKMAN ROAD PROPERTY\MXD\PLOT\31241554 - RBMP REV 2026-07-08.DWG

CONDITIONAL USE PLAN
FOR
HICKMAN

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

LEGEND

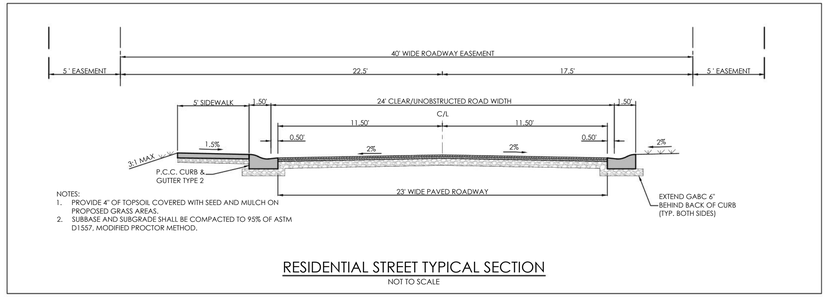
	EXISTING	PROPOSED
PROPERTY LINE		
EASEMENT		
R.O.W. LINE		
IRON PIPE FOUND	IPF	
CONCRETE MONUMENT FOUND	CMF	
IRON ROD & CAP FOUND	IRCF	
IRON ROD & CAP SET	IRCS	
BENCH MARK	BM	
SPOT ELEV. LABEL	+19.25	
MAJOR CONTOUR		
MINOR CONTOUR		
ROAD CENTERLINE		
CURB		
PAVEMENT		
CONCRETE		
GRAVEL		
BUILDING OUTLINE		
BUILDING HATCH		
SIDEWALK		
FENCE LINE	X	X
SIGN		
MAILBOX	MB	
EDGE OF POND		
WETLANDS		
FLOOD PLAIN		
CATCH BASIN		
STORM DRAIN MANHOLE		D
STORM PIPE		SD
CENTERLINE OF DITCH		
RIP RAP		
SANITARY MANHOLE	S	S
SANITARY CLEANOUT	CO	CO
SANITARY PIPE	SS	SS
FORCE MAIN	FM	
SEPTIC TANK	ST	
WATER VALVE	WV	
WATER PIPE	W	W
FIRE HYDRANT		
OVERHEAD ELECTRIC	E	
UTILITY POLE		
ELECTRIC SERVICE BOX	ELEC	
GUY WIRE		
TELEPHONE PEDESTAL	T	
DECIDUOUS TREE		
CONIFEROUS TREE		
TREE LINE		
RESOURCE BUFFER A	N/A	
RESOURCE BUFFER B	N/A	
GROUNDWATER RECHARGE LIMITS		



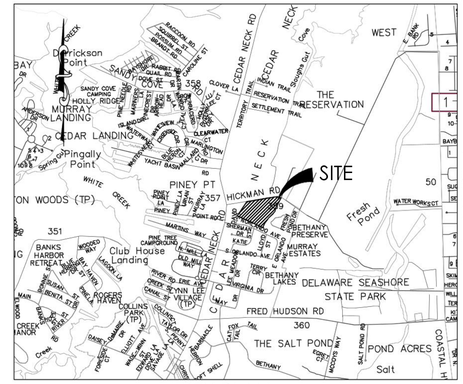
SITE
SCALE: 1"=150'

NOTES:

1. DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL WORK MUST BE PERFORMED IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
2. EXISTING CONTOURS, WETLANDS, AND OTHER FEATURES SHOWN HEREON ARE PROVIDED BY SOLUTIONS IPEM LLC
3. STORMWATER WILL BE HANDLED ONSITE AND WILL MEET THE CURRENT STATE OF DELAWARE REGULATIONS. ALL STORMWATER FACILITIES WILL BE PRIVATE AND MAINTAINED BY THE DEVELOPER UNTIL A HOMEOWNERS ASSOCIATION CAN ASSUME OWNERSHIP AND RESPONSIBILITY FOR THE STORMWATER FACILITIES.
4. ALL INTERNAL ROADWAYS AND SIDEWALKS ARE "PRIVATE" AND WILL BE MAINTAINED BY THE DEVELOPER UNTIL A HOMEOWNERS OR CONDOMINIUM ASSOCIATION CAN ASSUME OWNERSHIP AND RESPONSIBILITY FOR THE ROADWAYS AND SIDEWALKS.
5. FOR ANY NEW DEVELOPMENT LOCATED IN WHOLE OR IN PART WITH 50 FEET OF THE BOUNDARY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES, NO IMPROVEMENT REQUIRING AN OCCUPANCY APPROVAL FOR A RESIDENTIAL TYPE USE SHALL BE CONSTRUCTED WITHIN 50 FEET OF THE BOUNDARY OF THE LANDS USED PRIMARILY FOR AGRICULTURAL PURPOSES.
6. RIGHT-OF-WAYS SHALL HAVE 5' WIDE EASEMENTS ALONG BOTH SIDES.



RESIDENTIAL STREET TYPICAL SECTION
NOT TO SCALE



KEY PLAN
SCALE: 1"=2000'

SITE DATA:

- OWNER: THOMAS R. MULLEN, TRUSTEE
  16301 CAMDEN LAKES CIRCLE
  NAPLES, FL 16301
- DEVELOPER: FOXLANE HOMES DELAWARE, LLC
  32191 NASSAU ROAD, #2
  LEWES, DE 19958
  CONTACT: JOHN MURRAY
- ENGINEER/ LAND PLANNER: SOLUTIONS IPEM, LLC
  303 NORTH BEDFORD STREET
  GEORGETOWN, DE 19947
  PHONE: 302.297.9215
  CONTACT: JASON PALKEWICZ, PE
- TAX MAP 134-9.00-28.00
  DEED REFERENCE: 5294/107
- AREAS:
  TOTAL AREA = 13.481AC±
- PROPERTY IS ZONED MR - MEDIUM RESIDENTIAL
- PROPOSED ZONING: MR W/ CONDITIONAL USE
  MAX. BUILDING HEIGHT = 42'
- NO WELLHEAD PROTECTION AREAS
- EXCELLENT AND GOOD GROUNDWATER RECHARGE AREA. NOT DEVELOPMENT IN EXCELLENT GROUNDWATER RECHARGE AREA.
- SOIL TYPES
  AsA - ASKECKSY LOAMY SAND - HYDROLOGIC SOIL GROUP A/D
  IeB - INGLESIDE LOAING SAND - HYDROLOGIC SOIL GROUP A
  RuB - RUNCLINT LOAMY SAND - HYDROLOGIC SOIL GROUP A
- PROPERTY IS LOCATED IN FLOOD ZONE AE (EL 6 & EL7) - SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD AND FLOOD ZONE X (UNSHADED) - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, PER FIRM MAP NUMBER 10005C0504K, MAP REVISED MARCH 16, 2015.
- BOUNDARY AND TOPOGRAPHY AS SHOWN HEREON ARE AS PROVIDED BY SOLUTIONS IPEM LLC
- ANTICIPATED WATER SUPPLY:
  SUSSEX SHORES WATER COMPANY
- ANTICIPATED SANITARY SEWER:
  SUSSEX COUNTY UNIFIED SANITARY SEWER DISTRICT
- TIDAL WETLANDS AREA = 0.045 AC+/- (2087.9 S.F.)
- NON-TIDAL WETLANDS AREA = 0.071 AC.± (3108.8 S.F.)
- PARCEL AREA = 13.481 AC +/-
  ALLOWABLE NET DENSITY = 13 DU/AC
  156 UNITS PERMITTED.
- PROPOSED:
  TOWNHOMES = 55
  NET DENSITY = 4.08 DU/AC
- AREAS:
  OPEN SPACE AREA = 5 AC ± (39% ±)
  EXISTING WOODS: 2.69 AC.±
  WOODS TO BE REMOVED = 1.19 AC.± (42%)
  WOODS TO REMAIN = 1.50 AC.± (58%)

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Integrated Planning
Engineering & Management, LLC
303 North Bedford Street
Georgetown, DE 19947
T. 302.297.9215
3003 Merritt Mill Road
Salisbury, MD 21804
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JASON PALKEWICZ 21083 DELAWARE 08/16/24

REVISIONS

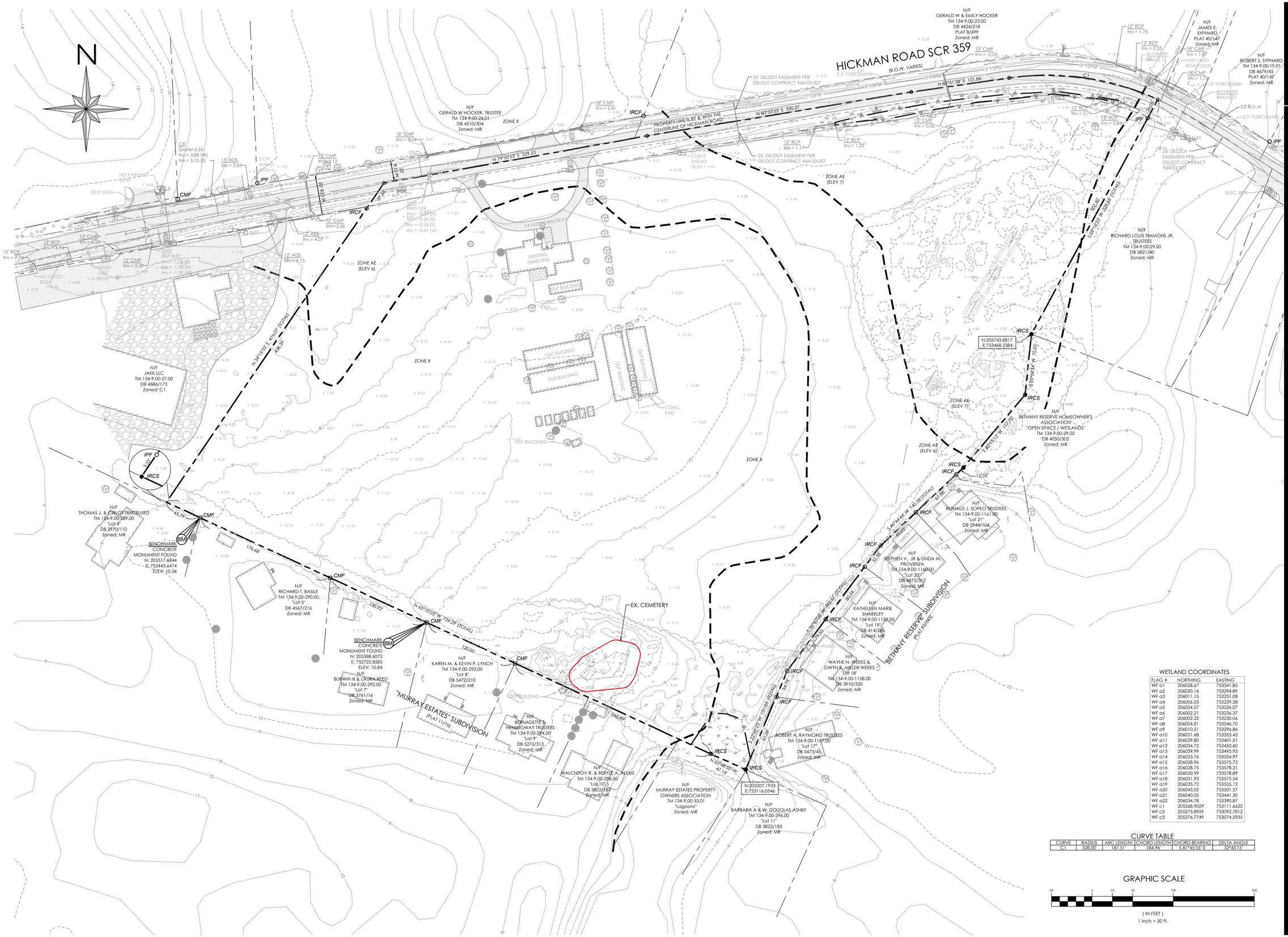
NO.	DATE	DESCRIPTION
1	8/12/25	PLAN UPDATE BASED ON CEMETERY AND WETLANDS

CONDITIONAL USE COVER SHEET
for
HICKMAN
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date: 7/9/24
Job Number: G24006
Scale: AS NOTED
Drawn By: MW
Designed By: JP
Approved By: JP

Sheet No.: 1

File Name: 24006-cond-cove



WETLAND COORDINATES

FLAG #	NORTHING	EASTING
WF a1	206028.67	753341.85
WF a2	206020.14	753294.89
WF a3	206011.15	753251.08
WF a4	206006.03	753229.28
WF a5	206004.57	753226.07
WF a6	206002.21	753226.37
WF a7	206002.22	753230.06
WF a8	206004.81	753246.70
WF a9	206010.51	753276.86
WF a10	206021.68	753353.43
WF a11	206029.80	753401.51
WF a12	206034.72	753450.60
WF a13	206039.99	753495.93
WF a14	206033.76	753554.97
WF a15	206028.96	753575.72
WF a16	206028.75	753578.21
WF a17	206030.99	753578.89
WF a18	206031.93	753575.54
WF a19	206035.72	753555.12
WF a20	206043.02	753501.27
WF a21	206040.05	753441.30
WF a22	206034.78	753390.87
WF c1	205268.9029	753111.6622
WF c2	205275.8959	753092.7812
WF c3	205276.7749	753074.5935

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	328.00'	187.51'	184.96'	S 81°45'55" E	32°45'15"

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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Integrated Planning Engineering & Management, LLC
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T. 302.297.9215
3003 Merrill Mill Road
Salisbury, MD 21804
T. 410.572.8833
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JASON PALKER 21083 7/9/24 PROFESSIONAL ENGINEER

REVISIONS NO.	DATE	DESCRIPTION
1	8/12/25	PLAN UPDATE BASED ON CEMETERY AND WETLANDS

CONDITIONAL USE EXISTING CONDITIONS PLAN

for

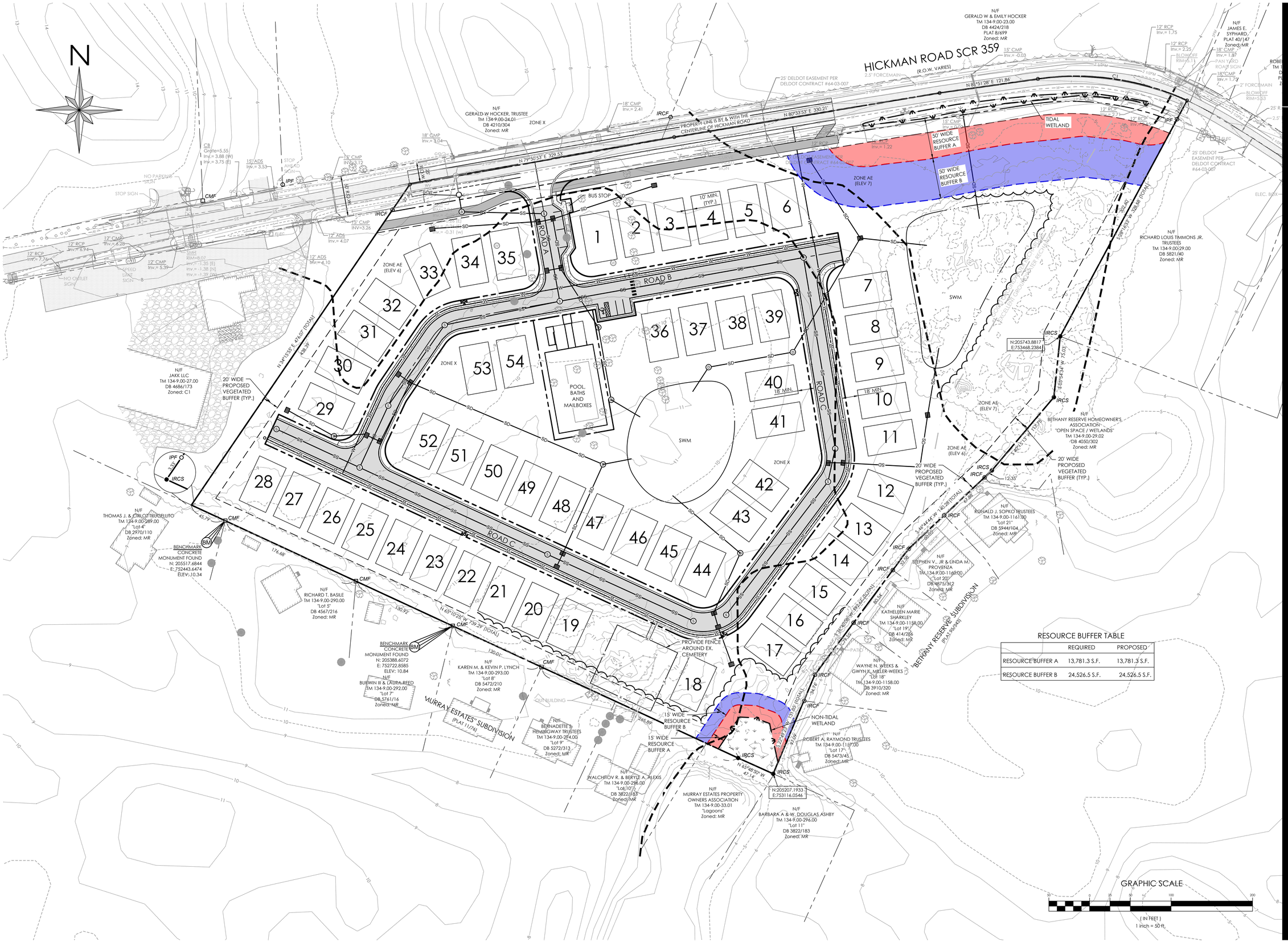
HICKMAN

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	7/9/24
Job Number:	G24006
Scale:	1"=50'
Drawn By:	MJL
Designed By:	JP
Approved By:	JP

Sheet No.: 2

File Name: 24006-EXST-SITE



RESOURCE BUFFER TABLE

	REQUIRED	PROPOSED
RESOURCE BUFFER A	13,781.3 S.F.	13,781.3 S.F.
RESOURCE BUFFER B	24,526.5 S.F.	24,526.5 S.F.

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JASON PALKER 21083 DELAWARE PROFESSIONAL ENGINEER 8/12/24

REVISIONS

NO.	DATE	DESCRIPTION
1	8/12/25	PLAN UPDATE BASED ON CEMETERY AND WETLANDS

CONDITIONAL USE SITE PLAN

for

HICKMAN

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

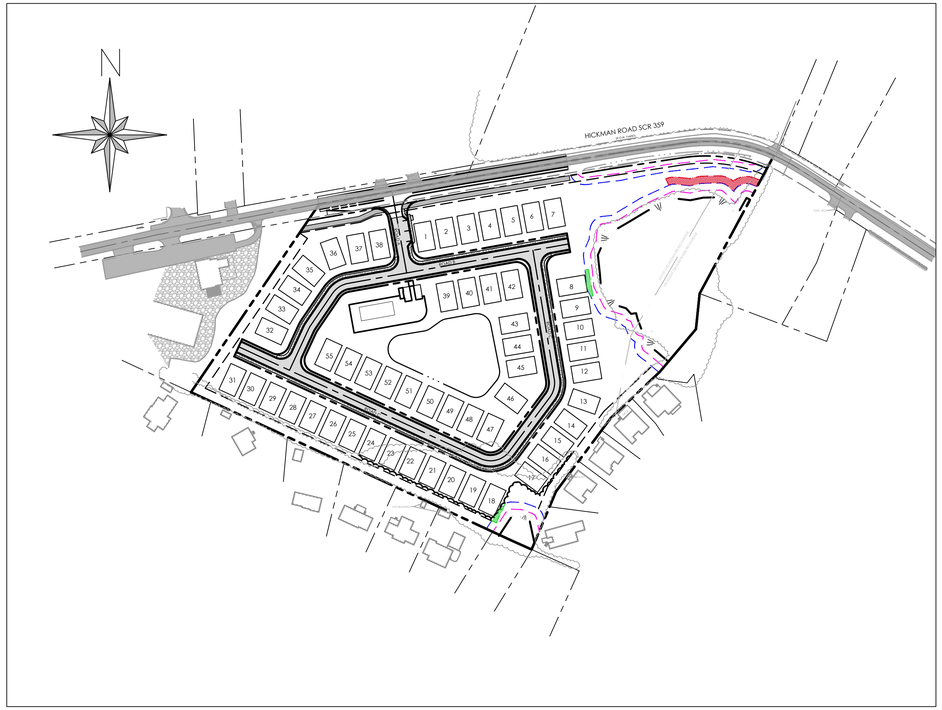
Date:	7/9/24
Job Number:	G24006
Scale:	1"=50'
Drawn By:	ML
Designed By:	JP
Approved By:	JP

Sheet No.: 3

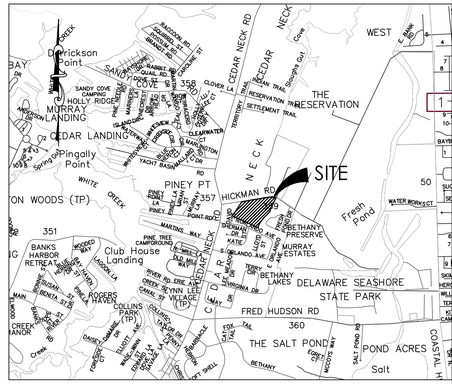
File Name: 24006-cond-SITE

CONDITIONAL USE PLAN
FOR
HICKMAN

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE



SITE
SCALE: 1"=150'



KEY PLAN
SCALE: 1"=2000'

SITE DATA:

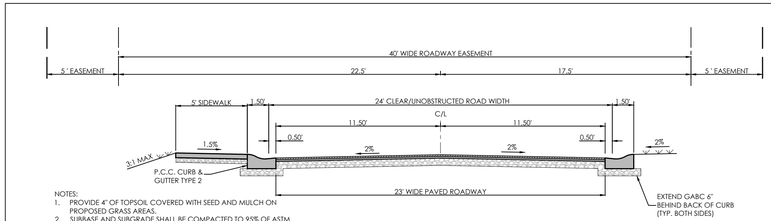
- OWNER: THOMAS R. MULLEN, TRUSTEE
  16301 CAMDEN LAKES CIRCLE
  NAPLES, FL 16301
- DEVELOPER: FOXLANE HOMES DELAWARE, LLC
  32191 NASSAU ROAD, #2
  LEWES, DE 19958
  CONTACT: JOHN MURRAY
- ENGINEER/ LAND PLANNER: SOLUTIONS IPEM, LLC
  303 NORTH BEDFORD STREET
  GEORGETOWN, DE 19947
  PHONE: 302.297.9215
  CONTACT: JASON PE
- TAX MAP 134-9.00-28.00
  DEED REFERENCE: 5294/107
- AREAS:
  TOTAL AREA = 12.8 AC±
- PROPERTY IS ZONED MR - MEDIUM RESIDENTIAL
- PROPOSED ZONING: MR W/ CONDITIONAL USE
  MAX. BUILDING HEIGHT = 42'
- NO WELLHEAD PROTECTION AREAS
- EXCELLENT AND GOOD GROUNDWATER RECHARGE AREA. NOT DEVELOPMENT IN EXCELLENT GROUNDWATER RECHARGE AREA.
- SOIL TYPES
  AsA - ASKECKSY LOAMY SAND - HYDROLOGIC SOIL GROUP A/D
  IeB - INGLESIDE LOAING SAND - HYDROLOGIC SOIL GROUP A
  RuB - RUNCLINT LOAMY SAND - HYDROLOGIC SOIL GROUP A
- PROPERTY IS LOCATED IN FLOOD ZONE AE (EL 6 & EL7) - SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD AND FLOOD ZONE X (UNSHADED) - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, PER FIRM MAP NUMBER 10005C0504K, MAP REVISED MARCH 16, 2015.
- BOUNDARY AND TOPOGRAPHY AS SHOWN HEREON ARE AS PROVIDED BY SOLUTIONS IPEM LLC
- ANTICIPATED WATER SUPPLY:
  SUSSEX SHORES WATER COMPANY
- ANTICIPATED SANITARY SEWER:
  SUSSEX COUNTY UNIFIED SANITARY SEWER DISTRICT
- TIDAL WETLANDS = 0.00 AC (+/-)
- NON-TIDAL WETLANDS SHOWN HEREON ARE APPROXIMATE
  APPROXIMATE AREA = 1.51 AC.±
  APPROXIMATE DISTURBANCE = 0.008 AC.± (PROPOSED STORMWATER OUTFALL)
- PARCEL AREA = 12.8 AC +/-
  ALLOWABLE NET DENSITY = 12 DU/AC
  156 UNITS PERMITTED.
- PROPOSED:
  TOWNHOMES = 55
  NET DENSITY = 4.30 DU/AC
- AREAS:
  OPEN SPACE AREA = 5 AC ± (39% ±)
  EXISTING WOODS: 1.41 AC.±
  WOODS TO BE REMOVED = 0.75 AC.± (53%)
  WOODS TO REMAIN = 0.66 AC.± (47%)

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
EASEMENT		
SETBACK LINE		
R.O.W. LINE		
UNMARKED POINT		
IRON ROD FOUND	IRF	
IRON PIPE FOUND	IPF	
CONCRETE MONUMENT FOUND	CMF	
IRON ROD & CAP FOUND	IRCF	
IRON ROD & CAP SET	IRCS	
BENCH MARK	BM	
SPOT ELEV. LABEL	+19.25	
MAJOR CONTOUR		
MINOR CONTOUR		
ROAD CENTERLINE		
CURB		
PAVEMENT		
CONCRETE		
GRAVEL		
BUILDING OUTLINE		
BUILDING HATCH		
SIDEWALK		
FENCE LINE	X	
SIGN		
SOIL BORING		
MAILBOX		
EDGE OF POND		
WETLANDS		
FLOOD PLAIN		
CATCH BASIN		
STORM DRAIN MANHOLE		D
STORM PIPE		SD
END WALL		
CENTERLINE OF DITCH		
RIP RAP		
SANITARY MANHOLE	S	S
SANITARY CLEANOUT	C/O	
SANITARY PIPE	SS	SS
FORCE MAIN		
SEPTIC TANK	ST	
WATER VALVE	WV	
WATER PIPE	W	W
FIRE HYDRANT		
OVERHEAD ELECTRIC	E	
UTILITY POLE		
ELECTRIC SERVICE BOX	ELEC	
GUY WIRE		
TELEPHONE PEDESTAL	T	
DECIDUOUS TREE		
CONIFEROUS TREE		
TREE LINE		
RESOURCE BUFFER A	N/A	
RESOURCE BUFFER B	N/A	
RESOURCE BUFFER REDUCTION		
RESOURCE BUFFER ADDITION		
GROUNDWATER RECHARGE LIMITS		

NOTES:

1. DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL WORK MUST BE PERFORMED IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
2. EXISTING CONTOURS, WETLANDS, AND OTHER FEATURES SHOWN HEREON ARE PROVIDED BY SOLUTIONS IPEM LLC
3. STORMWATER WILL BE HANDLED ONSITE AND WILL MEET THE CURRENT STATE OF DELAWARE REGULATIONS. ALL STORMWATER FACILITIES WILL BE PRIVATE AND MAINTAINED BY THE DEVELOPER UNTIL A HOMEOWNERS ASSOCIATION CAN ASSUME OWNERSHIP AND RESPONSIBILITY FOR THE STORMWATER FACILITIES.
4. ALL INTERNAL ROADWAYS AND SIDEWALKS ARE "PRIVATE" AND WILL BE MAINTAINED BY THE DEVELOPER UNTIL A HOMEOWNERS OR CONDOMINIUM ASSOCIATION CAN ASSUME OWNERSHIP AND RESPONSIBILITY FOR THE ROADWAYS AND SIDEWALKS.
5. FOR ANY NEW DEVELOPMENT LOCATED IN WHOLE OR IN PART WITH 50 FEET OF THE BOUNDARY OF LAND USED PRIMARILY FOR AGRICULTURAL PURPOSES, NO IMPROVEMENT REQUIRING AN OCCUPANCY APPROVAL FOR A RESIDENTIAL TYPE USE SHALL BE CONSTRUCTED WITHIN 50 FEET OF THE BOUNDARY OF THE LANDS USED PRIMARILY FOR AGRICULTURAL PURPOSES.
6. RIGHT-OF-WAYS SHALL HAVE 5' WIDE EASEMENTS ALONG BOTH SIDES.



NOTES:
1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.

RESIDENTIAL STREET TYPICAL SECTION
NOT TO SCALE

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JASON PALKEWICZ 11083 DELAWARE 7/18/24 PROFESSIONAL ENGINEER

REVISIONS

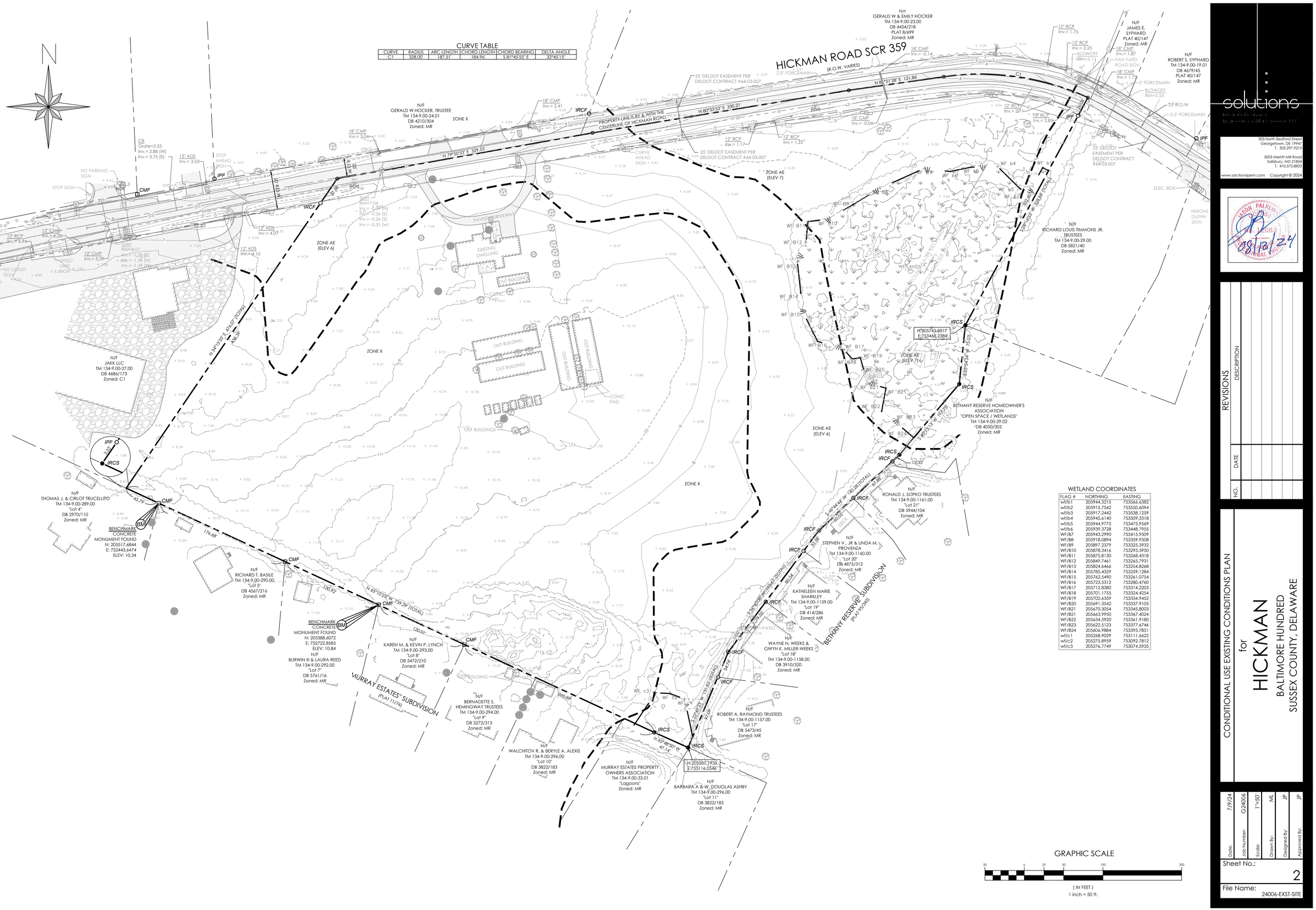
NO.	DESCRIPTION	DATE

CONDITIONAL USE COVER SHEET for HICKMAN
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	7/9/24
Job Number:	G24006
Scale:	AS NOTES
Drawn By:	ML
Designed By:	JP
Approved By:	JP

Sheet No.: 1

File Name: 24006-cond-cover



WETLAND COORDINATES

FLAG #	NORTHING	EASTING
wf/b1	205944.3215	753566.6382
wf/b2	205915.7542	753550.6094
wf/b3	205917.2442	753538.1259
wf/b4	205945.6140	753509.3318
wf/b5	205944.9775	753475.9569
wf/b6	205939.3728	753448.7955
WF/B7	205943.2990	753415.9509
WF/B8	205918.0894	753359.9508
WF/B9	205897.2379	753325.3932
WF/B10	205878.3416	753293.3950
WF/B11	205875.8130	753268.4318
WF/B12	205849.7461	753265.7931
WF/B13	205824.6466	753254.8268
WF/B14	205785.4329	753259.1284
WF/B15	205762.5490	753261.0754
WF/B16	205723.5312	753280.4760
WF/B17	205712.8380	753314.2203
WF/B18	205701.1755	753324.4254
WF/B19	205702.6359	753334.9452
WF/B20	205691.3542	753337.9105
WF/B21	205670.3054	753345.8003
WF/B21	205663.9950	753367.4024
WF/B22	205634.5920	753361.9180
WF/B23	205622.5123	753377.6746
WF/B24	205606.9884	753395.7851
wf/c1	205268.9029	753111.6622
wf/c2	205275.8959	753092.7812
wf/c3	205276.7749	753074.5935

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NO.	DATE	DESCRIPTION
		REVISIONS

CONDITIONAL USE EXISTING CONDITIONS PLAN

for

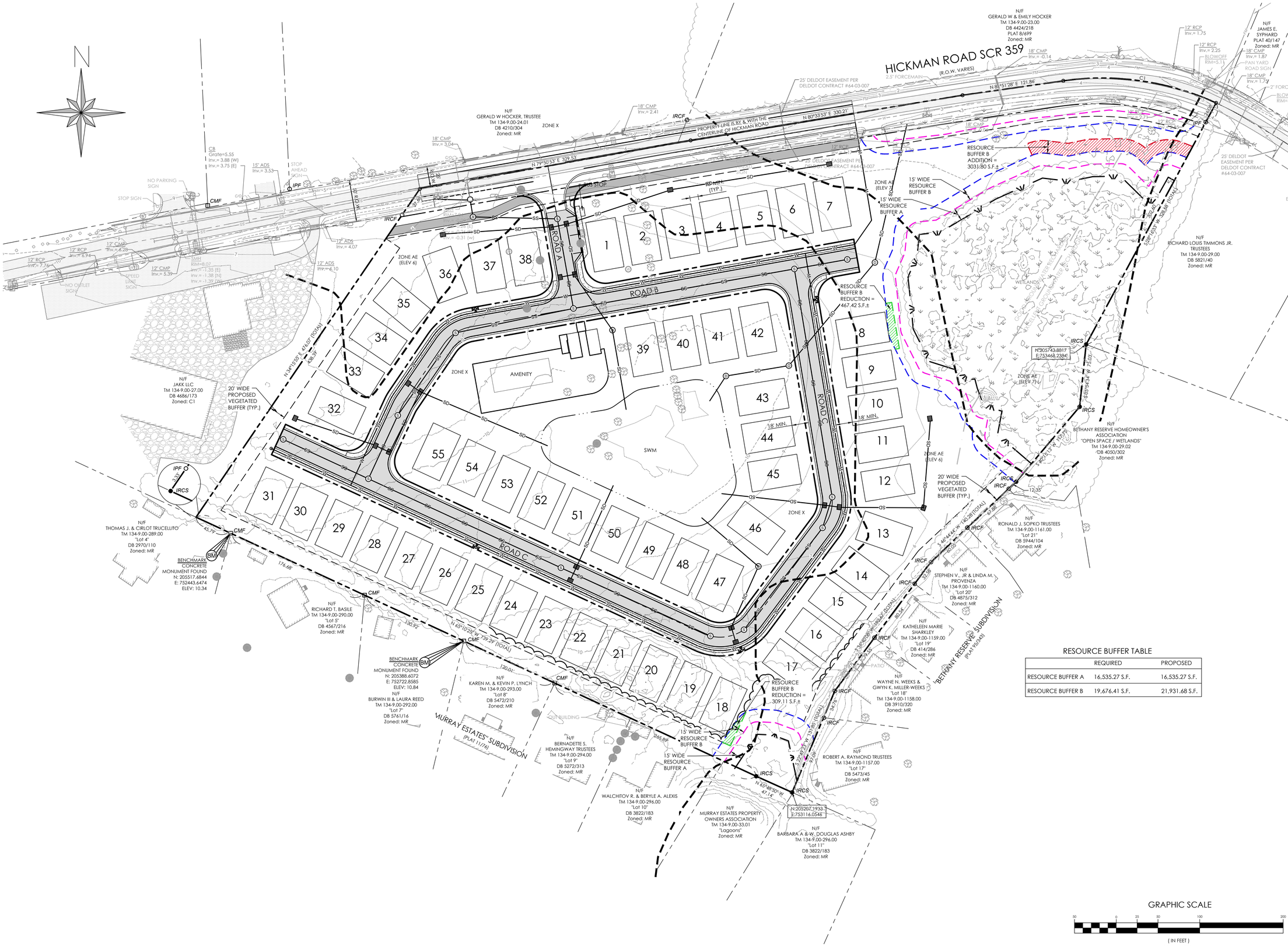
HICKMAN

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	7/9/24
Job Number:	G24006
Scale:	1"=50'
Drawn By:	ML
Designed By:	JP
Approved By:	JP

Sheet No.: 2

File Name: 24006-EXST-SITE



RESOURCE BUFFER TABLE

	REQUIRED	PROPOSED
RESOURCE BUFFER A	16,535.27 S.F.	16,535.27 S.F.
RESOURCE BUFFER B	19,676.41 S.F.	21,931.68 S.F.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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REVISIONS

NO.	DESCRIPTION	DATE

CONDITIONAL USE SITE PLAN

for

HICKMAN

BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	7/19/24
Job Number:	G24006
Scale:	1"=50'
Drawn By:	ML
Designed By:	JP
Approved By:	JP

Sheet No.: 3

File Name: 24006-cond-SITE

Hickman

Project Reference Material

July 2026

solutions
Integrated Planning
Engineering & Management, LLC

Project Team

APPLICANT/DEVELOPER: **Foxlane Homes Delaware, LLC**

Contact: John Murray
32191 Nassau Road #2
Lewes, DE 19958
Telephone: 302.291.7784
Email: jmurray@foxlanehomes.com

CIVIL ENGINEER/
LAND PLANNER: **Solutions IPEM, LLC**

Contact: Jason Palkewicz, PE
303 North Bedford Street
Georgetown, DE 19947
Telephone: 302.297.9215
Email: jpalkewicz@solutionsipem.com

ENVIRONMENTAL: **Geo-Technology Associates, Inc**

Contact: Matthew Jennette, Vice President
3445-A Box Hill Corp. Center Drive, Suite a
Abingdon, MD 21009
Telephone: 410.515.946
Email: mjennette@gtaeng.com

Watershed Eco, LLC

Contact: James C McCulley
Senior Professional Wetland Scientist
100 Biddle Avenue, Suite 120
Newark, DE 19702
Telephone: 302.750.6595
Email: jim@watershedeco.com

ATTORNEY:	**Brockstedt Mandalas Federico, LLC**	
	Contact:	Glenn Mandalas 1413 Savannah Road, Suite 1 Lewes, DE 19958
	Telephone:	302.645.2262
	Email:	glenn@bmbde.com
TRAFFIC:	**Bowman**	
	Contact:	Braden Garrison, PE, PTOE 835 Springdale Drive, Suite 200 Exton, PA 19341
	Telephone:	610.594.9996
	Email:	bgarrison@bowman.com

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Exhibit 21) SAS Meeting Minutes
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Resumes:

Jason Palkewicz, PE
Braden Garrison, PE, PTOE

Hickman Road

I. Executive Summary

Hickman Road is a proposed conditional use condominium community designed to create 54 single-family homes on the south side of Hickman Road. The total site area is 13.48 acres, located on TM 134-9.00-28.00.

Situated within Investment Levels 1, 2, and 3 of the State Strategies for Policies and Spending Map, Hickman Road aims to offer a balanced community with modern amenities and environmental preservation.

Key Features:

- **Homes and Infrastructure:** The subdivision will feature 54 homes on roads within private easements, complete with curb and gutter, sidewalks on one side of the streets, and streetlights.
- **Open Space:** Approximately 5.8 acres (43%) of the site will be dedicated to open space, excluding the amenity area, subject to final engineering.
- **Recreational Facilities:** Residents will enjoy a recreation facility that includes a pool, and bathhouse. A school bus stop and central mail facility will also be provided.

Environmental Considerations: During the planning process, the excellent recharge area was prioritized as the sensitive environmental area. The excellent recharge area also contains woodlands. The plan prioritizes the preservation of this area, with no disturbance proposed.

Proposed Density and Calculations:
Project Area
Gross = 13.48 acres (+/-)

Allowable Homes Calculation:
12.0 homes/acre
Area = 13.48 acres
13.48 x 12.0 = 161 homes

Proposed Homes:
54 Homes

Actual Density:
Gross = 54 / 13.48 = 4.0 homes/acre

In conclusion, the proposed community has been thoughtfully planned to achieve a superior living environment for future residents. This plan provides appealing amenities that will result in sustainable property values with neutral to positive impacts on property values in nearby neighborhoods while promoting the health, safety and welfare of the citizens of Sussex County.

II. Project Overview

A. Boundary Plat, Topographic & Non-Tidal Wetlands Survey

A boundary topographic survey for the property was prepared by Solutions IPEM, LLC. The total area of the property is 13.48 +/- acres. The site contains approximately 0.07 +/- acres of federal/non-tidal wetlands and 0.04 +/- acres of tidal wetlands. Which are subject to and Approved Jurisdictional Determination by the US Army Corps of Engineers dated February 6, 2026. The project will exceed the resource protection buffer requirements.

B. Overview of Current Site Conditions

The property for the proposed Hickman Road community is located on the south side of Hickman Road. The proposed development is in the vicinity of several communities, including Marlin Chase (RPC), Bethany Preserve, Murray Estates, Inland Bays (C/U), Bayside at Bethany Lakes (C/U), Cedar Bay, Salt Pond (RPC), Martin E Cox, and Bethany Marina Condominium.

Communities within two miles from the project with similar or higher densities than Hickman Road (4.0 du/ac) include:

Bayside at Bethany Lakes = 3.7 du/ac
Marlin Chase = 3.4 du/ac
Cedar Bay = 11.8 du/ac
Martin E Cox = 4.7 du/ac
Bethany Marina Condominium = 7.3 du/ac

The property is located in flood zone AE (El 6 & 7) – special flood hazard areas subject to inundation bye 1% annual chance food, and flood zone X (unshaded) – areas determined to be outside the 0.2% annual chance floodplain, per firm map number 10005C0504K, map revised March 16, 2015.

The site is located within areas of good and excellent groundwater recharge potential. No development is proposed within the excellent groundwater recharge areas.

BAY SHORE
1 MILE
MARLIN CHASE
BETHANY MARINA
SITE
BETHANY PRESERVE
RTE 1
MARTIN E COX
MURRAY ESTATES
CEDAR BAY
BAYSIDE AT
BETHANY LAKES
INLAND BAYS
CEDAR NECK
SALT POND

C. Land Plan and Amenities

The land plan takes into account:

- Existing site conditions
  - Forest Land
  - Existing Grades
  - Wetlands
  - Groundwater Recharge
- Stormwater outfalls
- Adjacent communities
- Existing roadways
- Current housing trends
- Recreational needs
- Adjacent agriculture lands

The resultant plan has:

- Buffers to the environmental resources exceeding code requirements.
- No homes will be closer than 20' to the boundary of the community.
- Sidewalks on one side of the street.
- Walking paths.
- Recreation amenities including:
  - Pool
  - Pool house
- Streetlights.
- Community mailbox cluster.
- School bus stop.
- An efficient stormwater management system that acts as an amenity.
- Open space that exceeds code requirements.
- Maintains the excellent groundwater recharge area and the woodlands located within.

D. DelDOT Improvements

A Traffic Impact Study (TIS) was not required for this community. However, a meeting was held with DelDOT to discuss required improvements. Subject to final engineering, the anticipated improvements are as follows:

- Turn lane into the site.
- Pay the Area Wide Study Fee.

E. Preliminary Land Use Service (PLUS)

A concept plan for Hickman Road was presented to PLUS on June 26, 2024. A response letter was provided to PLUS on September 18, 2024 which addressed their comments point by point.

F. Sanitary Sewer Planning

Hickman Road is located in Tier 1 of the Sussex County Unified Sanitary Sewer Districts. A Sanitary Sewer Concept Evaluation was completed by Sussex County Engineering. The property will be served by Sussex County.

III. Compliance with Applicable Regulations

A. Compliance with MR (Medium-Density Residential District)

The project is proposed to be located within the MR District. The site is being developed with single-family detached condominium home which are permitted as a conditional use.

The proposed land use is in conformity with the Zoning Ordinance (the "Code") which permits 12 dwelling units per acre as a conditional use.

Purpose: Hickman Road conforms with the purpose of the MR Code District in as much as it is a medium density residential community located in an area that is growing with sanitary sewer and public water available at time of construction.

Permitted Accessory Uses: The zoning permits the proposed outdoor amenities for the residents and their guests.

Conditional Uses: Hickman Road is proposing a conditional use for multi-family (detached condominium homes).

Special Use Exceptions: Hickman Road is not applying for any special use exceptions.

Permitted Signs: All proposed development signage will conform to the regulations provided in 115-159.2.

Height, Area and Bulk Requirements: The height, area and bulk requirements are set forth in the Zoning Ordinance. Hickman Road complies with the height, area and bulk requirements of Sussex County, Table II.

B. Statement of Compliance with Chapter 99, Sussex County Subdivision of Land

Chapter 99-9 (C)

An Applicant for approval of a preliminary plat shall provide that the following criteria are incorporated and addressed in the plat and the manner which each is incorporated and address through the design of the preliminary site plan:

1. ***"That the proposed subdivision is integrated into existing terrain and surrounding landscape."***

    a. A 20' vegetated buffer is provided along the perimeter of the property.

    b. The buffers to tidal and non-tidal wetlands exceed County requirements.

    c. The excellent groundwater recharge area and included woodlands are preserved.

2. ***"That all resources and resource buffers are protected in accordance with Chapters 99 and 115 herein and the floodplains are minimally used."***

a. A Drainage Assessment Report has been prepared based on County Code.

b. The proposed land plan exceeds the resource buffer requirements.

c. Perimeter buffers are provided per County Code at time of application.

3. ***"That natural and historic features are preserved and forest fragmentation and vegetation and soil removal is minimized. In addition, a forest assessment shall be conducted with a forest assessment report provided with the preliminary plat. If woodlands or mature forests that contain high habitat value are found, these areas shall be conserved to the maximum extent possible."***

a. The excellent groundwater recharge area and the woodlands included are preserved.

b. A forest assessment has been prepared.

c. The cemetery located on-site has been delineated. A new fence will be installed around the cemetery.

4. ***"That open space and scenic views are preserved."***

a. The excellent groundwater recharge area and the woodlands included are preserved.

b. Approximately 5.8 acres (43%) of open space is preserved.

5. ***"That the supply of potable water to future residents of the proposed subdivision is safe and adequate for their use."***

a. Potable water for the proposed homes and amenities will be provided by Sussex Shores Water Company.

b. A water tower exists within a mile of the site along Route 1.

c. The water system will be designed per Sussex Shores, Delaware State Health and Social Services, and Delaware State Fire Marshal standards.

d. A water main and fire hydrant exist along the property frontage.

6. ***"That the means and method of sewerage disposal are adequately addressed for the proposed subdivision."***

a. Sanitary sewer service will be provided by Sussex County.

b. The sewer collection and transmission system will be designed per Sussex County and DNREC standards.

c. Sanitary sewer facilities exist along the property frontage.

7. ***"That the proposed subdivision will not pollute surface water and groundwater."***

    a. The proposed community will be designed in a manner that will meet or exceed the stormwater management and sediment / erosion control (ESC) requirements of Sussex Conservation District.
        i. The runoff from the site during construction will be managed via standard ESC practices including, but not limited to, silt fence, temporary sediment basin, inlet protection, etc.
        ii. The post construction stormwater will be treated primarily by wet ponds. Other BMPs if appropriate will be utilized as well.
        iii. The proposed plan preserves woods within the excellent groundwater recharge area and exceeds the required resource buffers.

8. ***"That the anticipated method of minimization of erosion and sedimentation are adequately identified."***

    a. The proposed community will be designed in a manner that will meet or exceed the stormwater management and sediment / erosion control (ESC) requirements of Sussex Conservation District.
        i. The runoff from the site during construction will be managed via standard ESC practices including, but not limited to, silt fence, temporary sediment basin, inlet protection, etc.

9. ***"That changes to the groundwater levels will be minimized and that groundwater recharge is maximized as a result of the proposed subdivision and that the methods of both are adequately identified. In addition, that there will not be increased rates of runoff or increased risk of flooding onto adjoining properties from the design and construction of the proposed subdivision, and the anticipated methods used to achieve these criteria are adequately identified."***

    a. The proposed community will be designed in a manner that will meet or exceed the stormwater management and sediment / erosion control (ESC) requirements of Sussex Conservation District (SCD).
        i. The post construction stormwater will be treated primarily by wet ponds. Other BMPs, if appropriate, will be utilized as well.
        ii. The outfalls and drainage from the site will be directed to Emily Gut. Runoff rates will be calculated and managed per SCD requirements which require 'no adverse impact' on adjoining and downstream properties.

    b. To minimize changes to groundwater levels, the wet ponds that will be the primary BMP will be designed to have their water surface be at the existing groundwater level. Should the groundwater elevation be too low, pond liners will be utilized.

    c. The excellent groundwater recharge area has been preserved.

    d. Stormwater and storm drainage design will be coordinated with SCD to account for drainage from the existing Bethany Preserve community.

10. ***"That area property values will not be adversely affected."***

    a. The proposed development is in the vicinity of several communities, including Marlin Chase (RPC), Bethany Preserve, Murray Estates, Inland Bays (C/U), Bayside at Bethany Lakes (C/U), Cedar Bay, Salt Pond (RPC), Martin E Cox, and Bethany Marina Condominium. As such, the proposed Hickman Road fits within the area in a manner that will not negatively affect property values.

11. ***"That any active farmland and tree farming adjacent to the proposed subdivision is adequately preserved through the design and construction of the proposed subdivision."***

    a. There are no farmland or tree farming adjacent to the site.

12. ***"The applicant has notified the local school district where the proposed subdivision will be located."***

    a. The proposed community has been submitted to Indian River School District.

13. ***"That public buildings and community facilities will not be adversely affected by the proposed subdivision."***

    a. Fresh Pond trailhead parking is located approximately 0.5 miles east of the site at the end of Hickman Road. It is anticipated that residents of the proposed community would utilize and enjoy the park.

14. ***"That the subdivision is either within an established Transportation Improvement District or that subdivision endeavors to maintain the current Delaware Department of Transportation Level of Service on all adjacent roads and intersections after the subdivision is completed and in no event will allow the Level of Service to degrade below a Level of Service D."***

    a. A Service Level Evaluation Request was submitted to DelDOT via P&Z staff. Based on DelDOT's response, the proposed subdivision would have Minor impact to the local area roadways.

    b. A traffic assessment was prepared by Bowman. A stated in the report, "…the major intersection adjacent to the proposed entrance, as well as the frontage itself, will continue to operate at level-of-service D or better, which complies with Chapter 99-9C…"

    c. Based on a pre-application meeting with DelDOT to discuss the entrance and potential off-site improvements. Based on the meeting and DelDOT's Area Wide Study Fee and Off-site Improvements memo the developer is responsible to:
        - Turn lane into the site.
        - Pay the Area Wide Study Fee.

15. "That the proposed subdivision will be compatible with other area land uses."

a. The proposed development is in the vicinity of several communities, including Marlin Chase (RPC), Bethany Preserve, Murray Estates, Inland Bays (C/U), Bayside at Bethany Lakes (C/U), Cedar Bay, Salt Pond (RPC), Martin E Cox, and Bethany Marina Condominium. Many of these communities have similar density and lot sizes.

b. The properties to the south and east are single-family residential communities.

c. The property to the north across Hickman Road is a single-family residence.

d. The properties to the west are commercial uses (restaurants, boat storage/repair, appliance store, etc). These uses will provide services to the proposed community.

16. "That there will be safe and effective vehicular and pedestrian movement within the site and to and from adjacent developed properties with interconnectivity where appropriate."

a. The surrounding properties are developed and do not have interconnection points.

b. The roadways within the community will be designed per Sussex County and Delaware State Fire Marshal standards.

C. Statement of Conformity with Sussex County, Delaware, Comprehensive Plan Update, March 2019

Chapter 4 Future Land Use:

The site is located within the Coastal Area and complies as follows:

- Permitted Uses – "A range of housing types should be permitted in Coastal Areas, including single-family homes, townhouses, and multi-family unit." Hickman Road proposes single-family homes.
- Densities – "…medium and higher density (4-12 units per acre) can be appropriate in certain locations. Medium and higher density could be supported in areas: where there is central water and sewer; near sufficient commercial uses and employment centers; where it is in keeping with the character of the area; where it is along a main road or at/or near a major intersection; where there is adequate Level of Service;" Water and sewer are located within Hickman Road. Commercial uses are directly next to the proposed community. Atlantic Avenue (Rte 26) is approximately 1.5 miles from the proposed access along Hickman Road. The Millville, Ocean View, and Bethany Beach area has sufficient commercial uses and employment opportunities for Hickman Road.
- Infrastructure – The site will be served by central water and sewer facilities.

Chapter 5 Conservation:

The proposed community complies with the Conservation section as follows:

- The site complies with surface water runoff requirements.
- There are no well head protection areas.
- The excellent groundwater recharge area is being preserved.

- Regulated wetlands have been delineated and impacts will be minimized as practical for outfalls, and utility crossings.
- No homes are proposed in the wetland areas and buffers that exceed the minimum requirements have been provided around those resources.
- Central water and sewer will be available to the site.
- Resource buffer requirements are met or exceeded.

Chapter 6 Recreation and Open Space:

The proposed community complies with the Recreation and Open Space section as follows:

- The site is located within Region 5 of the Delaware Statewide Comprehensive Outdoor Recreation Plan and provides the following:
    - High Priorities:
        - Swimming pool

Chapter 7 Utilities:

The proposed community complies with the Utilities section as follows:

- Water will be provided by Sussex Shores Water Company who has the CPCN for the project.
- The Hickman Road community wastewater service will be provided by Sussex County.
- Adequate areas are provided for stormwater management and stormwater drainage.
- It is anticipated that solid waste collection will be by a licensed commercial hauler.

Chapter 8 Housing:

The proposed community complies with the Housing section as follows:

- The community is located in the vicinity of Millville, Ocean View, and Bethany Beach and will provide housing for retirees as well as those working in the County.

Chapter 9 Economic Development:

The proposed community complies with the Economic Development section as follows:

- This development project will directly provide employment/opportunities in:
    - Construction
    - Professional, Business and IT Services
    - Finance, Insurance and Real Estate
    - Utilities
- The development will also indirectly provide job opportunities in:
    - Leisure and Hospitality
    - Education and Healthcare

Chapter 10 Historic Preservation:

The proposed community complies with the Historic Preservation section as follows:

- The cemetery on-site has been delineated by Ed Otter. The report has been sent to the State. A fence will be provided around the cemetery to provide security.

Chapter 12 Community Design:

The proposed community complies with the Community Design section as follows:

- Street lighting will be provided.
- Sidewalks are proposed on one side of the roadways.

- The proposed homes will be limited to 42’ in height.
- The entrance to the community will be landscaped.
- Cross walks will be provided per the County’s and/or DelDOT’s regulations.
- Landscape/forested buffers will be provided.
- Utilities are proposed to be underground.
- Street signage will be provided throughout the community.

Chapter 13 Mobility Element:

The proposed community complies with the Mobility Element section as follows:

- Entrance, roadway and off-site improvements necessitated by DelDOT will be designed and constructed per DelDOT standards.

IV. Conclusion

The proposed community of Hickman Road will enhance the area with a well-planned design, upscale homes, and amenities, while having a limited impact on the land. The design preserves large amounts of open space and maintains attractive views. The homes are expected to have a neutral to positive impact on the value of surrounding neighborhoods and will provide the County with additional tax revenue.

- **Active Amenities:** The community will feature a pool and pool house, offering residents recreational opportunities and spaces to socialize.
- **Conservation of Environmental Features:** The design preserves the excellent groundwater recharge area and wooded areas within it.

The proposed community of Hickman Road meets the standards set forth by the County and State, ensuring a superior living environment for future residents. Importantly, it will not place a burden on the County, State, or taxpayers to serve this community.

solutions
Integrated Planning
Engineering & Management, LLC

September 18, 2024

Mr. David L Edgell, AICP
Director, Office of State Planning
Haslet Armory
122 Martin Luther King Jr. Blv. South
Dover, DE 19901

RE: PLUS review 2024-06-02; Hickman

Dear Mr. Edgell;

Please allow this letter to serve as our response to the PLUS review of the Hickman property. Answers to comments have been provided following each comment taken directly from your comment letter for ease of use. Our responses are in red and in different font for ease in review.

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

Response: The developer will comply with all Federal, State, and local regulations regarding the development of this property. The developer will comply with all regulations / restrictions set forth by Sussex County.

Strategies for State Policies and Spending

This project is located within Investment Levels 2 and 3 according to the 2020 Strategies for State Policies and Spending. If applicable, add: This site is also located in the Coastal Zone in the Sussex County Comp Plan.

Based on its location in a Level 2 and Level 3 investment area, this project may be consistent with the 2020 Strategies for State Policies and Spending. Investment Level 2 reflects areas where growth is anticipated by local, county, and state plans in the near-term future.

T: 302.297.9215
T: 410.572.8833
E: ideas@solutionsipem.com

303 North Bedford Street • 3003 Merritt Mill Road
Georgetown, DE 19947 • Salisbury, MD 21804

Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer-term future, or areas that may have environmental or other constraints to development.

In the Level 3 area, DNREC has noted that the preliminary plan shows seventeen lots occurring directly within the 100-year floodplain, either entirely or partially, as well as the entrance to the development. The entire eastern portion of the development and associated lots are also vulnerable to permanent inundation from sea level rise. Within the 30-year mortgage period, sea level rise, coupled with an increased frequency of intense rainfall, is expected to expand the area of the floodplain in this region and exacerbate the existing flooding and drainage issues on this site. Building in this manner is considered unsafe for residents due to the future vulnerability of this particular location. Roads are essential for first responders in the event of an emergency and could become impassable during flooding events. It is noteworthy that the 100-year floodplain is currently considered to be Out of Play in New Castle County, Kent County, and several municipalities due to these types of risks.

Drainage issues have been documented on nearby properties, with poorly drained soils (Hydrologic Soil Group D) occurring in the eastern third of the property. These soil types are anticipated to only worsen any existing drainage issues, especially in areas where tree removal is proposed.

The state requests that the applicant and the local jurisdiction work with state agencies to design the site with respect to those environmental features which will help create a more sustainable development.

Response: It is noted that the project is located in areas where growth is anticipated in the near-term or long-term future. The proposed community will comply with Sussex County floodplain requirements.

Code Requirements/Agency Permitting Requirements

Department of Transportation - Contact Stephen Bayer 302-760-4834

- The site access on all State maintained roads must be designed in accordance with DelDOT's Development Coordination Manual, which is available at http://www.deldot.gov/Business/subdivisions/index.shtml?dc=changes.

- Pursuant to Section 1.3 of the Development Coordination Manual, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request the meeting and guidance on what will be covered there and how to prepare for it is

located at https://www.deldot.gov/Business/subdivisions/pdfs/Meeting_Request_Form.pdf?08022017.

- Section 1.7 of the Development Coordination Manual addresses fees that are assessed for the review of development proposals. DelDOT anticipates collecting the Initial Stage Fee when the record plan is submitted for review and the Construction Stage Fee when construction plans are submitted for review.

- In terms of traffic analysis based on the expected trip generation this project will qualify for the Area Wide Study Fee (AWSF).

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Development Coordination Manual, DelDOT will require dedication of right-of-way along the site's frontage. By this regulation, this dedication is to provide a minimum of 30 feet of right-of-way from the physical centerline of Legion Road. The following right-of-way dedication note is required, "**An X-foot wide strip of right-of-way from the centerline is hereby dedicated in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation."**

- In accordance with Section 3.2.5.1.2 of the Development Coordination Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby dedicate in fee simple to the State of Delaware, acting by and through the Delaware Department of Transportation."**

- Referring to Section 3.4.2.1 of the Development Coordination Manual, the following items, among other things, are required on the Record Plan:

    - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.
    - Depiction of all existing entrances within 300 feet of the proposed entrances on Handy Road.
    - Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted.

- In accordance with Section 3.8 of the Development Coordination Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 20 feet from the ultimate State right-of-way along all State maintained roads.

- In accordance with Section 5.2.9 of the Development Coordination Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrances and how long those lanes should be. The worksheet can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.4 of the Development Coordination Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at http://www.deldot.gov/Business/subdivisions/index.shtml.

- In accordance with Section 5.14 of the Development Coordination Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

Response: The Developer will work with DelDOT and comply with necessary regulations. A meeting with the Sussex County Review Coordinator will be coordinated to discuss the limits of improvements as well as travel lane and shoulder widths.

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Special Flood Hazard Area

- Seventeen lots within the proposed development lie directly within the 100-year floodplain, designated as zone AE. Building in this manner is considered unsafe for residents due to the future vulnerability of this particular location. Roads are essential for first responders in the event of an emergency and could become impassable during flooding events. The following requirements apply:

  The applicant must comply with the local floodplain ordinance and regulations applicable to development or construction within the 100-year floodplain. In determining the boundary of the floodplain, use the most recent FIRM maps available, which can be found at https://floodplanning.dnrec.delaware.gov/

- If fill is to be placed in floodplain to increase grade elevation to raise proposed development out of mapped floodplain, a Certified Letter of Map Revision – Fill (CLOMR-Fill) request should be submitted to FEMA for review followed by an application to FEMA for a Letter of Map Revision (LOMR) at completion. Please note that a property will not be officially recognized by FEMA as being located out of the mapped floodplain until a LOMR has been issued.

- Homeowners with mortgages for homes within the floodplain may be required to purchase flood insurance. Additionally, homes located outside the floodplain might be required by lenders to purchase flood insurance, based on proximity.

Contact: DNREC Shoreline and Waterway Management Section at (302) 739-9921.
Website: https://dnrec.delaware.gov/watershed-stewardship/waterways/floodplains/

Response: The proposed community will comply with Sussex County floodplain requirements.

Wetlands and Waterways

Maps from the Statewide Wetlands Mapping Project indicate the potential presence of non-tidal forested wetlands on the northeastern corner and far southern corner of the site. The application indicates that wetlands have been delineated, with an estimated 1.5 acres f wetlands on the site. The applicant proposes approximately 0.01 acres of disturbance.

- State permits from the DNREC Wetlands and Waterways Section may be necessary if dredge, fill, or structures are proposed in streams or State Subaqueous Lands.

- Federal permits from the U.S. Army Corps of Engineers may also be necessary if dredge or fill is proposed in non-tidal wetlands or streams. A delineation of waterways and wetlands may be required, to be completed by a qualified professional hired by the landowner. In certain cases, permits from the US Army Corps of Engineers may trigger additional certifications from DNREC (Coastal Zone Federal Consistency Certification and 401 Water Quality Certification). Work with the U.S. Army Corps of Engineers to determine the appropriate permitting requirements if federal permits are required.

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

State Contact: DNREC Wetlands and Waterways Section at (302) 739-9943.
Website: https://dnrec.delaware.gov/water/wetlands/

Response: The project will comply with state and federal regulations regarding wetlands and wetland disturbance. The project exceeds the County's buffer regulation requirements.

Standard Stormwater Management Regulations

The project proposes greater than 5,000 square feet of land disturbing activities and will be subject to Delaware's *Sediment and Stormwater Regulations*.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District.

- A Sediment and Stormwater Plan must be developed, then approved by the appropriate plan review agency prior to any land disturbing activity taking place on the site. For this project, the plan review agency is the Sussex Conservation District. Additionally, to address federal requirements, construction activities that exceed 1.0 acre of land disturbance require Construction General Permit coverage through submittal of an electronic Notice of Intent for Stormwater Discharges Associated with Construction Activity. This form must be submitted electronically https://enoi.dnrec.delaware.gov/, select Construction Stormwater General Permit) to the DNREC Division of Watershed Stewardship, along with the $195 fee.

- Schedule a project application meeting with the appropriate plan review agency prior to moving forward with the stormwater and site design. As part of this process, you must submit a Stormwater Assessment Study.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219.
Website: https://www.sussexconservation.org/
General Stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

Response: The community will meet or exceed Delaware's Sediment and Stormwater Regulations.

Wastewater Disposal Systems – Large Systems

- For wastewater conveyance offsite by way of new sewer connection, flow rates exceeding 2,500 gallons of liquid waste per day will require a Wastewater Pollution Collection and Conveyance (WPCC) permit from the Commercial and Government Services section.

Contact: DNREC Commercial and Government Services section at (302) 739-9948.
Website: https://dnrec.delaware.gov/water/commercial-government/

Response: Noted.

Electric Vehicle Charging Requirements

Electric vehicle charging infrastructure is now required for all residential dwellings in Delaware (see 80 Del. Laws, c. 145 § 8001- § 8006) for which:

1. A building permit is issued on or after January 1, 2024 (single family), or
2. The final site plan is approved on or after January 1, 2025 (multi-family).

- Requirements are summarized below. Consult the Delaware Code directly for further details.

Single-family Dwellings, effective 2024:

- The developer of a single-family residential dwelling shall install at least one electric vehicle capable parking space at each single-family residential dwelling constructed.

- If the single-family residential dwelling does not have an attached or detached garage, an electric vehicle capable parking space must be provided in the driveway, assigned parking space for the dwelling, or at an unassigned non-street residential parking space constructed as part of the project.

Response: The developer/home builder will comply with electric vehicle charging requirements.

Delaware Department of Agriculture – Contact Milton Melendez 302-698-4500

No Delaware Department of Agriculture code or regulations apply to this PLUS project.

Response: Noted.

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

Proposed Project Parcel Flood Concern

- The majority of this parcel is located within an area of **Minimal Flood Concern of 1000 years or greater**. However, it appears to be surrounded on three sides by Flood Zone AE, identified as a special flood hazard area, also known as the 100-year flood plain or 1% annual chance flood hazard. It does appear that several parcels will exist within this

flood zone. Any residential home with a mortgage requires and NFIP flood insurance policy, separate from a standard home insurance policy.

Parcel Status within County Evacuation Zone Location

- The parcel is located within Sussex County's Evacuation Zone A.

Parcel Status within the 10-mile Emergency Planning Zone (EPZ) for the Salem Nuclear Power Plant

- The parcel **is not** located within the 10-mile EPZ for the Salem Nuclear Power Plant.

Response: The developer will provide notification regarding County Evacuation Zone A to the homeowners. The project will comply with floodplain requirements.

State Historic Preservation Office – Contact Carlton Hall 302-736-7400

- There is a moderate potential for both precontact and historic period archaeological sites on the previously undeveloped portion of this property. Part of the property is mapped has having well drained soils and is in close proximity to known sites in similar contexts on Cedar Neck. There may be sites(s) associated with the earlier farmstead and orchard shown on early 20th century maps and aerials, or with 19th century properties shown in the general vicinity on earlier maps.

- There is an unverified report of a cemetery, associated with the Richards family, in the southeast corner of the property. SHPO recommends an archaeological survey be conducted by a qualified archaeological consultant, starting with additional background research and site visit to further assess the archaeological potential of the property, and to determine if a cemetery is in fact on the property. SHPO further recommends avoidance or further investigation of any sites identified. If a cemetery is present, an archaeological investigation to define its boundaries is necessary to ensure no unmarked burials are disturbed. Please note that Ground Penetrating Radar survey, alone is not sufficient for this purpose. Please provide our office with a copy of the archaeological survey reports for our records.

  If any project or development proceeds, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law (Del. C. Title 7, Ch.54). If there are any questions, inquiries, or concerns, feel free to contact the Delaware State Historic Preservation Office for assistance at 302-736-7400.

Response: The developer had engaged an archeologist to review the site.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

This document is for information purposes only and does not constitute any type of approval from the Delaware State Fire Marshal's Office.

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

Fire Protection Water Requirements

- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly)
- Where a water distribution system is proposed for single-family dwellings, it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required. (One & Two-Family Dwelling)
- One- and Two-Family dwellings are required by law to offer the homeowner an automatic sprinkler system, therefore infrastructure should accommodate water needs.
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

Accessibility

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Sussex Pines Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac

shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.

- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.

- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

Gas Piping and System Information

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

Required Notes

- Provide a note on the final plans submitted for review to read "All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Response: The project will comply with state fire marshal requirements.

Recommendations/Additional Information

This section includes a list of site-specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped **(but in no way required)** that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Response: It is understood that the following comments do not represent state code requirements and that the ideas and suggestions are in *no way required by the development.*

Department of Transportation – Contact Stephen Bayer 302-760-4834

- The applicant should expect a requirement that all PLUS and Technical Advisory Committee (TAC) comments be addressed prior to submitting plans for review.

- Please be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision dates of March 21, 2019 and March 16, 2021. The notes can be found at https://www.deldot.gov/Business/subdivisions/

Response: Noted.

Department of Natural Resources and Environmental Control – Contact Beth Krumrine 302-735-3480

Flooding and Sea Level Rise

Seventeen lots are proposed within the 100-year floodplain (designated as zone AE), and the entrance to the development also lies within the 100-year floodplain. By 2050, mean sea levels are projected to rise by 0.7 – 1.9 feet; by end of century sea levels are projected to increase by 1.7 – 5.0 feet. As mean sea levels rise, the frequency and severity of tidal flooding events is also expected to increase.

The entire eastern portion of the development and associated lots are also vulnerable to permanent inundation from sea level rise. Additionally, lots near the current floodplain are vulnerable to intermittent or routine flooding episodes due to the combined effects of climate driven sea level rise and heavy precipitation events.

Locating primary access routes and permanent structures in this vulnerable area may place property, infrastructure, and lives a risk. Likewise, there is no guarantee of public funding for future repairs or drainage projects.

DNREC reviewers encourage consideration of the following to mitigate the flood concerns:

- Locate all houses, lots, and roadways outside of the floodplain and eliminate lots 4-7, 10-17, and 33-37.

- Avoid increasing the grade elevation and bulk grading on the site. Such practices have the potential to worsen flooding on adjacent properties, which have already been documented to have drainage issues, as described below in the section on Drainage Issues and Poorly Drained Soils.

- Relocate the entrance to the development to the western side of the site. DNREC reviewers discourage placement of roadways within floodplain areas, as they are essential for first responders in the event of an emergency and could become impassable during flood events. These events are likely anticipated to intensify through time due to impacts from climate change.

- Ensure unimpeded access to and from the amenity area. These structures are becoming increasingly important as emergency resilience hubs. For this reason, consider locating the amenity area at the highest elevation of the site.

- DNREC reviewers recommend that hydrologic and hydraulic engineering analyses are conducted for this site. These studies will determine base flood elevations and floodway delineations.

Contact: DNREC Climate and Sustainability Section at (302) 735-3480.
Website: https://dnrec.delaware.gov/coastal-programs/planning-training/adapting-to-sea-level-rise/

Response: The proposed community will comply with Sussex County floodplain requirements.

Drainage Issues and Poorly Drained Soils
Drainage issues have been documented on properties to the north, east, and south of this project. Poorly drained soils (Hydrologic Soil Group D) have also been identified in the eastern third of the property, where a total of 15 homes and an internal roadway are proposed. These soil types could worsen existing drainage issues.

- Limit removal of trees. Removal of trees in certain areas along the far southern corner of the property could worsen drainage issues. Tree removal is proposed in areas that likely contain poorly drained soils (Lots 17 – 24).

- All precautions should be taken to ensure the project does not hinder any off-site drainage upstream or create any off-site drainage problems downstream due to increases in stormwater.

Contact: DNREC Drainage Program at (302) 855-1930.
Website: https://dnrec.delaware.gov/drainage-stormwater/

Response: The project will comply with water quality stormwater management regulations.

Special Considerations for Stormwater Management

The preliminary plan proposes a stormwater management facility to be placed on the highest elevation of the site at the center of the development.

- It is recommended to work with the Sussex Conservation District to locate a more appropriate location for the stormwater management facility while considering the most suitable outlet.

Plan review agency contact: Sussex Conservation District at (302) 856-2105 or (302) 856-7219.
Website: https://www.sussexconservation.org/
General Stormwater contact: DNREC Sediment and Stormwater Program at (302) 739-9921. E-mail: DNREC.Stormwater@delaware.gov.
Website: https://dnrec.delaware.gov/watershed-stewardship/sediment-stormwater/

Response: The project will meet or exceed stormwater requirement of Sussex Conservation District.

Delaware Ecological Network

The forested area on this site is considered core habitat within the Delaware Ecological Network, a statewide network of interconnected lands having significant ecological value. This GIS data layer helps to identify and prioritize areas for natural resource protection, including forests, wetlands, streams, and high-quality habitat for rare plants and animals.

- Avoid disturbance within these habitats to maintain the naturally occurring landscape and connectivity of priority wildlife habitats.
- In general, larger, connected areas of natural habitat are more beneficial to wildlife, allowing for safer movement and migration from one area to another and reducing roadway mortality.

Contact: DNREC Wildlife Species Conservation and Research Program at (302) 735-3600.
Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

Response: As part of the planning of the community, the wetlands and forest adjacent to the wetlands were prioritized for preservation.

Removal of Mature Forest

The preliminary plan proposes the elimination of approximately 39.7 of 51.5 acres (77%) of forest on the site. An analysis of historical data indicates that the forest area covering most of the site has likely maintained some degree of forest cover since 1937 and could be considered mature forest. Mature forests possess the potential for rare, threatened, or endangered species that rely on this type of habitat. Forests filter water for improved water quality, provide habitat for wildlife, absorb nutrients, infiltrate stormwater, moderate temperatures, and store atmospheric carbon which would otherwise contribute to climate change.

- Removing forested areas for development, especially mature forests, should be avoided to the greatest extent possible.

- In general, contiguous forest and connected areas of natural habitat are more beneficial to wildlife, allowing for safer movement from one area to another while reducing roadway mortality.

- A forest assessment should be conducted to determine if mature forest resources exist on the property and to delineate their boundaries. Additionally, a forest assessment would include the identification of specimen trees and forest-dependent wildlife. If mature forests are found, these areas should be conserved to the maximum extent practicable.

- To reduce impacts to nesting birds and other wildlife species that utilize forests for breeding, it is recommended that tree clearing not occur from April 1st to July 31st. Likewise, avoid mowing open space areas and grass filter strips during the same timeframe, as various species of birds utilize these areas for nesting sites.

Contact: DNREC Division of Fish and Wildlife, Species Conservation and Research Program at (302) 735-3600.
Website: https://dnrec.delaware.gov/fish-wildlife/contact-information/

Response: The project will meet or exceed the County's resource buffer ordinances. As part of the planning of the community, the wetlands and forest adjacent to the wetlands were prioritized for preservation.

Sustainable Practices

- Incorporate nonmotorized connectivity and install bicycle racks where feasible to help facilitate non-vehicular travel modes.
- Build garages and parking spaces to be "electric vehicle (EV)-ready". Many manufacturers have pledged to sell only electric vehicles in the next 10-15 years. Installing a 240-volt outlet in one or two locations in a garage will enable a resident to easily (and cheaply) install a level 2 EV charger. This will increasingly be a selling point for homes.

- Offer the option to install solar or geothermal systems for each home. This allows a purchaser to incorporate the cost into their mortgage, making it more affordable. For community facilities, consider using renewable energy infrastructure such as solar or geothermal to reduce energy costs and further reduce pollution created from offsite generation. Grant funds and incentives are available for Delmarva Power customers through the DNREC Green Energy Fund, which includes several funding types through the state's major electric utilities (https://dnrec.delaware.gov/climate-coastal- energy/renewable/assistance/).

- Consider planting stands of native trees. Native trees improve air, water, and soil quality. Planting and nurturing trees is also a nature-based solution to reducing the greenhouse gases that drive climate change. In addition, native trees have an increasingly important role in the survival of native birds and beneficial insects whose habitat is shrinking due to development and climate change.

- Use efficient Energy Star rated products and materials in construction and redevelopment. Energy efficient appliances use less energy over time. This saves consumers and businesses money, while also helping to reduce pollution from power generation.

- Use structural paint coatings that are low in Volatile Organic Compounds to help protect air quality. Air pollution from new construction is generated through the use of maintenance equipment, paints, and consumer products like roof coatings and primers.

- Use recycled materials, such as reclaimed asphalt pavement, to reduce heat island effects on paved surfaces, prevent landfill waste, and lower material costs.

Contact: DNREC Division of Climate, Coastal & Energy at (302) 735-3480.
Website: https://dnrec.delaware.gov/climate-coastal-energy/

Response: Noted.

Delaware Emergency Management Agency – Contact Phillip Cane 302-659-2325

Population

- The county has a population density of 265.60 per square mile based on the US 2020 Census report; an increase from 2010 at 208.90 persons per square mile. The specific census block(s) the project is located on has a total population of 1328, though, with development, this will undoubtedly change. The 45 adjacent blocks aggregated bring the area to a total population of 3347.

FEMA National Risk Index

- The FEMA National Risk Index is an online mapping application that identifies communities most at risk to 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hal, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather. The FEMA National Risk Index is calculated by multiplying the Expected Annual Loss times the Social Vulnerability and dividing that by the Community Resilience.

- According to FEMA's National Risk Index, the parcel **is** considered **relatively low** for overall natural hazards risks.

- Community Resilience is a consequence reduction risk component and a community risk factor that represents the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions and withstand/recover rapidly from disruptions. Social Vulnerability is a consequence-enhancing risk factor that represents the susceptibility of social groups to the adverse impacts of natural hazards.
- Its community resilience and its social vulnerability are both rated as **relatively moderate.**

Renewable Energy Commitment

- Regarding energy use and consumption, the census tract utilizes **electricity** as the predominant fuel type for heating purposes.

- DEMA strongly encourages the use of renewable energies and high-efficiency appliances and utilities.

- Regarding utilities, DEMA suggests incorporating 90% series furnaces/HVAC systems; the closer to 99%, the better, as well as A/C units of 20 Seer or greater. DEMA recommends using tankless water heaters, and battery backup systems for sump pumps to reduce potential water damage from power failure.

- Lastly, DEMA encourages the integration of modern and emerging technologies, such as the potential for electric vehicles in garages/parking lots, green roofs or solar panels where applicable and allowable, and the like.

DEMA Notes:

- In reference to the evacuation zone, DEMA recommends the zone's designation and the information behind it be made readily available to all persons on the parcel, which can be done by simply placing a sign or having pamphlets readily accessible.

Response: The project will comply with County floodplain requirements. The home builder will review renewable energy options.

Delaware State Fire Marshall's Office – Contact Duane Fox 302-739-4394

- Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov, technical services link, plan review, applications or brochures.

Response: Noted.

This concludes our response. If you have any questions, please contact us at your convenience.

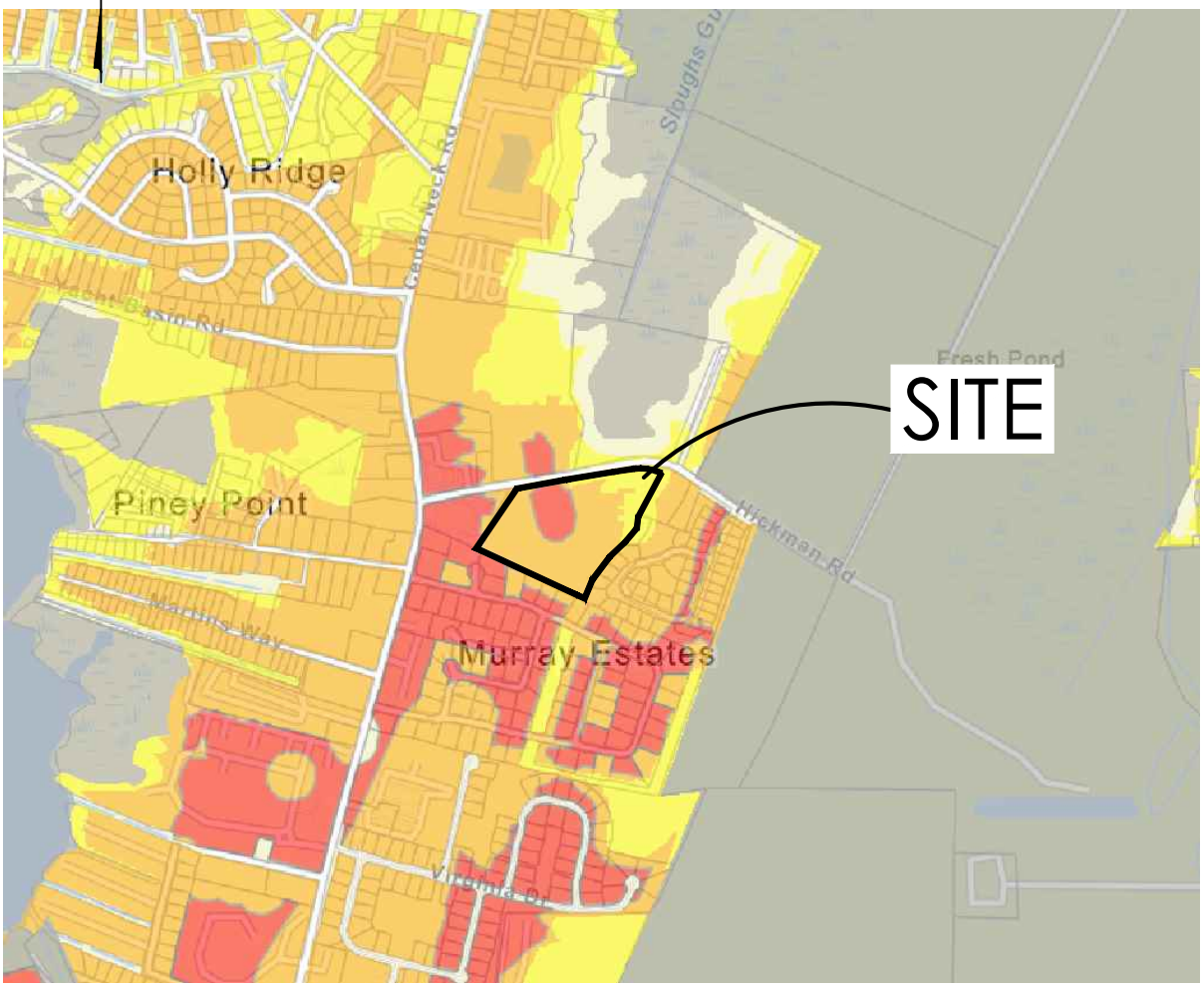
Sincerely,

Solutions, IPEM

Jason Palkewicz

Jason Palkewicz, PE

2020 STATE SPENDING STRAGEGIES



OUT OF PLAY

INVESTMENT LEVEL 1

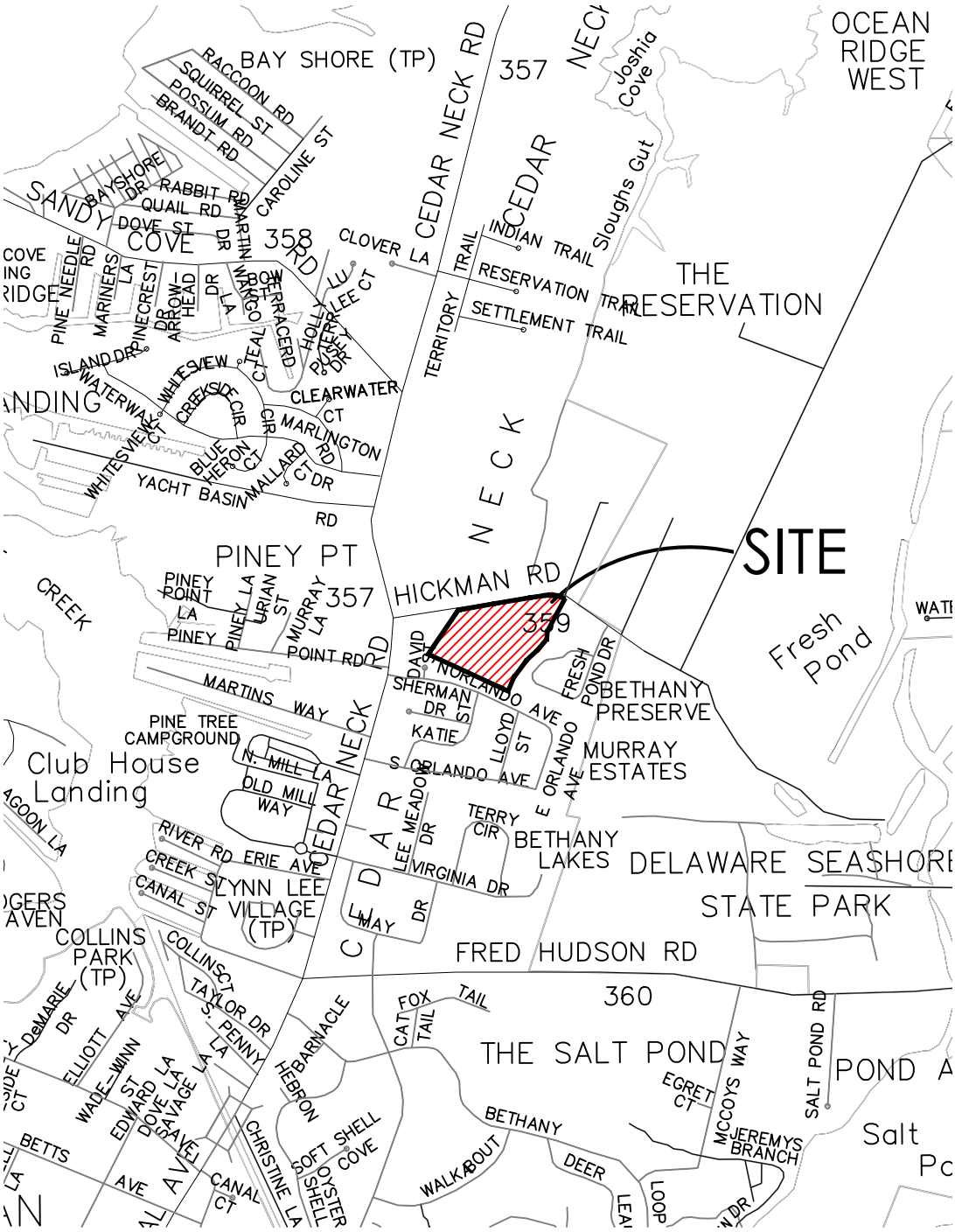
INVESTMENT LEVEL 2

INVESTMENT LEVEL 3

INVESTMENT LEVEL 4

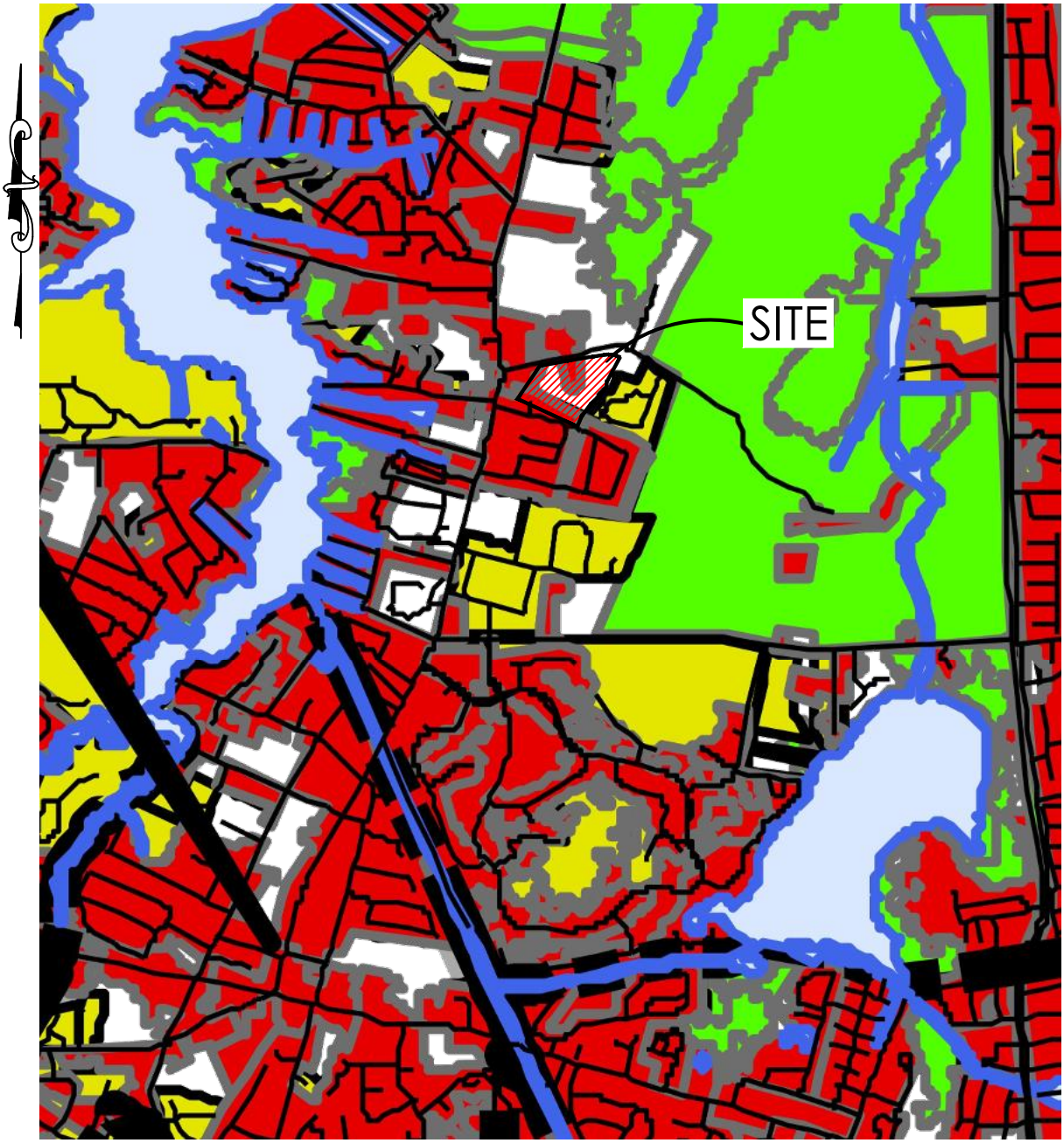
HICKMAN ROAD

VICINITY MAP



HICKMAN ROAD

DEVELOPED AND PROTECTED LANDS



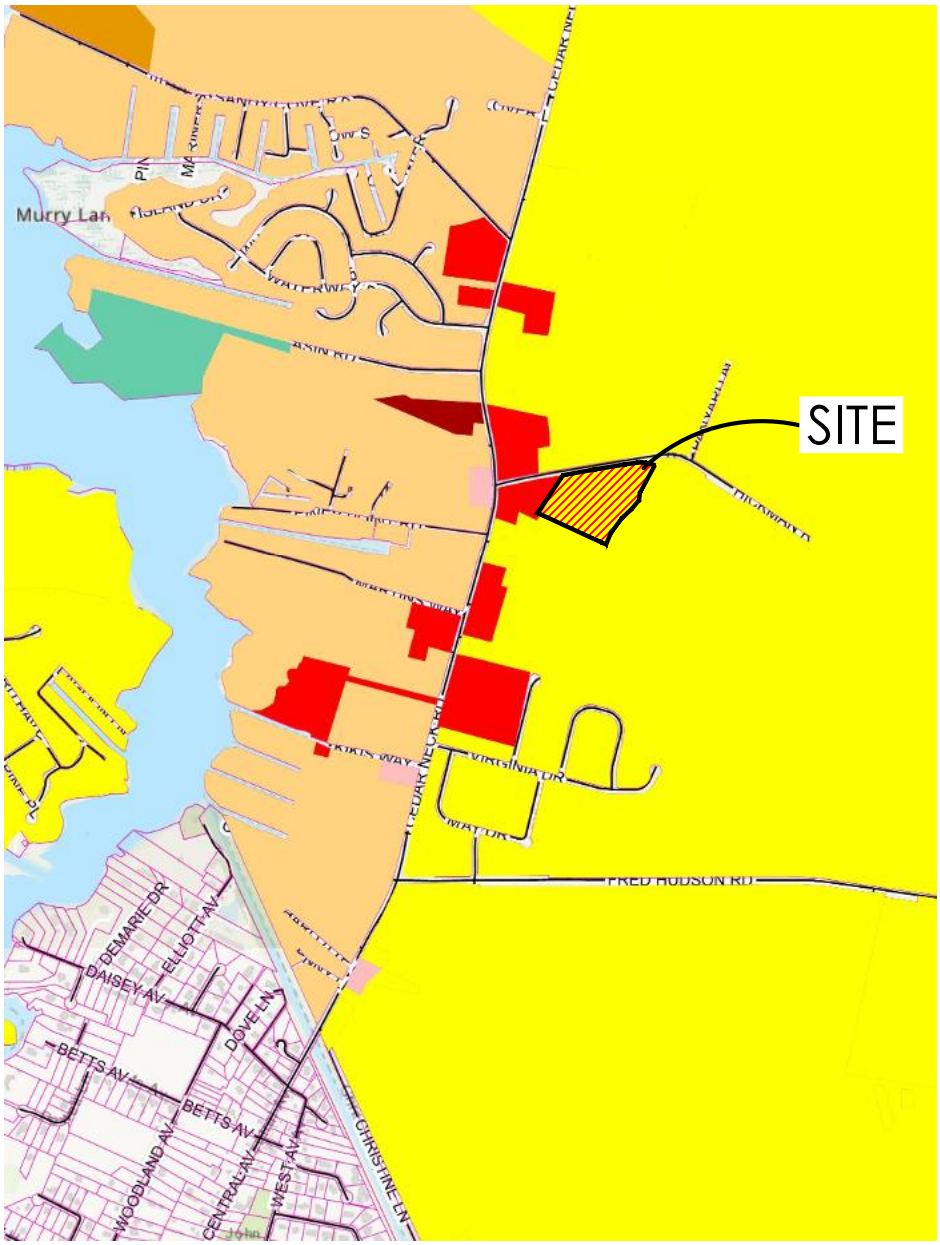
DEVELOPED LANDS

PROTECTED LANDS

MAJOR PROPOSED DEVELOPMENTS

HICKMAN ROAD

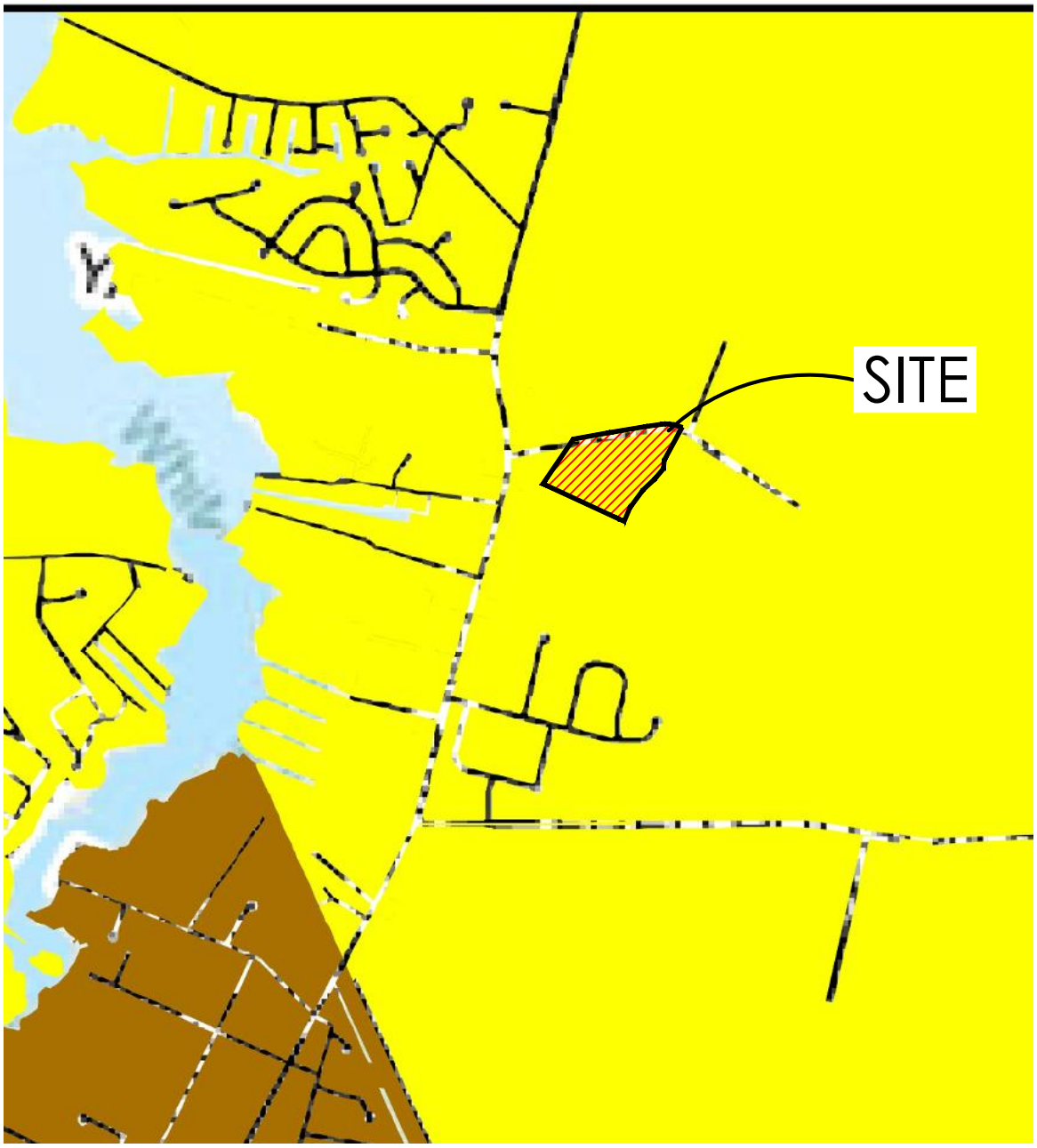
ZONING MAP



- AGRICULTURAL RESIDENTIAL - AR-1
- GENERAL RESIDENTIAL - GR
- MEDIUM RESIDENTIAL - MR
- NEIGHBORHOOD BUSINESS - B-1
- GENERAL COMMERCIAL - C1
- COMMERICAL RESIDENTIAL - CR-1
- MARINE

HICKMAN ROAD

FUTURE LAND USE PLAN



COASTAL

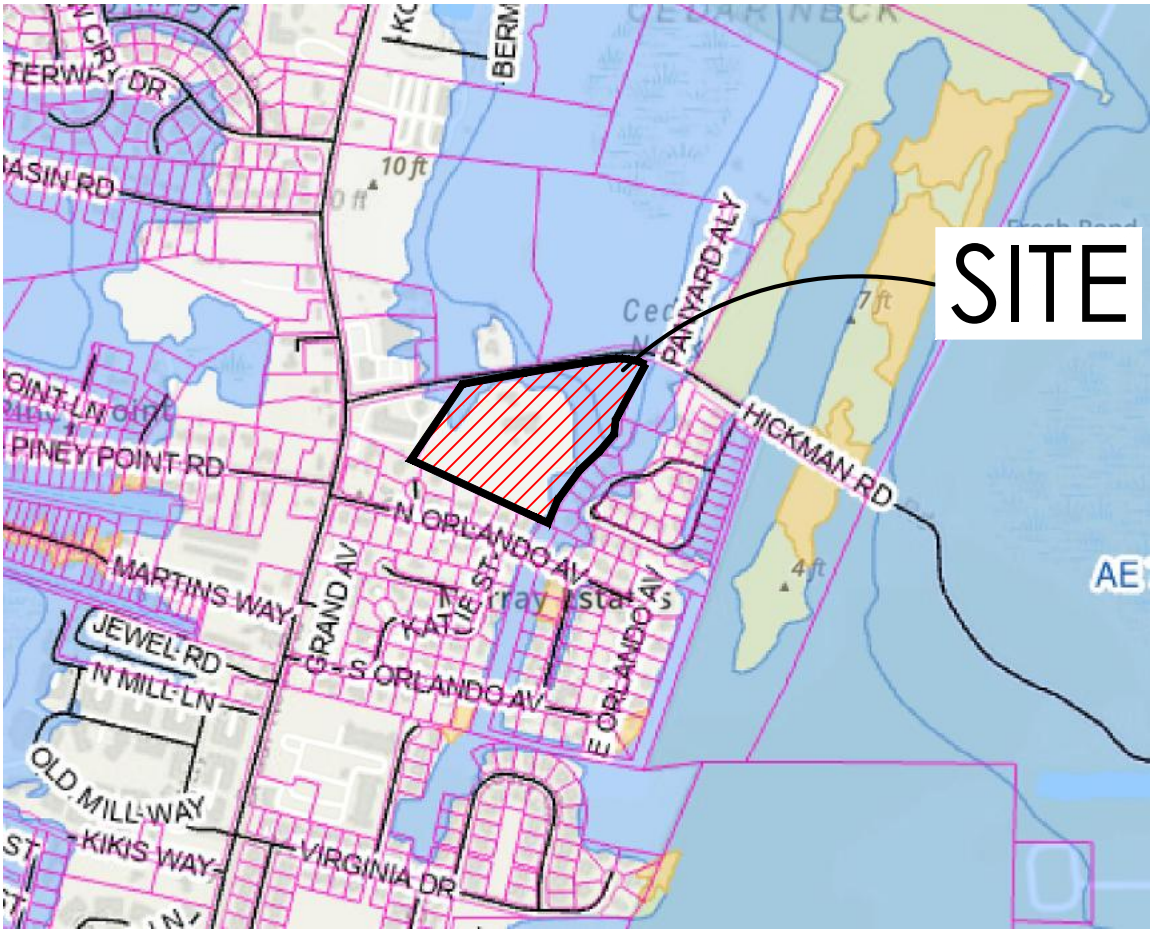
MUNICIPALITIES

HICKMAN ROAD

AERIAL

HICKMAN ROAD

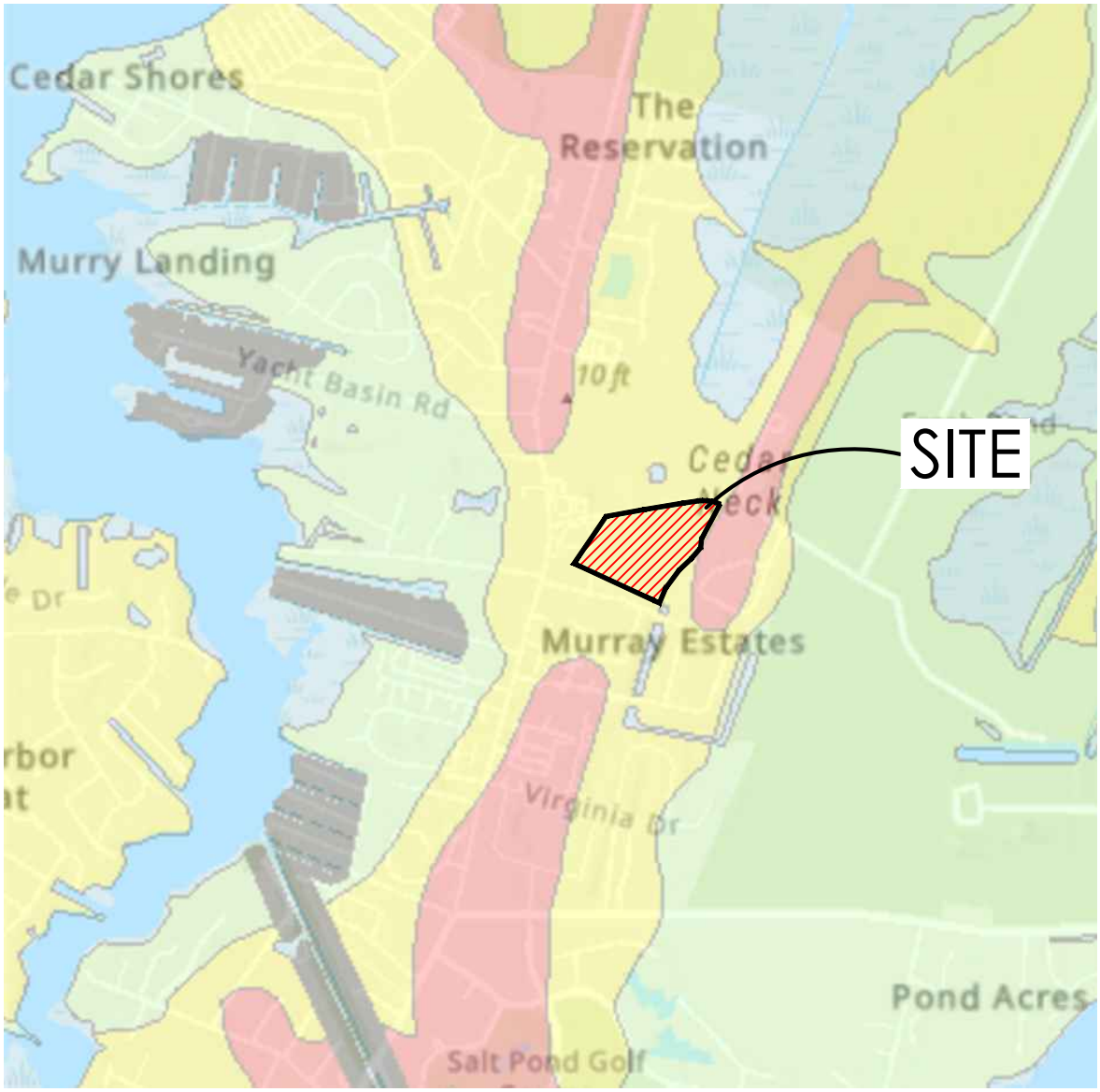
FLOOD MAP - 10005C0343K



PROPERTY IS LOCATED IN FLOOD ZONE AE (EL 6 & EL7) - SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD AND FLOOD ZONE X (UNSHADED) - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, PER FIRM MAP NUMBER 10005C0504K, MAP REVISED MARCH 16, 2015.

HICKMAN ROAD

GROUNDWATER RECHARGE PLAN



GOOD GROUNDWATER RECHARGE

FAIR GROUNDWATER RECHARGE

EXCELLENT GROUNDWATER RECHARGE

PIT/FILL

HICKMAN ROAD

Jason Palkewicz

From: Brad Dorey <BDorey@sussexshoreswater.com>
Sent: Wednesday, July 29, 2026 9:27 AM
To: Jason Palkewicz
Cc: John Murray; Christine Mason; Bryce Collins; Kelly Glenn
Subject: RE: Hickman Road

Mr. Palkewicz:

The purpose of this correspondence is to inform you that Sussex Shores Water Co. is prepared to provide water service to the proposed 44 lot community on Hickman Road, to be found on Sussex County Tax Map #1-34-9.00 -28

The developer will have to execute a water service agreement with SSWC prior to any water related utility work commencing.

We look forward to working with you on this project.

If you have any questions or need additional information, please advise.

Brad Dorey
Director of Operations
Sussex Shores Water Company
P. O. Box 170
39602 Waterworks Court
Bethany Beach, DE 19930
302-539-7611
302-539-0216 Fax
302-249-6474 Cell

From: Jason Palkewicz <jpalkewicz@solutionsipem.com>
Sent: Tuesday, July 28, 2026 8:21 AM
To: Brad Dorey <BDorey@sussexshoreswater.com>
Cc: John Murray <jmurray@foxlanehomes.com>
Subject: Hickman Road

Brad

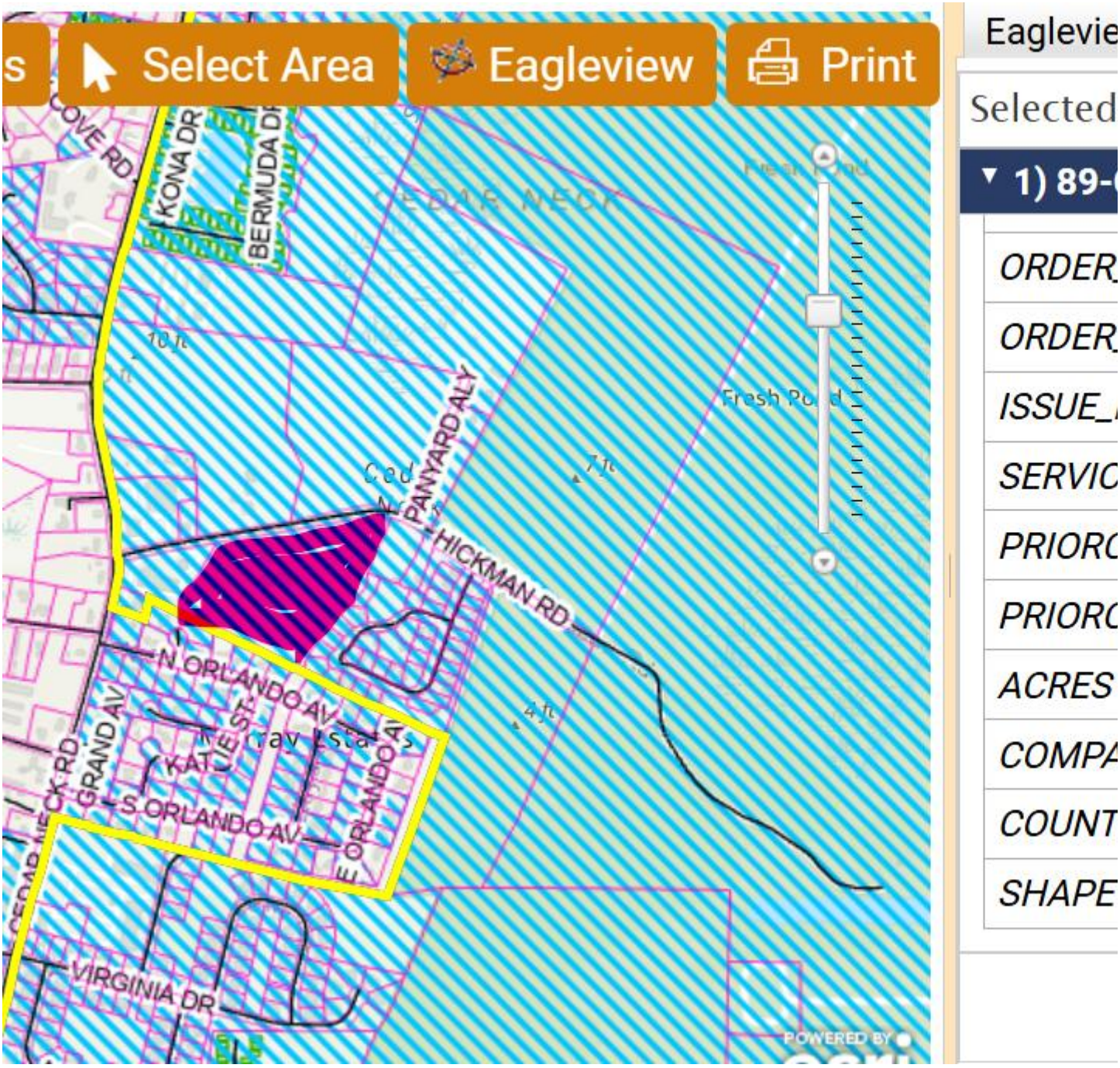
Good morning.

We are working on a proposed community on Hickman Road, see attached and below. The site is located on TM 134-9.00-28.00 and is within Sussex Shores CPCN.

Can you provide an ability to serve letter? We anticipate being on the P&Z agenda in the next couple of months.

Let us know if you have any questions.

Thanks



Jason Palkewicz | PE, LEED AP | CEO |

Solutions IPEM | 303 N Bedford Street | Georgetown, DE 19947 | ph 302.297.9215 | www.solutionsipem.com

Jason Palkewicz

From: Jason Palkewicz
Sent: Thursday, June 18, 2026 9:27 AM
To: jack.owens@irsd.k12.de.us
Subject: Hickman Road
Attachments: G24006-cond-cover-plus.pdf

Good morning.

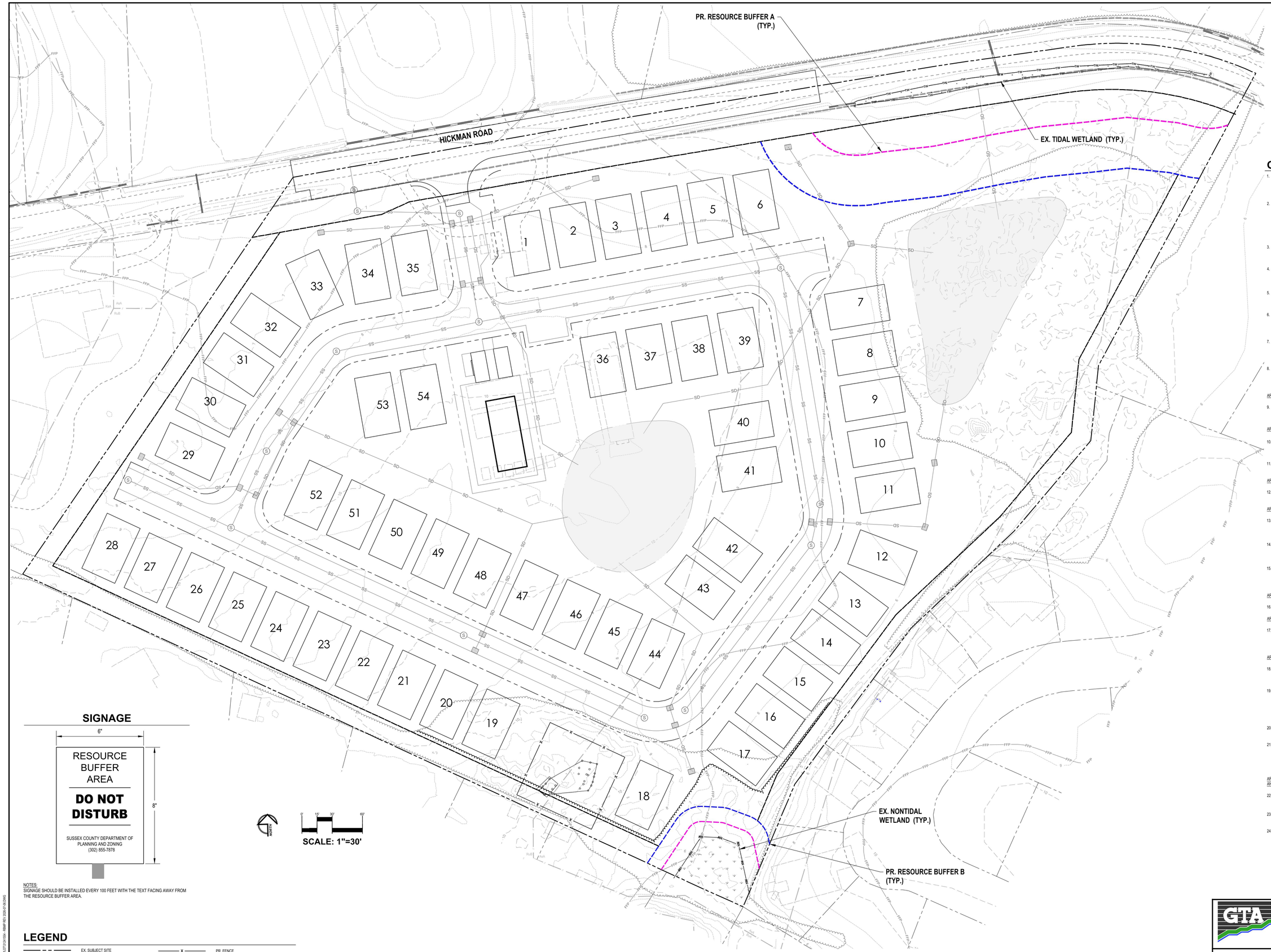
We are working on a proposed community located on Hickman Road. I have attached the cover sheet showing site details as well as the locate of a proposed bus stop.

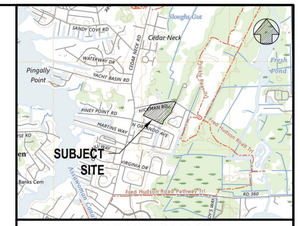
Please let us know if you have any questions or comments.

Thanks

Jason Palkewicz | PE, LEED AP | CEO |

Solutions IPEM | 303 N Bedford Street | Georgetown, DE 19947 | ph 302.297.9215 | www.solutionsipem.com





VICINITY MAP

SCALE: 1" = 2,000'

UNITED STATES GEOLOGICAL SURVEY, BETHANY BEACH, DE QUADRANGLE, 7.5 MINUTE TOPOGRAPHIC MAP SERIES, DATED 2023.

GENERAL INFORMATION

1. PLAN PREPARED FOR: FOXLANE HOMES DELAWARE
32191 NASSAU ROAD #2
LEWES, DELAWARE 19958
ATTN: JOHN MURRAY

2. PLAN PREPARED BY: GEO-TECHNOLOGY ASSOCIATES, INC. (GTA)
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
ATTN: MS. KIMBERLEY MCNEW
PHONE: 410-515-9446
EMAIL: KMCNEW@GTAENG.COM

3. THE SUBJECT SITE ENCOMPASSES APPROXIMATELY 12.86 ACRES AND IS LOCATED AT 38492 HICKMAN ROAD IN THE OCEAN VIEW AREA OF SUSSEX COUNTY, DELAWARE. THE SUBJECT SITE IS IDENTIFIED AS TAX PARCEL 134-9.00-28.00.

4. THIS PLAN WAS PRODUCED ON A BASE MAP PROVIDED BY SOLUTIONS IPEM, LLC. EXISTING TOPOGRAPHIC INFORMATION SHOWN HEREON WAS PROVIDED BY SOLUTIONS IPEM, LLC AND SUSSEX COUNTY GIS.

5. ACCORDING TO FEMA FIRM MAP NUMBER 10005C0504K, EFFECTIVE MARCH 16, 2015, PORTIONS OF THE SUBJECT SITE ARE LOCATED WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN.

6. A WETLAND DELINEATION OF THE SUBJECT SITE WAS PERFORMED BY WATERSHED ECO, LLC IN APRIL 2024. WETLAND FLAG LOCATIONS WITHIN THE SUBJECT SITE WERE SURVEY LOCATED BY SOLUTIONS IPEM, LLC. A JURISDICTIONAL DETERMINATION WAS ISSUED BY THE U.S. ARMY CORPS OF ENGINEERS ON FEBRUARY 6, 2026 (NAP-2026-00032-103).

7. GTA PERFORMED A DRAINAGE ASSESSMENT IN JULY 2024 TO REVIEW EXISTING DRAINAGE CONVEYANCES WITHIN THE SUBJECT SITE TO EVALUATE THEIR CONDITION AND IDENTIFY IMPEDIMENTS IN GENERAL ACCORDANCE WITH THE CODE OF SUSSEX COUNTY, CHAPTER 115, ARTICLE XXV §115-193.

8. THIS PLAN WAS PREPARED BY GTA FOR THE SOLE AND EXCLUSIVE USE OF FOXLANE HOMES DELAWARE ANY REPRODUCTION OF THIS PLAN BY ANY OTHER PERSON WITHOUT THE EXPRESSED WRITTEN PERMISSION OF GTA AND FOXLANE HOMES DELAWARE IS UNAUTHORIZED, AND SUCH USE IS AT THE SOLE RISK OF THE USER.

ARTICLE XXV §115-193(A(4)) RESOURCE BUFFER MARKERS

9. SIGNAGE, AS DISPLAYED ON THE RESOURCE BUFFER MANAGEMENT PLAN, WILL BE INSTALLED EVERY 100 FEET WITH THE TEXT FACING AWAY FROM THE RESOURCE BUFFER AREA.

ARTICLE XXV §115-193(B) RESOURCE BUFFER AVERAGING

10. RESOURCE BUFFERS ARE LISTED ON THE FINAL SITE PLAN AS "RESOURCE BUFFER A" AND "RESOURCE BUFFER B." ACCESS TO RESOURCE BUFFERS WILL BE PROVIDED BY RIGHT-OF-WAYS AND EASEMENTS.

11. RESOURCE BUFFER WIDTH AVERAGING WAS NOT UTILIZED IN THIS PLAN FOR ZONE B. ALL ZONE B AVERAGING IS ACHIEVED WITHIN THE PROPOSED BOUNDARIES.

ARTICLE XXV §115-193(C) PERMITTED ACTIVITIES

12. PERMITTED ACTIVITIES WITHIN THE RESOURCE BUFFER CAN BE FOUND WITHIN SUSSEX COUNTY CODE ARTICLE XXV §115-193C.

ARTICLE XXV §115-193(D) RESOURCE BUFFER STANDARDS

13. THE RESOURCE BUFFERS WITHIN THE SUBJECT SITE CONTAIN NATURAL FORESTS WHICH WILL BE MAINTAINED BY THE HOMEOWNERS' ASSOCIATION. THE FOREST WILL BE PRESERVED, PROTECTED, AND MAINTAINED IN ITS NATURAL STATE.

14. NONFOREST MEADOWS DO NOT EXIST WITHIN THE RESOURCE BUFFERS WITHIN THE SUBJECT SITE. IF CONDITIONS CHANGE AND THESE AREAS DEVELOP WITHIN A RESOURCE BUFFER, THEY SHOULD BE ALLOWED TO RETURN TO A FORESTED STATE.

15. GRAZED PASTURES, MANAGED TURF, ACTIVE CROPLAND, OR AREAS OF BARE EARTH NOT STABILIZED WITH VEGETATIVE COVER DO NOT EXIST WITHIN THE RESOURCE BUFFERS WITHIN THE SUBJECT SITE. IF CONDITIONS CHANGE AND THESE AREAS DEVELOP WITHIN A RESOURCE BUFFER, THEY SHOULD BE ALLOWED TO RETURN TO A FORESTED STATE.

ARTICLE XXV §115-193(E) INVASIVE SPECIES

16. INVASIVE SPECIES, IF OBSERVED, MAY BE REMOVED BY A QUALIFIED PROFESSIONAL.

ARTICLE XXV §115-193(F) MAINTENANCE OF DRAINAGE CONVEYANCES

17. DRAINAGES WITHIN THE SUBJECT SITE ARE POSITIVE CONVEYANCES AND DO NOT REQUIRE RESTORATION IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE, AND COUNTY REQUIREMENTS. DRAINAGES LOCATED WITHIN THE DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT) RIGHT OF WAY EASEMENT SHALL BE MAINTAINED BY DELDOT.

ARTICLE XXV §115-193(H) RESOURCE BUFFER MAINTENANCE AND MANAGEMENT

18. THE DEVELOPMENT WITHIN THE SUBJECT SITE REQUIRES RESOURCE BUFFERS FROM NON-TIDAL WETLANDS. THE REQUIREMENTS FOR RESOURCE BUFFERS HAVE BEEN MET BY PRESERVING EXISTING NATURAL FOREST. NO ADDITIONAL PLANTINGS ARE REQUIRED.

19. THE HOMEOWNERS' ASSOCIATION WILL BE RESPONSIBLE FOR PRESERVING AND MAINTAINING THE EXISTING NATURAL FOREST IN THE BUFFER AREAS. GTA RECOMMENDS ANNUAL EVALUATIONS OF THE RESOURCE BUFFERS BY QUALIFIED PROFESSIONALS. THE DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT) SHALL BE RESPONSIBLE FOR THE RESOURCE AND RESOURCE BUFFERS LOCATED WITHIN THE DELDOT RIGHT OF WAY EASEMENT.

20. PERMITTED ACTIVITIES WITHIN THE RESOURCE BUFFER CAN BE FOUND WITHIN SUSSEX COUNTY CODE ARTICLE XXV §115-193C.

21. THE RESOURCE BUFFERS IDENTIFIED ON THE SUBJECT SITE SHALL BE DESIGNATED AS ACCESS EASEMENTS AS STATED IN SUSSEX COUNTY CODE ARTICLE XXV §115-193F(1). THESE EASEMENTS WILL EXIST AS LONG AS THE BUFFER IS REQUIRED. EASEMENTS WILL BE MAINTAINED BY THE DEVELOPER AND THE HOMEOWNERS' ASSOCIATION FOR EASE OF MAINTENANCE ACCESS.

ARTICLE XXV §115-193(I-K) MODIFICATIONS AND EXCEPTIONS, REQUIREMENTS, VIOLATIONS AND PENALTIES

22. THE REQUIREMENTS ESTABLISHED BY SUSSEX COUNTY CODE ARTICLE XXV §115-193 HAVE BEEN MET.

23. THIS PROJECT IS CONSIDERED A MAJOR SUBDIVISION AS GOVERNED BY CHAPTER 99 IN THE SUSSEX COUNTY CODE.

24. ANY VIOLATIONS TO THE COVENANT AND RESTRICTIONS PUT INTO PLACE BY THE HOMEOWNERS' ASSOCIATION WILL BE AT THE SOLE RESPONSIBILITY AND EXPENSE OF THE VIOLATING PARTY.

SIGNAGE

NOTES:
SIGNAGE SHOULD BE INSTALLED EVERY 100 FEET WITH THE TEXT FACING AWAY FROM THE RESOURCE BUFFER AREA.

NORTH

0 15' 30' 60'

SCALE: 1"=30'

LEGEND

- EX. SUBJECT SITE
- EX. PROPERTY BOUNDARY
- EX. 1-FOOT CONTOUR
- EX. 5-FOOT CONTOUR
- EX. BUILDING
- EX. EDGE OF PAVEMENT
- EX. EASEMENT
- EX. SOIL BOUNDARY
- EX. TREE LINE
- EX. FEMA 100-YEAR FLOODPLAIN
- EX. NONTIDAL WETLAND
- EX. TIDAL WETLAND
- EX. CULVERT
- PR. FENCE
- PR. EASEMENT
- PR. ROAD EDGE
- PR. STORM DRAIN
- PR. TREE LINE
- PR. SEWER LINE
- RESOURCE BUFFER A
- RESOURCE BUFFER B
- PR. STORMWATER POND

SOILS CHART

SYMBOL[1]	NAME/DESCRIPTION[1]	HYDRIC SOIL[2]	HYDRIC COMPONENT[2]	PERCENTAGE OF MAPPING UNIT[2]	POSITION IN LANDSCAPE[2]
AsA	ASKECKSY LOAMY SAND, 0-2% SLOPES	YES	HURLOCK, UNDRAINED	10	DEPRESSIONS, SWALES, FLATS
			MULLICA, UNDRAINED	5	SWALES, DRAINAGEWAYS, DEPRESSIONS FLATS
IeB	INGLESIDE LOAMY SAND, 2-5% SLOPES	NO	-	-	-
RuB	RUNCLINT LOAMY SAND, 2-5% SLOPES	YES	HURLOCK, DRAINED	5	FLATS, DEPRESSIONS, SWALES

1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, SUSSEX COUNTY, DELAWARE, SOIL SURVEY DATA VERSION 24, DATED SEPTEMBER 12, 2023.
2. HYDRIC SOILS INFORMATION AVAILABLE FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE SOIL DATA ACCESS HYDRIC SOILS LIST. ACCESSED JULY 22, 2024.

RESOURCE BUFFER TABLE

RESOURCE TYPE	BUFFER TYPE	BUFFER REQUIRED	BUFFER PROVIDED
NON-TIDAL WETLAND	BUFFER A	13,781.3 SF	13,781.3 SF
NON-TIDAL WETLAND	BUFFER B	24,526.5 SF	24,526.5 SF

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM
© GEO-TECHNOLOGY ASSOCIATES, INC.

RESOURCE BUFFER MANAGEMENT PLAN

HICKMAN ROAD PROPERTY

SUSSEX COUNTY, DELAWARE

REVISIONS:

JOB NO:	31241554
SCALE:	1"=30'
DATE:	JULY 16, 2026
DRAWN BY:	BCW
DESIGN BY:	
REVIEW BY:	MAJ/TAS
SHEET:	1 OF 1

L:\GIS\PROJECT FILES\2024\31241554 - HICKMAN ROAD PROPERTY\MXD\PLOT\31241554 - RBMP REV 2026-07-09.DWG

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

NICOLE MAJESKI
SECRETARY

August 13, 2024

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Foxlane Homes Delaware, LLC c/o John Murray (38492 Hickman Road, Ocean View, DE 19970)** proposed land use application, which we received on August 1, 2024. This application is for an approximate 12.8-acre parcel (Tax Parcel: 134-9.00-28.00). The parcel is located on the south side of Hickman Road (Sussex County Road 359) and approximately 560 feet east of the intersection of Cedar Neck Road (Sussex County Road 357) and Hickman Road. The parcel is currently zoned MR (Medium-Density Residential District), and the applicant seeks a Conditional Use approval to place 55-Single Family Condos units, on the parcel.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volume along Hickman Road where the subject land is located, which is from Cedar Neck Road to the cul-de-sac to the east, is 284 of vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 215 / Units 55), we estimate that the above land use will generate fewer than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day. These numbers of trips are DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. Because the proposed land use would not meet these warrants, we consider the development's traffic impact to be **negligible** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as negligible with regard to warranting a TIS does not mean that it is negligible in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Mr. Philip Lindsey, at philip.lindsey@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SAM:plm
cc: Foxlane Homes Delaware, LLC c/o John Murray, Applicant
Ashley Paugh, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer, Maintenance & Operations
Tara Summers-Strong, South District Public Works Admin., Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination
Derek Sapp, Sussex County Subdivision Reviewer, Development Coordination
Thomas Gagnon, Sussex County Subdivision Reviewer, Development Coordination
José Quixtan, Sussex County Subdivision Reviewer, Development Coordination
Annamaria Furmato, TIS Group Engineer, Development Coordination
Ben Fisher, TIS Group Engineer, Development Coordination
Philip Lindsey, TIS Group Engineer, Development Coordination

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

NICOLE MAJESKI
SECRETARY

MEMORANDUM

TO: John Pietrobono, Acting Sussex County Review Coordinator

FROM: Sireen Muhtaseb, TIS Group Manager

DATE: November 21, 2024

SUBJECT: **Hickman Road**
(Protocol Tax Parcel # 134-9.00-28.00)
Area Wide Study Fee (AWSF) and Off-site Improvements

The subject development meets DelDOT's volume warrants to pay the Area Wide Study Fee in lieu of doing a Traffic Impact Study (TIS). This memorandum is to address the amount of that fee and the off-site improvements that should be required of the developer in the absence of a TIS. The fee and improvements presented below are an alternative to the developer doing a TIS and the improvements identified through DelDOT's review of that study.

1. The proposed development consists of 55 dwelling units of single-family housing. Based on our review, using Land Use Code 210 of the 11th edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual, the proposed development would generate 582 average vehicle daily trips (ADT) and 57 vehicle trips during the p.m. peak hour. The fee is calculated at ten dollars per daily trip. For the proposed development, the fee would be $5,820.

2. The developer shall improve the State-maintained Roads on which they front (Hickman Road, Sussex Road 359), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road**.** "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in

Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

3. Section 2.2.2.2 of the Development Coordination Manual allows DelDOT to accept the AWSF in lieu of a TIS, but only if the local land use agency does not require a TIS. If the County requires a TIS for this development, DelDOT will support that requirement and will not accept the AWSF.

If you have any additional questions or comments, please let me know.

SAM: km
cc: John Murray, Foxlane Homes Delaware
Jason Palkewicz, Solutions IPEM
Jamie Whitehouse, Sussex County Planning & Zoning
Lauren DeVore, Sussex County Planning & Zoning
Michael Simmons, Chief of Project Development South, DOTS
Wendy Carpenter, Traffic Calming & Subdivision Relations Manager, Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Alastair Probert, South District Engineer, South District
Matthew Schlitter, South District Public Works Manager, South District
Travis Schirmer, South District Public Works Supervisor, Maintenance & Operations
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
Thomas Gagnon, Sussex Subdivision Engineer, Development Coordination, Planning
Annamaria Furmato, TIS Group Engineer, Development Coordination, Planning
Benjamin Fisher, TIS Group Engineer, Development Coordination, Planning
Tanner Chiamprasert, TIS Group Engineer, Development Coordination, Planning

GEO-TECHNOLOGY ASSOCIATES, INC.

GEOTECHNICAL • ENVIRONMENTAL •
CONSTRUCTION OBSERVATION AND TESTING

A Practicing Geoprofessional Business Association Member Firm

July 10, 2026

Foxlane Homes Delaware
32191 Naussau Road #2
Lewes, Delaware 19958

Attn: Mr. John Murray

Re: Drainage Assessment Report
Hickman Road Property
Sussex County, Delaware

Dear Mr. Murray:

In accordance with our agreement dated July 11, 2024, Geo-Technology Associates (GTA) has completed the drainage assessment for the Hickman Road Property project located at 38492 Hickman Road in the Ocean View area of Sussex County, Delaware. The assessment consisted of a field evaluation of existing drainage conveyances within the subject site to evaluate their condition, identify impediments, and provide recommendations on remedial measures for impediments identified as required by the Code of Sussex County, Chapter 115, Article XXV §115-193. Transmitted herein is a report of our findings and conclusions about the condition of the drainage conveyances observed on the subject site.

Thank you for the opportunity to be of assistance. If you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
GEO-TECHNOLOGY ASSOCIATES, INC.

TRAVIS P. CARAWAY LICENSE No. 26202 DELAWARE PROFESSIONAL ENGINEER

Kimberley McNew.
Associate

Travis Caraway, P.E.
Associate

Matthew Jennette
Vice President

BCW/KRM/GRS/llh
31241554

DRAINAGE ASSESSMENT REPORT

HICKMAN ROAD PROPERTY
SUSSEX COUNTY, DELAWARE

July 10, 2026

Prepared For:

FOXLANE HOMES DELAWARE
32191 Naussau Road #2
Lewes, Delaware 19958
Attn: Mr. John Murray

Prepared By:

GEO-TECHNOLOGY ASSOCIATES, INC.
Geotechnical and Environmental Consultants
3445-A Box Hill Corporate Center Drive
Abingdon, Maryland 21009
Phone: (410) 515-9446
Fax: (410) 515-4895
www.gtaeng.com

GTA Project No: 31241554

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DRAINAGE ASSESSMENT REPORT
HICKMAN ROAD PROPERTY
SUSSEX COUNTY, DELAWARE
JULY 10, 2026

1.0 INTRODUCTION

The subject site encompasses approximately 12.86 acres and is located at 38492 Hickman Road in the Ocean View area of Sussex County, Delaware. (*Figure 1*). The subject site is identified as Sussex County Tax Parcel 134-9.00-28.00. It is Geo-Technology Associates Inc. (GTA) understanding that portions of the subject site are proposed for residential development. As part of the Sussex County Planning and Zoning development plan review process, and in accordance with Code of Sussex County, Chapter 115, Article XXV, §115-193 Resource Buffers are to be established on "Resources" (i.e. tidal waters, tidal wetlands, non-tidal wetlands, perennial streams, and intermittent streams) delineated within the subject site. Furthermore, "if a Resource Buffer abuts or contains features such as ephemeral, intermittent, or perennial streams which are not part of an established Tax Ditch and which convey drainage from or through a site proposed for development, a Drainage Assessment Report" is required.

GTA completed a drainage assessment of resources within the subject property to evaluate the condition of existing drainage conveyances within the subject site. As required by the Code of Sussex County, Chapter 115, Article XXV §115-193, the following instabilities were documented, if identified:

a) Unstable eroding or unstable stream banks or conveyance requiring stabilization or restoration measures.
b) The location of stream blockages such as debris jams, fallen or unstable trees, beaver dams or similar impediments to conveyance.
c) The location of any sand or gravel deposition within a channel or conveyance which impedes the flow of water produced by a storm having an annual probability of occurrence of 10%.

The sections that follow describe the existing conditions of the site, a summary of the on-site investigations completed, and discussion of recommended measures to remedy identified impediments to drainage conveyances.

2.0 EXISTING CONDITIONS

2.1 Rare, Threatened, and Endangered Species

On July 16, 2024 GTA utilized the United States Fish and Wildlife Service (USFWS) Chesapeake Bay Field Office online project review process to determine if state- and/or federally-listed threatened or endangered species have been documented within the subject site. The Official Species List included the endangered Northern Long Eared Bat (*Myotis septenrionalis*), the proposed endangered Tricolored Bat (*Perimyotis subflavus*), and the candidate monarch butterfly (*Danaus plexippus*) as potentially occurring within the vicinity of the subject site. There are no Section 7 of the Endangered Species Act of 1973 (ESA) requirements associated with candidate species or proposed endangered species. In accordance with the USFWS online review process, GTA completed and submitted the NLEB Rangewide Determination Key through the online review process. The Determination Key states that the proposed project is consistent with a determination of "no effect" for the NLEB. According to the Determination Key, if no changes occur within the project or there are no updates on listed species, no further consultation or coordination for this project is required for the NLEB. USFWS coordination is included in ***Appendix B.***

2.2 Land Use and Existing Resources

At the time of GTA's environmental review, the subject site consisted primarily of mowed fields and wooded areas (*Figure 2*). The current land use is residential and agricultural. The topography of the subject site is gently sloped. GTA consulted existing topographic survey provided by Solutions IPEM, the Wetland Delineation Report prepared by Watershed Eco, LLC and dated April 15, 2024 for the subject site (***Appendix C***), and the Federal Emergency Management Agency (FEMA) Flood Map[1] (*Figure 3*) of the subject site to identify drainage conveyances and/or streams within the subject site that qualify for the drainage assessment.

According to the FEMA Flood Map (*Figure 3*) areas of the subject site are located within the FEMA 100-year floodplain. The NWI Wetlands Map (*Figure 4*) identifies two freshwater forested/shrub wetlands located along the eastern boundary of the subject site (PFO1B).

[1] Federal Emergency Management Agency, Flood Map Service Center, Sussex County Area, Delaware. Accessed July 3, 2024.

The Jurisdictional Wetland Delineation Plan prepared by Watershed Eco, LLC and dated July 21, 2025 identified three wetlands and one ephemeral drainage ditch within the subject site. Wetland A is a federally regulated tidal emergent wetland located within the northeastern portion of the subject site. Wetland B is a not federally regulated isolated palustrine forested wetland that is located within the northeastern portion of the subject site. Wetland C is a federally regulated palustrine forested wetland that is located within the southern portion of the subject site. The ephemeral drainage ditch is not federally regulated and is located within the eastern portion of the subject site (***Appendix C***). A Jurisdictional Determination was issued by the U.S. Army Corps of Engineers on February 6, 2026 (NAP-2026-00032-103).

3.0 ON-SITE INVESTIGATION SUMMARY

During July 2024, GTA's environmental scientists conducted an on-site review of identified streams and drainage conveyances on the subject site to evaluate their condition and identify instream blockages and/or instabilities, if present. GTA's field investigation consisted of photo documenting existing conditions, identifying stream impediments (i.e. blockages or sand bars), and identifying unstable or eroding banks, if present. Cross section survey was performed by Solutions IPEM within Wetlands A and C and the ephemeral drainage ditch to document typical channel dimensions. Typical drainage area assessments include cross section surveys at each geometry transition and additional cross section surveys in locations of unstable or eroding banks, stream blockages, and in sand bars that would impede flow of water produced by a 10-year recurrence interval storm event. Existing site photographs are provided in ***Appendix D*** and the cross section survey is provided in ***Appendix E***. An existing condition plan with existing site photograph locations and cross section survey locations are included in ***Appendix F***. The paragraphs below summarize the existing condition of each resource evaluated on the project site.

Wetland A

Wetland A is a federally regulated tidal emergent wetland located within the northern portion of the subject site, adjacent to Hickman Road. At the time of GTA's site visit, Wetland A exhibited stable conditions within the subject site. The area is comprised of dense wetland vegetation including common reed (*Phragmites australis*, FACW),

narrow-leaf cattail (*Typha angustifolia*, OBL), and three-square (*Schoenoplectus pungens*, OBL). Debris blockages or sand or gravel deposition that would impede the flow of water at storms greater than the 10-year recurrence interval were not observed. Remediation measures are not recommended in Wetland A due to the stable nature of the conveyance.

Wetland C

Wetland C is a federally regulated palustrine forested wetland located within the southeastern portion of the subject site. At the time of GTA's site visit, Wetland C exhibited stable conditions within the subject site. The area is comprised of dense wetland vegetation including red maple (*Acer rubrum*, FAC), loblolly pine (*Pinus taeda*, FAC), and horsebrier (*Smilax rotundifolia*, FAC). Debris blockages or sand or gravel deposition that would impede the flow of water at storms greater than the 10-year recurrence interval were not observed. Remediation measures are not recommended in Wetland C due to the stable nature of the conveyance.

Ephemeral Drainage Ditch

The ephemeral drainage ditch is a not federally regulated feature located adjacent to the eastern boundary of the subject site. At the time of GTA's site visit, the ephemeral drainage ditch exhibited stable conditions within the subject site. The ephemeral drainage ditch was dry at the time of GTA's site visit, but appears to originate from drainage patterns within Wetland B and appears to flow south along the property boundary. The drainage ditch is in wooded areas and mowed/maintained areas. In the wooded areas, the drainage ditch is densely vegetated with trees, vines, and herbaceous vegetation. Minor amounts of woody debris were noted within the conveyance; however, the woody debris observed did not appear to be preventing flow. The mowed/maintained portions of the drainage also appeared visually stable in the field. Debris blockages or sand or gravel deposition that would impede the flow of water at storms greater than the 10-year recurrence interval were not observed. Remediation measures are not recommended in the ephemeral drainage ditch due to the stable nature of the conveyance.

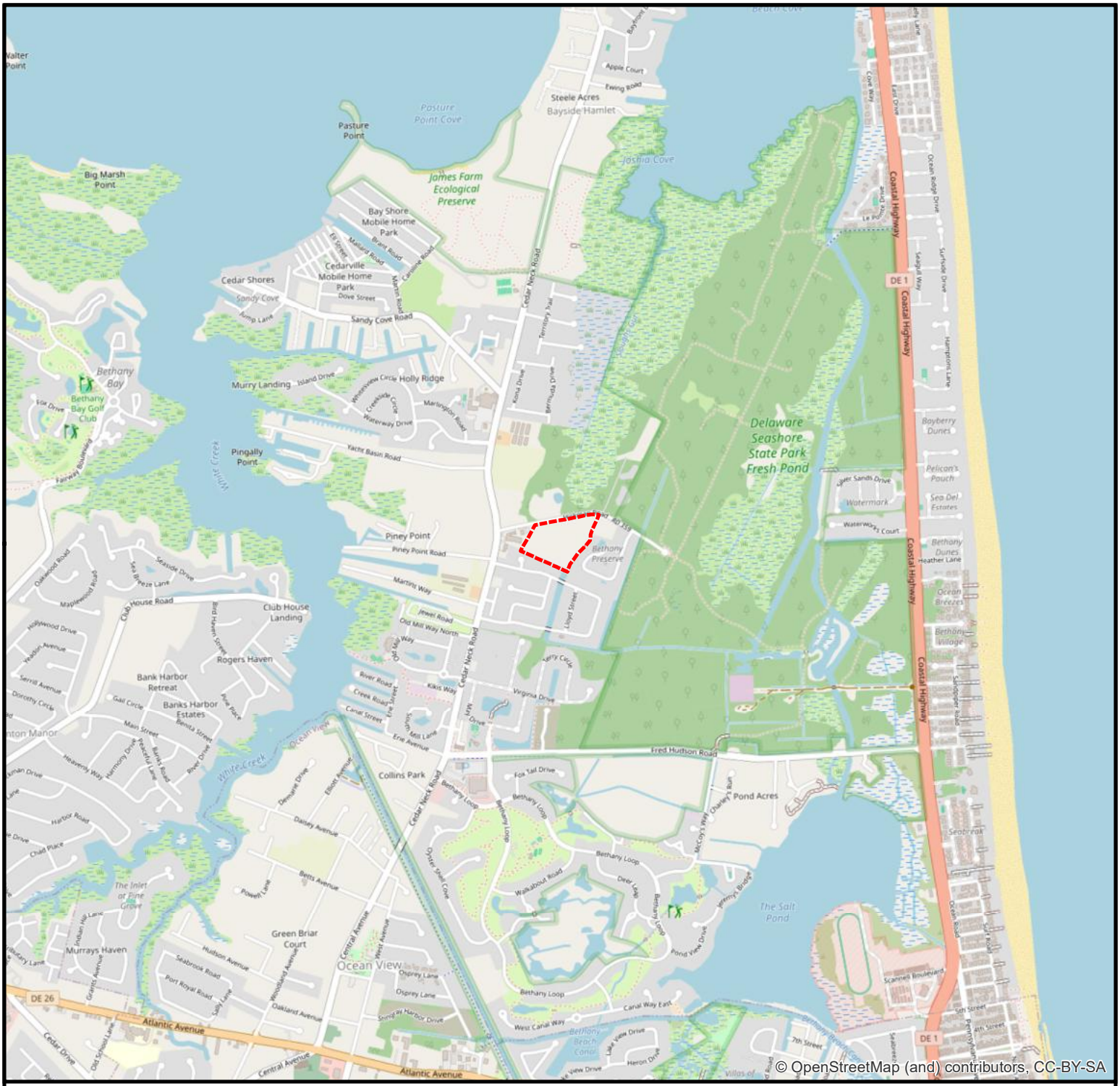
4.0 CONCLUSION

As a result of the environmental review of the subject site, it is GTA's professional opinion that Wetlands A and C and the ephemeral drainage ditch exhibited stable conditions and are not in need of remediation. In GTA's professional opinion, measures to remedy the streambank erosion should not be required to develop the subject site.

This Report was prepared by GTA for the sole and exclusive use of Foxlane Homes Delaware. Any reproduction of this Report by any other person without the expressed written permission of GTA and Foxlane Homes Delaware is unauthorized, and such use is at the sole risk of the user.

******* END OF REPORT *******

Appendix A
Figures


Pasture Point
Steele Acres
Bayside Hamlet
James Farm Ecological Preserve
Big Marsh Point
Bay Shore Mobile Home Park
Cedarville Mobile Home Park
Cedar Shores
Sandy Cove
Sandy Cove Road
Cedar Neck Road
Coastal Highway
DE 1
Bethany Bay
Bethany Bay Golf Club
Murry Landing
Holly Ridge
Pingally Point
Yacht Basin Road
Delaware Seashore State Park
Fresh Pond
Bayberry Dunes
Pelican's Pouch
Sea Del Estates
Watermark
Bethany Dunes
Ocean Breezes
Bethany Village
Piney Point
Piney Point Road
Bethany Preserve
Martins Way
Club House Road
Club House Landing
Rogers Haven
Bank Harbor Retreat
Banks Harbor Estates
Old Mill Way North
Jewel Road
Kiwis Way
Virginia Drive
Fred Hudson Road
Collins Park
Pond Acres
Seabrook
Ocean View
Green Briar Court
Murrays Haven
The Inlet at Pine Grove
The Salt Pond
Bethany Loop
Walkabout Road
Deer Leap
Pond View Drive
Canal Way East
West Canal Way
Bethany Beach Canal
Scanned Boulevard
Ocean Road
Atlantic Avenue
DE 26
Central Avenue
Osprey Lane
Seabrook Road
Port Royal Road
Oakland Avenue
Woodside Avenue
Dewayne Drive
Elliott Avenue
Daisey Avenue
Betts Avenue
Oyster Shell Cove
Bethany Loop
Jeremys Bridge
Charley Run
McCoys Way
Lake View Drive
Heron Drive
7th Street
4th Street
Ocean View Drive
Hickman Road
Lloyd Street
Terrapin Trail
Bermuda Drive
Kona Drive
Marlington Road
Waterway Drive
Whitewater Circle
Creekside Circle
Holly Ridge
Island Drive
Maryland Road
Brant Road
Canvasback Road
Dove Street
Jump Lane
Fox Drive
Fairway Boulevard
Seaside Drive
Sea Breeze Lane
Oakwood Road
Maplewood Road
Hollywood Drive
Yeadon Avenue
Sorrell Avenue
Dorothy Circle
Gail Circle
Main Street
Banks Road
River Drive
Harbor Road
Chart Place
Heavenly Way
Harmony Drive
Peaceful Lane
Bonita Street
Pine Place
Creek Road
Canal Street
Erie Avenue
Mill Lane
Ocean View
White Creek
Bird Haven Court
Kelly Circle
Lloyd Street
Fox Tail Drive
Bethany Loop
Oyster Shell Cove
Central Avenue
West Avenue
Osprey Lane
Shipyard Harbor Drive
Old School Lane
Cedar Drive
Indian Hill Lane
Grants Avenue
Seabrook Road
Port Royal Road
Lily Lane
Oakland Avenue
Powell Lane

SOURCE: 2023 BASE AERIAL IMAGERY PROVIDED BY MICROSOFT CORPORATION.

LEGEND

SUBJECT SITE

NORTH

0 200

APPROXIMATE SCALE
1 INCH = 200 FEET

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
PHONE: 410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM

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2023 AERIAL IMAGERY
HICKMAN ROAD PROPERTY

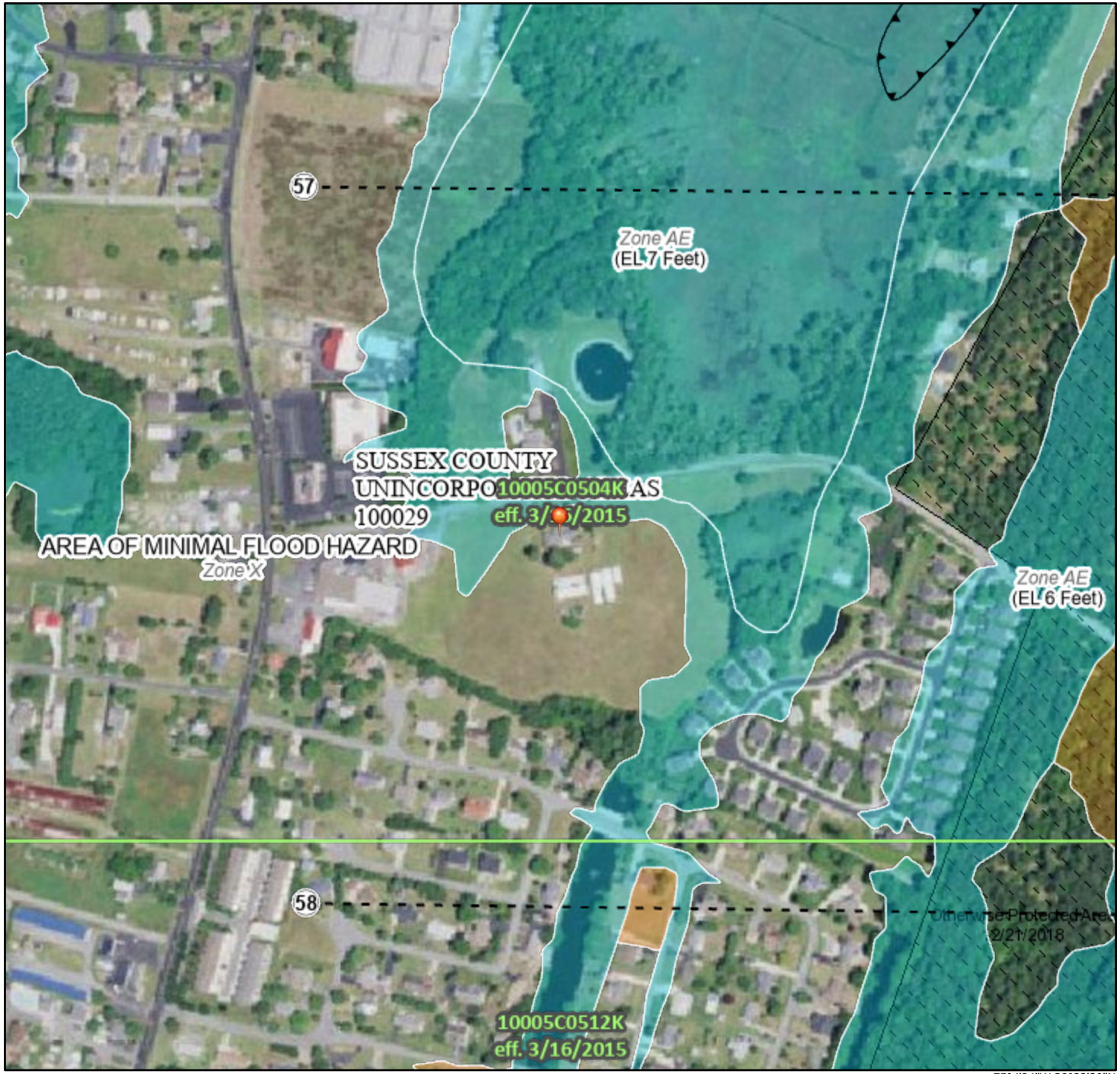
SUSSEX COUNTY, DELAWARE

JOB NO.	SCALE:	DATE:	DRAWN BY:	REVIEW BY:	FIGURE:
31241554	1"=200'	JULY 16, 2024	BCW	MAJ/TAS	2

National Flood Hazard Layer FIRMette

FEMA

75°5'1"W 38°34'7"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

75°4'24"W 38°33'39"N

Basemap Imagery Source: USGS National Map 2023

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 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 *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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 7/16/2024 at 3:45 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.

FIGURE 3

SOURCE: UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), NATIONAL WETLANDS INVENTORY (NWI), DATED MAY 17, 2024. 2023 BASE AERIAL IMAGERY PROVIDED BY MICROSOFT CORPORATION.

LEGEND

- SUBJECT SITE
- ESTUARINE AND MARINE WETLAND
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND

NORTH

0 200

APPROXIMATE SCALE
1 INCH = 200 FEET

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
PHONE: 410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM

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NWI WETLANDS MAP
HICKMAN ROAD PROPERTY

SUSSEX COUNTY, DELAWARE

JOB NO.	SCALE:	DATE:	DRAWN BY:	REVIEW BY:	FIGURE:
31241554	1"=200'	JULY 16, 2024	BCW	MAJ/TAS	4

Appendix B
USFWS Rare, Threatened, Endangered Species Coordination

United States Department of the Interior
U.S. Fish & Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401
410/573 4575

Online Certification Letter

Today's date: July 16, 2024

Project: Hickman Road Property

Dear Applicant for online certification:

Thank you for using the U.S. Fish and Wildlife Service (Service) Chesapeake Bay Field Office online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the referenced project in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA).This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

Based on this information and in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), we certify that except for occasional transient individuals, no federally listed endangered or threatened species are known to exist within the project area. Therefore, no Biological Assessment or further section 7 consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For additional information on threatened or endangered species in Maryland, you should contact the Maryland Wildlife and Heritage Division at (410) 260-8573. For information in Delaware you should contact the Delaware Division of Fish and Wildlife, Wildlife Species Conservation and Research Program at (302) 735-8658. For information in the District of Columbia, you should contact the National Park Service at (202) 339-8309.

The U.S. Fish and Wildlife Service also works with other Federal agencies and states to minimize loss of wetlands, reduce impacts to fish and migratory birds, including bald eagles, and restore habitat for wildlife. Information on these conservation issues and how development projects can avoid affecting these resources can be found on our website (www.fws.gov/chesapeakebay)

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interest in these resources. If you have any questions or need further assistance, please contact Chesapeake Bay Field Office Threatened and Endangered Species program at (410) 573-4527.

Sincerely,

Genevieve LaRouche
Field Supervisor

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 07/16/2024 19:32:57 UTC
Project Code: 2024-0117074
Project Name: Hickman Road Property

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

PROJECT SUMMARY

Project Code: 2024-0117074
Project Name: Hickman Road Property
Project Type: Residential Construction
Project Description: It is GTA's understanding that portions of the subject property are proposed for residential development.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5641178,-75.07828889298368,14z

Counties: Sussex County, Delaware

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ This species only needs to be considered if the project includes wind turbine operations. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Brooke Walz
Address: 3445A Box Hill Corporate Center Drive
City: Abingdon
State: MD
Zip: 21009
Email bwalz@gtaeng.com
Phone: 4104414878

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 07/16/2024 19:37:00 UTC
Project code: 2024-0117074
Project Name: Hickman Road Property

Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Hickman Road Property'

Dear Brooke Walz:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 16, 2024, for 'Hickman Road Property' (here forward, Project). This project has been assigned Project Code 2024-0117074 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0117074 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Hickman Road Property

2. Description

The following description was provided for the project 'Hickman Road Property':

> It is GTA's understanding that portions of the subject property are proposed for residential development.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5641178,-75.07828889298368,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats <u>are</u> likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   Yes

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Brooke Walz
Address: 3445A Box Hill Corporate Center Drive
City: Abingdon
State: MD
Zip: 21009
Email bwalz@gtaeng.com
Phone: 4104414878

Appendix C
Jurisdictional Wetland Delineation Plan

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT
1650 ARCH STREET
PHILADELPHIA PA 19103-2004

February 6, 2026

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination NAP-2026-00032-103
38485 Hickman Road SX
Center coordinates (39.512062°, -75.604408°)

William Twupack
Watershed ECO, LLC
651 N. Broad Street
Middletown, Delaware 19709

Dear Mr. Riding:

This Approved Jurisdictional Determination (AJD) is provided in response to your request on July 24, 2025 for a determination of Federal jurisdiction by this office. The site associated with your request is located at 38485 Hickman Road, Ocean View, Sussex County, Delaware. The property is identified as Sussex County Tax Parcel No. 134-9.00-28.00.

The findings of this AJD are documented in the **enclosed** AJD Form. The findings are also depicted on the **enclosed** plan(s) identified as “Jurisdictional Wetland Delineation Plan”; prepared by Solutions Engineering; dated July 21, 2025; unrevised; 2 sheets.

A Department of the Army permit is required for work or structures in “navigable waters of the United States” pursuant to Section 10 the Rivers and Harbors Act (RHA) of 1899 and the discharge of dredged or fill material into “waters of the United States” pursuant to Section 404 of the Clean Water Act (CWA). Any proposal to perform these activities within areas of Federal jurisdiction requires prior approval by this office.

Food Security Act statement: The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

This AJD is valid for a period of five (5) years. This AJD is issued in accordance with current Federal regulations and is based upon the existing site conditions and information provided by you in your application. This office reserves the right to reevaluate and modify this AJD at any time should the existing site conditions or Federal regulations change, or should the information provided by you prove to be false, incomplete or inaccurate.

You may request an administrative appeal of this AJD if you **do not** accept this determination. **Enclosed** you will find a combined Notification of Appeal Process (NAP) and Request for Appeal (RFA) form. Should you wish to appeal this determination, you must submit a completed RFA form to the North Atlantic Division Office within 60 days of the date on the form. Additionally, for the appeal to be accepted, the Corps must determine that it is complete and that it meets the criteria for appeal under 33 CFR Part 331.5. The form should be submitted to Andrew Dangler, Regulatory Program Manager, at Andrew.C.Dangler@usace.army.mil. If you do not have the means to submit this form electronically, you may send it by mail to the Division office at:

US Army Corps of Engineers North Atlantic Division
Attn: Andrew Dangler (CENAD-PD-OR)
Fort Hamilton Military Community
301 John Warren Avenue, First Floor
Brooklyn, NY 11252-6700

If you have any questions regarding this matter, please contact James A. Colligan at 32-518-9480 or James.A.Colligan@usace.army.mil.

Sincerely,

Todd A. Hoernemann
Chief, Applications Section I

Enclosures

cc:
Wetlands and Waterways Section, DDNREC

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT
1650 ARCH STREET
PHILADELPHIA, PENNSYLVANIA 19103-2004

CENAP-OPR February 6, 2026

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (Corps) Approved Jurisdictional Determination in accordance with the "Revised Definition of 'Waters of the United States'"; (88 FR 3004 (January 18, 2023) as amended by the "Revised Definition of 'Waters of the United States'; Conforming" (8 September 2023) ,[1] NAP-2026-00032-103

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.[2] AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.[3]

On January 18, 2023, the Environmental Protection Agency (EPA) and the Department of the Army ("the agencies") published the "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule"). On September 8, 2023, the agencies published the "Revised Definition of 'Waters of the United States'; Conforming", which amended the 2023 Rule to conform to the 2023 Supreme Court decision in *Sackett v. EPA*, 598 U.S., 143 S. Ct. 1322 (2023) ("*Sackett*").

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a Corps AJD as defined in 33 CFR §331.2. For the purposes of this AJD, we have relied on Section 10 of the Rivers and Harbors Act of 1899 (RHA),[4] the 2023 Rule as amended, as well as other applicable guidance, relevant case law, and longstanding practice in evaluating jurisdiction.

[1] While the Revised Definition of "Waters of the United States"; Conforming had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.
[2] 33 CFR 331.2.
[3] Regulatory Guidance Letter 05-02.
[4] USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

CENAP-OPR
SUBJECT: 2023 Rule, as amended, Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), NAP-2026-00032-103

1. SUMMARY OF CONCLUSIONS.

   a. Provide a list of each individual feature within the review area and the jurisdictional status of each one (i.e., identify whether each feature is/is not a water of the United States and/or a navigable water of the United States).

      i. Wetlands "A", jurisdictional, Section 10 and Section 404

      ii. Wetlands "B", non-jurisdictional

      iii. Ephemeral Drainage Ditch, non-jurisdictional

      iv. Wetlands "C", jurisdictional, Section 404

2. REFERENCES.

   a. "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule")

   b. "Revised Definition of 'Waters of the United States'; Conforming" 88 FR 61964 (September 8, 2023)

   c. *Sackett v. EPA*, 598 U.S. 651, 143 S. Ct. 1322 (2023)

3. REVIEW AREA. The property is located at 38485 Hickman Road, Ocean View, Sussex County, Delaware. The property is identified as Sussex County Tax Parcel No. 134-9.00-28.00 consisting of approximately 12.5 Acres. The limit of investigation is 12.5 Acres within the property. The property consists of an uninhabited single-family dwelling, agricultural fields, and forested wetlands. A site visit with James Colligan – USACE and Will Twupack – Watershed Eco was conducted on June 23, 2025. For additional notes regarding the site visit, see "2026-00032_Field_MFR".

4. NEAREST TRADITIONAL NAVIGABLE WATER (TNW), THE TERRITORIAL SEAS, OR INTERSTATE WATER TO WHICH THE AQUATIC RESOURCE IS CONNECTED. White Creek. White Creek is influenced by the ebb and flow of the tide.[5]

[5] This MFR should not be used to complete a new stand-alone TNW determination. A stand-alone TNW determination for a water that is not subject to Section 9 or 10 of the Rivers and Harbors Act of 1899 (RHA) is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established.

5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, THE TERRITORIAL SEAS, OR INTERSTATE WATER. Resources on the review area flow into White Creek through two different flow paths. Wetlands "A" drains off site to the north through a culvert under Hickman Road into White Creek. Wetlands "C" drains off site to the south into a man made lagoon system within Fresh Pond state park, which drains into White Creek.

6. SECTION 10 JURISDICTIONAL WATERS[6]: Describe aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899. Include the size of each aquatic resource or other feature within the review area and how it was determined to be jurisdictional in accordance with Section 10.[7]

    1. Wetlands "A" is a 0.04 acre tidal emergent wetland located entirely within the review area. Wetlands "A" is tidally influenced by White Creek. This feature drains outside the review area to the north under Hickman Road though a culvert. Wetlands "A" is influenced by the ebb and flow of the tide, making it Section 10 jurisdictional.

7. SECTION 404 JURISDICTIONAL WATERS: Describe the aquatic resources within the review area that were found to meet the definition of waters of the United States in accordance with the 2023 Rule as amended, consistent with the Supreme Court's decision in *Sackett*. List each aquatic resource separately, by name, consistent with the naming convention used in section 1, above. Include a rationale for each aquatic resource, supporting that the aquatic resource meets the relevant category of "waters of the United States" in the 2023 Rule as amended. The rationale should also include a written description of, or reference to a map in the administrative record that shows, the lateral limits of jurisdiction for each aquatic resource, including how that limit was determined, and incorporate relevant references used. Include the size of each aquatic resource in acres or linear feet and attach and reference related figures as needed.

    a. Traditional Navigable Waters (TNWs) (a)(1)(i): N/A

[6] 33 CFR 329.9(a) A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in § 329.8(b) of this part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions.
[7] This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

b. The Territorial Seas (a)(1)(ii): N/A

c. Interstate Waters (a)(1)(iii): N/A

d. Impoundments (a)(2): N/A

e. Tributaries (a)(3): N/A

f. Adjacent Wetlands (a)(4):

1. Wetlands "A" is a 0.04 tidal emergent wetland located entirely within the review area. This feature drains outside the review area to the north through a culvert under Hickman Road. This feature has a continuous surface connection to White Creek outside the review area. Wetlands "A" directly abuts an (a)(1) through (a)(3) water, thereby meeting the definition of an (a)(4) adjacent wetland.

2. Wetlands "C" is a 0.07 acre forested wetland located on the south portion of the review area and continues outside the review area to the south. This feature directly abuts a tidal man-made lagoon directly outside the review area. This connection was observed from within the review area and is visible on aerial imagery and lidar. Wetlands "C" directly abuts an (a)(1) through (a)(3) water, thereby meeting the definition of an (a)(4) adjacent wetland.

g. Additional Waters (a)(5): N/A

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

a. Describe aquatic resources and other features within the review area identified in the 2023 Rule as amended as not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5). Include the type of excluded aquatic resource or feature, the size of the aquatic resource or feature within the review area and describe how it was determined to meet one of the exclusions listed in 33 CFR 328.3(b).[8]

1. Ephemeral Drainage Ditch is an approximately 365 linear foot ephemeral feature located on the east portion of the property. This feature did not

[8] 88 FR 3004 (January 18, 2023)

exhibit relatively standing or flowing water during the site visit. This feature did not exhibit an ordinary high water mark. This feature does not carry a relatively permanent flow of water, thereby meeting the definition of a (b)(3) Ditch.

b. Describe aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the 2023 Rule as amended (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).

1. Wetlands "B" is a 1.38 acre forested wetland located on the northeast portion of the review area and continues outside the review area to the east. During the site visit, this feature was observed continuing east outside the review area. From aerial and lidar imagery, this feature appeared to be adjacent, but not abutting, a man-made stormwater pond. This does not constitute a connection to an (a)(1) through (a)(3) waters. This feature does not have any connections to other aquatic resources, leaving it isolated. Because this feature does not have a continuous surface connection to an (a)(1) through (a)(3) waters it does not meet the definition of an (a)(4) adjacent wetland.

9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.

a. USACE site visit on June 23, 2025.

b. Delineation Plan entitled "Jurisdictional Wetland Delineation Plan"; prepared by Solutions Engineering; dated July 21, 2025; unrevised; 2 sheets.

c. Delineation Report entitled "Wetland Delineation – Mullens Property"; prepared by Watershed ECO; dated April 15, 2024.

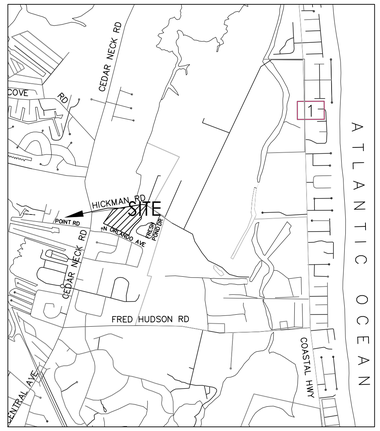
d. Flow Path Plan entitled "2026-00032_Flow_Path"; prepared by USACE.

e. Lidar Imagery entitled "2026-00032_Lidar"; prepared by USACE

10. OTHER SUPPORTING INFORMATION. N/A

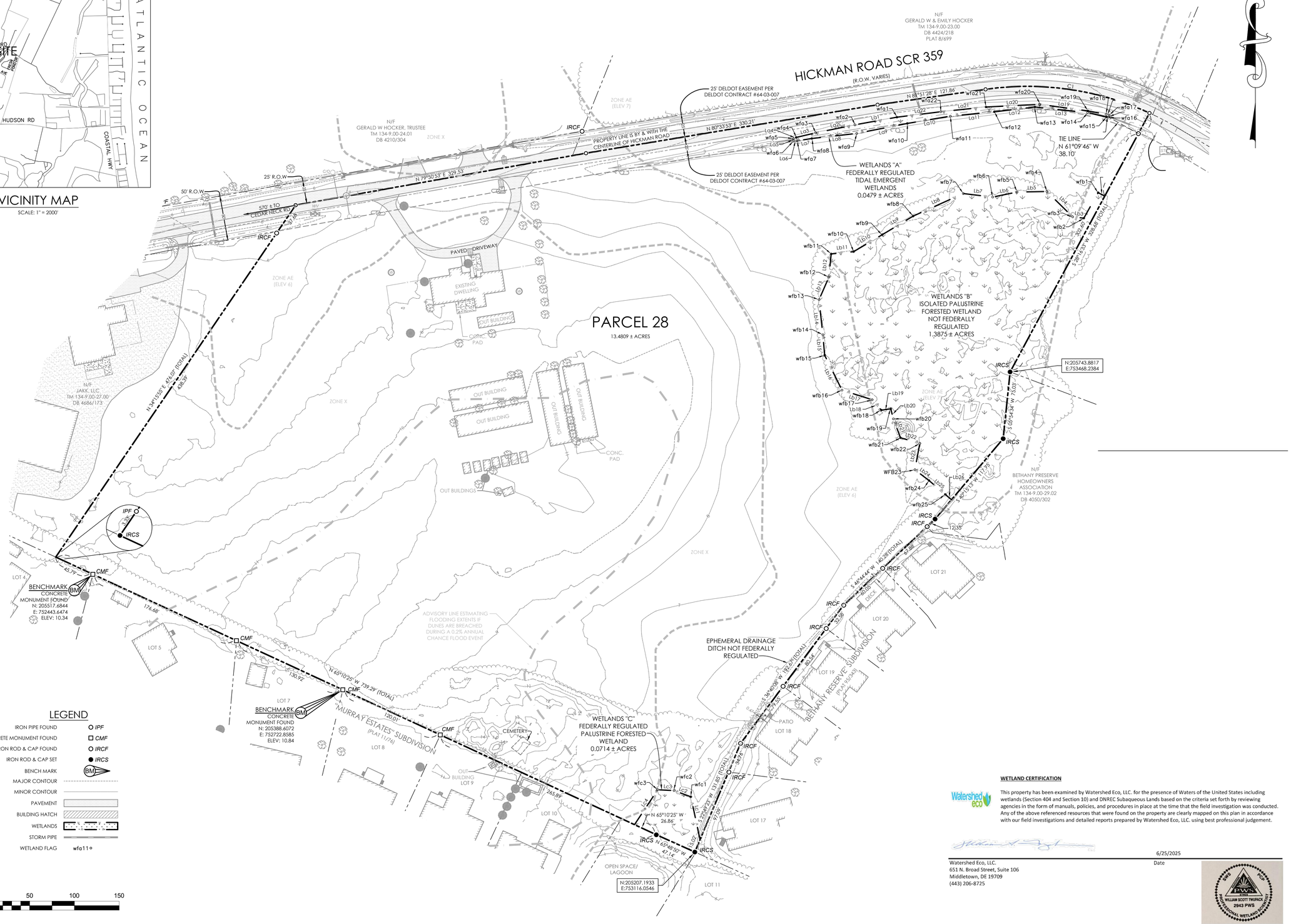
11. NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be

subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.



VICINITY MAP

SCALE: 1" = 2000'



LEGEND

IRON PIPE FOUND	IPF
CONCRETE MONUMENT FOUND	CMF
IRON ROD & CAP FOUND	IRCF
IRON ROD & CAP SET	IRCS
BENCH MARK	BM
MAJOR CONTOUR	
MINOR CONTOUR	
PAVEMENT	
BUILDING HATCH	
WETLANDS	
STORM PIPE	
WETLAND FLAG	wfa11

WETLAND CERTIFICATION

This property has been examined by Watershed Eco, LLC. for the presence of Waters of the United States including wetlands (Section 404 and Section 10) and DNREC Subaqueous Lands based on the criteria set forth by reviewing agencies in the form of manuals, policies, and procedures in place at the time that the field investigation was conducted. Any of the above referenced resources that were found on the property are clearly mapped on this plan in accordance with our field investigations and detailed reports prepared by Watershed Eco, LLC. using best professional judgement.

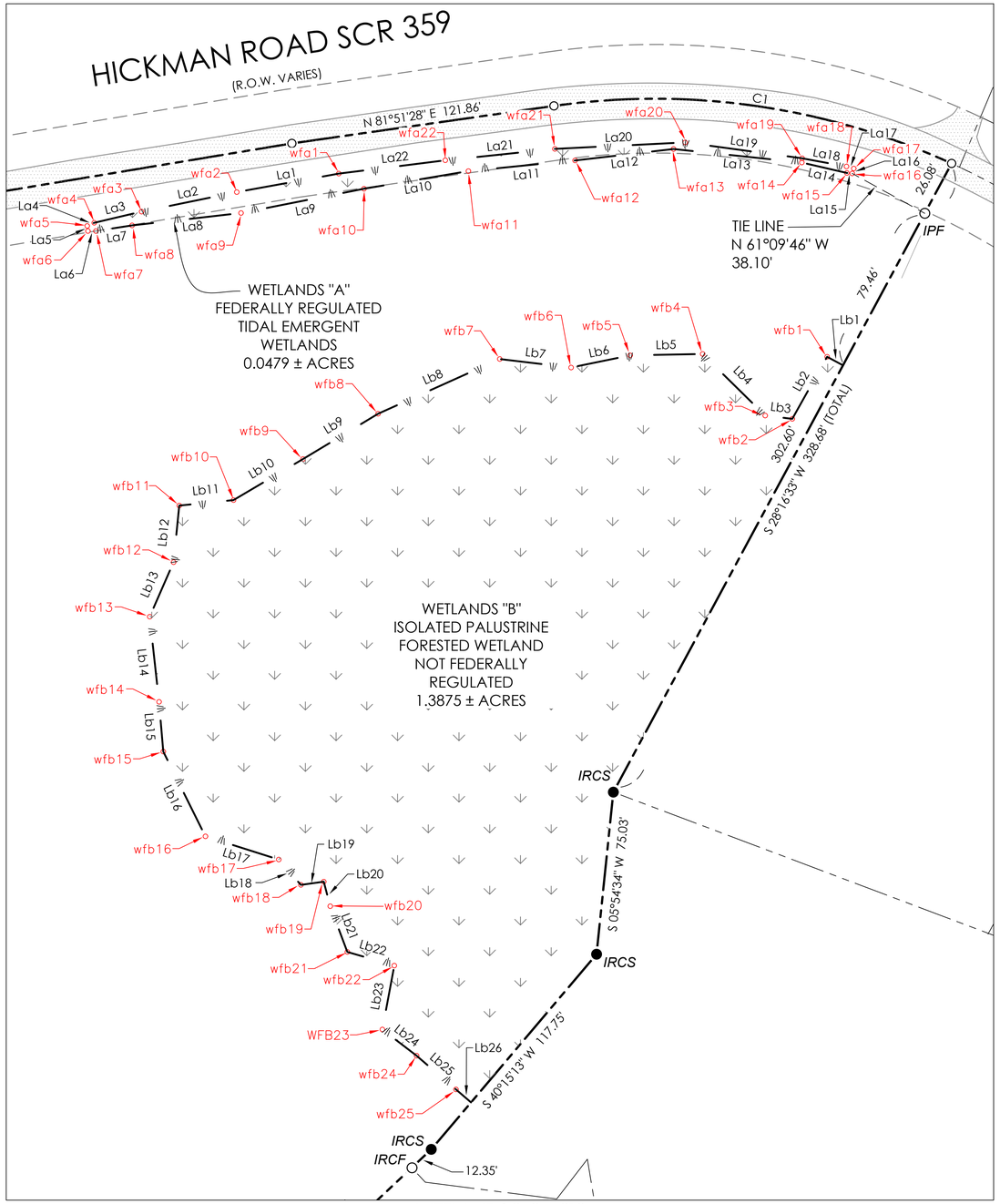
6/25/2025

Date

Watershed Eco, LLC.
651 N. Broad Street, Suite 106
Middletown, DE 19709
(443) 206-8725

WILLIAM SCOTT TWUPACK
2943 PWS
PROFESSIONAL WETLAND SCIENTIST

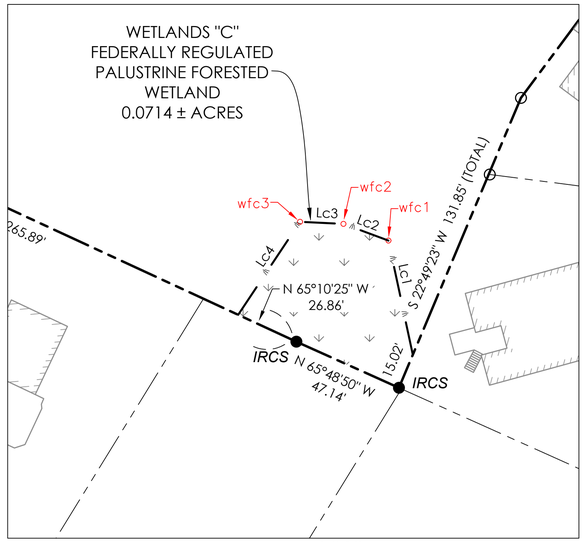
solutions



WETLANDS "A" & "B"

SCALE: 1" = 30'

DELAWARE STATE GRID NORTH NAD 83



WETLANDS "C"

SCALE: 1" = 30'

WETLANDS "A"

LINE	BEARING	DISTANCE
La1	S 79°42'19" W	47.73'
La2	S 78°24'15" W	44.73'
La3	S 76°46'51" W	22.39'
La4	S 65°47'07" W	3.53'
La5	S 07°19'35" E	2.38'
La6	N 89°47'02" E	3.69'
La7	N 81°09'03" E	16.84'
La8	N 83°31'34" E	50.49'
La9	N 78°49'28" E	57.67'
La10	N 80°24'46" E	48.76'
La11	N 84°17'08" E	49.33'
La12	N 83°22'12" E	45.64'
La13	S 83°58'38" E	59.37'
La14	S 76°59'38" E	21.30'
La15	S 85°07'22" E	2.49'
La16	N 16°57'09" E	2.34'
La17	N 74°18'34" W	3.47'
La18	N 79°28'39" W	20.78'
La19	N 82°16'36" W	54.34'
La20	S 87°09'30" W	60.04'
La21	S 84°02'27" W	50.71'
La22	S 82°53'11" W	49.40'

WETLANDS "B"

LINE	BEARING	DISTANCE
Lb1	N 61°43'27" W	8.29'
Lb2	S 29°17'47" W	32.76'
Lb3	N 83°11'37" W	12.57'
Lb4	N 45°25'31" W	40.42'
Lb5	S 88°54'27" W	33.38'
Lb6	S 78°20'27" W	27.73'
Lb7	N 83°11'00" W	33.08'
Lb8	S 65°45'51" W	61.41'
Lb9	S 58°53'38" W	40.36'
Lb10	S 59°26'10" W	37.16'
Lb11	S 84°12'58" W	25.09'
Lb12	S 05°46'49" W	26.20'
Lb13	S 23°36'04" W	27.39'
Lb14	S 04°15'36" E	39.45'
Lb15	S 04°51'47" E	22.97'
Lb16	S 26°26'16" E	43.57'
Lb17	S 72°25'02" E	35.40'
Lb18	S 41°11'14" E	15.50'
Lb19	N 82°05'48" E	10.62'
Lb20	S 14°43'36" E	11.66'
Lb21	S 20°32'52" E	22.48'
Lb22	S 73°42'58" E	22.50'
Lb23	S 10°33'57" W	29.91'
Lb24	S 52°31'29" E	19.85'
Lb25	S 49°23'51" E	23.85'
Lb26	S 49°23'51" E	9.17'

COORDINATE TABLE - WETLAND "A"

(FLAGS A1 - A22)

Description	Northing	Easting
wf/a1	206028.6639	753341.8486
wf/a2	206020.1362	753294.8880
wf/a3	206011.1460	753251.0753
wf/a4	206006.0262	753229.2796
wf/a5	206004.5739	753226.0676
wf/a6	206002.2107	753226.3714
wf/a7	206002.2246	753230.0617
wf/a8	206004.8147	753246.6980
wf/a9	206010.5069	753296.8613
wf/a10	206021.6834	753353.4341
wf/a11	206029.8039	753401.5098
wf/a12	206034.7163	753450.5995
wf/a13	206039.9852	753495.9301
wf/a14	206033.7560	753554.9717
wf/a15	206028.9626	753575.7238
wf/a16	206028.7507	753578.2071
wf/a17	206030.9885	753578.8892
wf/a18	206031.9283	753575.5438
wf/a19	206035.7224	753555.1173
wf/a20	206043.0247	753501.2725
wf/a21	206040.0479	753441.3016
wf/a22	206034.7833	753390.8680

COORDINATE TABLE - WETLAND "B"

(FLAGS B1 - B25)

Description	Northing	Easting
wf/b1	205944.3210	753566.6380
wf/b2	205915.7540	753550.6090
wf/b3	205917.2440	753538.1260
wf/b4	205945.6140	753509.3320
wf/b5	205944.9780	753475.9570
wf/b6	205939.3730	753448.7950
WF/B7	205943.2990	753415.9510
WF/B8	205918.0890	753359.9510
WF/B9	205897.2380	753325.3930
WF/B10	205878.3420	753293.3950
WF/B11	205875.8130	753268.4320
WF/B12	205849.7460	753265.7930
WF/B13	205824.6470	753254.8270
WF/B14	205785.4330	753259.1280
WF/B15	205762.5490	753261.0750
WF/B16	205723.5310	753280.4760
WF/B17	205712.8380	753314.2200
WF/B18	205701.1760	753324.4250
WF/B19	205702.6360	753334.9450
WF/B20	205691.3540	753337.9100
WF/B21	205670.3050	753345.8000
WF/B22	205663.9950	753367.4024
WF/B23	205634.5920	753361.9180
WF/B24	205622.5123	753377.6746
WF/B25	205606.9884	753395.7851

wfa11

Appendix D
Existing Condition Photos

Photograph 1: View of Wetland A facing east.

Photograph 2: View of Wetland C facing northeast.

Photograph 3: View of ephemeral drainage facing southwest.

Photograph 4: View of ephemeral drainage facing northeast.

Photograph 5: View of Wetland A Cross Section 1 facing west.

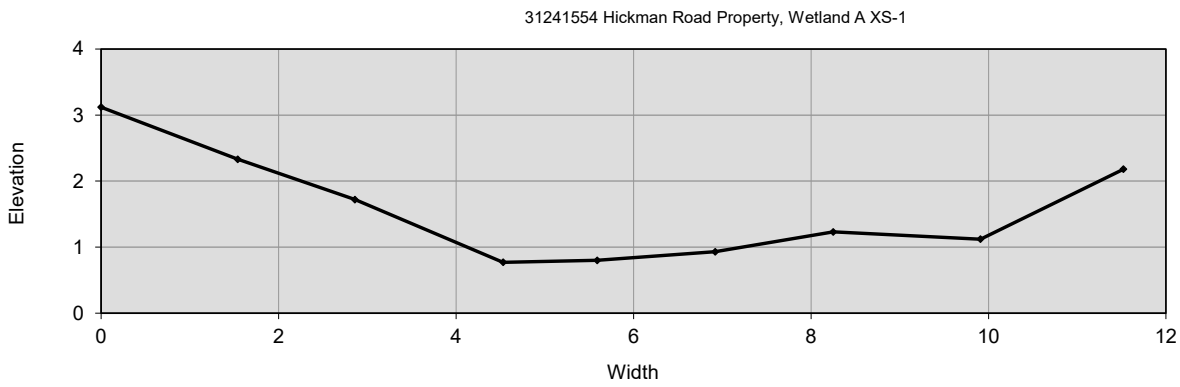
Photograph 6: View of Wetland C Cross Section 1 facing west.

Photograph 7: View of ephemeral drainage Cross Section 1 facing south.

Appendix E
Cross Sections

Wetland A Cross Section 1

Cross Section



Cross Section

reference ID
instrument height ---
longitudinal station ---

Bankfull Stage

FS ---
elevation ---

Low Bank Height

FS ---
elevation

Flood Prone Area

width fpa ---

Channel Slope

percent slope ---

Flow Resistance

Manning's "n" ---
D'Arcy - Weisbach "f" ---

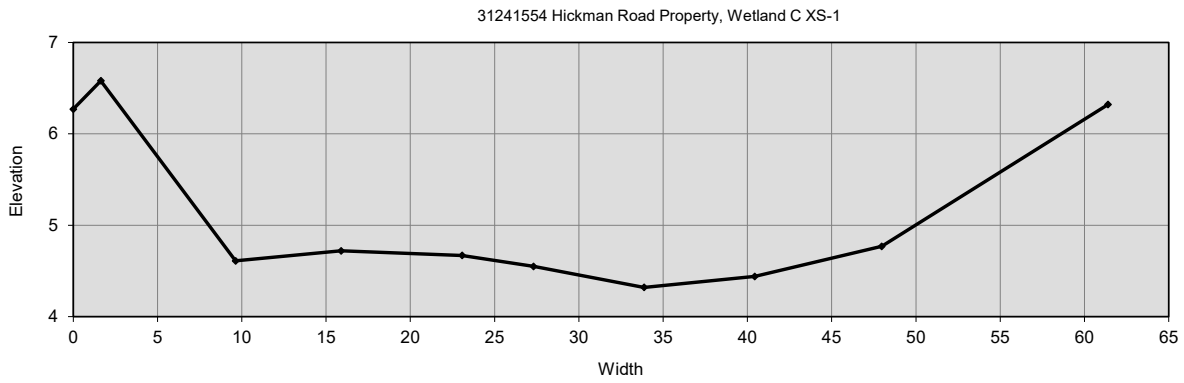
Note:

Wetland A XS-1

Distance (ft)	BS (ft)	HI (ft)	FS (ft)	Elevation (ft)	Omit Bkf	Notes
0		0		3.12		
1.54				2.33		
2.86				1.72		
4.53				0.77		
5.59				0.8		
6.92				0.93		
8.25				1.23		
9.91				1.12		
11.52				2.18		

Wetland C Cross Section 1

Cross Section



Cross Section

reference ID
instrument height ---
longitudinal station ---

Bankfull Stage

FS ---
elevation ---

Low Bank Height

FS ---
elevation

Flood Prone Area

width fpa ---

Channel Slope

percent slope ---

Flow Resistance

Manning's "n" ---
D'Arcy - Weisbach "f" ---

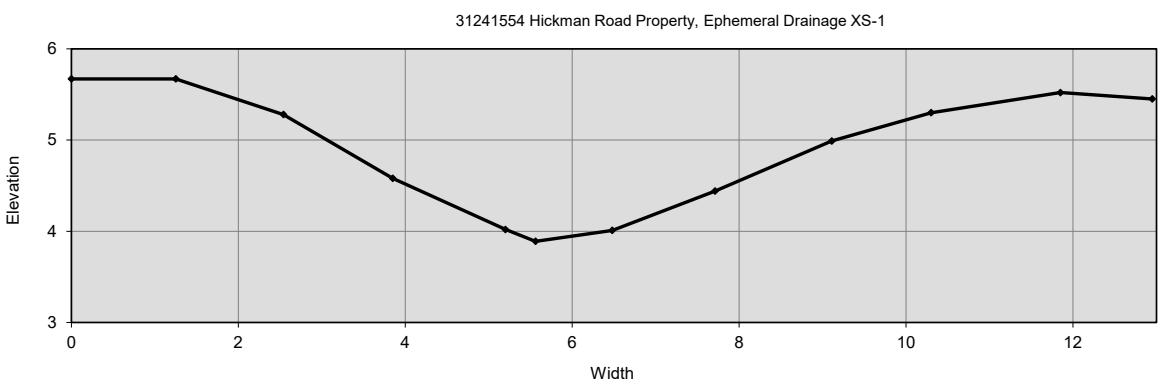
Note:

Wetland C XS-1

Distance (ft)	BS (ft)	HI (ft)	FS (ft)	Elevation (ft)	Omit Bkf	Notes
0		0		6.27	☐	
1.64				6.58	☐	
9.63				4.61	☐	
15.89				4.72	☐	
23.07				4.67	☐	
27.31				4.55	☐	
33.87				4.32	☐	
40.44				4.44	☐	
47.97				4.77	☐	
61.39				6.32	☐	

Ephemeral Drainage Cross Section 1

Cross Section



Cross Section

reference ID
instrument height ---
longitudinal station ---

Bankfull Stage

FS ---
elevation ---

Low Bank Height

FS ---
elevation

Flood Prone Area

width fpa ---

Channel Slope

percent slope ---

Flow Resistance

Manning's "n" ---
D'Arcy - Weisbach "f" ---

Note:

Ephemeral drainage XS-1

Distance (ft)	BS (ft)	HI (ft)	FS (ft)	Elevation (ft)	Omit Bkf	Notes
0		0		5.67		
1.25				5.67		
2.54				5.28		
3.85				4.58		
5.2				4.02		
5.56				3.89		
6.48				4.01		
7.71				4.44		
9.11				4.99		
10.3				5.3		
11.85				5.52		
12.95				5.45		

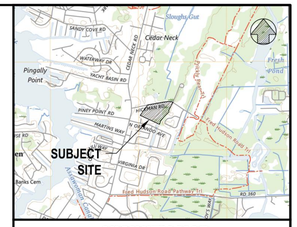
Appendix F
Drainage Assessment Plan

HICKMAN ROAD

WETLAND A
FEDERALLY REGULATED
TIDAL EMERGENT WETLAND

NOT FEDERALLY REGULATED
EPHEMERAL DRAINAGE (ED)

WETLAND C
FEDERALLY REGULATED
PALUSTRINE FORESTED WETLAND



VICINITY MAP

SCALE: 1" = 2,000'

UNITED STATES GEOLOGICAL SURVEY, BETHANY BEACH, DE QUADRANGLE, 7.5 MINUTE TOPOGRAPHIC MAP SERIES, DATED 2023.

GENERAL INFORMATION

1. PLAN PREPARED FOR: FOXLANE HOMES DELAWARE
   32191 NASSAU ROAD #2
   LEWES, DELAWARE 19958
   ATTN: JOHN MURRAY

2. PLAN PREPARED BY: GEO-TECHNOLOGY ASSOCIATES, INC. (GTA)
   3445-A BOX HILL CORPORATE CENTER DRIVE
   ABINGDON, MARYLAND 21009
   ATTN: MS. KIMBERLEY MCNEW
   PHONE: 410-515-9446
   EMAIL: KMCNEW@GTAENG.COM

3. THE SUBJECT SITE ENCOMPASSES APPROXIMATELY 12.86 ACRES AND IS LOCATED AT 38492 HICKMAN ROAD IN THE OCEAN VIEW AREA OF SUSSEX COUNTY, DELAWARE. THE SUBJECT SITE IS IDENTIFIED AS TAX PARCEL 134-9.00-28.00.

4. THIS PLAN WAS PRODUCED ON A BASE MAP PROVIDED BY SOLUTIONS IPEM, LLC. EXISTING TOPOGRAPHIC INFORMATION SHOWN HEREON WAS PROVIDED BY SOLUTIONS IPEM, LLC AND SUSSEX COUNTY GIS.

5. THE LIMITS OF 100-YEAR FLOODPLAIN SHOWN HEREON ARE PER FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 10005C0504K, EFFECTIVE MARCH 16, 2015.

6. A WETLAND DELINEATION OF THE SUBJECT SITE WAS PERFORMED BY WATERSHED ECO, LLC IN APRIL 2024. WETLAND FLAG LOCATIONS WITHIN THE SUBJECT SITE WERE SURVEY LOCATED BY SOLUTIONS IPEM, LLC. A JURISDICTIONAL DETERMINATION (JD) APPLICATION FOR THE WETLAND DELINEATION WAS SUBMITTED IN JULY 2025. A JURISDICTIONAL DETERMINATION WAS ISSUED BY THE U.S. ARMY CORPS OF ENGINEERS ON FEBRUARY 6, 2026 (NAP-2026-00032-103).

7. GTA PERFORMED A DRAINAGE ASSESSMENT IN JULY 2024 TO REVIEW EXISTING DRAINAGE CONVEYANCES WITHIN THE SUBJECT SITE TO EVALUATE THEIR CONDITION AND IDENTIFY IMPEDIMENTS IN GENERAL ACCORDANCE WITH THE CODE OF SUSSEX COUNTY, CHAPTER 115, ARTICLE XXV §115-193. CROSS SECTIONS OF EXISTING DRAINAGE CONVEYANCES WERE SURVEY-LOCATED BY SOLUTIONS IPEM, LLC IN JULY 2024.

8. GTA'S CONCLUSIONS REGARDING THIS SITE HAVE BEEN BASED ON OBSERVATIONS OF EXISTING CONDITIONS, PROFESSIONAL EXPERIENCE, AND GENERALLY ACCEPTED PROFESSIONAL ENVIRONMENTAL PRACTICE UNDER SIMILAR CIRCUMSTANCES. SEASONAL VEGETATION CYCLES AND FLUCTUATIONS IN PRECIPITATION OR WEATHER CONDITIONS CAN RESULT IN DIFFERENCES IN THE PERCEPTION OF HYDROLOGIC CONDITIONS AND THE PRESENCE OF PREDOMINANTLY HYDROPHYTIC VEGETATION, WHICH CAN ALTER GTA'S EVALUATION OF WETLANDS/WATERBODIES.

9. THIS PLAN WAS PREPARED BY GTA FOR THE SOLE AND EXCLUSIVE USE OF FOXLANE HOMES DELAWARE. ANY REPRODUCTION OF THIS PLAN BY ANY OTHER PERSON WITHOUT THE EXPRESSED WRITTEN PERMISSION OF GTA AND FOXLANE HOMES DELAWARE IS UNAUTHORIZED, AND SUCH USE IS AT THE SOLE RISK OF THE USER.

NORTH

0 15' 30' 60'

SCALE: 1"=30'

LEGEND

- EX. SUBJECT SITE
- EX. PROPERTY BOUNDARY
- EX. 1-FOOT CONTOUR
- EX. 5-FOOT CONTOUR
- EX. BUILDING
- EX. EDGE OF PAVEMENT
- EX. SOIL BOUNDARY
- EX. NONTIDAL WETLAND
- EX. TIDAL WETLAND
- EX. FEMA 100-YEAR FLOODPLAIN
- EX. WOOD LINE
- EX. CULVERT
- EX. EPHEMERAL DRAINAGE
- EX. EASEMENT
- DRAINAGE ASSESSMENT CROSS SECTION
- NUMBERED PHOTOGRAPH LOCATION

SOILS CHART

SYMBOL[1]	NAME/DESCRIPTION[1]	HYDRIC SOIL[2]	HYDRIC COMPONENT[2]	PERCENTAGE OF MAPPING UNIT[2]	POSITION IN LANDSCAPE[2]
AsA	ASKECKSY LOAMY SAND, 0-2% SLOPES	YES	HURLOCK, UNDRAINED	10	DEPRESSIONS, SWALES, FLATS
			MULLICA, UNDRAINED	5	SWALES, DRAINAGEWAYS, DEPRESSIONS FLATS
IeB	INGLESIDE LOAMY SAND, 2-5% SLOPES	NO	-	-	-
RuB	RUNCLINT LOAMY SAND, 2-5% SLOPES	YES	HURLOCK, DRAINED	5	FLATS, DEPRESSIONS, SWALES

1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, SUSSEX COUNTY, DELAWARE, SOIL SURVEY DATA VERSION 24, DATED SEPTEMBER 12, 2023.
2. HYDRIC SOILS INFORMATION AVAILABLE FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE SOIL DATA ACCESS HYDRIC SOILS LIST, ACCESSED JULY 22, 2024.

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM

© GEO-TECHNOLOGY ASSOCIATES, INC.

DRAINAGE ASSESSMENT PLAN

HICKMAN ROAD PROPERTY

SUSSEX COUNTY, DELAWARE

REVISIONS:

JOB NO:	31241554
SCALE:	1"=30'
DATE:	JULY 15, 2026
DRAWN BY:	BCW
DESIGN BY:	
REVIEW BY:	MAJTAS
SHEET:	1 OF 1

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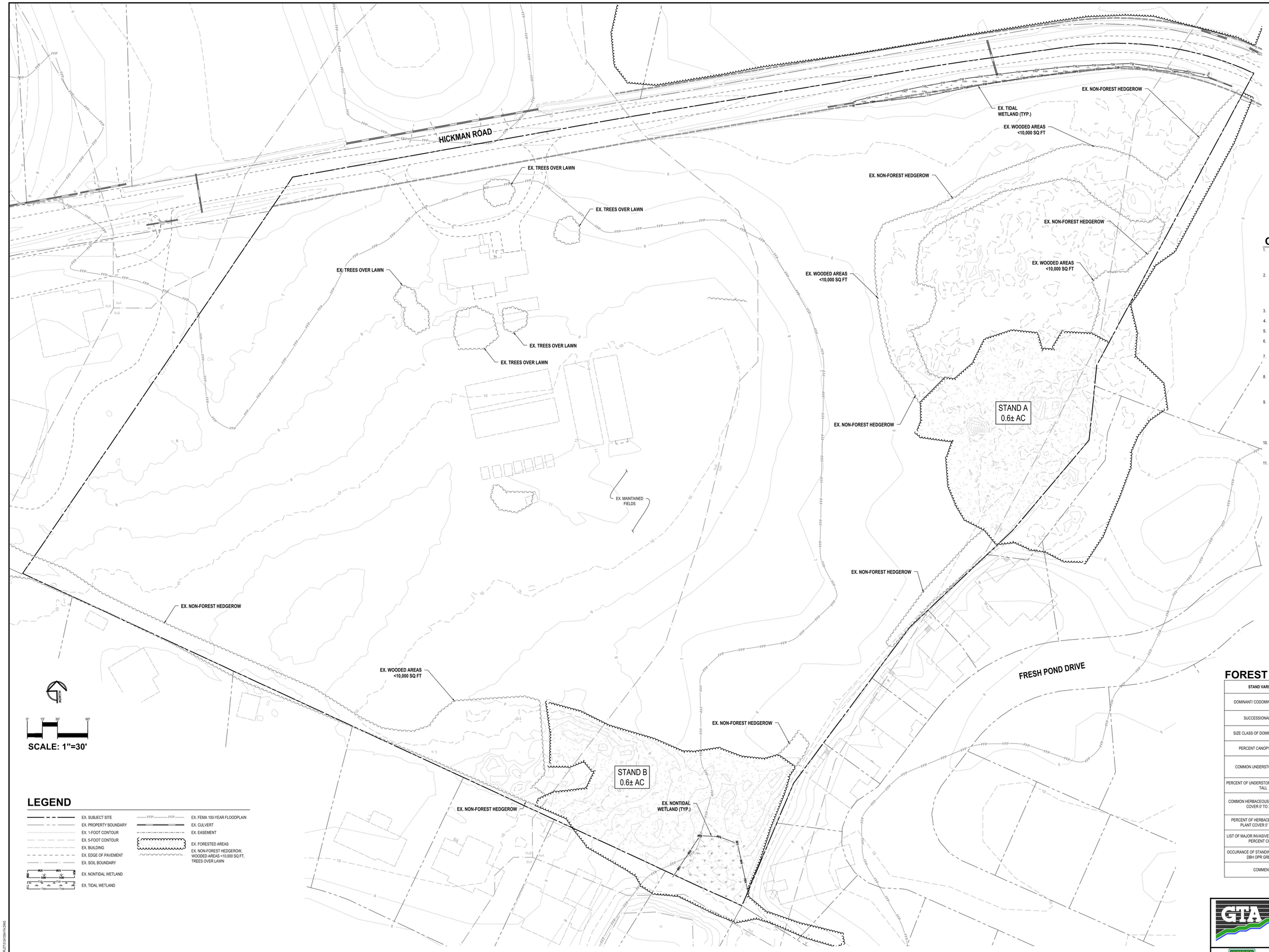

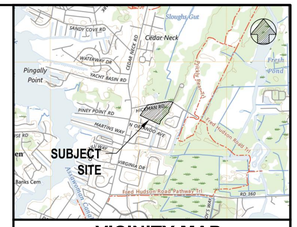

VICINITY MAP

SCALE: 1" = 2,000'

UNITED STATES GEOLOGICAL SURVEY, BETHANY BEACH, DE QUADRANGLE, 7.5 MINUTE TOPOGRAPHIC MAP SERIES, DATED 2023.

GENERAL INFORMATION

1. PLAN PREPARED FOR: FOXLANE HOMES DELAWARE
   32191 NASSAU ROAD #2
   LEWES, DELAWARE 19958
   ATTN: MR. JOHN MURRAY
2. PLAN PREPARED BY: GEO-TECHNOLOGY ASSOCIATES, INC. (GTA)
   3445-A BOX HILL CORPORATE CENTER DRIVE
   ABINGDON, MARYLAND 21009
   ATTN: MR. JORDAN MUNIZZI
   PHONE: 410-515-9446
   EMAIL: JMUNIZZI@GTAENG.COM
3. AREA OF REVIEW: 13± ACRES
4. TAX PARCEL: 134-9.00-28.00
5. DEED REFERENCE: 5294/107
6. THIS PLAN WAS PRODUCED ON A BASE MAP PROVIDED BY SOLUTIONS IPEM, LLC AND DELAWARE FIRSTMAP.
7. PORTIONS OF THE SUBJECT SITE ARE LOCATED WITHIN THE 100-YEAR FLOODPLAIN PER FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 10005C0504K, EFFECTIVE MARCH 16, 2015.
8. A WETLAND DELINEATION OF THE SUBJECT SITE WAS PERFORMED BY WATERSHED ECO, LLC IN APRIL 2024 AND WETLAND FLAGS WERE SURVEY LOCATED BY SOLUTIONS IPEM, LLC. A FOREST ASSESSMENT OF THE SUBJECT SITE WAS PERFORMED BY GTA IN JANUARY 2026.
9. GTA'S CONCLUSIONS REGARDING THIS SITE HAVE BEEN BASED ON OBSERVATIONS OF EXISTING CONDITIONS, PROFESSIONAL EXPERIENCE, AND GENERALLY ACCEPTED PROFESSIONAL ENVIRONMENTAL PRACTICE UNDER SIMILAR CIRCUMSTANCES. SEASONAL VEGETATION CYCLES AND FLUCTUATIONS IN PRECIPITATION OR WEATHER CONDITIONS CAN RESULT IN DIFFERENCES IN THE PERCEPTION OF HYDROLOGIC CONDITIONS AND THE PRESENCE OF PREDOMINANTLY HYDROPHYTIC VEGETATION, WHICH CAN ALTER GTA'S EVALUATION OF WETLANDS/WATERBODIES.
10. IT IS IMPORTANT TO NOTE THAT THIS EVALUATION IS GTA'S PROFESSIONAL OPINION, ONLY. DECISIONS REGARDING THE OFFICIAL JURISDICTIONAL STATUS ARE MADE BY FEDERAL, STATE, AND/OR LOCAL REGULATORY AGENCIES.
11. THIS PLAN WAS PREPARED BY GTA FOR THE SOLE AND EXCLUSIVE USE OF THE FOXLANE HOMES DELAWARE ANY REPRODUCTION OF THIS PLAN BY ANY OTHER PERSON WITHOUT THE EXPRESSED WRITTEN PERMISSION OF GTA AND FOXLANE HOMES DELAWARE IS UNAUTHORIZED, AND SUCH USE IS AT THE SOLE RISK OF THE USER.

FOREST STAND AREAS

FOREST STAND #	ACREAGE
A	0.6 AC
B	0.6 AC
TOTAL	1.2 AC

FOREST STAND SUMMARY SHEET

STAND VARIABLE	STAND A	STAND B
DOMINANT/ CODOMINANT SPECIES	DOMINANT: *PINUS TAEDA* CODOMINANT: *ACER RUBRUM*	DOMINANT: *PINUS TAEDA* CODOMINANT: *ACER RUBRUM*
SUCCESSIONAL STAGE	EARLY TO MID-SUCCESSIONAL	MID-SUCCESSIONAL
SIZE CLASS OF DOMINANT SPECIES	10-19.9"	10-29.9"
PERCENT CANOPY CLOSURE	95%	90%
COMMON UNDERSTORY SPECIES	*PHRAGMITES AUSTRALIS*	*LIQUIDAMBAR STYRACIFLUA, PYRUS CALLERYANA, ROSA MULTIFLORA*
PERCENT OF UNDERSTORY COVER 3' TO 20' TALL	45%%	40%
COMMON HERBACEOUS & WOODY PLANT COVER 0' TO 3' TALL	*LONICERA JAPONICA, ROSA MULTIFLORA, JUNIPERUS VIRGINIANA, ALLIUM VINEALE*	*ROSA MULTIFLORA, LONICERA JAPONICA, VINCA MINOR*
PERCENT OF HERBACEOUS & WOODY PLANT COVER 0' TO 3' TALL	10%	15%
LIST OF MAJOR INVASIVE PLANT SPECIES & PERCENT COVER	*ROSA MULTIFLORA* - 5% *LONICERA JAPONICA* - 2%	*PYRUS CALLERYANA* - 5% *ROSA MULTIFLORA* - 5% *LONICERA JAPONICA* - 2%
OCCURANCE OF STANDING DEAD TREES 6" DBH OPR GREATER	FEW	FEW
COMMENTS	-	-

LEGEND

- EX. SUBJECT SITE
- EX. PROPERTY BOUNDARY
- EX. 1-FOOT CONTOUR
- EX. 5-FOOT CONTOUR
- EX. BUILDING
- EX. EDGE OF PAVEMENT
- EX. SOIL BOUNDARY
- EX. NONTIDAL WETLAND
- EX. TIDAL WETLAND
- EX. FEMA 100-YEAR FLOODPLAIN
- EX. CULVERT
- EX. EASEMENT
- EX. FORESTED AREAS
- EX. NON-FOREST HEDGEROW, WOODED AREAS <10,000 SQ FT, TREES OVER LAWN

SOILS CHART

SYMBOL[1]	NAME/DESCRIPTION[1]	HYDRIC SOIL[2]	HYDRIC COMPONENT[2]	PERCENTAGE OF MAPPING UNIT[1]	POSITION IN LANDSCAPE[2]
AsA	ASKECKSY LOAMY SAND, 0-2% SLOPES	YES	ASKECKSY, UNDRAINED	45	FLATS
			ASKECKSY, DRAINED	30	
			HURLOCK, UNDRAINED	10	
			MULLICA, UNDRAINED	5	
IeB	INGLESIDE LOAMY SAND, 2-5% SLOPES	NO	-	-	-
RuB	RUNCLINT LOAMY SAND, 2-5% SLOPES	YES	HURLOCK, DRAINED	5	FLATS

1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, SUSSEX COUNTY, DELAWARE, SOIL SURVEY DATA VERSION 26, DATED SEPTEMBER 9, 2025.
2. HYDRIC SOILS INFORMATION AVAILABLE FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE SOIL DATA ACCESS HYDRIC SOILS LIST, ACCESSED JANUARY 30, 2026.

FOREST ASSESSMENT SUMMARY NARRATIVES

FOREST STAND A

STAND A IS AN EARLY TO MID-SUCCESSIONAL STAGE FOREST, DOMINATED BY *PINUS TAEDA. ACER RUBRUM* IS THE PRIMARY CODOMINANT SPECIES WITHIN STAND A. THE MAJORITY OF DOMINANT TREES IN THIS STAND EXHIBIT AVERAGE DBH'S IN THE 10- TO 19.9-INCH RANGE. THE UNDERSTORY WAS MODERATELY DENSE AND IS DOMINATED BY *PHRAGMITES AUSTRALIS*. THE HERBACEOUS AND WOODY PLANT COVER IS DOMINATED BY *LONICERA JAPONJICA, ROSA MULTIFLORA, JUNIPERUS VIRGINIANA,* AND *ALLIUM VINEALE*. THE STAND EXHIBITED A MODERATE PRESENCE OF INVASIVE SPECIES. THE FOREST GENERALLY APPEARS HEALTHY AND RELATIVELY FREE OF DISEASE AND PESTS.

FOREST STAND B

STAND B IS A MID-SUCCESSIONAL STAGE FOREST, DOMINATED BY *PINUS TAEDA. ACER RUBRUM* ARE THE PRIMARY CODOMINANT SPECIES WITHIN STAND B. THE MAJORITY OF DOMINANT TREES IN THIS STAND EXHIBIT AVERAGE DBH'S IN THE 10- TO 29.9-INCH RANGE. THE UNDERSTORY WAS MODERATELY DENSE AND IS DOMINATED BY *LIQUIDAMBAR STYRACIFLUA, PYRUS CALLERYANA,* AND *ROSA MULTIFLORA*. THE HERBACEOUS AND WOODY PLANT COVER IS DOMINATED BY *ROSA MULTIFLORA, LONICERA JAPONICA,* AND *VINCA MINOR*. THE STAND EXHIBITED A MODERATE PRESENCE OF INVASIVE SPECIES. THE FOREST GENERALLY APPEARS HEALTHY AND RELATIVELY FREE OF DISEASE AND PESTS.

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
410-515-9446
FAX: 410-515-9895
WWW.GTAENG.COM

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Jordon Munizzi
FL-10293A
Digitally signed by Munizzi
2026.01.30 15:53:49 -05'00'

FOREST ASSESSMENT PLAN

HICKMAN ROAD PROPERTY

SUSSEX COUNTY, DELAWARE

REVISIONS:
-

JOB NO:	31241554
SCALE:	1"=30'
DATE:	JANUARY 30, 2026
DRAWN BY:	BCW
DESIGN BY:	
REVIEW BY:	MAJ/TAS
SHEET:	1 OF 1

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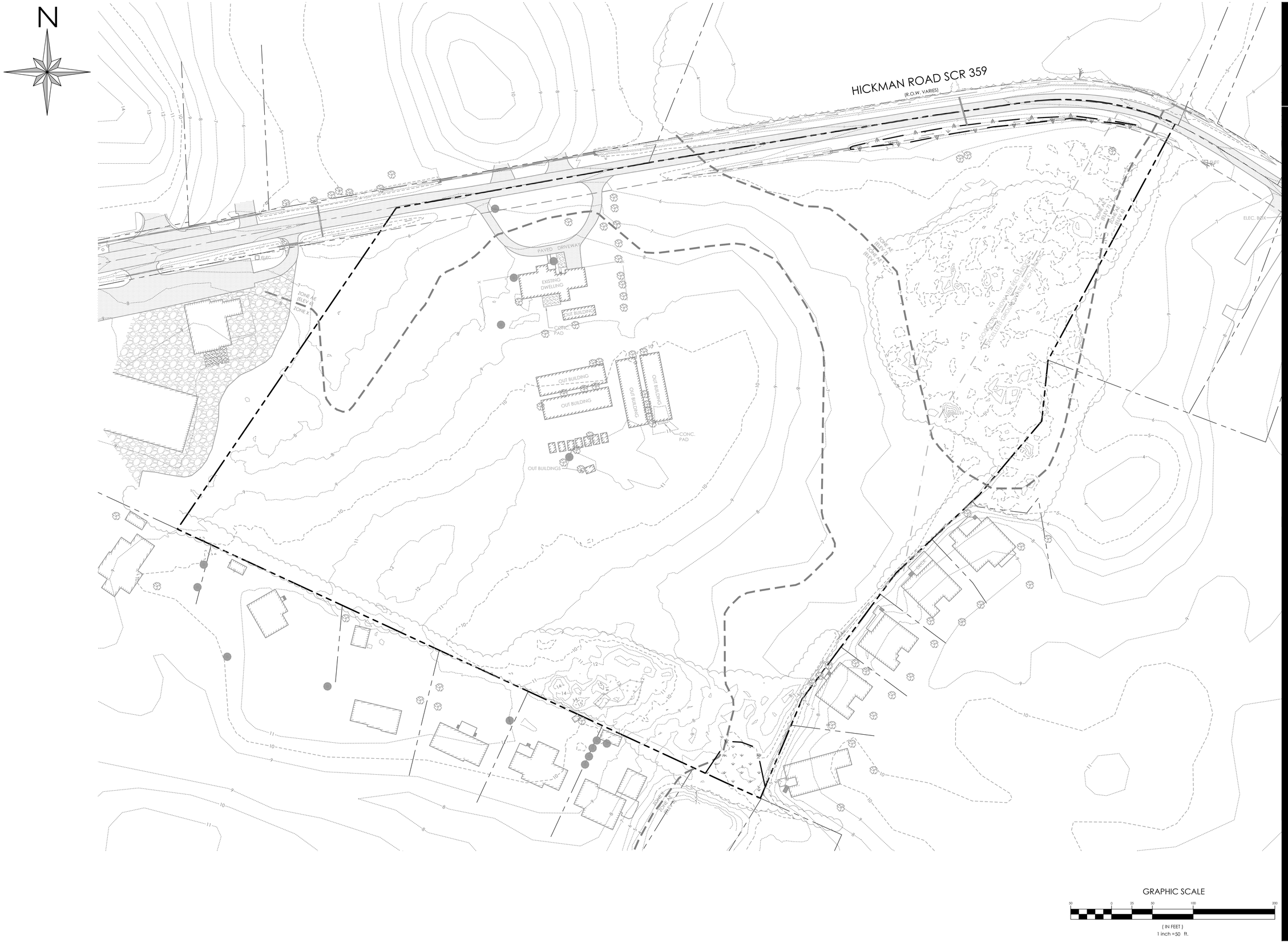

solutions
Integrated Planning, Engineering & Management, LLC
303 North Bedford Street
Georgetown, DE 19947
T. 302.297.9215
3003 Merritt Mill Road
Salisbury, MD 21804
T. 410.572.8833
www.solutionsipem.com Copyright © 2026

REVISIONS

NO.	DATE	DESCRIPTION

EXISTING CONDITIONS
for
HICKMAN
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	5/29/26
Job Number:	24006
Scale:	1"=50'
Drawn By:	HHB
Designed By:	HHB
Approved By:	JP

Sheet No.: 1

File Name: EX. COND

N

HICKMAN ROAD SCR 359
(R.O.W. VARIES)

LEGEND

- CEMETERY
- RESIDENTIAL/FARMETTE
- WOODED AREAS
- RESOURCE BUFFER A
- RESOURCE BUFFER B
- DEVELOPABLE AREA
- EXCELLENT GROUNDWATER RECHARGE

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

solutions

303 North Bedford Street
Georgetown, DE 19947
T. 302.297.9215

3003 Merritt Mill Road
Salisbury, MD 21804
T. 410.572.8833

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REVISIONS

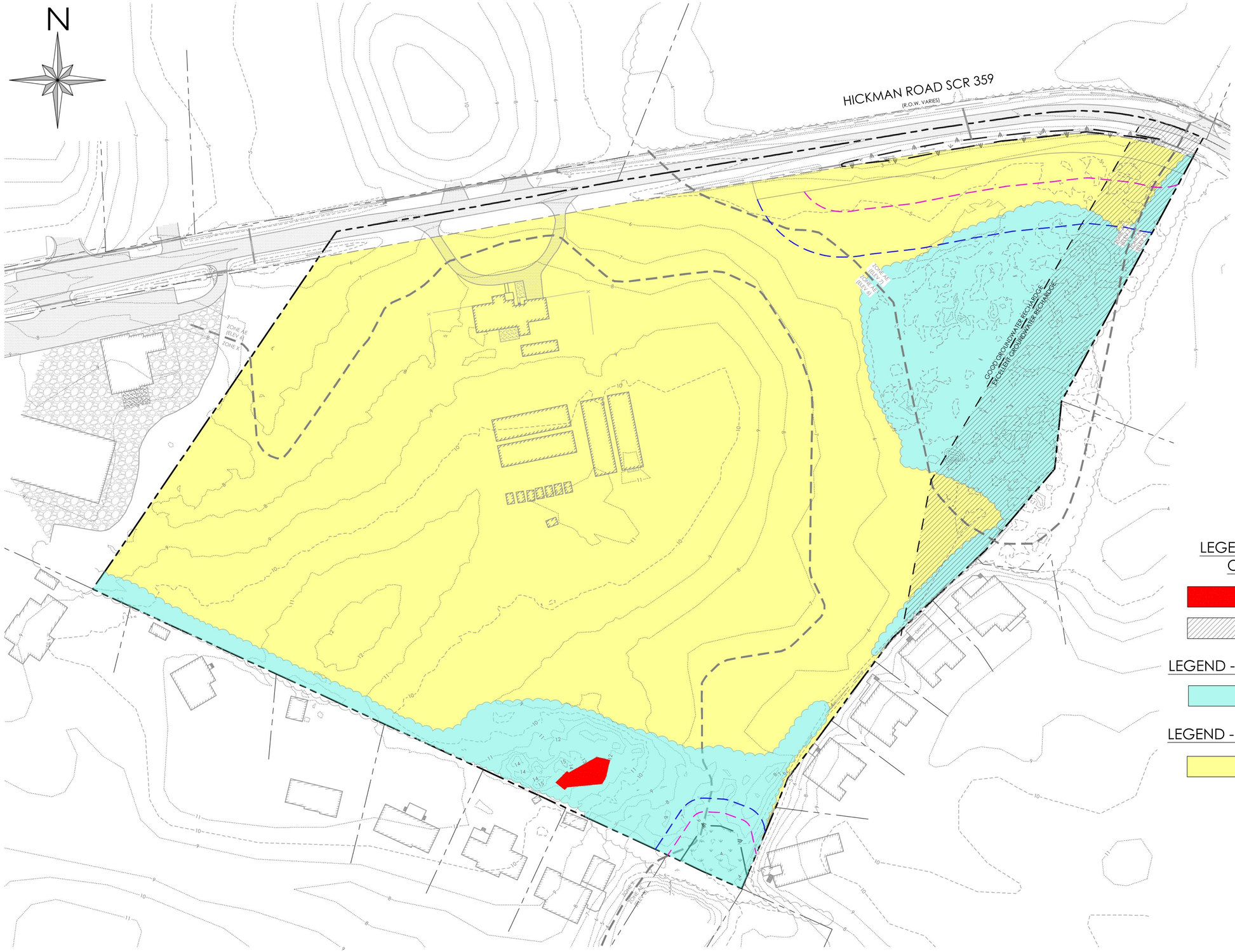
NO.	DATE	DESCRIPTION

EXISTING CONDITIONS FEATURES
for
HICKMAN
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	5/29/26
Job Number:	24006
Scale:	1"=200'
Drawn By:	HHB
Designed By:	HHB
Approved By:	JP

Sheet No.: 2

File Name: EX. COND. FEATURES



LEGEND - AREAS WORTHY OF PRESERVATION

- CEMETARY
- EXCELLENT GROUNDWATER RECHARGE

LEGEND - MEDIUM PRIORITY AREAS

- WOODED AREAS

LEGEND - LOW PRIORITY AREAS

- RESIDENTIAL/FARMETTE

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

solutions
Integrated Planning, Engineering & Management, LLC

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REVISIONS

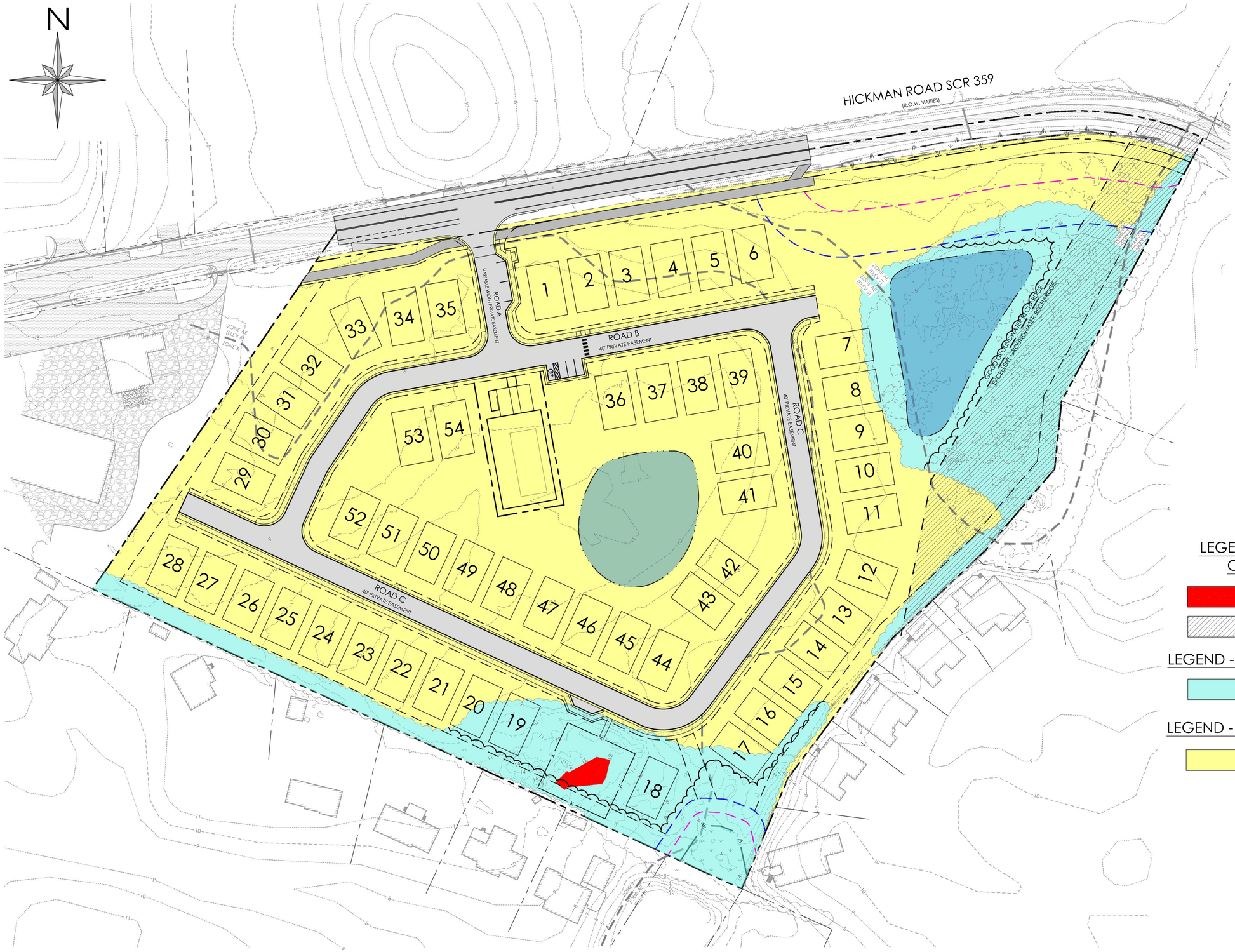
NO.	DATE	DESCRIPTION

AREAS WORTHY OF PRESERVATION
for
HICKMAN
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	5/29/26
Job Number:	24006
Scale:	1"=200'
Drawn By:	HHB
Designed By:	HHB
Approved By:	JP

Sheet No.: 3

File Name: WORTH PRESERV



LEGEND - AREAS WORTHY OF PRESERVATION

- CEMETARY
- EXCELLENT GROUNDWATER RECHARGE

LEGEND - MEDIUM PRIORITY AREAS

- WOODED AREAS

LEGEND - LOW PRIORITY AREAS

- RESIDENTIAL/FARMETTE

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

solutions
Integrated Planning, Engineering & Management, LLC

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REVISIONS

NO.	DATE	DESCRIPTION

COMMUNITY LAYOUT
for
HICKMAN
BALTIMORE HUNDRED
SUSSEX COUNTY, DELAWARE

Date:	5/29/26
Job Number:	24006
Scale:	1"=50'
Drawn By:	HHB
Designed By:	HHB
Approved By:	JP

Sheet No.: 4

File Name: WORTH PRESERV

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT
1650 ARCH STREET
PHILADELPHIA PA 19103-2004

February 6, 2026

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination NAP-2026-00032-103
38485 Hickman Road SX
Center coordinates (39.512062°, -75.604408°)

William Twupack
Watershed ECO, LLC
651 N. Broad Street
Middletown, Delaware 19709

Dear Mr. Riding:

This Approved Jurisdictional Determination (AJD) is provided in response to your request on July 24, 2025 for a determination of Federal jurisdiction by this office. The site associated with your request is located at 38485 Hickman Road, Ocean View, Sussex County, Delaware. The property is identified as Sussex County Tax Parcel No. 134-9.00-28.00.

The findings of this AJD are documented in the **enclosed** AJD Form. The findings are also depicted on the **enclosed** plan(s) identified as “Jurisdictional Wetland Delineation Plan”; prepared by Solutions Engineering; dated July 21, 2025; unrevised; 2 sheets.

A Department of the Army permit is required for work or structures in “navigable waters of the United States” pursuant to Section 10 the Rivers and Harbors Act (RHA) of 1899 and the discharge of dredged or fill material into “waters of the United States” pursuant to Section 404 of the Clean Water Act (CWA). Any proposal to perform these activities within areas of Federal jurisdiction requires prior approval by this office.

Food Security Act statement: The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

This AJD is valid for a period of five (5) years. This AJD is issued in accordance with current Federal regulations and is based upon the existing site conditions and information provided by you in your application. This office reserves the right to reevaluate and modify this AJD at any time should the existing site conditions or Federal regulations change, or should the information provided by you prove to be false, incomplete or inaccurate.

You may request an administrative appeal of this AJD if you **do not** accept this determination. **Enclosed** you will find a combined Notification of Appeal Process (NAP) and Request for Appeal (RFA) form. Should you wish to appeal this determination, you must submit a completed RFA form to the North Atlantic Division Office within 60 days of the date on the form. Additionally, for the appeal to be accepted, the Corps must determine that it is complete and that it meets the criteria for appeal under 33 CFR Part 331.5. The form should be submitted to Andrew Dangler, Regulatory Program Manager, at Andrew.C.Dangler@usace.army.mil. If you do not have the means to submit this form electronically, you may send it by mail to the Division office at:

US Army Corps of Engineers North Atlantic Division
Attn: Andrew Dangler (CENAD-PD-OR)
Fort Hamilton Military Community
301 John Warren Avenue, First Floor
Brooklyn, NY 11252-6700

If you have any questions regarding this matter, please contact James A. Colligan at 32-518-9480 or James.A.Colligan@usace.army.mil.

Sincerely,

Date:
2026.02.06
10:51:58 -05'00'

Todd A. Hoernemann
Chief, Applications Section I

Enclosures

cc:
Wetlands and Waterways Section, DDNREC

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT
1650 ARCH STREET
PHILADELPHIA, PENNSYLVANIA 19103-2004

CENAP-OPR February 6, 2026

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (Corps) Approved Jurisdictional Determination in accordance with the "Revised Definition of 'Waters of the United States'"; (88 FR 3004 (January 18, 2023) as amended by the "Revised Definition of 'Waters of the United States'; Conforming" (8 September 2023) ,[1] NAP-2026-00032-103

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.[2] AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.[3]

On January 18, 2023, the Environmental Protection Agency (EPA) and the Department of the Army ("the agencies") published the "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule"). On September 8, 2023, the agencies published the "Revised Definition of 'Waters of the United States'; Conforming", which amended the 2023 Rule to conform to the 2023 Supreme Court decision in *Sackett v. EPA*, 598 U.S., 143 S. Ct. 1322 (2023) ("*Sackett*").

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a Corps AJD as defined in 33 CFR §331.2. For the purposes of this AJD, we have relied on Section 10 of the Rivers and Harbors Act of 1899 (RHA),[4] the 2023 Rule as amended, as well as other applicable guidance, relevant case law, and longstanding practice in evaluating jurisdiction.

[1] While the Revised Definition of "Waters of the United States"; Conforming had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.
[2] 33 CFR 331.2.
[3] Regulatory Guidance Letter 05-02.
[4] USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

CENAP-OPR
SUBJECT: 2023 Rule, as amended, Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), NAP-2026-00032-103

1. SUMMARY OF CONCLUSIONS.

   a. Provide a list of each individual feature within the review area and the jurisdictional status of each one (i.e., identify whether each feature is/is not a water of the United States and/or a navigable water of the United States).

      i. Wetlands "A", jurisdictional, Section 10 and Section 404

      ii. Wetlands "B", non-jurisdictional

      iii. Ephemeral Drainage Ditch, non-jurisdictional

      iv. Wetlands "C", jurisdictional, Section 404

2. REFERENCES.

   a. "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule")

   b. "Revised Definition of 'Waters of the United States'; Conforming" 88 FR 61964 (September 8, 2023)

   c. *Sackett v. EPA*, 598 U.S. 651, 143 S. Ct. 1322 (2023)

3. REVIEW AREA. The property is located at 38485 Hickman Road, Ocean View, Sussex County, Delaware. The property is identified as Sussex County Tax Parcel No. 134-9.00-28.00 consisting of approximately 12.5 Acres. The limit of investigation is 12.5 Acres within the property. The property consists of an uninhabited single-family dwelling, agricultural fields, and forested wetlands. A site visit with James Colligan – USACE and Will Twupack – Watershed Eco was conducted on June 23, 2025. For additional notes regarding the site visit, see "2026-00032_Field_MFR".

4. NEAREST TRADITIONAL NAVIGABLE WATER (TNW), THE TERRITORIAL SEAS, OR INTERSTATE WATER TO WHICH THE AQUATIC RESOURCE IS CONNECTED. White Creek. White Creek is influenced by the ebb and flow of the tide.[5]

[5] This MFR should not be used to complete a new stand-alone TNW determination. A stand-alone TNW determination for a water that is not subject to Section 9 or 10 of the Rivers and Harbors Act of 1899 (RHA) is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established.

5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, THE TERRITORIAL SEAS, OR INTERSTATE WATER. Resources on the review area flow into White Creek through two different flow paths. Wetlands "A" drains off site to the north through a culvert under Hickman Road into White Creek. Wetlands "C" drains off site to the south into a man made lagoon system within Fresh Pond state park, which drains into White Creek.

6. SECTION 10 JURISDICTIONAL WATERS[6]: Describe aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899. Include the size of each aquatic resource or other feature within the review area and how it was determined to be jurisdictional in accordance with Section 10.[7]

    1. Wetlands "A" is a 0.04 acre tidal emergent wetland located entirely within the review area. Wetlands "A" is tidally influenced by White Creek. This feature drains outside the review area to the north under Hickman Road though a culvert. Wetlands "A" is influenced by the ebb and flow of the tide, making it Section 10 jurisdictional.

7. SECTION 404 JURISDICTIONAL WATERS: Describe the aquatic resources within the review area that were found to meet the definition of waters of the United States in accordance with the 2023 Rule as amended, consistent with the Supreme Court's decision in *Sackett*. List each aquatic resource separately, by name, consistent with the naming convention used in section 1, above. Include a rationale for each aquatic resource, supporting that the aquatic resource meets the relevant category of "waters of the United States" in the 2023 Rule as amended. The rationale should also include a written description of, or reference to a map in the administrative record that shows, the lateral limits of jurisdiction for each aquatic resource, including how that limit was determined, and incorporate relevant references used. Include the size of each aquatic resource in acres or linear feet and attach and reference related figures as needed.

    a. Traditional Navigable Waters (TNWs) (a)(1)(i): N/A

[6] 33 CFR 329.9(a) A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in § 329.8(b) of this part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions.
[7] This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

b. The Territorial Seas (a)(1)(ii): N/A

c. Interstate Waters (a)(1)(iii): N/A

d. Impoundments (a)(2): N/A

e. Tributaries (a)(3): N/A

f. Adjacent Wetlands (a)(4):

1. Wetlands "A" is a 0.04 tidal emergent wetland located entirely within the review area. This feature drains outside the review area to the north through a culvert under Hickman Road. This feature has a continuous surface connection to White Creek outside the review area. Wetlands "A" directly abuts an (a)(1) through (a)(3) water, thereby meeting the definition of an (a)(4) adjacent wetland.

2. Wetlands "C" is a 0.07 acre forested wetland located on the south portion of the review area and continues outside the review area to the south. This feature directly abuts a tidal man-made lagoon directly outside the review area. This connection was observed from within the review area and is visible on aerial imagery and lidar. Wetlands "C" directly abuts an (a)(1) through (a)(3) water, thereby meeting the definition of an (a)(4) adjacent wetland.

g. Additional Waters (a)(5): N/A

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

a. Describe aquatic resources and other features within the review area identified in the 2023 Rule as amended as not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5). Include the type of excluded aquatic resource or feature, the size of the aquatic resource or feature within the review area and describe how it was determined to meet one of the exclusions listed in 33 CFR 328.3(b).[8]

1. Ephemeral Drainage Ditch is an approximately 365 linear foot ephemeral feature located on the east portion of the property. This feature did not

[8] 88 FR 3004 (January 18, 2023)

exhibit relatively standing or flowing water during the site visit. This feature did not exhibit an ordinary high water mark. This feature does not carry a relatively permanent flow of water, thereby meeting the definition of a (b)(3) Ditch.

b. Describe aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the 2023 Rule as amended (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).

1. Wetlands "B" is a 1.38 acre forested wetland located on the northeast portion of the review area and continues outside the review area to the east. During the site visit, this feature was observed continuing east outside the review area. From aerial and lidar imagery, this feature appeared to be adjacent, but not abutting, a man-made stormwater pond. This does not constitute a connection to an (a)(1) through (a)(3) waters. This feature does not have any connections to other aquatic resources, leaving it isolated. Because this feature does not have a continuous surface connection to an (a)(1) through (a)(3) waters it does not meet the definition of an (a)(4) adjacent wetland.

9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.

a. USACE site visit on June 23, 2025.

b. Delineation Plan entitled "Jurisdictional Wetland Delineation Plan"; prepared by Solutions Engineering; dated July 21, 2025; unrevised; 2 sheets.

c. Delineation Report entitled "Wetland Delineation – Mullens Property"; prepared by Watershed ECO; dated April 15, 2024.

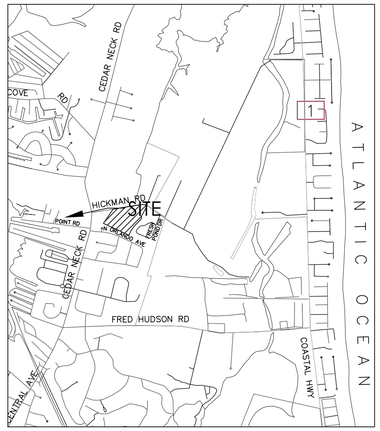
d. Flow Path Plan entitled "2026-00032_Flow_Path"; prepared by USACE.

e. Lidar Imagery entitled "2026-00032_Lidar"; prepared by USACE

10. OTHER SUPPORTING INFORMATION. N/A

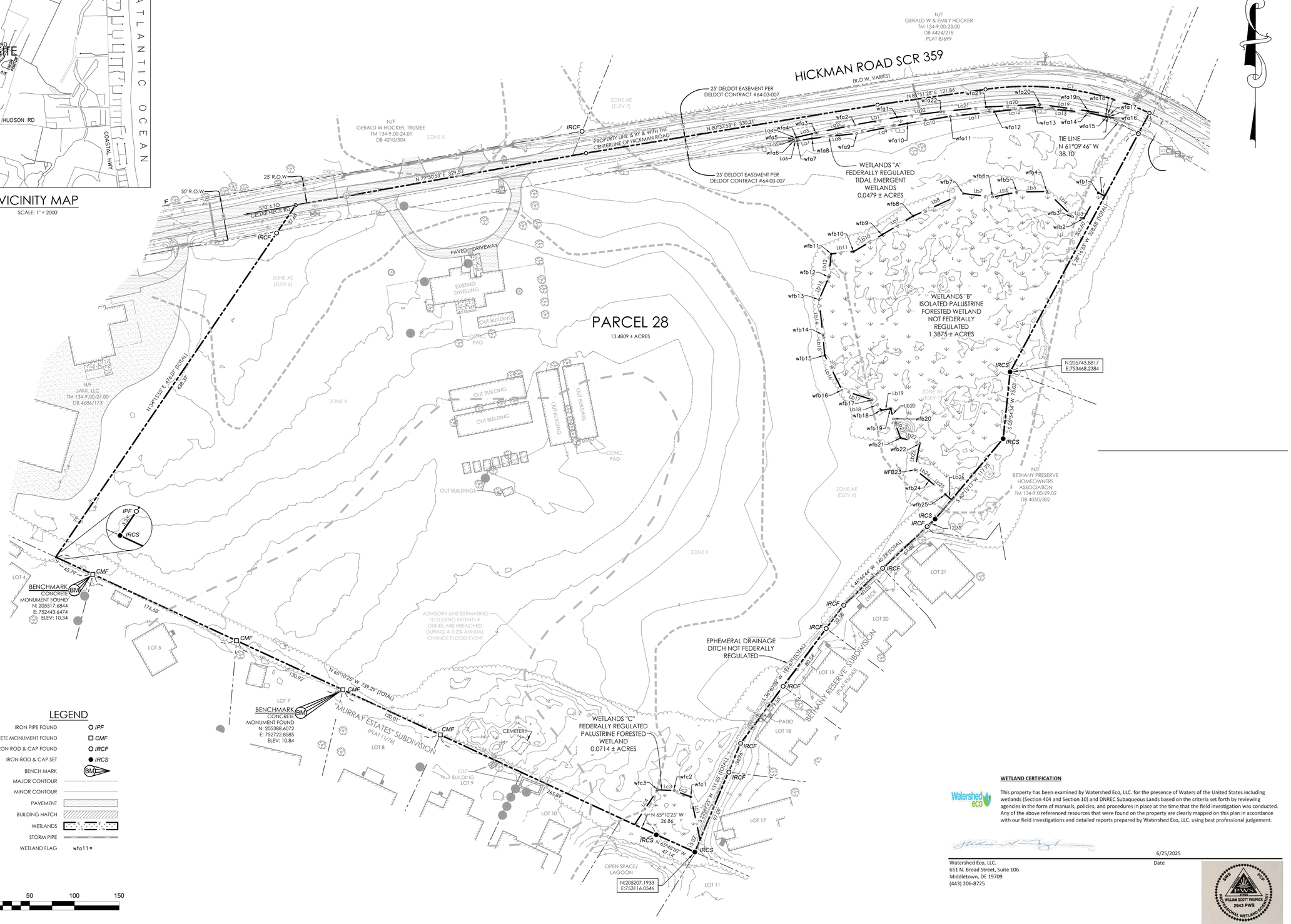
11. NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be

subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.



VICINITY MAP

SCALE: 1" = 2000'



LEGEND

IRON PIPE FOUND	IPF
CONCRETE MONUMENT FOUND	CMF
IRON ROD & CAP FOUND	IRCF
IRON ROD & CAP SET	IRCS
BENCH MARK	BM
MAJOR CONTOUR	
MINOR CONTOUR	
PAVEMENT	
BUILDING HATCH	
WETLANDS	
STORM PIPE	
WETLAND FLAG	wfa11

0 50 100 150

WETLAND CERTIFICATION

This property has been examined by Watershed Eco, LLC. for the presence of Waters of the United States including wetlands (Section 404 and Section 10) and DNREC Subaqueous Lands based on the criteria set forth by reviewing agencies in the form of manuals, policies, and procedures in place at the time that the field investigation was conducted. Any of the above referenced resources that were found on the property are clearly mapped on this plan in accordance with our field investigations and detailed reports prepared by Watershed Eco, LLC. using best professional judgement.

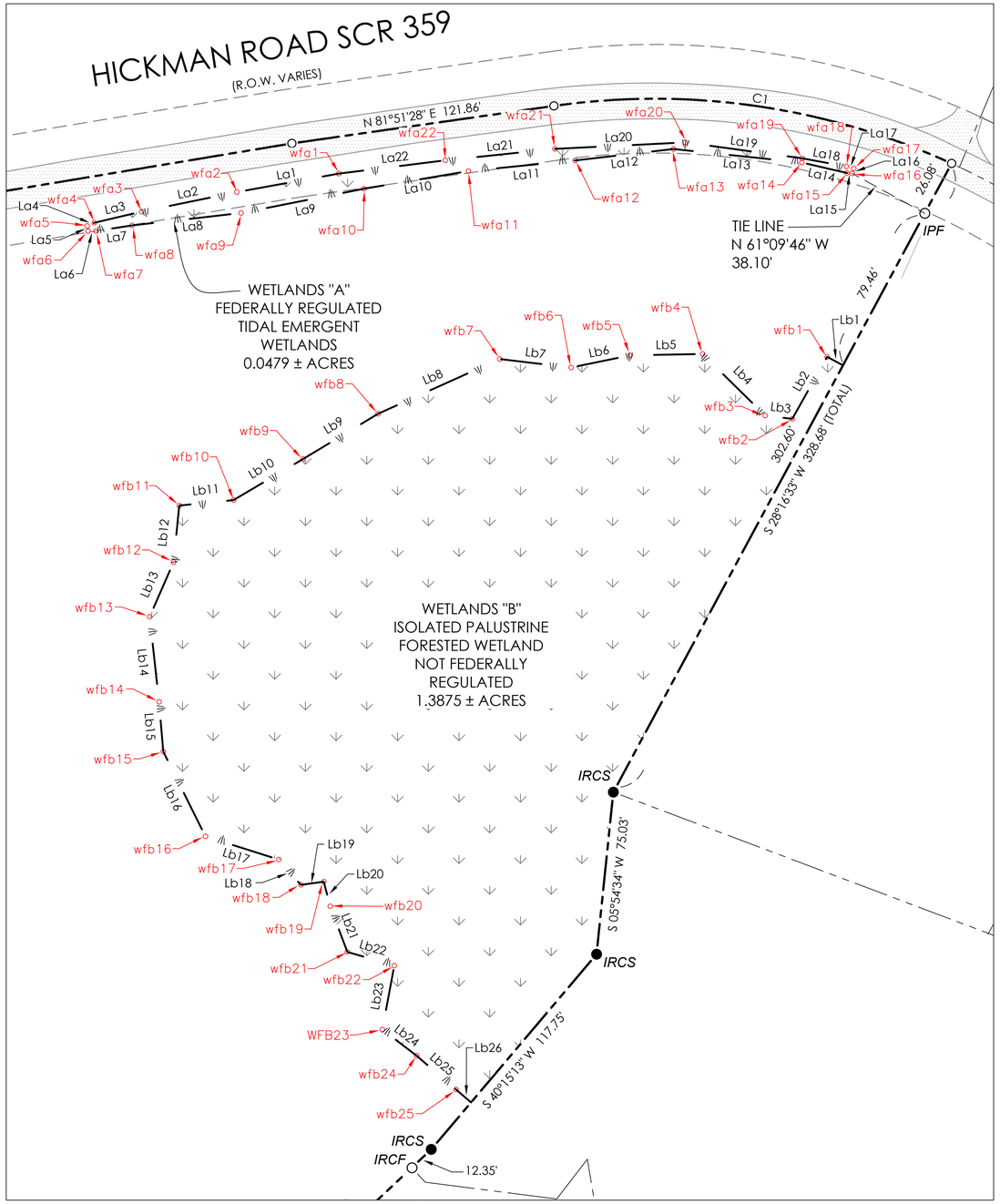
6/25/2025

Date

Watershed Eco, LLC.
651 N. Broad Street, Suite 106
Middletown, DE 19709
(443) 206-8725

WILLIAM SCOTT TWUPACK
2943 PWS
NATIONAL WETLAND SCIENTIST

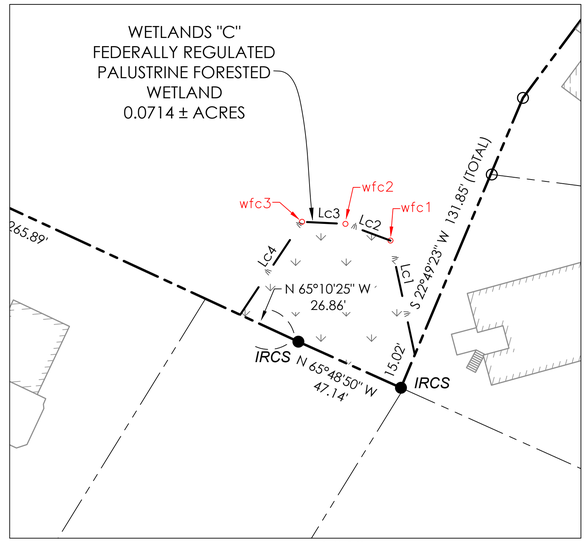
solutions



WETLANDS "A" & "B"

SCALE: 1" = 30'

DELAWARE STATE GRID NORTH NAD 83



WETLANDS "C"

SCALE: 1" = 30'

WETLANDS "A"

LINE	BEARING	DISTANCE
La1	S 79°42'19" W	47.73'
La2	S 78°24'15" W	44.73'
La3	S 76°46'51" W	22.39'
La4	S 65°47'07" W	3.53'
La5	S 07°19'35" E	2.38'
La6	N 89°47'02" E	3.69'
La7	N 81°09'03" E	16.84'
La8	N 83°31'34" E	50.49'
La9	N 78°49'28" E	57.67'
La10	N 80°24'46" E	48.76'
La11	N 84°17'08" E	49.33'
La12	N 83°22'12" E	45.64'
La13	S 83°58'38" E	59.37'
La14	S 76°59'38" E	21.30'
La15	S 85°07'22" E	2.49'
La16	N 16°57'09" E	2.34'
La17	N 74°18'34" W	3.47'
La18	N 79°28'39" W	20.78'
La19	N 82°16'36" W	54.34'
La20	S 87°09'30" W	60.04'
La21	S 84°02'27" W	50.71'
La22	S 82°53'11" W	49.40'

WETLANDS "B"

LINE	BEARING	DISTANCE
Lb1	N 61°43'27" W	8.29'
Lb2	S 29°17'47" W	32.76'
Lb3	N 83°11'37" W	12.57'
Lb4	N 45°25'31" W	40.42'
Lb5	S 88°54'27" W	33.38'
Lb6	S 78°20'27" W	27.73'
Lb7	N 83°11'00" W	33.08'
Lb8	S 65°45'51" W	61.41'
Lb9	S 58°53'38" W	40.36'
Lb10	S 59°26'10" W	37.16'
Lb11	S 84°12'58" W	25.09'
Lb12	S 05°46'49" W	26.20'
Lb13	S 23°36'04" W	27.39'
Lb14	S 04°15'36" E	39.45'
Lb15	S 04°51'47" E	22.97'
Lb16	S 26°26'16" E	43.57'
Lb17	S 72°25'02" E	35.40'
Lb18	S 41°11'14" E	15.50'
Lb19	N 82°05'48" E	10.62'
Lb20	S 14°43'36" E	11.66'
Lb21	S 20°32'52" E	22.48'
Lb22	S 73°42'58" E	22.50'
Lb23	S 10°33'57" W	29.91'
Lb24	S 52°31'29" E	19.85'
Lb25	S 49°23'51" E	23.85'
Lb26	S 49°23'51" E	9.17'

COORDINATE TABLE - WETLAND "A"

(FLAGS A1 - A22)

Description	Northing	Easting
wf/a1	206028.6639	753341.8486
wf/a2	206020.1362	753294.8880
wf/a3	206011.1460	753251.0753
wf/a4	206006.0262	753229.2796
wf/a5	206004.5739	753226.0676
wf/a6	206002.2107	753226.3714
wf/a7	206002.2246	753230.0617
wf/a8	206004.8147	753246.6980
wf/a9	206010.5069	753296.8613
wf/a10	206021.6834	753353.4341
wf/a11	206029.8039	753401.5098
wf/a12	206034.7163	753450.5995
wf/a13	206039.9852	753495.9301
wf/a14	206033.7560	753554.9717
wf/a15	206028.9626	753575.7238
wf/a16	206028.7507	753578.2071
wf/a17	206030.9885	753578.8892
wf/a18	206031.9283	753575.5438
wf/a19	206035.7224	753555.1173
wf/a20	206043.0247	753501.2725
wf/a21	206040.0479	753441.3016
wf/a22	206034.7833	753390.8680

COORDINATE TABLE - WETLAND "B"

(FLAGS B1 - B25)

Description	Northing	Easting
wf/b1	205944.3210	753566.6380
wf/b2	205915.7540	753550.6090
wf/b3	205917.2440	753538.1260
wf/b4	205945.6140	753509.3320
wf/b5	205944.9780	753475.9570
wf/b6	205939.3730	753448.7950
WF/B7	205943.2990	753415.9510
WF/B8	205918.0890	753359.9510
WF/B9	205897.2380	753325.3930
WF/B10	205878.3420	753293.3950
WF/B11	205875.8130	753268.4320
WF/B12	205849.7460	753265.7930
WF/B13	205824.6470	753254.8270
WF/B14	205785.4330	753259.1280
WF/B15	205762.5490	753261.0750
WF/B16	205723.5310	753280.4760
WF/B17	205712.8380	753314.2200
WF/B18	205701.1760	753324.4250
WF/B19	205702.6360	753334.9450
WF/B20	205691.3540	753337.9100
WF/B21	205670.3050	753345.8000
WF/B22	205663.9950	753367.4024
WF/B23	205634.5920	753361.9180
WF/B24	205622.5123	753377.6746
WF/B25	205606.9884	753395.7851

wfa11

Bowman

February 16, 2026

Holly Wingate
Chairperson
Sussex County Planning & Zoning Commission
2 The Circle
PO Box 589
Georgetown, DE 19947

RE: Traffic Impact Evaluation
Hickman Residential
Sussex County, Delaware
Bowman Project No: 314635-01-001

Dear Ms. Wingate:

Bowman Consulting Group Ltd. (Bowman) has completed this traffic impact evaluation for the proposed 55-unit residential subdivision located on the south side of Hickman Road to the east of Cedar Neck Road. Access is proposed via a new full-movement entrance to Hickman Road.

While the proposed subdivision does satisfy the thresholds to require a Traffic Impact Study (TIS) per Chapter 2.2.2 of DelDOT's *Development Coordination Manual* the trip generating characteristics of the site are low enough to qualify for payment of the Area Wide Study Fee in lieu of completing a TIS.

As detailed in DelDOT's Area Wide Study Fee letter dated November 21, 2024 DelDOT has concluded that the proposed site is not anticipated to result in off-site traffic impacts and therefore is waiving the requirement of a TIS and is accepting payment of the Area Wide Study fee in the amount of $5,820.

Notwithstanding the above, Sussex County has recently amended Chapter 99-9(C) of their ordinance to include the following provision:

> *"(14) [Effect on area roadways and public transportation.] That the subdivision is either within an established Transportation Improvement District or the subdivision endeavors to maintain the current Delaware Department of Transportation Level of Service on all adjacent roads and intersections after the subdivision is completed and in no event will allow the Level of Service to degrade below a Level of Service D."*

Should this project have completed a TIS through the typical DelDOT process, then compliance with this ordinance could be demonstrated. While this development is not subject to this change in the Ordinance, and DelDOT and the County are waiving the requirement for a TIS, this traffic impact evaluation has been completed to demonstrate compliance of the above.

835 Springdale Drive, Suite 200, Exton, PA 19341
P: 610.594.9995
bowman.com

Per the amended ordinance, adjacent intersections and roadways should be studied. For this development Hickman Road is the only roadway for which access to the site would be provided. While there are no intersections directly adjacent to the subject parcel, the scope of this study includes the next major intersection to the west along Hickman Road, as defined below. Per DelDOT's Development Coordination Manual, an intersection should be included in a TIS if it experiences 50 or more peak hour trips. Due to the low trip generating characteristics of this site, this is the only intersection beyond Hickman Road which would meet this requirement, and therefore the scope of study contained herein is consistent DelDOT's TIS guidelines.

Existing Transportation Settings and Conditions

The proposed development will be located on the south side of Hickman Road to the east of Cedar Neck Road in Sussex County, Delaware (**Figure 1**). The existing roadways and intersections in the vicinity of the site, which comprise the study area roadway network, are described in this section.

Roadway Characteristics

The study area roadway network and characteristics are summarized below in **Table 1**.

Table 1. Existing Roadway Characteristics

Roadway Name	Travel Lanes (per direction)	Shoulders	Speed Limit (mph)
Hickman Road	1	NO	30
Cedar Neck Road	1	YES	35

The following key intersection in the vicinity of the site comprise the study area which, as noted previously, satisfies DelDOT's guidelines:

- Hickman Road and Cedar Neck Road

Crash Data

Reportable crash history for the three-year period from January 1, 2022 through December 31, 2025 was obtained through Delaware's Open Data Portal. Review of three years of crash data at study intersection is consistent with DelDOT's scope of study for traffic impact studies. A summary of the data is provided in **Tables 2A through 2C**.

As shown in the following tables, there was one reportable crash at the intersection of Hickman Road and Cedar Neck Road in which an inattentive, distracted, or fatigued driver resulted in a single-vehicle crash.

Table 2A. Reportable Crashes per Year
January 1, 2022 through December 31, 2025

Location	Traffic Control	Frequency of Crashes (Number per Year)			
		2023	2024	2025	Total
Hickman Road and Cedar Neck Road	TWSC	0	0	1	1

Table 2B. Reportable Crashes by Collision Type
January 1, 2022 through December 31, 2025

Intersection/ Type of Crash	Not A Collision between Two Vehicles	Total
Hickman Road and Cedar Neck Road	1	1

Table 2C. Reportable Crashes by Severity
January 1, 2022 through December 31, 2025

Intersection/ Type of Crash	Traffic Control	Fatal	Injury	Property Damage Only	Total
Hickman Road and Cedar Neck Road	TWSC	0	1	0	1

Existing Traffic Volumes

Traffic counts were completed at the above study intersection during a typical weekday from 7:00 AM – 9:00 AM and from 4:00 PM to 6:00 PM. These time periods are consistent with DelDOT requirements for residential projects. Additionally, DelDOT does not permit weekday traffic counts to be completed while school is not in session (i.e. during summer months). Additionally, DelDOT does not require the study of Saturday conditions for purely residential developments.

The results of these traffic counts are tabulated by 15-minute intervals and are provided in **Attachment 1**. The four highest consecutive 15-minute peak intervals during these traffic count periods constitute the peak hours, and the raw counted peak hour traffic volumes are shown in **Figure 3** for the weekday morning and weekday afternoon peak hours.

The raw existing traffic counts were adjusted based on seasonal adjustment factors supplied by DelDOT for other roadways of similar characteristics. The seasonal adjustment factors shown in **Table 3** were used to

adjust the raw counted traffic volumes in Figure 3, resulting in the seasonal adjustment shown in **Figure 4**, and the adjusted existing traffic volumes are shown in **Figure 4**.

Table 3. Seasonal Adjustment Factors

Roadway	January
Hickman Road (TPG 4)	1.163
Cedar Neck Road (TPG 2)	1.088
All Other Roadways	1.000

Future Traffic Conditions without Development

To account for regional traffic growth, the existing traffic volumes were increased by annual traffic growth rates, which are based on growth rates provided by DelDOT for roadways with similar characteristics and are summarized by roadway in **Table 4** below. A future build-out year of 2030 was assumed based on DelDOT's guidelines of two years for reviews and approvals and construction/occupancy at a rate of 50 units per year.

Table 4. Background Growth Factors

Roadway	Per Year Background Growth Factor	Total Background Growth (from 2026 to 2030)
Hickman Road	1.005	1.020
Cedar Neck Road	1.010	1.041
All Other Roads	1.000	1.000

To account for local traffic growth the following area developments were identified within a two-mile radius of the proposed site, which follows DelDOT's guidelines. Accordingly, the existing traffic volumes were increased to include the traffic to be generated by the following nearby committed developments in the vicinity of the proposed development as identified by Sussex County. Specifically, the following developments were identified as being approved within the last five years:

1. **Coastal Corner:** 20 townhomes located on the northeast corner of the intersection of Cedar Neck Road and Fred Hudson Road. This development was completed at the time of the traffic counts, and therefore, no additional traffic was added to the study area.
2. **Inland Bays Community:** 30 multifamily residential units located along the north side of Fred Hudson Road. This development was completed at the time of the traffic counts, and therefore, no additional traffic was added to the study area.
3. **Marlin Chase:** 75 townhomes located on the east side of Cedar Neck Road opposite Sandy Cove Road. This development was completed at the time of the traffic counts, and therefore, no additional traffic was added to the study area.

Correspondence with the County is contained in **Attachment 2**.

The future year 2030 without-development traffic volumes for the weekday morning and weekday afternoon peak hours are illustrated in **Figure 6**.

Detailed traffic volume projection worksheets are provided in **Attachment 3.**

Future Traffic Conditions with Development

Traffic volumes generated by the proposed redevelopment were prepared based on trip generation data compiled from numerous studies contained in the Institute of Transportation Engineers (ITE) publication, *Trip Generation Manual, 12th Edition*. **Table 5** presents the anticipated vehicular trip generation for the proposed redevelopment.

Table 5. Vehicular Trip Generation

Land Use	Size	Daily	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
		Total	In	Out	Total	In	Out	Total
Single-Family Homes	55 units	709	11	31	42	34	22	56

(1) Based on ITE Land Use Code 210 - Single-Family Detached Housing.

Site-generated traffic will approach and depart the site via different routes depending on factors such as the existing traffic patterns, location of major roadways, and the location of the development's site entrance. The site distributions for the site entrance are based on guidance provided by DelDOT during their review of the plan during the pre-submittal process. The distribution percentages for the anticipated directions of approach and departure for this development are illustrated in **Figure 5**.

Application of the percentages illustrated in Figure 5 to the new peak hour trips contained in Table 5, provides an estimate of site traffic to be added to the study area. The site-generated traffic is also shown in **Figure 5** for the weekday morning and weekday afternoon peak hours.

The future year 2030 without-development traffic volumes for the weekday morning and weekday afternoon peak hours are illustrated in **Figure 6**. Detailed spreadsheets summarizing the regional growth and the site trip assignments for each intersection are provided in **Attachment 3**.

Capacity / Level-of-Service Results

The peak hour traffic volumes were analyzed to determine the existing and future traffic operating conditions, both without and with the proposed development, in accordance with the standard techniques contained in the current *Highway Capacity Manual (7th Edition)* for unsignalized intersections. The HCM 7th Edition Methodology within HCS 2026 (8.5) traffic analysis software was utilized in the traffic analyses.

Conclusions

As detailed herein, under future 2030 with-development conditions, the major intersection adjacent to the proposed development entrance, as well as the frontage roadway itself, will continue to operate at level-of-service D or better, which complies with Chapter 99-9C of the County's ordinance without the need for mitigation improvements.

Consistent with DelDOT's Area-Wide Study Fee letter dated November 21, 2024, the following are required as part of this development:

- Payment of DelDOT Area-Wide Study Fee in the amount of $5,820.
- Improvement of Hickman Road along the site frontage to meet DelDOT's Functional Classification criteria, as defined in Section 1.1 of the Development Coordination Manual.

Additionally, the following entrance improvements are recommended:

- Installation of a 50-foot right-turn lane along Hickman Road at the Site Entrance.

If you should have any questions, or require further information, please feel free to contact me at 610.594.9995 or bgarrison@bowman.com.

Sincerely,

Braden Garrison, PE, PTOE
Project Manager, Transportation

BGG

Attachments

https://us-partner-integrations.egnyte.com/msoffice/wopi/files/d0f4bb4c-c5dc-446b-b4a9-8e5798361653/WOPIServiceId_TP_EGNYTE_PLUS/WOPIUserId_686.bowman.egnyte.com/2026-02 TIE.docx

Table 7 - Level of Service Matrices

1. Cedar Neck Road and Hickman Road

Time Period			Weekday Morning Peak Hour				Weekday Afternoon Peak Hour			
Year			2026	2030 Build-Out Year			2026	2030 Build-Out Year		
Development Condition			Existing	w/o Dev	w/ Dev	w/Dev Sensitivity	Existing	w/o Dev	w/ Dev	w/Dev Sensitivity
Hickman Road	WB	Left	A	A	B	C	B	B	B	D
		Right	9.9	10.0	10.2	20.6	10.4	10.5	11.0	31.9
Cedar Neck Road	NB	Thru	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
		Right								
	SB	Left	A	A	A	A	A	A	A	A
		Thru	7.4	7.4	7.4	8.2	7.7	7.7	7.8	9.5

(1) Movement operates at free-flow conditions.

Table 7 - Level of Service Matrices

2. Site Entrance and Hickman Road

Time Period		Weekday Morning Peak Hour	Weekday Afternoon Peak Hour
Year		2030 Build-Out Year	2030 Build-Out Year
Development Condition		w/ Dev	w/ Dev
Hickman Road	Thru	(1)	(1)
EB	Right		
Hickman Road	Left	A	A
WB	Thru	7.3	7.4
Site Entrance	Left	A	A
NB	Right	8.8	9.2

(1) Movement operates at free-flow conditions.

FIGURE 1

Site Location Map

HICKMAN ROAD RESIDENTIAL

SUSSEX COUNTY, DE

Bowman

BGARRISON - 02/13/2026 - V:\314635 - Foxlane Homes\314635-01-001 (TRN) - Hickman Road - Millsboro DE\Engineering\Traffic\Graphics\Figure 1.dwg

FIGURE 2

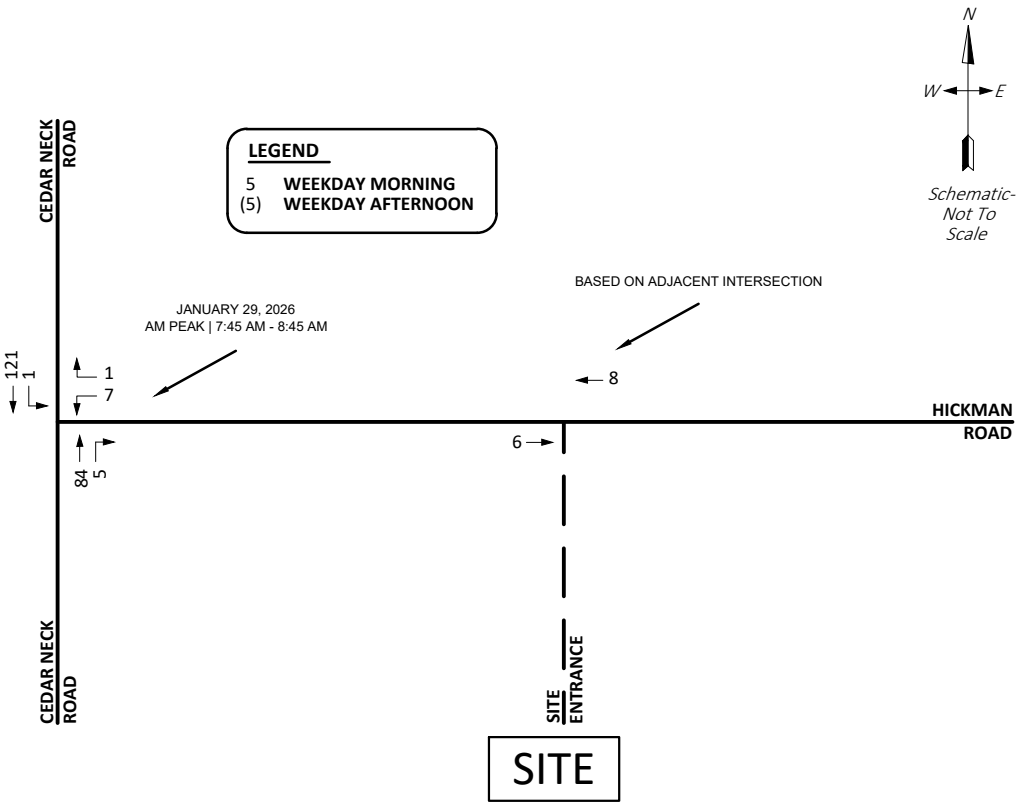
Site Plan

HICKMAN ROAD RESIDENTIAL

SUSSEX COUNTY, DE

Bowman

BGARRISON - 02/13/2026 - V:\314635 - Foxlane Homes\314635-01-001 (TRN) - Hickman Road - Millsboro DE\Engineering\Traffic\Graphics\Figure 2.dwg



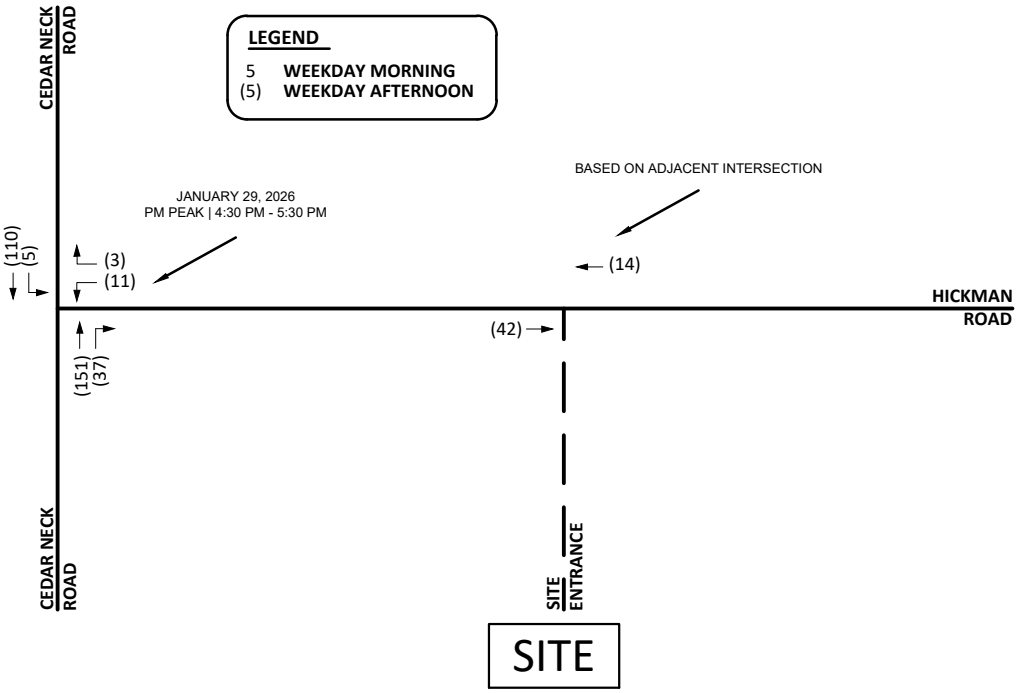


FIGURE 3

Raw Weekday Peak Hour Traffic Volumes

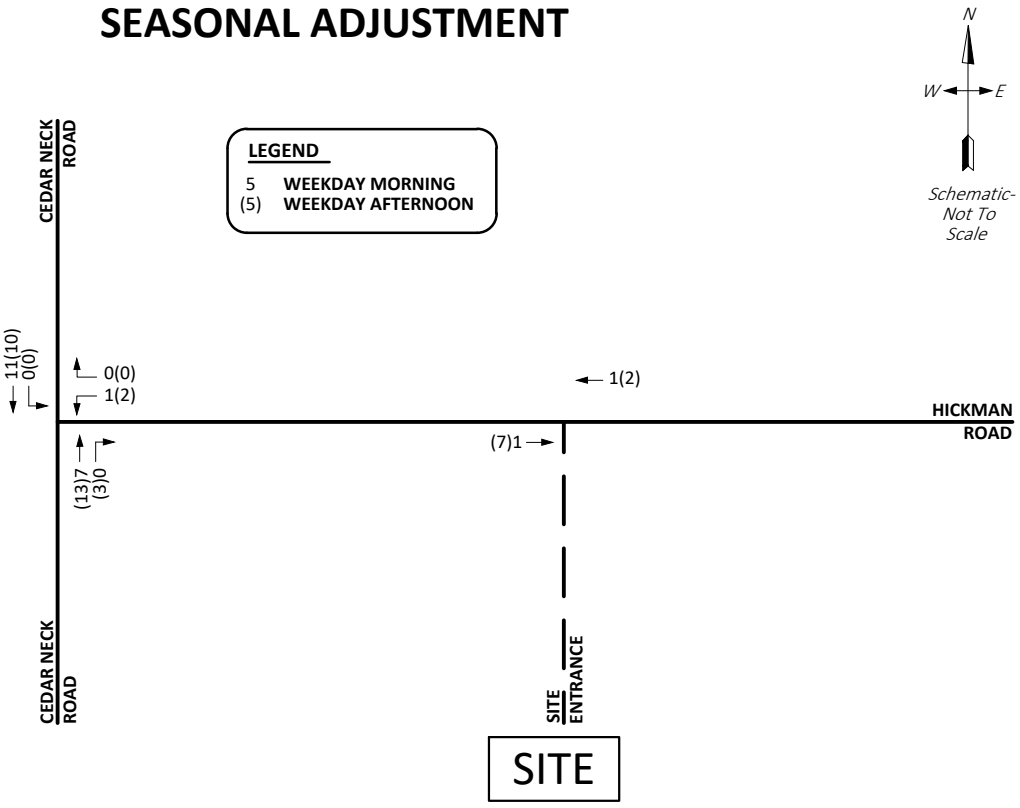
HICKMAN ROAD RESIDENTIAL

SUSSEX COUNTY, DE

Bowman

BGARRISON - 02/13/2026 - V:\314635 - Foxlane Homes\314635-01-001 (TRN) - Hickman Road - Millsboro DE\Engineering\Traffic\Graphics\Figure 3.dwg

SEASONAL ADJUSTMENT



ADJUSTED EXISTING

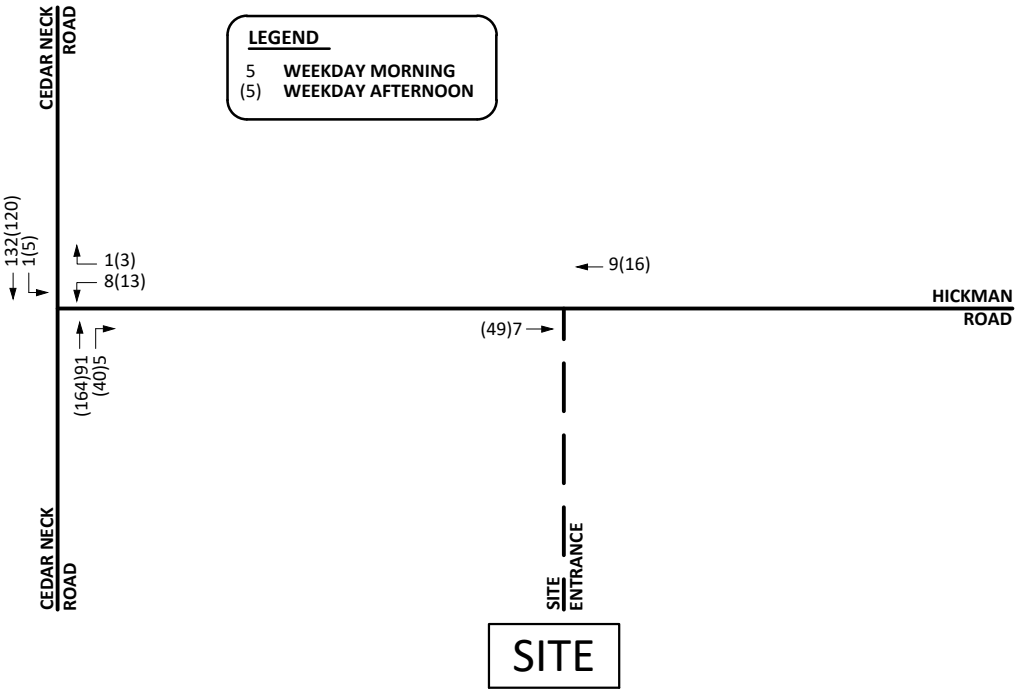


FIGURE 4

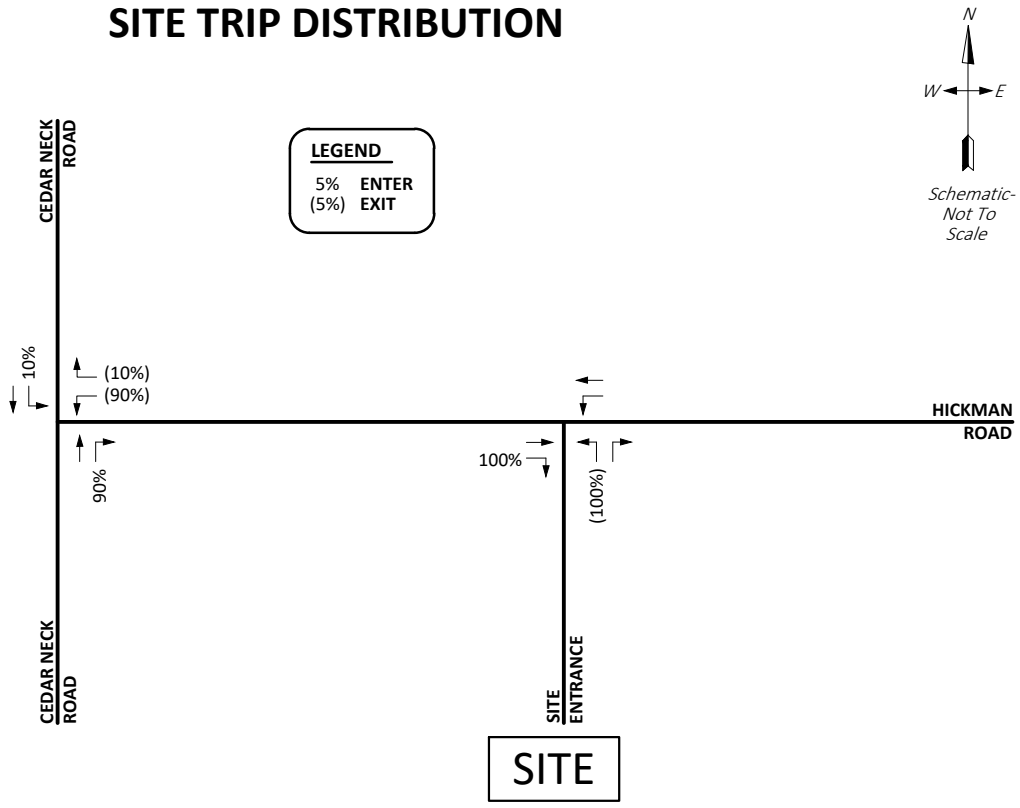
Adjusted Weekday Peak Hour Traffic Volumes

HICKMAN ROAD RESIDENTIAL

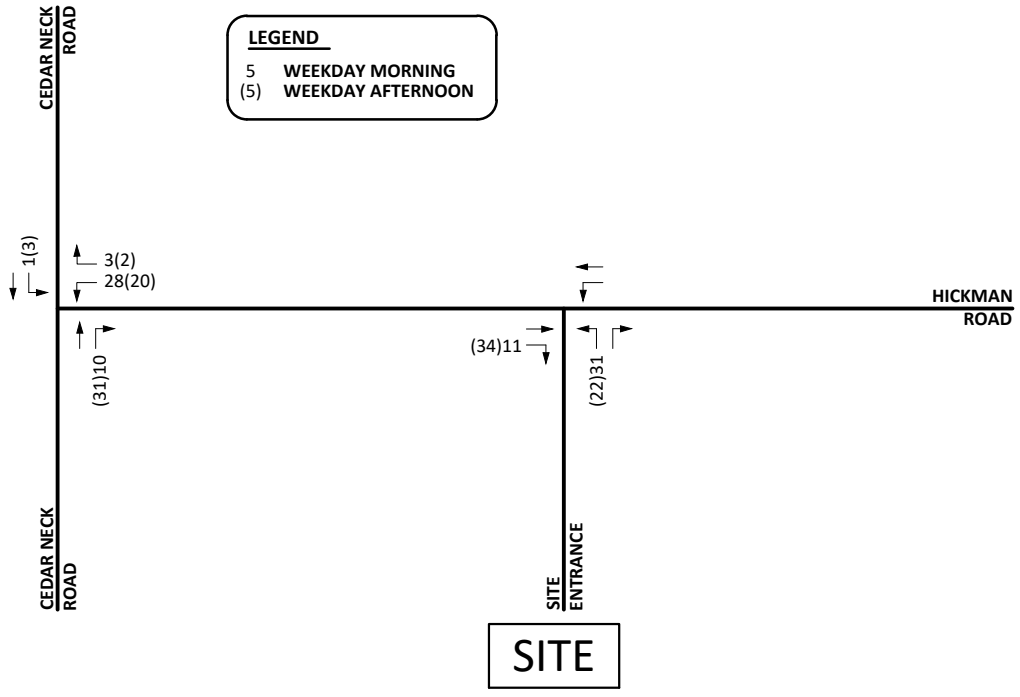
SUSSEX COUNTY, DE

Bowman

SITE TRIP DISTRIBUTION



SITE TRIP ASSIGNMENT



	AM	(PM)
IN	11	(34)
OUT	31	(22)

FIGURE 5

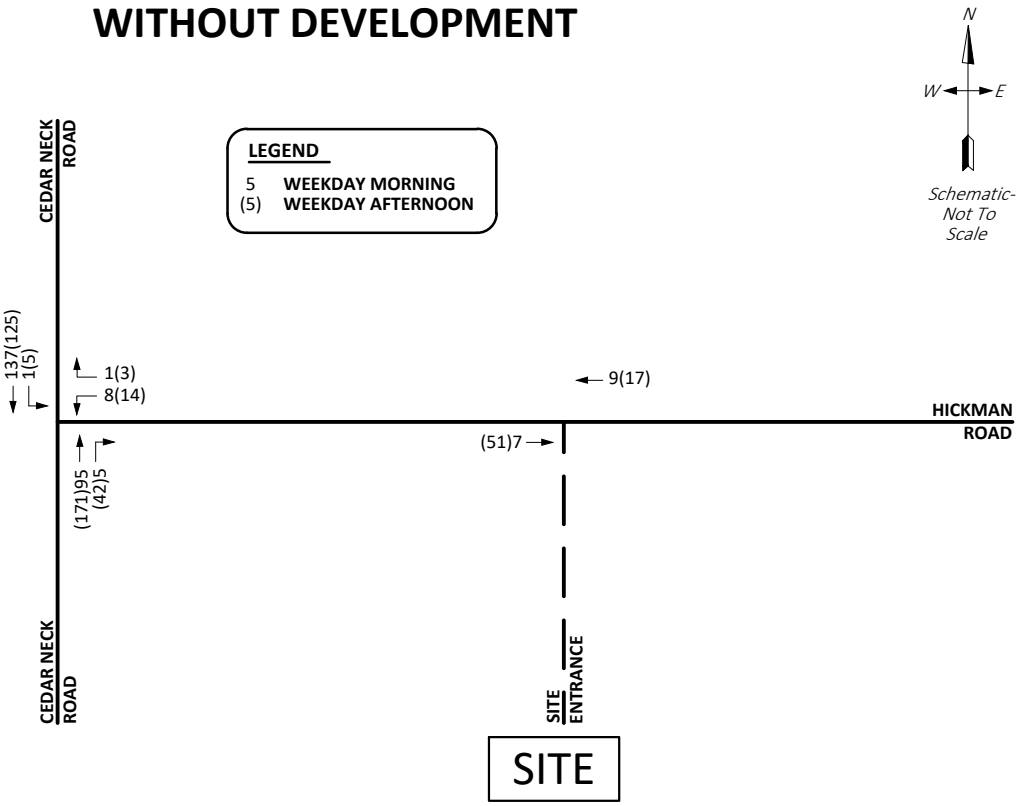
Site Trip Distribution and Assignment

HICKMAN ROAD RESIDENTIAL

SUSSEX COUNTY, DE

Bowman

WITHOUT DEVELOPMENT



WITH DEVELOPMENT

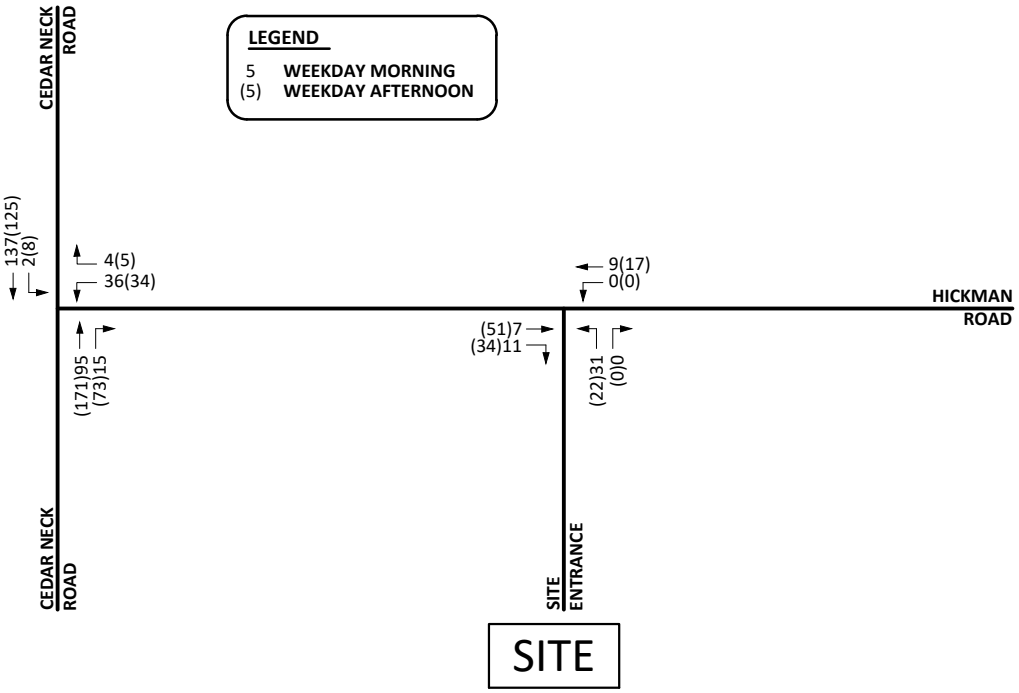


FIGURE 6

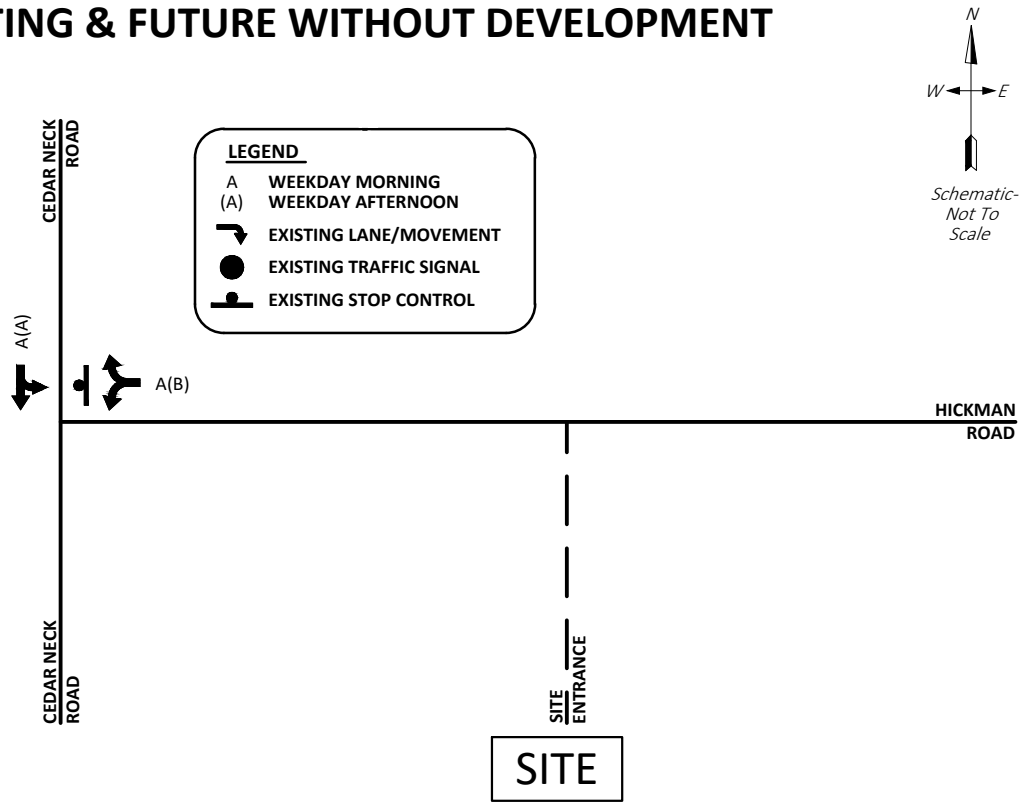
Future Weekday Peak Hour Traffic Volumes

HICKMAN ROAD RESIDENTIAL

SUSSEX COUNTY, DE

Bowman

EXISTING & FUTURE WITHOUT DEVELOPMENT



FUTURE WITH DEVELOPMENT

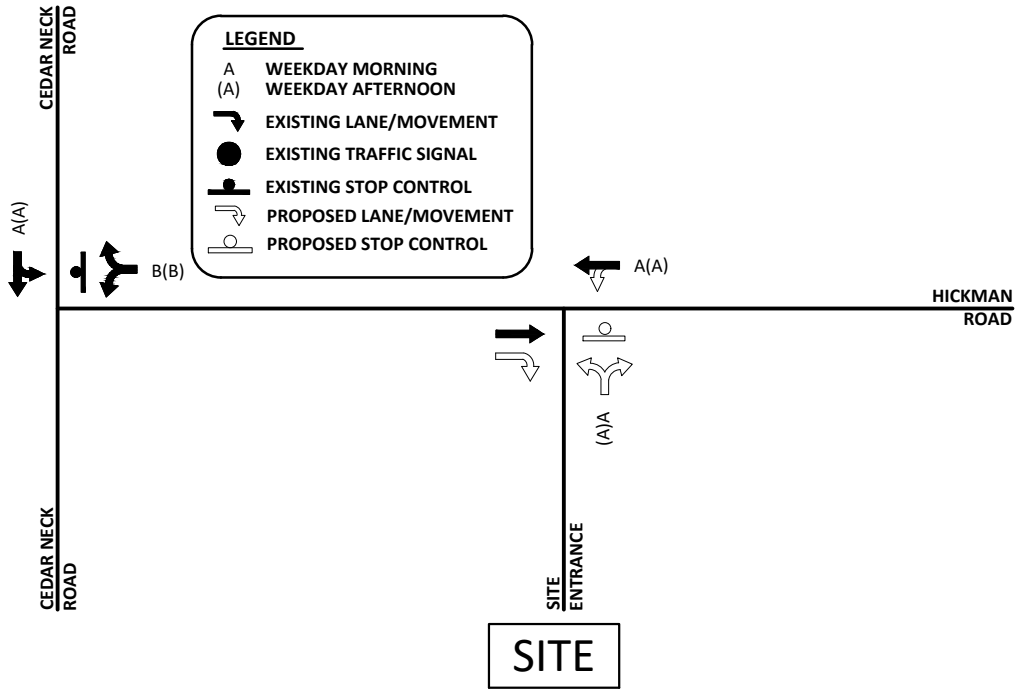


FIGURE 7

Existing and Future Weekday Peak Hour Levels-of-Service

HICKMAN ROAD RESIDENTIAL

SUSSEX COUNTY, DE

Bowman

BGARRISON - 02/13/2026 - V:\314635 - Foxlane Homes\314635-01-001 (TRN) - Hickman Road - Millsboro DE\Engineering\Traffic\Graphics\Figure 7.dwg

ATTACHMENT 1
TRAFFIC COUNTS

TRI-STATE TRAFFIC DATA
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Tri-State Traffic Data, Inc

Delmont, PA, Pennsylvania, United States 15626
610-517-0990
Serving Transportiation Professionals Since 1995

Ocean View, Sussex County, DE
Cedar Neck Rd & Hickman Rd
Thursday, January 29, 2026
Location: 38.564645, -75.081225

Count Name: Cedar Neck Rd & Hickman Rd
Site Code:
Start Date: 01/29/2026
Page No: 1

Turning Movement Data

Start Time	Hickman Rd Westbound					Cedar Neck Rd Northbound					Cedar Neck Rd Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	9	0	0	0	9	0	20	0	0	20	29
7:15 AM	1	0	0	0	1	4	1	0	0	5	0	14	0	0	14	20
7:30 AM	2	1	0	0	3	19	2	0	0	21	0	19	0	0	19	43
7:45 AM	4	1	0	0	5	20	1	0	0	21	0	30	0	0	30	56
Hourly Total	7	2	0	0	9	52	4	0	0	56	0	83	0	0	83	148
8:00 AM	0	0	0	0	0	18	2	0	0	20	0	34	0	0	34	54
8:15 AM	0	0	0	0	0	26	0	0	0	26	1	22	0	0	23	49
8:30 AM	3	0	0	0	3	20	2	0	0	22	0	35	0	0	35	60
8:45 AM	0	0	0	0	0	23	0	0	0	23	0	24	0	0	24	47
Hourly Total	3	0	0	0	3	87	4	0	0	91	1	115	0	0	116	210
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	3	2	0	0	5	29	2	0	0	31	1	27	0	0	28	64
4:15 PM	0	0	0	0	0	35	3	0	0	38	0	26	0	0	26	64
4:30 PM	0	1	0	0	1	30	9	0	0	39	3	33	0	0	36	76
4:45 PM	2	2	0	0	4	42	8	0	0	50	1	29	0	0	30	84
Hourly Total	5	5	0	0	10	136	22	0	0	158	5	115	0	0	120	288
5:00 PM	3	0	0	0	3	33	10	0	0	43	1	23	0	0	24	70
5:15 PM	6	0	0	0	6	46	10	0	0	56	0	25	0	0	25	87
5:30 PM	3	0	0	0	3	36	7	0	0	43	0	22	0	0	22	68
5:45 PM	4	0	0	0	4	35	5	0	0	40	1	14	0	0	15	59
Hourly Total	16	0	0	0	16	150	32	0	0	182	2	84	0	0	86	284
Grand Total	31	7	0	0	38	425	62	0	0	487	8	397	0	0	405	930
Approach %	81.6	18.4	0.0	-	-	87.3	12.7	0.0	-	-	2.0	98.0	0.0	-	-	-
Total %	3.3	0.8	0.0	-	4.1	45.7	6.7	0.0	-	52.4	0.9	42.7	0.0	-	43.5	-
Lights	31	5	0	-	36	416	60	0	-	476	8	387	0	-	395	907
% Lights	100.0	71.4	-	-	94.7	97.9	96.8	-	-	97.7	100.0	97.5	-	-	97.5	97.5
Buses	0	2	0	-	2	4	2	0	-	6	0	6	0	-	6	14
% Buses	0.0	28.6	-	-	5.3	0.9	3.2	-	-	1.2	0.0	1.5	-	-	1.5	1.5
Trucks	0	0	0	-	0	5	0	0	-	5	0	4	0	-	4	9
% Trucks	0.0	0.0	-	-	0.0	1.2	0.0	-	-	1.0	0.0	1.0	-	-	1.0	1.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Ocean View, Sussex County, DE
Cedar Neck Rd & Hickman Rd
Thursday, January 29, 2026
Location: 38.564645, -75.081225

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Count Name: Cedar Neck Rd & Hickman Rd
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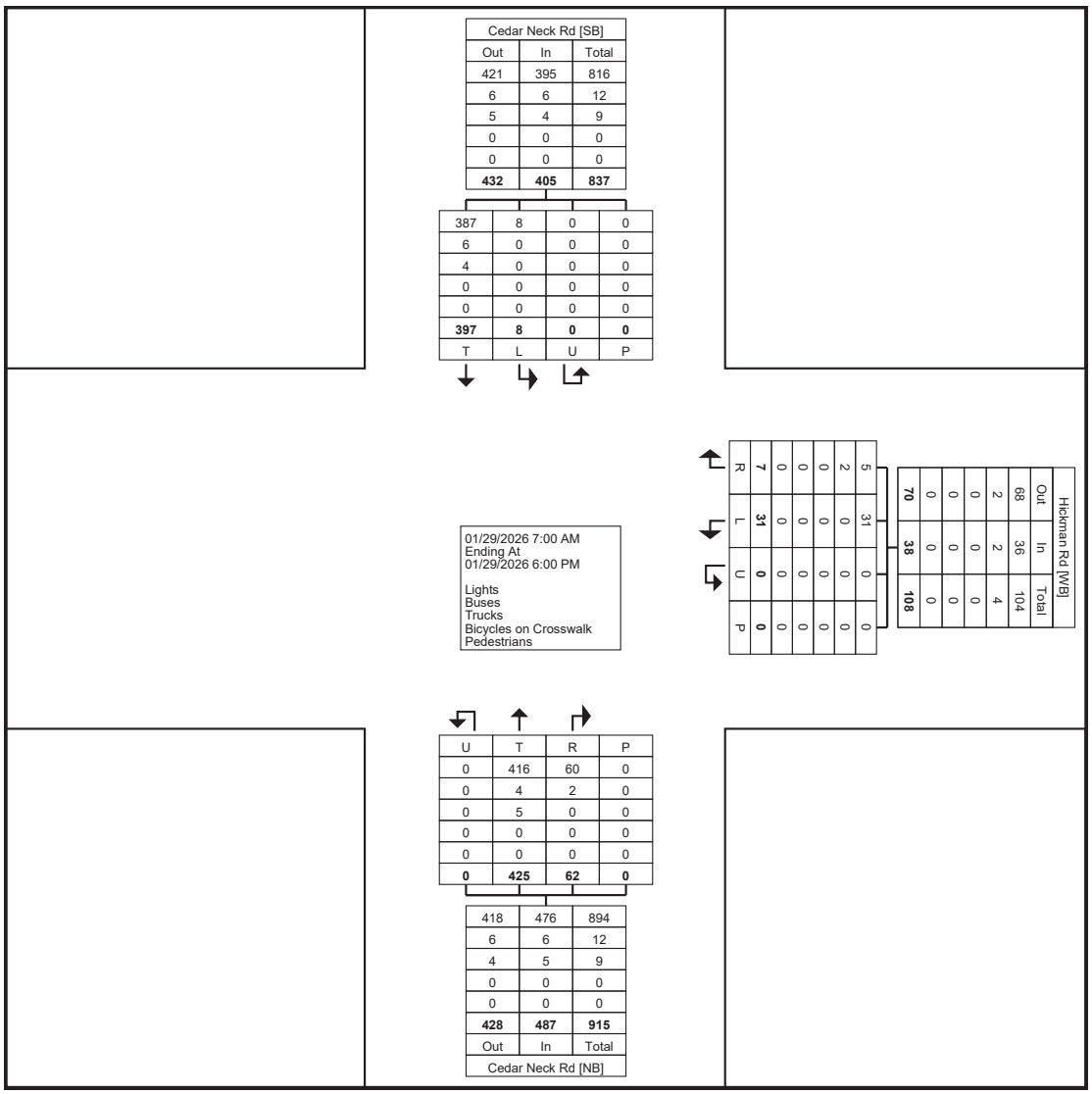
Start Date: 01/29/2026
Page No: 2



Turning Movement Data Plot

Ocean View, Sussex County, DE
Cedar Neck Rd & Hickman Rd
Thursday, January 29, 2026
Location: 38.564645, -75.081225

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Delmont, PA, Pennsylvania, United States 15626
610-517-0990
Serving Transportiation Professionals Since 1995

Count Name: Cedar Neck Rd & Hickman Rd
Site Code:
Start Date: 01/29/2026
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

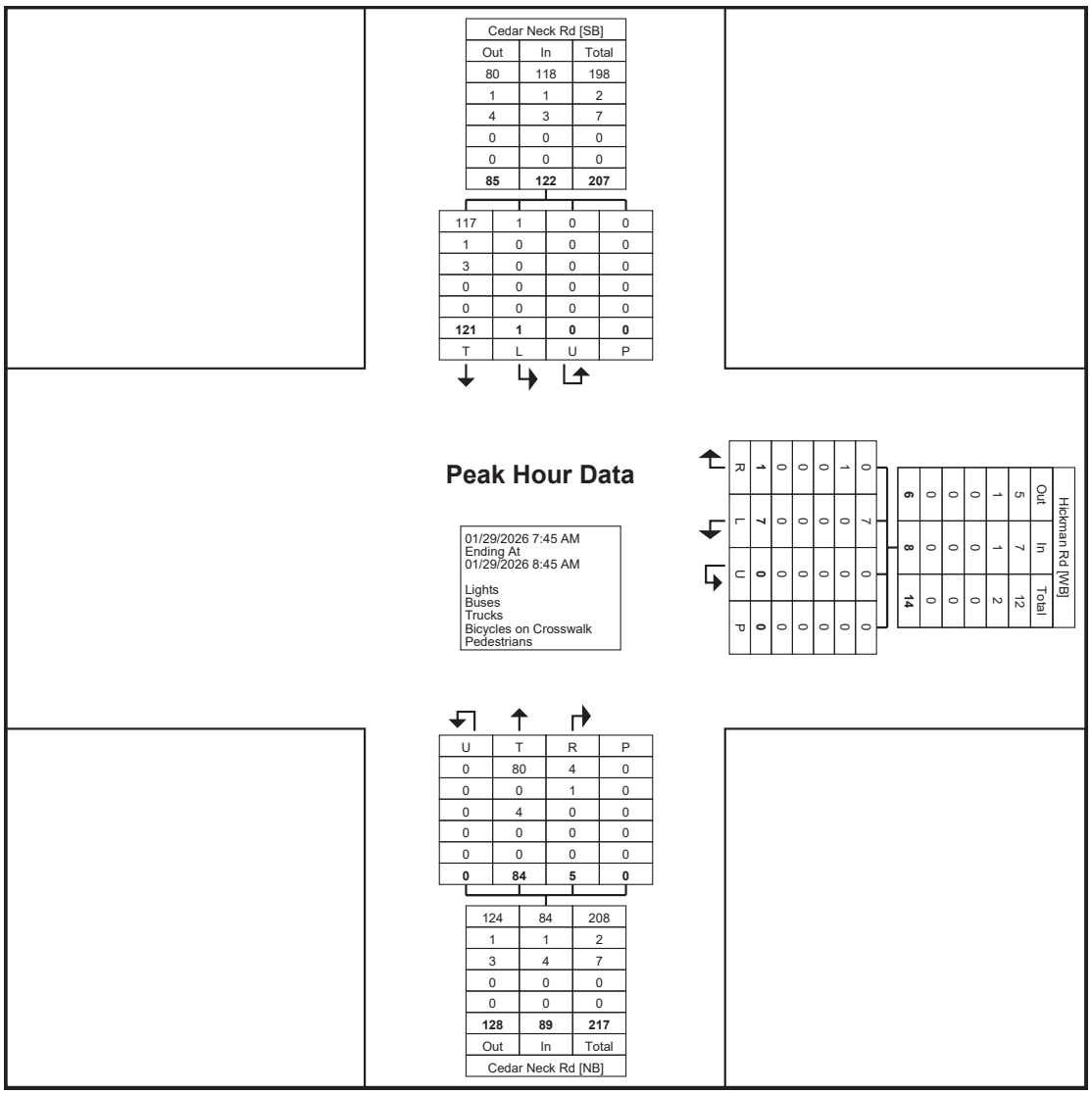
Start Time	Hickman Rd Westbound					Cedar Neck Rd Northbound					Cedar Neck Rd Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:45 AM	4	1	0	0	5	20	1	0	0	21	0	30	0	0	30	56
8:00 AM	0	0	0	0	0	18	2	0	0	20	0	34	0	0	34	54
8:15 AM	0	0	0	0	0	26	0	0	0	26	1	22	0	0	23	49
8:30 AM	3	0	0	0	3	20	2	0	0	22	0	35	0	0	35	60
Total	7	1	0	0	8	84	5	0	0	89	1	121	0	0	122	219
Approach %	87.5	12.5	0.0	-	-	94.4	5.6	0.0	-	-	0.8	99.2	0.0	-	-	-
Total %	3.2	0.5	0.0	-	3.7	38.4	2.3	0.0	-	40.6	0.5	55.3	0.0	-	55.7	-
PHF	0.438	0.250	0.000	-	0.400	0.808	0.625	0.000	-	0.856	0.250	0.864	0.000	-	0.871	0.913
Lights	7	0	0	-	7	80	4	0	-	84	1	117	0	-	118	209
% Lights	100.0	0.0	-	-	87.5	95.2	80.0	-	-	94.4	100.0	96.7	-	-	96.7	95.4
Buses	0	1	0	-	1	0	1	0	-	1	0	1	0	-	1	3
% Buses	0.0	100.0	-	-	12.5	0.0	20.0	-	-	1.1	0.0	0.8	-	-	0.8	1.4
Trucks	0	0	0	-	0	4	0	0	-	4	0	3	0	-	3	7
% Trucks	0.0	0.0	-	-	0.0	4.8	0.0	-	-	4.5	0.0	2.5	-	-	2.5	3.2
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Ocean View, Sussex County, DE
Cedar Neck Rd & Hickman Rd
Thursday, January 29, 2026
Location: 38.564645, -75.081225

www.TSTData.com
Tri-State Traffic Data, Inc

Delmont, PA, Pennsylvania, United States 15626
610-517-0990
Serving Transportiation Professionals Since 1995

Count Name: Cedar Neck Rd & Hickman Rd
Site Code:
Start Date: 01/29/2026
Page No: 4



Turning Movement Peak Hour Data Plot (7:45 AM)

Ocean View, Sussex County, DE
Cedar Neck Rd & Hickman Rd
Thursday, January 29, 2026
Location: 38.564645, -75.081225

www.TSTData.com
Tri-State Traffic Data, Inc

Delmont, PA, Pennsylvania, United States 15626
610-517-0990
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Count Name: Cedar Neck Rd & Hickman Rd
Site Code:
Start Date: 01/29/2026
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Hickman Rd Westbound					Cedar Neck Rd Northbound					Cedar Neck Rd Southbound					
	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
4:30 PM	0	1	0	0	1	30	9	0	0	39	3	33	0	0	36	76
4:45 PM	2	2	0	0	4	42	8	0	0	50	1	29	0	0	30	84
5:00 PM	3	0	0	0	3	33	10	0	0	43	1	23	0	0	24	70
5:15 PM	6	0	0	0	6	46	10	0	0	56	0	25	0	0	25	87
Total	11	3	0	0	14	151	37	0	0	188	5	110	0	0	115	317
Approach %	78.6	21.4	0.0	-	-	80.3	19.7	0.0	-	-	4.3	95.7	0.0	-	-	-
Total %	3.5	0.9	0.0	-	4.4	47.6	11.7	0.0	-	59.3	1.6	34.7	0.0	-	36.3	-
PHF	0.458	0.375	0.000	-	0.583	0.821	0.925	0.000	-	0.839	0.417	0.833	0.000	-	0.799	0.911
Lights	11	3	0	-	14	150	37	0	-	187	5	108	0	-	113	314
% Lights	100.0	100.0	-	-	100.0	99.3	100.0	-	-	99.5	100.0	98.2	-	-	98.3	99.1
Buses	0	0	0	-	0	1	0	0	-	1	0	1	0	-	1	2
% Buses	0.0	0.0	-	-	0.0	0.7	0.0	-	-	0.5	0.0	0.9	-	-	0.9	0.6
Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Trucks	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	0.9	-	-	0.9	0.3
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Ocean View, Sussex County, DE
Cedar Neck Rd & Hickman Rd
Thursday, January 29, 2026
Location: 38.564645, -75.081225

www.TSTData.com
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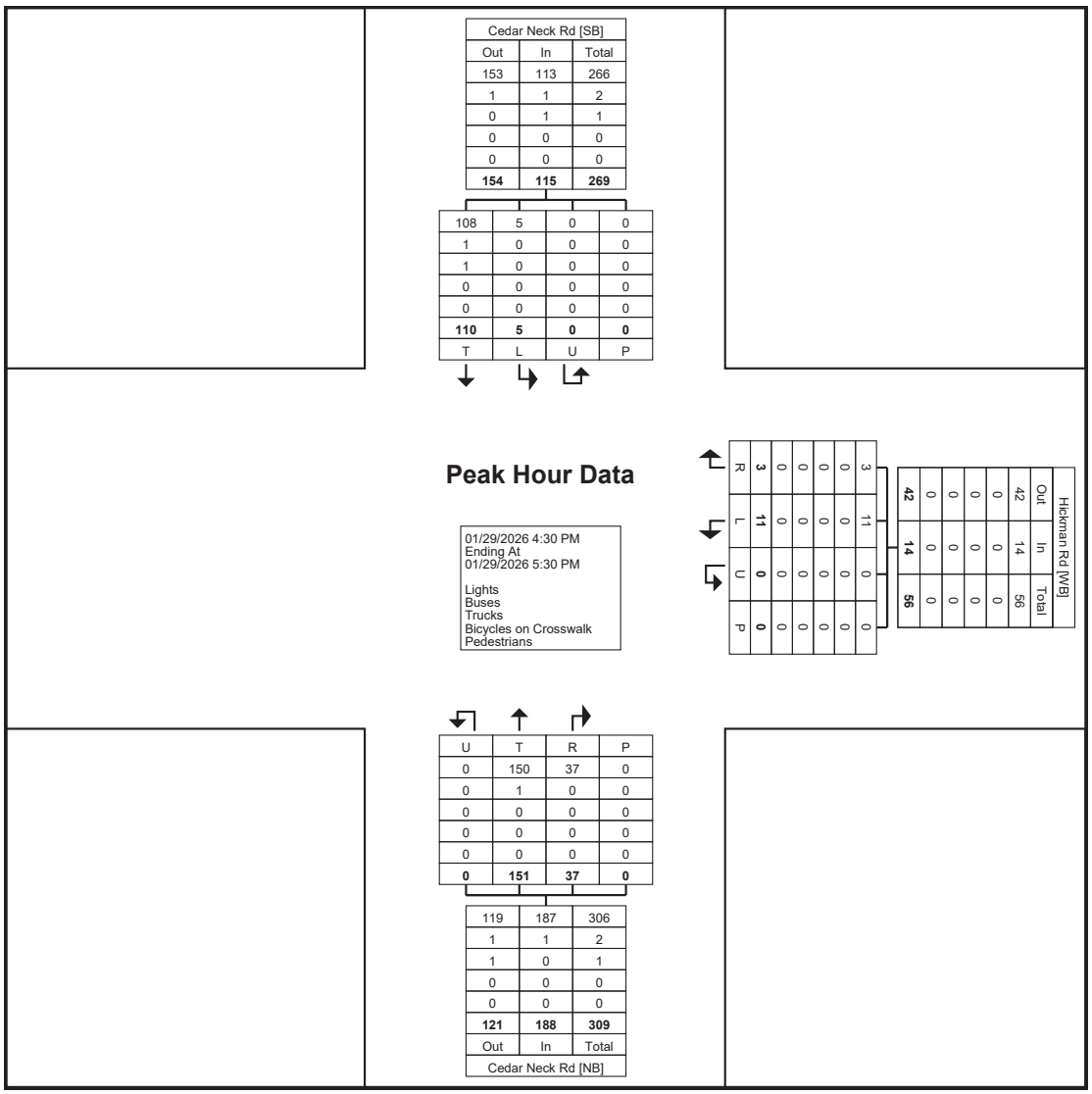
610-517-0990
Serving Transportation Professionals Since 1995

Count Name: Cedar Neck Rd & Hickman Rd
Site Code:
Start Date: 01/29/2026
Page No: 6



Turning Movement Peak Hour Data Plot (4:30 PM)

ATTACHMENT 2
COMMITTED DEVELOPMENT INFORMATION

Braden Garrison

From: Lauren Cecchine <lauren.Cecchine@sussexcountyde.gov>
Sent: Thursday, February 12, 2026 4:19 PM
To: Braden Garrison
Subject: [EXTERNAL] RE: RFI - Developments In the Vicinity of Hickman Road Baltimore Hundred

Good Afternoon, Braden,

My sincerest apologies for the delay in responding!

I would agree with your assessment. The following are noteworthy projects you may wish to include that have been approved in that area over the past **5 years** or so:

- **Coastal Corner (C/U 2130) – Multifamily - 20 residential units**
- **Inland Bays Community (C/U 2259) – Multifamily - 30 residential units**
- **Marlin Chase (F.K.A. Marlin Run) (C/U 2207) – Multifamily – 75 residential units**

I hope that this is of assistance! Please let me know if you have any further questions and as always, it would be my pleasure to assist you.

Best Regards,

-Lauren

Lauren Cecchine **[Chi-kee-nee], AICP**

Planning & Zoning Manager
Department of Planning and Zoning
P.O. Box 417
Georgetown, DE 19947
Tel: (302) 855-7878
8:30AM – 4:30PM

SUSSEX COUNTY
DELAWARE

PLEASE NOTE: As of July 1st, 2024, the Department of Planning and Zoning has updated its list of Service Fees. Please find the Department's Listing of Service Fees here: https://sussexcountyde.gov/sites/default/files/PDFs/Planning_and_Zoning_Fees.pdf

The County has overhauled its Land Use Docket. For information on pending Land Use Applications in the County, please visit the Application Docket: Sussex - Land Use Application Docket

For more information on the County's latest Comprehensive Plan, please visit the following location:
2018 Sussex County Comprehensive Plan

From: Braden Garrison <bgarrison@bowman.com>
Sent: Tuesday, February 10, 2026 5:21 PM
To: Lauren Cecchine <lauren.Cecchine@sussexcountyde.gov>
Subject: RE: RFI - Developments In the Vicinity of Hickman Road Baltimore Hundred

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

Lauren,

Wanted to check-in if you'd be able to provide feedback on the below.

Thanks,

BRADEN GARRISON, PE, PTOE
Project Manager, Transportation | **BOWMAN**
O: (610) 594-9995 | D: (267) 291-0425
bgarrison@bowman.com | bowman.com

From: Braden Garrison
Sent: Tuesday, February 3, 2026 3:18 PM
To: Lauren Cecchine <lauren.cecchine@sussexcountyde.gov>
Subject: RFI - Developments In the Vicinity of Hickman Road Baltimore Hundred

Lauren,

We are working on a traffic evaluation outside of the DelDOT TIS process for the proposed residential subdivision along Hickman Road to the east of Cedar Neck Road in Baltimore Hundred (CU 2548). Typically DelDOT would look at developments within a two-mile radius of the subject parcel. However, given the waterways in the area we would expect only developments along the Cedar Neck Road corridor to the north of DE 26 to add traffic to the vicinity of Hickman Road. Based on a review of the County's Land Use Application Docket I did not see any large developments which should be considered in our study but wanted to confirm with the County on that assessment.

If there are any that we should include, would you be able to provide the location and number/type of units for any projects?

Thanks for the assistance,

BRADEN GARRISON, PE, PTOE
Project Manager, Transportation | **BOWMAN**
835 Springdale Dr, Suite 200, Exton, PA 19341
O: (610) 594-9995 | D: (267) 291-0425
bgarrison@bowman.com | bowman.com

ATTACHMENT 3
TRAFFIC VOLUME PROJECTIONS

Cedar Neck Road & Access / Hickman Road
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Access			Hickman Road			Cedar Neck Road			Cedar Neck Road		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	0	0	7	0	1	0	84	5	1	121	0
Seasonal Adjustment Factor		1.163	1.163	1.163	1.163	1.163	1.163	1.088	1.088	1.088	1.088	1.088	1.088
Seasonal Adjustment		0	0	0	1	0	0	0	7	0	0	11	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**0**	**0**	**8**	**0**	**1**	**0**	**91**	**5**	**1**	**132**	**0**
Background Growth to 2030	4.06%	0	0	0	0	0	0	0	4	0	0	5	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2030 WITHOUT DEVELOPMENT VOLUMES		**0**	**0**	**0**	**8**	**0**	**1**	**0**	**95**	**5**	**1**	**137**	**0**
Single-Family Detached Housing	DIST IN									90%	10%		
	DIST OUT				(90%)		(10%)						
	ASSIGN	0	0	0	28	0	3	0	0	10	1	0	0
Total New Site Trip Assignment		*0*	*0*	*0*	*28*	*0*	*3*	*0*	*0*	*10*	*1*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2030 WITH DEVELOPMENT VOLUMES		**0**	**0**	**0**	**36**	**0**	**4**	**0**	**95**	**15**	**2**	**137**	**0**

Cedar Neck Road & Access / Hickman Road
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Access			Hickman Road			Cedar Neck Road			Cedar Neck Road		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	0	0	11	0	3	0	151	37	5	110	0
Seasonal Adjustment Factor	1.000	1.163	1.163	1.163	1.163	1.163	1.163	1.088	1.088	1.088	1.088	1.088	1.088
Seasonal Adjustment		0	0	0	2	0	0	0	13	3	0	10	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**0**	**0**	**13**	**0**	**3**	**0**	**164**	**40**	**5**	**120**	**0**
Background Growth to 2030	4.06%	0	0	0	1	0	0	0	7	2	0	5	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2030 WITHOUT DEVELOPMENT VOLUMES		**0**	**0**	**0**	**14**	**0**	**3**	**0**	**171**	**42**	**5**	**125**	**0**
Single-Family Detached Housing	DIST IN									90%	10%		
	DIST OUT				(90%)		(10%)						
	ASSIGN	0	0	0	20	0	2	0	0	31	3	0	0
Total New Site Trip Assignment		*0*	*0*	*0*	*20*	*0*	*2*	*0*	*0*	*31*	*3*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2030 WITH DEVELOPMENT VOLUMES		**0**	**0**	**0**	**34**	**0**	**5**	**0**	**171**	**73**	**8**	**125**	**0**

Site Entrance & Hickman Road
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Hickman Road			Hickman Road			Site Entrance					
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	6	0	0	8	0	0	0	0	0	0	0
Seasonal Adjustment Factor		1.163	1.163	1.163	1.163	1.163	1.163	1.000	1.000	1.000	1.000	1.000	1.000
Seasonal Adjustment		0	1	0	0	1	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**7**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Background Growth to 2030	4.06%	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2030 WITHOUT DEVELOPMENT VOLUMES		**0**	**7**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Single-Family Detached Housing	DIST IN			100%									
	DIST OUT							(100%)					
	ASSIGN	0	0	11	0	0	0	31	0	0	0	0	0
Total New Site Trip Assignment		*0*	*0*	*11*	*0*	*0*	*0*	*31*	*0*	*0*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2030 WITH DEVELOPMENT VOLUMES		**0**	**7**	**11**	**0**	**9**	**0**	**31**	**0**	**0**	**0**	**0**	**0**

Site Entrance & Hickman Road
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Hickman Road			Hickman Road			Site Entrance					
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	42	0	0	14	0	0	0	0	0	0	0
Seasonal Adjustment Factor	1.000	1.163	1.163	1.163	1.163	1.163	1.163	1.000	1.000	1.000	1.000	1.000	1.000
Seasonal Adjustment		0	7	0	0	2	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**49**	**0**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Background Growth to 2030	4.06%	0	2	0	0	1	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2030 WITHOUT DEVELOPMENT VOLUMES		**0**	**51**	**0**	**0**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Single-Family Detached Housing	DIST IN			100%									
	DIST OUT							(100%)					
	ASSIGN	0	0	34	0	0	0	22	0	0	0	0	0
Total New Site Trip Assignment		*0*	*0*	*34*	*0*	*0*	*0*	*22*	*0*	*0*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2030 WITH DEVELOPMENT VOLUMES		**0**	**51**	**34**	**0**	**17**	**0**	**22**	**0**	**0**	**0**	**0**	**0**

ATTACHMENT 4
CAPACITY / LEVEL-OF-SERVICE ANALYSIS METHODOLOGY

CAPACITY/LEVEL-OF-SERVICE ANALYSIS METHODOLOGY

The detailed capacity/level-of-service analysis contained in this transportation impact study was performed in accordance with the standard techniques contained in the *Highway Capacity Manual 7th Edition*. By definition, capacity represents "the maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions." The level at which an intersection or a uniform section of a lane or roadway function can be expressed in terms of a level of service. Level of service (LOS) is defined as "a quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler's perspective and LOS F the worst."

Stop-Controlled Intersections

At unsignalized stop-controlled intersections, such as two-way stop-controlled (TWSC) or all-way stop-controlled (AWSC), a methodology for evaluating the relative functioning of these intersections is based upon the control delay. For these types of unsignalized intersections, the analysis of the control delay is based upon the following data:

- Number and configuration of lanes on each approach;
- Percentage of heavy vehicles on each approach;
- Demand flow rate for each entering vehicular movement and pedestrian crossing movement;
- Unique geometric factors such as, channelization aspects; two-way left-turn lanes, raised or striped median storage; approach grades, flared approaches on the minor street; and upstream signals within 0.25 miles.

At TWSC intersections, only drivers on the minor street approaches are required to stop before proceeding into the intersection and left-turning drivers from the major street are typically required to yield to on-coming major street through or right-turning traffic if present, but are not required to stop in the absence of on-coming traffic. The capacity at stop-controlled legs is based primarily on three factors: the distribution of gaps in the traffic stream on the major road, driver judgment in selecting the gaps, and the follow-up headways required by each driver in a queue.

At AWSC intersections, every vehicle is required to stop at the intersection before proceeding, and as a result, the decision to proceed is a function of the traffic conditions on the other approaches. Each driver proceeds only after determining that no vehicles are currently in the intersection and that it is the driver's turn to proceed. Capacity at an AWSC intersection is described by the saturation headway or time between departures of successive vehicles on a given approach for a particular case assuming a continuous queue; departure headway or the average time between departures of successive vehicles on a given approach accounting for the probability of each possible case; and service time or the average time sent by a vehicle in first position waiting to depart.

At both TWSC and AWSC intersections, the level of service is based upon the control delay, as well as the corresponding volume-to-capacity ratio for each movement/lane group. For TWSC intersections, the level of service is not calculated for major-street approaches or for the intersection as a whole; however, the intersection-wide level of service is calculated for AWSC intersections. The following table provides a summary of the relationship between the level of service, control delay, and volume-to-capacity ratio for TWSC and AWSC intersections.

LOS by Control Delay | Stop Controlled Intersections (1)

Control Delay (Sec/Veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10 – 15	B	F
> 15 – 25	C	F
> 25 – 35	D	F
> 35 – 50	E	F
> 50	F	F

(1) Based on Exhibits 20-2 (TWSC) and 21-8 (AWSC) of the *Highway Capacity Manual, 7th Edition*.

Signalized Intersections

At three or four-legged signalized intersections, a methodology for evaluating the capacity and quality of service provided to road users traveling through the signalized intersection. For signalized intersections, the level of service can be characterized for the entire intersection, each approach, and each lane group. The level of service is based upon the control delay and volume-to-capacity ratio. The delay quantifies the increase in travel time due to the traffic signal control and is a surrogate measure of driver discomfort and fuel consumption, while the volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group. Input data in determining the delay and volume-to-capacity ratio include but are not limited to:

- Demand flow rate for each entering vehicular movement and pedestrian crossing movement, including right-turn on red volumes and percent of heavy vehicles;
- Initial queue for each lane group;
- Number and configuration of lanes on each approach;
- Type of signal control and phase sequence;
- Allocation of minimum/maximum green times and clearance intervals (Yellow plus All Red phases); and
- Phase recall.

At signalized intersections, the level of service is based upon the control delay, as well as the corresponding volume-to-capacity ratio for each movement/lane group. The following table provides a summary of the relationship between the level of service, control delay, and volume-to-capacity ratio for signalized intersections.

LOS by Control Delay | Signalized Intersections (1)

Control Delay (Sec/Veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10 – 20	B	F
> 20 – 35	C	F
> 35 – 55	D	F
> 55 – 80	E	F
> 80	F	F

(1) Based on Exhibits 19-8 of the *Highway Capacity Manual, 7th Edition*.

ATTACHMENT 5
CAPACITY / LEVEL-OF-SERVICE ANALYSIS WORKSHEETS

HCS Two-Way Stop-Control Report

EXISTING

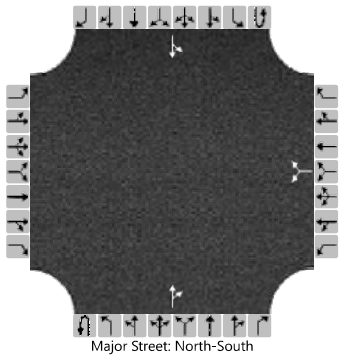
General Information

Analyst	BGG
Agency/Co.	Bowman Consulting Group
Date Performed	2/13/2026
Analysis Year	2026
Time Analyzed	EX AM
Intersection Orientation	North-South
Project Description	Hickman Road Residential

Site Information

Intersection	Cedar Neck Road and Hickman Road
Jurisdiction	Sussex County
East/West Street	Hickman Road
North/South Street	Cedar Neck Road
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						8		1			91	5		1	132	
Percent Heavy Vehicles (%)						0		100						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		7.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		4.20						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							10							1		
Capacity, c (veh/h)							742							1498		
v/c Ratio							0.01							0.00		
95% Queue Length, Q_{95} (veh)							0.0							0.0		
95% Queue Length, Q_{95} (ft)							0.0							0.0		
Control Delay (s/veh)							9.9							7.4	0.0	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)						9.9								0.1		
Approach LOS						A								A		

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HCS Two-Way Stop-Control Report

EXISTING

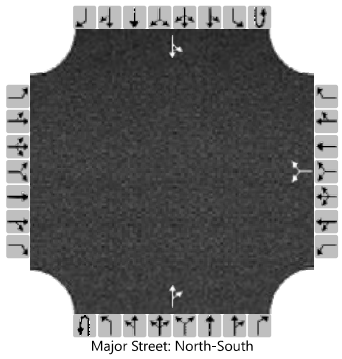
General Information

Analyst	BGG
Agency/Co.	Bowman Consulting Group
Date Performed	2/13/2026
Analysis Year	2026
Time Analyzed	EX PM
Intersection Orientation	North-South
Project Description	Hickman Road Residential

Site Information

Intersection	Cedar Neck Road and Hickman Road
Jurisdiction	Sussex County
East/West Street	Hickman Road
North/South Street	Cedar Neck Road
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						13		3			164	40		5	120	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							18							5		
Capacity, c (veh/h)							682							1356		
v/c Ratio							0.03							0.00		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
95% Queue Length, Q_{95} (ft)							2.5							0.0		
Control Delay (s/veh)							10.4							7.7	0.0	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						10.4								0.3		
Approach LOS						B								A		

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HCS Two-Way Stop-Control Report

2030 WITHOUT DEVELOPMENT

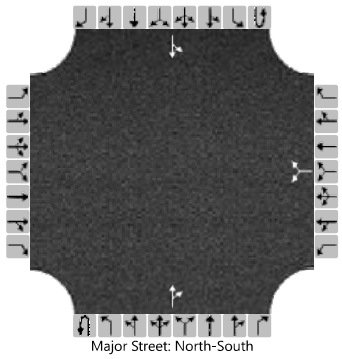
General Information

Analyst	BGG
Agency/Co.	Bowman Consulting Group
Date Performed	2/13/2026
Analysis Year	2030
Time Analyzed	WO AM
Intersection Orientation	North-South
Project Description	Hickman Road Residential

Site Information

Intersection	Cedar Neck Road and Hickman Road
Jurisdiction	Sussex County
East/West Street	Hickman Road
North/South Street	Cedar Neck Road
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						8		1			95	5		1	137	
Percent Heavy Vehicles (%)						0		100						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		7.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		4.20						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							10							1		
Capacity, c (veh/h)							733							1493		
v/c Ratio							0.01							0.00		
95% Queue Length, Q_{95} (veh)							0.0							0.0		
95% Queue Length, Q_{95} (ft)							0.0							0.0		
Control Delay (s/veh)							10.0							7.4	0.0	
Level of Service (LOS)							A							A	A	
Approach Delay (s/veh)					10.0								0.1			
Approach LOS					A								A			

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HCS Two-Way Stop-Control Report

2030 WITHOUT DEVELOPMENT

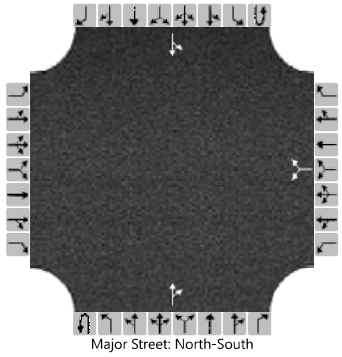
General Information

Analyst	BGG
Agency/Co.	Bowman Consulting Group
Date Performed	2/13/2026
Analysis Year	2030
Time Analyzed	WO PM
Intersection Orientation	North-South
Project Description	Hickman Road Residential

Site Information

Intersection	Cedar Neck Road and Hickman Road
Jurisdiction	Sussex County
East/West Street	Hickman Road
North/South Street	Cedar Neck Road
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						14		3			171	42		5	125	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							19							5		
Capacity, c (veh/h)							668							1345		
v/c Ratio							0.03							0.00		
95% Queue Length, Q_{95} (veh)							0.1							0.0		
95% Queue Length, Q_{95} (ft)							2.5							0.0		
Control Delay (s/veh)							10.5							7.7	0.0	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						10.5								0.3		
Approach LOS						B								A		

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HCS Two-Way Stop-Control Report

2030 WITH DEVELOPMENT

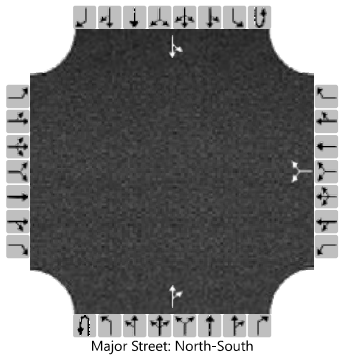
General Information

Analyst	BGG
Agency/Co.	Bowman Consulting Group
Date Performed	2/13/2026
Analysis Year	2030
Time Analyzed	W AM
Intersection Orientation	North-South
Project Description	Hickman Road Residential

Site Information

Intersection	Cedar Neck Road and Hickman Road
Jurisdiction	Sussex County
East/West Street	Hickman Road
North/South Street	Cedar Neck Road
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						36		4			95	15		2	137	
Percent Heavy Vehicles (%)						0		25						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.45						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.53						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							44							2		
Capacity, c (veh/h)							738							1479		
v/c Ratio							0.06							0.00		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
95% Queue Length, Q_{95} (ft)							5.1							0.0		
Control Delay (s/veh)							10.2							7.4	0.0	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						10.2								0.1		
Approach LOS						B								A		

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HCS Two-Way Stop-Control Report

2030 WITH DEVELOPMENT

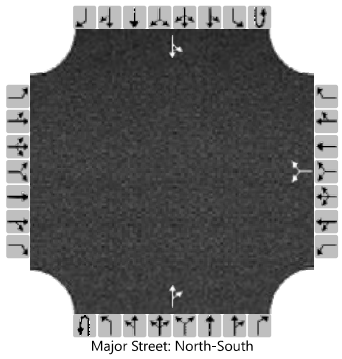
General Information

Analyst	BGG
Agency/Co.	Bowman Consulting Group
Date Performed	2/13/2026
Analysis Year	2030
Time Analyzed	W PM
Intersection Orientation	North-South
Project Description	Hickman Road Residential

Site Information

Intersection	Cedar Neck Road and Hickman Road
Jurisdiction	Sussex County
East/West Street	Hickman Road
North/South Street	Cedar Neck Road
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						34		5			171	73		8	125	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							43							9		
Capacity, c (veh/h)							639							1307		
v/c Ratio							0.07							0.01		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
95% Queue Length, Q_{95} (ft)							5.0							0.0		
Control Delay (s/veh)							11.0							7.8	0.1	
Level of Service (LOS)							B							A	A	
Approach Delay (s/veh)						11.0								0.5		
Approach LOS						B								A		

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HCS Two-Lane Highway Report

HICKMAN ROAD
2030 WITH DEVELOPMENT

Project Information			
Analyst	BGG	Date	2/16/2026
Agency	Bowman Consulting Group	Analysis Year	2030
Jurisdiction	Sussex County	Time Analyzed	WD AM
Project Description	Hickman Road Residential	Units	U.S. Customary

Segment 1

Vehicle Inputs			
Segment Type	Passing Constrained	Length, ft	2500
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	30	Access Point Density, pts/mi	4.3

Demand and Capacity			
Directional Demand Flow Rate, veh/h	50	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.80	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	27.0
Speed Slope Coefficient (m)	1.99284	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.38877	PF Power Coefficient (p)	0.62707
In Passing Lane Effective Length?	No	Follower Density, followers/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2500	-	-	27.0

Vehicle Results			
Average Speed, mi/h	27.0	Percent Followers, %	19.1
Segment Travel Time, minutes	1.05	Adj. Follower Density, followers/mi/ln	0.4
Vehicle LOS	A		

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HCS Two-Lane Highway Report

HICKMAN ROAD
2030 WITH DEVELOPMENT

Project Information			
Analyst	BGG	Date	2/16/2026
Agency	Bowman Consulting Group	Analysis Year	2030
Jurisdiction	Sussex County	Time Analyzed	WD PM
Project Description	Hickman Road Residential	Units	U.S. Customary

Segment 1

Vehicle Inputs			
Segment Type	Passing Constrained	Length, ft	2500
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	30	Access Point Density, pts/mi	4.3

Demand and Capacity			
Directional Demand Flow Rate, veh/h	106	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.80	Total Trucks, %	3.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	27.0
Speed Slope Coefficient (m)	1.99284	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.38877	PF Power Coefficient (p)	0.62707
In Passing Lane Effective Length?	No	Follower Density, followers/mi/ln	1.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2500	-	-	26.8

Vehicle Results			
Average Speed, mi/h	26.8	Percent Followers, %	28.9
Segment Travel Time, minutes	1.06	Adj. Follower Density, followers/mi/ln	1.1
Vehicle LOS	A		

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HCS Two-Way Stop-Control Report

2030 WITH DEVELOPMENT SENSITIVITY ANALYSIS

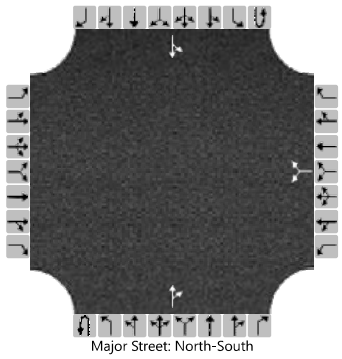
General Information

Analyst	BGG
Agency/Co.	Bowman Consulting Group
Date Performed	2/13/2026
Analysis Year	2030
Time Analyzed	W AM
Intersection Orientation	North-South
Project Description	Hickman Road Residential

Site Information

Intersection	Cedar Neck Road and Hickman Road
Jurisdiction	Sussex County
East/West Street	Hickman Road
North/South Street	Cedar Neck Road
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						36		4			380	15		2	548	
Percent Heavy Vehicles (%)						0		25						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.45						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.53						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							44							2		
Capacity, c (veh/h)							274							1136		
v/c Ratio							0.16							0.00		
95% Queue Length, Q_{95} (veh)							0.6							0.0		
95% Queue Length, Q_{95} (ft)							15.3							0.0		
Control Delay (s/veh)							20.6							8.2	0.0	
Level of Service (LOS)							C							A	A	
Approach Delay (s/veh)						20.6								0.1		
Approach LOS						C								A		

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HCS Two-Way Stop-Control Report

2030 WITH DEVELOPMENT SENSITIVITY ANALYSIS

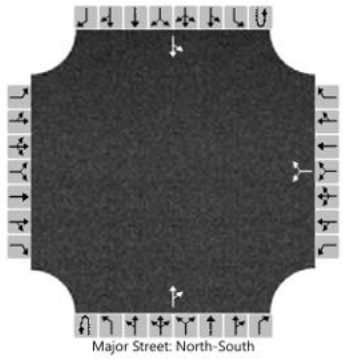
General Information

Analyst	BGG
Agency/Co.	Bowman Consulting Group
Date Performed	2/13/2026
Analysis Year	2030
Time Analyzed	W PM SENSITIVITY
Intersection Orientation	North-South
Project Description	Hickman Road Residential

Site Information

Intersection	Cedar Neck Road and Hickman Road
Jurisdiction	Sussex County
East/West Street	Hickman Road
North/South Street	Cedar Neck Road
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						34		5			684	73		8	500	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							43							9		
Capacity, c (veh/h)							176							809		
v/c Ratio							0.24							0.01		
95% Queue Length, Q_{95} (veh)							0.9							0.0		
95% Queue Length, Q_{95} (ft)							22.5							0.0		
Control Delay (s/veh)							31.9							9.5	0.1	
Level of Service (LOS)							D							A	A	
Approach Delay (s/veh)						31.9								0.3		
Approach LOS						D								A		

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Cemetery Study and Delineation
Rickards Family Cemetery (CRS S12549)
Baltimore Hundred, Sussex County, Delaware

February 2, 2024

Prepared for:
Foxlane Homes
28107 Beaver Dam Branch Road
Laurel, Delaware 19956

By: Edward Otter, Ph.D.
Submitted by Edward Otter, Inc.
1704 Camden Avenue
Salisbury, MD 21801

Abstract

Edward Otter, Inc. was contracted by Foxlane Homes to conduct a cemetery study and delineation before the development of Sussex County, Delaware Parcel 134-9.00-28. A cemetery is known to exist on the property and is recorded with Delaware CHRIS as Cultural Resource Survey (CRS) S12549. Delaware Title 7 Chapter 54 provides protection for unmarked human burials and human skeletal remains within the state. Therefore, before development moves forward, it is prudent to determine the extent of the cemetery. Based on the earliest inscribed grave marker, the cemetery was established by 1851. Records accessed during archival study did not mention the cemetery or any exclusion to sale.

The area to avoid during development measures 80 feet by 70 feet. This area was staked and should be added to engineering plans. The developer plans to preserve the cemetery in place. Mechanical clearing of the wooded area is not recommended to avoid accidentally disturbing human remains. Herbicides can be used to manage overgrowth if needed. Consideration of an ingress easement for descendant visitation should be part of the development plan.

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INTRODUCTION

Edward Otter, Inc. was contracted by Foxlane Homes to conduct a cemetery study and delineation before the planning and development of Sussex County, Delaware Parcel 134-9.00-28. A cemetery is known to exist on the property and is recorded with Delaware CHRIS as CRS S12549. Delaware Title 7 Chapter 54 provides protection for unmarked human burials and skeletal remains within the state. It is prudent to determine the extent of the cemetery. The developer intends to preserve the cemetery in place and protect it from any impacts during development.

Parcel 533-1.00-38.00 is located south of Hickman Road east Cedar Neck Road and west of Freshpond. This is within Ocean View, Baltimore Hundred, Sussex County Delaware (Figure 1). The cemetery location is Latitude 38.563298°, Longitude -75.078267° (Figure 2).

The cemetery is on an elevated ridge with agricultural field to the north and a housing development to the south. Elevation in the field is eight feet above mean sea level. The highest land in the cemetery is at 12 feet. This lies within the Atlantic Coastal Plain Soils within the project location are identified as Askecksy Loamy Sand 0 to 2 percent slopes (AsA) and Runclint loamy sand 2 to 5 percent slope (RuB) (Websoilsurvey). The cemetery has been recorded with Delaware Division of Historical and Cultural Affairs (DHCA) as the Rickards Family Cemetery (CRS S12549).

Scope of Work

The goals of this study are to determine the extent of the cemetery located on 134-9.00-28 and to verify cemetery ownership. Archival research and cemetery delineation are components of this project.

During archival research, records for the property are examined for indications of past land use and habitation but particularly for previous exclusions from sale. The records examined include land deeds, wills and probate, Orphans' Court documents, Chancery Court cases, census enumerations, birth, marriage, and burial records. Historical maps and aerial photographs are studied as part of this work. Delaware DHCA CHRIS, Tatnall records, and Find a Grave are consulted to determine whether the cemetery has been previously studied.

Cemetery delineation seeks to determine the extent of the cemetery, not necessarily how many burials exist within it. A mini-excavator with a clean-out bucket is utilized to carefully scrape topsoil to a depth where grave shafts will be observable if they exist. Excavated surfaces are then more finely cleaned using flat shovels and trowels. If graves are found, work continues twenty-five feet past any burials until no more burials are found. A metal probe is used to locate brick crypts and vaults, subsurface gravestones, and other potential features. Positive probe tests are flagged and mapped. No human burials are uncovered or otherwise disturbed during this work.

When the delineation is completed, a scaled map is drawn indicating the extent of the cemetery as well as cemetery feature locations. The scaled map can later be utilized by project engineers and the cemetery can be added to project maps and plans to be sure the area is avoided and there are no impacts to the cemetery during development.

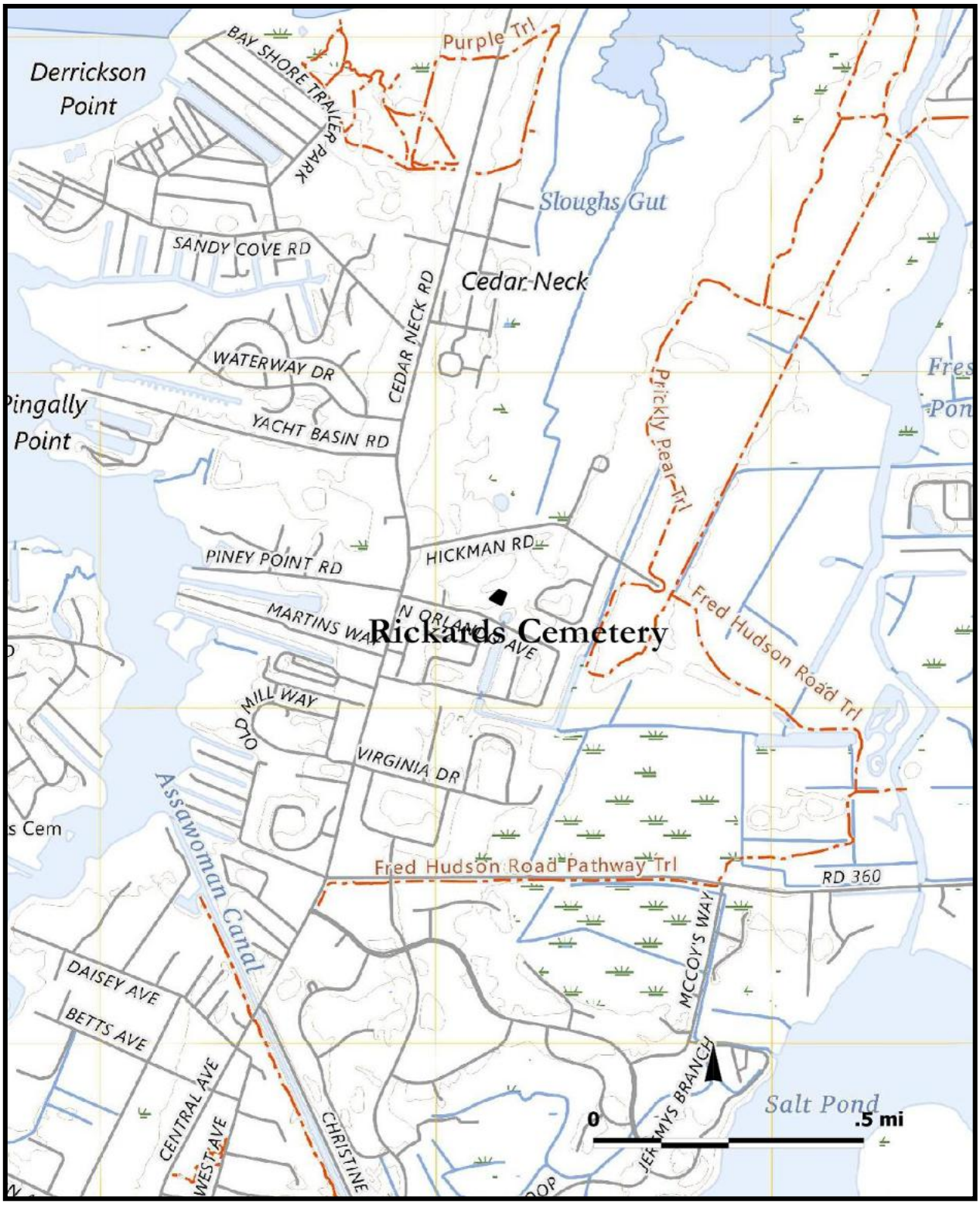


Figure 1. Project Location (USGS Topographic Map Frankford Quadrangle 2023)

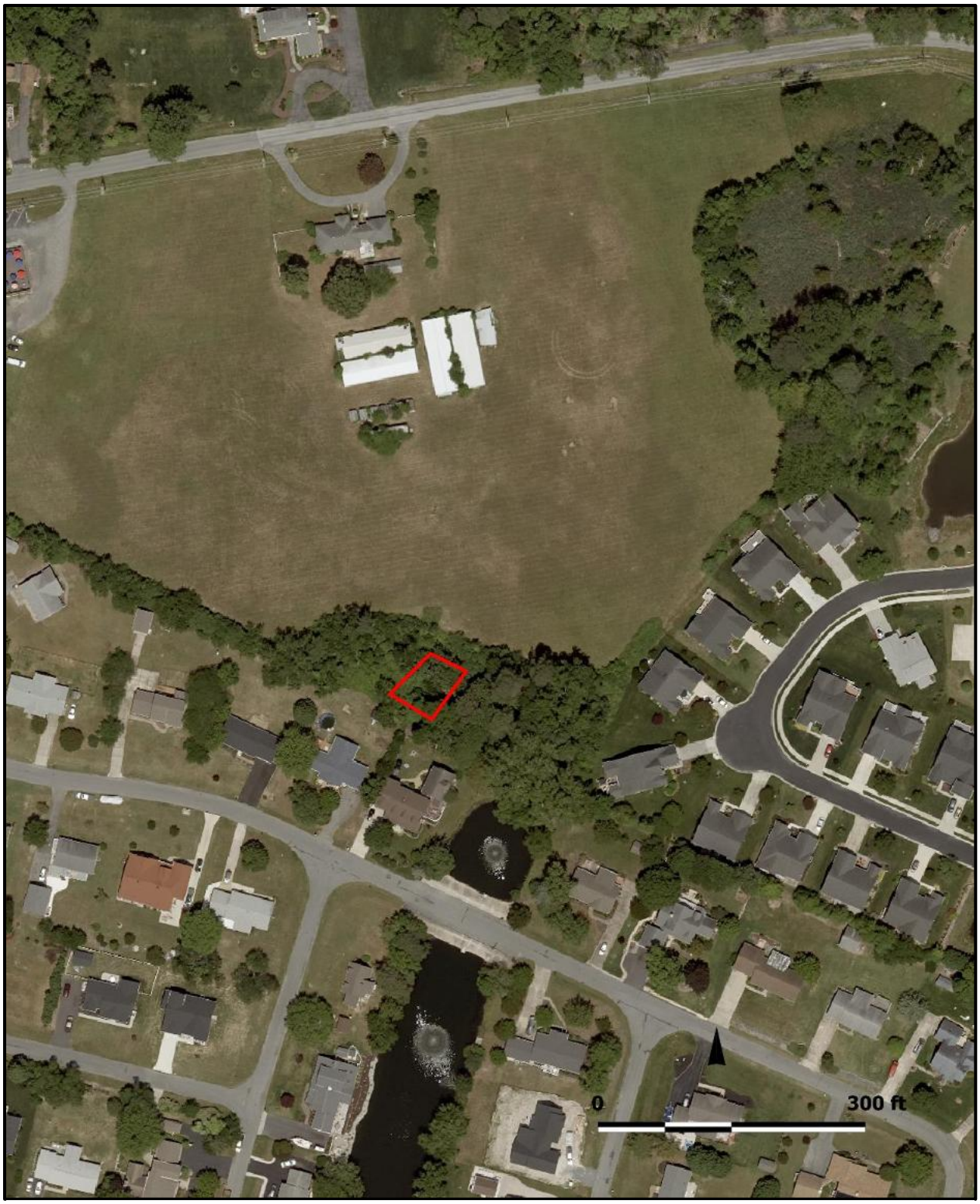


Figure 2. Project Location (NAIP 2023)

ARCHIVAL RESEARCH

Archival research was conducted at Delaware Public Archives as well as online via Sussex County Recorder of Deeds website, DE DHCA CHRIS, Ancestry.com, FamilySearch.com, Newspapers.com, and Findagrave.com.

Previous Study

The cemetery was previously mapped on DE DHCA CHRIS and has been designated CRS S12549, Cemetery. Currently there is a find-a-grave listing for the cemetery (ID 2517326) and the cemetery was mapped by Tatnall circa 1930 and is recorded as "Richards Graveyard (Page 185). Tatnall observed four gravestones in the Rickard Graveyard

Lemuel W. Capt	b Nov 6, 1805	d Jan 24, 1885
Mary W. his wife	b Dec 9, 1824	d Feb 12, 1868
Sarah Ann, Dau	age 3-11-23	d Feb 23, 1847
Lemuel W.	b Oct 5, 1838	d Aug 8, 1899

Chain of Title and Land History

A history of land ownership was constructed by following land transfers back into the past beginning with the current owners, Double H Development, who purchased the 27.84-acre parcel from Andrew J. and Donna Lee Cress in September of 2023 (Deed 5968/295). The history of the land is presented chronologically as follows.

Prior to 1847 the land was owned by members of the Wharton Family. William Wharton sold the property to Joseph D. Allen (53/107). Joseph Allen was sued for a debt and the land was sold to Benjamin Burton at Sherif's sale (61/173). This sale was completed in 1854.

Captain Lemuel Rickards bought the land in 1857 from Benjamin Burton. It appears that the Captain had some form of access to the land prior to that date as the first burial, for his daughter, Sarah, is dated 1851. The Pomeroy & Beers Map of 1868 shows Capt L. W. Rickets living on the west side of Cedar Neck Road, the cemetery is east of that road (Figure 3). Lemuel sold the land to his son, John, in 1876. At that time the parcel included 60 acres. John sold the 60 acres to his brother Archibald but in 1879 Archibald sold 27 acres back to John. The 1889 Coast and Geodetic Survey map does not show the cemetery (Figure 4).

John Rickards sold five acres to George Gray in 1893 (117/488) and 10 acres to Charels Evans in 1896 (123/551). In 1906, Charles Evans bought George Gray's five acres (204/153). The cemetery can be identified on aerial photography from 1926 (Figure 5), 1936 (Figure 6) and 1941 (Figure 7). The 15 acres was then sold to Harriet Berger in 1942 (365/151) and then to John Hudson in 1946 (358/588). Hudson sold it to Irvin Short in 1949 (385/228) who then sold it to Richard Timmons in 1951 (406/52). Timmons sold to Ascher Hearn just four months later (407/262) and Hearn sold to Lloyd Hickman in 1963 (556/496). Dollie Hickman, trustee for Dollie and Lloyd Hickman transferred the property to Thomas Mullen in 2022 (5294/107). By 1963 the area around the cemetery had been allowed to grow trees (Figure 8) and in the 1972 aerial farm equipment can be seen at the west end of the trees (Figure 9).

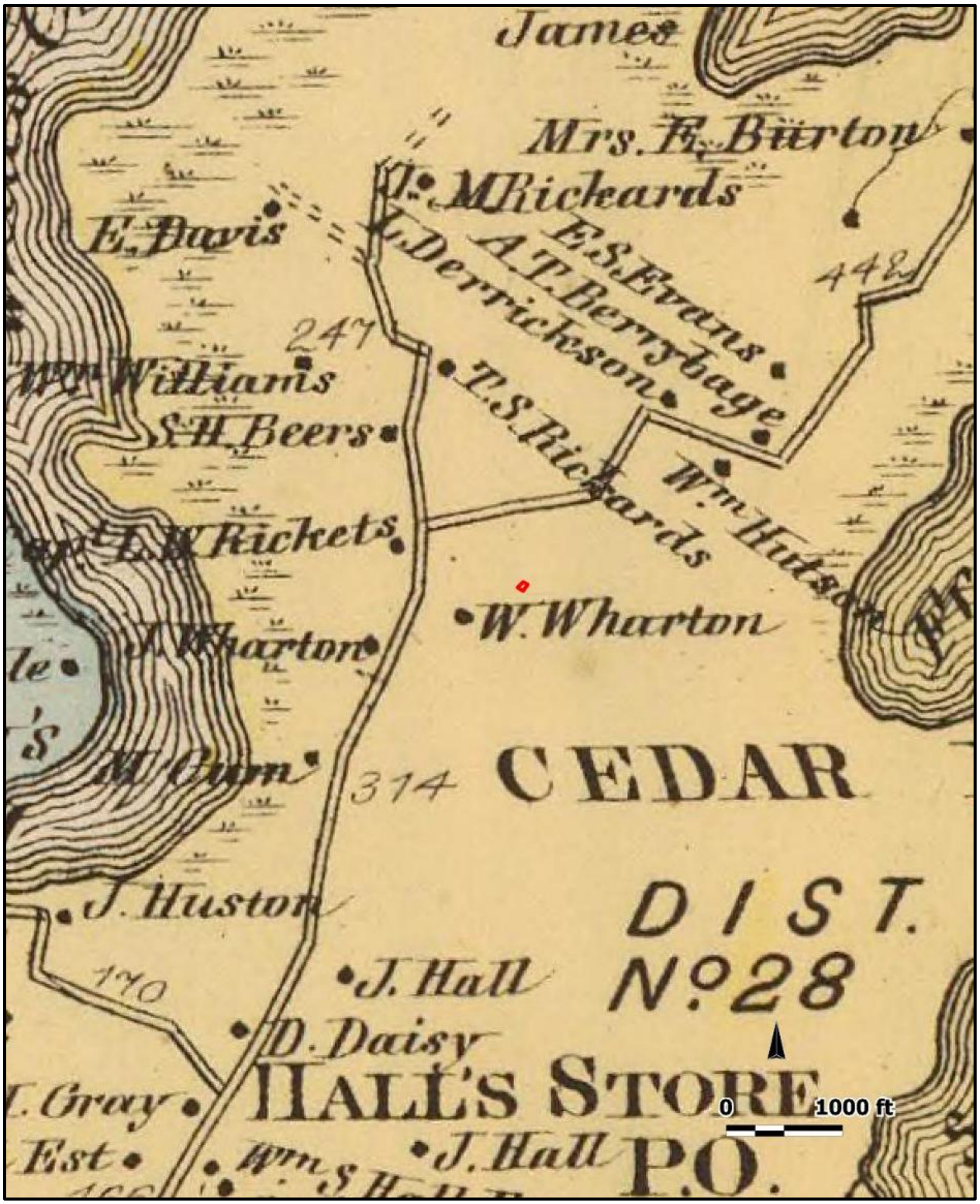


Figure 3. 1868 Pomeroy & Beers Atlas

Figure 4. 1889 Coast & Geodetic Survey Map

Figure 5. 1926 Aerial Photograph

Figure 6. 1937 Aerial Photograph

Figure 7. 1941 Aerial Photograph

Figure 8. 1963 Aerial Photograph

Figure 9. 1972 Aerial Photograph

The land was in the Rickards family for about 40 years. When it was sold out of the family, no exceptions to sale were made. No mention of the cemetery was found in any of the land deeds or records during archival research.

DELINEATION

Cemetery delineation work was performed March 3 and 4, 2025. This work was conducted by Edward Otter, PhD archaeologist with assistance from archaeological field technician, Jill L. Showell. The main goal of delineation is to determine the cemetery's boundaries and mark its four corners. This information will be added to project engineering plans to prevent any unintended impacts to the cemetery as development is underway.

The cemetery lies within a small wooded area elevated over formerly cultivated land. The elevation of the wooded area is generally about four feet above the former fields. Upon arrival three headstones and three foot stones were found. There was a collapsed iron fence (Figure 10).

Figure 10. Rickards Cemetery on our Arrival

During this work it is critical to avoid uprooting existing trees and roots which can potentially unearth human remains. Using a mini-excavator equipped with a clean out bucket, the surface vegetation was carefully scraped away. Soil was then scraped in increments to a depth where bricked graves and/or unbricked grave shafts would be visible if they were present. Excavation began near the marked graves and extended to the north, east, and west. The area to the south was not investigated as the property line is about 25 feet to the property line and this area will remain as a buffer.

As soils were excavated, they were piled out of the way as back dirt. The excavated areas were then more carefully cleaned using flat shovels and trowels. Excavations continued away from the identified burials until no more were found.

Probing was conducted around the marked graves searching for vaults or fallen stones. This work did not locate any brick vaults. Vaults would be expected on the later graves and it may be they are deeper than the probe could reach.

Three headstones were visible at the cemetery. These belong to Capt Lemuel Rickards (d), his wife, Nancy (d 1868) and Lemeul W. Rickards (d 1899). A marked stone for Sarah Ann Rickards was found by probing. The stone, though marked, is small and crudely carved. There were also three unmarked foot stones.

During soil removal with the excavator, a series of boulders were encountered. These were regularly spaced and are interpreted as grave markers. Rock markers such as these are not rare. In all, a total of twenty graves were identified during this study (Figure 12). There are the four graves with carved markers and 16 rock markers.

All the burials follow the typical Christian tradition, with an orientation from west to east. Brick vaults would be expected on the later graves. The rock marked graves likely did not contain vaults. The soils are light and dry making shaft identification difficult.

Figure 11. Headstone for Sarah Ann Rickards

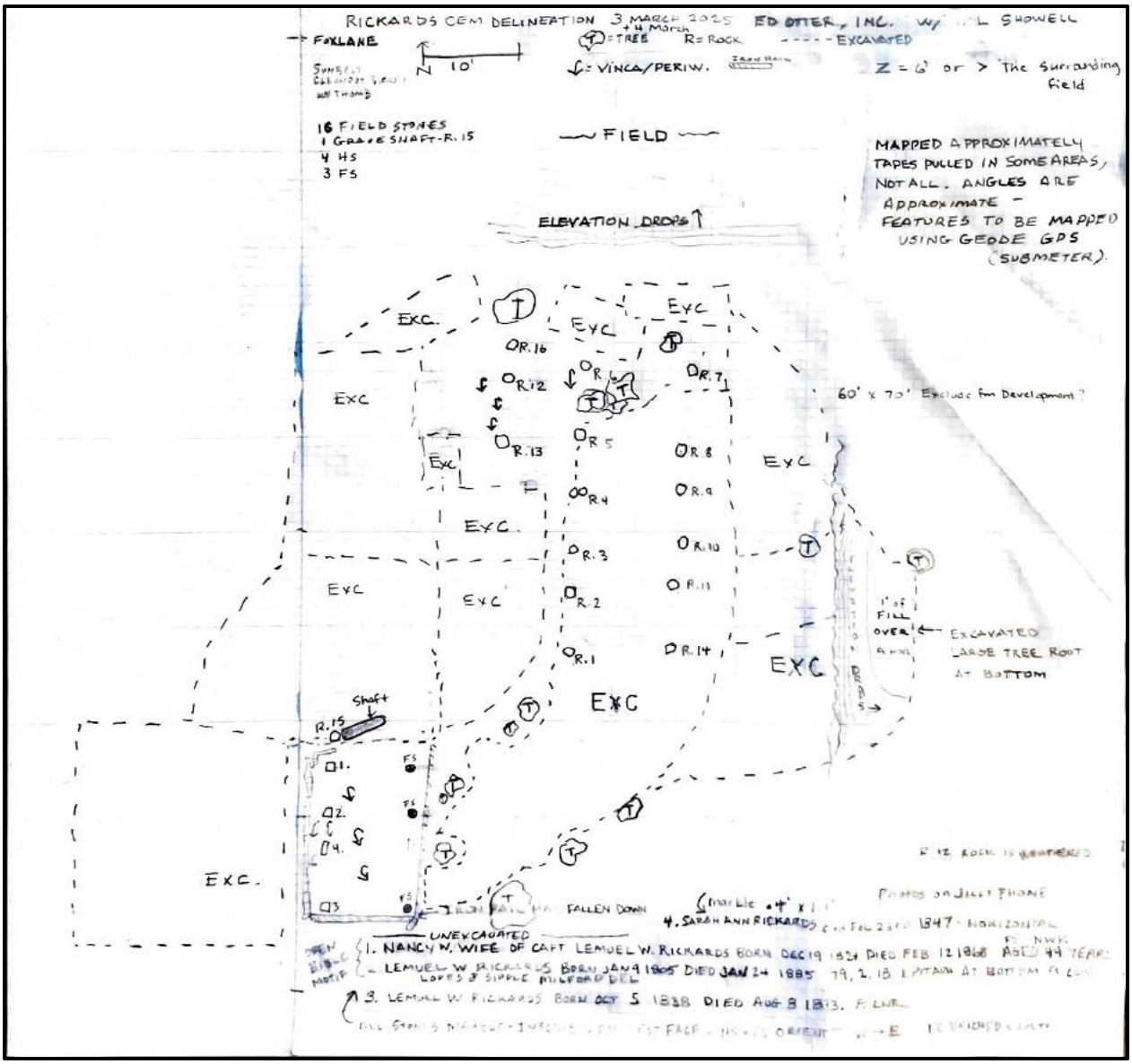


Figure 12. Sketch Map of Rickards Cemetery

CONCLUSIONS AND RECOMMENDATIONS

Archival research traced the ownership history back to before the purchase of the land by Captain Lemuel Rickards. No portion of the property was excluded from sale.

Field investigation identified at least 20 graves within the cemetery (Figure). The graves are contained with the areas laid out for lots 19 and 20 (Figure). Testing along the north edge of the graves was impeded by large trees and terrain. A small area outside of the treeline was tested with negative results (Figure). However, the area on the north side of the marked graves and within the elevated tree lot may hold graves as that area could not be adequately tested.

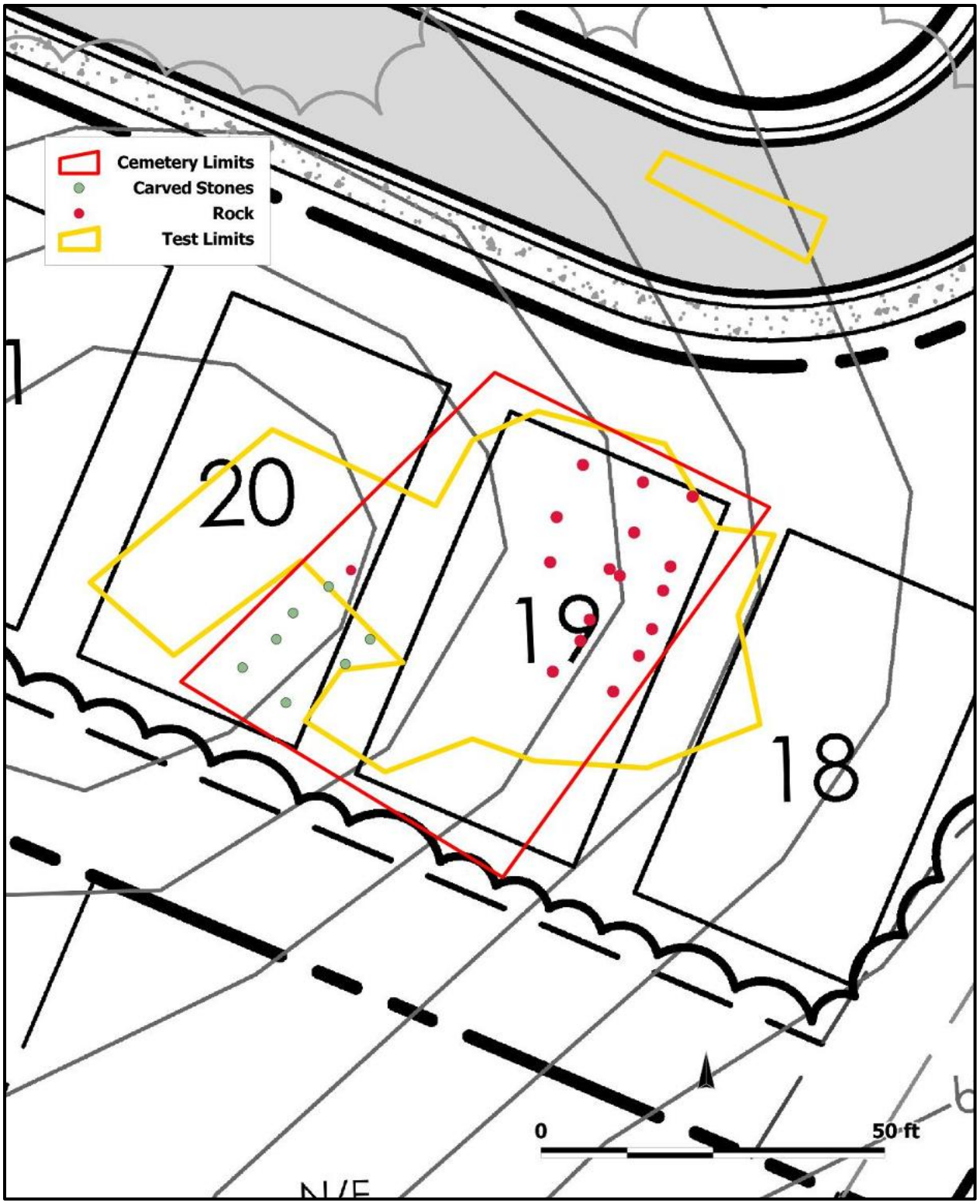


Figure 13. Rickard Cemetery Map

It is recommended that lots 19 and 20 be abandoned and retained as open space. The elevated land between the northern most stone marker and the field could not be tested. It is advised that the road be located within the field and not cut into the higher ground.

Provisions should be made for perpetual maintenance of the cemetery. Specific instructions are that rocks should never be moved as they are grave markers. There are dead trees in the area and they should be removed to prevent falling timbers from breaking headstones. Trees should be cut and roots should never be pulled as that could pull human remains along with the roots.

REFERENCES

Pomeroy and Beers
1868 Delaware State Atlas, Sussex County, Baltimore Hundred. Copy on file, Delaware Public Archives, Dover.

Sussex County, Delaware Orphans Court Records. Delaware Public Archives, Dover.

Sussex County, Delaware Deed Books. Delaware Public Archives, Dover.

Sussex County, Delaware Wills and Probate. Delaware Public Archives, Dover.

Tatnall, Walter G.
1930 Delaware, Sussex County, Tatnall Tombstone Collection, 1700 – 1960. Unpublished manuscript. Copy on file, Delaware Public Archives, Dover.

APPENDIX I: QUALIFICATIONS OF PRINCIPAL INVESTIGATOR

Edward Otter, PhD President and Principal of Edward Otter, Inc.

Education

2002	PhD Anthropology/Archaeology Catholic University of America, Washington D.C.
1989	Master of Arts Anthropology/Archaeology Catholic University of America, Washington D.C.
1980	Bachelor of Arts Anthropology University of Delaware, Newark, Delaware

Capabilities

Over 40 years-experience in archaeology in the Middle Atlantic United States. Work during this period has involved prehistoric and historic sites at all levels of expertise from Field Crewmember to Principal Investigator. Responsibilities have included project design and implementation, field and laboratory supervision, artifact analysis, archival research, report writing, site interpretation to the public, field and classroom instruction, and faunal analysis.

Select Recent Projects

2023	Alexander Warrington Cemetery Delineation, Cool Spring, Sussex County, DE.
2021	Joshua Burton Cemetery Rehabilitation, Indian River Hundred, Sussex County.
2021	Cemetery Study St. George AME on Pilottown Road, Lewes.
2021	Delineation and Archival Study Robert Burton Cemetery at Angola, Delaware.
2020	Brittingham Farm Cemetery Relocation, Princess Anne, Somerset County, Maryland.
2019	Carlisle Church Cemetery Study, Dover, Kent County, Delaware.
2019	Delineation of Private C. S. Hall Cemetery, Frankford, Sussex County, Delaware.
2018	Delineation Vessels Cemetery, Robinsonville Road, Sussex County, Delaware.
2018	Delineation Prettyman Cemetery at Tower Hill, Sussex County, Delaware.
2018	Blackwater Presbyterian Church Study, Frankford Delaware.
2017	Cemetery Delineation and Archival Study Hall Family Baltimore Hundred.
2017	Cemetery Delineation and Archival Study New Ebenezer on Cedar Grove Road.
2017	Cemetery Delineation and Study, Hastings Family Delmar, Sussex County.
2016	Delineation and Archival Study James F. Baylis Cemetery, Long Neck Road.
2014/2015	Historic Cemetery Removal, Wolfe Family in Lewes, Sussex County, Delaware.

Hickman Road - SAS Meeting Minutes – 10/29/2024

Attendees: John Justice - SCD

Don Pogwist - Solutions

Meeting Discussion Points

Standard

- Meeting minutes are to be submitted to SCD within 7 business days after the meeting date. If minutes are not received prior to plan submittal, the plan review will be delayed until the minutes are submitted. Any meeting agreements discussed may be rendered null and void in the event that the SCD attendees do not recall such agreements.
- All formal submittals are to include paper copies of plans and reports as well as electronic copies to aid in an expeditious review. (i.e., pdf, Excel, HydroCAD, CAD)
- Project report narrative to state how regulatory compliance is being met quantitatively and qualitatively for the RPv, Cv & Fv storm evets.
- For consistency, and assistance with implementing SCD/DNREC's database, the site data, latitude/longitude to be on State Plane coordinates, with approximate geographical location (i.e., benchmark #1, NE site corner, etc.) *AND* in degree decimal format (xx.xxx, -xx.xxx)
- All property line Post Development discharge points are to be analyzed for quantitative compliance. (i.e., unmanaged rear of lots, unmanaged areas that have proposed grading)
- Report to include sizing computations of Forebay(s), ROP & Sediment Trap(s).
- Silt fence to be provided behind all curbs (sidewalks if provided).
- All soils testing, accomplished per SIP, is required with the first plan submittal. (Note: SCD determines quantity of tests required for infiltration practices by area of facility bottom and all testing should be adequately distributed within facility bottoms infiltrating surface, not side slopes or forebay areas. Non-infiltrating facility soil testing quantities are determined by area of top-of-bank and testing should be adequately distributed.)
- Both the 'Sequence of Construction' and Operation & Maintenance notes and schedule are to be site specific.

Site Specific

- DelDOT Entrance Permit required prior to scheduling Pre-Construction Meeting.
- Letter of No Objection required for discharge into DelDOT/Municipal systems prior to SCD plan approval.
- Super silt fence is required for disturbances adjacent to wetlands or wetland buffers and tax ditches.
- DNREC Drainage Section approval required prior to SCD Plan approval. (Plans will be submitted to Drainage Section by SCD once reviewer is confident no significant design changes will occur.)

- Ensure that proper separation is provided from proposed facilities in accordance with Appendix 8 of the BMP Standards & Specifications.
- Wetland delineation to be performed by a certified Wetland Scientist and clearly identified on plans along with the 'Certification' block found in the Plan Review Checklist.
- Letter of No Objection required from Army Corp of Engineers for any wetland disturbances.
- Letter of No Objection required from Subaqueous for disturbance to Jurisdictional waters of the U.S. (Tidal, Shoreline Stabilization, Piers, Docks, Blueline Streams, etc.)
- No adverse impact on down stream conveyance ditche(s) north of Hickman Rd to wetlands.
- Verify culvert size and material crossing Hickman Rd adjacent to Hocker property.
- No adverse impact upstream of DelDOT culverts.
- Intercept drainage from back of lots with storm drain inlets and divert to stormwater management pond.
- For unmanaged runoff, provide a comparison between pre- and post-development, e.g. lots 8-9.

Hickman – Drainage Coordination Meeting
(Microsoft Teams Meeting)
June 25, 2026
Attendees:

Jessica Watson (SCD)
Jim Eriksen (Solutions IPEM)
Jason Palkewicz (Solutions IPEM)
John Murray (Development Team)

Minutes:

- Meeting was held to discuss the County's Drainage Assessment Report and determine the design parameters and conditions that may be required for this project.
- The County expressed concerns regarding the proposed pond located within the existing wooded sump in the northeastern portion of the site. The County GIS identifies the sump as wetlands, but the approved jurisdictional determination for the project confirms it is not jurisdictional wetlands.
- Similarly, the ephemeral drainage ditch is not federally regulated per the approved jurisdictional determination.
- The County expressed concerns regarding the Bethany Preserve subdivision's adjacent pond outfall discharging into this area, and how the proposed project would impact the performance and functionality of the Bethany Preserve pond.
- SCD confirmed the Bethany Preserve pond discharges as described in the County's Drainage Assessment Report.
- Solutions IPEM requested that SCD provides the stormwater management plans and reports for the Bethany Preserve Subdivision.
- SCD agreed to provide the files, and the files were provided on June 25, 2026.

- Given the approved jurisdictional determination, SCD confirmed that the construction of the proposed stormwater facility as shown in the preliminary site plan is permitted. SCD suggested providing enhanced vegetation within the facility and providing beneficial species to improve water quality. Pending final BMP selection, Solutions IPEM is not opposed to providing suitable, beneficial plantings as feasible for the facility.
- Solutions IPEM identified the area of excellent groundwater recharge that is shown in the area of woods to remain and explained the intention was to preserve the woods within that area.
- Solutions IPEM and SCD discussed the design parameters of the subject property. Those parameters are identified below:
    - All stormwater management design will be performed in accordance with DNREC regulations.
    - The proposed stormwater facility shown in a portion of the existing wooded sump is a permitted BMP and will be designed in accordance with DNREC regulations
    - The stormwater discharges from the Bethany Preserve subdivision shall be considered and incorporated into the stormwater management design for the subject property. The files provided by SCD will be utilized for these purposes.
    - The stormwater design for the subject property shall verify that development of the property will have no adverse impact on the Bethany Preserve subdivision's stormwater management facilities.
    - The discharge for the proposed stormwater management design will be the tidal wetlands to the northeast. The tidal wetlands are located within DelDOT right of way. As is typical for any project with discharge into DelDOT right of way, the stormwater design will also need to be approved by DelDOT in accordance with their standards and regulations.

Jason Palkewicz, Professional Engineer
CEO

EDUCATION

BE, Environmental Eng., 1995
Hofstra University

MS, Civil Eng., 1999
University of Toledo

REGISTRATIONS

- Professional Engineer
  MD 9 25088
- Professional Engineer
  DE 9 12083
- Professional Engineer
  VA 9 035417
- Professional Engineer
  FL 9 100735

MEMBERSHIPS

- LEED, AP

PROFESSIONAL SUMMARY

Mr. Palkewicz is a Professional Engineer and Project Manager with licenses in Maryland, Virginia and Delaware, with over 25 years of experience successfully overseeing all phases of planning, engineering and survey projects for government and private-sector clients. He is a highly skilled team leader, detail oriented with the ability to solve problems with limited resources while never losing sight of the big picture.

SPECIAL PROJECT EXPERIENCE

- **Cardinal Grove, Sussex County, DE** – The civil engineer project manager for this 98 unit cluster subdivision located on Beaver Dam Road. The project included planning, entitlement, roadway, grading, stormwater management, sanitary sewer, pump station and DelDOT entrance design.
- **Pelican Point, Sussex County, DE** – Prepared construction drawings and plats for a 379 unit residential along Rte 5 outside of Long Neck. Plans included roadway, grading, sediment and erosion control, potable water, gravity sanitary sewer and sanitary pump station.
- **Chase Oaks, Sussex County, DE –** The civil engineer project manager for this 253 unit coastal area cluster subdivision located on Robinsonville Road. The project included planning, entitlement, roadway, grading, stormwater management, sanitary sewer, pump station and DelDOT entrance design.
- **Headwater Cove, Sussex County, DE –** Prepared construction drawings and plats for a 163 unit residential subdivision on Dorman Road. Plans included roadway, grading, sediment and erosion control, potable water, gravity sanitary sewer and sanitary pump station.

Bowman

Braden Garrison, PE, PTOE

Project Manager, Transportation

Braden Garrison, PE, PTOE has nearly ten years of experience in transportation engineering, including traffic impact studies for private land development projects in Pennsylvania, Delaware, and Maryland, as well as state and municipal corridor improvement studies. Braden is also experienced with traffic operations and modeling analyses using a wide variety of software including Synchro and Highway Capacity Software. He is experienced with many types of traffic engineering studies including gap studies, speed studies, parking studies, signal and multi-way stop warrant studies, auxiliary lane warrant analysis, and safety studies.

Education

B.S. Civil Engineering, Pennsylvania State University, 2016

Registrations

Professional Engineer:

- PA (#PE092287)
- DE (#28124)
- MD (#61208)

Professional Traffic Operations Engineer (#6001)

Associations

Institute of Transportation Engineers

Accolades

GVF TMA: Top TDM Professional Under 40

Experience

Levels View Farm | *Town of Middletown, New Castle County, DE*

Provided traffic engineering services to prepare a traffic impact study compliant with DelDOT regulations for the construction of 700 single-family homes along Levels View Road in the Town of Middletown. Services included trip generation analyses, capacity analyses, review of crash data, and evaluation of site entrance design and operations as well as coordination with improvements programmed within the established Transportation Improvement District (TID).

Terraces at Pike Creek | *New Castle County, DE*

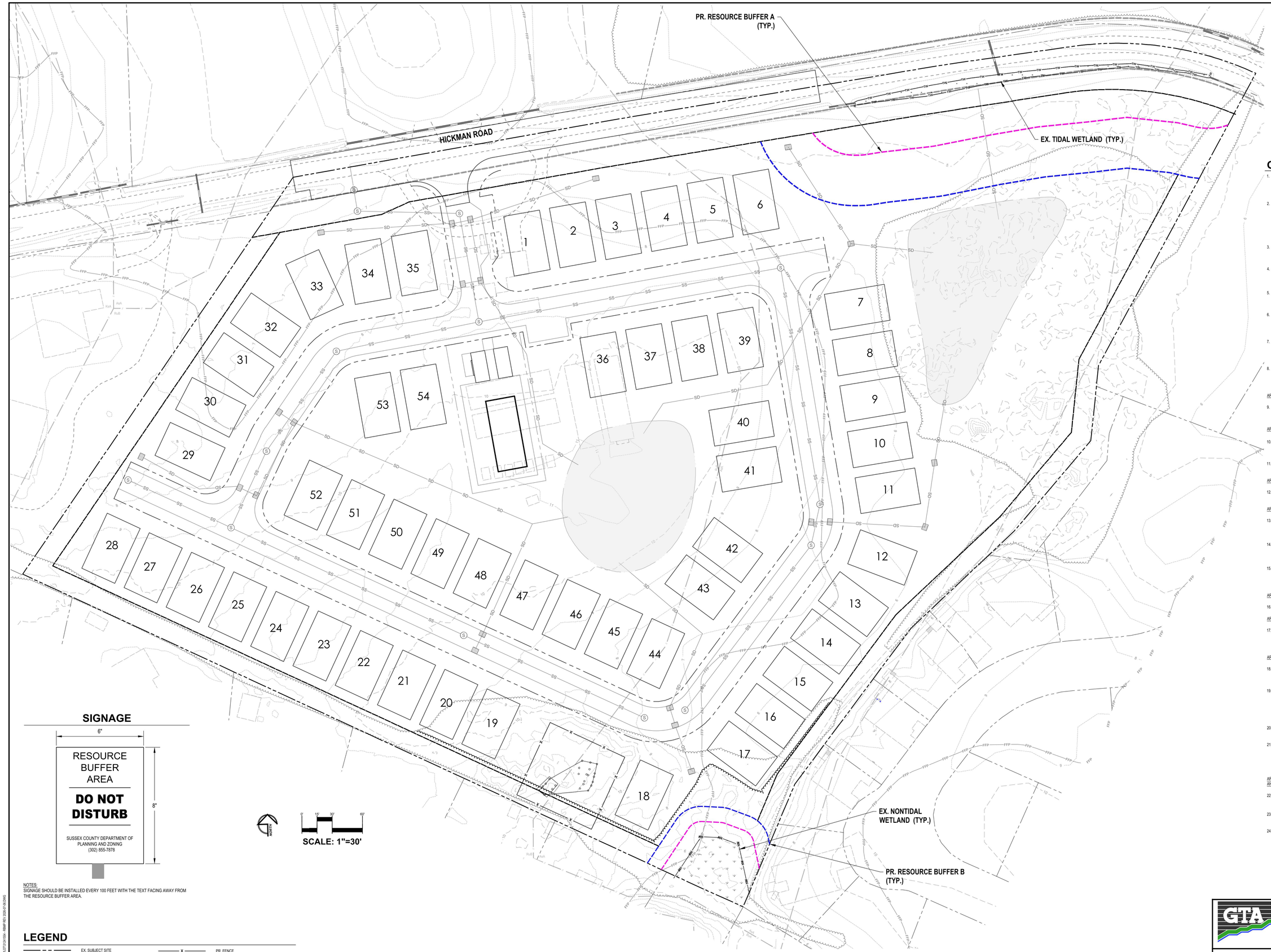
Provided traffic engineering services to prepare a traffic impact study compliant with DelDOT regulations for the construction of 61 single-family homes along Pike Creek Boulevard in New Castle County. Services included trip generation analyses, capacity analyses, review of crash data, and evaluation of site entrance design and operations as well as confirmation of compliance with County level-of-service concurrency requirements.

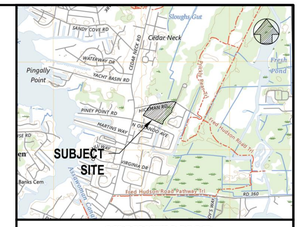
Bridgeville Town Center | *Sussex County, DE*

Provided traffic engineering services to prepare a traffic impact study compliant with DelDOT regulations for the construction of 342 residential units, a hotel, quick-service restaurants, a convenience market with fuel, and approximately 70,000 square feet of retail space homes along US 13 in Sussex County. Services included trip generation analyses, capacity analyses, review of crash data, and evaluation of site entrance design and operations.

Wawa Lincoln | *Sussex County, DE*

Provided traffic engineering services to prepare a traffic impact study compliant with DelDOT regulations for the construction of a Wawa convenience market with fuel service. Services included trip generation analyses, capacity analyses, review of crash data, and evaluation of site entrance design and operations, as well as recommendation of off-site improvements to mitigate the impact of area land development projects.





VICINITY MAP

SCALE: 1" = 2,000'

UNITED STATES GEOLOGICAL SURVEY, BETHANY BEACH, DE QUADRANGLE, 7.5 MINUTE TOPOGRAPHIC MAP SERIES, DATED 2023.

GENERAL INFORMATION

1. PLAN PREPARED FOR: FOXLANE HOMES DELAWARE
32191 NASSAU ROAD #2
LEWES, DELAWARE 19958
ATTN: JOHN MURRAY

2. PLAN PREPARED BY: GEO-TECHNOLOGY ASSOCIATES, INC. (GTA)
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
ATTN: MS. KIMBERLEY MCNEW
PHONE: 410-515-9446
EMAIL: KMCNEW@GTAENG.COM

3. THE SUBJECT SITE ENCOMPASSES APPROXIMATELY 12.86 ACRES AND IS LOCATED AT 38492 HICKMAN ROAD IN THE OCEAN VIEW AREA OF SUSSEX COUNTY, DELAWARE. THE SUBJECT SITE IS IDENTIFIED AS TAX PARCEL 134-9.00-28.00.

4. THIS PLAN WAS PRODUCED ON A BASE MAP PROVIDED BY SOLUTIONS IPEM, LLC. EXISTING TOPOGRAPHIC INFORMATION SHOWN HEREON WAS PROVIDED BY SOLUTIONS IPEM, LLC AND SUSSEX COUNTY GIS.

5. ACCORDING TO FEMA FIRM MAP NUMBER 10005C0504K, EFFECTIVE MARCH 16, 2015, PORTIONS OF THE SUBJECT SITE ARE LOCATED WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN.

6. A WETLAND DELINEATION OF THE SUBJECT SITE WAS PERFORMED BY WATERSHED ECO, LLC IN APRIL 2024. WETLAND FLAG LOCATIONS WITHIN THE SUBJECT SITE WERE SURVEY LOCATED BY SOLUTIONS IPEM, LLC. A JURISDICTIONAL DETERMINATION WAS ISSUED BY THE U.S. ARMY CORPS OF ENGINEERS ON FEBRUARY 6, 2026 (NAP-2026-00032-103).

7. GTA PERFORMED A DRAINAGE ASSESSMENT IN JULY 2024 TO REVIEW EXISTING DRAINAGE CONVEYANCES WITHIN THE SUBJECT SITE TO EVALUATE THEIR CONDITION AND IDENTIFY IMPEDIMENTS IN GENERAL ACCORDANCE WITH THE CODE OF SUSSEX COUNTY, CHAPTER 115, ARTICLE XXV §115-193.

8. THIS PLAN WAS PREPARED BY GTA FOR THE SOLE AND EXCLUSIVE USE OF FOXLANE HOMES DELAWARE. ANY REPRODUCTION OF THIS PLAN BY ANY OTHER PERSON WITHOUT THE EXPRESSED WRITTEN PERMISSION OF GTA AND FOXLANE HOMES DELAWARE IS UNAUTHORIZED, AND SUCH USE IS AT THE SOLE RISK OF THE USER.

ARTICLE XXV §115-193(A(4)) RESOURCE BUFFER MARKERS

9. SIGNAGE, AS DISPLAYED ON THE RESOURCE BUFFER MANAGEMENT PLAN, WILL BE INSTALLED EVERY 100 FEET WITH THE TEXT FACING AWAY FROM THE RESOURCE BUFFER AREA.

ARTICLE XXV §115-193(B) RESOURCE BUFFER AVERAGING

10. RESOURCE BUFFERS ARE LISTED ON THE FINAL SITE PLAN AS "RESOURCE BUFFER A" AND "RESOURCE BUFFER B." ACCESS TO RESOURCE BUFFERS WILL BE PROVIDED BY RIGHT-OF-WAYS AND EASEMENTS.

11. RESOURCE BUFFER WIDTH AVERAGING WAS NOT UTILIZED IN THIS PLAN FOR ZONE B. ALL ZONE B AVERAGING IS ACHIEVED WITHIN THE PROPOSED BOUNDARIES.

ARTICLE XXV §115-193(C) PERMITTED ACTIVITIES

12. PERMITTED ACTIVITIES WITHIN THE RESOURCE BUFFER CAN BE FOUND WITHIN SUSSEX COUNTY CODE ARTICLE XXV §115-193C.

ARTICLE XXV §115-193(D) RESOURCE BUFFER STANDARDS

13. THE RESOURCE BUFFERS WITHIN THE SUBJECT SITE CONTAIN NATURAL FORESTS WHICH WILL BE MAINTAINED BY THE HOMEOWNERS' ASSOCIATION. THE FOREST WILL BE PRESERVED, PROTECTED, AND MAINTAINED IN ITS NATURAL STATE.

14. NONFOREST MEADOWS DO NOT EXIST WITHIN THE RESOURCE BUFFERS WITHIN THE SUBJECT SITE. IF CONDITIONS CHANGE AND THESE AREAS DEVELOP WITHIN A RESOURCE BUFFER, THEY SHOULD BE ALLOWED TO RETURN TO A FORESTED STATE.

15. GRAZED PASTURES, MANAGED TURF, ACTIVE CROPLAND, OR AREAS OF BARE EARTH NOT STABILIZED WITH VEGETATIVE COVER DO NOT EXIST WITHIN THE RESOURCE BUFFERS WITHIN THE SUBJECT SITE. IF CONDITIONS CHANGE AND THESE AREAS DEVELOP WITHIN A RESOURCE BUFFER, THEY SHOULD BE ALLOWED TO RETURN TO A FORESTED STATE.

ARTICLE XXV §115-193(E) INVASIVE SPECIES

16. INVASIVE SPECIES, IF OBSERVED, MAY BE REMOVED BY A QUALIFIED PROFESSIONAL.

ARTICLE XXV §115-193(F) MAINTENANCE OF DRAINAGE CONVEYANCES

17. DRAINAGES WITHIN THE SUBJECT SITE ARE POSITIVE CONVEYANCES AND DO NOT REQUIRE RESTORATION IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE, AND COUNTY REQUIREMENTS. DRAINAGES LOCATED WITHIN THE DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT) RIGHT OF WAY EASEMENT SHALL BE MAINTAINED BY DELDOT.

ARTICLE XXV §115-193(H) RESOURCE BUFFER MAINTENANCE AND MANAGEMENT

18. THE DEVELOPMENT WITHIN THE SUBJECT SITE REQUIRES RESOURCE BUFFERS FROM NON-TIDAL WETLANDS. THE REQUIREMENTS FOR RESOURCE BUFFERS HAVE BEEN MET BY PRESERVING EXISTING NATURAL FOREST. NO ADDITIONAL PLANTINGS ARE REQUIRED.

19. THE HOMEOWNERS' ASSOCIATION WILL BE RESPONSIBLE FOR PRESERVING AND MAINTAINING THE EXISTING NATURAL FOREST IN THE BUFFER AREAS. GTA RECOMMENDS ANNUAL EVALUATIONS OF THE RESOURCE BUFFERS BY QUALIFIED PROFESSIONALS. THE DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT) SHALL BE RESPONSIBLE FOR THE RESOURCE AND RESOURCE BUFFERS LOCATED WITHIN THE DELDOT RIGHT OF WAY EASEMENT.

20. PERMITTED ACTIVITIES WITHIN THE RESOURCE BUFFER CAN BE FOUND WITHIN SUSSEX COUNTY CODE ARTICLE XXV §115-193C.

21. THE RESOURCE BUFFERS IDENTIFIED ON THE SUBJECT SITE SHALL BE DESIGNATED AS ACCESS EASEMENTS AS STATED IN SUSSEX COUNTY CODE ARTICLE XXV §115-193F(1). THESE EASEMENTS WILL EXIST AS LONG AS THE BUFFER IS REQUIRED. EASEMENTS WILL BE MAINTAINED BY THE DEVELOPER AND THE HOMEOWNERS' ASSOCIATION FOR EASE OF MAINTENANCE ACCESS.

ARTICLE XXV §115-193(I-K) MODIFICATIONS AND EXCEPTIONS, REQUIREMENTS, VIOLATIONS AND PENALTIES

22. THE REQUIREMENTS ESTABLISHED BY SUSSEX COUNTY CODE ARTICLE XXV §115-193 HAVE BEEN MET.

23. THIS PROJECT IS CONSIDERED A MAJOR SUBDIVISION AS GOVERNED BY CHAPTER 99 IN THE SUSSEX COUNTY CODE.

24. ANY VIOLATIONS TO THE COVENANT AND RESTRICTIONS PUT INTO PLACE BY THE HOMEOWNERS' ASSOCIATION WILL BE AT THE SOLE RESPONSIBILITY AND EXPENSE OF THE VIOLATING PARTY.

SIGNAGE

NOTES:
SIGNAGE SHOULD BE INSTALLED EVERY 100 FEET WITH THE TEXT FACING AWAY FROM THE RESOURCE BUFFER AREA.

NORTH

0 15' 30' 60'

SCALE: 1"=30'

LEGEND

- EX. SUBJECT SITE
- EX. PROPERTY BOUNDARY
- EX. 1-FOOT CONTOUR
- EX. 5-FOOT CONTOUR
- EX. BUILDING
- EX. EDGE OF PAVEMENT
- EX. EASEMENT
- EX. SOIL BOUNDARY
- EX. TREE LINE
- EX. FEMA 100-YEAR FLOODPLAIN
- EX. NONTIDAL WETLAND
- EX. TIDAL WETLAND
- EX. CULVERT
- PR. FENCE
- PR. EASEMENT
- PR. ROAD EDGE
- PR. STORM DRAIN
- PR. TREE LINE
- PR. SEWER LINE
- RESOURCE BUFFER A
- RESOURCE BUFFER B
- PR. STORMWATER POND

SOILS CHART

SYMBOL[1]	NAME/DESCRIPTION[1]	HYDRIC SOIL[2]	HYDRIC COMPONENT[2]	PERCENTAGE OF MAPPING UNIT[2]	POSITION IN LANDSCAPE[2]
AsA	ASKECKSY LOAMY SAND, 0-2% SLOPES	YES	HURLOCK, UNDRAINED	10	DEPRESSIONS, SWALES, FLATS
			MULLICA, UNDRAINED	5	SWALES, DRAINAGEWAYS, DEPRESSIONS FLATS
IeB	INGLESIDE LOAMY SAND, 2-5% SLOPES	NO	-	-	-
RuB	RUNCLINT LOAMY SAND, 2-5% SLOPES	YES	HURLOCK, DRAINED	5	FLATS, DEPRESSIONS, SWALES

1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, SUSSEX COUNTY, DELAWARE, SOIL SURVEY DATA VERSION 24, DATED SEPTEMBER 12, 2023.
2. HYDRIC SOILS INFORMATION AVAILABLE FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE SOIL DATA ACCESS HYDRIC SOILS LIST. ACCESSED JULY 22, 2024.

RESOURCE BUFFER TABLE

RESOURCE TYPE	BUFFER TYPE	BUFFER REQUIRED	BUFFER PROVIDED
NON-TIDAL WETLAND	BUFFER A	13,781.3 SF	13,781.3 SF
NON-TIDAL WETLAND	BUFFER B	24,526.5 SF	24,526.5 SF

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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM
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RESOURCE BUFFER MANAGEMENT PLAN

HICKMAN ROAD PROPERTY

SUSSEX COUNTY, DELAWARE

REVISIONS:

JOB NO:	31241554
SCALE:	1"=30'
DATE:	JULY 16, 2026
DRAWN BY:	BCW
DESIGN BY:	
REVIEW BY:	MAJ/TAS
SHEET:	1 OF 1

I:\GWE\PROJECT FILES\2024\31241554 - HICKMAN ROAD PROPERTY\NET CAD\PLOT\31241554 - RBMP REV 2026-07-09.DWG

Hickman Road

Environmental Assessment and Public Facilities Evaluation Report

The proposed development, Hickman Road, is in conformity with the Sussex County Zoning requirements for the Coastal Area Overlay Zone.

Delineation of the zoning district: Hickman Road is located within the Coastal Area Overlay zone.

Application process: All developments containing 50 or more dwelling units are subject to the Coastal Area Overlay Zone performance requirements. An environmental assessment and public facility evaluation report and sketch plan (report) are required to be submitted to the Director of Planning and Zoning. Below is the report which finds:

(a) The proposed drainage design will include the use of both a closed system storm drain and open system drainage network. Storm water management will meet or exceed the current storm water management regulations including managing both water quantity and quality. Stormwater management devices could include constructed wetlands, bio-swales, infiltration basins, filter strips, ponds, etc. The project flow may be directed to adjacent wetlands which connect to the Indian River Bay and will have no negative downstream impacts.

(b) Potable water and fire protection will be provided for Hickman Road. The site will be served by Sussex Shores. Potable water demands are anticipated to be approximately 14,000 gallons per day. Irrigation, if provided, will be by either potable water supply, non-potable well or drawn from storm water management facilities.

(c) Wastewater collection and treatment will be provided for the site by Sussex County. The proposed collection and treatment of the wastewater generated from the site will not have an adverse effect on the quality of groundwater and surface waters. An on-site pump station may be required to be installed to connect to the existing system.

(d) The proposed development will be designed to provide safe and efficient vehicular travel patterns on site. Site access to Hickman Road will be in accordance with DelDOT's *Development Coordination Manual*. Entrance improvements to Hickman Road are anticipated to include:
- Widening of Hickman Road to provide adequate travel lane and shoulder width.
- Sidewalks and multi-modal path.
- Participation in an Area Wide Study and payment of the area-wide study fee.

(e) No proposed or federally listed endangered or threatened species are known to exist on the site.

(f) The site contains non-tidal wetlands as delineated by Watershed Eco. A jurisdictional determination will be processed by the U.S. Army Corp of Engineers. Disturbance to the wetlands is not anticipated. Buffers are provided in accordance with the County's resource protection ordinance.

(g) The site has been planned to maintain areas of open space throughout the site. The plan provides a total of 5 +/- acres (39%) of open space. 5 +/- acres (100%) of the open space is interconnected

or within one road crossing. Open space amenities will include preserved woodlands & wetlands, perimeter buffers, and a recreation amenity/gathering space.

(h) The internal access roadway will be privately owned and maintained by the HOA within private rights-of-way or easements. Road width and pavement thicknesses shall be in conformity with Sussex County Standards. Potable water mains and sanitary sewer mains will be publicly owned and maintained within rights-of-way and/or utility easements. Storm water drainage and management facilities will be privately owned and maintained by the HOA.

(i) The project is located within the Ocean View / Bethany Beach developed area. There are commercial services in direct proximity of the site. As such it will offer not only an economic boost from tax revenue and tourism but will also provide jobs associated with land development construction and home building.

(j) There are no known historic or cultural resources located on the site that are listed on the National Register of Historic Places.

(k) The proposed application is in conformity with the current Sussex County Comprehensive Plan. Specifically, the site is located in the Coastal Area and is low to medium density. The site will be served by public sewer. Also, the site is within a Sussex Shores franchise area.

(l) All mitigation measures, where required, have been discussed in the appropriate sections. The design of the Hickman Road development alleviates the detrimental impacts identified above (a-k) in a manner which is consistent with the Comprehensive Plan.

GEO-TECHNOLOGY ASSOCIATES, INC.

GEOTECHNICAL • ENVIRONMENTAL •
CONSTRUCTION OBSERVATION AND TESTING

A Practicing Geoprofessional Business Association Member Firm

July 31, 2024

Foxlane Homes Delaware
32191 Naussau Road #2
Lewes, Delaware 19958

Attn: Mr. John Murray

Re: Drainage Assessment Report
Hickman Road Property
Sussex County, Delaware

Dear Mr. Murray:

In accordance with our agreement dated July 11, 2024, Geo-Technology Associates (GTA) has completed the drainage assessment for the Hickman Road Property project located at 38492 Hickman Road in the Ocean View area of Sussex County, Delaware. The assessment consisted of a field evaluation of existing drainage conveyances within the subject site to evaluate their condition, identify impediments, and provide recommendations on remedial measures for impediments identified as required by the Code of Sussex County, Chapter 115, Article XXV §115-193. Transmitted herein is a report of our findings and conclusions about the condition of the drainage conveyances observed on the subject site.

Thank you for the opportunity to be of assistance. If you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
GEO-TECHNOLOGY ASSOCIATES, INC.

Kimberley McNew.
Senior Project Scientist

Gregory R. Sauter, P.E.
Vice President

GREGORY R. SAUTER
REGISTERED
NO. 13047
DELAWARE
PROFESSIONAL ENGINEER

BCW/KRM/GRS/llh
31241554

DRAINAGE ASSESSMENT REPORT

HICKMAN ROAD PROPERTY
SUSSEX COUNTY, DELAWARE

July 31, 2024

Prepared For:

FOXLANE HOMES DELAWARE
32191 Naussau Road #2
Lewes, Delaware 19958
Attn: Mr. John Murray

Prepared By:

GEO-TECHNOLOGY ASSOCIATES, INC.
Geotechnical and Environmental Consultants
3445-A Box Hill Corporate Center Drive
Abingdon, Maryland 21009
Phone: (410) 515-9446
Fax: (410) 515-4895
www.gtaeng.com

GTA Project No: 31241554

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Figure 2: 2023 Aerial Imagery
Figure 3: FEMA National Flood Hazard Layer FIRMette
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Appendix C Wetland Delineation Report
Appendix D Existing Condition Photos
Appendix E Cross Sections
Appendix F Drainage Assessment Plan

DRAINAGE ASSESSMENT REPORT
HICKMAN ROAD PROPERTY
SUSSEX COUNTY, DELAWARE
JULY 31, 2024

1.0 INTRODUCTION

The subject site encompasses approximately 12.86 acres and is located at 38492 Hickman Road in the Ocean View area of Sussex County, Delaware. (*Figure 1*). The subject site is identified as Sussex County Tax Parcel 134-9.00-28.00. It is Geo-Technology Associates Inc. (GTA) understanding that portions of the subject site are proposed for residential development. As part of the Sussex County Planning and Zoning development plan review process, and in accordance with Code of Sussex County, Chapter 115, Article XXV, §115-193 Resource Buffers are to be established on "Resources" (i.e. tidal waters, tidal wetlands, non-tidal wetlands, perennial streams, and intermittent streams) delineated within the subject site. Furthermore, "if a Resource Buffer abuts or contains features such as ephemeral, intermittent, or perennial streams which are not part of an established Tax Ditch and which convey drainage from or through a site proposed for development, a Drainage Assessment Report" is required.

GTA completed a drainage assessment of resources within the subject property to evaluate the condition of existing drainage conveyances within the subject site. As required by the Code of Sussex County, Chapter 115, Article XXV §115-193, the following instabilities were documented, if identified:

a) Unstable eroding or unstable stream banks or conveyance requiring stabilization or restoration measures.
b) The location of stream blockages such as debris jams, fallen or unstable trees, beaver dams or similar impediments to conveyance.
c) The location of any sand or gravel deposition within a channel or conveyance which impedes the flow of water produced by a storm having an annual probability of occurrence of 10%.

The sections that follow describe the existing conditions of the site, a summary of the on-site investigations completed, and discussion of recommended measures to remedy identified impediments to drainage conveyances.

2.0 EXISTING CONDITIONS

2.1 Rare, Threatened, and Endangered Species

On July 16, 2024 GTA utilized the United States Fish and Wildlife Service (USFWS) Chesapeake Bay Field Office online project review process to determine if state- and/or federally-listed threatened or endangered species have been documented within the subject site. The Official Species List included the endangered Northern Long Eared Bat (*Myotis septenrionalis*), the proposed endangered Tricolored Bat (*Perimyotis subflavus*), and the candidate monarch butterfly (*Danaus plexippus*) as potentially occurring within the vicinity of the subject site. There are no Section 7 of the Endangered Species Act of 1973 (ESA) requirements associated with candidate species or proposed endangered species. In accordance with the USFWS online review process, GTA completed and submitted the NLEB Rangewide Determination Key through the online review process. The Determination Key states that the proposed project is consistent with a determination of "no effect" for the NLEB. According to the Determination Key, if no changes occur within the project or there are no updates on listed species, no further consultation or coordination for this project is required for the NLEB. USFWS coordination is included in ***Appendix B.***

2.2 Land Use and Existing Resources

At the time of GTA's environmental review, the subject site consisted primarily of mowed fields and wooded areas (*Figure 2*). The current land use is residential and agricultural. The topography of the subject site is gently sloped. GTA consulted existing topographic survey provided by Solutions IPEM, the Wetland Delineation Report prepared by Watershed Eco, LLC and dated April 15, 2024 for the subject site (***Appendix C***), and the Federal Emergency Management Agency (FEMA) Flood Map[1] (*Figure 3*) of the subject site to identify drainage conveyances and/or streams within the subject site that qualify for the drainage assessment.

According to the FEMA Flood Map (*Figure 3*) areas of the subject site are located within the FEMA 100-year floodplain. The NWI Wetlands Map (*Figure 4*) identifies two freshwater forested/shrub wetlands located along the eastern boundary of the subject site (PFO1B).

[1] Federal Emergency Management Agency, Flood Map Service Center, Sussex County Area, Delaware. Accessed July 3, 2024.

The Wetland Delineation Report prepared by Watershed Eco, LLC and dated April 15, 2024 identified "palustrine forested wetlands in the northeastern and southeastern portions of the subject property (Wetland B and Wetland C). These wetlands abut an ephemeral drainage ditch along the eastern property boundary which drains off-site to the south. An open water drainage ditch (Wetland A) was observed in the northeastern portion of the property which appears to drain to the north into Beach Cove and Indian River Bay." (Wetlands A, B, and C, ***Appendix C***).

3.0 ON-SITE INVESTIGATION SUMMARY

During July 2024, GTA's environmental scientists conducted an on-site review of identified streams and drainage conveyances on the subject site to evaluate their condition and identify instream blockages and/or instabilities, if present. GTA's field investigation consisted of photo documenting existing conditions, identifying stream impediments (i.e. blockages or sand bars), and identifying unstable or eroding banks, if present. Cross section survey was performed by Solutions IPEM within Wetlands A, B, and C and the ephemeral drainage ditch to document typical channel dimensions. Typical drainage area assessments include cross section surveys at each geometry transition and additional cross section surveys in locations of unstable or eroding banks, stream blockages, and in sand bars that would impede flow of water produced by a 10-year recurrence interval storm event. Existing site photographs are provided in ***Appendix D*** and the cross section survey is provided in ***Appendix E***. An existing condition plan with existing site photograph locations and cross section survey locations are included in ***Appendix F***. The paragraphs below summarize the existing condition of each resource evaluated on the project site.

Wetland A

Wetland A is an open water drainage ditch located within the northern portion of the subject site, adjacent to Hickman Road. At the time of GTA's site visit, Wetland A exhibited stable conditions within the subject site. The area is comprised of dense wetland vegetation including common reed (*Phragmites australis*, FACW), narrow-leaf cattail (*Typha angustifolia*, OBL), and three-square (*Schoenoplectus pungens*, OBL). Debris blockages or sand or gravel deposition that would impede the flow of water at

storms greater than the 10-year recurrence interval were not observed. Remediation measures are not recommended in Wetland A due to the stable nature of the conveyance.

Wetland B

Wetland B is palustrine forested wetland located within the northeastern portion of the subject site. At the time of GTA's site visit, Wetland B exhibited stable conditions within the subject site. The area is comprised of dense wetland vegetation including red maple (*Acer rubrum*, FAC), loblolly pine (*Pinus taeda*, FAC), horsebrier (*Smilax rotundifolia*, FAC), and common reed (*Phragmites australis*, FACW). Debris blockages or sand or gravel deposition that would impede the flow of water at storms greater than the 10-year recurrence interval were not observed. Remediation measures are not recommended in Wetland B due to the stable nature of the conveyance.

Wetland C

Wetland C is palustrine forested wetland located within the southeastern portion of the subject site. At the time of GTA's site visit, Wetland C exhibited stable conditions within the subject site. The area is comprised of dense wetland vegetation including red maple (*Acer rubrum*, FAC), loblolly pine (*Pinus taeda*, FAC), and horsebrier (*Smilax rotundifolia*, FAC). Debris blockages or sand or gravel deposition that would impede the flow of water at storms greater than the 10-year recurrence interval were not observed. Remediation measures are not recommended in Wetland C due to the stable nature of the conveyance.

Ephemeral Drainage Ditch

The ephemeral drainage ditch is located adjacent to the eastern boundary of the subject site. At the time of GTA's site visit, the ephemeral drainage ditch exhibited stable conditions within the subject site. The ephemeral drainage ditch was dry at the time of GTA's site visit, but appears to originate from drainage patterns within Wetland B and appears to flow south along the property boundary. The drainage ditch is in wooded areas and mowed/maintained areas. In the wooded areas, the drainage ditch is densely vegetated with trees, vines, and herbaceous vegetation. Minor amounts of woody debris

were noted within the conveyance; however, the woody debris observed did not appear to be preventing flow. The mowed/maintained portions of the drainage also appeared visually stable in the field. Debris blockages or sand or gravel deposition that would impede the flow of water at storms greater than the 10-year recurrence interval were not observed. Remediation measures are not recommended in the ephemeral drainage ditch due to the stable nature of the conveyance.

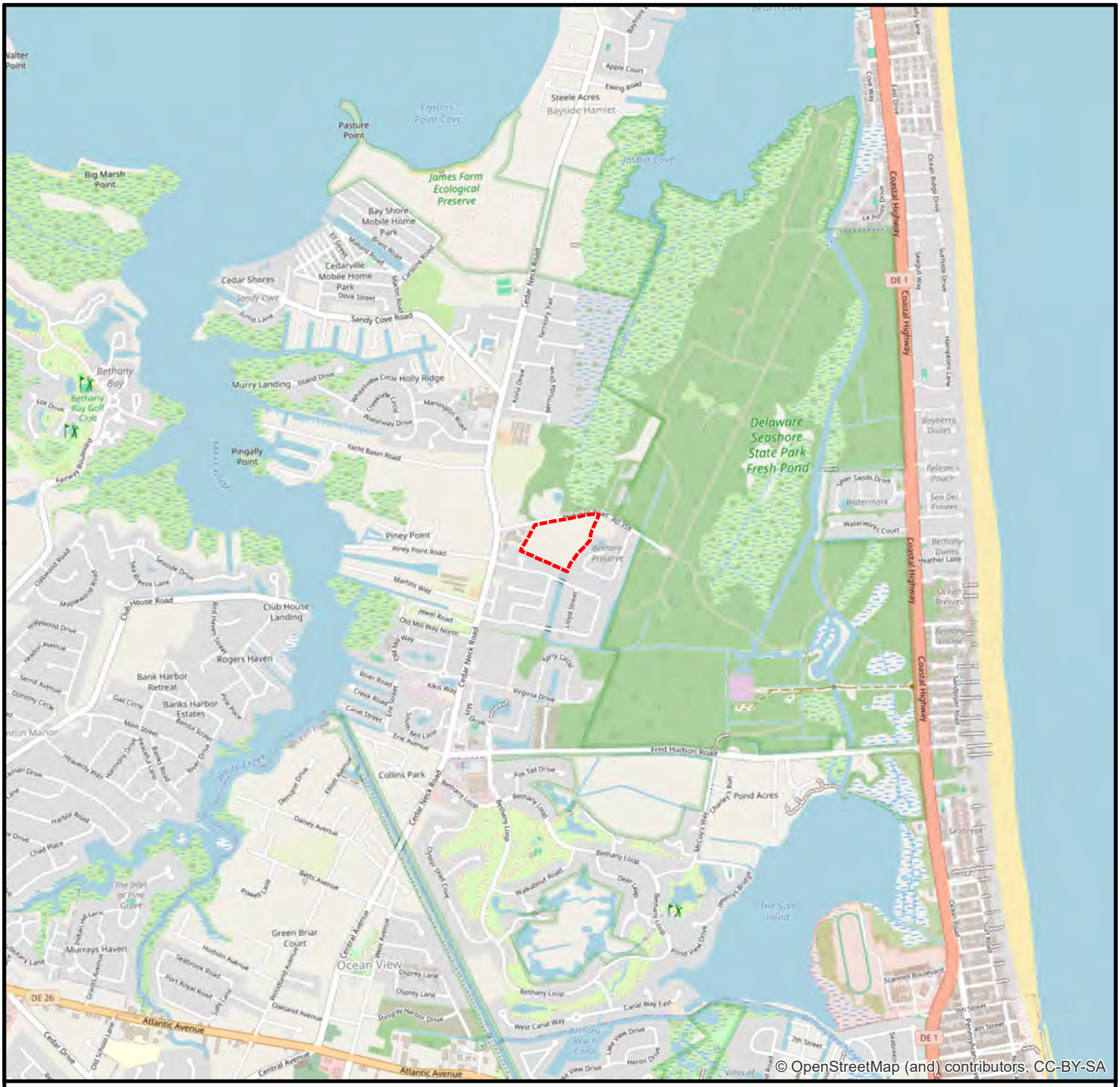
4.0 CONCLUSION

As a result of the environmental review of the subject site, it is GTA's professional opinion that Wetlands A, B, and C and the ephemeral drainage ditch exhibited stable conditions and are not in need of remediation. In GTA's professional opinion, measures to remedy the streambank erosion should not be required to develop the subject site.

This Report was prepared by GTA for the sole and exclusive use of Foxlane Homes Delaware. Any reproduction of this Report by any other person without the expressed written permission of GTA and Foxlane Homes Delaware is unauthorized, and such use is at the sole risk of the user.

******* END OF REPORT *******

Appendix A
Figures



LEGEND

SUBJECT SITE

NORTH

0 2,000

APPROXIMATE SCALE
1 INCH = 2,000 FEET

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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
PHONE: 410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM

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SITE LOCATION MAP
HICKMAN ROAD PROPERTY

SUSSEX COUNTY, DELAWARE

JOB NO.	SCALE:	DATE:	DRAWN BY:	REVIEW BY:	FIGURE:
31241554	1"=2,000'	JULY 16, 2024	BCW	MAJ/TAS	1

SOURCE: 2023 BASE AERIAL IMAGERY PROVIDED BY MICROSOFT CORPORATION.

LEGEND

SUBJECT SITE

NORTH

0 200

APPROXIMATE SCALE
1 INCH = 200 FEET

GEO-TECHNOLOGY ASSOCIATES, INC.
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ABINGDON, MARYLAND 21009
PHONE: 410-515-9446
FAX: 410-515-4895
WWW.GTAENG.COM

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2023 AERIAL IMAGERY
HICKMAN ROAD PROPERTY

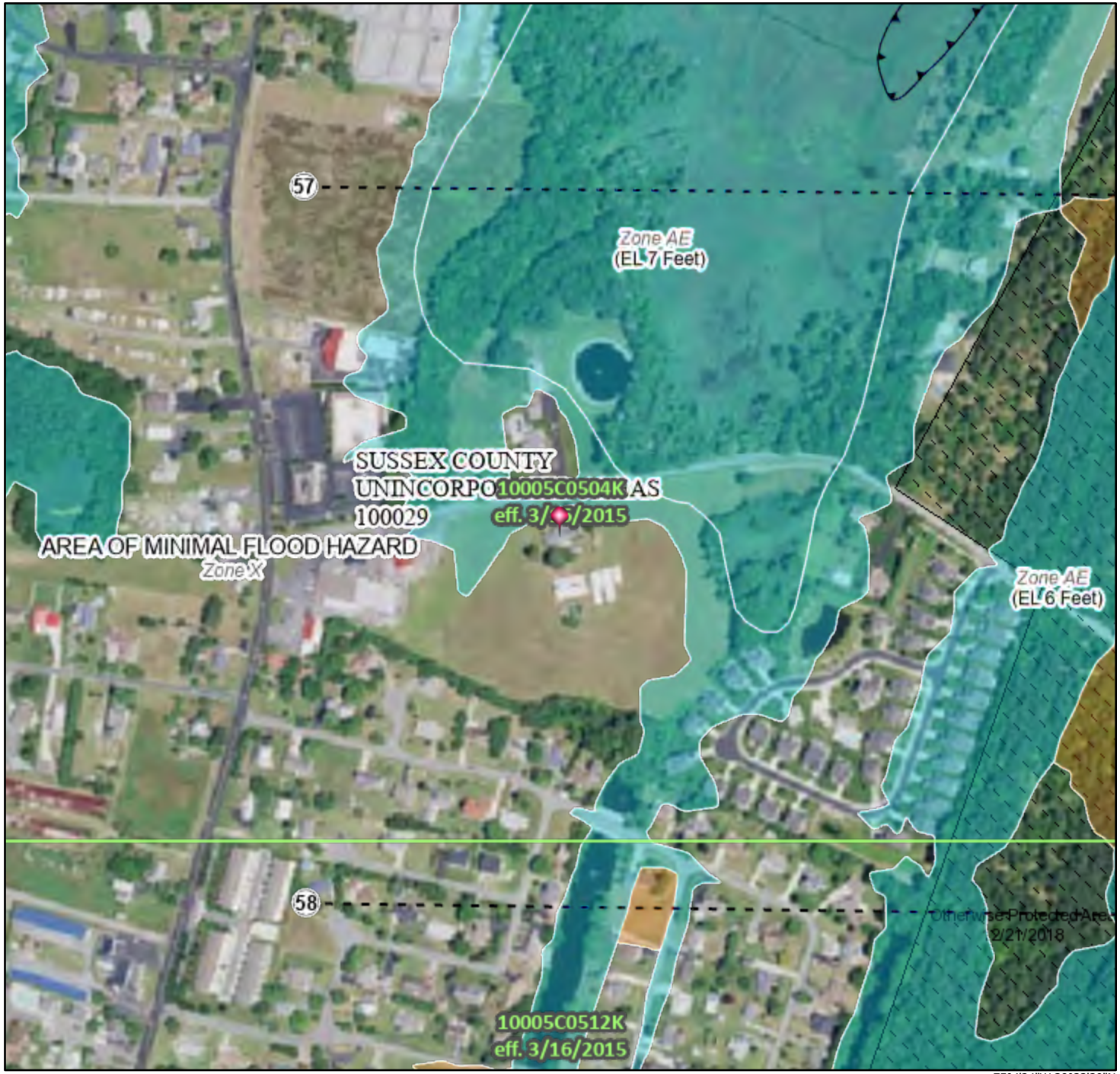
SUSSEX COUNTY, DELAWARE

JOB NO.	SCALE:	DATE:	DRAWN BY:	REVIEW BY:	FIGURE:
31241554	1"=200'	JULY 16, 2024	BCW	MAJ/TAS	2

National Flood Hazard Layer FIRMette

FEMA

75°5'1"W 38°34'7"N



75°4'24"W 38°33'39"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 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 *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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 7/16/2024 at 3:45 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.

FIGURE 3

SOURCE: UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), NATIONAL WETLANDS INVENTORY (NWI), DATED MAY 17, 2024. 2023 BASE AERIAL IMAGERY PROVIDED BY MICROSOFT CORPORATION.

LEGEND

- SUBJECT SITE
- ESTUARINE AND MARINE WETLAND
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND

NORTH

0 200

APPROXIMATE SCALE
1 INCH = 200 FEET

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
PHONE: 410-515-9446
FAX: 410-515-4895
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NWI WETLANDS MAP
HICKMAN ROAD PROPERTY

SUSSEX COUNTY, DELAWARE

JOB NO.	SCALE:	DATE:	DRAWN BY:	REVIEW BY:	FIGURE:
31241554	1"=200'	JULY 16, 2024	BCW	MAJ/TAS	4

Appendix B
USFWS Rare, Threatened, Endangered Species Coordination

United States Department of the Interior

U.S. Fish & Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401
410/573 4575

Online Certification Letter

Today's date: July 16, 2024

Project: Hickman Road Property

Dear Applicant for online certification:

Thank you for using the U.S. Fish and Wildlife Service (Service) Chesapeake Bay Field Office online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the referenced project in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA).This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

Based on this information and in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), we certify that except for occasional transient individuals, no federally listed endangered or threatened species are known to exist within the project area. Therefore, no Biological Assessment or further section 7 consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For additional information on threatened or endangered species in Maryland, you should contact the Maryland Wildlife and Heritage Division at (410) 260-8573. For information in Delaware you should contact the Delaware Division of Fish and Wildlife, Wildlife Species Conservation and Research Program at (302) 735-8658. For information in the District of Columbia, you should contact the National Park Service at (202) 339-8309.

The U.S. Fish and Wildlife Service also works with other Federal agencies and states to minimize loss of wetlands, reduce impacts to fish and migratory birds, including bald eagles, and restore habitat for wildlife. Information on these conservation issues and how development projects can avoid affecting these resources can be found on our website (www.fws.gov/chesapeakebay)

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interest in these resources. If you have any questions or need further assistance, please contact Chesapeake Bay Field Office Threatened and Endangered Species program at (410) 573-4527.

Sincerely,

Genevieve LaRouche
Field Supervisor

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 07/16/2024 19:32:57 UTC
Project Code: 2024-0117074
Project Name: Hickman Road Property

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

PROJECT SUMMARY

Project Code: 2024-0117074
Project Name: Hickman Road Property
Project Type: Residential Construction
Project Description: It is GTA's understanding that portions of the subject property are proposed for residential development.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5641178,-75.07828889298368,14z

Counties: Sussex County, Delaware

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ This species only needs to be considered if the project includes wind turbine operations. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Brooke Walz
Address: 3445A Box Hill Corporate Center Drive
City: Abingdon
State: MD
Zip: 21009
Email bwalz@gtaeng.com
Phone: 4104414878

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 07/16/2024 19:37:00 UTC
Project code: 2024-0117074
Project Name: Hickman Road Property

Federal Action Agency (if applicable):

Subject: Record of project representative's no effect determination for 'Hickman Road Property'

Dear Brooke Walz:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 16, 2024, for 'Hickman Road Property' (here forward, Project). This project has been assigned Project Code 2024-0117074 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/ coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0117074 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Hickman Road Property

2. Description

The following description was provided for the project 'Hickman Road Property':

> It is GTA's understanding that portions of the subject property are proposed for residential development.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.5641178,-75.07828889298368,14z

DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (Myotis septentrionalis). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. The proposed action does not intersect an area where the northern long-eared bat is likely to occur, based on the information available to U.S. Fish and Wildlife Service as of the most recent update of this key. If you have data that indicates that northern long-eared bats are likely to be present in the action area, answer "NO" and continue through the key.

   Do you want to make a no effect determination?

   Yes

PROJECT QUESTIONNAIRE

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Brooke Walz
Address: 3445A Box Hill Corporate Center Drive
City: Abingdon
State: MD
Zip: 21009
Email bwalz@gtaeng.com
Phone: 4104414878

Appendix C
Wetland Delineation Report

Wetland Delineation – Mullens Property, Ocean View, Delaware

James C. McCulley IV, PWS
Watershed Eco, LLC
April 15, 2024
Jim@WatershedEco.com

Introduction

At the request of Foxlane Homes Delaware, Watershed Eco, LLC. has reviewed background materials and conducted site visits to determine the previous and current site conditions related to waters, wetlands, and drainage.

James McCulley, the investigator, and report author has over 30 years of experience in wetland delineation and permitting. He previously worked as a biologist in the Regulatory Section of the U.S. Army Corps of Engineers, Philadelphia District and was selected as one of 17 wetland scientists nationwide to serve on the National Academy of Sciences, Wetlands Characterization Committee which authored Wetlands: Characteristics and Boundaries. He was chosen as one of four committee members to present the committee findings at a press conference on Capitol Hill.

Mr. McCulley is a Senior Professional Wetland Scientist, #000471 as certified by the Society of Wetland Scientists, an international scientific association.

All opinions in this report are to a reasonable degree of scientific certainty.

Executive Summary

Watershed Eco, LLC. reviewed background information and conducted a wetland delineation at the Mullens Property and determined that palustrine forested wetlands were present in the northeastern and southeastern portions of the property abutting an unnamed ephemeral tributary to Fresh Pond. A narrow open water ditch was observed bordering Hickman Road in the northeast. These wetlands and waters were flagged in the field and depicted on the attached wetland delineation map.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands within the northeastern and southeastern portions of the property. These wetlands abut an ephemeral drainage ditch which drains off-site to the south to an open water pond which drains east to Fresh Pond, a tributary to Indian River Bay, a Traditional Navigable Waterway. The open water drainage ditch in the northeastern portion of the property appears to drain northerly off-site into Beach Cove and Indian River Bay. The flagging placed in the field represents the outer boundary of these resources.

The site conditions at the time of the investigation are detailed in this report.

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Definition of Jurisdictional Waters and Wetlands

The latest WOTUS Rule became effective on March 20, 2023. This rule codifies the definition of Waters of the United States (WOTUS), including jurisdictional wetlands. Discussion of Jurisdiction related to Waters and Wetlands in this report are based on the Rule and Section 404 of the Clean Water Act and as described in the definitions in this section as well as guidance currently in effect and based on professional experience.

The scope of Federal jurisdiction established in the Clean Water Act (CWA) is limited to WOTUS, which is defined in the Act as Navigable Waters, including the Territorial Seas. The Act does not further define WOTUS and has left the interpretation to the agencies (U.S. EPA and U.S. Army Corps of Engineers). The agencies have defined WOTUS by regulation since the 1970s with the latest definition becoming effective on March 20, 2023, and being nullified by the Supreme Court in May 2023.

The U.S. Army Corps of Engineers and U.S. EPA are revising the Rule and will be based on the Supreme Court Decision that state that to be a Jurisdictional Water, there must be a permanent and continuous connection to a downstream Navigable Water. The new guidance has not yet been released to the public at the time this report was prepared.

It is assumed, under the Supreme Court language, that a tributary must be intermittent or perennial and connected to a downstream Navigable Water to be jurisdictional and any adjacent wetlands would also be deemed Jurisdictional. It is assumed that the mapped wetlands and waters on this site have a direct surface connection to Fresh Pond, Beach Cove, and Indian River Bay and would be regulated by the U.S. Army Corps of Engineers. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands or waterways within the subject property.

Waters are mapped by determining the Ordinary High-Water Mark (OHWM) of features with a bed and bank as defined above and in accordance with various guidance as discussed below.

Wetlands are mapped using three criteria: 1. Vegetation, 2. Soils and 3. Hydrology which are further described in the Manual and appropriate Regional Supplement. Hydrophytic (wetland) vegetation is specifically adapted for life in saturated soils and listed by species and indicator status on the National Wetland Plant List maintained by the U.S. Army Corps of Engineers. Hydric (wetland) soils formed under conditions of saturation, flooding or ponding long enough to develop anaerobic conditions and are listed on the United States Department of Agriculture, Hydric Soils Database. Wetland hydrology is described as recurrent, sustained water at or near the surface for extended periods of time.

Subject Property

The Subject Property is located south of Hickman Road in Ocean View, Delaware. The Subject Property is located at Latitude and Longitude 38.564602 and -75.078353 and is identified as Sussex County Tax Parcel No. 134-9.00-28.00 consisting of approximately 12.5 Acres.

The subject property consists of a residential dwelling with outbuildings surrounded by maintained lawn areas. Wooded areas were observed in the northeast and southeast. Hedgerows form the eastern and southern property boundaries.

Based on the information reviewed and discussed in this report, it was concluded that there were palustrine forested wetlands in the northeastern and southeastern portions of the property. These wetlands drain into an ephemeral ditch along the eastern property boundary to an off-site open water pond to the south. This pond drains east, then north into Fresh Pond, a tributary to Indian River Bay, a Traditional Navigable Waterway. An open water drainage ditch was observed in the northeastern portion of the property which appears to drain northerly off-site into Beach Cove and Indian River Bay.

Documents Considered

The following documents were considered as part of this study:

- Current National Wetland Inventory (NWI) Map
- Current USGS Mapping
- Historical Aerial Photos
- NRCS Soils Mapping
- National Hydrography Dataset Mapping

Findings

Background Research

The NWI Map (Figure 2) depicts a palustrine forested wetland in the northeastern portion of the subject property and in the southeast. Forested and estuarine emergent wetlands are mapped north of the property. An open water pond is depicted within the residential subdivision to the south.

The USGS Mapping (Figure 3) depicts a blue-line stream south of the subject property which drains easterly, then north to Fresh Pond. The subject property is relatively flat with elevations above and below the 10-foot contour line.

The National Hydrography Dataset map (Figure 4) depicts no wetlands or waters within the subject property. An open water pond is mapped south of the subject property.

The 1937 aerial photo (Figure 5) depicts most of the subject property in active agricultural use with woodlands in the northeastern and southeastern portions. A ditch is apparent along the

eastern property boundary. Surrounding land use is primarily agricultural and wooded properties.

The 1954 aerial photo (Figure 6) depicts similar site conditions as the 1937 imagery. No significant changes in surrounding land use are apparent.

The 1968 aerial photo (Figure 7) depicts the construction of a residential dwelling in the northwest. A small area of tree is apparent in the rear of the dwelling. No significant changes in surrounding land use are apparent.

The 1992 aerial photo (Figure 8) depicts the construction of a garage in the rear of the dwelling. A hedgerow has formed along the southern property boundary. A subdivision is apparent to the south, and commercial development to the west. A private residence has been constructed to the north. An open water pond is apparent within the subdivision to the south.

The 2002 aerial photo (Figure 9) depicts similar site conditions as the 1992 imagery. Additional outbuildings have been constructed in the rear of the dwelling. No significant changes in surrounding land use are apparent.

The 2017 aerial photo (Figure 10) depicts similar site conditions as the 2002 imagery within the subject property. A residential subdivision is apparent on the adjacent property to the east.

The 2023 aerial photo (Figure 11) depicts similar conditions as the 2017 imagery. No significant changes in surrounding land use are apparent.

The NRCS Soil Mapping (Figure 12) indicates the property is underlain with excessively drained Runclint loamy sand (RuB) in the western portion of the property. Poorly drained Askecksy loamy sand (AsA) is mapped in the eastern portion of the property.

Field Investigation

Watershed Eco LLC., conducted a field investigation on February 20, 2024. The purpose of the investigation was to conduct a wetland delineation within the subject property.

These investigations consisted of a visual review of the entire site with special attention paid to vegetative communities and topography. The wetland boundary was walked, and wetland boundaries were flagged in the field and locations noted using handheld global positioning systems (GPS). Wetland flags were located by GPS during the field investigation and plotted on the attached plans.

Vegetation was identified using delineator experience and confirmed using field guides for the following strata:

> ***Trees*** woody plants 6 meters or more in height and 7.6 centimeters or larger in diameter at breast height.

Saplings woody plants 6 meters or more in height and less than 7.6 centimeters in diameter at breast height.

Shrubs woody plants 1 to 6 meters in height.

Herbs all herbaceous plants regardless of size and woody plants less than 1 meter in height.

Woody Vines all woody vines regardless of height.

The indicator status for each dominant species was recorded based on the USACE 2018 Atlantic, Gulf and Coastal Plain Region Plant List.

Soil borings were advanced to an approximate depth of 20 inches using a 3-inch diameter Dutch auger. Soil colors were visually estimated using a Munsell Soil Color Chart and texture was estimated using standard soil texture criteria. Soil characteristics were compared to the Hydric Soil Indicator Guide in order to identify whether hydric soils were present at each data point location.

Wetland hydrology characteristics were visually observed where present based on the USACE Wetland Delineation Manual and Regional Supplement. No additional hydrology studies were performed at the site (ie. Piezometers, Observation Wells or Modeling) and potential wetland hydrology was based on observations on the day of the field investigation and professional experience. Based on the U.S. Army Corps of Engineers Antecedent Precipitation Tool, hydrologic conditions were wetter than normal at the time of the field investigation.

Results

Palustrine forested wetlands were observed in the northeastern and southeastern portions of the subject property. These wetlands abut an ephemeral drainage ditch along the eastern property boundary which drains off-site to the south. An open water drainage ditch was observed in the northeastern portion of the property which appears to drain to the north into Beach Cove and Indian River Bay. These wetlands and waters would be classified as Section 404 wetlands regulated by U.S. Army Corps of Engineers. The flagging placed in the field represents the outer boundary of these resources.

The subject property consists of a residential dwelling with outbuildings surrounded by maintained lawn areas. Wooded areas were observed in the northeast and southeast. Hedgerows form the eastern and southern property boundaries.

Representative photographs of the site and flagged areas are included in this report.

Based on the U.S. Army Corps of Engineers Antecedent Precipitation Tool, hydrology conditions were wetter than normal at the time of the site investigation.

Jurisdiction

Federal Jurisdiction – WOTUS

The wetlands flagged on the site were assumed to be WOTUS up to the OHWM or to the edge of adjacent wetlands.

The limits of wetlands flagged represent the upper limit of wetlands and waters and in most cases the Section 404 wetlands line. The U.S. Army Corps of Engineers should be consulted prior to any impacts of these aquatic resources.

State Jurisdiction – Subaqueous Lands

No areas that would qualify as Subaqueous Lands regulated by DNREC were observed within the subject property.

Conclusions

All opinions are to a reasonable degree of scientific certainty.

It is the opinion of Watershed Eco, LLC., that federally jurisdictional palustrine forested wetlands are in the northeastern and southeastern portions of the subject property. These wetlands appear to have a direct surface connection to an unnamed tributary to Fresh Pond and Indian River Bay and would be regulated as Section 404 wetlands. An open water drainage ditch was observed in the northeastern portion of the property which appears to drain off-site to the north into Beach Cove and Indian River Bay. The U.S. Army Corps of Engineers Philadelphia District should be consulted prior to any impacts to any wetlands or waters mapped within the subject property.

The unnamed ephemeral drainage ditch along the eastern boundary and the open water ditch in the northeastern portion of the property would not qualify as Subaqueous Lands regulated by DNREC.

The mapped wetlands can be found on the attached map prepared by Watershed Eco, LLC (Figure 13). Jurisdictional limits can only be determined by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Department of Agriculture and the State of Delaware, Wetlands and Subaqueous Lands Branch.

Figures

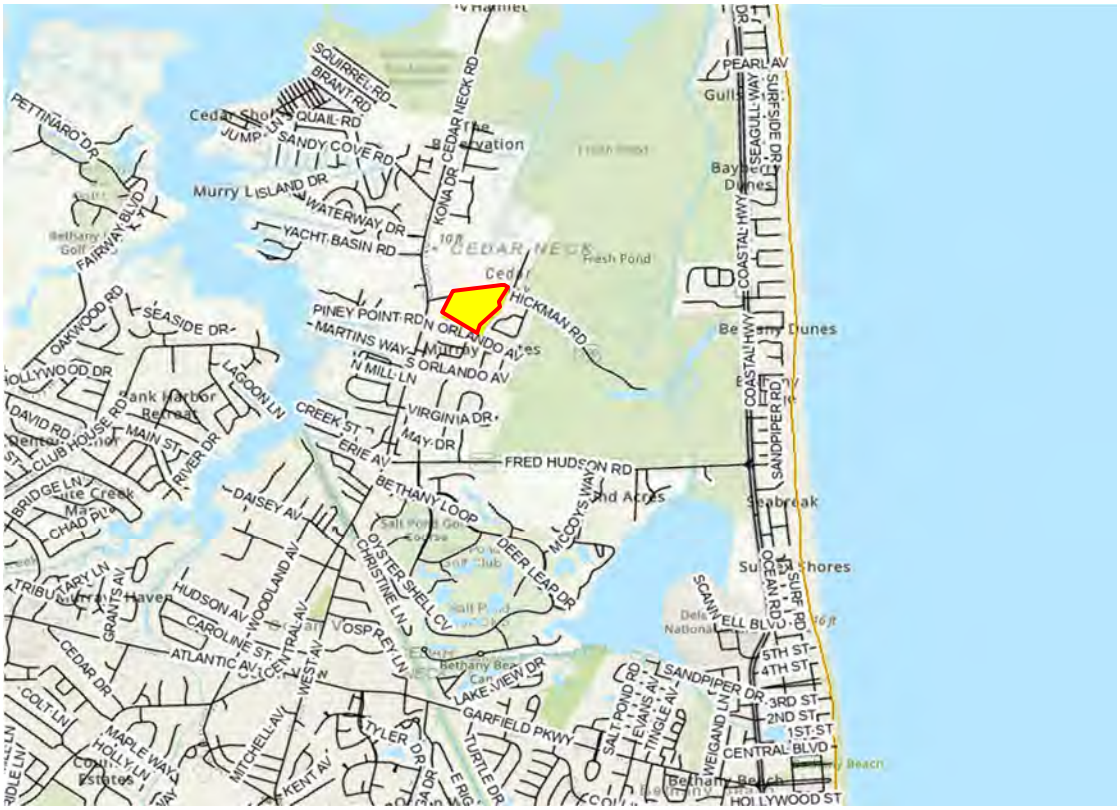


Figure 1: Location Map

Figure 2: National Wetland Inventory Map.

Figure 3: USGS Mapping.

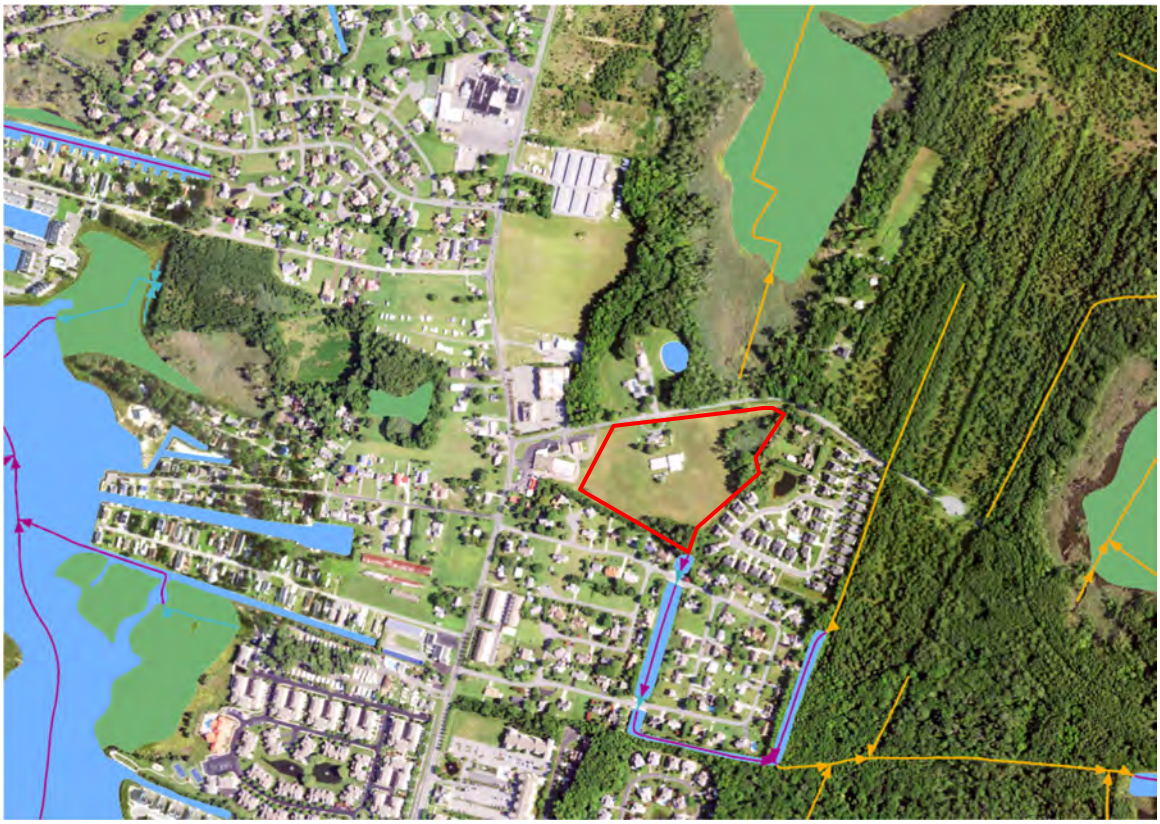


Figure 4: NHD Map.

Figure 5: 1937 Aerial Photograph.

Figure 6: 1954 Aerial Photograph

Figure 7: 1968 Aerial Photograph.

Figure 8: 1992 Aerial Photograph.

Figure 9: 2002 Aerial Photograph.

Figure 10: 2017 Aerial Photograph.

Figure 11: 2023 Aerial Photograph

Figure 12: USDA Soil Survey Map.

Figure 13: Wetland Delineation Map

Credentials

James C. McCulley IV

Senior Professional Wetland Scientist, P.W.S. (#000471)

Education:

- B.A. Biology, Rutgers University
- M.S. Biology, Rutgers University
- Wetland Sedges, Grasses and Rushes, The Swamp School
- Hydric Soils Indicators, The Swamp School
- Wetland Ferns, The Swamp School
- Wetland Delineation, Rutgers Continuing Education
- Wetland Hydrology, Rutgers Continuing Education
- Wetland Regulation, Corps of Engineers Training Program

Topics Presented:

- Presented Wetland Rules, Regulations and Policies, Delaware State Bar
- Presented Wetlands Rules, Regulations and Policies, Pennsylvania State Bar
- Presented Wetland Rules, Regulations and Policies, Maryland Architects
- Presented Environmental Rule Changes, Homebuilders Association of Delaware
- Chaired Panel Discussion at Annual Meeting of Society of Wetland Scientists (SWS)
- Presented on No Net Loss at Association of State Wetland Managers Meeting
- Presented on Wetlands Legislation to Environmental Law Institute
- Presented on Wetland Delineation at State Parks Managers Meeting
- Part of Panel to present NAS findings to Congress on Wetlands Legislation
- Treatment of Storm Water Run-Off by Wetlands to SWS Annual Meeting

Committees:

- State of Delaware, Wetlands Advisory Committee
- National Association of Homebuilders, Environmental Issues Committee
- National Association of Homebuilders, Land Use Policy Committee
- Homebuilders Association of Delaware, Life Director
- National Academy of Sciences Wetlands Characterization Committee
- State of Delaware, Freshwater Wetlands Legislation Committee
- New Castle County Comprehensive Plan Update
- New Castle County, Riparian Buffer Ordinance Committee
- Board of Directors, Homebuilders Association of Delaware

Publications:

- Wetlands: Characteristics and Boundaries, National Academy of Sciences Press
- Integrated Natural Resource Management Plan, PAX Naval Air Station

Community:

- Mentored Honors Biology Program at Glasgow High School
- Curriculum Development Committee for Hodgson Vo-Tech (HVT), Environmental Landscape Technology Program
- Graded Senior Projects for HVT, Environmental Program
- Assisted Talley Middle School with Artificial Wetland Creation Project
- Donated Plants for Brader Elementary School, Wetland Creation Project
- Donated Plants for Ohio State University Wetland Creation Project
- Presented Career Opportunities to Sussex Vo-Tech Environmental Program
- Donated Numerous Environmental Studies for Habitat for Humanity Projects

Selected Projects:

Firefly Music Festival Dover, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting and Wetland Mitigation Design for the 2012, 2013, 2014 and 2015 festivals. The festival has grown every year and has required increased impacts in wetlands to accommodate the larger crowds and safe access. Permitting was always on a short time frame for this project.

Breakwater Beach Bethany Beach, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting. For 30 years the property owner attempted to get approval to build the final eight homes on the beach but couldn't get the Corps of Engineer approvals. Watershed Eco, through creative design implementation, secured approval to construct these homes.

Peninsula Millsboro, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Wetland Permitting, Wetland Mitigation Design, Submerged Aquatic Vegetation Study, Fisheries Study, Forest Delineation and Assessment, Water Quality Monitoring and Environmental Features Construction Oversight.

The Reserves Ocean View, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Ditch Characterization, Wetland Permitting, Wetland Mitigation Design and Delmarva Fox Squirrel Habitat Study.

Warrington Property/Oak Creek Rehoboth, Delaware

Provided Wetland Delineation, Jurisdictional Determination, Successful Appeal of JD for Isolated Wetlands, Revision to State Tidal Mapping and Consultation on Storm Water BMPs.

Shipyard Shops Wilmington, Delaware

Provided Wetland Delineation, Jurisdictional Determination and Wetland Permitting.

Delaware Outdoor Advertising - Wilmington, Delaware

Provided Violation Resolution with the Corps of Engineers and the State for Billboards along I-95, Design of Wetland Mitigation, Construction Oversight and Wetland Mitigation Monitoring.

Townsend Station Townsend, Delaware

Provided Violation Resolution with the Corps of Engineers for Illegal Wetland Fills, Design of Restoration and Mitigation Plans, Construction Oversight and Monitoring of Wetland Areas.

State Route 1, Phase II, Scott Run to Smyrna Delaware

Provided Wetland Delineation, Jurisdictional Determination, Habitat Studies, Wetland Permitting, Wetland Mitigation Design, Construction Oversight, Wetland Mitigation Area Monitoring.

Photographs

Maintained lawn area in the western portion of the property, looking northwest.

Maintained lawn area in the eastern portion of the property, looking southeast.

Existing dwelling in the central portion of the property.

Forested wetland in the northeastern portion of the property.

Maintained lawn area surrounding outbuildings located southeast of the dwelling.

View looking west at open water ditch bordering Hickman Road in the northeast.

Ponded water within forested wetland in the northeastern portion of the property.

Ephemeral drainage ditch along the eastern property boundary, looking south.

Appendices

Foxlane-Mullens Property, Hickman Road, Ocean View, DE

Wetland Delineation Map_2.20.2024

Legend

- Ephemeral Swale
- Flag ID#
- Property Boundary
- Wetland Boundary

Hickman Rd

Hickman Rd

Hickman Rd

Fresh Pond Dr

Fresh Pond Dr

Fresh Pond Dr

N Orlando Ave

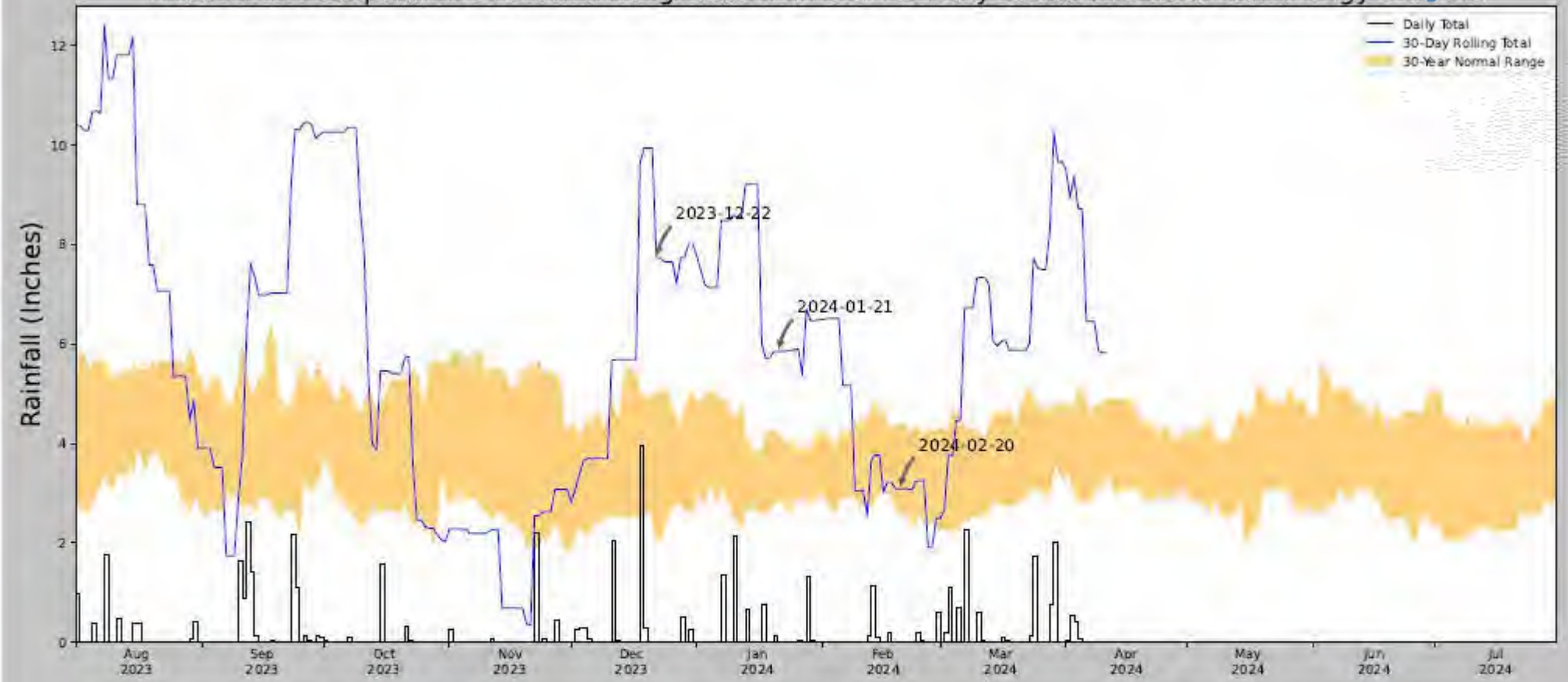
N Orlando Ave

Google Earth

400 ft

N

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	38.564602, -75.078353
Observation Date	2024-02-20
Elevation (ft)	9.163
Drought Index (PDSI)	Mild wetness
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-02-20	2.649606	4.347244	3.082677	Normal	2	3	6
2024-01-21	2.821654	4.201181	5.850394	Wet	3	2	6
2023-12-22	2.042913	4.959843	7.72441	Wet	3	1	3
Result							Wetter than Normal - 15

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BISHOPVILLE 3.1 E	38.4466, -75.134	2.953	8.691	6.21	3.965	5913	90
SELBYVILLE 7.1 E	38.4612, -75.0893	0.984	2.621	1.969	1.185	22	0
BERLIN 5.9 NNE	38.3971, -75.161	17.06	3.719	14.107	1.726	1	0
OCEAN CITY MUNI AP	38.3092, -75.1233	5.906	9.511	2.953	4.308	2845	0
SNOW HILL 4 N	38.2317, -75.3761	29.856	19.814	26.903	9.449	2571	0

Foxlane-Mullens Property, Hickman Road, Ocean View, DE

Data Point Location Map

Legend

- Data Point Location
- Ephemeral Swale
- Flag ID#
- Property Boundary
- Wetland Boundary

Hickman Rd

Hickman Rd

Hickman Rd

UPL-1

WET-1

UPL-3

UPL-2

WET-2

David St

Fresh Pond Dr

Fresh Pond Dr

Fresh P

Google Earth

200 ft

N

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Mullens Property City/County: Ocean View, Sussex Sampling Date: 2/20/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.565169 Long: -75.076413 Datum: NAD 83

Soil Map Unit Name: Askecksy loamy sand (AsA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Old field area in the northeastern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation. Area appears to sheetflow to wetland to the south.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: UPL-1

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: ____ 20% of total cover: ____			
Sapling Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: ____ 20% of total cover: ____			
Shrub Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
	0 = Total Cover		
50% of total cover: ____ 20% of total cover: ____			
Herb Stratum (Plot size: 30 ft)			
1. *Apocynum canabinum*	30	yes	FACU
2. *Dactylis glomerata*	45	yes	FACU
3. *Phragmites australis*	5	no	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80 = Total Cover		
50% of total cover: 40 20% of total cover: 16			
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: ____ 20% of total cover: ____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: UPL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					sandy loam	
3-9	10YR 5/2	100					sandy loam	
9-20	10YR 5/2	85	10YR 5/4	15	C	M	sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Old field area in the northeastern portion of the property boundary at Datapoint UPL-1.

Soil boring at UPL-1.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Mullens Property City/County: Ocean View, Sussex Sampling Date: 2/20/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: WET-1

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.565-27 Long: -75.076325 Datum: NAD 83

Soil Map Unit Name: Askecksy loamy sand (AsA) NWI classification: PFO1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Forested wetland in the northeastern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ✓	No _____	Depth (inches): 3"	
Water Table Present?	Yes ✓	No _____	Depth (inches): -2"	
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): 0	**Wetland Hydrology Present?** Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Depressional area which receives sheetflow runoff from surrounding uplands.
Area likely intercepts seasonal high groundwater.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: WET-1

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1. *Acer rubrum*	20	yes	FAC
2. *Pinus taeda*	5	yes	FAC
3.			
4.			
5.			
6.			
	25 = Total Cover		
50% of total cover: 12.5	20% of total cover: 5		
Sapling Stratum (Plot size: 30 ft)			
1. *Liquidambar styraciflua*	5	yes	FAC
2. *Ilex opaca*	5	yes	FAC
3.			
4.			
5.			
6.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Shrub Stratum (Plot size: 30 ft)			
1. *Acer rubrum*	5	yes	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		
Herb Stratum (Plot size: 30 ft)			
1. *Phragmites australis*	80	yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80 = Total Cover		
50% of total cover: 40	20% of total cover: 16		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: WET-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	100					sandy loam	saturated
4-10	10YR 5/1	80	10YR 5/6	20	C	M	sandy clay	saturated
9-20	10YR 5/1	80	10YR 5/4	20	C	M	sand	saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

Forested wetland in the northeastern portion of the property at Datapoint WET-1.

Soil boring at WET-1.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Mullens Property City/County: Ocean View, Sussex Sampling Date: 2/20/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.563296 Long: -75.077738 Datum: NAD 83

Soil Map Unit Name: Askecksy loamy sand (AsA) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Wooded upland in the southeastern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation. Area appears to sheet flow to wetland area to the south.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: UPL-2

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	40	yes	FAC
2. *Acer rubrum*	10	no	FAC
3. *Prunus serotina*	10	no	FACU
4.			
5.			
6.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		
Sapling Stratum (Plot size: 30 ft)			
1. *Ilex opaca*	20	yes	FAC
2. *Prunus serotina*	10	yes	FACU
3.			
4.			
5.			
6.			
	30 = Total Cover		
50% of total cover: 15	20% of total cover: 6		
Shrub Stratum (Plot size: 30 ft)			
1. *Pyrus calleryana*	10	no	NI
2. *Liquidambar styraciflua*	10	no	FAC
3. *Pinus taeda*	5	no	FAC
4. *Smilax rotundofolia*	40	yes	FAC
5.			
6.			
	65 = Total Cover		
50% of total cover: 32.5	20% of total cover: 13		
Herb Stratum (Plot size: 30 ft)			
1. *Lonicera japonica*	20	yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ___ No ✓

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: UPL-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					sand	
3-10	10YR 4/3	100					sand	
10-20	10YR 5/4	100					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Forested upland in the southeastern portion of the property at Datapoint UPL-2.

Soil profile at UPL-2.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Mullens Property City/County: Ocean View, Sussex Sampling Date: 2/20/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: WET-2

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR T Lat: 38.563084 Long: -75.077783 Datum: NAD 83

Soil Map Unit Name: Askecksy loamy sand (AsA) NWI classification: PFO1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Forested wetland in the southeastern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes ✓	No _____	Depth (inches): -4"
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): -4

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Depressional area which receives sheetflow runoff from surrounding uplands.
Area likely intercepts seasonal high groundwater and drains southerly to off-site pond.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: WET-2

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1. *Acer rubrum*	30	yes	FAC
2. *Liquidambar styraciflua*	15	yes	FAC
3.			
4.			
5.			
6.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Sapling Stratum (Plot size: 30 ft)			
1. *Liquidambar styraciflua*	10	yes	FAC
2. *Ilex opaca*	5	yes	FAC
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Shrub Stratum (Plot size: 30 ft)			
1. *Ilex opaca*	10	yes	FAC
2. *Smilax rotundofolia*	10	yes	FAC
3.			
4.			
5.			
6.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Herb Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: WET-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100					sandy loam	saturated at -4"
6-20	10YR 4/2	100					sandy loam	saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ✓ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

Forested wetland in the southeastern portion of the property at WET-2.

Soil profile at WET-2.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Mullens Property City/County: Ocean View, Sussex Sampling Date: 2/20/2024

Applicant/Owner: Foxlane Homes Delaware State: DE Sampling Point: UPL-3

Investigator(s): W. Twupack Section, Township, Range: _____

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): 2-5

Subregion (LRR or MLRA): LRR T Lat: 38.563733 Long: -75.079515 Datum: NAD 83

Soil Map Unit Name: Runclint loamy sand (RuB) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Hedgerow in the southwestern portion of the property. Based on the Antecedent Precipitation Tool, hydrological conditions were wetter than normal at the time of the site investigation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators observed at the time of the site investigation.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: UPL-3

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*	20	yes	FACU
2.			
3.			
4.			
5.			
6.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Sapling Stratum (Plot size: 30 ft)			
1. *Sassafras albidum*	5	yes	FACU
2. *Prunus serotina*	5	yes	FACU
3.			
4.			
5.			
6.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Shrub Stratum (Plot size: 30 ft)			
1. *Rosa multiflora*	15	yes	FACU
2. *Sassafras albidum*	5	yes	FACU
3.			
4.			
5.			
6.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Herb Stratum (Plot size: 30 ft)			
1. *Lonicera japonica*	20	yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ___ No ✓

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: UPL-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					sandy loam	
3-8	10YR 4/3	100					sandy loam	
8-20	10YR 4/6	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Organic Bodies (A6) **(LRR P, T, U)**
___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
___ Muck Presence (A8) **(LRR U)**
___ 1 cm Muck (A9) **(LRR P, T)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Coast Prairie Redox (A16) **(MLRA 150A)**
___ Sandy Mucky Mineral (S1) **(LRR O, S)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) **(LRR P, S, T, U)**
___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
___ Thin Dark Surface (S9) **(LRR S, T, U)**
___ Loamy Mucky Mineral (F1) **(LRR O)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) **(LRR U)**
___ Depleted Ochric (F11) **(MLRA 151)**
___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
___ Umbric Surface (F13) **(LRR P, T, U)**
___ Delta Ochric (F17) **(MLRA 151)**
___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRR O)**
___ 2 cm Muck (A10) **(LRR S)**
___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Hedgerow in the southwestern portion of the property at UPL-3.

Soil boring at UPL-3.

United States Department of Agriculture

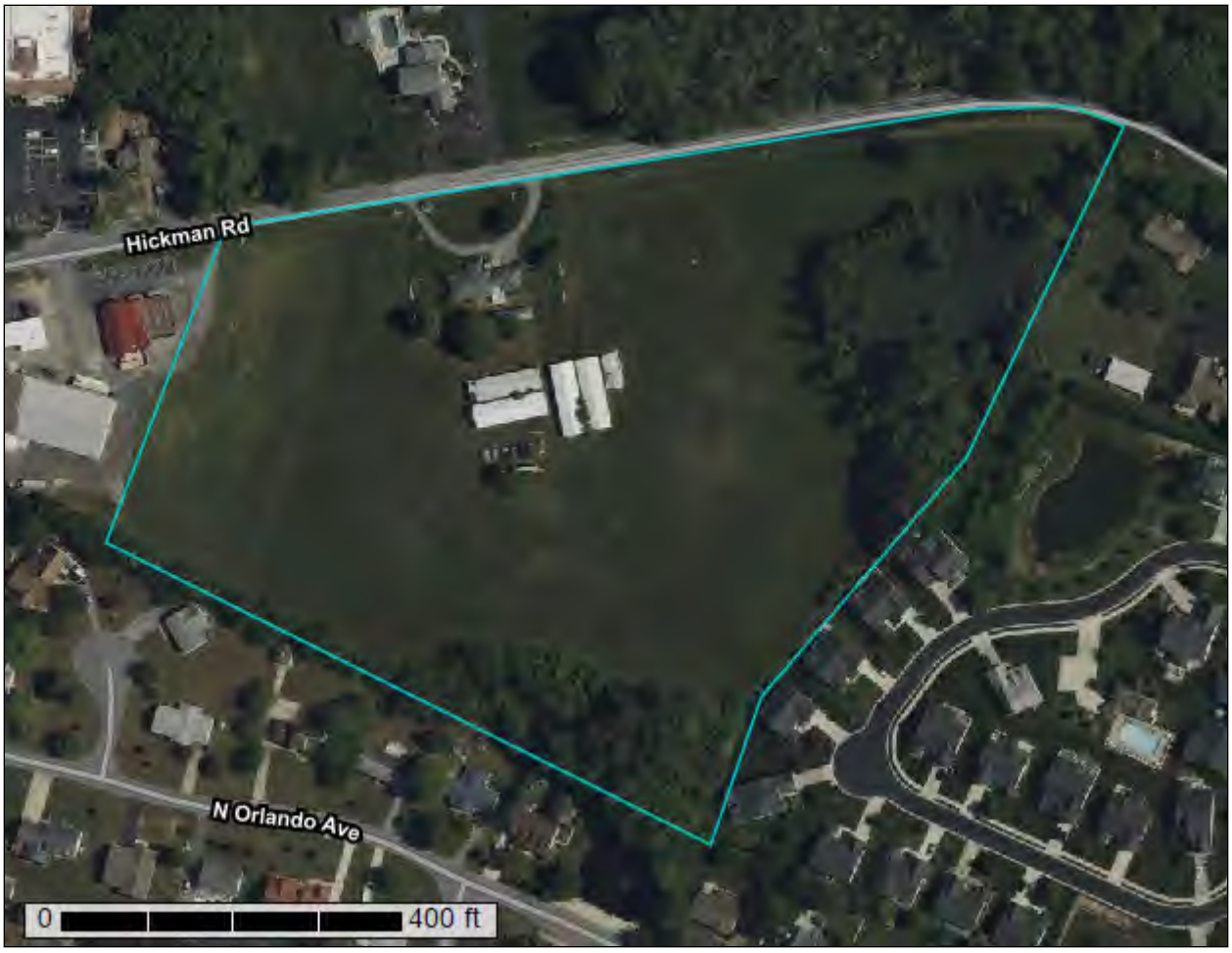
NRCS

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

38492 Hickman Road, Ocean View, DE



February 8, 2024

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

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

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: 1:2,230 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

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 24, Sep 12, 2023

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

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

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
AsA	Askecksy loamy sand, 0 to 2 percent slopes	5.8	42.2%
BuA	Brockatonorton-Urban land complex, 0 to 2 percent slopes	0.0	0.0%
IeB	Ingleside loamy sand, 2 to 5 percent slopes	0.4	3.1%
RuB	Runclint loamy sand, 2 to 5 percent slopes	7.5	54.7%
Totals for Area of Interest		**13.7**	**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 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

AsA—Askecksy loamy sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qtfg
Elevation: 0 to 100 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Askecksy, undrained, and similar soils: 45 percent
Askecksy, drained, and similar soils: 30 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Askecksy, Undrained

Setting

Landform: Drainageways, swales, depressions, flats
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Sandy eolian deposits and/or fluviomarine sediments

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material
A - 3 to 8 inches: loamy sand
Bg - 8 to 21 inches: loamy sand
Cg1 - 21 to 29 inches: sand
Cg2 - 29 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 99.90 in/hr)
Depth to water table: About 0 to 10 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F153DY130MD - Sandy Coastal Plain Swamp
Hydric soil rating: Yes

Description of Askecksy, Drained

Setting

Landform: Swales, depressions, flats
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Sandy eolian deposits and/or fluviomarine sediments

Typical profile

Ap - 0 to 8 inches: loamy sand
Bg - 8 to 21 inches: loamy sand
Cg1 - 21 to 29 inches: sand
Cg2 - 29 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.38 to 99.90 in/hr)
Depth to water table: About 10 to 20 inches
Frequency of flooding: None
Frequency of ponding: Rare
Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Ecological site: F153DY130MD - Sandy Coastal Plain Swamp
Hydric soil rating: Yes

Minor Components

Hurlock, undrained

Percent of map unit: 10 percent
Landform: Depressions, swales, flats
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Mullica, undrained

Percent of map unit: 5 percent
Landform: Swales, drainageways, depressions, flats
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Klej

Percent of map unit: 5 percent
Landform: Depressions, flats
Down-slope shape: Concave, linear

Across-slope shape: Concave, linear
Ecological site: F153DY150NJ - Moist Sandy Upland
Hydric soil rating: No

Galloway

Percent of map unit: 5 percent
Landform: Flats, depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F153DY150NJ - Moist Sandy Upland
Hydric soil rating: No

BuA—Brockatonorton-Urban land complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 1qtfp
Elevation: 0 to 130 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

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

Description of Brockatonorton

Setting

Landform: Back-barrier beaches
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Sandy eolian deposits and/or sandy marine deposits

Typical profile

A - 0 to 3 inches: sand
C - 3 to 24 inches: sand
Cg1 - 24 to 50 inches: sand
Oe - 50 to 60 inches: mucky peat
Cg2 - 60 to 72 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)

Depth to water table: About 24 to 36 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Maximum salinity: Nonsaline to strongly saline (0.0 to 16.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F153DY090MD - Backdune
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Flats

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: Unranked

Minor Components

Udorthents

Percent of map unit: 10 percent
Landform: Flats
Hydric soil rating: No

Beaches

Percent of map unit: 5 percent
Landform: Beaches
Hydric soil rating: Yes

Acquango

Percent of map unit: 3 percent
Landform: Dunes, backshores
Ecological site: R153DY100MD - Foredune
Hydric soil rating: No

Transquaking

Percent of map unit: 2 percent
Landform: Tidal marshes
Ecological site: R153DY060MD - Tidal Salt Marsh
Hydric soil rating: Yes

IeB—Ingleside loamy sand, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1qthc

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: Fluviomarine terraces, depressions, flats
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: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
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): 2e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

Minor Components

Evesboro

Percent of map unit: 5 percent
Landform: Flats, knolls, dunes
Landform position (three-dimensional): Rise
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Woodstown

Percent of map unit: 5 percent
Landform: Swales, depressions, flats

Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Hammonton

Percent of map unit: 5 percent
Landform: Swales, depressions, flats
Ecological site: F149AY130NJ - Moist Loamy Upland
Hydric soil rating: No

Cedartown

Percent of map unit: 5 percent
Landform: Flats
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Downer

Percent of map unit: 5 percent
Landform: Flats
Landform position (three-dimensional): Rise
Ecological site: F153DY160NJ - Well Drained Coarse-Loamy Upland
Hydric soil rating: No

RuB—Runclint loamy sand, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1qtk1
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

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

Description of Runclint

Setting

Landform: Knolls, dunes, fluviomarine terraces, flats
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Sandy eolian deposits and/or fluviomarine sediments

Typical profile

Ap - 0 to 9 inches: loamy sand
E - 9 to 22 inches: sand
Bw - 22 to 39 inches: sand
BC - 39 to 59 inches: sand

2C - 59 to 80 inches: loamy coarse sand

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (0.57 to 19.98 in/hr)
Depth to water table: About 40 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
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
Ecological site: F153DY170NJ - Sandy, Excessively Drained Upland
Hydric soil rating: No

Galloway

Percent of map unit: 5 percent
Landform: Flats, depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F153DY150NJ - Moist Sandy Upland
Hydric soil rating: No

Hurlock, drained

Percent of map unit: 5 percent
Landform: Flats, depressions, swales
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: F149AY090NJ - Coastal Plain Hardwood Swamp
Hydric soil rating: Yes

Klej

Percent of map unit: 5 percent
Landform: Depressions, flats
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: F153DY150NJ - Moist Sandy Upland
Hydric soil rating: No

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Appendix D
Existing Condition Photos

Photograph 1: View of Wetland A facing east.

Photograph 2: View of Wetland B facing east.

Photograph 3: View of Wetland B facing east.

Photograph 4: View of Wetland C facing northeast.

Photograph 5: View of ephemeral drainage facing southwest.

Photograph 6: View of ephemeral drainage facing northeast.

Photograph 7: View of Wetland A Cross Section 1 facing west.

Photograph 8: View of Wetland B Cross Section 1 facing east.

Photograph 9: View of Wetland B Cross Section 2 facing south.

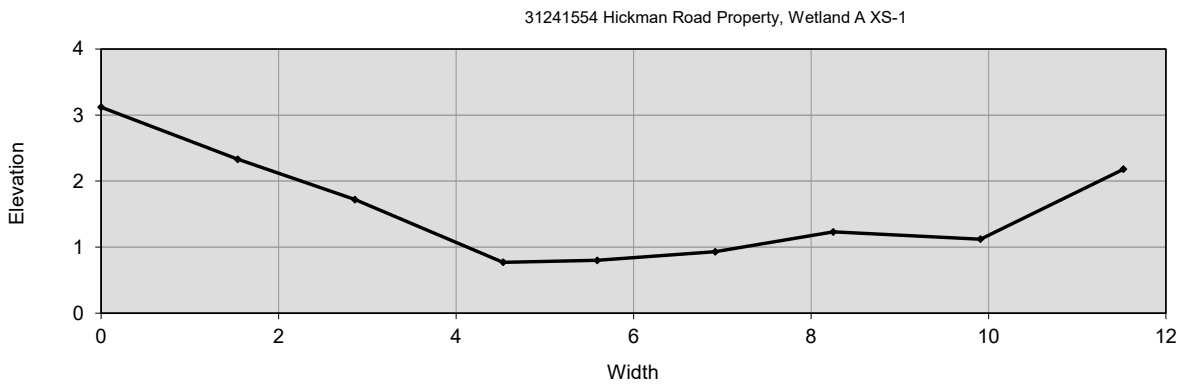
Photograph 10: View of Wetland C Cross Section 1 facing west.

Photograph 11: View of ephemeral drainage Cross Section 1 facing south.

Appendix E
Cross Sections

Wetland A Cross Section 1

Cross Section



Cross Section

reference ID
instrument height ---
longitudinal station ---

Bankfull Stage

FS ---
elevation ---

Low Bank Height

FS ---
elevation

Flood Prone Area

width fpa ---

Channel Slope

percent slope ---

Flow Resistance

Manning's "n" ---
D'Arcy - Weisbach "f" ---

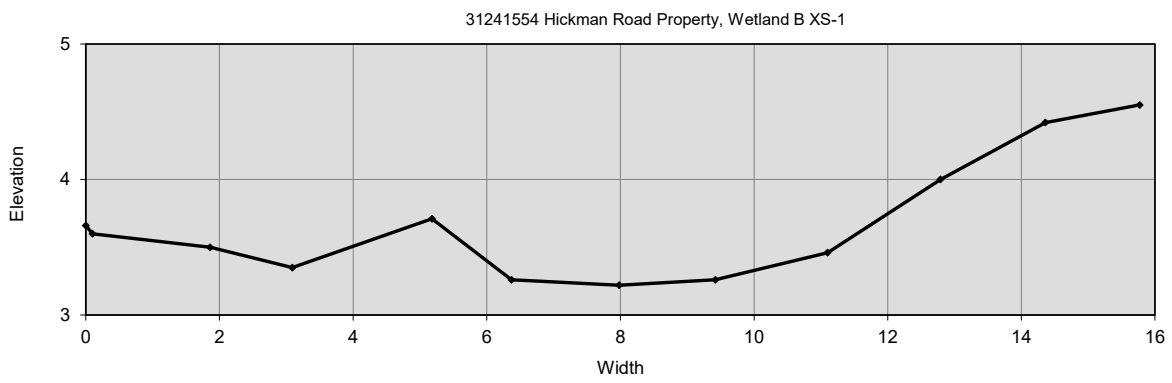
Note:

Wetland A XS-1

Distance (ft)	BS (ft)	HI (ft)	FS (ft)	Elevation (ft)	Omit Bkf	Notes
0		0		3.12		
1.54				2.33		
2.86				1.72		
4.53				0.77		
5.59				0.8		
6.92				0.93		
8.25				1.23		
9.91				1.12		
11.52				2.18		

Wetland B Cross Section 1

Cross Section



Cross Section

reference ID
instrument height ---
longitudinal station ---

Bankfull Stage

FS ---
elevation ---

Low Bank Height

FS ---
elevation

Flood Prone Area

width fpa ---

Channel Slope

percent slope ---

Flow Resistance

Manning's "n" ---
D'Arcy - Weisbach "f" ---

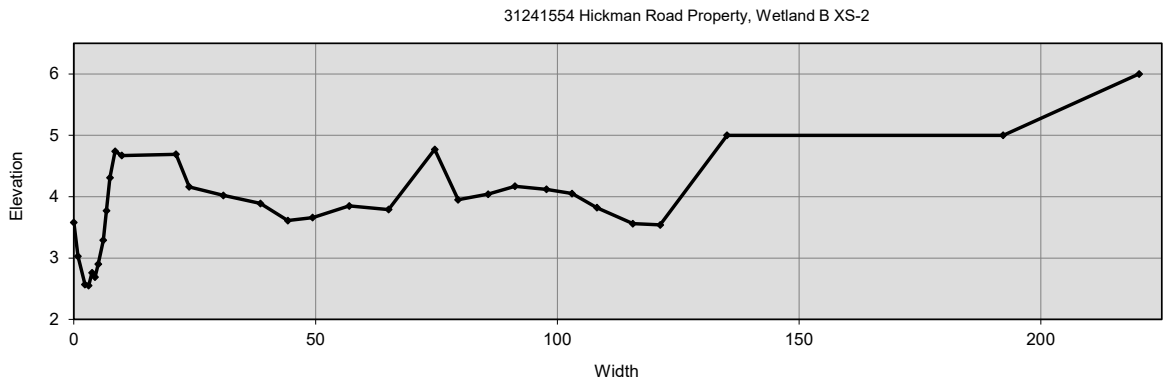
Note:

Wetland B XS-1

Distance (ft)	BS (ft)	HI (ft)	FS (ft)	Elevation (ft)	Omit Bkf	Notes
0		0		3.66		
0.1				3.6		
1.86				3.5		
3.09				3.35		
5.18				3.71		
6.37				3.26		
7.98				3.22		
9.42				3.26		
11.1				3.46		
12.79				4		
14.36				4.42		
15.77				4.55		

Wetland B Cross Section 2

Cross Section



Cross Section

reference ID
instrument height ---
longitudinal station ---

Bankfull Stage

FS ---
elevation ---

Low Bank Height

FS ---
elevation

Flood Prone Area

width fpa ---

Channel Slope

percent slope ---

Flow Resistance

Manning's "n" ---
D'Arcy - Weisbach "f" ---

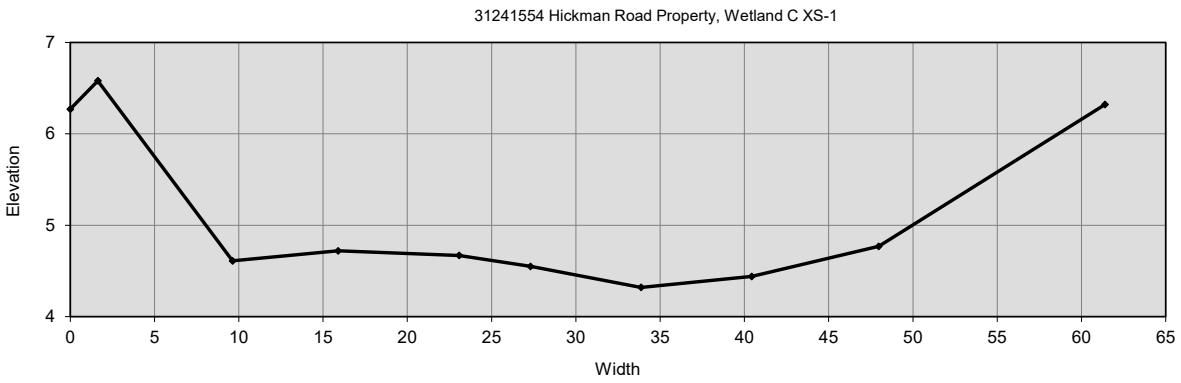
Note:

Wetland B XS-2

Distance (ft)	BS (ft)	HI (ft)	FS (ft)	Elevation (ft)	Omit Bkf	Notes
0		0		3.58		
0.85				3.03		
2.29				2.57		
3.07				2.55		
3.77				2.76		
4.38				2.69		
5.05				2.9		
6.09				3.29		
6.76				3.77		
7.48				4.31		
8.53				4.74		
9.92				4.67		
21.13				4.69		
23.86				4.16		
30.94				4.02		
38.59				3.89		
44.26				3.61		
49.39				3.66		
56.96				3.85		
65.1				3.79		
74.65				4.77		
79.49				3.95		
85.69				4.04		
91.24				4.17		
97.74				4.12		
103.06				4.05		
108.19				3.82		
115.62				3.56		
121.27				3.54		
135.1				5		
192.22				5		
220.31				6		

Wetland C Cross Section 1

Cross Section



Cross Section

reference ID
instrument height ---
longitudinal station ---

Bankfull Stage

FS ---
elevation ---

Low Bank Height

FS ---
elevation

Flood Prone Area

width fpa ---

Channel Slope

percent slope ---

Flow Resistance

Manning's "n" ---
D'Arcy - Weisbach "f" ---

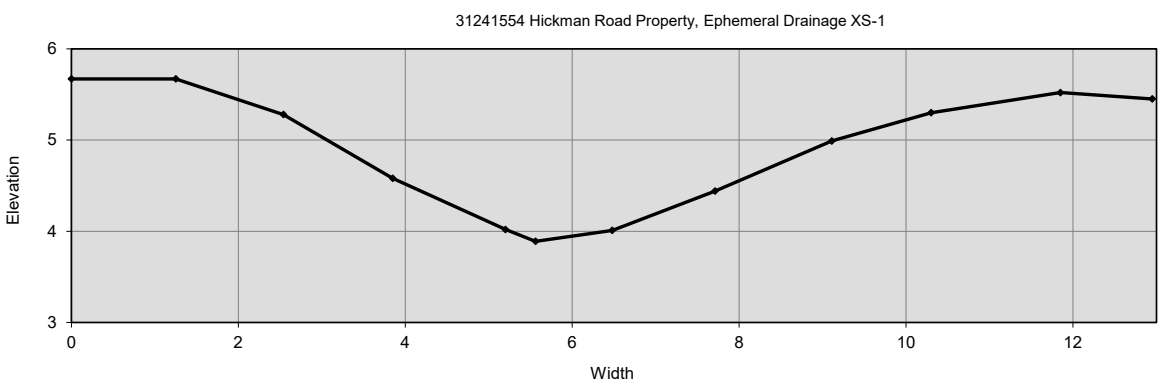
Note:

Wetland C XS-1

Distance (ft)	BS (ft)	HI (ft)	FS (ft)	Elevation (ft)	Omit Bkf	Notes
0		0		6.27	☐	
1.64				6.58	☐	
9.63				4.61	☐	
15.89				4.72	☐	
23.07				4.67	☐	
27.31				4.55	☐	
33.87				4.32	☐	
40.44				4.44	☐	
47.97				4.77	☐	
61.39				6.32	☐	

Ephemeral Drainage Cross Section 1

Cross Section



Cross Section

reference ID
instrument height ---
longitudinal station ---

Bankfull Stage

FS ---
elevation ---

Low Bank Height

FS ---
elevation

Flood Prone Area

width fpa ---

Channel Slope

percent slope ---

Flow Resistance

Manning's "n" ---
D'Arcy - Weisbach "f" ---

Note:

Ephemeral drainage XS-1

Distance (ft)	BS (ft)	HI (ft)	FS (ft)	Elevation (ft)	Omit Bkf	Notes
0		0		5.67		
1.25				5.67		
2.54				5.28		
3.85				4.58		
5.2				4.02		
5.56				3.89		
6.48				4.01		
7.71				4.44		
9.11				4.99		
10.3				5.3		
11.85				5.52		
12.95				5.45		

Appendix F
Drainage Assessment Plan

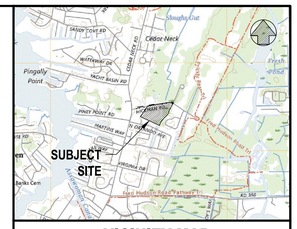
HICKMAN ROAD

WETLAND A
OPEN WATER DRAINAGE DITCH

WETLAND B
NONTIDAL FORESTED WETLAND

EPHEMERAL DRAINAGE (ED)

WETLAND C
NONTIDAL FORESTED WETLAND



VICINITY MAP

SCALE: 1" = 2,000'

UNITED STATES GEOLOGICAL SURVEY, BETHANY BEACH, DE QUADRANGLE, 7.5 MINUTE TOPOGRAPHIC MAP SERIES, DATED 2023.

GENERAL INFORMATION

1. PLAN PREPARED FOR: FOXLANE HOMES DELAWARE
   32191 NASSAU ROAD #2
   LEWES, DELAWARE 19958
   ATTN: JOHN MURRAY

2. PLAN PREPARED BY: GEO-TECHNOLOGY ASSOCIATES, INC. (GTA)
   3445-A BOX HILL CORPORATE CENTER DRIVE
   ABINGDON, MARYLAND 21009.
   ATTN: MS. KIMBERLEY MCNEW

   PHONE: 410-515-9446
   EMAIL: KMCNEW@GTAENG.COM

3. THE SUBJECT SITE ENCOMPASSES APPROXIMATELY 12.86 ACRES AND IS LOCATED AT 38492 HICKMAN ROAD IN THE OCEAN VIEW AREA OF SUSSEX COUNTY, DELAWARE. THE SUBJECT SITE IS IDENTIFIED AS TAX PARCEL 134-9.00-28.00.

4. THIS PLAN WAS PRODUCED ON A BASE MAP PROVIDED BY SOLUTIONS IPEM, LLC. EXISTING TOPOGRAPHIC INFORMATION SHOWN HEREON WAS PROVIDED BY SOLUTIONS IPEM, LLC AND SUSSEX COUNTY GIS.

5. THE LIMITS OF 100-YEAR FLOODPLAIN SHOWN HEREON ARE PER FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 10005C0504K, EFFECTIVE MARCH 16, 2015.

6. A WETLAND DELINEATION OF THE SUBJECT SITE WAS PERFORMED BY WATERSHED ECO, LLC IN APRIL 2024. WETLAND FLAG LOCATIONS WITHIN THE SUBJECT SITE WERE SURVEY LOCATED BY SOLUTIONS IPEM, LLC.

7. GTA PERFORMED A DRAINAGE ASSESSMENT IN JULY 2024 TO REVIEW EXISTING DRAINAGE CONVEYANCES WITHIN THE SUBJECT SITE TO EVALUATE THEIR CONDITION AND IDENTIFY IMPEDIMENTS IN GENERAL ACCORDANCE WITH THE CODE OF SUSSEX COUNTY, CHAPTER 115, ARTICLE XXV §115-193. CROSS SECTIONS OF EXISTING DRAINAGE CONVEYANCES WERE SURVEY-LOCATED BY SOLUTIONS IPEM, LLC IN JULY 2024.

8. GTA'S CONCLUSIONS REGARDING THIS SITE HAVE BEEN BASED ON OBSERVATIONS OF EXISTING CONDITIONS, PROFESSIONAL EXPERIENCE, AND GENERALLY ACCEPTED PROFESSIONAL ENVIRONMENTAL PRACTICE UNDER SIMILAR CIRCUMSTANCES. SEASONAL VEGETATION CYCLES AND FLUCTUATIONS IN PRECIPITATION OR WEATHER CONDITIONS CAN RESULT IN DIFFERENCES IN THE PERCEPTION OF HYDROLOGIC CONDITIONS AND THE PRESENCE OF PREDOMINANTLY HYDROPHYTIC VEGETATION, WHICH CAN ALTER GTA'S EVALUATION OF WETLANDS/WATERBODIES.

9. IT IS IMPORTANT TO NOTE THAT THIS EVALUATION IS GTA'S PROFESSIONAL OPINION, ONLY. DECISIONS REGARDING THE OFFICIAL JURISDICTIONAL STATUS OF WETLANDS/WATERBODIES ARE MADE BY FEDERAL, STATE, AND/OR LOCAL REGULATORY AGENCIES.

10. THIS PLAN WAS PREPARED BY GTA FOR THE SOLE AND EXCLUSIVE USE OF FOXLANE HOMES DELAWARE. ANY REPRODUCTION OF THIS PLAN BY ANY OTHER PERSON WITHOUT THE EXPRESSED WRITTEN PERMISSION OF GTA AND FOXLANE HOMES DELAWARE IS UNAUTHORIZED, AND SUCH USE IS AT THE SOLE RISK OF THE USER.

LEGEND

- EX. SUBJECT SITE
- EX. PROPERTY BOUNDARY
- EX. 1-FOOT CONTOUR
- EX. 5-FOOT CONTOUR
- EX. BUILDING
- EX. EDGE OF PAVEMENT
- EX. SOIL BOUNDARY
- EX. NONTIDAL WETLAND
- EX. FEMA 100-YEAR FLOODPLAIN
- EX. WOOD LINE
- EX. CULVERT
- EX. EPHEMERAL DRAINAGE
- EX. EASEMENT
- DRAINAGE ASSESSMENT CROSS SECTION
- NUMBERED PHOTOGRAPH LOCATION

SOILS CHART

SYMBOL[1]	NAME/DESCRIPTION[1]	HYDRIC SOIL[2]	HYDRIC COMPONENT[2]	PERCENTAGE OF MAPPING UNIT[2]	POSITION IN LANDSCAPE[2]
AsA	ASKECKSY LOAMY SAND, 0-2% SLOPES	YES	HURLOCK, UNDRAINED	10	DEPRESSIONS, SWALES, FLATS
			MULLICA, UNDRAINED	5	SWALES, DRAINAGEWAYS, DEPRESSIONS FLATS
IeB	INGLESIDE LOAMY SAND, 2-5% SLOPES	NO	-	-	-
RuB	RUNCLINT LOAMY SAND, 2-5% SLOPES	YES	HURLOCK, DRAINED	5	FLATS, DEPRESSIONS, SWALES

1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, SUSSEX COUNTY, DELAWARE, SOIL SURVEY DATA VERSION 24, DATED SEPTEMBER 12, 2023.
2. HYDRIC SOILS INFORMATION AVAILABLE FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE SOIL DATA ACCESS HYDRIC SOILS LIST, ACCESSED JULY 22, 2024.

SCALE: 1"=30'

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
3445-A BOX HILL CORPORATE CENTER DRIVE
ABINGDON, MARYLAND 21009
410-515-9446
FAX: 410-515-8895
WWW.GTAENG.COM

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DRAINAGE ASSESSMENT PLAN

HICKMAN ROAD PROPERTY

SUSSEX COUNTY, DELAWARE

REVISIONS:

JOB NO:	31241554
SCALE:	1"=30'
DATE:	JULY 30, 2024
DRAWN BY:	BCW
DESIGN BY:	
REVIEW BY:	MAJTAS
SHEET:	1 OF 1

L:\SHARED\PROJECT FILES\2024\31241554 - HICKMAN ROAD PROPERTY\ATTACHMENTS\CIVIL\31241554 EXCIVL.DWG

Cemetery Study and Delineation
Rickards Family Cemetery (CRS S12549)
Baltimore Hundred, Sussex County, Delaware

February 2, 2024

Prepared for:
Foxlane Homes
28107 Beaver Dam Branch Road
Laurel, Delaware 19956

By: Edward Otter, Ph.D.
Submitted by Edward Otter, Inc.
1704 Camden Avenue
Salisbury, MD 21801

Abstract

Edward Otter, Inc. was contracted by Foxlane Homes to conduct a cemetery study and delineation before the development of Sussex County, Delaware Parcel 134-9.00-28. A cemetery is known to exist on the property and is recorded with Delaware CHRIS as Cultural Resource Survey (CRS) S12549. Delaware Title 7 Chapter 54 provides protection for unmarked human burials and human skeletal remains within the state. Therefore, before development moves forward, it is prudent to determine the extent of the cemetery. Based on the earliest inscribed grave marker, the cemetery was established by 1851. Records accessed during archival study did not mention the cemetery or any exclusion to sale.

The area to avoid during development measures 80 feet by 70 feet. This area was staked and should be added to engineering plans. The developer plans to preserve the cemetery in place. Mechanical clearing of the wooded area is not recommended to avoid accidentally disturbing human remains. Herbicides can be used to manage overgrowth if needed. Consideration of an ingress easement for descendant visitation should be part of the development plan.

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INTRODUCTION

Edward Otter, Inc. was contracted by Foxlane Homes to conduct a cemetery study and delineation before the planning and development of Sussex County, Delaware Parcel 134-9.00-28. A cemetery is known to exist on the property and is recorded with Delaware CHRIS as CRS S12549. Delaware Title 7 Chapter 54 provides protection for unmarked human burials and skeletal remains within the state. It is prudent to determine the extent of the cemetery. The developer intends to preserve the cemetery in place and protect it from any impacts during development.

Parcel 533-1.00-38.00 is located south of Hickman Road east Cedar Neck Road and west of Freshpond. This is within Ocean View, Baltimore Hundred, Sussex County Delaware (Figure 1). The cemetery location is Latitude 38.563298°, Longitude -75.078267° (Figure 2).

The cemetery is on an elevated ridge with agricultural field to the north and a housing development to the south. Elevation in the field is eight feet above mean sea level. The highest land in the cemetery is at 12 feet. This lies within the Atlantic Coastal Plain Soils within the project location are identified as Askecksy Loamy Sand 0 to 2 percent slopes (AsA) and Runclint loamy sand 2 to 5 percent slope (RuB) (Websoilsurvey). The cemetery has been recorded with Delaware Division of Historical and Cultural Affairs (DHCA) as the Rickards Family Cemetery (CRS S12549).

Scope of Work

The goals of this study are to determine the extent of the cemetery located on 134-9.00-28 and to verify cemetery ownership. Archival research and cemetery delineation are components of this project.

During archival research, records for the property are examined for indications of past land use and habitation but particularly for previous exclusions from sale. The records examined include land deeds, wills and probate, Orphans' Court documents, Chancery Court cases, census enumerations, birth, marriage, and burial records. Historical maps and aerial photographs are studied as part of this work. Delaware DHCA CHRIS, Tatnall records, and Find a Grave are consulted to determine whether the cemetery has been previously studied.

Cemetery delineation seeks to determine the extent of the cemetery, not necessarily how many burials exist within it. A mini-excavator with a clean-out bucket is utilized to carefully scrape topsoil to a depth where grave shafts will be observable if they exist. Excavated surfaces are then more finely cleaned using flat shovels and trowels. If graves are found, work continues twenty-five feet past any burials until no more burials are found. A metal probe is used to locate brick crypts and vaults, subsurface gravestones, and other potential features. Positive probe tests are flagged and mapped. No human burials are uncovered or otherwise disturbed during this work.

When the delineation is completed, a scaled map is drawn indicating the extent of the cemetery as well as cemetery feature locations. The scaled map can later be utilized by project engineers and the cemetery can be added to project maps and plans to be sure the area is avoided and there are no impacts to the cemetery during development.

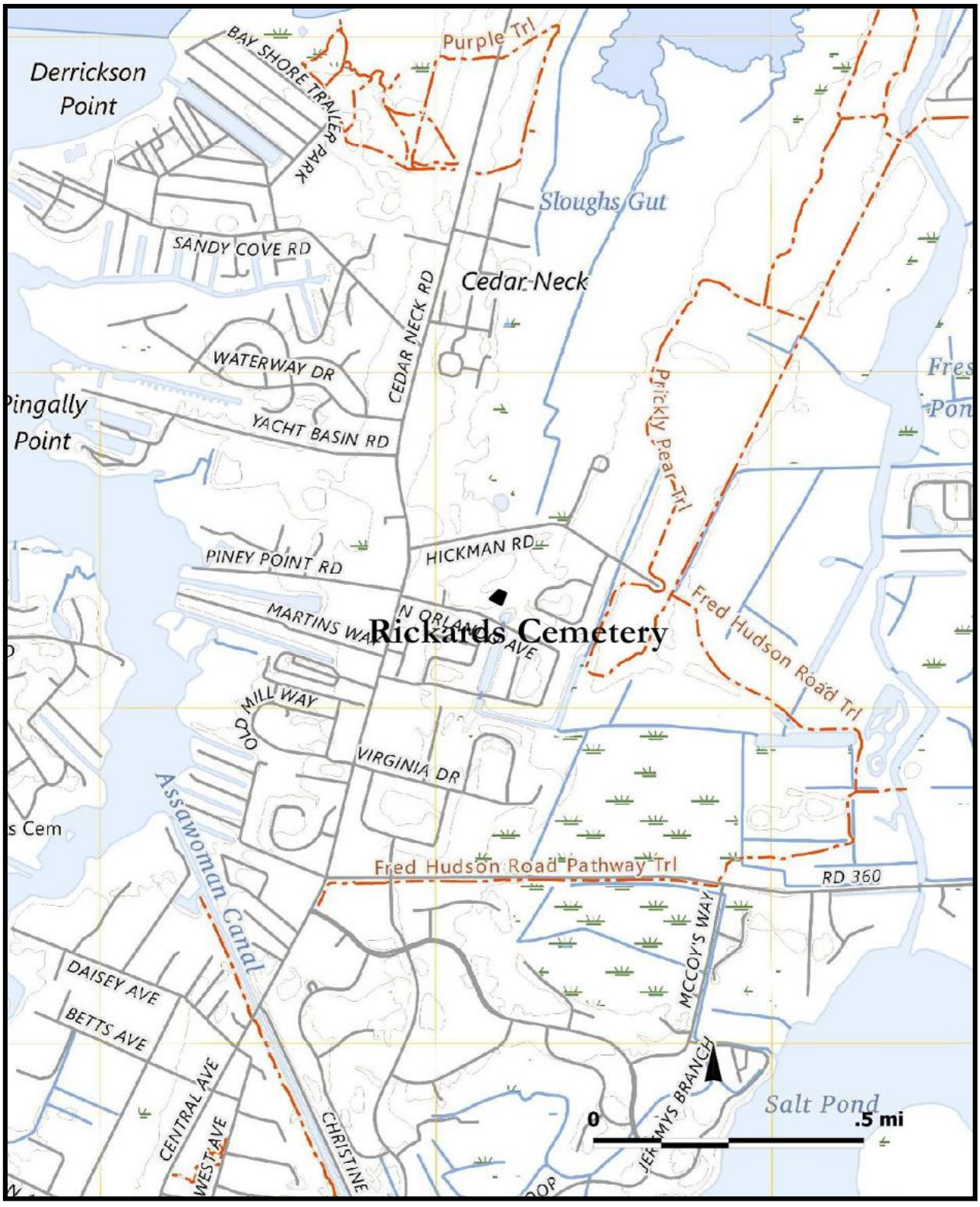

Figure 1. Project Location (USGS Topographic Map Frankford Quadrangle 2023)

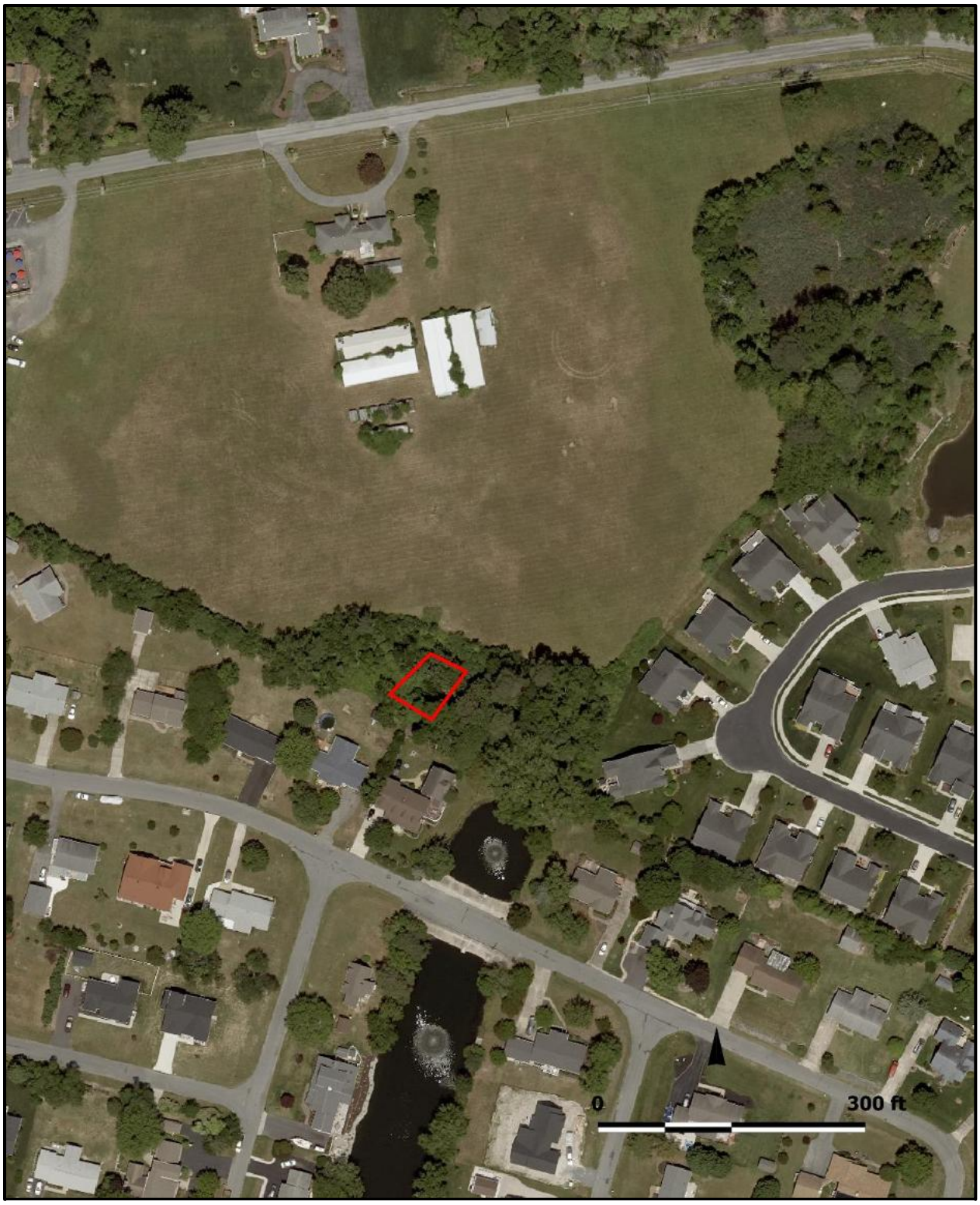

Figure 2. Project Location (NAIP 2023)

ARCHIVAL RESEARCH

Archival research was conducted at Delaware Public Archives as well as online via Sussex County Recorder of Deeds website, DE DHCA CHRIS, Ancestry.com, FamilySearch.com, Newspapers.com, and Findagrave.com.

Previous Study

The cemetery was previously mapped on DE DHCA CHRIS and has been designated CRS S12549, Cemetery. Currently there is a find-a-grave listing for the cemetery (ID 2517326) and the cemetery was mapped by Tatnall circa 1930 and is recorded as "Richards Graveyard (Page 185). Tatnall observed four gravestones in the Rickard Graveyard

Lemuel W. Capt	b Nov 6, 1805	d Jan 24, 1885
Mary W. his wife	b Dec 9, 1824	d Feb 12, 1868
Sarah Ann, Dau	age 3-11-23	d Feb 23, 1847
Lemuel W.	b Oct 5, 1838	d Aug 8, 1899

Chain of Title and Land History

A history of land ownership was constructed by following land transfers back into the past beginning with the current owners, Double H Development, who purchased the 27.84-acre parcel from Andrew J. and Donna Lee Cress in September of 2023 (Deed 5968/295). The history of the land is presented chronologically as follows.

Prior to 1847 the land was owned by members of the Wharton Family. William Wharton sold the property to Joseph D. Allen (53/107). Joseph Allen was sued for a debt and the land was sold to Benjamin Burton at Sherif's sale (61/173). This sale was completed in 1854.

Captain Lemuel Rickards bought the land in 1857 from Benjamin Burton. It appears that the Captain had some form of access to the land prior to that date as the first burial, for his daughter, Sarah, is dated 1851. The Pomeroy & Beers Map of 1868 shows Capt L. W. Rickets living on the west side of Cedar Neck Road, the cemetery is east of that road (Figure 3). Lemuel sold the land to his son, John, in 1876. At that time the parcel included 60 acres. John sold the 60 acres to his brother Archibald but in 1879 Archibald sold 27 acres back to John. The 1889 Coast and Geodetic Survey map does not show the cemetery (Figure 4).

John Rickards sold five acres to George Gray in 1893 (117/488) and 10 acres to Charels Evans in 1896 (123/551). In 1906, Charles Evans bought George Gray's five acres (204/153). The cemetery can be identified on aerial photography from 1926 (Figure 5), 1936 (Figure 6) and 1941 (Figure 7). The 15 acres was then sold to Harriet Berger in 1942 (365/151) and then to John Hudson in 1946 (358/588). Hudson sold it to Irvin Short in 1949 (385/228) who then sold it to Richard Timmons in 1951 (406/52). Timmons sold to Ascher Hearn just four months later (407/262) and Hearn sold to Lloyd Hickman in 1963 (556/496). Dollie Hickman, trustee for Dollie and Lloyd Hickman transferred the property to Thomas Mullen in 2022 (5294/107). By 1963 the area around the cemetery had been allowed to grow trees (Figure 8) and in the 1972 aerial farm equipment can be seen at the west end of the trees (Figure 9).

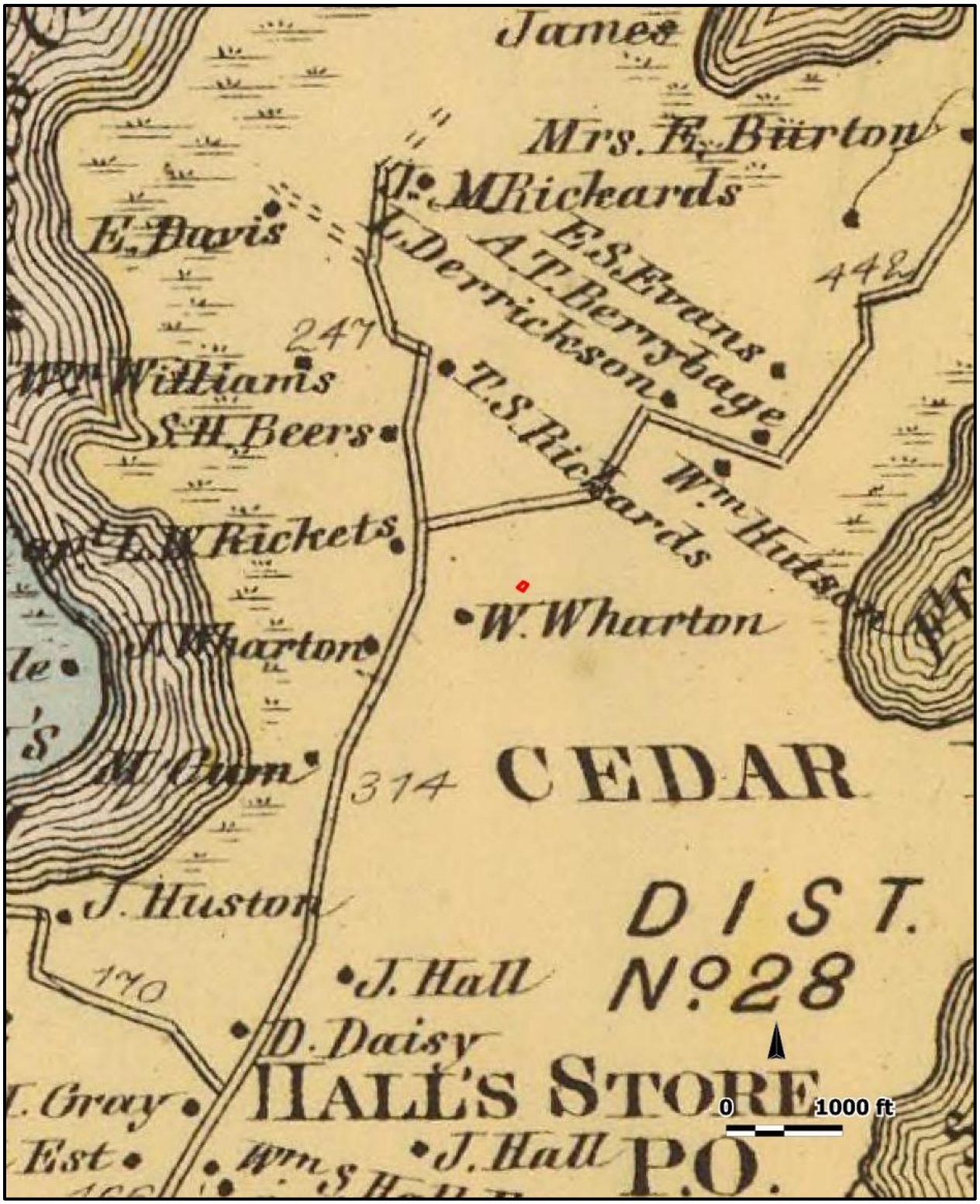

Figure 3. 1868 Pomeroy & Beers Atlas

Figure 4. 1889 Coast & Geodetic Survey Map

Figure 5. 1926 Aerial Photograph

Figure 6. 1937 Aerial Photograph

Figure 7. 1941 Aerial Photograph

Figure 8. 1963 Aerial Photograph

Figure 9. 1972 Aerial Photograph

The land was in the Rickards family for about 40 years. When it was sold out of the family, no exceptions to sale were made. No mention of the cemetery was found in any of the land deeds or records during archival research.

DELINEATION

Cemetery delineation work was performed March 3 and 4, 2025. This work was conducted by Edward Otter, PhD archaeologist with assistance from archaeological field technician, Jill L. Showell. The main goal of delineation is to determine the cemetery's boundaries and mark its four corners. This information will be added to project engineering plans to prevent any unintended impacts to the cemetery as development is underway.

The cemetery lies within a small wooded area elevated over formerly cultivated land. The elevation of the wooded area is generally about four feet above the former fields. Upon arrival three headstones and three foot stones were found. There was a collapsed iron fence (Figure 10).

Figure 10. Rickards Cemetery on our Arrival

During this work it is critical to avoid uprooting existing trees and roots which can potentially unearth human remains. Using a mini-excavator equipped with a clean out bucket, the surface vegetation was carefully scraped away. Soil was then scraped in increments to a depth where bricked graves and/or unbricked grave shafts would be visible if they were present. Excavation began near the marked graves and extended to the north, east, and west. The area to the south was not investigated as the property line is about 25 feet to the property line and this area will remain as a buffer.

As soils were excavated, they were piled out of the way as back dirt. The excavated areas were then more carefully cleaned using flat shovels and trowels. Excavations continued away from the identified burials until no more were found.

Probing was conducted around the marked graves searching for vaults or fallen stones. This work did not locate any brick vaults. Vaults would be expected on the later graves and it may be they are deeper than the probe could reach.

Three headstones were visible at the cemetery. These belong to Capt Lemuel Rickards (d), his wife, Nancy (d 1868) and Lemeul W. Rickards (d 1899). A marked stone for Sarah Ann Rickards was found by probing. The stone, though marked, is small and crudely carved. There were also three unmarked foot stones.

During soil removal with the excavator, a series of boulders were encountered. These were regularly spaced and are interpreted as grave markers. Rock markers such as these are not rare. In all, a total of twenty graves were identified during this study (Figure 12). There are the four graves with carved markers and 16 rock markers.

All the burials follow the typical Christian tradition, with an orientation from west to east. Brick vaults would be expected on the later graves. The rock marked graves likely did not contain vaults. The soils are light and dry making shaft identification difficult.

Figure 11. Headstone for Sarah Ann Rickards

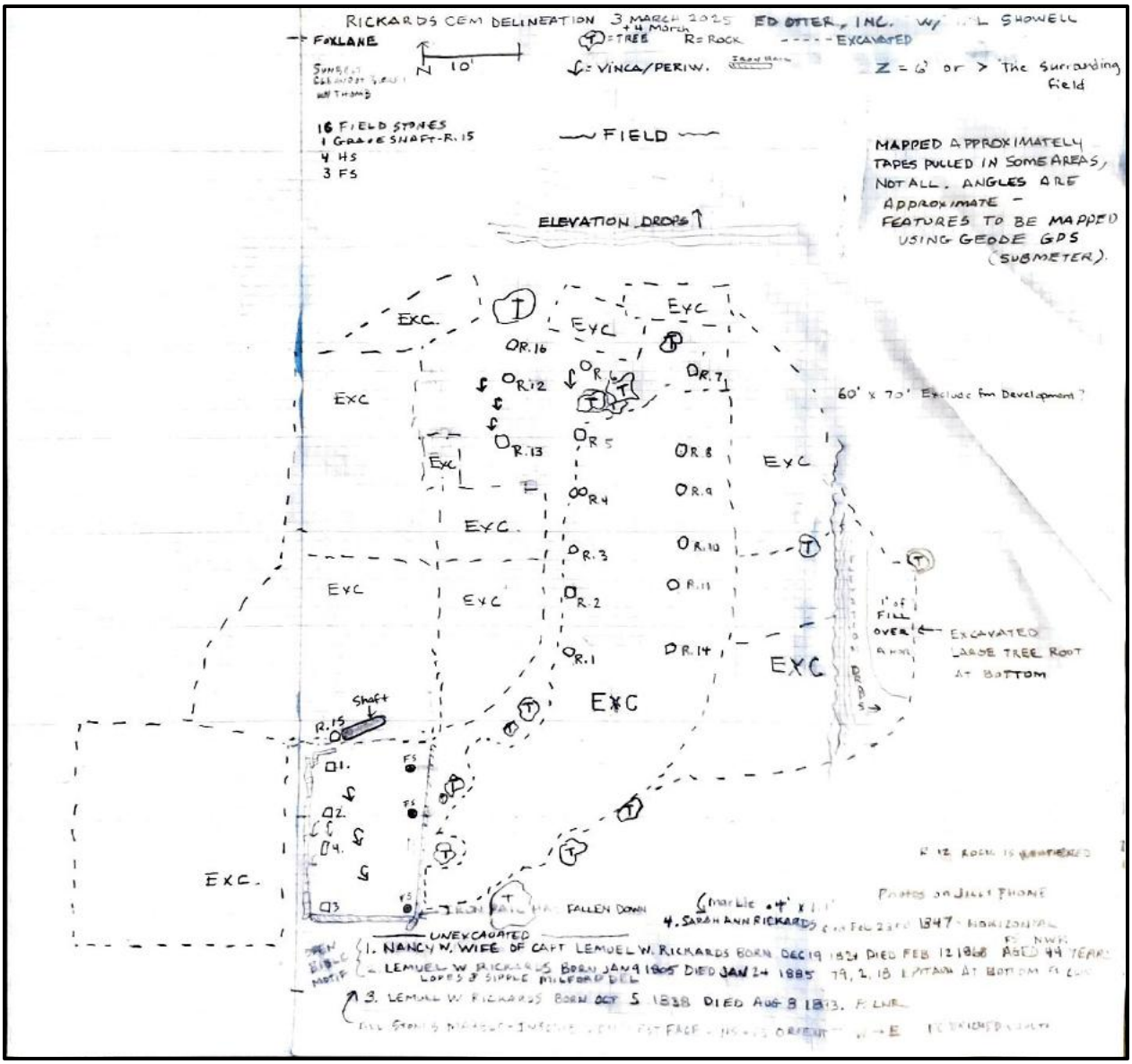

Figure 12. Sketch Map of Rickards Cemetery

CONCLUSIONS AND RECOMMENDATIONS

Archival research traced the ownership history back to before the purchase of the land by Captain Lemuel Rickards. No portion of the property was excluded from sale.

Field investigation identified at least 20 graves within the cemetery (Figure). The graves are contained with the areas laid out for lots 19 and 20 (Figure). Testing along the north edge of the graves was impeded by large trees and terrain. A small area outside of the treeline was tested with negative results (Figure). However, the area on the north side of the marked graves and within the elevated tree lot may hold graves as that area could not be adequately tested.

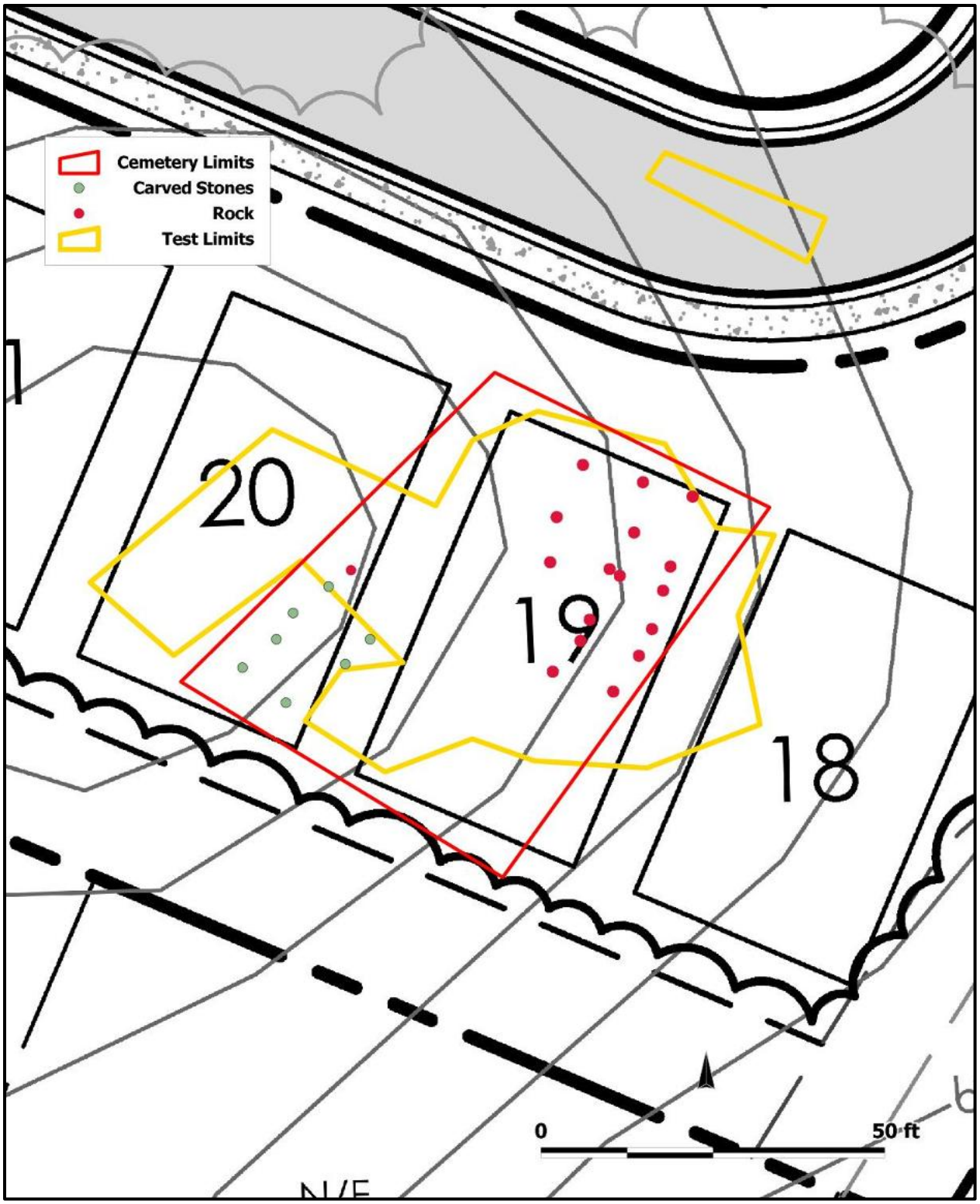

Figure 13. Rickard Cemetery Map

It is recommended that lots 19 and 20 be abandoned and retained as open space. The elevated land between the northern most stone marker and the field could not be tested. It is advised that the road be located within the field and not cut into the higher ground.

Provisions should be made for perpetual maintenance of the cemetery. Specific instructions are that rocks should never be moved as they are grave markers. There are dead trees in the area and they should be removed to prevent falling timbers from breaking headstones. Trees should be cut and roots should never be pulled as that could pull human remains along with the roots.

REFERENCES

Pomeroy and Beers
1868 Delaware State Atlas, Sussex County, Baltimore Hundred. Copy on file, Delaware Public Archives, Dover.

Sussex County, Delaware Orphans Court Records. Delaware Public Archives, Dover.

Sussex County, Delaware Deed Books. Delaware Public Archives, Dover.

Sussex County, Delaware Wills and Probate. Delaware Public Archives, Dover.

Tatnall, Walter G.
1930 Delaware, Sussex County, Tatnall Tombstone Collection, 1700 – 1960. Unpublished manuscript. Copy on file, Delaware Public Archives, Dover.

APPENDIX I: QUALIFICATIONS OF PRINCIPAL INVESTIGATOR

Edward Otter, PhD President and Principal of Edward Otter, Inc.

Education

2002	PhD Anthropology/Archaeology Catholic University of America, Washington D.C.
1989	Master of Arts Anthropology/Archaeology Catholic University of America, Washington D.C.
1980	Bachelor of Arts Anthropology University of Delaware, Newark, Delaware

Capabilities

Over 40 years-experience in archaeology in the Middle Atlantic United States. Work during this period has involved prehistoric and historic sites at all levels of expertise from Field Crewmember to Principal Investigator. Responsibilities have included project design and implementation, field and laboratory supervision, artifact analysis, archival research, report writing, site interpretation to the public, field and classroom instruction, and faunal analysis.

Select Recent Projects

2023	Alexander Warrington Cemetery Delineation, Cool Spring, Sussex County, DE.
2021	Joshua Burton Cemetery Rehabilitation, Indian River Hundred, Sussex County.
2021	Cemetery Study St. George AME on Pilottown Road, Lewes.
2021	Delineation and Archival Study Robert Burton Cemetery at Angola, Delaware.
2020	Brittingham Farm Cemetery Relocation, Princess Anne, Somerset County, Maryland.
2019	Carlisle Church Cemetery Study, Dover, Kent County, Delaware.
2019	Delineation of Private C. S. Hall Cemetery, Frankford, Sussex County, Delaware.
2018	Delineation Vessels Cemetery, Robinsonville Road, Sussex County, Delaware.
2018	Delineation Prettyman Cemetery at Tower Hill, Sussex County, Delaware.
2018	Blackwater Presbyterian Church Study, Frankford Delaware.
2017	Cemetery Delineation and Archival Study Hall Family Baltimore Hundred.
2017	Cemetery Delineation and Archival Study New Ebenezer on Cedar Grove Road.
2017	Cemetery Delineation and Study, Hastings Family Delmar, Sussex County.
2016	Delineation and Archival Study James F. Baylis Cemetery, Long Neck Road.
2014/2015	Historic Cemetery Removal, Wolfe Family in Lewes, Sussex County, Delaware.

Jason Palkewicz

From: Jason Palkewicz
Sent: Thursday, June 18, 2026 9:27 AM
To: jack.owens@irsd.k12.de.us
Subject: Hickman Road
Attachments: G24006-cond-cover-plus.pdf

Good morning.

We are working on a proposed community located on Hickman Road. I have attached the cover sheet showing site details as well as the locate of a proposed bus stop.

Please let us know if you have any questions or comments.

Thanks

Jason Palkewicz | PE, LEED AP | CEO |

Solutions IPEM | 303 N Bedford Street | Georgetown, DE 19947 | ph 302.297.9215 | www.solutionsipem.com

solutions
Integrated Planning
Engineering & Management, LLC

July 17, 2026

Mr. Michael Lowrey
Sussex County Planning & Zoning
County Administrative Offices
2 The Circle
Georgetown, DE 19947

RE: Hickman (C/U 2548) – Preliminary Plat Revisions

Dear Michael:

Solutions IPEM has received Sussex County's Planning & Zoning comments dated June 10, 2026, and has addressed all comments. Responses below are in blue. Please find enclosed with this submittal one full size copy and one electronic copy (emailed).

Chapter 115 – Zoning

Preliminary Site Plan

1. Please denote a (30) foot right-of-way (ROW) for all internal roads on the plan per guidance from the County Attorney relating to all plan submitted to the Planning & Zoning Commission in order to reflect the State of Delaware road standards.

   The roadway easement width has been shown under the road names.

2. Please note, if a Conditional Use for the multifamily units were to be approved by County Council and prior to the subsequent review and or potential approval of any preliminary or final site plan, the Plan will be required to show easements and paving all the way to the parcel boundary with adjacent parcels where interconnectivity is required.

   No interconnectivity is proposed for this project. The lands to the west are an existing commercial site. The land to the south is an existing subdivision. The lands to the east are in the excellent ground water recharge area and are single family homes.

3. Please include detail as to how the proposed Plan will meet the interconnectivity requirement (§115-221(B)(16)). Staff recommend the Applicant consider including stubs or easements on the Plan to provide interconnectivity with the adjacent parcels with frontage on Hickman Road (S.C.R. 359) if improvements were to occur on these adjacent parcels in the future.

   §115-221 refers to Final Site Plan requirements. Currently we are submitting a Conditional Use Site Plan.

4. Please include a note on the Plan referencing the Drainage Assessment report by title, author and date as required under (§115-220(B)(17)(g)).

   See Note 7 on the Cover Sheet.

• T: 302.297.9215
• T: 410.572.8833
• E: ideas@solutionsipem.com

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5. Please provide any correspondence with IRSD relating to provision of a bus stop.
   Included with this submittal is email correspondence with IRSD.
6. Staff request the plan clarify if units are to be rented or be under separate ownership (§115-188(C)).
   The units are to be owned.
7. If units are proposed to be under separate ownership, please include a limited individual element for each individual unit drawn on the Plan. Please include this in any draft HOA documents as well. Staff have concerns in terms of the clarity of buildable area for future residents who may seek building permits for accessory structures (patios, hot tubs, sitting walls, fences, sheds, etc.) adjacent to the rear of units. Several building restriction lines impact the rear area of units including Tax Ditch ROWs, Resource Buffers, and Perimeter buffers (§115- 188(E)(3))
   A *imited Common lement Areas* exhibit is included in this plan set. There will not be any LCE areas in the proposed buffers.
8. Please include Limited Common Elements (LCE) envelope and/or Limited Individual Element (LIE) showing any areas where individual units owners/renters may propose to locate accessory structures.
   A *imited Common lement Areas* exhibit is included in this plan set.
9. Please include notation on the Plan relating to any Limited Common/Individual Elements on the Plan indicating that accessory improvements or cutting of vegetation by individual residents outside of their respective individual LCE/LIE is prohibited.
   A note is included with the LCE exhibit.
10. Please include an item in the Site Data Colum indicating that any accessory structures shall be subject to site plan review including the Code section reference of (§115-188(E)(3)).
    The note has been added to the Site Data Column.
11. Please include dimensioning for the proposed parking stalls adjacent to the amenities area (§115-166(A)(1)) & (§115-166(C)).
    The amenities shown on this plan are conceptual in nature. A separate Amenity Site Plan will be submitted in the future.
12. Please include details regarding the material and location of the required fencing around the proposed pool (§115-185(D)).
    The amenities shown on this plan are conceptual in nature. A separate Amenity Site Plan will be submitted in the future.
13. Please include as much detail as possible relating to the proposed amenities area to include dimensioning for the pool, the paved patio, and proposed "Poolhouse" (§115-162(B)(10)).
    The amenities shown on this plan are conceptual in nature. A separate Amenity Site Plan will be submitted in the future.
14. Please note amenities need to be completed in the timeframe required per (§115-194.5). Please include a note indicating the proposed amenities (pool & poolhouse) and the associated parking areas shall be constructed and open to use by the residents of a development on or before the issuance of the residential building permit representing 60% of the total residential building permits for the development.

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The note has been added to the Site Data Column.

15. Please include dimensioning for the proposed multifamily structures (§115-220(B)(8)).
    Please see a detail on the site plan with the dimensions of the single-family detached footprint.
16. Please include the proposed number of bedrooms in each unit as well as if any required parking is to be included in garages if applicable (§115-162(B)(1))
    The proposed bedrooms/garage spaces have been provided in the Site Data Column. The parking requirements for multifamily dwellings have been satisfied.
17. Please indicate if any phases are proposed for the project (§115-220(B)(12)).
    There will only be one phase for this development.
18. Please address all comments in the SCED review of the Drainage Assessment Report (DAR).
    The SCED review of the DAR comments that the engineer needs to work with SCD through the plan review process to evaluate discharge to the existing wetland area. As we will need approval from SCD prior to Final Site Plan approval, the SCED comment will be addressed.
19. Please include as clear Limit of Disturbance Line (LOD) on the Plan.
    The LOD will be provided on the Final Site Plan after all engineering is complete which will drive the LOD locations.
20. Please include the proposed locations for the required resource buffer signage on the Plan and please include detail of a typical sign on the Plan (§115-193(A)(4)).
    The signs will be shown on the engineering plans and the final site plan.
21. Staff note that the multifamily structures do not meet the separation distance required under (§115-188(E)(2)).
    The buildings are single-family condominiums. The separation distance you are referring to only applies to buildings with two or more units sharing a common wall.
22. While units are not proposed on individual lots, Staff note that the multifamily structures do not meet the requirement of a (10) foot side yard setbacks (for each unit) as required under (Chapter 115 Zoning – Table II- Multifamily Structures in MR).
    This project consists of single-family detached units within a unified condominium regime. Table II provides setbacks related to units sitting on individual subdivided lots with a minimum lot area of 3,630 S.F. As we do not have individual lots, our proposed setbacks are measured from the perimeter boundary. This project is consistent with past projects recorded within Sussex County utilizing the single-family condominium regime.
23. Staff note that the proposed individual units largely meet the aggregate (40) setback requirements for front and rear yards for townhouses as required under (§115-188(D)(2)).
    Comment noted.
24. Staff recommend plantings to screen the amenities and mailbox area parking from proposed units #36 through #54 to shield these units from noise and/or vehicle headlights.
    A separate Site Plan for the amenity area will be submitted in the future. The amenity site plans are typically required to show landscaping as required by code.
25. Please include a detailed bulk grading plan for the entire site as lots are not being created and therefore individual units will not be required to provide individual lot grading plans for each

unit as would be the process with a major subdivision including (46) single family detached units (§115-221(B)(17)).

Bulk grading plans have been added to this plan set.

26. Please include a breakdown of the open space areas on the plans with respective acreages (Open Space "A," "B," "C," etc.) (§115-220(B)(15)).

    The open space areas are labeled.

27. Please include the (MR) Zoning District setbacks in the Site Data Column.

    The MR setbacks have been added to the Site Data Column.

28. Staff request details as to whether the bus stop included on the Plan is for the local school district. Please include any communications with IRSD relating to the provision and location of any proposed school bus stop area. Additionally, please include any proposed public transportation facilities on the Plan.

    The bus stop provided at the entrance is a school bus stop. There are no proposed public transportation facilities.

29. Staff recommend the Plan include dedicated parking stalls for the cemetery area along proposed "Road C" adjacent to fencing around burial area (§115-194.3(E)).

    A parking space has been added for the cemetery area.

30. Please clarify and include the location and nature of any proposed postal areas/facilities for the community.

    The mail facility will be incorporated into the amenity area.

31. Please include the proposed locations for utilities and resource buffer easements on the Plan.

    The utilities (water, sewer, and storm drain) are provided on the plan. The resource buffers are provided on the plan as well.

32. Please include a Resource and Resource Buffer Management Plan (RRBMP) (§115-193(H)(1))

    A copy of the RBMP is included with this submittal.

Sincerely,

Holly Bartkovich

Holly Bartkovich

• T: 302.297.9215
• T: 410.572.8833
• E: ideas@solutionsipem.com

303 North Bedford Street • 3003 Merritt Mill Road
Georgetown, DE 19947 • Salisbury, MD 21804

Tax Map Parcel Number: 1-34 9.00-28.00

Prepared By and Return To:
Baird Mandalas Brockstedt LLC
1413 Savannah Road, Suite 1
Lewes, DE 19958

CODE OF REGULATIONS/BYLAWS FOR
HICKMAN CONDOMINIUM
BALTIMORE HUNDRED, SUSSEX COUNTY, DELAWARE

ARTICLE I

PLAN OF OWNERSHIP

Section 1. Unit Ownership. The Property (as defined in that certain Declaration of HICKMAN Condominium recorded in the Office of the Recorder of Deeds in and for Sussex County, Delaware (the "**Recorder's Office**"), contemporaneously herewith, at Deed Book _____, Page _____ (the "**Declaration**")) located in Baltimore Hundred, Sussex County (the "**County**"), Delaware, has been submitted to the provisions of the Delaware Unit Property Act ("UPA") 25 Del.C. Chapter 22 (hereinafter referred to as the "Act") and only to those cited, applicable provisions of the Delaware Uniform Common Interest Ownership Act ("DUCIOA"), 25 Del. C. § 81-106 (Applicability of local ordinances, regulations, and building codes) and 81-107 of this title (Eminent domain), as this community is specifically exempt from DUCIOA as per section 81 Del.C. §81-117 (the "**Act**"), by the Declaration created and imposed by FOXLANE HOMES DELAWARE, LLC ("**Declarant**"), a Delaware Limited Liability Company, and shall hereinafter be known as "HICKMAN Condominium" (the "**Condominium**") and is more particularly depicted and described on that certain Condominium Declaration Plan recorded in the Recorder's Office at Plot Book ___, Page ___.

Section 2. Capitalized Terms. Any capitalized terms or words not otherwise defined in these Bylaws shall have the definition and meaning ascribed thereto in the Declaration.

Section 3. Applicability of Code of Regulations/Bylaws. The provisions of these Code of Regulations, also and hereinafter referred to as "Bylaws", are applicable to the Property and to the use and occupancy thereof. All present and future owners, mortgagees, lessees and occupants of Units and their employees, and any other person who may use the facilities of the Property in any manner, are subject to the Condominium Documents. The acceptance of an instrument of assignment, conveyance or other transfer document or the entering into of a lease or the act of occupancy of a Unit shall conclusively establish the acceptance and ratification of the Condominium Documents as they may be amended from time to time, by the person so assuming, acquiring, encumbering, leasing, or occupying a Unit and shall constitute and evidence an agreement by such person to comply with the same.

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Section 4. Office. The office of the Association (as hereinafter defined) and of the Executive Board shall be located at the Condominium or at such other place as may be designated from time to time by the Executive Board.

ARTICLE II

ASSOCIATION

Section 1. Composition. All of the Units Owners, acting as a group in accordance with these Bylaws, the Act and Declaration, shall constitute the "**Association**," a Delaware unincorporated association pursuant to §81-301 of the Act called "**Hickman Condominium Association**". The Association, acting in accordance with the Act, the Declaration and these Bylaws, shall have the responsibility of administering the Condominium, establishing the means and methods of collecting the contributions of the Common Expenses, arranging for the management of the Condominium, and performing all of the other acts that may be required to be performed by the Association by the Ac and the Condominium Documents. Except as to those matters which the Act specifically requires to be performed by the vote of the Unit Owners, the administration of the foregoing responsibilities shall be performed by the Executive Board as more particularly set forth in Article III hereof.

Section 2. Initial and Subsequent Annual Meetings. A meeting of the Association will be held at a date to be set by Council following the tenth (10th) Unit settlement. Thereafter, the meetings of the Association shall be held on an annual basis as determined by a majority of the Executive Board.

Section 3. Place of Meeting. Meetings of the Association shall be held at a suitable place or via electronic means convenient to the Unit Owners as may be designated by the Executive Board.

Section 4. Special Meetings. Special meetings of the Association may be called by the President, a majority of the Executive Board, or by Unit Owners having at least twenty percent (20%) of the General Common Element Percentage Interest of all Unit Owners. It shall be the duty of the President to call a special meeting of the Association, if so directed, by resolution of a majority of the Executive Board or upon a petition signed and presented to the Secretary of a majority of Unit Owners.

Section 5. Notice of Meetings. Except in cases of emergency meetings, which may be held without prior notice, not fewer than ten (10) nor more than sixty (60) days in advance of any regular or special meeting of the Unit Owners, the Secretary shall cause notice of that meeting to be delivered to each Unit Owner by any means described in §81-127 of the Act, including electronic means, or sent prepaid by United States mail to any mailing address designated in writing by such Unit Owner. The notice of any meeting must state the time and place of the meeting and the items on the agenda, or must state the website address where the agenda is located, including: (a) a statement of the general nature of any proposed amendment to the Declaration or Bylaws; (b) a statement that in the absence of objection from any Unit Owner present at the meeting, the President may add items to the agenda; (c) any budget changes; and

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(d) any proposal to remove an officer or member of the Executive Board. The agenda may be posted on the website of the Association, in lieu of being included in the notice, provided that the Association shall, by any means described in § 81-127 of the Act, furnish to any Unit Owner who so requests a copy of the agenda prior to the meeting. Regardless of the agenda, Unit Owners shall be given a reasonable opportunity at any meeting to offer comments to the Executive Board regarding any matter affecting the Condominium. If the Association does not notify Unit Owners of a special meeting within thirty (30) days after the requisite number or percentage of the Executive Board or Unit Owners, as applicable, requested the Secretary to do so, the requesting members or Unit Owners, as applicable, may directly notify all the Unit Owners of that meeting. Only matters described in the meeting notice required by this Section may be considered at a special meeting.

Section 6. Adjournment of Meetings. If any meetings of the Association cannot be held because a quorum is not present, Unit Owners owning a majority of the General Common Element Percentage Interests who are present at such meeting, either in person or by proxy, may adjourn the meeting to a time not less than forty-eight (48) hours from the time the original meeting was called.

Section 7. Order of Business. The order of business at all annual meetings of the Association shall be as follows:

(a) Roll Call.
(b) Proof of Notice of meeting.
(c) Reading of minutes of preceding meeting.
(d) Report of officers.
(e) Reports of the Executive Board.
(f) Reports of committees.
(g) Election of inspectors of election (when so required).
(h) Election of member of the Executive Board (when so required).
(i) Unfinished business.
(j) New business.
() Adjournment.

Section 8. Title to Units. Title to Units may be taken in the name of an individual or in the names of two or more persons, as tenants in common or as joint tenants or as tenants by the entirety, or in the name of a corporation, partnership, limited liability company, other legal entity or in the name of a fiduciary.

Section 9. Voting. Voting at all meetings of the Association shall be on a percentage basis and the percentages of the vote to which each Unit Owner is entitled shall be the General Common Element Percentage Interest assigned to such Owner's Unit in the Declaration. If only one (1) of several Owners of a Unit is present at a meeting of the Association, that Owner is entitled to cast all the votes allocated to that Unit. The vote of each Unit shall be exercised as the Owners of the Unit, among themselves determine, but in no event shall more than one (1) vote be cast with respect to any such Unit. In the event of multiple or disputed votes by and between the applicable Owners of a Unit, then such votes shall be ruled invalid and the Executive Board shall disregard any such multiple or disputed votes cast by the Owners of the Unit. Any such

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invalidated votes shall not, however, invalidate or otherwise alter the effectiveness of such Unit Owners attendance at the meeting by proxy or otherwise for quorum purposes. Whenever the approval or disapproval of a Unit Owner is required by the Act, the Declaration or these Bylaws, such approval or disapproval shall only be made by the person who would be entitled to cast the vote for the Unit Owner at any meeting of the Association. Except where a greater number is required by the Act, the Declaration or these Bylaws, a majority of the votes cast in person, by proxy, electronic means, or by ballot at a meeting of Unit Owners where a quorum is present shall determine the outcome of any action of the Association where a vote is taken so long as the number of votes cast in favor comprise at least a majority of the number of votes required for a quorum for that meeting. Votes allocated to a Unit owned by the Association may not be cast and shall not be calculated either in a quorum or in any percentage of unit votes needed for any action by the Unit Owners.

Section 10. Proxies & Electronic Voting. A vote may be cast in person, by proxy or by electronic voting. Proxies shall be valid only for the particular meeting designated therein, must be in writing and must be filed with the Secretary before the appointed time of the meeting. Electronic voting, as permitted by statute, may be from a source known to the Association or property manager governing the Association's property, including an e-mail address registered with the Association or property manager using electronic voting software selected by the Association. If a Unit is owned by more than one (1) person, each Owner of the Unit may vote or register protest to the casting of votes by the other Owners of the Unit through a duly executed proxy. A Unit Owner may revoke a proxy given only by actual notice of revocation to the person presiding over the meeting of the Association. A proxy is void if it is not dated or purports to be revocable without notice. A proxy terminates one (1) year after its date, unless it specifies a shorter term.

Section 11. Majority of Unit Owners. As used in these Bylaws, the term "**majority of the Unit Owners**" shall mean those Unit Owners having more than fifty percent (50%) of the aggregate interest of the undivided ownership of the General Common Elements as specified in the Condominium Documents.

Section 12. Quorum. Except as otherwise provided in these Bylaws, the presence in person or by proxy of twenty percent (20%) of the Owners shall constitute a quorum at all meetings of the Association. The votes of a majority of the Owners present at a meeting at which a quorum is present shall constitute the decision of the Association.

Section 13. Conduct of Meeting. The President shall preside over all meetings of the Association and the Secretary shall keep the minutes for the meeting and record in a minute book all resolutions adopted by the meeting as well as a record of all transactions occurring thereat. Roberts Rules of Order shall govern the conduct of all meetings of the Association when not in conflict with the Declaration, these Bylaws or the Act.

ARTICLE III

EXECUTIVE BOARD

Section 1. Number, Election and Appointment, Term, Qualification, etc.

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(a) Number. The property and business of the Association shall be managed and controlled by the Executive Board, which shall initially consist of three (3) members, to be expanded to five (5) members as provided below. Each member of the Executive Board is herein sometimes referred to as a "**Director**."

(b) Election and Appointment.

(i) Appointment During Declarant Control Period. During the Declarant Control Period, Declarant shall have the sole right, power, and authority to appoint the members of the Executive Board (who need not be Unit Owners or residents of the State of Delaware), subject to the provisions of Sections 1(b)(ii) through 1(b)(iv) below. The initial Directors shall be as provided in the Declaration.

(ii) Not later than sixty (60) days after conveyance of seventy percent (75%) of the total number of Units that may be created to Owners other than Declarant or a Participating Builder, at least one (1) member and not less than twenty-five percent (25%) of the members of the Executive Board shall be elected by the members other than Declarant or a Participating Builder.

(iii) Election After Declarant Control Period. Upon the termination of the Declarant Control Period, (A) the members of the Executive Board shall be elected by plurality vote of the members, (B) the Executive Board shall consist of at least three (3) members, and (C) at least a majority of the members of the Executive Board shall be Owners or, if an Owner is a corporation, limited liability company, partnership, trust or other entity, an officer, director, managing member or other authorized representative designated in writing by such Owner.

Section 2. Term. Except for the Directors appointed by Declarant, who shall serve until the earlier of their death, resignation, or removal by Declarant (in each such case, their successor to be appointed by Declarant) or the date of the next annual meeting next following the termination of the Declarant Control Period, the initial term of office of one (1) member of the Executive Board shall be fixed at three (3) years, the initial term of office for one (1) member of the Executive Board shall be fixed at two (2) years, and the initial term of office of one (1) member of the Executive Board shall be fixed at one (1) year. The Executive Board shall determine which members have the initial terms of one (1), two (2), and three (3) years. At the expiration of the initial term of each respective member of the Executive Board, his or her successor shall be appointed or elected, as applicable, to serve for a term of three (3) years. The members of the Executive Board shall hold office until their respective successors shall have been appointed or elected, as applicable, by Declarant or Association, as applicable, in accordance with Section 1 of this Article III.

Section 3. Directors shall be elected for a one (1) year term and shall hold office until the next annual election and until their successors are elected and the successors' willingness to serve confirmed. Unless such timing coincides with an annual meeting, the President shall call a special meeting for any election by the members as provided in Article III of these Bylaws.

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Section 4. Removal and Vacancy. Except for Directors appointed by Declarant, who shall serve until the earlier of their death, resignation, or removal by Declarant (in each such case, their successor to be appointed by Declarant) or the date of the next annual meeting next following the termination of the Declarant Control Period, any Director may be removed from the Executive Board at any time, with or without cause, by a two-thirds (2/3) vote of the members of the Association present in person or by proxy and entitled to vote at any meeting of the members at which a quorum is present. In the event of death, resignation or removal of a Director, except for Directors appointed by Declarant, who shall serve until the earlier of their death, resignation, or removal by Declarant (in each such case, their successor to be appointed by Declarant) or the date of the next annual meeting next following the termination of the Declarant Control Period, a successor shall be selected by a two-thirds (2/3) vote of the members of the Association present in person or by proxy and entitled to vote at any meeting of the members at which a quorum is present.

Section 5. Compensation. No Director shall receive compensation for any service rendered to the Association in such Director's capacity as a Director. However, any Director may be reimbursed for actual expenses incurred in the performance of such Director's duties.

Section 6. Action taken without a meeting. The Directors shall have the right to take any action without a meeting which they could take at a meeting by obtaining the written approval, including electronic means, of the Directors. Any action so approved shall have the same effect as though taken at an in-person meeting of the Directors.

Section 7. Powers and Duties. The affairs of the Condominium shall be governed by the Executive Board provided, however, that the Executive Board may not act on behalf of the Association to amend the Condominium Documents, to terminate the Condominium, or to elect members of the Executive Board or determine the qualifications, powers and duties, or terms of office of Executive Board members, but the Executive Board may fill vacancies in its membership for the unexpired portion of any term. The Executive Board shall have all of the powers and duties necessary for the administration of the affairs of the Condominium and may do all such acts and things as are not by the Act or by the Condominium Documents directed to be exercised and done by the Association. The Executive Board shall have the power from time to time to adopt any rules and regulations deemed necessary for the enjoyment of the Condominium provided such rules and regulations shall not be in conflict with the Act or the Condominium Documents. The Executive Board shall delegate to one of its members the authority to act on behalf of the Executive Board on all matters relating to the duties of the Managing Agent, if any, which might arise between meetings of the Executive Board. In addition to the duties imposed by these Bylaws or by any resolution of the Association that may hereafter be adopted, the Executive Board shall have the power to, and be responsible for, the following:

(a) The Executive Board shall adopt and may amend recorded bylaws consistent with §81-306 of the Act and the terms of these Bylaws.

(b) The Executive Board shall adopt and amend budgets pursuant to §81-324 of the Act and collect Assessments, including funds for the Repair and Replacement Reserves (as defined below), from Unit Owners.

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(c) The Executive Board shall maintain the following records in written form or in another form capable of conversion into written form within a reasonable time: (1) detailed records of receipts and expenditures affecting the operation and administration of the Association and other appropriate accounting records, including those for the Repair and Replacement Reserves (all financial records shall be kept in accordance with generally accepted accounting practices); (2) minutes of all meetings of its members and the Executive Board; (3) a record of its members in a form that permits preparation of a list of the names and addresses of all members, in alphabetical order by class, showing the number of votes each member is entitled to cast and the members' class of membership, if any; and (4) a copy of the following records at its principal office: (i) its original or restated certificate of incorporation, if any, and the Declaration and Rules and Regulations and these Bylaws and all amendments to them currently in effect; (ii) the minutes of all members' meetings and records of all action taken by members without a meeting for the past three (3) years; (iii) any financial statements and tax returns of the Association prepared for the past three (3) years, together with the report of the auditors of the financial records; (iv) a list of the names and business addresses of its current directors and officers; (v) its most recent annual report delivered to the Secretary of the State; (vi) the Association's most recent Reserve Study; and (vii) financial and other records sufficiently detailed to enable the Association to comply with §81-409 of the Act. Subject to the provisions of this Subsection below, all records kept by the Association, including the Association's membership list and address, and aggregate salary information of employees of the Association, shall be available for examination and copying by a Unit Owner or the Unit Owner's authorized agent so long as the request is made in good faith and for a proper purpose related to the Owner's membership in the Association. This right of examination may be exercised: (1) only during reasonable business hours or at a mutually convenient time and location, and (2) upon five (5) days written notice reasonably identifying the purpose for the request and the specific records of the Association requested. Records kept by the Association may be withheld from inspection and copying to the extent that they concern: (1) personnel matters relating to specific persons or a person's medical records; (2) contracts, leases, and other commercial transactions to purchase or provide goods or services, currently in or under negotiation; (3) pending or threatened litigation, arbitration, mediation or other administrative proceedings; (4) matters involving federal, state or local administrative or other formal proceedings before a government tribunal for enforcement of the Condominium Documents; (5) communications with legal counsel which are otherwise protected by the attorney-client privilege or the attorney work product doctrine; (6) disclosure of information in violation of law; (7) meeting minutes or other confidential records of an executive session of the Executive Board; and (8) individual Unit Owner files other than those of the requesting Owner. The Association may charge a fee for providing copies of any records under this Section including the cost for staffing to be present while the records are review, but that fee may not exceed the actual cost of the materials and labor incurred by the Association. Records may be shown in electronic format in lieu of printed documentation. All books and records shall be audited at least once a year by an outside auditor employed by the Executive Board who shall not be a resident of the Condominium or an Owner of a Unit therein and the cost of such audit shall be a Common Expense.

(d) Making Assessments against the applicable Unit Owners to defray the costs and expenses associated with the Common Expenses that apply to such Owner’s Unit as defined in the Declaration as determined by the Executive Board from time to time, including but not limited to: (1) bulk utility/telecommunication and trash services; (2) the costs and expenses

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set forth under §81-315(a)(2) of the Act regarding repair and replacement reserves as well as for the maintenance, repair, or replacement of the General Common Elements, the Single Family Home General Common Elements under §81- 315(c)(1) of the Act and the Condominium Documents; (3) the maintenance, repair and replacement of the irrigation systems that are located within the General Common Element as well as any which are installed within any Limited Common Element Yard Area; and (4) any Assessments against individual Unit Owners who fail to perform such Unit Owner(s) obligations as provided under the Condominium Documents, including but not limited to Section 11 of the Declaration captioned "Maintenance, Repair and Replacement of Limited Common Elements" as well as any individualized fees for services provided to some but not all of the Unit Owners based on their use and consumption of services as provided under §81- 315(c)(2) of the Act.

(e) Establishing the means and methods of collecting such Assessments from the Unit Owners and establishing the period of the installment payment of the annual Assessment for the Common Expenses. Unless otherwise determined or modified by the Executive Board, the annual Assessment against each Unit Owner for his proportionate share of the Common Expenses which are applicable to such Owner's Unit shall be payable in equal quarterly installments, each such installment to be due and payable in advance on the first day of each quarter for said year or as otherwise determined by the Executive Board.

(f) Providing for the operation, care, upkeep, maintenance and surveillance, if any, of all of the Common Elements and services of the Condominium for which the Association is responsible for providing.

(g) Designating, hiring and dismissing the personnel necessary for the maintenance, operation, repair and replacement of the Common Elements for which it is responsible for, and providing services for the Property, and, where appropriate, providing for the compensation of such personnel and for the purchase of equipment, supplies and materials to be used by such personnel in the performance of their duties, which supplies and equipment shall be deemed the common property of the Unit Owners.

(h) Collecting the Assessments against the Unit Owners, depositing the proceeds thereof in a bank depository which it shall approve, and using the proceeds to carry out the administration of the Property and the Condominium.

(i) Making and amending the Rules and Regulations respecting the use of the Property, including the power to levy fines for infractions or violations of the Condominium Documents on a uniform and non-discriminatory basis. Before adopting or substantially amending any Rules and Regulations, the Executive Board must notify all Unit Owners of: (1) its intention to adopt the proposed Rules and Regulations and (2) a date on which the Executive Board will convene a meeting to receive comments on them from the Unit Owners. The Association may only adopt Rules and Regulations that affect the use of or behavior in Units that may be used for residential purposes to: (1) prevent any use of a Unit which violates the Condominium Documents; (2) regulate any behavior in or occupancy of a Unit which violates the Condominium Documents or adversely affects the use and enjoyment of other Units or the Common Elements by other Unit Owners; or (3) regulate the method, manner, means and/or medium used for subleasing the Units and/or restrict the subleasing of residential Units to the

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extent those restrictions in any Rules and Regulations are reasonably designed to meet underwriting requirements of institutional lenders who regularly lend money secured by first mortgages on Units or regularly purchase those mortgages.

(j) Opening of bank accounts on behalf of the Condominium and designating the signatories required therefor.

(k) Making, or contracting for the making of, repairs, additions, and improvements to, or alterations of, the Property and repairs to, and restoration of, the Property in accordance with the other provisions of these Bylaws, after damage or destruction by fire or other casualty.

(l) Enforcing by legal means including, but not limited to, the levying of fines, the provisions of the Condominium Documents for the use of the Property adopted by it, and bringing any proceedings which may be instituted on behalf of the Unit Owners.

(m) Obtaining and carrying insurance against casualties and liabilities, as provided in Article VI of these Bylaws, and paying the premium cost thereof.

(n) Paying the cost of all services rendered to the Condominium, which are not otherwise the sole responsibility and obligation of, and not billed to, one or more Unit Owners of individual Units.

(o) Granting permits, licenses and easements over the Common Elements for utilities, roads and other purposes necessary for the proper operation of the Property, in common with others entitled thereto.

(p) Entering into or satisfying management contracts as well as leases, licenses or other contractual agreements for the operation, use, maintenance or management of the various Common Elements, the cost of which shall be either a General Common Expense or a Townhouse General Common Expense; provided that, no such lease, license or other contractual agreement may bind the Association unless such lease, license or other contractual agreement provides for the right of the Association to terminate the same without cause or penalty at any time after transfer of control of the Association from Declarant to the Unit Owners, upon not less than ninety (90) days' notice. In addition, if entered into before the Executive Board elected by the Unit Owners (as opposed to appointed by Declarant) in accordance with this Declaration takes office: (1) any management contract, employment contract, or lease of recreational or parking areas or facilities, (2) any other contract or lease between the Association and Declarant or an affiliate of Declarant, or (3) any contract or lease that is not bona fide or was unconscionable to the Unit Owners at the time entered into under the circumstances then prevailing, may be terminated without penalty by the Association at any time after the Executive Board elected by the Unit Owners (as opposed to appointed by Declarant) in accordance with this Declaration takes office upon not less than ninety (90) days' notice to the other party; provided, that, this shall not apply to: (i) any lease the termination of which would terminate the Condominium or reduce its size, unless the real estate subject to that lease was included in the Condominium for the purpose of avoiding the right of the Association to terminate a lease under this section, or (ii) a proprietary lease.

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(q) Managing the business operations and affairs of the Property and for such purposes, engage employees and appoint agents and to define their duties and fix their compensation, enter into contracts, leases and other written instruments or documents and to authorize the execution thereof by officers elected by the Executive Board.

(r) Providing each Mortgagee written notice, or copies, of: (1) any condemnation or casualty loss that affects either a material part of the Property or the Unit securing its mortgage; (2) any sixty (60) day delinquency in payment of Assessments or charges owed by the Unit Owner on which it holds the mortgage; (3) a lapse, cancellation, or material modification of any insurance policy maintained by the Association; (4) any proposed action that requires the consent of a specified percentage of Mortgagees; (5) any proposed termination of the Condominium; (6) any proposed amendment of the Condominium Documents effecting a change in (i) the boundaries of any Unit or the exclusive easement rights appertaining thereto, (ii) the interest in the General Common Elements or Limited Common Elements appertaining to any Unit or the liability for the applicable Common Expenses appertaining thereto, (iii) the number of votes in the Association appertaining to any Unit, or (iv) the purpose to which any Unit or Common Elements are restricted; (7) any default by the Unit Owner which is obligated to such Mortgagee; and (8) audited financial statements of the operation of the Property (such audited financial statements shall be made available no later than one hundred twenty (120) days after the end of the Association's fiscal year).

(s) Pursuant to §81- 302(a)(11) of the Act, the Executive Board may suspend any privileges of Unit Owners (other than the right of a Unit Owner to vote on any matter submitted to a vote of Unit Owners) or services provided to Unit Owners by the Association (other than those necessary for the habitability of the Owner's Unit) for non-payment of Assessments; may impose charges for late payment of Assessments; and, after notice and an opportunity to be heard, may levy reasonable fines for violations of the Declaration, Bylaws and Rules and Regulations of the Association.

(t) Arrange for the performance by the Association of the notification requirements regarding any transfers or conveyances of Units as set forth under the Environmental Covenant and as provided under the Declaration.

(u) To do such other things and acts provided under § 81-302(a) of the Act and such other things and acts not inconsistent with the Act and the Condominium Documents which it may be authorized to do by a resolution of the Association.

Section 8. Managing Agent. The Executive Board shall employ for the Condominium a professional Managing Agent at a compensation established by the Executive Board, to perform such duties and services as the Executive Board shall authorize. The initial Managing Agent to be retained by the Executive Board shall be **SeaScape Property Management**, having a current address of 17563 Nassau Commons Boulevard, Lewes, Delaware 19958 or such other address as may be provided to the Unit Owners from time to time by the Executive Board. The Executive Board may delegate to the Managing Agent some or all of the powers granted to the Executive Board by these Bylaws other than the powers set forth in Sections 2(a), (b), (h) and (i) of this Article III. Any such delegation shall be in writing reflecting the consent of the Executive Board and shall expressly provide that such delegation

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may be terminated and revoked at any time upon written notice. No agreement with a professional Managing Agent may bind the Association unless said agreement provides for the right of the Association to terminate the same without cause or penalty at any time after transfer of control of the Association from Declarant to the Unit Owners, upon not more than ninety (90) days' notice. Any such agreement shall be for a reasonable term.

Section 9. Initial and Subsequent Meetings. A meeting of the Executive Board must be held at least once each calendar year after the Initial meeting as set forth in Article II, Section 2.

Section 10. Special Meetings. Special meetings of the Executive Board may be called by the President or a majority of the Executive Board. It shall be the duty of the President to call a special meeting of the Executive Board if so directed by resolution of a majority of the Executive Board.

Section 11. Notice of Meetings. Except when a schedule of meetings has been distributed to Unit Owners that identifies the meeting in question or in cases of emergency meetings that may be held without prior notice, the Secretary shall cause notice of any regular or special Executive Board meeting to be delivered to each Unit Owner by any means described in §81-127 of the Act not fewer than ten (10) nor more than sixty (60) days in advance of the meeting (but not later than the time notice of the meeting is sent to members of the Executive Board). The notice must state the time and place of the meeting and the items on the agenda, including an opportunity for Unit Owners to offer comments to the Executive Board regarding any matter affecting the Condominium.

(a) Upon the expiration or earlier termination of the Declarant Control Period, all meetings of the Executive Board shall be open to the Unit Owners except for executive sessions held for purposes of: (1) consulting with the Association's lawyer regarding, or Executive Board discussion of, litigation, mediation, arbitration or administrative proceedings or any contract matters; (2) discussing labor or personnel matters; (3) discussing matters related to contract negotiations, including the review of bids or proposals, if premature general knowledge of those matters would place the Association at a disadvantage; (4) discussion of any complaint from or alleged violation by a Unit Owner, when the Executive Board determines that public knowledge would violate the privacy of the Unit Owner; or (5) discussing any other matter that Declarant determines, in its sole subjective and absolute discretion, should be discussed in executive session and not open to the Unit Owners.

(b) After the expiration or earlier termination of the Declarant Control Period, all meetings of the Executive Board shall be open to the Unit Owners except for executive sessions held for purposes of: (1) consulting with the Association's lawyer regarding, or Executive Board discussion of, litigation, mediation, arbitration or administrative proceedings or any contract matters; (2) discussing labor or personnel matters; (3) discussing matters related to contract negotiations, including the review of bids or proposals, if premature general knowledge of those matters would place the Association at a disadvantage; or (4) discussion of any complaint from or alleged violation by a Unit Owner, when the Executive Board determines that public knowledge would violate the privacy of the Unit Owner.

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(c) If any materials are distributed to the Executive Board before the meeting, the Association shall at the same time make copies of those materials reasonably available to the Unit Owners, except that the Association need not distribute copies of unapproved minutes or materials that are to be considered in executive session.

(d) The Executive Board may meet in a telephonic or video conference call or interactive electronic communication process provided that: (1) the meeting notice must indicate that the meeting is to be a telephonic, video or other conference and, if not a meeting in executive session, provide information as to how Unit Owners may participate in the conference directly or by meeting at a central location or conference connection; and (2) the process must provide all Unit Owners the opportunity to hear the discussion and offer comments.

(e) After the expiration or earlier termination of the Declarant Control Period, in lieu of a meeting, the Executive Board may act by unanimous consent as documented in a record signed by all its members, but the Executive Board may not act by unanimous consent to: (1) adopt a rule, budget or special Assessment, (2) impose a fine or take action to enforce the Declaration or the Rules and Regulations or these Bylaws, (3) buy or sell real property, (4) borrow money, or (5) contract for any sum greater than one percent (1%) of the Association's annual budget. The Secretary shall promptly notify all Unit Owners of any action taken by unanimous consent.

(f) The Executive Board shall maintain written minutes of all meetings of the Executive Board; and, upon written request delivered to the Secretary, such minutes shall be made available to any Unit Owner and to any Mortgagee.

(g) Waiver of Notice. Any member may, at any time, in writing waive notice of any meeting of the Executive Board, and such waiver shall be deemed equivalent to the giving of such notice. Attendance by a member at any meeting the Executive Board shall constitute a waiver of notice by him at the time and place of such meeting. If all members are present at any meeting of the Executive Board, no notice shall be required and any business may be transacted at such meeting, not otherwise inconsistent with the Act.

Section 12. Quorum of Executive Board. At all meetings of the Executive Board, a majority of the members of the Executive Board shall constitute a quorum for the transaction of business, and the votes of a majority of the members of the Executive Board present at any meeting at which a quorum is present shall constitute the decisions of the Executive Board.

Section 13. Conduct of Meeting. The President shall preside over all meetings of the Executive Board and the Secretary shall keep a minute book of the Executive Board recording therein all resolutions adopted by the Executive Board and a record of all transactions and proceedings occurring at such meetings. Roberts Rules of Order shall govern the conduct of the meetings of the Executive Board when not in conflict with the Declaration, these Bylaws or the Act.

Section 14. Fidelity Bonds. Unless the Unit Owners, by Majority Vote, otherwise determine (with the requisite consent of Mortgagees, as applicable), the Executive Board shall require fidelity bonds for all officers and employees of the Condominium handling or

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responsible for Condominium funds, with coverage being an amount equal to (1) one quarter of the annual Common Expenses plus (2) all reserve funds controlled by the Executive Board. The premiums on such bonds shall constitute a Common Expense.

Section 15. Director and Officer Liability Insurance. The Executive Board shall obtain Director and Officer Liability Insurance for all Executive Board members and officers of the Executive Board and the premiums on such Insurance shall constitute a Common Expense.

Section 16. Liability of the Members of the Executive Board. The members of the Executive Board shall not be liable to the Unit Owners for any mistake of judgment, negligence, or otherwise except for their own individual willful misconduct or bad faith. The Association shall indemnify and hold harmless each of the members of the Executive Board from and against all contractual liability to others arising out of contracts made by the Executive Board on behalf of the Unit Owners unless any such contract shall have been made in bad faith. It is intended that the members of the Executive Board shall have no personal liability with respect to any contract made by them on behalf of the Unit Owners. It is also intended that the liability of any Unit Owner arising out of any contract made by the Executive Board or out of the aforesaid indemnity in favor of the members of the Executive Board shall be limited to such proportion of the total liability thereunder as his Percentage Interest bears to the Percentage Interests of all of the Unit Owners. Every agreement made by the Executive Board or by the Managing Agent on behalf of the Owners shall, if obtainable, provide that the members of the Executive Board, or the Managing Agent, as the case may be, are acting only as agents for the Unit Owners and shall have no personal liability thereunder (except as Unit Owners), and that each Unit Owner's liability thereunder shall be limited to such proportion of the total liability thereunder as his Percentage Interest bears to the Percentage Interests of all Unit Owners. The Unit Owners shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding by reason of the fact that he is or was a member of the Executive Board, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believes to be in or not opposed to the best interests of the Unit Owners.

Section 17. Executive Board Committees. The Executive Board may, from time to time, establish such one or more ad hoc committees as it may deem necessary or appropriate for the administration of the affairs of the Executive Board or of the Property. Each such committee, shall have such discretionary, decision making or advisory powers as the Executive Board shall determine; provided, however, that the Executive Board shall retain full responsibility for all acts undertaken by any committee within the authority granted to such committee. The members of any such committee shall be appointed from among the members of the Executive Board or from those persons entitled to vote at any meeting of Unit Owners, or any combination thereof. After the sale of the fifteenth (15) Unit and during the Declarant Control Period, there may be appointed a Transition committee which shall consist of three (3) Unit Owners who wish to volunteer and shall be selected by the Executive Board to serve as a point of contact between the Declarant and the Unit Owners to discuss issues of concern directly with the Declarant that may arise during the Declarant Control Period.

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Section 18. Inspection of and Access to Books and Records. The books and accounts of the Association, vouchers accrediting the entries made thereupon and all other records maintained by the Association, as well as current copies of the Declaration, Bylaws, Declaration Plan and the Rules and Regulations shall be available for examination by the Unit Owners as well as their duly authorized agents or attorneys, and by the lenders, holders, insurers, and guarantors of any first mortgage on any Unit and their respective duly authorized agents or attorneys, during normal business hours and for purposes reasonably related to their respective interest and after reasonable notice. The books and accounts of the Association, vouchers accrediting the entries made thereupon and all other records maintained by the Association, as well as current copies of the Declaration, Bylaws, Declaration Plan and Rules and Regulations, and the most recent annual audited financial statement, if such is prepared, shall be available for examination by any prospective purchaser of a Unit in the Condominium during normal business hours and for purposes reasonably related to their respective interest and after reasonable notice.

ARTICLE IV

OFFICERS

Section 1. Designation. The principal officers of the Association shall be the President, Vice-President, Secretary and Treasurer, all of whom shall be appointed by the Executive Board, who need not be Unit Owners or residents of the State of Delaware. The Executive Board may appoint an assistant treasurer, an assistant secretary, and such other officers as in its judgment may be necessary. The President shall be a member of the Executive Board. Any other officers may be, but shall not be required to be, members of the Executive Board.

Section 2. Election of Officers. The officers of the Association shall be elected annually by the Executive Board at the organization meeting of each new Executive Board and shall hold office at the pleasure of the Executive Board. Any vacancy in an office shall be filled by the Executive Board at a regular meeting or special meeting called for such purpose.

Section 3. Removal of Officers. Upon the affirmative vote of a majority of the members of the Executive Board, any officer may be removed, either with or without cause, and such officer's successor may be elected at any regular meeting of the Executive Board or at any special meeting of the Executive Board called for such purpose.

Section 4. Term of Office. The term of office of the President, Vice-President, Secretary and Treasurer shall be fixed at three (3) years, except as to the initial staggered terms established under Article III, Section 2, in which case the terms of the respective offices shall coincide with the term of the Director associated with such office. At the expiration of the term of the President, Vice-President, Secretary and Treasurer, as applicable, his or her successor shall be appointed by the Executive Board. Each officer shall hold office until his or her successor shall have been appointed by the Association.

Section 5. Vacancies. Any Vacancy of any principal officer position shall be filled by appointment by the Executive Board and each person so appointed shall serve for the remainder of the term of the office to which they are appointed by the Executive Board.

Section 6. President. The President shall be the chief executive of the Condominium. The President shall preside at all meetings of the Association and of the Executive Board. The President shall have all of the general powers and duties which are incident to the office of president of a stock corporation organized under the General Corporation Law of the State of Delaware, including, but not limited to, the power to appoint committees from among the Owners from time to time as the President may in the President's discretion decide is appropriate to assist in the conduct of the affairs of the Condominium. The President or Vice-President may prepare, execute, certify and record amendments to the Condominium Documents on behalf of the Association.

Section 7. Vice-President. The Vice-President shall take the place of the President and perform the President's duties whenever the President shall be absent or unable to act. If neither the President nor the Vice-President is able to act, the Executive Board shall appoint some other member of the Executive Board to act in the place of the President, on an interim basis. The Vice-President shall also perform such duties as shall from time to time be imposed upon the Vice-President by the Executive Board or by the President. The President or Vice-President may prepare, execute, certify and record amendments to the Condominium Documents on behalf of the Association.

Section 8. Secretary. The Secretary shall keep the minutes of all meetings of the Association and of the Executive Board; shall have charge of such books and papers as the Executive Board may direct, and shall, in general, perform all the duties incident to the office of secretary of a stock corporation organized under the General Corporation Law of the State of Delaware.

Section 9. Treasurer. The Treasurer shall have the responsibility for Condominium funds and securities and shall be responsible for keeping full and accurate financial records and books of account showing all receipts and disbursements, and for the preparation of all required financial data; shall be responsible for the deposit of all monies and other valuable effects in the name of the Executive Board, or the Managing Agent, in such depositories as may from time to time be designated by the Executive Board, and shall, in general, perform all the duties incident to the office of treasurer of a stock corporation organized under the General Corporation law of the State of Delaware

Section 10. Agreements, Contracts, Deeds, Checks, etc. All agreements, contracts, deeds, leases, checks and other instruments of the Association for expenditures or obligations of over $1,000.00, shall be executed by any two officers of the Association or by such other person or persons as may be designated by the Executive Board. All such instruments for expenditures or obligations of less than $1,000.00, may be executed by any one officer of the Association or by such other person as may be designated by the Executive Board.

Section 11. Compensation of Officers. No officer shall receive any compensation from the Condominium for acting as such. Officers shall be reimbursed for their actual out-of-pocket expenses necessarily incurred in connection with the performance of their duties and services as officers of the Executive Board on behalf of the Condominium.

ARTICLE V

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OPERATION OF THE PROPERTY

Section 1. Determination of Common Expenses and Assessments Against Owners.

(a) Fiscal Year. The fiscal year of the Condominium shall consist of the twelve-month period commencing on January 1 of each year and terminating on December 31 of the same year.

(b) Preparation and Adoption of Annual Budget. Each year on or before November 1st, the Executive Board shall adopt a budget for the Condominium for the next ensuing fiscal year, containing (1) a line item for any required funding of the Repair and Replacement Reserves sufficient to achieve the level of funding noted in the Reserve Study and to provide cash reserves to repair and replace the General Common Elements, the Single Family Home General Common Elements on the Property that are not Units as are necessary to maintain the Required Community Condition and in accordance with Legal Requirements (including the Act), or maintain the Repair and Replacement Reserves at such levels and (2) an estimate of the total amount which it considers necessary to pay the normal and recurring costs and expenses of (i) maintaining, managing, operating, repairing and replacing the General Common Elements, the Single Family Home General Common Elements that the Executive Board is responsible for maintaining, repairing and replacing under the Act, these Bylaws or the Declaration, (ii) wages, materials, insurance premiums, services, supplies and other expenses that may be declared to be Common Expenses by the Act, these Bylaws, the Declaration or a resolution of the Association, (iii) the Working Capital and Operating Reserve (as defined in this Article V below) so as to replenish any funds withdrawn from the Working Capital and Operating Reserve and not replenished by funds received under Section 1(h)(3) of this Article V below, (iv) the Repair and Replacement Reserves, and (v) such other reasonable amounts as the Executive Board considers necessary to provide working capital for the Property, a general operating reserve for the Property, reserves for contingencies and replacements related to the Property, and for the administration, operation, maintenance and repair of the Property that the Association is responsible for under the Condominium Documents and the Act and the rendering to the Unit Owners of all related services. The budget shall constitute the basis for determining each Unit Owner's contribution for the Common Expenses of the Condominium applicable to such Unit Owner's Unit. When the first Executive Board appointed by Declarant under these Bylaws takes office, it shall determine the budget, as defined in this Section, for the period commencing upon the sale of the first Unit by Declarant and ending on December 31st of the fiscal year in which such first sale occurs. Regular Assessments shall be assessed and levied against the Unit Owners during said period as provided in this Section but in no event later than sixty (60) days after the first Unit is conveyed by Declarant.

(c) Adoption Prior to Expiration of Declarant Control Period. Until the expiration or earlier termination of the Declarant Control Period, within thirty (30) days after the adoption of any budget, the Executive Board shall send to each Unit Owner a copy of the budget, in a reasonably itemized form which sets forth the amount of the Common Expenses payable by each Unit Owner.

(d) Adoption After Expiration of Declarant Control Period After the expiration or earlier termination of the Declarant Control Period, within thirty (30) days after the

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adoption of any budget, the Executive Board shall (1) provide to all Unit Owners a summary of the budget, including any reserves and a statement of the basis on which any reserves are calculated and funded and (2) simultaneously set a date for a meeting of the Unit Owners to consider ratification of the budget not less than fourteen (14) nor more than sixty (60) days after providing the summary. Unless at that meeting sixty-seven percent (67%) of the Percentage Interests entitled to vote reject the budget, the budget shall be deemed ratified, whether or not a quorum is present. If a proposed periodic budget is rejected, the periodic budget last ratified by the Unit Owners shall be continued until such time as the Unit Owners ratify a subsequent budget proposed by the Executive Board.

(e) Regular Assessments and Payment of Common Expenses. The total amount of the estimated funds required for the operation of the Property set forth in the budget for each fiscal year shall be assessed against each Unit Owner in proportion to such Owner's respective Percentage Interest that is applicable to such Owner's Unit. On or before the first day of each fiscal year, and the first day of each of the succeeding eleven (11) months in such fiscal year, each Unit Owner shall be obligated to pay to the Executive Board or the Managing Agent (as determined by the Executive Board), one-twelfth (1/12) of the Assessment for such fiscal year made pursuant to the foregoing provisions; provided, however, if the Executive Board so determines, Assessments may be collected quarterly in which event each Unit Owner shall be obligated to pay to the Executive Board or the Managing Agent (as determined by the Executive Board) one-fourth (1/4) of the Assessment for such fiscal year on the first day of each fiscal year, and one-fourth (1/4) on the first day of the fourth, seventh and tenth months of each fiscal year or such other intervals that the Executive Board may determine. Within sixty (60) days after the end of each fiscal year, the Executive Board shall supply to all Unit Owners an itemized accounting of the Common Expenses for such fiscal year actually incurred and paid, together with a tabulation of the amounts collected pursuant to the budget adopted by the Executive Board for such fiscal year, and showing the net amount over or short of the actual expenditures plus reserves. Any amount accumulated in excess of the amount required for actual expenses and reserves shall be either credited according to the percentage of the portion of total budget allocated to the General Common Expenses that are applicable to each Unit to the next monthly, quarterly or other interval as determined by the Executive Board of installments due from Unit Owners under the current fiscal year's budget until exhausted, refunded to each Unit Owner, or applied in any other manner as the Executive Board shall determine in its sole subjective and absolute discretion. Any net shortage shall, if the Executive Board deems it advisable, be added, in accordance with the above allocations, to the installments due in the succeeding six (6) months after the rendering of the accounting.

(f) Special Assessments. Extraordinary expenditures not originally included in the annual budget which may become necessary during the year shall be charged first against the Working Capital and Operating Reserve.

(1) Prior to Expiration of Declarant Control Period. Until the expiration or earlier termination of the Declarant Control Period, if the Working Capital and Operating Reserve is inadequate for any reason, including nonpayment of any Unit Owner's Assessment, the Executive Board may at any time levy a special Assessment, which shall be assessed against the Unit Owners according to their respective Percentage Interests, and which shall be payable in a lump sum or in installments as the Executive Board may determine, in its

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sole subjective and absolute discretion. The Executive Board shall notify all Unit Owners, in writing, of any such special Assessment disclosing the amount and reasons therefore; and such special Assessment, unless otherwise specified in such notice, shall become effective with the next monthly (or quarterly, if payments are required by the Executive Board to be made quarterly) payment of regular Assessments due more than ten (10) days after the delivery or mailing of such notice of such special Assessment. All Unit Owners shall be obligated to pay the adjusted monthly (quarterly or such other interval as determined by the Executive Board) amount or, if the special Assessment is not payable in installments, the amount of such special Assessment.

(2) After Expiration of Declarant Control Period. After the expiration or earlier termination of the Declarant Control Period, the Executive Board may at any time propose a budget which would require a special Assessment against all the Units for any General Common Expenses and against all the Single Family Home Unit Owners for Single Family Home General Common Expenses. Except as provided in this Subsection 1(f)(2) below, the special Assessment is effective only if the Executive Board follows the procedures for ratification of a budget described in Subsection 1(d) of this Article V above and a majority of the Unit Owners affected by such special Assessment do not reject that proposed special Assessment. Notwithstanding the foregoing provisions of this Subsection 1(f)(2), if the Executive Board determines by unanimous vote that a special Assessment is necessary in order to respond to an emergency or otherwise to comply with the requirements of the Act, then: (i) the special Assessment shall become effective immediately in accordance with the terms of the vote; (ii) notice of the emergency Assessment shall be promptly provided to all Unit Owners affected by such special Assessment; and (iii) the Executive Board shall spend the funds paid on account of the emergency Assessment solely for the purposes described in the vote.

(3) In the event that any Reserve Study applicable to the General Common Elements shows, at any time and from time to time, that there are insufficient funds allocated to the General Common Elements in the Repair and Replacement Reserve for the projected time when the costs of repairs and/or replacements of any of the General Common Elements will be incurred as required under the Declaration or these Bylaws, the Executive Board shall have the right to make a special Assessment to the Unit Owners to pay, based on the their proportionate share of the General Common Element Expenses, which special Assessment shall be payable over the necessary period (as set forth in the then current Reserve Study applicable to the General Common Elements) to eliminate any projected shortfall in the funds allocated to the General Common Elements within the Repair and Replacement Reserve.

(4) In the event that any Reserve Study applicable to the Single Family Home General Common Elements shows, at any time and from time to time, that there are insufficient funds allocated to the Single Family Home General Common Elements in the Repair and Replacement Reserve for the projected time when the costs of repairs and/or replacements of any of the Single Family Home General Common Elements will be incurred as required under the Declaration or these Bylaws, the Executive Board shall have the right to make a special Assessment to the Owners of the Single Family Home Units to pay, based on the their proportionate share of the Single Family Home General Common Element Expenses, which special Assessment shall be payable over the necessary period (as set forth in the then current Reserve Study applicable to the Single Family Home General Common Elements) to eliminate

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any projected shortfall in the funds allocated to the Single Family Home General Common Elements within the Repair and Replacement Reserve.

(g) Executive Board Unit Assessments. If the Executive Board purchases a Unit for the use and occupancy of a resident manager for the Property, the cost of such Unit shall be treated as a General Common Expense. That portion of the General Common Expenses directly attributable to the purchase of the Unit to be used and occupied by the resident manager shall be allocated among the Unit Owners in an amount equal to the amount by which such Unit Owner's General Common Percentage Interest bears to the aggregate General Common Percentage Interest of all such Units Owners and collected through a special Assessment which shall be collectable in whatever manner the Executive Board, in its sole subjective and absolute discretion, decides.

(h) Reserves.

(1) Working Capital and Operating Reserve. In addition to all other Assessments hereunder, the Association (or, if the Association has not been formed, until the Association has been formed, Declarant) shall build up and maintain a working capital and operating reserve to meet unforeseen capital and operating expenditures, to purchase any additional equipment and/or provide services (the "**Working Capital and Operating Reserve**"). The amounts paid into the Working Capital and Operating Reserve shall not be considered as advance payments of regular or special Assessments. Declarant shall not use any portion of the Working Capital and Operating Reserve to defray any of its or the Association's expenses, reserve contributions, or construction costs or to make up any budget deficits while Declarant is in control of the Association. Notwithstanding anything contained herein to the contrary, Declarant shall be entitled to receive reimbursement for any funds it paid to the Association for an unsold Unit's share of the Working Capital and Operating Reserve from funds collected from the purchaser of such Unit at closing when such Unit is sold.

(2) Repair and Replacement Reserve. Upon the recordation of these Bylaws, the Association (or, if the Association has not been formed, until the Association has been formed, Declarant) shall create and maintain, in addition to any reserve for contingencies, a repair and replacement reserve with respect to each of the (i) General Common Elements to be designated and maintained as the General Common Elements Repair and Replacement Reserve, and (ii) Single Family Home General Common Elements to be designated and maintained as the Single Family Home General Common Element Repair and Replacement Reserve.

(i) Unit Owner Contributions to the Working Capital and Repair, Replacement and Operating Reserve. Upon the sale of each Unit by Declarant and/or a Participating Builder to a third party purchaser (which is not a Participating Builder), the Unit Owner purchasing such Unit shall contribute a sum of ONE THOUSAND DOLLARS ($1,000.00) to the Working Capital and Operating Reserve account. Thereafter each subsequent purchaser of such Unit shall contribute a sum of ONE THOUSAND DOLLARS ($1,000.00) to such Working Capital and Operating Reserve account.

(j) Reserve Account. The Working Capital and Repair, Replacement and Operating Reserve account are referred to as the "**Reserve Account**". In addition to the

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contributions that will be made by each Unit Owner as provided above, the Association shall include as part of each annual Assessment an assessment towards a contribution equal to at least **ten percent (10%) of the then current annual budget** to be allocated by the Executive Board as needed or required with respect to the obligations of the Unit Owners to one or more of the Reserve Account into which each Unit Owner, as applicable, is responsible to contribute to from time to time. All funds accumulated for the Reserve Account shall be segregated from the general operating funds, and, if the Executive Board deems it advisable, funds accumulated for each type of reserve shall be kept in a separate bank account, identified by reference to the specific category of reserve and as otherwise provided or required under the Declaration.

(k) Effect of Failure to Prepare or Adopt Budget. The failure or delay of the Executive Board to prepare or adopt the annual budget for any fiscal year shall not constitute a waiver or release in any manner of a Unit Owner's obligation to pay the Unit Owner's allocable share of its applicable Common Expenses, whenever the same shall be determined; and, in the absence of any annual budget or adjusted budget, each Unit Owner shall continue to pay the applicable Common Expenses assessment rate established for the immediately preceding fiscal period until the adjusted budget shall have been mailed or delivered. With respect to any differential between the rate for such immediately preceding fiscal year and the rate calculable pursuant to the annual budget, once adopted, for the new fiscal year, the Executive Board shall be entitled to assess or credit such differential as the Executive Board determines.

(l) Accounts. Unless the Unit Owners otherwise direct by Majority Vote, the Executive Board shall be entitled to commingle into a single fund all sums collected by the Executive Board with respect to Assessments against the Unit Owners except that any sums collected with respect to Reserve Account shall at all times be kept in segregated funds.

(m) Increase of Assessments. Any increase in Assessments that would increase the annual Assessments more than twenty-five percent (25%) from the previous year shall require the affirmative approval of sixty-seven percent (67%) of the Percentage Interests entitled to vote with respect to such Assessment and such other approvals as otherwise provided under Article XI of these Bylaws.

(n) Exceptions for Declarant's, Participating Builder's and Executive Board's Units. Notwithstanding anything contained in the Condominium Documents to the contrary, no lawsuit, suspension of utilities or other action shall be taken by or on behalf of the Executive Board or any Unit Owner, Mortgagee, occupant, mortgagee or other lienor to collect any Assessment made against any Unit owned by Declarant, Participating Builder or the Executive Board, or their respective successors or assigns, which relates to any period of time or times during which the Unit was not actually being occupied as a residence (and the performance of work on any Units owned by Declarant or Participating Builder to construct, complete, repair, rehabilitate, modify or improve same shall not constitute occupancy thereof), unless and except to the extent that such Assessment is for actual cash expenditures made by the Executive Board for the cost of utilities, services, insurance premiums, or maintenance personnel directly consumed or utilized, in fact, by such Unit, independent of and apart from its interest in the Common Elements. To the extent that Declarant or Participating Builder owes any Assessment on a Unit (computed in accordance with the limitations regarding unoccupied Units owned by Declarant or Participating Builder as set forth in the immediately preceding sentence) at the time

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when that Unit is being conveyed, the amount due shall be reimbursed to the Executive Board without interest, from the net proceeds of sale received by Declarant or Participating Builder, as applicable, but only insofar as such net proceeds are adequate. Any deficiency shall be allocated to Declarant's or Participating Builder's unsold Units in proportion to the Percentage Interest attributed to each such Unit.

(o) Assessments and Common Expenses During Declarant Control Period. Notwithstanding anything contained in the Condominium Documents to the contrary, during the Declarant Control Period, (i) Assessments shall be assessed against each Unit Owner in proportion to such Unit Owner's Single Family Home Common Elements Percentage Interests, Percentage Interests, as applicable, that are assigned to such Unit in **Schedule "C"**, as attached to the Declaration, and (ii) the remaining balance of the Assessments attributable to each annual operating budget (exclusive of any Assessments assessed in order to fund the Reserve Account) that are required to eliminate a deficit in such annual operating budget (exclusive of any Assessments assessed in order to fund the Reserve Account) shall be paid by Declarant (the "**Declarant's Deficit Contribution**") on a monthly or quarterly basis as determined by the Executive Board in accordance with the terms of Article V hereof. For avoidance of doubt, the Assessments under this Section 1(r) for each Unit Owner shall include all amounts required to fund the Repair and Replacement Reserve with respect the Single Family Home General Common Elements, as applicable to each Unit in accordance with the Reserve Study during the Declarant Control Period. Upon the expiration of the Declarant Control Period, the Assessments shall be assessed or re-assessed, as applicable, in accordance with the provisions contained in Article V hereof, and Declarant's obligation to pay the Declarant's Deficit Contribution shall immediately cease, become void and of no further force or effect. For purposes of this Section 1(r), if Declarant terminates the Declarant Control Period under clause (iv) of the definition of Declarant Control Period in the Declaration, Declarant's obligation under this Section 1(r) to pay the Declarant's Deficit Contribution shall expire upon the earlier (A) sixty (60) days after the date on which seventy-five percent (75%) or more of the proposed Units, including any and all Units submitted to the Act and the Condominium in accordance with the Act and any and all Expansion Units have been conveyed to Units Owner other than Declarant or (B) ten (10) years after the date on which the first Unit has been conveyed to a Unit Owner other than Declarant.

(p) Surplus Funds. Any surplus funds of the Association remaining after payment of or provision for Common Expenses and any prepayment of reserves shall be applied to any future deficits or future projects, to one or more of the Reserve Account in a manner consistent with an equitable allocation of such surplus attributable to the amount of the payments made into a Reserve Account unless the Executive Board determines after consultation with the Managing Agent and the Association's accountant that the funds applied to Reserve Accounts are adequately funded as required or contemplated by these Bylaws and some or all of the surplus can be credited to the Unit Owners in proportion to their payments made and their respective Percentage Interests in the applicable General Common Elements or some other fair and equitable method adopted by the Executive Board based on the factors resulting in the creation of any such surplus in order to reduce one or more future Assessments.

Section 2. Payment of Common Expenses.

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(a) Prior to Establishment of Association and Initial Assessment. Pursuant to § 81-315(a)(11) of the Act until the Association is validly established pursuant to the Act and makes a Common Expense Assessment, Declarant shall pay all Common Expenses together with all sums necessary to fully fund the Reserve until the Association makes its first Assessment.

(b) Subsequent to Establishment of Association and Initial Assessment. All Unit Owners shall be personally liable for and obligated to pay the Common Expenses applicable to each Owner's Unit as assessed by the Executive Board pursuant to the provisions of the Condominium Documents, including, but not limited to, Section 1 of this Article V. No Unit Owner may exempt himself from liability for his contribution toward his applicable Common Expenses by waiver of the use of enjoyment of any of the Common Elements or by abandonment of his or her Unit. The purchaser of a Unit shall be jointly and severally liable with the selling Unit Owner for all unpaid Assessments against the latter for his applicable Percentage Interest of his Common Expenses applicable to his Unit up to the time of the conveyance, without prejudice to the purchaser's right to recover from the selling Unit Owner the amounts paid by the purchaser therefor; provided, however, that any such purchaser shall be entitled to a statement from the Executive Board or Managing Agent setting forth the amount of the unpaid Assessments against the selling Unit Owner and such purchaser shall not be liable for, nor shall the Unit conveyed be subject to a lien for, any unpaid Assessments in excess of the amount therein set forth; and provided, further, that if a mortgagee of a first mortgage of record or other purchaser of a Unit obtains title to the Unit as a result of foreclosure of a first mortgage, or through the other remedies provided for in the first mortgage, such purchaser, its successors and assigns, shall not be liable for, and such Unit shall not be subject to, a lien for the payment of Common Expenses assessed prior to the acquisition of title to such Unit by such purchaser pursuant to the foreclosure sale, or through the other remedies provided for in the first mortgage; provided, however that the purchase of any such Unit as a result of any such foreclosure of a first mortgage, or through the other remedies provided for in the first mortgage, shall be without prejudice to the Association's right to recover from the selling or prior Unit Owner any past due or delinquent Assessments. Any such unpaid share of the Common Expenses assessed prior to the acquisition of title to such Unit by such purchaser pursuant to a voluntary sale (but excluding an acquisition of title to a Unit pursuant to a foreclosure sale) for which a statement was provided to such purchaser by the Executive Board, shall be collectible from all Unit Owners, including the purchaser of such Unit, in proportion to their respective Percentage Interests in the applicable Common Elements appurtenant to each Owner's Unit.

(c) During the Declarant Control Period. Notwithstanding anything contained in the Condominium Documents to the contrary, during the Declarant Control Period, (i) Unit Owners shall pay their applicable Common Expenses based on the amount of Assessment under Article V, Section 1(r) above and (ii) Declarant shall pay the Declarant's Deficit Contribution assessed under Article V, Section 1(r). For purposes of this Section 2(c), if Declarant terminates the Declarant Control Period under clause (iv) of the definition of Declarant Control Period in the Declaration, Declarant's obligation under this Section 2(c) to pay the Declarant's Deficit Contribution shall expire upon the earlier (A) sixty (60) days after the date on which seventy-five percent (75%) or more of the proposed Units, including any and all Units submitted to the Act and the Condominium in accordance with the Act and any and all Expansion Units have been conveyed to Units Owner other than Declarant or (B) ten (10) years after the date on which the first Unit has been conveyed to a Unit Owner other than Declarant.

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Section 3. Collection of Assessments. The Executive Board shall take prompt action to collect any Assessments due from any Unit Owner which remain unpaid for more than thirty (30) days from the due date for payment thereof, together with interest thereon as imposed under Article IX, Section 1 below. To the extent permitted under Legal Requirements (including the Act), the Association shall have a statutory lien against a Unit for any Assessment levied against the Unit or fines imposed against its Unit Owner, as provided under § 81-316 of the Act.

Section 4. Statement of Unpaid Assessments. The Association upon written request shall furnish to a Unit Owner a statement setting forth the amount of unpaid Assessments against the Unit. Such statement must be in recordable form. The statement must be furnished within ten (10) business days after receipt of the request and is binding on the Association, the Executive Board, and every Unit Owner.

Section 5. Maintenance, Repair and Replacement.

(a) By the Executive Board. Pursuant to § 81-307(a) of the Act, the Executive Board shall be responsible for and shall determine when and to what extent the maintenance, repair and replacement of the following shall be required and otherwise necessary to maintain the Required Community Condition, the cost of which shall be charged to each Unit Owner as a General Common Element Expense, as applicable (unless necessitated by the negligence, misuse or neglect of a Unit Owner, in which case such expense shall be charged to such Unit Owner):

(1) All of the General Common Elements.

(2) With respect to the Limited Common Element, the maintenance, repair and replacement of the irrigation systems that are located within any Limited Common Element Yard of each Unit, as well as mowing, fertilizing, trimming, pruning and/or otherwise maintaining all or any portion of the grass, shrubs, bushes, trees and other planted materials installed by the Declarant and/or a Participating Builder, and any replacements thereof, as may be located within the Limited Common Element Lawn Area of each Unit, but expressly excluding any maintenance, repairs or replacements to any Limited Common Elements appurtenant to each Unit not otherwise expressly the responsibility of the Association as provided herein (including but not limited to any approved Yard Area Improvements made by the Unit Owner within its Limited Common Element Yard Area) which the Unit Owner shall be responsible for under Section 5(b) below.

(3) All incidental damage caused to any Unit, or its appurtenant Limited Common Elements or any other Common Element by such work as may be done or caused to be done by the Executive Board in accordance therewith.

Each Unit Owner shall promptly report to the Executive Board or the Managing Agent any defect or need for repairs for which the Executive Board is responsible.

(b) By the Unit Owner. As provided under Section 11 of the Declaration captioned "Maintenance Repair and Replacement of Limited Common Elements by the Unit Owners", each Unit Owner shall keep such Unit Owner's Unit and any Limited Common Elements which are a part of and appurtenant to such Unit (including but not limited to any

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Limited Common Element Yard Area and any Yard Area Improvements) in good order, condition and repair and in a clean and sanitary condition, and shall do all redecorating, painting cleaning, power washing and varnishing which may at any time be necessary to maintain the good appearance and condition of such Unit and any Limited Common Elements which are a part of and appurtenant to such Unit, inclusive (by way of example and not limitation) of installing and maintaining window treatments in all windows and assuring that the same, to the extent visible from the exterior of the Unit as provided in the Declaration. Pursuant to § 81-307(a) of the Act the Executive Board shall determine when and to what extent any such maintenance, repairs and replacements associated with the Units and any Limited Common Elements which are a part of and appurtenant to such Units shall be required from time to time in order to comply with the Condominium Documents, the Act and as required in order to maintain the Required Community Condition. In addition, each Unit Owner shall be responsible for all damages to any and all other Units or to the Common Elements resulting from such Unit Owner's failure to make or perform any of the maintenance, repairs, and/or replacements required to be made by such Unit Owner by this Section. Each Unit Owner shall perform such Unit Owner's responsibility in such manner as shall not unreasonably disturb or interfere with the other Unit Owners and as otherwise directed by the Executive Board.

(c) Manner of Maintenance, Repair and Replacement. All maintenance, repairs and replacements of any Common Element, including any Limited Common Elements whether the obligations of the Association or a Unit Owner hereunder shall be in a manner to keep the foregoing in good order, condition and repair and in a clean and sanitary condition consistent with and substantially similar to the original construction and installation and in accordance with the Condominium Documents, the Act and as required in order to maintain the Required Community Condition.

(d) Executive Board's Right of Self-Help. In the event that any Unit Owner fails to maintain, repair or replace such Owner's Unit, or any Limited Common Elements which are such Unit Owner's responsibility under the Declaration and these Bylaws as directed by the Executive Board, the Executive Board shall have the right (but not the obligation) to make an Assessment for and/or undertake the maintenance, repair and/or replacement of such Owner's Unit and any appurtenant Limited Common Elements, the Assessment and/or costs and expenses of which shall be a lien against such Owner's Unit and payable by such Unit Owner upon demand therefor by the Executive Board and otherwise as provided and permitted under §81-316 of the Act.

Section 6. Additions, Alterations or Improvements by the Executive Board.

(a) Whenever in the judgment of the Executive Board the General Common Elements shall require additions, alterations, or improvements costing in excess of TEN THOUSAND DOLLARS ($10,000.00) during any twelve (12) consecutive months, and the making of such additions, alterations or improvement shall have been approved by a vote of a majority of the Unit Owners, the Executive Board shall proceed with such additions, cost thereof as a General Common Element Expense. Any additions, alterations or improvements costing TEN THOUSAND DOLLARS ($10,000.00) or less during any period of twelve (12) consecutive months may be made by the Executive Board without the approval of the Unit Owners and the cost thereof shall constitute part of the General Common Element Expenses.

(b) Whenever in the judgment of the Executive Board the Single Family Home General Common Elements shall require additions, alterations, or improvements costing in excess of TEN THOUSAND DOLLARS ($10,000.00) during any twelve (12) consecutive months, and the making of such additions, alterations or improvement shall have been approved by a vote of a majority of the Single Family Home Unit Owners, the Executive Board shall proceed with such additions, cost thereof as a Single Family Home General Common Element Expense. Any additions, alterations or improvements costing TEN THOUSAND DOLLARS ($10,000.00) or less during any period of twelve (12) consecutive months may be made by the Executive Board without the approval of the Single Family Home Unit Owners and the cost thereof shall constitute part of the Single Family Home General Common Element Expenses.

Section 7. Additions, Alterations or Improvements by Unit Owners. No Unit Owner shall make any structural addition, alteration or improvement to any of the Common Elements, including but not limited to any Limited Common Elements that comprise the exterior of such Unit Owner's Unit without the prior written consent thereto of the Declarant and the Executive Board and otherwise subject to and in accordance with the provisions of § 81-211 and § 81-212 of the Act and in compliance with the Condominium Documents as well as in a manner consistent with and materially similar to the original construction and installation and otherwise in compliance with the Required Community Condition. Any application to any governmental authority for a permit to make any approved addition, alteration or improvement in or to any Unit or its appurtenant Limited Common Elements or any other Common Element may be executed by the Executive Board without however, incurring any liability on the part of the Executive Board or any of them to any contractor, subcontractor or materialman on account of such addition, alteration or improvement, or to any person having any claim for injury to person or damage to property arising therefrom.

Section 8. Restrictions on Use of Units and Common Elements. Each Unit and the Common Elements shall be occupied and used in accordance with the provisions of the Condominium Documents.

Section 9. Right to Access. Each Unit Owner shall grant a right of access to such Unit Owner's Unit and the appurtenant Limited Common Elements to the Executive Board or the Managing Agent, or any other person authorized by the Executive Board or the Managing Agent, or any group of the foregoing, for the purpose of making inspections or for the purpose of correcting any condition originating in such Unit or the appurtenant Limited Common Elements and threatening another Unit or any of the other Common Elements, or for the purpose of performing installations, alterations or repairs to the mechanical or electrical services of the Common Elements applicable to such Unit or elsewhere in the Property, or to correct any condition which violates the provisions of any mortgage covering another Unit and its appurtenant Limited Common Elements provided that requests for entry are made in advance and that any such entry is at a time reasonably convenient to the Unit Owner. In case of an emergency, such right of entry shall be immediate, not require notice, and whether the Unit Owner is present at the time or not. Each Unit Owner shall provide, upon the request of the Executive Board or the Managing Agent with emergency contact information from time to time to enable the Executive Board or the Managing Agent to respond in a timely manner to any situation that may necessitate the need to exercise the foregoing right of access. The Unit Owner

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shall, at all times, cause a key to its Unit to be in the possession of the Executive Board or the Managing Agent.

Section 10. Electricity. Electricity shall be supplied by the public utility company, Delmarva Power, serving the Units directly to each Unit through separate meters and each Unit Owner shall be required to pay the bills for electricity consumed or used in its Unit and any appurtenant Limited Common Elements. The electricity serving the General Common Elements shall be separately metered, and the Executive Board shall pay all bills for electricity consumed in such portions of the General Common Elements as a General Common Element Expense.

Section 11. Sewer Service. Sewer service shall be supplied to each Unit by Sussex County. The cost for all maintenance, repair and replacement of the sewer lines located within the General Common Elements to each Unit, (but not within the Unit or appurtenant Limited Common Element) shall be a General Common Element Expense. Each Unit Owner shall be responsible for the sewer fees for its Unit. Any sewer service to the General Common Elements shall be separately metered, and the Executive Board shall pay all bills for such sewer service provided to the General Common Elements as a General Common Element Expense.

Section 12. Water Service. Water service shall be supplied by Tidewater Utilities, Inc. (or its successors or assigns) directly to each Unit and the user fees for which, including any irrigation of any Limited Common Elements appurtenant to each Unit shall be billed directly to the individual Unit Owners. Any water service to the General Common Elements shall be separately metered, and the Executive Board shall pay all bills for such water service provided to the General Common Elements as a General Common Element Expense.

Section 13. Gas Supply. Propane gas shall be supplied by Service Energy Services (or its successors or assigns) directly to each Unit and the user fees for which shall be billed directly to the individual Unit Owners. Any gas service to the General Common Elements shall be separately metered, and the Executive Board shall pay all bills for such gas service provided to the General Common Elements as a Common Expense.

Section 14. Roads/Access Easements. The roads, and any access easements designated on the Declaration Plan, the Declaration or which are otherwise appurtenant to and benefit the Property shall be maintained, repaired and/or replaced from time to time as a General Common Element and shall be available for use on a non-exclusive basis by the Declarant, any Participating Builder, the Association, Unit Owners and their respective, agents, representatives, contractors, subcontractors, venders, licensees, employees and invitees (each a "**Responsible Party**") and shall be subject to such reasonable Rules and Regulations that may be promulgated from time to time by the Declarant and the Executive Board or as otherwise provided in any applicable easements or other documents recorded in the Recorder's Office pertaining to such roads or access easements. Notwithstanding anything contained herein to the contrary, a non-exclusive easement over and across said roads and access easements for ingress, egress, and regress is retained by the Declarant and Participating Builders, their successors and assigns, for their respective use in the development of the Condominium and in the event the Expansion Building(s) Unit(s) and additional improvements are constructed and annexed into the Condominium subject to the terms provided in the Declaration. The cost of any maintenance, repairs and replacement of all such roads and access easements shall be a General Common

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Element Expense payable by, and assessed to, all Unit Owners; provided, however, each Unit Owner shall be responsible for any and all damages to any other Units or to the Common Elements resulting from such Unit Owner's negligent acts or omissions arising out of the use of any such roads and access easements.

Section 15. Unit Decks and Balconies. Each Unit Owner shall be responsible for the maintenance, repair and replacement at its own expense of all decks, patios and balconies appurtenant to such Unit Owner's Unit and designated as either a part of the Unit and/or as a Limited Common Element appurtenant to such Unit Owner's Unit in the Declaration and/or the Declaration Plan as directed by the Executive Board pursuant to the Condominium Documents in order to maintain a uniform appearance and as necessary to maintain the Required Community Condition.

Section 16. Legal Proceedings. Due to the potential adverse financial impact to the Association and the Unit Owners of defending or pursuing any administrative, legal or equitable proceeding or action in connection with any dispute, claim, cause of action or proceeding arising out of or under or in connection with any one or more of the Condominium Documents (collectively, the "**Legal Proceedings**"), the decision to initiate any Legal Proceedings (except for the recovery of dues and Assessments from Unit Owners and for those matters or causes of actions that would arise under Article IX hereof) must be made by a resolution duly adopted at a properly noticed regular or special meeting of the Association held for such purpose. Such resolution shall require the affirmative vote of the Unit Owners representing not less than sixty-seven percent (67%) of the Common Element Percentage Interests held by the Unit Owners and approved or consented to by Mortgagees that represent at least fifty-one percent (51%) of the Common Element Percentage Interests held by the Unit Owners of the Units subject to a mortgage. If the Association shall incur or potentially be obligated as a result of such resolution to incur attorney's fees, expert fees or other costs or expenses associated with such Legal Proceedings, totaling in excess of $25,000.00 or if the amount recoverable by an attorney for the Association pursuant to a contingency fee agreement shall exceed $50,000.00, then such resolution shall require the affirmative vote of the Unit Owners representing not less than seventy-five percent (75%) percent of the Unit Owners and their Mortgagees. Neither the Executive Board, the Association nor the Unit Owners shall borrow on behalf of the Association nor use any funds from reserves of the Association to pay such legal costs, but the same shall be paid from and limited to the amounts provided in the annual budget for such expenditures for the fiscal year and shall be raised by special Assessment levied against the Unit Owners for such purpose. If such Legal Proceedings are not concluded within one (1) year of the date of such resolution, the continued prosecution of such Legal Proceedings beyond such period must be reaffirmed annually at a special meeting held for such purpose by the percentage vote of the Association as was required to adopt the original resolution. If the continued prosecution of such Legal Proceedings is not reaffirmed, the action shall be discontinued and the Executive Board shall have no further authority to act as the attorney-in-fact for the Association in the further prosecution or defense of such Legal Proceedings but may, with the affirmative vote of a majority of the vote in the Association, act as its attorney-in-fact with respect to any settlement or compromise of such Legal Proceedings; provided the same is completed within six (6) months thereafter. If the Association, by resolution approved in accordance with this section, authorizes the Executive Board to initiate Legal Proceedings, then the decisions relating to the conduct of the Legal Proceedings shall be made by the Executive Board for such purposes. Decisions

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regarding the conduct of any Legal Proceedings are nondelegable. Notwithstanding anything contained herein or in the Declaration to the contrary, the provisions of this Section shall not be modified or amended without Declarant's written consent so long as Declarant owns any property within the Condominium or the Expansion Area; thereafter this Section shall not be modified or amended except by a written instrument, executed by the Unit Owners representing not less than sixty-seven percent (67%) of the Common Element Percentage Interests held by the Unit Owners and approved or consented to by Mortgagees that represent at least fifty-one percent (51%) of the Common Element Percentage Interests held by the Unit Owners of Units subject to a mortgage, and be recorded with the Recorder's Office. The failure of a Mortgagee to respond to a notice of any such Legal Proceedings sent certified mail or registered mail, return receipt requested within sixty (60) days after notice of any such Legal Proceedings issues to such Mortgagee shall be deemed to be a consent by such Mortgagee to such Legal Proceedings.

Section 17. Trash Removal. The company providing trash removal services for the Condominium, including, but not limited to, for each of the Units, shall be selected by the Executive Board and each Unit Owner shall be obligated to individually contract with the aforementioned company for such trash removal services related to such Unit Owner's Unit. The expenses related to trash removal services for the General Common Elements shall be paid by the Executive Board as a General Common Element Expense. The expenses related to trash removal services for each Unit shall be the sole responsibility and obligation of the Unit Owner of such Unit and shall be paid by such Unit Owner directly to such company in accordance with such company's standard billing practices. Other than the company selected by the Executive Board, no Unit Owner shall contract with any other company for trash removal services related to such Unit Owner's Unit.

(a) Snow Removal, Mowing Irrigation and Landscaping. All snow, sanding/ice treatment (no salt to be used), mowing, irrigation and landscaping services with respect to and related to any General Common Elements shall be arranged for and paid by the Executive Board as a General Common Element Expense. In addition the Executive Board shall arrange for the mowing of the lawns in the Limited Common Element Yard Area, the trimming and pruning of trees and shrubbery located in the Limited Common Element Yard Area, and the removing and replacing of diseased, infested, unsightly, or dead trees and shrubbery in the Limited Common Element Yard Area and as otherwise provided under Section 5(a)(2) under Article V above, all as a General Common Element Expense. Each Unit Owner shall be responsible, at his or her own expense, for obtaining any additional services that are not otherwise provided by the Association as a General Common Element Expenses, such as snow removal and sanding/ice treatment (no salt to be used) with respect to and related to any and all decks, balconies, porches, sidewalks, and driveways appurtenant to such Unit Owner's Unit and/or denoted as a Limited Common Element, or additional irrigation, landscaping and other Limited Common Element Yard Area related services that are desired by any Unit Owner which exceeds the level, degree or scope of the Association Seasonal Care Maintenance as defined below (the "**Unit Owner Seasonal Care Maintenance**"). Agricultural Wells servicing an individual Unit Owner or any part of the Project shall be permitted subject to the approvals of the Association and state agencies regulating same. Unit Owner Seasonal Care Maintenance may, at the election of the Executive Board be provided to individual Unit Owners at their request, upon such terms, conditions and the fees or costs as may be offered by the Association from time to time, subject to assessment and payment for the fees or costs for such individualized services

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provided to some but not all of the Unit Owners pursuant to § 81-315(c)(2) of the Act (the "**Association Seasonal Care Maintenance**"). Furthermore, the Executive Board shall have the authority, under the Rules and Regulations to establish terms and conditions regarding the level, scope, quality and frequency of any such Unit Owner Seasonal Care Maintenance which shall be no less comparable and consistent with the Association Seasonal Care Maintenance that is offered and/or provided by the Association and in all respects shall be compliant with the Required Community Condition. The failure of any such Unit Owner to timely perform any of Unit Owner Seasonal Care Maintenance as required by this Section after written notice from the Association and an opportunity to remedy or correct any such failure(s) as provided in the Rules and Regulations shall obligate such Unit Owner to receive the Association Seasonal Care Maintenance and to be assessed and required to pay for the costs thereof in addition to the payment of any other fines and other costs and expenses incurred by the Association to remedy or correct any such failure(s) that may be necessary to bring such areas covered by the Association Seasonal Care Maintenance into the required condition for compliance with the Condominium Documents and the Required Community Condition.

ARTICLE VI

INSURANCE

Section 1. Authority to Purchase. Except as otherwise provided in Section 3 and Section 6 of this Article VI, all insurance policies relating to the Property shall be purchased by the Executive Board as trustee for the Unit Owners and their respective mortgagees, as their interests may appear, which insurance shall name the Association as a named insured, and, to the extent available, provide coverage for at least the following:

(a) Casualty or physical damage insurance in an amount equal to the full replacement value (with a maximum deductible amount which shall be the lesser of $10,000.00 or 1% of the policy face amount) of the Condominium, excluding the Units, with an "agreed amount" endorsement, "Condominium replacement cost" endorsement, an "Inflation Guard" endorsement if available, "Building Ordinance" or "Law Endorsement" endorsement, if applicable, "Steam Boiler and Maximum Coverage" endorsement and a "Special Condominium" endorsement and such other endorsements that may be required from time to time under Part II, Subject Standards, Chapter 7: Insurance Requirements of the Federal National Mortgage Association Selling Guide (the "**FNMA Guidelines**"), without deduction or allowance for depreciation (said amount to be redetermined annually by the Executive Board with the assistance of the insurance company affording such coverage), such coverage to afford protection against at least the following:

(1) All risks of direct physical loss commonly insured against by projects similar in construction, location and use;

(2) Loss or damage by fire or other hazards covered by the standard extended coverage endorsement; and

(3) Such other risks as shall customarily be covered with respect to projects similar in construction, location and use, including, but not limited to, vandalism,

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malicious mischief, windstorm, water damage, machinery explosion or damage, and such other insurance as the Executive Board may from time to time determine;

(b) Commercial General Liability Insurance in such amounts (but not less than Two Million Dollars ($2,000,000.00) per occurrence and Five Million Dollars ($5,000,000.00) annual aggregate) and in such form as may be considered appropriate by the Executive Board covering all occurrences commonly insured against for death, bodily injury, and property damage arising out of or in connection with the use, ownership, or maintenance of the Common Elements including, but not limited to, medical payments insurance, water damage, legal liability, hired automobile, non-owned automobile and any and all other liability incident to the ownership and/or use of the Condominium or any portion thereof, said Commercial General Liability Insurance to name Declarant and the Association as insureds as their interests may appear;

(c) Adequate fidelity insurance for all officers and employees of the Association and from any Managing Agent handling or responsible for Association funds in such amounts and coverage as may reasonably be determined by the Executive Board or as may be required under the FNMA Guidelines;

(d) During the course of any construction or repair on the Property by the Association, builder's completed value risk insurance against "all risks of physical loss," including collapse and transit coverage, in non-reporting form;

(e) Workmen's compensation insurance to the extent necessary to comply with any Applicable Law;

(f) Flood insurance in the maximum amount available under the Federal Flood Insurance Program up to the lesser of (i) 100% of the replacement cost of the insurable value of the General Common Elements and, if applicable, a "Residential Condominium Building Association" policy or (ii) the maximum coverage available under the appropriate National Flood Insurance Program to the extent the Property is within the Flood plain and deemed necessary by the Executive Board or as may be required under the FMNA Guidelines. The maximum deductible amounts for flood insurance coverage required above shall be the lesser of $5,000.00 or 1% of the policy's face amount; and

(g) Such other policies of insurance, including insurance for other risks of a similar or dissimilar nature, as are or shall hereafter be considered appropriate by the Executive Board.

The Executive Board shall obtain a single master policy covering physical damage for the entire Property under which the insurance company will issue to each Owner and mortgagee of a Unit, upon written request, a certificate or sub-policy specifying the portion of the master policy allocated to each Owner's Percentage Interest in the Common Elements. The insurance policies carried pursuant to Subsections (a) through (c) of this Section must provide that:

(1) Each Unit Owner is an insured person under the policy with respect to liability arising out of such Unit Owner's interest in the Common Elements or membership in the Association;

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(2) The insurer waives its right to subrogation under the policy against any Unit Owner or member of the Unit Owner's household;

(3) No act or omission by any Unit Owner, unless acting within the scope of the Unit Owner's authority on behalf of the Association, will void the policy or be a condition to recovery under the policy; and

(4) If, at the time of a loss under the policy, there is other insurance in the name of a Unit Owner covering the same risk covered by the policy, the Association's policy provides primary insurance.

Section 2. Limitations. Except for the insurance required under Section 3 and Section 6 of this Article VI, any insurance obtained pursuant to the requirements of this Article, shall be subject to the following provisions:

(a) All policies shall be written with a company or companies licensed to do business in the State of Delaware and holding a rating of "A XIII" or better general policyholder's rating in "Best's Insurance Report".

(b) Exclusive authority to negotiate losses under said policies shall be vested in the Executive Board or its authorized representative, including any trustee with which the Executive Board or Association may enter into any insurance trust agreement, or any successor trustee, each of which shall be herein referred to as the "**Insurance Trustee**."

(c) In no event shall the insurance coverage obtained and maintained pursuant to the requirements of this Article be brought into contribution with insurance purchased by the Unit Owners or their mortgagees, as herein permitted, and any "no other insurance" or similar clause in any policy obtained by the Executive Board pursuant to the requirements of this Article shall exclude such policies from consideration. An insurance policy issued to the Association shall not prevent a Unit Owner from obtaining insurance for the Unit Owner's own benefit.

(d) An insurer that has issued an insurance policy under this Article shall issue certificates or memoranda of insurance to the Association and, upon written request, to any Unit Owner or holder of a security interest. The insurer issuing the policy may not cancel, refuse to renew or substantially change it until thirty (30) days after notice of the proposed cancellation or nonrenewal has been mailed to the Association, each Unit Owner and each holder of a security interest to whom a certificate or memorandum of insurance has been issued at their respective last known addresses. If requested, the insurer shall also deliver duplicate originals of the insurance policies and all endorsements thereto, together with proof of payment or premiums, to all Unit Owners and all mortgagees of Units at the times such policies are issued and at least thirty (30) days prior to the expiration of the then current policies.

(e) That the net proceeds of such policies, if less than FIVE THOUSAND DOLLARS ($5,000.00), shall be payable to the Executive Board, and if more than FIVE THOUSAND DOLLARS ($5,000.00), shall be payable to the Insurance Trustee designated in Section 4 of this Article. The Insurance Trustee or the Association shall hold any insurance proceeds in trust for the Association, Unit Owners and lien holders as their interests may appear. Subject to the provisions of Subsection 2(e)(i) below, the proceeds must be disbursed first for the

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repair or restoration of the damaged property, and the Association, Unit Owners, and lien holders are not entitled to receive payment of any portion of the proceeds unless there is a surplus of proceeds after the property has been completely repaired or restored, or the Condominium is terminated.

(f) Any portion of the Condominium for which insurance is required under this Article which is damaged or destroyed must be repaired or replaced as soon as practicable by the Association unless: (i) the Condominium is terminated, in which case §81-218 of the Act applies, (ii) repair or replacement would be illegal under any state or local statute or ordinance governing health or safety, or (iii) eighty percent (80%) of the Unit Owners, including every Owner of a Unit or assigned Limited Common Element that will not be rebuilt, vote not to rebuild. The cost of repair or replacement in excess of insurance proceeds and reserves is a Common Expense. If the entire Condominium is not repaired or replaced: (i) the insurance proceeds attributable to the damaged Common Elements must be used to restore the damaged area to a condition compatible with the remainder of the Condominium, and (ii) except to the extent that other persons will be distributees, (A) the insurance proceeds attributable to Limited Common Elements that are not rebuilt must be distributed to the Owners of those Units and the Owners of the Units to which those Limited Common Elements were allocated, or to lien holders, as their interests may appear, and (B) the remainder of the proceeds must be distributed to all the Unit Owners, lien holders or Legal Owner, as their interests may appear in proportion to the Percentage Interests of all Units. If the Unit Owners vote not to rebuild any Unit, that Unit's allocated Percentage Interests are automatically reallocated upon the vote as if the Unit had been condemned under §81-107(a) of the Act, and the Association promptly shall prepare, execute, and record an amendment to the Declaration reflecting the reallocations.

(g) To the extent available and economically reasonable (in the reasonable judgment of the Executive Board), all policies shall contain a waiver of subrogation by the insurer as to any claims against the Executive Board, the Unit Owner and/or their respective agents, employees or invitees, and of any defenses based upon co-insurance or invalidity arising from the acts of the insured. To the extent available and economically reasonable (in the reasonable judgment of the Executive Board), said policies cannot be canceled, invalidated or suspended on account of any conduct of the Executive Board, the Unit Owner and/or their respective agents, employees or invitees, and of any defenses based upon co-insurance or invalidity arising from the acts of the insured. If any policy does not include "severability of interest" in its terms, such policy shall contain a specific endorsement to preclude the insurer's denial of a Unit Owner's claim because of negligent acts of the Association or of other Unit Owners.

(h) All policies shall contain the standard mortgagee clause in favor of each mortgagee (together with its successors and assigns) of a Unit to the extent of the portion of the coverage of the master policy allocated to such Unit, which shall provide that the loss, if any, thereunder shall be payable to such mortgagee and the Owner as their interests may appear, subject, however, to the loss payment and adjustment provisions in favor of the Executive Board and the Insurance Trustee contained in this Article. In the event a mortgagee endorsement has been issued as to a Unit, the proceeds payable shall be held in trust for the mortgagee and the Unit Owner as their interests may appear.

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Section 3. Separate Insurance for Unit Owners Required. Each Unit Owner shall be required at his or her sole cost and expense to obtain and maintain insurance coverage for his or her own Unit, personal property and improvements not otherwise covered by the Executive Board's policy on the Property and for his or her personal liability in such types and coverage amounts as reasonably determined by the Executive Board based on generally acceptable industry standards or practices in the county in which the Property is located, as applicable from time to time; provided that no Unit Owner shall be entitled to exercise his or her right to acquire or maintain such additional insurance coverage so as to decrease the amount which the Executive Board, on behalf of all Unit Owners, may realize under any insurance policy which it may have in force on the Property at any particular time or to cause any insurance coverage maintained by the Executive Board to be brought into contribution with such additional insurance coverage obtained by the Unit Owner, and provided further that all such additional policies shall contain waiver of subrogation.

(a) Each Unit Owner shall be required to notify the Executive Board of all improvements made by the Unit Owner to his or her Unit, the value of which is in excess of TWO THOUSAND DOLLARS ($2,000.00).

(b) Each Unit Owner shall be required to file proof of such individual policy or policies with the Executive Board at the time of the Unit Owner's purchase of his or her Unit.

Section 4. Insurance Trustee.

(a) The Executive Board shall have the right to designate any bank, trust company, savings and loan association, insurance company, or any institutional lender as the Insurance Trustee, and all parties beneficially interested in such insurance coverage shall be bound thereby. The Insurance Trustee at the time of the deposit of such policies and endorsements shall acknowledge that the policies and any proceeds thereof will be held in accordance with the terms of these Bylaws. Any and all fees and costs incurred by the Association with respect to any such Insurance Trustee shall be deemed to be a Common Expense and shall not be deducted from any insurance proceeds received but shall be paid as a Common Expense.

(b) The Insurance Trustee shall not be liable for payment of premiums, the renewal of the policies, the sufficiency of coverage, the form or contents of the policies, the correctness of any amounts received by it on account of the proceeds of any insurance proceeds. The sole duty of the Insurance Trustee shall be to receive such proceeds as are paid to it and to hold the same in trust for the purposes elsewhere stated in these Bylaws for the benefit of the Unit Owners and their respective mortgagees.

(c) Executive Board as Agent. The Executive Board is hereby irrevocably appointed the agent for each Unit Owner and for each mortgagee of a Unit and for each Unit Owner of any other interest in the Property to adjust all claims arising under insurance policies purchased by the Executive Board and to execute and deliver releases upon the payment of claims.

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(d) Premiums. Premiums for all insurance policies purchased by the Executive Board shall be deemed to be a Common Expense, and assessed and allocated as provided in the Declaration.

Section 5. Additional FNMA Approved Project Requirements.

(a) With respect to the insurance carrier providing the above-referenced insurance policies, (1) under the terms of such insurance carrier's charter, by-laws, or policy, contributions or Assessments may not be made against borrowers, the Federal National Mortgage Association ("**FNMA**"), or Federal Home Loan Mortgage Corporation ("**FHLMC**"), or the designee of FNMA or FHLMC, (2) under the terms of such insurance carrier's charter, by-laws, or policy, loss payments shall not be contingent upon action by such insurance carrier's board of directors, policyholders, or members, and (3) the policies shall not include any limiting clauses (other than insurance conditions) which could prevent FNMA, FHLMC, or the borrowers from collecting insurance proceeds.

(b) With respect to the above-referenced insurance policies, such insurance policies must provide for the following: (1) recognition of any insurance trust agreement, (2) a waiver of the right of subrogation against Unit Owners individually, (3) that the insurance is not prejudiced by any act or neglect of individual Unit Owners which is not in the control of such Owners collectively, and (4) that the policies are primary in the event the Unit Owner has other insurance covering the same loss.

(c) In the event that the Condominium contains a steam boiler, the Executive Board shall obtain a policy that covers loss or damage resulting from steam boiler equipment accidents in an amount of not less than $50,000 per accident per location (or such greater amount as deemed prudent based on the nature of the property).

ARTICLE VII

REPAIR AND RECONSTRUCTION AFTER FIRE OR OTHER CASUALTY

Section 1. When Repair and Reconstruction Are Required. In the event of damage to or destruction of all or any of the Common Elements, as applicable, as a result of fire or other casualty (unless seventy-five percent (75%) of the Unit Owners and seventy-five (75%) of the holders of first mortgages on the Units, with each first mortgage holder to be entitled to one vote, affected by such destruction or damage duly resolve in writing, at a meeting called within ninety (90) days after the occurrence of the casualty, not to proceed with repair or restoration), the Executive Board shall arrange for and supervise the prompt repair and restoration of the Common Elements, as applicable (but expressly excluding and not including any damage to or destruction of all or any of the Units).

Section 2. Procedure for Reconstruction and Repair.

(a) Cost Estimates. Immediately after a fire or other casualty causing damage to any Common Elements, the Executive Board shall obtain reliable and detailed estimates of the cost of repairing and restoring the Common Elements to a condition as good as that existing

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before such casualty. Such costs may also include professional fees and premiums for such bonds as the Executive Board determines to be necessary.

(b) Assessments. If the proceeds of insurance are not sufficient to defray the said estimated costs of reconstruction and repair as determined by the Executive Board, or if at any time during reconstruction and repair, or upon completion of reconstruction and repair, the funds for the payment of the costs thereof are insufficient, Assessments shall be made against the Unit Owners directly affected by the damage or destruction, in proportion to their respective Percentage Interests as set forth in Schedules C-1, D-1, and E-1, as applicable to each Unit Owner, in sufficient amounts to provide payment of such costs.

(c) Plans and Specifications. Any such reconstruction or repair shall be substantially in accordance with the plans and specifications under which the Property was originally constructed.

(d) Encroachments. Encroachments upon or in favor of Units which may be created as a result of such reconstruction or repair shall not constitute a claim or basis for any proceeding or action by the Unit Owner upon whose property such encroachment exists, provided that such reconstruction is substantially in accordance with the Declaration Plan under which the Property was originally constructed. Such encroachments shall be allowed to continue in existence for so long as the reconstructed Unit or Common Element shall stand.

Section 3. Disbursements of Construction Funds.

(a) Construction Fund. The net proceeds of insurance collected on account of a casualty and the funds collected by the Executive Board from Assessments against Unit Owners on account of such casualty shall constitute a construction fund which shall be disbursed in payment of the cost of reconstruction and repair in the manner set forth in this Section. If the net proceeds of insurance collected on account of a casualty exceed FIVE THOUSAND DOLLARS ($5,000.00), then the funds collected by the Executive Board from Assessments against the Unit Owner shall be deposited by the Executive Board with the Insurance Trustee, and the entire construction fund shall be disbursed by the Insurance Trustee; otherwise the construction fund shall be held and disbursed by the Executive Board.

(b) Method of Disbursement. The construction fund shall be paid by the Executive Board or the Insurance Trustee, as the case may be, in appropriate progress payments, to such contractors, suppliers and personnel engaged in performing the work or supplying materials or services for the repair and reconstruction of the Common Elements, as are designated by the Executive Board.

(c) Surplus. It shall be presumed that the first monies disbursed in payment of the cost of reconstruction and repair shall be from insurance proceeds; and if there is a balance in the construction fund after the payment of all the costs of the reconstruction and repair for which the fund is established, such balance shall be distributed jointly to the Unit Owners and their mortgagees who are the beneficial owners of the fund; provided, however, that the part of the distribution to a beneficial Unit Owner which is not in excess of Assessments paid by the Unit Owner into the construction fund shall not be made payable to any mortgagee.

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(d) [Reserved.]

(e) Certificate. The Insurance Trustee shall be entitled to rely upon a certificate executed by the President or Vice-President, and the Secretary or Treasurer of the Condominium certifying (1) whether the damaged property is required to be reconstructed and repaired; (2) the name of the payee and the amount to be paid with respect to disbursements from any construction fund held by it or whether surplus funds to be distributed are less than the Assessments paid by the Unit Owners; and (3) all other matters concerning the holding and disbursing of any construction fund held by it. Any such certificate shall be delivered to the Insurance Trustee promptly after request.

(f) When Reconstruction is Not Required. If there is substantially total destruction of one or more of the Common Elements, or if seventy-five percent (75%) of the Unit Owners and seventy-five (75%) of the holders of first mortgages on the Units, with each first mortgage holder to be entitled to one vote, directly affected by such destruction or damage duly resolved in writing, at a meeting called within ninety (90) days after the occurrence of the casualty, not to proceed with repair or restoration, then, and in that event, the salvage value of the Property shall be subject to a suit for partition at the suit of any Unit Owner directly affected by such destruction or damage, in which event the net proceeds of the sale, together with the proceeds of insurance policies held by the Executive Board, shall be considered as one fund and, shall be divided among the Unit Owners directly affected by such destruction or damage in proportion with their Percentage Interests after discharging, out of the respective shares of such Unit Owners to the extent sufficient for the purpose, all liens against the Units of such Unit Owners.

ARTICLE VIII

MORTGAGES

Section 1. Notice to the Executive Board. A Unit Owner who mortgages such Unit Owner's Unit shall notify the Executive Board of the name and address of such Unit Owner's mortgagee and shall file and register a conformed copy of the mortgage and any amendments and/or assignments thereof with the Executive Board in accordance with and subject to and as otherwise provided under Section 21(d) of the Declaration.

Section 2. Notice of Unpaid Assessments for Common Expenses. The Executive Board shall promptly report any then unpaid Assessments for Common Expenses due for more than 60 days from, or any other default not cured within 60 days by, the Unit Owner of the mortgaged Unit; provided, however, the neglect or failure of the Executive Board to send any notice of any such unpaid Assessments or uncured default to any such mortgagee shall not affect the validity or enforceability of any such Assessment or default upon the Unit Owner.

Section 3. Notice of Default. The Executive Board, when giving notice to a Unit Owner of a default in paying the Assessment for Common Expenses or any other default, shall send a copy of such notice to each mortgagee covering such Unit Owner's Unit whose name and address have theretofore been furnished to the Executive Board by the Unit Owner; provided,

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however, the neglect or failure of the Executive Board to send any notice of default to any such mortgage holder shall not affect the validity or enforceability of any such notice of default upon the Unit Owner.

Section 4. Notice of Condemnation or Casualty Loss. The Executive Board shall provide a mortgagee with notice of condemnation or casualty loss affecting a material portion of the Property or the Unit securing the mortgage.

Section 5. Miscellaneous Notices. The Executive Board shall provide a mortgagee with notice of any proposed action that requires the consent or approval of a specified percentage of mortgagees either under these Bylaws or the Declaration.

ARTICLE IX

COMPLIANCE AND DEFAULT

Section 1. Relief. Each Unit Owner shall be governed by and shall comply with all of the terms of the Condominium Documents. A default by a Unit Owner shall entitle the Association, acting through its Executive Board or through the Managing Agent, to the following relief:

(a) Legal Proceedings. Failure to comply with any of the terms of the Condominium Documents shall be grounds for relief which may include, without limiting the same, an action to recover any sums due for money damages, injunctive relief, foreclosure of the lien for payment of all Assessments, any other relief provided for in the Condominium Documents, or any combination thereof, and all of which relief may be sought by the Association, the Executive Board, the Managing Agent, or, if appropriate, by any aggrieved Unit Owners.

(b) Additional Liability. Each Unit Owner shall be liable for the expense of all maintenance, repair or replacement rendered necessary by his or her or his or her family members, employees, agents, subtenants or licensees' act, neglect or carelessness, but only to the extent that such expense is not covered by the proceeds of insurance carried by the Executive Board. Such liability shall include any increase in fire insurance rates occasioned by use, misuse, occupancy or abandonment of any Unit or its appurtenances. Nothing contained herein, however, shall be construed as modifying any waiver of any insurance company of its rights of subrogation.

(c) Costs and Attorney's Fees. In any proceeding arising out of (i) any alleged default by a Unit Owner, (ii) a dispute between Unit Owners with respect to the Condominium, (iii) a dispute between any Unit Owner and the Association and/or the Executive Board with respect to the Condominium , or (iv) any dispute between any Unit Owner and/or the Association with Legal Owner with respect to the Condominium Documents, the prevailing party shall be entitled to recover the costs of the proceedings, and such reasonable attorneys' fees as may be determined by the court.

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(d) No Waiver of Rights. The failure of the Association, the Executive Board, or of a Unit Owner to enforce any right, provision, covenant, or condition which may be granted by any one or more of the Condominium Documents shall not constitute a waiver of the right of the Association, the Executive Board or the Unit Owner to enforce such rights, provisions, covenant, or condition in the future. All rights, remedies and privileges granted to the Association, the Executive Board, or any Unit Owner pursuant to any terms, provision, covenant or condition of any one or more of the Condominium Documents shall be deemed to be cumulative, and the exercise of any one or more thereof shall not be deemed to constitute an election of remedies, nor shall it preclude the party exercising the same from exercising such privileges as may be granted to such party by any one or more of the Condominium Documents, or at law or in equity.

(e) Interest. In the event of a default by any Unit Owner in paying any Common Expenses or other sum assessed against him which continues for a period in excess of thirty (30) days from the due date, then such Unit Owner shall be obligated to pay interest on the amounts due at the rate of the lesser of eighteen percent (18%) per annum or the highest rate permitted by law.

(f) Abatement and Enjoinment of Violations by Unit Owners. The violation of any rule or regulation adopted by the Executive Board, or the breach of any provision of any one or more of the Condominium Documents, shall give the Executive Board the right, in addition to any other rights pursuant to law or set forth in any such Condominium Documents: (a) to enter the Unit, by appropriate legal proceedings, either at law or in equity, in which, or as to which, such violation or breach exists and summarily to abate and remove, at the expense of the defaulting Unit Owner, any structure, thing or condition that may exist therein contrary to the intent and meaning of the provisions hereof, and the Executive Board shall not thereby be deemed guilty in any manner of trespass; or (b) to enjoin, abate or remedy by appropriate legal proceedings, either at law or in equity, the continuance of any such breach.

Section 2. Lien for Assessments.

(a) The Association has a statutory lien on each Unit for any Assessment levied against that Unit or fees, charges, late charges, fines, and interest charged pursuant to the Act, and any other sums due the Association under the Condominium Documents, the Act or as a result of an administrative or judicial decision, together with court costs and reasonable attorneys' fees incurred in attempting collection of the same. Fees, charges, late charges, fines, and interest charged pursuant to the Act, and any other sums due the Association under the Condominium Documents, the Act or as a result of an administrative or judicial decision, together with court costs and reasonable attorneys' fees incurred in attempting collection of the same, are enforceable in the same manner as unpaid Assessments under the Condominium Documents. If an Assessment is payable in installments, the lien is for the full amount of the Assessment from the time the first installment thereof becomes due. The following restrictions apply to any action by the Association to foreclose its lien under this Section:

(1) No foreclosure action may be commenced unless: (a) the Unit owner, at the time the action is commenced, owes a sum equal to at least three (3) months of Common Expense Assessments based on the periodic budget last adopted by the Association;

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and (b) the Executive Board expressly votes to commence a foreclosure action against that specific Unit.

(2) The Association shall apply any sums paid by Unit Owners who are delinquent in paying Assessments as follows: (a) first, to the oldest unpaid Assessments, then to the more present Assessments; (b) then to late charges; (c) then to attorneys' fees and other reasonable collection charges and costs; and (d) finally, to all other unpaid fees, charges, penalties, interest and late charges.

(3) If the only sums due with respect to a Unit consist of fines and related sums levied against that Unit, a foreclosure action may not be commenced against that Unit unless the Association has first secured a judgment against the Unit Owner with respect to those fines and has perfected a judgment lien against the Unit under state law.

(b) In any case where an Assessment against a Unit Owner is payable in installments, upon a default by such Unit Owner in the payment of any single installment, which continues for thirty (30) days after written notice of such default has been sent to the Unit Owner, the maturity of the remaining total of the unpaid installment of such Assessments may be accelerated, at the option of the Executive Board and the then balance owing may be declared due and payable in full by the service of notice to such effect upon the defaulting Unit Owner by the Executive Board or the Managing Agent.

(c) The lien for contribution may be foreclosed in the manner provided by the laws of the State of Delaware by suit brought in the name of the Executive Board or the Managing Agent, acting on behalf of the Association. During the pendency of such suit the Unit Owner shall be required to pay a reasonable rental of the Unit for any period prior to sale pursuant to any judgment or order of any court having jurisdiction over such sale. The plaintiff in such proceeding shall have the right to the appointment of a receiver, if available under the then laws of the State of Delaware.

(d) Suit to recover a money judgment for unpaid contributions shall be maintainable without foreclosing or waiving the lien securing the same, and foreclosure shall be maintainable notwithstanding the pendency of any suit to recover a money judgment.

(e) Any lien for Common Expense Assessments or other charges that the Association has on any Unit shall be subordinate to the lien of the first mortgage on the Unit, if the mortgage was recorded before the delinquent Assessment was due. Any lien for Common Expense Assessments shall not be affected by the sale or transfer of a Unit, unless a foreclosure of a first mortgage is involved, in which case the foreclosure will extinguish the lien for any Assessments that were payable before the foreclosure sale, but will not relieve any subsequent Unit Owner from paying further Assessments.

ARTICLE X

MISCELLANEOUS

Section 1. Notices. All notices, demands, bills, statements, or other communications under the Condominium Documents shall be in writing and shall be deemed to have been duly

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given if delivered personally or if sent by registered or certified mail, return receipt requested, first class postage prepaid; (a) if to a Unit Owner, at the address which the Unit Owner shall designate in writing and file with the Secretary, or if no such address is designated, at the address of the Unit of such Unit Owner, (b) if to the Association, the Executive Board or the Managing Agent, at the principal office of the Executive Board or Managing Agent, as applicable, or at such other address as shall be designated by notice in writing to the Unit Owners pursuant to this Section.

Section 2. Invalidity. The invalidity of any part of these Bylaws shall not impair or affect in any manner the validity, enforceability or effect of the balance of these Bylaws.

Section 3. Captions. The captions herein are inserted only as a matter of convenience and for reference, and in no way define, limit or describe the scope of these Bylaws, or the intent of any provisions thereof.

Section 4. Gender. The use of the masculine and/or the feminine genders in these Bylaws shall be deemed to include whether one or more persons, group of persons, association, corporation, limited liability company, partnership, trust or other legal entity, or any combination thereof whenever the context so requires and the use of the singular shall be deemed to include the plural, and vice versa, whenever the context so requires.

Section 5. Perpetuities. If any of the covenants, conditions, easements, restrictions, or other provisions of any one or more of the Condominium Documents shall be unlawfully void, or voidable for violation of the rule against perpetuities, then such provisions shall continue only until twenty-one (21) years after the death of the last survivor of the now living descendants of Donald Trump, the forty-fifth (45th) President of the United States of America.

Section 6. Conflicts. Notwithstanding anything contained in these Bylaws to the contrary,

(a) to the extent that the provisions of the Declaration or these Bylaws might conflict with or be inconsistent with the Act, the Act shall govern and control, except as otherwise provided under the Act; and

(b) to the extent that the provisions of these Bylaws might conflict with or be inconsistent with the Declaration, the Declaration shall govern and control.

ARTICLE XI

AMENDMENTS TO BYLAWS

Section 1. During the Declarant Control Period, the Executive Board and the Unit Owners (other than Declarant) may make no amendment to these Bylaws without the written consent of Declarant, which consent may be granted or withheld for any reason or no reason whatsoever in Declarant's sole subjective and absolute discretion. Following the expiration of the Declarant Control Period and subject to Article XIV hereof, these Bylaws may be amended in accordance with the terms of these Bylaws.

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Section 2. Notwithstanding the provisions of Section 1 of this Article, or any law, custom or usage to the contrary, so long as Declarant owns one or more Units subject to the Declaration or has the right to expand the Condominium in accordance with Sections 5 and 6 of the Declaration, no amendment to these Bylaws shall be adopted by the Executive Board or the Unit Owners which, in Declarant's sole subjective and absolute opinion, may materially or adversely interfere with or affect (a) the lease, sale, other disposition or use of any one or more of the Units owned by Declarant or proposed Units, including, but not limited to, any Expansion Units, (b) the value, use, or marketability of any one or more of the Units owned by Declarant or proposed Units, including, but not limited to, any Expansion Units, (c) any expansion rights granted to Declarant under any one or more of the Condominium Documents, or (d) the financing available to Declarant with respect to any of the foregoing.

Section 3. Notwithstanding the provisions of Section 1 of this Article, or any law, custom or usage to the contrary, so long as Declarant owns one or more Units subject to the Declaration or has the right to expand the Condominium in accordance with Sections 5 and 6 of the Declaration, Declarant also shall have the absolute right, power and authority and shall have an irrevocable power of attorney, coupled with an interest, at any time and from time to time, in its sole subjective and absolute discretion, to amend any one or more of the Condominium Documents to cause each or all of them to be amended by filing with the Recorder's Office instruments and plans as permitted hereunder or as necessary to (a) correct any clerical or typographical errors, ambiguities, title questions or defects, or conflicts with or to comply with any and all Legal Requirements, (b) achieve compliance with the requirements of FNMA, FHLMC, Federal Housing Authority, Veterans Administration or other governmental agency or their successors, or (c) conform the Condominium Documents to be consistent with the provisions required by the Act.

Section 4. Subject to Sections 1, 2, and 3 of this Article and Declarant's right to expand the Condominium in accordance with Sections 5 and 6 of the Declaration, and any and all rights granted to or reserved by Declarant in Sections 5 and 6 of the Declaration, these Bylaws may be amended by the vote of a Majority of the Unit Owners, cast in person or by proxy at a meeting duly held in accordance with the provisions of these Bylaws; provided, however, that any action to terminate the legal status of the Condominium must be approved by Unit Owners holding no less than eighty percent (80%) of the Percentage Interests and approved by or consented to Mortgagees that represent at least sixty-seven percent (67%) of the Common Element Percentage Interests held by the Unit Owners of the Units subject to a, and, provided, further, that any such amendments of a material nature ("**Material Amendments**") must be approved by Unit Owners holding no less than sixty-seven percent (67%) of the Common Element Percentage Interests and approved by or consented to Mortgagees that represent at least fifty-one percent (51%) of the Common Element Percentage Interests held by the Unit Owners of the Units subject to a mortgage.. For purposes of this Section 4, the term "**Material Amendments**" shall be defined to mean a change or amendment to this Declaration pertaining to any one or more of the following:

(a) Voting rights;

(b) Any Assessment increase which is more than 25% of the previously applicable Assessment, or the priority of Assessment liens;

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(c) Reductions in reserves for maintenance, repair, and replacement of Common Elements;

(d) Responsibility for maintenance and repairs;

(e) Reallocation of interests in the General Common Elements or Limited Common Elements, or the rights to their use;

(f) Redefinition of any Unit boundaries;

(g) Convertibility of Units into Common Elements or, vice versa;

(h) Expansion or contraction of the Condominium, or the addition, annexation, or withdrawal of property to or from the Condominium;

(i) Hazard or fidelity insurance or bonds requirements;

(j) Imposition of any new restriction relating to the leasing of Units;

(k) A decision by the Association to establish self-management, if professional management had been required previously by the Condominium Documents, Department of Housing and Urban Development, Veterans Administration, Federal National Mortgage Association, or Federal Home Loan Mortgage Corporation;

(l) Restoration or repair of any General Common Elements (after damage or a partial condemnation) in a manner other than that specified in the Condominium Documents;

(m) Any action to terminate the legal status of the Condominium after substantial destruction or condemnation occurs;

(n) Any provisions that expressly benefit mortgage holders, insurers, or guarantors;

(o) Any reallocation of interests in the Common Elements resulting from a partial condemnation or partial destruction of the Condominium;

(p) Assessments, Assessment liens or subordination of such liens;

(q) Rights to use of the Common Elements; or

(r) Imposition of any right of first refusal or any restriction on the right of a Unit Owner to sell, transfer, or otherwise convey his or her Unit.

Subject to Sections 1, 2, and 3 of this Article XI and Declarant's right to expand the Condominium in accordance with Sections 5 and 6 of the Declaration, and any and all rights granted to or reserved by Declarant in Sections 5 and 6 of the Declaration, no such amendment under this Section 4 shall be effective until duly recorded in the Recorder's Office; provided, however, that the Percentage Interests shall not be changed except by consent of sixty-seven percent (67%) of the Unit Owners affected thereby, and the Mortgagees of those affected Units,

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such change being evidenced by an appropriate amendatory declaration to such effect, duly executed and recorded in the Recorder's Office. The failure of a Mortgagee to respond to any such proposed notice of an amendment as aforesaid sent by certified mail or registered mail, return receipt requested, within sixty (60) days after notice issues to such Mortgagee shall be deemed to be a consent of such Mortgagee to such amendment. Each such amendment shall be effective upon recordation of the same in the Recorder's Office of an appropriate instrument setting forth such amendment.

Section 5. If any amendment is necessary in the judgment of the Executive Board to cure any ambiguity or to correct or supplement any provision of the Declaration or these Bylaws which is incorrect, defective or inconsistent with any other provision thereof or hereof or with the Act, or to change, correct or supplement any aspect of the Declaration Plan which is incorrect, defective, or similarly inconsistent, and which is not a Material Amendment, then the Executive Board may effect an appropriate corrective amendment without the approval of the Unit Owners as long as the Executive Board shall have received an opinion of counsel (as to any amendment pertaining to the Declaration or these Bylaws) or of an independent registered architect or licensed professional engineer (as to any such amendment pertaining to the Declaration Plan); and, in either case, such opinion shall and must recommend and approve the proposed amendment.

Section 6. If there are one or more amendments to the Declaration, the Declaration Plan or these Bylaws, all references thereafter to the Declaration, the Declaration Plan and these Bylaws (unless otherwise specifically designated) shall mean the Declaration, the Declaration Plan or these Bylaws as amended to the date of such reference. Any amendment to the Declaration, the Declaration Plan and these Bylaws shall be deemed in proper form for filing and recording when such amendment is executed by the members of the Executive Board, and when accompanied by certification that such amendment has been duly enacted in accordance with the provisions of the Declaration or these Bylaws, as the case may be.

Section 7. Notwithstanding the foregoing provisions for the amendment of these Bylaws, Declarant shall have an irrevocable power of attorney, coupled with an interest, for the purpose of amending any one or more of the Condominium Documents, including, but not limited to, the applicable Schedules of the Declaration and the Declaration Plan under the reservation and powers given unto Declarant in Sections 5 and 6 of the Declaration for the purposes stated in any one or more of the said Sections 5 and 6. The provisions for annexing land and improvements by Declarant and all other provisions of said Sections 5 and 6 are incorporated into this Section 7 by reference as though each and every statement contained in said Sections 5 and 6 were fully set forth herein.

ARTICLE XII

EMINENT DOMAIN OR CONDEMNATION

Section 1. Partial Taking Without Direct Affect on Units. If part of the Property shall be taken or damaged through the exercise of eminent domain or condemnation power or through the exercise of any right or any obligation on the part of any public authority to purchase the same or as a result of any agreement between the Executive Board, the Unit Owners and said public authority made in lieu of condemnation or eminent domain proceedings such that no Unit

nor any part thereof is taken, then all compensation and damages for and on account of such taking, exclusive of compensation for consequential damages to certain affected Units shall be payable to the Executive Board as Trustee for all Unit Owners and mortgagees according to the loss or damages to their respective interests in such Common Elements. The Executive Board shall have the right to act on behalf of the Unit Owners with respect to the negotiation and litigation of the issues with respect to the taking and compensation affecting the Common Elements without limitation on the right of the Unit Owners or any mortgagees of any one or more Units to represent their own interest. Such proceeds shall, subject to the prior rights of such mortgagees, be used in the same manner as insurance proceeds as heretofore set forth. Nothing herein is to prevent a Unit Owner whose Unit is specifically affected by the condemnation or eminent domain proceedings from joining in such proceedings and petitioning on their own behalf for consequential damages relating to loss of value of the affected Unit or personal improvements therein, exclusive of damages relating to Common Elements. In the event that any award resulting from such action does not allocate consequential damages to specific Unit Owners but by its terms includes an award for reduction in value of Units without such allocation, the award shall be divided between affected Unit Owners subject to the rights of mortgagees of such Units by the Executive Board as Trustee, as aforesaid, as their interests may appear.

Section 2. Partial or Total Taking Directly Affecting Units. If the Property or any part thereof shall be taken or damaged through the exercise of eminent domain or condemnation power, or through the exercise of any right or any obligation on the part of any public authority to purchase the same, or as a result of any agreement between the Executive Board, Unit Owners and said public authority made in lieu of condemnation or eminent domain proceedings, such that any Unit or a part thereof is taken, the Executive Board shall act on behalf of the Unit Owners with respect to the Common Elements as in Section 1 above without limitation on the right of any mortgagees of any one or more Units to represent their own interests, and the proceeds shall be payable as outlined in Section 1 above. The Unit Owners directly affected by such taking and their respective mortgagees shall represent and negotiate for themselves with respect to the damages affecting their respective Units and appurtenant Common Elements, the award so made shall, subject to the prior rights of mortgagees, be used and distributed by the Executive Board, as Trustee, first to restore the Common Elements on the remaining Property in the same manner as provided for to the extent possible, with any excess award distributed among Unit Owners and mortgagees as their interests may appear. In the event that the Executive Board determines that such a taking so removes land containing the Common Elements that they cannot effectively be restored or replaced and unless seventy-five percent (75%) of the Unit Owners and holders of first mortgages encumbering seventy-five (75%) percent of the undivided interest in the Common Elements subject to mortgages vote to accept an alternative plan, then the salvaged value of the Property so taken, if any, shall be subject to partition at the suit of any Unit Owner directly affected thereby, in which event the net proceeds of sale, together with any award held by the Executive Board, shall be considered as one fund and divided among the Unit Owners directly affected thereby in proportion to the respective undivided ownership of the Common Elements after discharging out of the respective shares of the Unit Owners directly affected thereto to the extent sufficient for the purpose all liens against the Units of such Unit Owners.

ARTICLE XIII

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ABANDONMENT

Section 1. Except as otherwise expressly provided for elsewhere in these Bylaws, in the event of condemnation of, or substantially total destruction to, the Units and/or Common Elements, and subject to all the provisions of Applicable Law, the Executive Board may not, unless all of the Units Owners and all of the holders of first mortgages and judgments and liens on the Units, with each holder of a first mortgage, judgment or other lien being entitled to one vote, give their prior written consent, do the following:

(a) By either act or omission seek to abandon and terminate the Condominium;

(b) Change the Unit Owner's pro rata interest in the Common Elements unless necessary to do so as a consequence of any such condemnation or destruction;

(c) Partition or subdivide any Unit;

(d) Abandon, partition, subdivide, encumber, sell, assign or transfer the Common Elements by either act or omission; and

(e) Use the hazard insurance proceeds for losses for the Units and/or Common Elements for anything other than the repair, replacement and/or reconstruction of the Units and/or Comment Elements.

Section 2. Notwithstanding anything contained herein to the contrary, any election by the Unit Owners and the holders of mortgages, judgments or other liens affecting the Units and the Common Elements to terminate the Condominium shall be subject to the terms and conditions contained in the Act, including, but not limited to, §81-218 of the Act.

ARTICLE XIV

PROVISIONS APPLICABLE TO DECLARANT

Notwithstanding anything contained in these Bylaws to the contrary, the following provisions shall apply and, in the event of a conflict between the other terms of these Bylaws and the terms of this Article XIV, the terms of this Article XIV shall govern and control.

Section 1. Amendment. During the Declarant Control Period, Declarant may amend the terms of these Bylaws subject only to the requisite consent of at least fifty-one percent (51%) of any then existing first lien mortgagee(s) as hereinafter provided, and notice to the Unit Owners within thirty (30) days following the effectiveness of such amendment; provided, however, if any such amendment shall be determined to be necessary in the judgment of Declarant to cure any ambiguity or to correct or supplement any provision of any one or more of the Condominium Documents which is incorrect, defective or inconsistent with any other provision hereof or thereof or with the Act, or to change, correct or supplement anything appearing or failing to appear in any one or more of the Condominium Documents which is incorrect, defective, or similarly inconsistent, or as may be required by FMNA, FHA, VA, FHLMC, GNMA or by any governmental agency, or as may be required to comply with all

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applicable Legal Requirements, then Declarant may also effect an appropriate corrective amendment without the approval of the Association, Executive Board, any Owners or any holders of any existing mortgages upon Declarant's receipt of favorable opinion of counsel recommending and approving the proposed amendment. In the event any amendment requires the consent of any Mortgagees, all Mortgagees then holding mortgages with respect to any portion of the Property shall be notified of such proposed amendment and consent shall be obtained from Mortgagees holding, in the aggregate, first lien mortgages with respect to at least fifty-one percent (51%) of the Common Element Percentage Interests held by Unit Owners of the Units subject to a mortgage. The failure of any first lien mortgagee to respond to notice of a proposed amendment to cure an ambiguity or to correct or supplement any provision, as aforesaid, within sixty (60) days after such notice to such Mortgagee from Declarant shall be deemed to be a consent by such Mortgagee, provided the notice was delivered by certified or registered mail, with a return receipt requested. Each such amendment shall be effective upon recording in the Recorder's Office of an appropriate instrument setting forth the amendment.

ARTICLE XV

DISPUTE RESOLUTION PROCEDURES

Section 1. All disputes arising between the Executive Board, the Managing Agent, any of the Unit Owners (each a "**Party**" and collectively the "**Parties**") from time to time regarding their respective rights, duties and responsibilities with respect to the Required Community Condition or any review and approval by such Party which is not to be unreasonably withheld, conditioned or delayed under these Bylaws, then, to the extent the applicable Parties cannot mutually resolve the same by agreement between themselves, shall be resolved by binding arbitration pursuant to the provisions of this Section and shall not be the subject of any legal action or lawsuit instituted by any such applicable Parties. Such arbitration shall be initiated by notice from the aggrieved Party (the "**Initiating Party**") to the other Party or Parties and shall be in accordance with the Commercial Arbitration Rules of the American Arbitration Association (the "**Arbitration Rules**"), and shall take place in the County. The notice from the Initiating Party shall be in accordance with the Arbitration Rules and the arbitration itself shall be conducted by three (3) arbitrators, each of whom shall be selected from the panel of the American Arbitration Association; provided, however, that one (1) such arbitrator must be engaged in active practice at such time as an attorney at law in the State of Delaware with a minimum of fifteen (15) years of experience in the general subject matter of the dispute; and the remaining two (2) arbitrators shall be professional property managers with a minimum of fifteen (15) years in experience in the management of condominium properties in the State of Delaware. In determining any question, matter, or dispute before the arbitrators, the arbitrators are authorized to determine all questions of reasonableness of any action of any Party under these Bylaws and shall apply the provisions of these Bylaws without varying therefrom in any respect, and shall not have the power or authority to add, modify, or otherwise change any of the provisions of these Bylaws, including, but not limited to the rights and remedies expressly set forth with respect to any breach by the Party of any of the covenants, obligations or provisions hereof. The Parties to the arbitration shall abide by and observe the Arbitration Rules and, further, shall honor any decision rendered by the arbitrators pursuant to the provision of this

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Declaration and pursuant to the Arbitration Rules. The award and decision of the three (3) arbitrators made pursuant to the provisions of this Section 1 and pursuant to the Arbitration Rules shall be final and binding upon each Party who is party to the arbitration. No appeal shall be allowed from any such award or decision. Furthermore, any Party or Parties to the arbitration shall be entitled to seek legal action in any court having proper jurisdiction to enforce any decision or determination or award made by the arbitrators pursuant to the provisions of this Section 1 and the cost of such arbitration shall be borne between the Party or Parties as the three arbitrators shall decide.

[Execution Page Follows]

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IN WITNESS WHEREOF, the undersigned, as the initial members of the Executive Board, have executed this instrument, under seal, this _____day of _____, 2024 (the "**Effective Date**").

_____ _____(SEAL)
WITNESS David Hart

_____ _____(SEAL)
WITNESS Jamie Savino

_____ _____(SEAL)
WITNESS John Murray

STATE OF DELAWARE :
:ss.
COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this _____day of _____, 2024, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, David Hart, Jamie Savino, and Johnn Murray, as the initial members of HICKMAN Condominium Executive Board, and being known to me personally to be such, acknowledged this Indenture to be their respective acts and deeds and the act and deed of the Executive Board.

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

_____
NOTARY PUBLIC
Print Name:_____
My Commission Expires:_____

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Tax Map Parcel Number: 1-34 9.00 28.00

Prepared by and Return to:
Baird Mandalas Brockstedt LLC
1413 Savannah Road, Suite 1
Lewes, DE 19958

DECLARATION OF
HICKMAN CONDOMINIUM
BALTIMORE HUNDRED, SUSSEX COUNTY, DELAWARE

FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company ("Declarant"), does hereby declare:

1. Intent of Submission and Description of Property. Declarant, as owner of legal title to the land herein described, hereby submits certain real property located in Sussex County, Delaware, more particularly described in **Schedule A** annexed hereto, together with the buildings and improvements thereon erected and owned by Declarant in fee simple absolute (hereinafter referred to as the "Property"), to the Delaware Uniform Common Interest Ownership Act ("DUCIOA"), 25 Del. C. § 81-106 (Applicability of local ordinances, regulations, and building codes) and 81-107 of this title (Eminent domain), as this community is specifically exempt from DUCIOA as per section 81 Del.C. §81-117, in order to create a plan of condominium ownership in the Property. The Property currently consists of the Land, Buildings, Units and Common Elements (all as hereinafter defined) shown on the Declaration Plan (as hereinafter defined) but expressly excepts and excludes the Expansion Area (as hereinafter defined), including, but not limited to, the Expansion Building(s) and Unit(s) (as hereinafter defined), until such time, if ever, as such Expansion Area, including, but not limited to, such Expansion Building(s) and Unit(s), are constructed and submitted to the Act and the Condominium Regime (as hereinafter defined) in accordance with the terms of this Declaration.

2. Definitions. The terms used in this Declaration and in the Code of Regulations/Bylaws recorded immediately hereafter and all amendments to said documents shall have the following meanings:

(a) "Act" means the statutory provisions set forth in 25 Del. C. Chapter 22 and 25 Del. C. § 81-106 (Applicability of local ordinances, regulations, and building codes) and 81-107 of this title (Eminent domain).

(b) "Assessments" shall mean any and all sums attributable to each Unit and due to the Association pursuant to the Condominium Documents, including but not limited to, the Common Expenses allocated to each Unit in the manner described in § 81-315 of the Act, as well as those set forth under §81-315(a)(2) of the Act regarding repair and replacement reserves as well as the maintenance, repair, or replacement of General Common Elements and/or Limited Common Elements appurtenant to each Unit, the cost and expense of which are the responsibility of each Unit Owner and which, if not maintained as provided under the Condominium Documents, shall be assessed to the applicable Unit Owner under § 81-315(c)(1) of the Act and as provided in the Condominium Documents and any individualized fees for services provided to some but not

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all of the Unit Owners as provided under § 81-315(c)(2) of the Act.

(c) "Association" means all of the Unit Owners acting as a group in accordance with this Declaration and the Act and Bylaws, which shall be organized as a Delaware nonprofit nonstock corporation called "Hickman Condominium Association, Inc.".

(i) "Building" means each individual Single Family Home that contain a Unit with direct entry from the outside, which is used for residential purposes (including leasing of such Units for residential purposes) or for any other lawful purpose, as such Units are more specifically depicted in the Declaration Plan, when and if constructed and submitted to the Act.

(d) "Bylaws" means the recorded document entitled Code of Regulations/Bylaws that contains the procedures for the conduct of the affairs of the Association in accordance with the Act, including any and all amendments thereto.

(e) "Common Elements" mean (i) all parts of the Property other than the Units and (ii) any other interest in real estate for the benefit of the Unit Owners which are subject to this Declaration but shall expressly except and exclude the Expansion Area until such time, if ever, as such Expansion Area is constructed and submitted to the Act and the Condominium Regime in accordance with the terms of this Declaration. By way of illustration and not of limitation, the Common Elements include (i) the General Common Elements, including the "Amenity Detail" as shown on the Declaration Plan which includes but is not limited to a paved seating/gathering area, Bar-b-que, Fire Pit and Pergola/Shade Structure, (ii) the Single Family Home Limited Common Elements, and (iii) all Land, and all air space above the surface of the Land (but excluding air space enclosed within the title lines of any Unit) together with all site improvements, subject to any public utility easements now of record or to be given or obtained in the future either by the Declarant or the Association for sanitary and storm sewer use, water lines, electric, telephone and cable T.V., transmission lines or other similar necessary or desirable utility functions or which are appurtenant to the Land but shall expressly except and exclude the Expansion Area until such time, if ever, as such Expansion Area is constructed and submitted to the Act and the Condominium Regime in accordance with the terms of this Declaration.

(f) "General Common Element Percentage Interest" means the proportionate undivided interest in the General Common Elements expressed as a percentage and assigned to each Unit as set forth in **Schedule C** attached hereto, the same being subject to specified reductions upon subsequent amendments thereto as provided for in this Declaration.

(g) "Common Element Expenses" mean the General Common Element Expenses.

(h) "Condominium" means the HICKMAN Condominium project being submitted to the provisions of the Act pursuant to the terms and conditions of this Declaration.

(i) "Condominium Documents" means this Declaration and the Site Plan, Declaration Plan, Bylaws, Rules and Regulations, and Declaration of Easement, and any of the accompanying documents referenced or provided for as schedules thereto, and any and all

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amendments thereto.

(j) "Condominium Regime" means the entirety of the Property as developed from time to time consistent with the terms of the Condominium Documents.

(k) "County" means Sussex County, Delaware.

(l) "Declaration" means this document by which Declarant, as owner in fee simple of the Property, submits the Property to the provisions of the Act, and any and all amendments hereto.

(m) "Declaration Plan" means the Condominium Declaration Plan dated _____, prepared by Solutions IPEM and recorded among the Land Records in the Office of the Recorder of Deeds in and for Sussex County, Delaware in Plot Book ___, Page ____, which Condominium Declaration Plan (i) contains a survey of the entire Property and a depiction and location of the Buildings, Units and Common Elements, (ii) is recorded contemporaneously with this Declaration in the Recorder's Office, and (iii) complies with §§81-103(18) and 81-209 of the Act, and any and all amendments thereto.

(n) "Declaration of Easement" means the Declaration of Easement Together With An Irrevocable Power Of Attorney Coupled With An Interest (a copy of which is attached hereto as **Schedule E**), which is of record immediately prior to the Declaration Plan in the Recorder's Office, and any and all amendments thereto.

(o) "Declarant" means FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company, and its successors or assigns.

(p) "Declarant Control Period" means the period beginning on the date of recordation of this Declaration and ending on the date which is the earliest of (i) sixty (60) days after the date on which seventy-five percent (75%) or more of the proposed Units, including any and all Units submitted to the Act and the Condominium Regime in accordance with this Declaration and any and all proposed Expansion Units, together with the Common Elements appurtenant thereto, have been conveyed to Unit Owners other than Declarant; (ii) two (2) years after Declarant has ceased to offer Units for residential purposes for sale in the ordinary course of business; (iii) two (2) years after any right to add new Units for residential purposes was last exercised; or (iv) the day Declarant, after giving written notice to the Unit Owners, records an instrument voluntarily surrendering all rights to control activities of the Association.

(q) "Mortgagee" or "mortgagee" shall mean any Person holding a mortgage on any Unit which is recorded in the Recorder's Office, together with any insurer or guarantor of such mortgage, and their respective assignees, as their interests may appear.

(r) "Executive Board" means a board of natural persons of the number stated in the Bylaws.

(s) "Expansion Area" shall have the meaning ascribed in Section 5 hereof, captioned "Expansion" and shall expressly except and exclude the Property.

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(t) "Expansion Buildings" mean the Single Family Home Expansion Buildings, as defined on **Schedule F**, respectively.

(u) "Expansion Building(s) and Unit(s)" mean the Single Family Home Expansion Buildings and Units, as defined on **Schedule F**, respectively.

(v) "Expansion Units" mean the Expansion Single Family Home Units, as defined on **Schedule F**, respectively.

(w) "General Common Elements" mean the entire Property expressly excepting and excluding the Units, the General Common Elements, Single Family Home Limited Common Elements, as shown on the Declaration Plan and as otherwise set forth herein.

(x) "General Common Element Expenses" means and includes any of the following that are not otherwise included in the Common Element Expenses:

(i) All sums lawfully assessed against the Unit Owners by the Executive Board;

(ii) Expenses of administration, maintenance, repair and replacement of the General Common Elements, including General Common Element Repair and Replacement Reserves for the General Common Elements as may be established from time to time;

(iii) Expenses agreed upon as General Common Element Expenses by the Unit Owners in accordance with the terms of this Declaration and the Bylaws;

(iv) Expenses declared to be General Common Element Expenses by the provisions of the Act or by this Declaration or the Bylaws;

(v) Premiums for insurance policies attributable to any Common Elements required to be purchased by the Executive Board pursuant to the Bylaws;

(vi) Costs and expenses allocated and attributable to the Property and payable by the Executive Board on behalf of the Unit Owners which are assessed to the Property in connection with the maintenance, repair, replacement and other obligations, responsibilities and duties as more fully set forth in any Agreements recorded in the Recorder's Office that benefits or burdens the Property;

(vii) All valid charges assessed against or applicable to the Property and the Condominium as a whole (expressly excepting and excluding any such charges assessed against or applicable to the General Common Elements); and

(viii) All expenditures made by, or financial liabilities of, the Association, together with any allocations to reserves, related to General Common Elements, other Units or other real estate described in this Declaration.

(y) "Initial Building" shall have the meaning ascribed in Section 4

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hereof, captioned "Buildings/Units".

(z) "Initial Building and Units" shall have the meaning ascribed in Section 4 hereof, captioned "Buildings/Units".

(aa) "Initial Units" shall have the meaning ascribed in Section 4 hereof, captioned "Buildings/Units".

(bb) "Land" means the real property more particularly described in **Schedule A** attached hereto, expressly excepting and excluding (i) the Buildings, Units or other improvements thereon, and (ii) the Expansion Area, including, but not limited to, the Expansion Building(s) and Unit(s).

(cc) "Legal Requirements" shall mean all laws, regulations, ordinances and similar enactments, by and from any local, county, state or federal agency or body, including, but not limited to environmental laws and regulations and applicable zoning, subdivision, health and building codes as well as all permits, authorizations, licenses or similar governmental authorization relating thereto (collectively the "Permits") which govern the use and operation of the Condominium, Condominium Property, together with the Expansion Area, as applicable.

(dd) "Limited Common Elements" mean the Single Family Home Limited Common Elements, as defined in **Schedule F**, respectively.

(ee) "Limited Common Element Yard Area" shall mean those limited lawn or landscape areas which are appurtenant to each Unit as shown and delineated as a "Limited Common Element Yard Area" on the Declaration Plans or described in the Condominium Documents, including any lamp post, and other betterments appurtenant to such Unit, located within the Limited Common Element Yard Area immediately adjacent to such Unit.

(ff) "Majority" or "Majority of the Unit Owners" means the Owners of more than fifty percent (50%) of the aggregate interest in the undivided ownership of the applicable Common Elements involving such Unit Owners as specified herein.

(gg) "Managing Agent" means a professional managing agent employed by Declarant or the Executive Board to perform such duties and services as Declarant or the Executive Board shall authorize in conformance with this Declaration and the Bylaws.

(hh) "Participating Builder" shall mean and refer to (1) Foxlane Homes or (2) any person or entity designated by Declarant.

(ii) "Person" means any individual, partnership, corporation, limited liability company, association, joint stock company, trust, joint venture, unincorporated organization, governmental entity, any department, agency or political subdivision thereof, or any other legal entity or combination thereof.

(jj) "Recorder's Office" means the Office of the Recorder of Deeds, in and for Sussex County.

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(kk) "Repair and Replacement Reserves" mean the General Common Elements Repair and Replacement Reserve.

(ll) "Site Plan" means that certain Record Plan of HICKMAN dated _____, prepared by Solutions IPEM, and recorded in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Plot Book ___, Page ___, and any and all amendments, changes or modifications thereto.

(mm) "Rules and Regulations" means such rules and regulations as may be adopted from time to time by Declarant or the Executive Board that are deemed necessary for the enjoyment of the Condominium, provided they are not in conflict with the Act or any of the Condominium Documents.

(nn) "General Common Elements" shall have the meaning ascribed in **Schedule F** hereof.

(oo) "General Common Element Expenses" means and includes any of the following that are not otherwise included as part of the General Common Element Expenses:

(i) All sums lawfully assessed against the Single Family Home Unit Owners by the Executive Board that are not otherwise included as part of the General Common Element Expenses;

(ii) Expenses of administration, maintenance, repair and replacement of the General Common Elements, including General Common Element Repair and Replacement Reserves for the General Common Elements as may be established from time to time;

(iii) Expenses agreed upon as General Common Element Expenses by the Single Family Home Unit Owners in accordance with the terms of this Declaration and the Bylaws;

(iv) Expenses declared or required to be General Common Element Expenses by the provisions of the Act or by this Declaration or the Bylaws;

(v) All valid charges assessed against or applicable to the General Common Elements; and

(vi) All expenditures made by, or financial liabilities of, the Association, together with any allocations to reserves, related to General Common Elements.

(pp) "General Common Element Percentage Interest For General Common Element Expenses" means the percentage assigned to each Single Family Home Unit as set forth in **Schedule C** attached hereto for its proportionate share of the General Common Element Expenses and other rights and obligations thereto, the same being subject to specified reductions upon subsequent amendments thereto as provided for in this Declaration.

(qq) "Unit" means a Unit as defined by the UPA and DUCOIA Acts, and

consists of any one of those parts of the Buildings which are separately described on the Declaration Plan and herein, including, but not limited to, the Unit garage, if any, deemed to be part of such Unit and depicted and described on the Declaration Plan, and shall expressly include the Initial Units and, when and if constructed and submitted to the Act and the Condominium Regime, any Expansion Units. The Units include each Single Family Home Unit.

(rr) "Unit Designation" means the number, letter, or combination thereof designating a Unit on the Declaration Plan.

(ss) "Unit Owner" or "Owner" means any Single Family Home Unit Owner.

(i) "Single Family Home Unit Owner" means any natural person, corporation, partnership, association, limited liability company, trust or other legal entity or any combination thereof which owns title to a Single Family Home Unit, but does not include any such natural person, corporation, partnership, association, limited liability company, trust or other legal entity or any combination thereof having an interest in a Single Family Home Unit solely as security for an obligation.

3. Name of Condominium. The Condominium shall be known as "HICKMAN Condominium". The Condominium is an expandable condominium as hereinafter provided.

4. Buildings/Units. There shall be a maximum of up fifty-four (54) Units on the Property. As of the date of this Declaration, One (1) Building consisting of Units 1 (the "Initial Building(s)" and "Initial Unit(s)"), have been built (the Initial Building(s) and Initial Unit(s) are collectively referred to as the "Initial Building(s) and Unit(s)"). The Initial Building(s) and Unit(s) are located as shown on the Declaration Plan. **Schedule F** attached hereto and incorporated by reference contain certain provisions applicable to the Single Family Home Buildings and Single Family Home Units, respectively.

5. Expansion.

(a) Right to Expand. Subject to the limitations and requirements set forth herein, the Declarant shall have the absolute right (but not the obligation), without the consent of the Association, the Executive Board, any Unit Owner, any Mortgagee, the holder of any lien on any Unit, or any other Person, at any time and from time to time, to be exercised prior to the date that is **twenty (20)** years after the date of the recordation of this Declaration in the Recorder's Office, to annex into the Property, as the same are described and identified by legal description on **Schedule A** attached hereto; and thereby to submit to each and every of the provisions of the Condominium Documents and the Act, and to the Condominium Regime, the Declarant's interest in the lands described on said **Schedule A** which are currently excepted out and from submission to the Act and the Condominium Regime, and which lands underlie, *inter alia*, the Expansion Building(s) and Expansion Unit(s), as applicable, and which lands are delineated, in general terms, on the Declaration Plan (collectively, the "Expansion Area"), together with the improvements to be hereafter constructed upon any such lands, in substantial conformity with the Condominium Documents. Nothing herein shall be construed or interpreted (either expressly or impliedly) as requiring or obligating the Declarant to expand the Condominium and annex any additional land

(including, but not limited to, any or all of the Expansion Area) or construct any Expansion Building(s) and Expansion Unit(s). The foregoing expansion may be accomplished in one or more phases (individually an "Expansion Phase" and collectively the "Expansion Phases"), subject to such changes as the Declarant, in Declarant's sole subjective and absolute discretion, deems necessary due to site conditions, construction problems, revisions to applicable building codes or circumstances dictated by the needs of the market place or such other factors or circumstances that Declarant encounters from time to time that requires such changes in Declarant's sole subjective and absolute judgment. The construction of the Phases, in whole or in part, is to be at the sole subjective and absolute discretion of the Declarant. If, as and to the extent constructed and annexed and submitted as aforesaid, each Expansion Phase shall become part of the Condominium Regime and be subject to the terms and provisions of the Condominium Documents, the same as if both the currently "as-built" Condominium Regime and each such Expansion Phase, when and as constructed, had been built contemporaneously and all references herein shall be construed appropriately in context.

(b) Expansion Amendments. Any such expansion and annexation of any one or more of the Phases shall be accomplished by the recordation in the Recorder's Office of an amendment to this Declaration, including, **Schedules A**, **B**, and **C**, of this Declaration, as applicable, and an amended Declaration Plan showing thereon, inter alia, the Buildings and Units as constructed. It shall be sufficient to describe and identify the portion of land in any expansion or annexation under this paragraph by identifying, describing and designating said land by the Unit numbers of the Units proposed to be built over the land as the same are identified on **Schedule A** and delineated on the Declaration Plan. Upon each annexation of all or any portion of the Expansion Area, including, without limitation, any one or more Expansion Building(s) and Unit(s), into the property of the Condominium, **Schedule A** shall be amended to delete the exception of such portion of the Expansion Area as part of the land previously excepted out of, and excluded from, the property of the Condominium, the Property, and the Condominium Regime.

(c) General Common Element Percentage Interests.

(i) Each Unit Owner, by operation of law, shall have an undivided ownership interest in the General Common Elements and the number of votes equal to the General Common Element Percentage Interest assigned to the Unit owned by such Unit Owner as set forth on **Schedule C** attached hereto. Each Unit's General Common Element Percentage Interest in the General Common Elements and voting rights shall be determined and calculated based on the percentage equivalent of a fraction, the numerator of which is one (1) and the denominator of which is the total number of Units submitted to the Act and Condominium Regime in accordance with this Declaration and any subsequent amendments. Also, the General Common Element Percentage Interest shall be used to allocate the obligation to pay General Common Element Common Expenses among all Unit Owners.

(d) Adjustments to General Common Element Percentage Interests.

(i) Upon the recordation of an amendment to this Declaration for the purpose of annexing to the Property all or any portion of the Expansion Area, including, but not limited to, any one or more Expansion Building(s) and Unit(s), each Unit Owner, by operation of law, shall have an undivided ownership interest in the General Common Elements

and the voting rights equal to the General Common Element Percentage Interests assigned to the Unit Owned by such Unit Owner as set forth on **Schedule C**, as amended. Each such expansion and annexation will be accomplished by recording in the Recorder's Office an amendment to this Declaration which will, among other things and as appropriate, adjust each Unit's General Common Element Percentage Interest. The sum of the General Common Element Percentage Interests when expressed in terms of a percentage as provided in **Schedule C** for all Units shall equal one hundred percent (100%), except for minor variations due to rounding. In the event of any discrepancy between an allocated interest and the result derived from application of the pertinent formula, then the allocated interest prevails as provided under §81-207(e) of the Act.

(e) Irrevocable Power of Attorney. Upon the recordation of any such amendment, (i) the General Common Element Percentage Interest used to allocate voting rights and General Common Element Expenses among the Units shall be reallocated as set forth above and amended on **Schedule C**. Any deed, instrument of assignment conveyance or other transfer document for any Unit shall be delivered, subject to the conditional limitation that the General Common Element Percentage Interests, and voting rights appurtenant to such Unit shall be automatically reallocated pro tanto upon the recordation of such amendments in accordance with the terms of this Declaration. Attached hereto as **Schedule E** is an Irrevocable Power Of Attorney Coupled With An Interest, which shall be executed by each Unit Owner coincident with and in partial consideration of Declarant's conveyance of each Unit to the Owner thereof. Such Power of Attorney shall be recorded with the Recorder's Office to confirm the right of Declarant to create and expand the Condominium Regime to include any one or more of the Phases as herein provided. In addition, each such Unit Owner and any mortgagee shall be deemed to have agreed and covenanted to execute such further instruments, if any, as may be required by the Declarant, its successors or assigns, to properly accomplish such amendments, at no additional cost or expense to Declarant. Notwithstanding the foregoing, in the absence of the execution of any such Power of Attorney by a Unit Owner, any such Unit Owner (for such Unit Owner and such Unit Owner's successors and assigns), by acceptance of any deed for such Unit shall be deemed to have acknowledged and agreed to grant the rights and authorities referenced and contained in the foregoing Power of Attorney.

(f) Execution and Recordation of Amendments. There is reserved unto the Declarant an irrevocable power of attorney, coupled with an interest, for the purpose of reallocating the General Common Element Percentage Interests, General Common Element Percentage Interests and voting rights appurtenant to each of the Units in accordance with this Declaration and executing, acknowledging and delivering such further instruments as may from time to time be required in order to accomplish the purposes of this Declaration. Each Unit Owner and each mortgagee of a Unit shall be deemed to have acquiesced in and expressly authorized the amendment of the Condominium Documents for the purpose of adding additional Buildings, Units, and Common Elements to the Condominium in the manner set forth in this Declaration and shall be deemed to have granted unto the Declarant an irrevocable power of attorney, coupled with an interest, to effectuate, execute, acknowledge and deliver any such amendments, and each such Unit Owner and mortgagee shall be deemed to have agreed and covenanted to execute such further instruments, if any, as may be required by the Declarant to properly accomplish such amendments at no additional cost or expense to Declarant.

(g) Status of Expansion Area, including, without limitation, Land

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Underlying Expansion Building(s) and Unit(s) Prior to Expansion. Notwithstanding anything contained in any Condominium Document to the contrary, Declarant hereby reserves the right and has the right to use all or any portion of the Expansion Area, including, but not limited to, any one or more Expansion Building(s) or Expansion Unit(s), for any purpose whatsoever, and shall not be deemed to be obligated to and is not obligated to (i) construct any Buildings, Units or other appurtenant improvements on all or any portion of the Expansion Area, including, but not limited to, any one or more Expansion Building(s) or Expansion Unit(s), or (ii) hold all or any portion of the Expansion Area, including, but not limited to, any one or more Expansion Building(s) or Expansion Unit(s), in inventory for annexation into the Condominium Regime.

(h) Expense, Taxes and Other Burdens of Ownership of Expansion Area Prior To Expansion. Until any portion of the Expansion Area is submitted to the provisions of this Declaration and the Act and Condominium Regime in accordance with the terms of this Declaration, the expense, taxes and any other burdens of ownership of any such Expansion Area shall be at the sole expense and responsibility of, and any income or proceeds from the Expansion area shall inure to the benefit of, the Declarant. Any necessary amendments to the Condominium Documents under this Section shall also be at the sole cost and expense of the Declarant.

(i) Additional FNMA Expansion Provisions. In the event that additional property (expressly excluding any and all Expansion Area, including, without limitation, any one or more Expansion Building(s) or Unit(s)) is added to the Condominium, the prior written consent of each holder, insurer or guarantor of a mortgage on a Unit shall be obtained at the time such additional property is added to the Condominium. If the Federal National Mortgage Association ("FNMA") holds any mortgage on a Unit at the time such additional property (expressly excluding any and all Expansion Area, including, without limitation, any one or more Expansion Building(s) or Unit(s)) is to be added to the Condominium, FNMA shall be furnished with title evidence, in form satisfactory to FNMA, which discloses any lien, easement or other encumbrances affecting such additional property to be added or which will affect the Condominium after the addition of such additional property.

6. Adjustments to General Common Element Percentage Interests.

(a) Change in Percentage of Ownership in General Common Elements, Voting Rights and General Common Element Expenses by Expansion and Annexation, and Method of Implementing Any Such Change. Notwithstanding anything contained in any Condominium Document to the contrary, upon annexation of land into the Property of the Condominium as provided for in Section 5 hereof, captioned "Expansion", the General Common Element Percentage Interest of each Unit Owner and such Unit Owner's voting rights and obligations with respect to General Common Element Expenses shall be reallocated as provided for, and authorized in, said Section 5, and in accordance with the formula provided for in said Section 5 and as listed on **Schedule C** .

7. Units. **Schedule F**, attached hereto and incorporated by reference, contain certain provisions applicable to the Single Family Home Units.

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8. Limited Common Elements. **Schedule F**, attached hereto and incorporated by reference, contain certain provisions applicable to the General Common Elements and Single Family Home Limited Common Elements, respectively.

9. Use of Units and Common Elements. Each Unit and the Common Elements shall be occupied and used as follows:

(a) General Use Restrictions. No part of the Property shall be used other than for housing and the related common purposes for which the Property was designated and each Unit shall be used only for residential purposes and shall be occupied only by the Unit Owner, the Unit Owner's immediate family, guests, subtenants and invitees in such numbers as do not overburden such Unit or the Common Elements. Notwithstanding the foregoing, and subject to applicable statutes and ordinances, a Unit Owner may maintain a home business office within a Unit for such Unit Owner's personal use; provided, however business invitees, customers, and clients shall not be permitted to meet with Unit Owners in Units unless the Executive Board provides otherwise in the Rules and Regulations. No Owner may actively engage in any solicitation for commercial purposes within the Property. No solicitors of a commercial nature shall be allowed within the Property without the prior written consent of the Executive Board. No garage or similar types of sales are permitted, except as permitted by the Executive Board. No day care center or facility may be operated out of a Unit. Notwithstanding anything contained in any of the Condominium Documents to the contrary (1) Declarant and Participating Builder shall have the right to maintain, at no charge, one or more of the following: one (1) sales office, one (1) construction management office, and two (2) models in any Units owned by Declarant or the Participating Builder or on the Common Elements in any size, and at any location as Declarant or the Participating Builder shall deem necessary in its sole subjective and absolute discretion for a period beginning on the date hereof and ending on the date which is thirty (30) days after the last proposed Unit (including any and all Units submitted to the Act and the Condominium in accordance with this Declaration and any and all proposed Expansion Units) has been conveyed by Declarant or the Participating Builder, and (2) Declarant or the Participating Builder maintaining them shall have the right to relocate any one or more such offices or models, at any time and from time to time, in Declarant's or the applicable Participating Builder's sole subjective and absolute discretion. In addition, Declarant and Participating Builder shall have the right to maintain, at no charge, one or more construction trailers, equipment, vehicles, and other temporary structures, equipment, vehicles and improvements associated with the development and construction of the Property upon the Common Elements or any Unit owned by Declarant or Participating Builder.

(b) Insurance Considerations. Nothing shall be done or kept in any Unit or in the Common Elements which will increase the rate of insurance for the Property, or the contents thereof, applicable for residential use, without the prior written consent of the Executive Board. No Owner shall permit anything to be done or kept in such Owner's Unit or in the Common Elements which will result in the cancellation of insurance on the Property, or the contents thereof, or which would be in violation of any law.

(c) General Compliance with Legal Requirements. No immoral, improper, offensive or unlawful use shall be made of the Property or any part thereof. All Legal Requirements shall be observed and complied with, by and at the sole expense of, the Unit Owner

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or the Executive Board, as applicable.

(d) No Impairment of Structures. Nothing shall be done in any Unit or in, on, under, above or to the Common Elements which will impair the structural integrity of the Property or which would structurally change any structures or improvements thereon except as is otherwise provided in the Bylaws or this Declaration.

(e) No Non-Residential Uses. Except for residential use permitted by Section 9(a) and subject to the rights granted to Declarant and Participating Builder by Section 9(a), no industry, business, trade, or occupation, designed for profit, not-for-profit, altruism, exploration, or otherwise, shall be conducted, maintained, or permitted on any part of the Property.

(f) For Sale Signs. Any Unit Owner shall have the right to display a "For Sale" sign measuring up to twelve inches (12") by eighteen inches (18") on the exterior wall of such Unit Owner's Unit or the Limited Common Elements appurtenant to such Unit. Such "For Sale" sign shall be entitled "For Sale", and contain such information as accurately describes the Unit and any applicable names, addresses and phone numbers of the person or persons who are offering the Unit for sale. Notwithstanding the foregoing limitations, the right is expressly reserved and retained by Declarant and any Participating Builder or their respective agents to place "For Sale" signs on any unsold or unoccupied or proposed Units (including any and all Units submitted to the Act and the Condominium in accordance with this Declaration and any and all proposed Expansion Units) or at suitable places in the Common Elements, at any time and from time to time, including, but not limited to, the sales offices and the right is hereby given to any mortgagee, who may become the owner of any Unit, to place such signs on any Unit owned by such mortgagee.

(g) For Rent Signs. Any Unit Owner shall have the right to display a "For Rent" sign measuring up to twelve inches (12") by eighteen inches (18") on the exterior wall of such Unit Owner's Unit or the Limited Common Elements appurtenant to such Unit for a period of up to sixty (60) days prior to expiration of any then permitted lease of the Unit as well as during any time the Unit is vacant and is being offered for lease for a term in compliance with this Declaration. Notwithstanding the foregoing limitations, the right is expressly reserved and retained by Declarant and any Participating Builder or their respective agents to place "For Rent" signs or other window displays or advertising on any unsold or unoccupied Units or at suitable places in the Common Elements, including, but not limited to, the sales offices, and the right is hereby given to any mortgagee, who may become the Owner of any Unit, to place such signs on any Unit owned by such mortgagee while such Unit is vacant.

(h) American Flag. In accordance with §81-320(c) of the Act, any Unit Owner shall have the right to display the flag of the United States of America, measuring up to three (3) feet by five (5) feet, on a pole attached to the exterior wall of such Unit Owner's Unit or to the Limited Common Elements appurtenant to such Unit.

(i) Display Items. Subject to the express exceptions set forth under the Act and this Declaration, no sign, banner, flag, or advertisement of any kind, including, but not limited to, informational signs, signs of contractors and subcontractors, or signs of a political nature or in support of any particular political cause or person running for public or quasi-public

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office or any other signs or banners of any kind whatsoever (each a "Display Item"), shall be erected or maintained on or visible from a Unit or Common Element except as provided in the Rules and Regulations or in the absence of any applicable provisions in the Rules and Regulations then with the prior written consent of the Executive Board, or as expressly permitted under all applicable Legal Requirements. If permission is granted to any Owner to erect a Display Item by the Executive Board, the Executive Board reserves the right to restrict the size, shape, color, lettering, height, material and location of the Display Item, or in the alternative, provide the Owner with the Display Item to be used for such purposes. No Display Item shall be nailed or otherwise attached to trees or other landscaping on the Property.

(j) Changes to Exterior Appearances. A Unit Owner shall not change the exterior appearance of the Limited Common Elements appurtenant to the Owner's Unit or any part of the Unit visible from outside of the Unit (i.e. doors and windows) and other Limited Common Elements by painting, staining or otherwise altering, in any manner or fashion the existing color thereof, adding fixtures, plantings or landscaping thereto, or otherwise, without obtaining the prior written approval of the Executive Board and Declarant so long as Declarant holds title to any portion of the Expansion Area.

(k) Alteration of Common Elements. Nothing shall be altered or constructed, stored in or on or removed from the Common Elements, except upon the written consent of the Executive Board and otherwise in compliance with the Act and the Condominium Documents. Notwithstanding anything to the contrary in this Declaration, no obstruction to visibility at street intersections shall be permitted and such visibility clearances shall be maintained as required by the Association and applicable governmental agencies. No vehicles, objects, fences, walls, hedges, shrubs or other plantings shall be placed or permitted on any Common Element where such obstruction would create a traffic concern or problem.

(l) General Use of Common Elements. The Common Elements shall be used only for the furnishing of the services and facilities for which they were reasonably suited and which are incident to the use and occupancy of the Units for the use permitted in Section 9(a).

(1) No cooking shall be permitted nor shall any goods or beverages be consumed on the General Common Elements except in areas designated for those purposes by the Executive Board.

(2) Each Unit Owner (including Declarant and Participating Builder) shall have the unrestricted perpetual right to use the Common Elements (except the Limited Common Elements) in common with all other Unit Owners as may be required for the purposes of access and ingress and regress to and use and occupancy and enjoyment of the respective Unit owned by such Unit Owner. Such right to use the Common Elements shall extend to each Unit Owner, and the agents, servants, and invitees of each Unit Owner. No wire or other lawn edging, underground invisible fencing or other treatment shall be placed or maintained on any portion of the Common Elements (including any Limited Common Elements) which would impede or hinder the Association's ability to perform its obligations as set forth in this Declaration or the other Condominium Documents, or which would be inharmonious with the aesthetics of the Condominium.

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(3) For purposes of maintenance of Common Elements, no salt shall be used to treat snow/ice on any concrete surface.

(m) General Use of Units and Limited Common Elements. Each Unit Owner shall have the right to the exclusive use and possession of the Limited Common Elements contiguous to or assigned to or serving exclusively the respective Unit owned by such Unit Owner. Such rights to use and possess the Limited Common Elements shall be subject to and governed by the provisions of the Act and the Condominium Documents, including this Declaration.

(1) In the event a Unit will be unoccupied for an extended period exceeding thirty (30) days, the Unit Owner of any such Unit shall, prior to departure: (i) notify the Association of the anticipated duration such extended absence; (ii) remove all removable items such as furniture, plants and other objects from the outside the Unit; and (iii) designate a responsible firm or individual to monitor and if necessary care for the Unit, should the Unit suffer damage or require attention, and provide a key to the Unit to the firm or individual and provide the name of such the designee to the Association. Notwithstanding the foregoing, the Association shall have no responsibility or obligation to undertake or perform any services of any nature relating to any unoccupied Unit that would otherwise be the responsibility of the Unit Owner and not the Association.

(2) Except as originally installed by Developer, no flammable fuel storage for equipment shall be permitted within any Unit or Limited Common Element, except as may be necessary or reasonably used for permitted spas, fireplaces or similar devices compatible with the residential use of the Unit and otherwise in compliance with all applicable Legal Requirements. In addition, no flammable, combustible or explosive fuel, fluid, chemical, hazardous waste, or substance shall be kept on any Common Element, Limited Common Element or within any Unit, except those which are originally installed by Developer or required for and/or are in such quantities or volume customarily used in normal residential household use.

(3) No garage shall be converted into or used as a general living area. Garage doors shall remain closed at all times except when vehicular or pedestrian access is required. Notwithstanding the foregoing limitations, the right is expressly reserved and retained by Declarant and any Participating Builder to utilize the garage area of a Unit as a sales office or facility.

(4) No mops or laundry of any kind, or any other similar type article, shall be hung or exposed so as to be visible outside the Unit.

(5) Window treatments for each Unit shall consist of drapery, blinds, decorative panels, or other tasteful window covering approved by the Executive Board. No temporary window treatments shall be permitted. No security bars shall be placed on the windows of any Unit. No awnings, canopies or shutters shall be affixed to the exterior Limited Common Elements of a Unit without the prior written approval of the Executive Board. No reflective tinting or mirror finishes on windows shall be permitted; non-reflective tinting may be permitted if specifically approved by the Executive Board.

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(6) All personal property of each Unit Owner or other occupants of the Unit shall be stored within such Unit unless outdoor storage within such Unit Owner's Limited Common Element Yard Area has been approved by the Executive Board.

(n) Vehicles. No trailers, campers, recreational vehicles, boats and other large vehicles (other than for temporary loading and unloading or to the extent parked in the garage of any Unit) shall be parked on the Property at any time, provided, that Declarant and Participating Builder shall have the right to maintain, at no charge, one (1) construction trailer, equipment and vehicles associated with the development and construction of the Property upon the Common Elements or any Unit owned by Declarant or a Participating Builder for a period beginning on the date hereof and ending on the date which is thirty (30) days after the last proposed Unit (including any and all Units submitted to the Act and the Condominium in accordance with this Declaration and any and all proposed Expansion Units) has been conveyed by Declarant. No junk or derelict vehicle or other vehicle on which current registration or plates are not maintained or displayed shall be kept upon any of the Common Elements.

(o) Animals. The maintenance, keeping, boarding and/or raising of animals, livestock, poultry or reptiles of any kind, regardless of number, shall be and are prohibited within any Unit or upon the Common Elements, except that the keeping of small, orderly domestic pets (i.e., insurance approved dogs, cats or caged birds) not to exceed two (2) pets per Unit without the approval of the Executive Board, is permitted, subject to the Rules and Regulations adopted and amended by the Executive Board from time to time and as otherwise permitted by all Legal Requirements and otherwise in accordance with the Rules and Regulations established by the Executive Board from time to time; provided, however, that such pets are not kept or maintained for commercial purposes or for breeding; and provided, further, that any such pet causing or creating a nuisance or unreasonable disturbance or noise shall be permanently removed from the Property by the owner of such pet upon three (3) days written notice from the Executive Board. Any breed of dog determined to increase insurance rates, such at Pitbulls, Akitas, etc., shall not be permitted. A determination by the Executive Board that any animal or pet kept or harbored in a Unit is a nuisance shall be conclusive and binding on all parties, subject to any appeal process provided in the Rules and Regulations. Such pets shall not be permitted upon the Common Elements unless accompanied by an adult and unless carried or leashed. No dog, cat or other animal shall be permitted to relieve itself on any shrub, patio, structure, dwelling, improvement, car or other areas or components of the Common Elements or items of personal property belonging to neighboring Unit Owners. Any solid waste left on any Common Elements or the Limited Common Element Yard Area of any Unit shall be promptly placed in a bag or other suitable receptacle and properly disposed of by the responsible Unit Owner of such pet. Every pet owner shall take all reasonable steps to prevent the noise, waste or odors of such owner's pet from annoying other Unit Owners. Unit Owners shall be strictly liable for the actions of their pets and those of their invitees, licensees, tenants and guests. The Executive Board shall have the right to require that any habitually diseased, infested, unclean or noisy animal, bird, reptile, fish or insect be removed from the Property. Any Unit Owner who keeps or maintains any pet upon any portion of the Property or allows any pet to be so kept or maintained upon any portion of the Property shall be deemed to have indemnified and agreed to hold the Association, each Unit Owner, Declarant and Legal Owner free and harmless from any loss, claim or liability of any kind or character whatever arising by reason of keeping or maintaining such pet upon any portion of the Property.

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All pets shall be registered with the Executive Board and shall otherwise be registered and inoculated as required by all applicable Legal Requirements. The Executive Board may establish reasonable fees for registration of pets not to exceed the additional cost incurred by the Association resulting from the presence of such pets. Pets shall not be left unattended on any patio, porch or deck. No pet or animals shall be "tied out" on the exterior of the Unit or in the Common Elements, or left unattended in a yard or on a balcony, porch, patio or courtyard. No dog runs or enclosures shall be permitted except for the area of the General Common Elements designated as a "Pet Park" by the Declarant. The Executive Board shall have authority to modify these provisions on a case by case basis as may be reasonably necessary to accommodate pets providing specialized services to a Unit Owner or immediate family members, guests, tenants and invitees.

(p) Satellite Dishes. Satellite dishes shall be permitted by the Executive Board in such locations as the Executive Board may reasonably approve, provided such dishes do not exceed one (1) meter in diameter and otherwise are in compliance with all Legal Requirements. The use and maintenance of any such satellite dishes shall be the responsibility of Unit Owner served by the same. Antennas of any kind or nature shall not be permitted nor maintained or used at any time.

(q) Parking. The Executive Board may establish Rules and Regulations with respect to the use and enjoyment of the parking spaces which are delineated as General Common Elements to ensure proper use of such parking spaces by the Unit Owners entitled to the use thereof as provided under the Condominium Documents and to protect against the unauthorized use by third parties. There shall be no parking on the front Yard area serving a Unit as the propane tank servicing the Unit is located underground in the front yard area. In addition, there shall be no parking permitted along the roads and streets that are part of the Common Elements except as provided by the Executive Board in the Rules and Regulations, or the other Condominium Documents. All automobiles of the Unit Owners and their family members and their respective tenants, guests and invitees shall be parked in the garage or driveway appurtenant to such Unit and shall not block the sidewalks or driveways of other Unit Owners. All third-party service vehicles belonging to contractors or other service providers hired by an Owner ("Service Vehicles") shall be present only when necessary for the purpose of any such services or maintenance and shall park on the roadway in front of the Unit. No vehicle which cannot operate on its own power shall remain on any Common Element for more than twelve (12) hours. No repair, except emergency repair, of vehicles shall be made within the Common Elements. No commercial vehicle, limousine, recreational vehicle, boat, trailer, including, but not limited to boat trailers, house trailers, and trailers of every other type, kind or description, or camper, may be kept within the Common Elements. Notwithstanding the foregoing, a recreational vehicle, a boat and/or boat trailer may be kept within the Limited Common Element Yard Area of a Unit for up to twenty-four (24) hours for cleaning one every thirty (30) day period, and for loading and/or unloading purposes. The term commercial vehicle shall not be deemed to include law enforcement vehicles, recreational or utility vehicles (e.g., 4-Runners, Suburbans, Explorers, etc.) up to 21 feet 5 inches in length or clean "non-working" vehicles such as pick-up trucks, vans, or cars if they are used by the Unit Owner on a daily basis for normal transportation. No vehicles used in business for the purpose of transporting goods, equipment and the like, or any trucks or vans which are larger than one (1) ton shall be parked in any Common Element. Personal street vans, personal trucks of one (1) ton capacity or smaller, and personal vehicles that can be appropriately parked within standard size parking stalls may be parked in driveways appurtenant to Units. Except for Service Vehicles,

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no vehicles displaying commercial advertising shall be parked within the public view. No vehicles of any nature shall be parked on any portion of the Common Elements except on the surfaced parking area thereof. No vehicles bearing a "for sale" sign shall be parked within the public view anywhere in the Common Elements. No vehicles shall be stored on blocks, nor may inoperable vehicles or vehicles with parts removed be stored or parked in the Common Elements. No tarpaulin covers on vehicles shall be permitted anywhere within the public view. For any Owner who drives an automobile used by any governmental agency, department or body (i.e., police cars), such automobile shall not be deemed to be a commercial vehicle and may be parked in the garage or driveway of the Unit. Notwithstanding any other provision in this Declaration to the contrary, the foregoing provisions shall not apply to construction, maintenance or service vehicles and equipment in connection with the development, construction, improvement, installation, maintenance, repair or replacement activities with respect to any Units or Common Elements by the Declarant or any Participating Builder, in the exercise of the Association's maintenance, repair, replacement obligations and responsibilities and services provided to the Unit Owners under the Condominium Documents, in connection with the development and construction activities of Declarant or any Participating Builder.

(r) Garbage Storage. Garbage, rubbish or any other material of any nature to be abandoned or disposed of shall not be placed or allowed to remain on any Unit or Common Element nor shall it be placed, left or allowed to fall upon any portion of the Property, but if placed outside a Unit shall be placed in closed garbage receptacles of permanent (mobile) construction intended for such purpose and may be placed at street side on the day of collection if required by the collecting agency or as other directed by the Executive Board. All garbage, trash and other refuse shall be kept in tight, enclosed containers with lids, adequately camouflaged and kept from public view and removed from the Units at reasonably frequent intervals. Such trash receptacles shall be kept in clean, sanitary and enclosed areas, hidden from view inside the garage of a Unit, excepting that they may be placed temporarily at street/curb side on the regular day of collection or after 5:00 p.m. on the day immediately prior to the day of collection if required by the collection agency. Each Unit Owner shall take all reasonable steps to prevent such Owner's garbage and refuse from omitting odors which would reasonably annoy any other Unit Owner. No outside burning of trash or garbage is permitted.

(s) Holiday Lighting and Decorations and Other Lighting**.** Holiday lighting and decorations shall be permitted to be placed upon the exterior portions of the Limited Common Elements appurtenant to each Unit in the manner permitted hereunder commencing on Thanksgiving and shall be removed not later than January 15th of the following year. With regard to those portions of any Limited Common Elements that are maintained or serviced by the Association, no lighting or any facilities or electrical cords or wiring related thereto or any decorations shall be permitted to be placed upon or across any portion of the Limited Common Element Yard Area maintained by the Association, including but not limited to sidewalks, driveways, lawn or landscaped areas and the Association and its agents shall be permitted, but shall not be required, to remove any such items which serve as impediments to the any such maintenance, and the Owner, by placement of any lighting or decorations, hereby assumes the risk that such lighting and decorations may be inadvertently damaged or destroyed. An Owner shall be permitted to place holiday lighting and decorations on and within the shrubs located in the front of the Limited Common Element Yard Area appurtenant to such Owner's Unit, provided that (i) the Association shall not be required to maintain such shrubs for such period of time as the

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decorations, lighting and cords are contained within the shrubs, and (ii) such placement shall not otherwise interfere with any maintenance, services or other obligations or responsibilities imposed upon the Association. Except for seasonal holiday lights, all exterior lighting shall require the approval of the Executive Board. As part of the Rules and Regulations, the Executive Board may establish reasonable standards and guidelines for holiday lights, including the right to require the removal of any excessive lighting that creates a nuisance to adjacent or adjoining Unit Owners.

(t) Utilities and Stormwater Management Facilities. No Unit Owner may alter, amend or otherwise interfere with the utilities or storm water management and/or drainage facilities or water easement areas as identified on the Master Plan, the Declaration Plan, or any recorded document in the Recorder's Office as each may be amended or any utilities or irrigation system within any Common Element including any Limited Common Element Yard Area. Neither any Unit Owner nor the Association may alter, amend or otherwise interfere with the utilities, storm water management and/or drainage facilities without first submitting a plan for such alteration, amendment or interference to Declarant (so long as Declarant holds title to any of the Expansion Area), the County and any applicable utility provider for review and approval. The Association or the Unit Owner, as applicable, shall be solely responsible for all costs and expenses associated with any such proposed modifications, including but not limited to all reasonable expenses, including reasonable attorney's fees incurred by any of the foregoing parties with respect to their review of any such proposed modifications. In addition, in the event that such utilities, systems or facilities (whether comprised of swales, pipes, pumps, water body slopes, or other improvements) is adversely affected by any changes to landscaping, structures, or additions undertaken by a Unit Owner whether approved or not by the Executive Board, then any costs and expenses to correct, repair, maintain or replace any impacted utilities or drainage system and/or facilities and any resulting damages to any Unit or Common Element shall be sole obligation and responsibility of the Owner who made such changes. By way of example, and not of limitation, if an Owner plants a tree within its Limited Common Element Yard Area (pursuant to Executive Board approval) and the roots of such tree subsequently affect pipes or other drainage facilities within another Unit or the Common Elements, then such Owner shall be solely responsible for the costs and expenses of removal of the roots as directed by the Executive Board.

(u) Solar Panels. Solar panels and accessory equipment shall be permitted to be installed and maintained solely and exclusively on rear and side roofs of the Units within the Condominium at the sole cost and expense of the applicable Unit Owner. Any installation, maintenance, repairs, replacements, removal and/or disposal shall be first subject to the review and approval of the Executive Board of Association (which shall not be unreasonably withheld, conditioned or delayed), including the approval of the installer and maintenance or service provider. Without limiting the foregoing, any and all maintenance, repairs, replacements as well as any attendant damages resulting from such installation and/or other permitted or required activities such as (but not limited to) the creation of holes, roof penetrations, tie-ins to existing electrical service, ductwork and equipment, access panels, or the relocation of existing equipment that are made as a result of any such activities shall be undertaken and completed at the sole cost and expense of the applicable Unit Owner.

(v) Skylights. Skylights shall be permitted to be installed and maintained solely and exclusively on rear and side roofs of Units within the Condominium at the sole cost and expense of the applicable Unit Owner. Any installation, maintenance, repairs,

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replacements, removal and/or disposal shall be first subject to the review and approval of the Executive Board of Association (which shall not be unreasonably withheld, conditioned or delayed), including the approval of the installer and maintenance or service provider. Without limiting the foregoing, any and all maintenance, repairs, replacements as well as any attendant damages resulting from such installation and/or other permitted or required activities such as (but not limited to) the creation of holes and roof penetrations that are made as a result of any such activities shall be undertaken and completed at the sole cost and expense of the applicable Unit Owner.

(w) Use of and Alterations to Limited Common Elements and Limited Common Element Yard Areas. In order to encourage harmonious architectural design and to protect the visual integrity, architectural spirit and long-term property values of the Condominium as may be necessary to cause the Condominium to remain an "upscale" community (both aesthetically and functionally) consistent with other similar projects in the County and as required by the Condominium Documents and in accordance with Legal Requirements, including the Act (the "Required Community Condition"), the Executive Board and Declarant reserves the right to adopt Rules and Regulations with respect to reasonable conditions on the use and enjoyment of the Limited Common Element Yard Areas. Except for the initial landscaping package, fence, and other Limited Common Elements constructed by the Declarant and/or a Participating Builder within the Limited Common Element Yard Area of each Unit, no other dwelling, structure, improvement, landscaping or other man-made object that are not otherwise expressly prohibited under this Declaration or other Condominium Documents, including but not limited to tennis courts, basketball courts, children's recreation equipment or other recreational or sporting facilities designed to be located and installed in a fixed location (by way of illustration, swing sets, trampolines or jungle gyms), decks, patios, porches, swimming pools, greenhouses, tool or storage sheds, ponds, gardens, driveways, paved areas, satellite dishes, radio antennas, communications equipment or facilities, fences, walls, together with all forms or types of hardscaping or exterior lighting (collectively, the "Yard Area Improvements") shall be designed, constructed, maintained, altered, extended, added to, removed or otherwise modified without the express written consent and approval of the Executive Board and otherwise in compliance with the Rules and Regulations and the Condominium Documents. No tree, hedge or other landscape feature shall be planted or maintained within any Limited Common Element Yard Area in a location which obstructs sight-lines for vehicular traffic on public streets or on private streets and roadways or sight-lines from adjoining, adjacent or surrounding Units. Notwithstanding anything contained in this Section 9(w) to the contrary, the Executive Board shall have no authority or jurisdiction to grant approval or authorization for any Yard Area Improvements which would otherwise be specifically prohibited under this Declaration or the other Condominium Documents or in contravention of any Legal Requirements. In addition, no Yard Area Improvements, once approved by the Executive Board shall be altered, extended, added to, removed or otherwise modified, nor shall any additional structures of any nature be erected, used or maintained nor shall any exterior change or alteration be made (including exterior facade color changes or change in grade or drainage) to the Yard Area Improvements or the Limited Common Element Yard Area except in accordance with the Condominium Documents. No Owner shall remove soil from any portion of the Limited Common Element Yard Area appurtenant to its Unit, change the grade or topography of the Limited Common Element Yard Areas or plant landscaping or install hardscaping materials or improvements which results in any permanent change in the flow and drainage of surface water. Notwithstanding anything contained in this Declaration to the contrary, any Yard Area

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Improvements marketed or sold by Declarant and/or a Participating Builder shall be deemed to have been pre-approved by Declarant, without the need or obligation to obtain any approvals or authorizations from either Declarant or the Executive Board.

(1) Composting. No composting activities of any kind or nature shall be permitted on any portion of the Limited Common Element Yard Area, including natural composting activities. In addition, no Unit Owner shall erect or maintain any composting piles or receptacles or containers on any portion of the Common Elements.

(2) Outdoor Furniture. Outdoor furniture shall be used and maintained in the Limited Common Element Yard Area or patios, decks or porches only, unless otherwise determined by the Executive Board, and shall be maintained in a neat and attractive manner.

(3) Outdoor Equipment. No equipment or machinery (including equipment or machinery for use in connection with the maintenance of any Unit or Limited Common Element Yard Area) shall be stored around the front, rear or side of any Unit and its appurtenant Limited Common Elements. Notwithstanding the foregoing, equipment or machinery may be present when necessary for the purpose of performing work or maintenance to any Unit or Limited Common Element appurtenant thereto provided such equipment or machinery is promptly removed following the completion of such work or maintenance. An exception to this restriction would be Generac type home generators.

(4) Artificial Vegetation. No artificial grass, plants or other artificial vegetation or rocks or other landscape devices, shall be placed or maintained upon the exterior portion of any Unit or any appurtenant Limited Common Element or Limited Common Element Yard Area. All parts of the Unit which are exposed to the elements, including by way of illustration and not limitation, decks, deck rails, patios, porches, stairs, stair carriages and doors, shall not be changed nor shall the appearance of such be changed without obtaining the prior written approval of the Executive Board.

(5) Outdoor Laundry. No clothing, towels, sheets, or other items may be hung, draped, or allowed to be placed upon or over decks, deck rails, or patios of the Limited Common Elements of the Units.

(6) Outdoor Grills. The Executive Board shall have the right to restrict the use against gas grills or gas barbeque facilities within the Limited Common Element Yard Areas pursuant to the Rules and Regulations. Gas grilling shall be permitted only within the designated Recreation Area whereby the grilling equipment will be equipped with timers/automatic shutoff.

(7) Decorations. No decorative objects, including, but not limited to, birdbaths, light fixtures, sculptures, statutes, weather vanes, or flagpoles shall be installed or placed within or upon any portion of the Limited Common Elements appurtenant to each Unit without the prior written approval of the Executive Board.

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(8) Privacy Screens. No privacy screens, walls or fences shall be erected or installed within or upon any portion of the Limited Common Elements appurtenant to each Unit without the prior written approval of the Executive Board.

(9) Sports Equipment**.** No recreational, playground or sports equipment shall be installed or placed within or about any portion of the Limited Common Elements or Limited Common Element Yard Area of any Unit for an extended period of time except for periodic use not extending more than seven (7) consecutive days during any month without prior written consent of the Executive Board. The use of any such recreational, playground or sports equipment within or about any portion of the Limited Common Elements or Limited Common Element Yard Area that is kept within a Unit when not in active use shall be permitted. No basketball backboards, skateboard ramps, or play structures will be permitted without written approval by the Executive Board. Any such approved equipment shall be located at the rear of the Limited Common Elements or Limited Common Element Yard Area of the Unit. Tree houses or platforms of a similar nature shall not be constructed on any part of the Limited Common Elements or Limited Common Element Yard Area of a Unit. No basketball hoop shall be attached to the Limited Common Elements or Limited Common Element Yard Area of a Unit and any portable basketball hoop must be stored inside the garage of the Unit.

(10) Outdoor Storage**.** No temporary or permanent utility or storage shed, storage building, tent, or other structure or improvement, including but not limited to storage pods or trailers shall be permitted and no other similar structure or improvement shall be constructed, erected, altered, modified or maintained without the prior approval of the Executive Board, which approval shall conform to the requirements of this Declaration.

(x) Fences. No fence shall be constructed or maintained upon any Limited Common Element Yard Area until the plans for the same have been submitted to and approved in writing by the Executive Board in accordance with the provisions of the Bylaws including the location thereof relative to certain infrastructure, including but not limited to existing utilities and lines, drainage swales, irrigation systems, utility and other improvements together with such other reasonable terms and conditions as may be imposed by the Executive Board. Fences should be white vinyl or composite material for low maintenance, four (4) feet in height installed with a forty-eight (48) inch gate for access. If the Unit Owner selects a fence to be installed either by Declarant or Participating Builder, or after settlement by Unit Owner's fence installer, then the Unit Owner shall pay any assessed cost with the annual dues for the added expense of mowing and landscaping control of the fence, said cost is subject to change annually with the annual Budget. Notwithstanding the foregoing, this Section 9(x) shall not apply to temporary above ground fences installed by or on behalf of Declarant or any Participating Builder during the construction and development of the Condominium, which in the sole opinion of Declarant or such Participating Builder, as applicable, shall be required, convenient or incidental to Declarant's or such Participating Builder's, as applicable, construction, development, marketing, leasing and sales activities within the Condominium, all of which shall be temporary in nature and shall be promptly removed when the need for such fencing is no longer needed in connection with the foregoing activities.

(y) General Reservation for Declarant, Participating Builders and Association. Notwithstanding any other provision in this Declaration to the contrary, the foregoing

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provisions, restrictions and limitations set forth in this Section 9 shall not apply to any activities reasonably undertaken and performed in connection with the development, construction, improvement, installation, maintenance, repair or replacement activities with respect to any Buildings, Units, Common Elements or Expansion Areas by the Declarant or any Participating Builder or in the exercise of the Association's maintenance, repair, replacement obligations and responsibilities and services provided to the Unit Owners under the Condominium Documents or any other document or agreement pertaining to the operation or use of the Condominium, or to actions taken to comply with any Legal Requirements.

10. Repair and Replacement Reserve. The Association shall create and maintain, in addition to any reserve for contingencies, (a) a fully funded repair and replacement reserve (as defined in §81-103(39) of the Act) for the General Common Elements (the "General Common Elements Repair and Replacement Reserve") based upon a current reserve study (as defined in §81-103(40) of the Act) (the "Reserve Study") in accordance with the Act, (b) a fully funded repair and replacement reserve (as defined in §81-103(39) of the Act) for the General Common Elements (the "General Common Elements Repair and Replacement Reserve") based upon a current Reserve Study in accordance with the Act.

(a) All assessments to fund the General Common Elements Repair and Replacement Reserve shall be a General Common Element Expense and shall be due and payable by each Unit Owner.

(b) All assessments to fund the General Common Elements Repair and Replacement Reserve shall be a General Common Element Expense and shall be due and payable by each Single Family Home Unit Owner.

11. Maintenance Repair and Replacement of Limited Common Elements by the Unit Owners. Notwithstanding anything contained in the Condominium Documents to the contrary, each Owner shall have the affirmative obligation to undertake, perform and complete as provided hereunder any and all maintenance, repairs and replacement of any and all Limited Common Elements appurtenant to such Unit Owner's Unit that should arise from time to time to properly maintain and keep any such Limited Common Element in good repair, condition and appearance and as necessary to maintain the Required Community Condition other than those Limited Common Elements which shall be maintained, repaired and replaced by the Association. Any and all such maintenance, repair and/or replacement of any such Limited Common Elements shall be the sole obligation, responsibility of and shall be at the sole cost and expense of the Owner of the Unit as required hereunder and under §81-3107(a) of the Act. In addition, the Executive Board shall determine in its reasonable judgment when and to what extent such maintenance, repairs and replacements shall be required to any such Limited Common Elements in order to maintain the Required Community Condition and as otherwise required by and provided for in the Condominium Documents, including but not limited to the rights and remedies of the Association as provided in the Bylaws in the event of any Unit Owner's failure to timely perform any such maintenance, repairs and/or replacements obligations as required under the Condominium Documents. For purposes of maintaining Limited Common Elements, Unit Owners shall refrain from using salt to treat snow/ice on any concrete surface.

12. Alienation of Units, Restrictions on Sales and Leases of Units, Registration

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Requirements for Subleases, Rental Agreements and Mortgages.

(a) No Severance of Ownership. No Unit Owner shall execute any instrument of assignment, conveyance or other transfer document or any lease, mortgage, or other instrument conveying or mortgaging the title to such Owner's Unit without including therein the undivided interest of such Unit in the Common Elements, it being the intention hereof to prevent any severance of such combined ownership. Any such instrument of assignment, conveyance or other transfer document or any such lease, mortgage, or other instrument purporting to affect one or more of such interests, without including all such interests, shall be deemed and taken to include the interest or interests, so omitted, even though the latter shall not be expressly mentioned or described therein. No part of the interests in the Common Elements of any Unit may be sold, leased, transferred, given, devised, or otherwise disposed of, except as part of the Unit to which such interests are appurtenant, or as part of a sale, lease, transfer, gift, devise or other disposition of such part of the interests in the Common Elements of all Units. The Common Elements are not subject to partition, and any purported conveyance, encumbrance, judicial sale, or other voluntary or involuntary transfer of an undivided or individual interest in the Common Elements made without the Unit to which that interest is allocated is void.

(b) Registration of Leases and Rental Agreements. Every Unit Owner, within ten (10) days of entering into a lease or any other agreement, written or oral, for the occupancy or use of such Owner's Unit (including, but not limited to, any rental agreement that may be excluded under the Delaware Landlord Tenant Code under 25 Del. C. § 5102) (such lease or other agreement being referred in this subsection as a "lease") shall supply a copy of any such lease to the Executive Board together (i) an acknowledgment by the tenant under such lease that such tenant has received a copy of the Condominium Documents, including, but not limited to, the Rules and Regulations, and (ii) the payment of a reasonable administrative fee to process such registration of each lease as may be determined by the Executive Board. Such Unit Owner shall obtain from the Executive Board and deliver to or otherwise make available to each tenant of such Unit Owner's Unit, at the time the lease is executed or, in the absence of a written lease when the tenancy begins, a current copy of the Condominium Documents as furnished by the Executive Board and shall deliver to or otherwise make available to the tenant a copy of any additions or revisions to the Condominium Documents as such additions or revisions are adopted and noticed to the Unit Owners by the Executive Board. A tenant shall be bound to comply with the noticed Condominium Documents and the Unit Owner leasing to the tenant shall take all lawful action against a tenant who materially violates the noticed Condominium Documents. By entering into a lease for a Unit, the Unit Owner of such Unit irrevocably appoints the Executive Board as attorney-in-fact coupled with an interest to have the right and authority (but not the obligation) to enforce the Condominium Documents against the tenant of that lease in the event that the Unit Owner shall fail, within a reasonable time after written demand by the Executive Board, to take what the Executive Board reasonably regards as adequate enforcement action against the tenant in material violation of noticed Condominium Documents. In the event of enforcement action (including any summary action for possession at law or a petition for injunctive relief in equity) under this subsection, the tenant shall have no resort to any defense based upon lack of contractual privity with the Executive Board. Any such lease shall also be in writing, have a term of no less than thirty (30) days, shall have not have term for subleasing within that thirty (30) day period, and is, and shall expressly provide, that such lease is subject to the provisions of the Act and the Condominium Documents, and that any failure of the lessee to comply with such provisions shall

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constitute a default under the rental agreement.

(c) Registration of Mortgages with Executive Board. In order to enable the Association and the Executive Board to timely and efficiently administer and perform any required notification procedures in connection with required notices to Mortgagees under this Declaration, including but not limited to Section 21(d) relating to Material Amendment notices, every Unit Owner, within ten (10) business days following the execution of any mortgage on the Unit Owner's Unit, shall individually (or through the Unit Owner's attorney who conducts the settlement on the Unit or conducts a refinance on the Unit which results in the creation of one or more mortgages on the Unit) shall supply either (i) a copy of such mortgage as certified by a license attorney in the State of Delaware together with a recorder's receipt showing the book and page (or other applicable instrument reference which evidences the recordation of such mortgage) or a copy of the mortgage as recorded in the Recorder's Office (each a "Unit Mortgage") to the Executive Board or to the property management company retained by the Executive Board if applicable and if directed to do so in writing by the Executive Board (the "Management Company"). Each Unit Mortgage shall include or be accompanied by the name and address of the Mortgagee. In addition, in the event any such Unit Mortgage is assigned to a new Mortgagee, then within ten (10) business days of the Unit Owner receiving notification of any such assignment (the "Unit Mortgage Assignment"), the Unit Owner shall deliver a copy of any such Unit Mortgage Assignment notification to the Executive Board or to the Property Management Company as and if provided above. Each Unit Owner who obtains a Unit Mortgage and any subsequent Unit Mortgage Assignment shall be responsible for the assessment and payment of a reasonable administrative fee to process such registration of each Unit Mortgage and Unit Mortgage Assignment as may be determined by the Executive Board from time to time. Each Unit Owner covenants and agrees to confirm in writing from time to time to the Executive Board or to the Property Management Company as and if provided above upon written request whether such Unit Owner has any mortgages secured by such Unit Owner's Unit and to provide copies of any such Unit Mortgages and Unit Mortgage Assignments if not previously provided as required hereunder. In the event the Executive Board determines that any Unit Owner has failed to timely and properly notify and/or otherwise provide to the Executive Board or to the Property Management Company as and if provided above after being directed to do so in writing by the Executive Board, then the Unit Owner shall be responsible for and liable to the Association for all reasonable costs and expenses incurred by the Association in determining the absence or existence of any Unit Mortgages and/or Unit Mortgage Assignments on such Unit Owner's Unit. The Executive Board shall have the authority to establish, create, modify, supplement and otherwise change these registration requirements and the associated fees and costs in administering and enforcing these requirements pursuant to and otherwise in accordance with the Bylaws.

13. Decoration and Fixturing of Interior Surfaces of Walls and Ceilings. Each Unit Owner shall have the right, at any time and from time to time, to install, at such Owner's own cost and expense, such decorations, additions, fixtures, and coverings (including but not limited to, painting, finishing, wall papering and carpeting) to the surfaces of walls and ceilings which face the interior of such Owner's Unit, provided that the same do not impair the structural integrity of the Building within which any such Unit is a part of. All window coverings must appear white or "off white" when viewed from the exterior.

14. Creation of Executive Board and Initial Members of the Executive Board.

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The names of the initial Members/Directors of the Executive Board to serve until their successors are chosen and qualified pursuant to the Bylaws are:

(a) David Hart
(b) Jamie Savino
(c) John Murray

15. Encroachments. If any portion of the Common Elements now or subsequently encroaches upon any Unit, or if any Unit now or subsequently encroaches upon any other Unit or upon any portion of the Common Elements in general as a result of the construction of any Building or if any such encroachment shall occur after the recording of this Declaration as a result of settling or shifting of any Building, a valid and perpetual and non-exclusive easement for such encroachment and for the maintenance, repair, reconstruction and replacement of the same shall exist so long as such Building shall stand. In the event any Building, any Unit, any adjoining Unit, or any adjoining Common Elements shall be partially or totally destroyed as a result of fire or other casualty or as a result of condemnation or eminent domain proceedings, and then re-built; encroachments of parts of the Common Elements upon any Unit or Building, or of any Unit upon any other Unit or any portion of the Common Elements or any Building, or of any Building upon any other Building or any portion of the Common Elements or any Unit, due to such rebuilding, shall be permitted, and valid perpetual easements for such encroachments and for the maintenance, repair, reconstruction and replacement of the same shall exist so long as such reconstructed Building, Unit or Common Element shall stand.

16. Pipe Ducts, Cables, Wires, Conduits, Public Utility Lines and Other Common Elements Located Inside of Units: Support. Each Unit Owner shall have a perpetual and non-exclusive easement in common with the Owners of all other Units to use all pipes, wires, ducts, cables, conduits, public utility lines and other Common Elements located in any of the other Units that serves such Owner's Unit. Each Unit shall be subject to a perpetual and non-exclusive easement in favor of the Owners of all other Units to use pipes, ducts, cables, wires, conduits, public utility lines and other Common Elements serving such other Units and located in such Unit. The Executive Board or its representative shall have a right of access to each Unit to inspect the same, to remove violations therefrom and to maintain, repair or replace the Common Elements contained therein or elsewhere in the Buildings. Every portion of a Unit which contributes to the structural support of a Building shall be burdened with a perpetual and non-exclusive easement of structural support for the benefit of all other Units and Common Elements contained within such Building.

17. Units Subject to Easements and Licenses for Ingress and Egress Through Common Elements; Other Unit Owner Easements. Subject to §§81-302(a)(6) and 81-312 of the Act, (a) each Unit Owner shall have a non-exclusive easement and license in common with Declarant, the other Unit Owners for ingress and egress through all Common Elements reasonably necessary for the use and enjoyment of such Unit Owner's and (b) each Unit shall be subject to a non-exclusive easement and license for ingress and egress through all Common Elements by persons lawfully using or entitled to the same.

18. Units Subject to Construction Easements and Licenses on Common Elements. Each Unit shall be subject to a non-exclusive easement and license of ingress and egress

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through all Common Elements for design, construction, maintenance, repairs and replacement of all improvements (including, but not limited to, utilities) installed or to be built on the Common Elements and for the construction, maintenance, repairs, and completion of certain Units, by all construction personnel, personnel of Declarant, the Participating Builders, the Executive Board, and the Unit Owners and their respective employees, agents, and invitees, together with the use of construction equipment, tools and services associated therewith.

19. Units Subject to Condominium Documents. All present and future Unit Owners, lessees, mortgagees, tenants and occupants of Units shall be subject to, and shall comply with, the provisions of the Condominium Documents, as they may be amended from time to time. The acceptance of an instrument of assignment, conveyance or other transfer document or the entering into of a lease or the entering into occupancy of any Unit shall constitute an agreement that the provisions of the Condominium Documents are accepted and ratified by such Owner, tenant, or occupant and all of such provisions shall be deemed and taken to be enforceable equitable servitudes and covenants running with the Land and shall bind any person having at any time any interest or estate in such Unit, as though such provisions were recited and stipulated at length in each and every instrument of assignment, conveyance or other transfer document or any lease thereof.

20. Unit Ownership and Ownership of Common Elements. Each Unit Owner shall own the interest in such Owner's Unit and the undivided Common Element Percentage Interest of such Unit in the Common Elements appurtenant to such Unit.

21. Amendment of Declaration.

(a) During the Declarant Control Period, no amendment may be made to this Declaration without the written consent of Declarant, which consent may be granted or withheld for any reason or no reason whatsoever, in Declarant's sole subjective and absolute discretion. Thereafter and subject to Section 32 hereof, this Declaration shall be amended in accordance with the terms of this Declaration.

(b) Notwithstanding the provisions of Section 21(a) hereof, or any law, custom or usage to the contrary, so long as Declarant owns one or more Units subject to this Declaration or has the right to expand the Condominium Regime in accordance with the Condominium Documents, including, but not limited to, Sections 5 and 6 hereof, no amendment to this Declaration shall be adopted which, in Declarant's sole subjective and absolute opinion, may materially or adversely interfere with or affect (i) the lease, sale, other disposition or use of the Expansion Area or any one or more of the Units owned by Declarant or proposed Units, including, but not limited to, any Expansion Building(s) and Unit(s), (ii) the value, use, or marketability of any one or more of the Units owned by Declarant or proposed Units, including, but not limited to, any Expansion Building(s) and Unit(s), (iii) any expansion rights granted to Declarant under any one or more of the Condominium Documents, or (iv) the financing available to Declarant with respect to any of the foregoing.

(c) Notwithstanding the provisions of Section 21(a) hereof, or any law, custom or usage to the contrary, so long as Declarant owns one or more Units subject to this Declaration or has the right to expand the Condominium Regime in accordance with the

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Condominium Documents, including, but not limited to, Sections 5 and 6 hereof, Declarant also shall have the absolute right, power and authority and shall have an irrevocable power of attorney, coupled with an interest, at any time and from time to time, in Declarant's sole subjective and absolute discretion, to amend any one or more of the Condominium Documents to cause each or all of them to be amended by filing with the Recorder's Office instruments and plans as permitted hereunder or as necessary to (i) correct any clerical or typographical errors, ambiguities, title questions or defects, or conflicts with or to comply with any and all applicable laws and legal requirements, (ii) achieve compliance with the requirements of Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, Federal Housing Authority, Veterans Administration or other governmental agency or their successors, or (iii) conform the Condominium Documents to be consistent with the provisions required or allowed by the Act, or to comply with any Legal Requirements.

(d) Subject to Sections 21(a), (b) and (c) hereof and Declarant's right to expand the Condominium Regime in accordance with the Condominium Documents, including, by way of example and not of limitation, Sections 5 and 6 hereof, captioned "Expansion" and "Adjustments to General Common Element Percentage Interests", respectively, and any and all rights granted to or reserved by Declarant in the aforesaid Sections 5 and 6, this Declaration may be amended by the vote of a Majority of the Unit Owners, cast in person or by proxy at a meeting duly held in accordance with the provisions of the Bylaws; provided, however, that any action to terminate the legal status of the Condominium must be approved by Unit Owners holding no less then eighty percent (80%) of the Common Element Percentage Interests and approved by Mortgagees that represent at least sixty-seven percent (67%) of the Common Element Percentage Interests held by Unit Owners of the Units subject to a mortgage, and, provided, further, that any such amendments of a material adverse nature ("Material Amendments") must be approved by Unit Owners holding no less then sixty-seven percent (67%) of the Common Element Percentage Interests and approved by Mortgagees that represent at least fifty-one percent (51%) of the Common Element Percentage Interests held by the Unit Owners of the Units subject to a mortgage. For purposes of this Section 21(d) the term "Material Amendments" shall be defined to mean a change or amendment to this Declaration pertaining to any one or more of the following:

(1) Voting rights;

(2) Any assessment increase which is more than 25% of the previously applicable assessment, or the priority of assessment liens;

(3) Reduction in reserves for maintenance, repair, and replacement of Common Elements;

(4) Responsibility for maintenance and repairs;

(5) Reallocation of interests in the Common Elements or the rights to their use;

(6) Redefinition of any Unit boundaries;

(7) Convertibility of Units into Common Elements or, vice versa;

(8) Expansion or contraction of the Condominium, or the addition, annexation, or withdrawal of property to or from the Condominium;

(9) Hazard or fidelity insurance or bonds requirements;

(10) Imposition of any new restriction relating to the leasing of Units;

(11) A decision by the Association of Owners to establish self-management, if professional management had been required previously by the Condominium Documents, Department of Housing and Urban Development, Veterans Administration, Federal National Mortgage Association, or Federal Home Loan Mortgage Corporation;

(12) Restoration or repair of any Buildings (after damage or a partial condemnation) in a manner other than that specified in the Condominium Documents;

(13) Any action to terminate the legal status of the Condominium after substantial destruction or condemnation occurs;

(14) Any provisions that expressly benefit mortgage holders, insurers, or guarantors;

(15) Any reallocation of interests in the Common Elements resulting from a partial condemnation or partial destruction of the Condominium;

(16) Assessments, assessment liens or subordination of such liens;

(17) Rights to use of the Common Elements; or

(18) Imposition of any right of first refusal or any restriction on the right of a Unit Owner to sell, transfer, or otherwise convey his Unit.

Subject to Sections 21(a), (b) and (c) hereof and Declarant's right to expand the Condominium Regime in accordance with the Condominium Documents, including, by way of example and not of limitation, Sections 5 and 6 hereof, captioned "Expansion" and "Adjustments to Common Element Percentage Interests", respectively, and any and all rights granted to or reserved by Declarant in the aforesaid Sections 5 and 6, no such amendment shall be effective until duly recorded in the Recorder's Office; provided, however, that neither the Common Element Percentage Interests shall be changed except by unanimous consent of all the Unit Owners affected thereby, and the mortgagees of those affected Units, such change being evidenced by an appropriate amendatory declaration to such effect, duly executed and recorded in the Recorder's Office. The failure of any Mortgagee to respond to any such proposed notice of an amendment as aforesaid sent by certified mail or registered mail, return receipt requested, within sixty (60) days after notice issues to such Mortgagee shall be deemed to be a consent of such Mortgagee to such

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amendment. Each such amendment shall be effective upon recordation of the same in the Recorder's Office of an appropriate instrument setting forth such amendment.

(e) If any amendment is necessary in the judgment of the Executive Board to cure any ambiguity or to correct or supplement any provision of this Declaration or the Bylaws which is incorrect, defective or inconsistent with any other provision hereof or thereof or with the Act, or to change, correct or supplement any aspect of the Declaration Plan which is incorrect, defective, or similarly inconsistent, and which is not a Material Amendment, then the Executive Board may effect an appropriate corrective amendment without the approval of the Unit Owners as long as the Executive Board shall have received an opinion of counsel (as to any amendment pertaining to this Declaration or the Bylaws) or of an independent registered architect or licensed professional engineer (as to any such amendment pertaining to the Declaration Plan); and, in either case, such opinion shall and must recommend and approve the proposed amendment. Each such amendment shall be effective upon recordation of the same in the Recorder's Office of an appropriate instrument setting forth such amendment.

(f) If there are one or more amendments to this Declaration, the Declaration Plan or the Bylaws, all references thereafter to this Declaration, the Declaration Plan and the Bylaws (unless otherwise specifically designated) shall mean this Declaration, the Declaration Plan or the Code of Regulation as amended to the date of such reference. Any amendment to this Declaration, the Declaration Plan and the Bylaws shall be deemed in proper form for filing and recording when such amendment is executed by the President of the Association and when accompanied by certification that such amendment has been duly enacted in accordance with the provisions of this Declaration or the Bylaws, as the case may be.

(g) Notwithstanding the foregoing provisions for the amendment of this Declaration, Declarant, its successors and assigns, shall have an irrevocable power of attorney, coupled with an interest, for the purpose of amending any one or more of the Condominium Documents, including, but not limited to, the applicable Schedules of this Declaration attached hereto and the Declaration Plan under the reservation and powers given unto Declarant in Sections 5 and 6 of this Declaration, for the purposes stated in any one or more of the said Sections 5 and 6, respectively. The provisions for annexing land and improvements by Declarant and all other provisions of said Sections 5 and 6, respectively, are incorporated into this Section by reference as though each and every statement contained in said Sections 5 and 6, respectively, were fully set forth herein.

(h) Amendment to Schedule K. Notwithstanding any provisions for the amendment of this Declaration to the contrary, no amendment may be made of to Schedule K without the prior written consent of the Declarant.

22. No Partition of Common Elements/Percentage Interests. The Common Elements are not subject to partition, and any purported conveyance, encumbrance, judicial sale, or other voluntary or involuntary transfer of an undivided interest in the Common Elements made without the Unit to which that interest is allocated is void. Neither the Common Element Percentage Interests nor the General Common Element Percentage Interests shall be separated from the Unit to which they appertain and shall be deemed conveyed, leased or encumbered with the Unit though the interest is not expressly mentioned or described in the conveyance or other

instrument.

23. No Revocation. Except in the event of substantial destruction as provided in the Bylaws and the Act, the dedication of the Property under the Act shall not be removed, waived, revoked, or terminated unless all of the Unit Owners and the mortgagees of all of the mortgages covering the Units and all other affected judgment and other lien holders with respect to the Units unanimously agree to such removal, revocation, waiver, or termination.

24. Eminent Domain. Whenever all or part of the Common Elements shall be taken, injured or destroyed by eminent domain, the Association shall represent the Unit Owners in negotiations, settlements and agreements with the condemning authority. Each Unit Owner appoints the Association as attorney-in-fact for this purpose under an irrevocable power of attorney coupled with an interest to effectuate, execute, acknowledge and deliver any and all agreements or other documents that may be required or necessary to consummate and complete any such settlements and/or agreements with the condemning authority or other third parties; and each Unit Owner shall be deemed to have agreed and covenanted to execute such further instruments, agreements, or documents, if any, as may be required by the Association, its successors or assigns, to properly accomplish the purposes of this Section. Each Unit Owner shall be entitled to notice thereof, but in any proceedings for the determination of damages, such damages shall be determined for such taking, injury, or destruction as a whole and not for each Unit Owner's interest therein. The award or proceeds of settlement shall be payable to the Association for the use and benefit of the Unit Owners and their mortgagees as their interests may appear, and as otherwise provided in the Bylaws.

25. Invalidity. The invalidity of any provision of this Declaration shall not be deemed to impair or affect in any manner the validity, enforceability or effect of the remainder of this Declaration, and, in such event, all of the other provisions of this Declaration shall continue in full force and effect as if such invalid provision had never been included herein.

26. Waiver. No provision contained in this Declaration shall be deemed to have been abrogated or waived by reason of any failure to enforce the same, irrespective of the number of violations or breaches which may occur.

27. Gender. The use of the masculine gender in this Declaration shall be deemed to refer to the feminine gender and neuter gender and the use of the singular shall be deemed to refer to the plural, and vice versa, whenever the context so requires.

28. Successors and Assigns. Whenever "FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company" is used such reference shall also refer to its successors or assigns.

29. Captions. The captions herein are inserted only as a matter of convenience and for reference, and in no way define, limit, or describe the scope of this Declaration or the intent of any provision thereof.

30. Joinder of Mortgagee. By means of the Mortgagee Joinder and Subordination Addendum attached hereto and incorporated by reference herein, the Lender (as defined in such Addendum) joins in the execution of this Declaration to acknowledge both (a) the

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Lender's consent to the establishment with respect to the Property of the Condominium Regime hereby documented and (b) the subordination of the Lender's existing mortgage lien with respect to the Property to the terms of the Condominium Documents, as amended from time to time in accordance with the Condominium Documents.

31. Assessments and Taxes. Each Unit and its Common Element Percentage Interest in the Common Elements shall be assessed and taxed for all purposes as a separate parcel of real estate in accordance with §81-105 of the Act and any such real estate taxes and assessments applicable to each such Unit shall be the sole responsibility of such Unit Owner.

32. Declarant's Right to Amend. Notwithstanding anything contained in this Declaration to the contrary, so long as Declarant holds title to one or more of the Units which are being offered for sale or has the right to expand the Condominium Regime in accordance with the Condominium Documents, including, but not limited to, Sections 5 and 6 hereof, Declarant reserves the absolute right, power and authority and shall have an irrevocable power of attorney, coupled with an interest, to change the interior design and arrangement of, or alter the boundaries between Buildings and Units owned by Declarant at any time and from time to time after this Declaration or any amendment thereto is filed in the Recorder's Office. To accomplish any of the foregoing, Declarant shall have the right to amend any one or more of the Condominium Documents so as to reflect such change, without previously or subsequently obtaining the consent, approval, authorization, signature or other action or non-action of the Association, the Executive Board, any Unit Owner, any Mortgagee, any holder of any lien on any Unit or any occupant of the Property or any Unit or any other Person. Notwithstanding any law, custom or usage to the contrary, Declarant also shall have the absolute right, power and authority and shall have an irrevocable power of attorney, coupled with an interest, to amend any one or more of the Condominium Documents to cause each or all of them to be amended by filing with the Recorder's Office instruments and plans as permitted hereunder or as necessary to correct any clerical or typographical errors, ambiguities, title questions or defects, or conflicts with or to comply with any and all applicable laws and legal requirements. To accomplish any of the foregoing, Declarant shall have the right to amend any one or more of the Condominium Documents so as to reflect such correction, without previously or subsequently obtaining the consent, approval, authorization, signature or other action or non-action of the Association, the Executive Board, any Unit Owner, any Mortgagee, any holder of any lien on any Unit or any occupant of the Property or any Unit or any other Person.

33. Declarant Easements. Declarant shall have a perpetual, free and non-exclusive easement through the Common Elements as may be reasonably necessary for the purpose of discharging Declarant's obligations or exercising special declarant rights, whether arising under the Act or reserved in this Declaration.

34. Perpetuities. If any of the covenants, conditions, easements, restrictions, or other provisions of any one or more of the Condominium Documents shall be unlawfully void, or voidable for violation of the rule against perpetuities, then such provisions shall continue only until twenty-one (21) years after the death of the last survivor of the now living descendants of Donald Trump, the forty-fifth (45th) President of the United States of America.

35. Declarant Reserved Right. Notwithstanding anything contained in any one

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or more of the Condominium Documents to the contrary, any building, structure, or other improvement constructed, maintained, repaired, replaced, marketed or sold by Declarant or its successor or assignees shall be deemed to have complied with the provisions of the Condominium Documents and Declarant shall have the right to construct, maintain, repair, replace, market or sell such buildings, structures, or other improvement all without the approval of the Association, Executive Board, any Owners or any holders of any existing mortgages.

36. Conflicts. Notwithstanding anything contained in this Declaration to the contrary, (a) to the extent that the provisions of this Declaration or the Bylaws might conflict with or be inconsistent with the Act, the Act shall govern and control, except as otherwise provided under the Act; and (b) to the extent that the provisions of the Bylaws might conflict with or be inconsistent with this Declaration, this Declaration shall govern and control.

[END OF TEXT - SIGNATURE PAGE FOLLOWS]

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IN WITNESS WHEREOF, Declarant has caused its name and its seal to be affixed hereto this _____ day of _____, 2024.

FOXLANE HOMES DELAWARE , LLC

_____ BY:_____(SEAL)
WITNESS , Manager/Authorized Member

STATE OF DELAWARE)
) SS:
COUNTY OF SUSSEX)

BE IT REMEMBERED, that on this _____ day of _____, 2024, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, _____, Manager/Authorized Member of FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company, party to this Declaration, known to me personally to be such, and he acknowledged this Declaration to be his act and deed on behalf of said entity.

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

_____
NOTARY PUBLIC

PRINT NAME:_____

COMMISSION EXPIRES:_____

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LIST OF SCHEDULES

Schedule A	Land Description
Schedule B	Building and Improvements
Schedule C	General Common Elements Percentage Interests
Schedule D	Declaration Of Easement Together With An Irrevocable Power Of Attorney Coupled With An Interest
Schedule E	Irrevocable Power Of Attorney Coupled With An Interest
Schedule F	Single Family Home Buildings; Applicable Provisions

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DECLARATION OF
HICKMAN CONDOMINIUM

SCHEDULE A
LAND DESCRIPTION

ALL that certain tract, piece or parcel of land situate, lying and being in Baltimore Hundred, Sussex County, Delaware, said to contain 12.8 acres of land, more or less, as shown on a plat entitled "HICKMAN" prepared by Solutions IPEM, LLC and recorded in Plot Book ___, Page ___ and being more particularly described as follows, to wit:

Insert metes and bounds description

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DECLARATION OF
HICKMAN CONDOMINIUM

SCHEDULE B

Buildings and Improvements

BUILDING:

The Land has been improved by One (1) Building designated as Unit 1, Phase 1 all as more particularly shown and set forth on the Declaration Plan.

IMPROVEMENTS:

The Land is further improved as more particularly shown on the Declaration Plan by paved driveways and parking areas, paved walkways and landscaping and lighting fixtures, as well as sanitary sewer systems, drainage systems, water, electrical, telephone, conduits and lines (title to which systems may, in certain instances, remain vested in the utility company providing services through such systems) and infrastructure currently constructed to the Units in the Building(s), all such improvements being constructed in accordance with the Declaration Plan.

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DECLARATION OF
HICKMAN CONDOMINIUM

SCHEDULE C

General Common Elements Percentage Interests

The following percentages represent (1) the respective undivided percentages of ownership of each Unit in the General Common Elements, (2) the number of votes of each Unit expressed as a percentage, and (3) each Unit's percentage share of the General Common Element Expenses, which percentages shall be adjusted based on the actual number of Units submitted to the Condominium Regime in accordance with this Declaration.

Building	Unit #	General Common Element Percentage Interests
1	1	100%
Total		100%*

Between the recordation of this Declaration and the completion of all the Units, each Unit Owner's General Common Element Percentage Interests shall be adjusted in accordance with the terms of this Declaration and this Schedule shall be amended as provided under this Declaration to document such adjustment to the General Common Element Percentage Interests.

The General Common Element Percentage Interests shall be used, in addition to voting or other rights and obligations expressly provided under the Condominium Documents, to allocate the obligation of each Unit Owner to pay its proportionate share of the General Common Element Expenses.

*Pursuant to 25 Del. C. § 81-07(e), except for minor variations due to rounding, the sum of the undivided interests in the common elements allocated at any time to all the units must equal 1 if stated as a fraction or 100 percent if stated as a percentage. In the event of any discrepancy between an allocated interest and the result derived from application of the pertinent formula, then the allocated interest prevails.

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DECLARATION OF
HICKMAN CONDOMINIUM

SCHEDULE D

Declaration of Easement

Part of Tax Parcel Number: 1-34-9.00-28.00

Prepared by and Return to:
Baird Mandalas Brockstedt LLC
1413 Savannah Road, Suite 1
Lewes, DE 19958

DECLARATION OF EASEMENT TOGETHER WITH AN IRREVOCABLE POWER OF ATTORNEY COUPLED WITH AN INTEREST

This Declaration of Easement Together With An Irrevocable Power Of Attorney Coupled With An Interest (this "**Declaration of Easement**") made effective this _____ day of _____, 20___, is reserved unto FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company, its successors and assigns ("**Grantor**").

RECITALS

WHEREAS, Grantor is the owner of an interest in that certain real property located in BALTIMORE Hundred, Sussex County, Delaware, which property is more particularly described in **Exhibit A** attached hereto and made a part hereof; and

WHEREAS, said property is to be submitted by Grantor to a plan of condominium ownership under the Delaware Uniform Common Interest Ownership Act, 25 Del. C. §81-101, et seq., as amended (hereinafter referred to as the "**Act**"), by, and in accordance with, the Declaration Of HICKMAN Condominium (the "**Declaration**") to be filed of record in the Office of the Recorder of Deeds, in and for, Sussex County, Delaware (the "**Recorder's Office**"), after the filing of this Declaration of Easement; and

WHEREAS, any term or definition not otherwise expressly defined herein shall have the meaning and definition as provided in the Declaration; and

WHEREAS, as of the date hereof, Grantor has constructed the Initial Building and Initial Units; and

WHEREAS, the Declaration, in Sections 5 and 6 of the Declaration, captioned "Expansion" and "Adjustments to Percentage Interests", respectively, reserves to Grantor the right, *inter alia*, by and unto itself to (1) annex into the land and the improvements constituting the Property of the Condominium; and thereby to submit to each and every of the provisions of the Declaration and the Act and the Condominium Regime, all or any portion of the Expansion Area, including, but not limited to, the Expansion Buildings and Units, and (2) change the location of any one or more of the proposed Expansion Buildings and Units in order to improve views to and from the Buildings and Units, improve parking areas and harmonize the Property to the sewer, water and other utilities service distribution plans.

WHEREAS, it is intended that the Common Elements be subject to this Declaration of Easement in order to facilitate the possible minor relocation of said Buildings and Units.

NOW, THEREFORE, in consideration of the matters hereinabove set forth:

DECLARATION OF EASEMENT

Grantor hereby reserves unto itself the exclusive, free, perpetual right, privilege and easement (but not the obligation) to (1) annex into the land and the improvements constituting the Property of the Condominium; and thereby to submit to each and every of the provisions of the Declaration, the Act and the Condominium Regime, all or any portion of the Expansion Area, including, but not limited to, any one or more of the Expansion Buildings and Units, (2) change the location of any one or more of the Expansion Buildings and Units in order to improve views to and from the Buildings and Units, improve parking areas and harmonize the Property to the sewer, water and other utilities service distribution plans, (3) construct (a) one or more of the Expansion Buildings and Units as delineated on the Declaration Plan, and/or (b) all of the necessary parking lots, walks and other appurtenances (including, but not limited to, utilities and roadways) requisite to service all or any portion of the Expansion Area, including, but not limited to, any one or more of the Expansion Buildings and Units, and (4) provide for the necessary ingress and egress to the Expansion Area, including, but not limited to, any one or more of the Expansion Buildings and Units, together with such other rights, privileges, licenses, easements and rights-of-ways as may be deemed necessary or desirable to submit all or any portion of the Expansion Area, including, but not limited to, any one or more of the Expansion Buildings and Units, to the Condominium Regime and the Act as contemplated and provided for under the Declaration, Declaration Plan, Site Plan and Bylaws.

This reservation of easement shall be perpetual during the continued existence of the Condominium.

This reservation of easement shall run with the Land and shall be binding upon each Unit Owner and mortgagee of a Unit in the Condominium and their respective heirs, personal representatives, successors and assigns and shall be deemed to have granted unto the Grantor, its successors and assigns, an irrevocable power of attorney coupled with an interest, to effectuate, execute, acknowledge and deliver any such amendment; and each such Unit Owner and mortgagee shall be deemed to have agreed and covenanted to execute such further instruments, if any, as may be required by the Grantor, its successors or assigns, to properly accomplish the purposes of this Declaration of Easement.

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IN WITNESS WHEREOF, the Grantor has caused its name and its seal to be affixed hereto the day and year first above-written.

FOXLANE HOMES DELAWARE, LLC

_____ BY:_____(SEAL)
WITNESS , Manager

STATE OF DELAWARE)
) SS:
COUNTY OF SUSSEX)

BE IT REMEMBERED, that on this ___ day of _____, 20___, personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, _____, Manager of FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company, party to this Indenture, known to me personally to be such, and he acknowledged this Indenture to be his act and deed on behalf of said entity.

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

_____
NOTARY PUBLIC
PRINT NAME:_____
COMMISSION EXPIRES:_____

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EXHIBIT A to Schedule D

ALL that certain tract, piece or parcel of land situate, lying and being in Baltimore Hundred, Sussex County, Delaware, said to contain 12.8 acres of land, more or less, as shown on a plat entitled “Hickman", prepared by Solutions IPEM, LLC and recorded in Plot Book ___, Page ___ and being more particularly described as follows, to wit:

Insert metes and bounds description

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DECLARATION OF
HICKMAN CONDOMINIUM

SCHEDULE E

Sample Irrevocable Power of Attorney

Tax Map Parcel Number: 1-34 9.00 28.00 Unit _____

Prepared By and Return To:

_____

IRREVOCABLE POWER OF ATTORNEY COUPLED WITH AN INTEREST

HICKMAN CONDOMINIUM

KNOW ALL MEN BY THESE PRESENTS, that, for the period commencing on the date hereof and ending on the date which is _____ **(___) years** after the date hereof, I/we, _____ owners of Unit _____ (the "**Unit**") in HICKMAN Condominium (the "**Condominium**") hereby make constitute and appoint FOXLANE HOMES DELAWARE, LLC, a Delaware limited liability company ("**Declarant**"), and its successors and assigns, to be my/our true and lawful attorney, and in my/our name, place and stead and in my/our behalf, and hereby grant Declarant, and its successors and assigns, the absolute right, power and authority, together with an irrevocable power of attorney, coupled with an interest, to do and execute all or any of the following acts, deeds and things, at any time and from time to time:

1. To execute, acknowledge, deliver and record any one or more instruments, documents, amendments or plans as may be required to amend, modify, or otherwise change any one or more of the Condominium Documents, including, but not limited to, the Declaration Plan, Declaration, Bylaws, Rules and Regulations and/or Declaration of Easement (all as defined in the Declaration) for any one or more of the purposes expressly provided under any one or more of the Condominium Documents, including, but not limited to, under the Declaration in Section 4, captioned "Buildings/Units", Section 5, captioned "Expansion", Section 6, captioned "Adjustments to General Common Element Percentage Interests", Section 21, captioned "Amendment of Declaration", and Section 32, captioned "Declarant's Right to Amend", and under the Bylaws in Article XI, captioned "Amendments to Bylaws" and Article XIV, captioned "Provisions Applicable to Declarant", all to be accomplished in accordance with the terms and conditions of the Condominium Documents, including, but not limited to, the Declaration, Bylaws and Declaration Plan, as recorded in the Office of the Recorder of Deed in and for Sussex County, Delaware (the "**Recorder's Office**"), at _____, _____, and _____, respectively; and

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2. To take any and all such actions which Declarant deems necessary or desirable, in Declarant's sole subjective and absolute discretion, for the purpose of constructing additional condominium units and submitting any one or more Expansion Phases, including, but not limited to, any one or more Expansion Buildings and Units, to the Act and the Condominium Regime, including, but not limited to, for the purpose of reallocating the Common Element Percentage Interests and General Common Element Percentage Interests for each unit (including the Unit) in the Common Elements by proportionately reducing the Percentage Interests of the Common Elements appurtenant to each unit (including the Unit) in the Condominium; and

3. To amend, modify, or otherwise change any one or more of the Condominium Documents, including, but not limited to, the Site Plan, Declaration, Bylaws, Rules and Regulations, Declaration Plan, and/or Declaration of Easement, or to cause each or all of them to be amended by filing with the Recorder's Office instruments, documents, amendments and plans required or necessary to (a) annex into the land and the improvements constituting the Property of the Condominium; and thereby to submit to each and every of the provisions of the Declaration and the Act and the Condominium Regime, all or any portion of the Expansion Area, including, but not limited to, the Expansion Buildings and Units, and (b) correct any clerical or typographical errors, ambiguities, title questions or defects, or conflicts with or to comply with any and all applicable laws and legal requirements – all without previously or subsequently obtaining the consent, approval, authorization, signature or other action or non-action of the Undersigned, the Association, the Executive Board, any Unit Owner, any Mortgagee, or the holder of any lien on any Unit or any other occupant of the Property or any Unit or any other third party; and

4. Without in any way detracting from the hereinabove authorized powers, I/we specifically request and authorize that my/our hereinabove designated true and lawful attorney to be authorized and directed to take any and all such action which it deems necessary for the purposes of, or in fulfillment of, any of the provisions contained herein, including, but not limited to, any such amendments, subdivisions or dedications; hereby giving unto my/our said attorney full power to do and perform every act whatsoever requisite or convenient to be done in the premises as fully to all intents and purposes as I/we could do if personally present and acting.

And I/we hereby, for myself/ourselves, my/our heirs, executors, administrators and assigns, confirm and agree to ratify and confirm whatsoever my/our said attorney may lawfully do by virtue of these presents, it being understood that this instrument is intended to be, and is, an irrevocable power of attorney coupled with an interest, and that this instrument shall bind all current and future owners and mortgagees of the Unit and shall run with and bind the Unit.

Whenever used, the singular number shall include the plural, the plural the singular and the use of any gender shall include all genders.

If any of the covenants, conditions, easements, restrictions, or other provisions of any one or more of the Condominium Documents shall be unlawfully void, or voidable for violation of the rule against perpetuities, then such provisions shall continue only until twenty-one (21) years after the death of the last survivor of the now living descendants of Donald Trump, the forty-fifth (45th) President of the United States of America.

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Any defined terms not otherwise expressly defined in this Irrevocable Power of Attorney Coupled With An Interest shall have the meanings and definitions provided in the Declaration.

IN WITNESS WHEREOF, I/we have hereunto set our hands and seals, this _____ day of _____, 20___.

_____ _____(SEAL)
Witness

_____ _____(SEAL)
Witness

STATE OF _____ :
:ss.
COUNTY OF_____ :

BE IT REMEMBERED, that on this _____ day of, _____, 20__, personally, came before me, the Subscriber, a Notary Public for the State and County aforesaid _____, _____, parties to this foregoing Irrevocable Power of Attorney Coupled With An Interest, known to me personally to be such, and acknowledged said Irrevocable Power of Attorney Coupled With An Interest and Release and Waiver to be his/her their voluntary act and deed.

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

_____
NOTARY PUBLIC

_____
Print Name

_____
Date Commission Expires

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DECLARATION OF
HICKMAN CONDOMINIUM

SCHEDULE F

Single Family Home Buildings and Single Family Home Units; Applicable Provisions

1. Single Family Home Buildings. Declarant has reserved the right to expand the Condominium Regime to include up to five (5) Single Family Home Buildings (the "**Expansion Single Family Home Building(s)**") consisting of an aggregate of fifty four (54) Single Family Home Units (the "**Expansion Single Family Home Unit(s)**") each of which Declarant has the right (but not the obligation) to construct in the future (the Expansion Single Family Home Building(s) and Expansion Single Family Home Unit(s) are collectively referred to as the "**Expansion Single Family Home Building(s) and Unit(s)**"). If constructed in the future, each of the Expansion Single Family Home Building(s) and Unit(s), as they are built, will be, located in substantial conformity with and as depicted on the Declaration Plan and will be substantially consistent, in terms of quality of construction, with the other Single Family Home Buildings and Units; provided, however, that (a) the Declarant may effect minor changes in the location of any and all Expansion Single Family Home Building(s) and Unit(s) constructed in the future, if any, in order to improve views to and from such Expansion Single Family Home Building(s) and Unit(s), improve parking areas and harmonize the Property to the sewer, water and other utilities service distribution plans; (b) no assurances are made with respect to (i) the architectural style and size of any such Expansion Single Family Home Building(s) and Unit(s); (ii) the descriptions of Common Elements that may be created within any part of the Condominium; or (iii) any limitations as to the locations of any such Expansion Single Family Home Building(s) and Unit(s) or Common Elements that may be made within any part of the Condominium; and (c) Declarant reserves the right, from time to time, to change the size, type, design, location, layout, number, and configuration of such Expansion Single Family Home Building(s) and Unit(s) and Common Elements, as Declarant, in Declarant's sole subjective and absolute discretion, deems necessary due to site conditions, construction problems, revisions to applicable building codes, circumstances dictated by the needs of the market place, or such other factors or circumstances that Declarant encounters from time to time that requires such changes in Declarant's sole subjective and absolute judgment.

2. Single Family Home Units. Each Single Family Home Unit consists of the space measured horizontally between the unfinished (unexposed) surfaces of the drywall enclosing such Single Family Home Unit and measured vertically from the finished (exposed) exterior side of the slab or basement surface of such Single Family Home Unit to the unfinished (unexposed) surface of the drywall ceiling of such Single Family Home Unit. Included as part of each such Single Family Home Unit are (a) the non-structural walls and framing constituting the entrance of such Single Family Home Unit; (b) the electric panel located within such Single Family Home Unit for such Single Family Home Unit; (c) the hot water heater for such Single Family Home Unit; (d) interior nonload-bearing walls or partitions located within such Single Family Home Unit; (e) all

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electrical outlets and lights serving such Single Family Home Unit (whether within or without such Single Family Home Unit); (f) all stoves, refrigerators, microwave and garbage disposal, heat and air conditioning units, ceiling fans, washer-dryers, sinks, baths, or other plumbing or heating or cooling facilities, and insulation located within or without such Single Family Home Unit but solely serving such Single Family Home Unit, including any air conditioner-heat pump; (g) the plumbing and water lines serving such Single Family Home Unit commencing at the collector from the main lines serving such Single Family Home Unit; (h) all interior stairs, stair wells, and stair carriages solely serving such Single Family Home Unit; (i) any storage areas solely serving such Single Family Home Unit; (j) all windows and doors servicing such Single Family Home Unit; (k) all screens and storm window inserts pertinent to the windows and doors servicing such Single Family Home Unit; (l) any lamp post and other betterments appurtenant to such Single Family Home Unit, located within the yard immediately adjacent to such Single Family Home Unit and installed initially by Declarant; and (m) any garage deemed to be party of such Single Family Home Unit, together with all mechanical systems located within such garage, including by way of illustration and not limitation, any garage door openers and mechanical apparatus associated with the door of such garage.

3. Common Elements.

(a) "Single Family Home Limited Common Elements" consist of any and all Common Elements identified on the Declaration Plan as Single Family Home Limited Common Elements or as described herein or as otherwise reasonably intended for the use by the Owner or occupant of a specific Single Family Home Unit or Single Family Home Units (i.e., one or more but less than all of the Single Family Home Units). Single Family Home Limited Common Elements shall include, by way of example and not limitation, (i) the front, rear and, if any, side yard areas adjacent to a Single Family Home Unit and depicted as a as a Limited Common Element Yard Area on the Declaration Plan, (ii) those porches, decks, balconies, patios, parking areas, hallways, stairs, driveways, and walkways accessible directly from a Single Family Home Unit, or appurtenant to a Single Family Home Unit, and designated as a Single Family Home Limited Common Element on the Declaration Plan, (iii) the spaces enclosed by a Single Family Home Building's roof assembly, and (iv) any other Common Element intended for use by the Owner or occupant of a specific Single Family Home Unit or Single Family Home Units but accessible solely through a particular Single Family Home Unit or Single Family Home Units and not directly from a General Common Element or otherwise dedicated to the use of one or more but less than all of the Single Family Home Unit Owners. Single Family Home Limited Common Elements of the type described in this paragraph shall automatically be allocated as Single Family Home Limited Common Elements for the exclusive use and benefit of the Single Family Home Unit(s) they are designed and constructed to serve, or to which they are allocated as provided herein, without any further action or document required, whether or not such Single Family Home Limited Common Elements are expressly so designated on the Declaration Plan. No Single Family Home Limited Common Elements may be reallocated without the prior written consent of a majority of the Single Family Home Unit Owners and then only in accordance with the Act.

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(b) "General Common Elements" consist of any and all Common Elements located solely within, or a part of, a Single Family Home Building, expressly excepting and excluding any Single Family Home Units and Single Family Home Limited Common Elements. As such, the General Common Elements includes, without limitation, the following:

(i) All lighting facilities, and equipment and wiring installed to illuminate any of the Common Elements located within, or a part of, a Single Family Home Building which are not otherwise Single Family Home Limited Common Elements;

(ii) All of the foundations, structural walls, outside exterior walls of a Single Family Home Building, all of the supports and other components, floors and ceilings (including the respective parts thereof expressly included within the Single Family Home Units located within a Single Family Home Building) of a Single Family Home Building, and all roofs and roof assemblies of a Single Family Home Building as and to the extent any of the foregoing are not specifically, by this Declaration, included within a Single Family Home Unit;

(iii) All equipment, apparatus and installations existing for common use by one or more Single Family Home Unit Owners, including trash and related facilities, entrance signs, perimeter fencing, and landscaping, if any, located within or adjacent to a Single Family Home Building;

(iv) All installations of and systems for central services and utilities serving more than one Single Family Home Unit which are located in or about a Single Family Home Building, including, but not limited to, systems for electricity, plumbing, light, water, gas, sewer, drainage, communications, security, and telephone service as well as all other apparatus and installations existing for common use of the Single Family Home Unit Owners, including all pipes, ducts, wires, cables and conduits used in connection therewith, except as and to the extent the same are located within and serve only a single Single Family Home Unit and as and to the extent that all or parts of any utility systems are owned by the municipality or utility supplying the particular services involved;

(v) Motors, pumps, tanks, boilers, security systems and any other equipment used to provide any service available for use by more than one Single Family Home Unit Owner;

(vi) Perpetual easements or licenses located within a Single Family Home Building for access, maintenance, repair, reconstruction or replacement of structural members, equipment, utilities, rights-of-ways, installations and appurtenances, and for all other services necessary or convenient to the existence, maintenance, repair, safety and use of the Property; and

(vii) All other elements of the Property located within a Single Family Home Building, other than the Single Family Home Units and the Single Family Home Limited

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Common Elements, necessary or convenient to their existence, operation, maintenance, repair and replacement, safety or normally in common use.

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Document# 2020000037194 BK: 5294 PG: 107
Recorder of Deeds, Scott Dailey On 8/19/2020 at 11:10:40 AM Sussex County, DE
Consideration: $0.00 County/Town: $0.00 State: $0.00 Total: $0.00
Doc Surcharge Paid Town: SUSSEX COUNTY

TAX MAP #1-34-9.00-28.00
NO TITLE EXAMINATION
REQUESTED OR PERFORMED
Prepared by and Return to: Moore & Rutt, P.A.
P.O. Box 554
Georgetown, DE 19947
File 32626.008 (DNR)

THIS DEED, made this 18th day of August, in the year of our LORD Two Thousand Twenty (2020),

BETWEEN T. HENLEY GRAVES, SUCCESSOR TRUSTEE OF THE DOLLIE M. HICKMAN REVOCABLE TRUST DATED JULY 22, 2002, of 17 Coventry Road, Rehoboth, Delaware 19971, party of the first part,

- AND -

THOMAS R. MULLEN, TRUSTEE OF THE THOMAS R. MULLEN REVOCABLE TRUST UNDER AGREEMENT DATED AUGUST 13, 2015 AS RESTATED ON FEBRUARY 5, 2019, of 107 Blackpool Road, Rehoboth Beach, Delaware 19971, party of the second part,

WITNESSETH, that the said party of the first part, for and in consideration of the sum of ONE DOLLAR ($1.00) lawful money and other valuable considerations of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the said party of the second part, to:

ALL that certain tract, piece and parcel of land lying and being in Cedar Neck, Baltimore Hundred, Sussex County and State of Delaware, located on the south side of the road leading from Ocean View to Cotton Patch Hills, bounded and described as follows, to wit: Adjoining lands of Charles C. Foxwell and Arnie L. Foxwell on the west, the aforesaid road on the north, on the east by lands of Grantor and on the south by lands of Fred Hudson, said to contain fifteen (15) acres more or less.

BEING the parcel conveyed by Dollie Mae Hickman and Lloyd H. Hickman to Dollie M. Hickman Trustee of the Dollie M. Hickman Revocable Trust dated July 22, 2002 by deed dated July 22, 2002 and Dollie M. Hickman dies on September 23, 2008 and pursuant to said Revocable Trust the parcel herein was gifted and

bequeathed to Lloyd H. Hickman, Successor Trustee and Beneficiary for his lifetime. Lloyd H. Hickman died on August 1, 2019 at which time T. Henley Graves because Successor Trustee, pursuant to Section 4.E of the aforesaid Dollie Hickman Revocable Trust at Lloyd H. Hickman's death Thomas R. Mullen was named residual beneficiary to whom the subject parcel was to be conveyed.

SUBJECT to any and all restrictions, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

IN WITNESS WHEREOF, the said party of the first part has hereunto set her hand and seal, the day and year aforesaid.

SIGNED, SEALED, DELIVERED,
and witnessed in the
presence of

Denise Kendall

_____ SEAL)
T. HENLEY GRAVES, SUCCESSOR TRUSTEE
OF THE DOLLIE M. HICKMAN REVOCABLE
TRUST UNDER AGREEMENT DATED
JULY 22, 2002

STATE OF DELAWARE :
: ss.
COUNTY OF SUSSEX :

BE IT REMEMBERED, that on this 18th day of August, 2020 personally appeared before me, the Subscriber, a Notary Public for the State and County aforesaid, T. HENLEY GRAVES, SUCCESSOR TRUSTEE OF DOLLIE M. HICKMAN REVOCABLE TRUST UNDER AGREEMENT DATED JULY 22, 2002, party to this Indenture, known to me personally to be such, and she acknowledged this Indenture to be her act and deed.

GIVEN under my hand and seal of office, the day and year aforesaid.

Sandra M Whaley
Notary Public

SANDRA M WHALEY
Printed Name of Notary

STATE OF DELAWARE NOTARY PUBLIC SANDRA M WHALEY MY COMMISSION EXPIRES ON 05-19-2022

PLANNING & ZONING COMMISSION
HOLLY WINGATE, CHAIR
SCOTT COLLINS, VICE CHAIR
JEFF ALLEN
JOHN PASSWATERS
DAVID PETTYJOHN

Sussex County

sussexcountyde.gov
pandz@sussexcountyde.gov

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: October 7, 2026

Application:	C/U 2593 Andrew Scrutchfield
Applicant:	Andrew Scrutchfield
Owner:	Andrew Scrutchfield
Site Location:	17659 Stingey Lane, Lewes The property is lying on the east side of Stingey Lane (Not a State Maintained Road), approximately 195 feet north of Beaver Dam Road (Rt. 23)
Current Zoning:	Agricultural Residential (AR-1)
Proposed Use:	Indoor Storage Units
Comprehensive Land Use Plan Reference:	Coastal Area
Councilmanic District:	District 3 – Ms. Jane Gruenebaum
School District:	Cape Henlopen School District
Fire District:	Lewes Fire Company
Sewer:	Sussex County
Water:	Tidewater
Site Area:	0.22 acres +/-
Tax Map ID.:	334-5.00-195.00

EQUAL HOUSING OPPORTUNITY

COUNTY ADMINISTRATIVE OFFICES
2 THE CIRCLE | PO BOX 417
GEORGETOWN, DELAWARE 19947

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Planning Commission Members
From: Susan Isaacs, Planner I
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: August 17, 2026
RE: Staff Analysis for C/U 2593 Andrew Scutchfield

This memo is to provide background and analysis for the Planning Commission to consider as a part of Application C/U 2593 Andrew Scrutchfield to be reviewed during the October 7, 2026, Planning Commission Meeting. This analysis should be included in the record of this Application and is subject to comments and information that may be presented during the Public Hearing.

Please note that the following Staff Analysis is for informational purposes only and does not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.

Tax Parcel ID: 334-5.00-195.00

Proposal: The request is for Conditional Use for Tax Parcel 334-5.00-195.00 to allow for indoor storage units. The property is lying on the east side of Stingey Lane (Not a State Maintained Road), approximately 194 feet north of Beaver Dam Road (Route 23). The Parcel consists of 0.22-acres +/-.

Zoning: The Parcel is zoned Agricultural Residential (AR-1) District. The adjacent Parcels to the north, south, west and east are also zoned Agricultural Residential (AR-1) District.

Future Land Use Map Designation w/in Comprehensive Plan: Coastal Area

Applicability to Comprehensive Plan: The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use Map (FLUM) in the Plan indicates that the subject property is designated has a Growth Area designation of "Coastal Area." The adjacent properties to the north, south, east and west of the subject property also have a Future Land Use Map designation of Coastal Area. Parcels on the opposite side of Lewes Georgetown Highway (Route 9) have a Future Land Use Map designation of Commercia Area.

As outlined in the 2018 Sussex County Comprehensive Plan, *"Coastal Areas" are areas where the County encourages only appropriate forms of concentrated new development – especially when environmental features are at play"* (2018 Sussex County Comprehensive Plan, 4-9).

Additionally, the Plans notes that, *"This region is among the most desirable location in Sussex County for new housing"* but also *"contains ecologically important and sensitive characteristics" (2018 Sussex County Comprehensive Plan,* 4-15).

The Plan further notes that, *"Medium and higher density (4-12 unit per acre" can be appropriate in areas*

- *here there is central water and sewer*
- *ear sufficient commercial uses and employment centers*
- *here it is in eeping with the character of the area*
- *here it is along a main road or at or near a ma or intersection*
- *Where there is adequate Level of Service"* (2018 Sussex County Comprehensive Plan, 4-16).

Further Site Considerations:

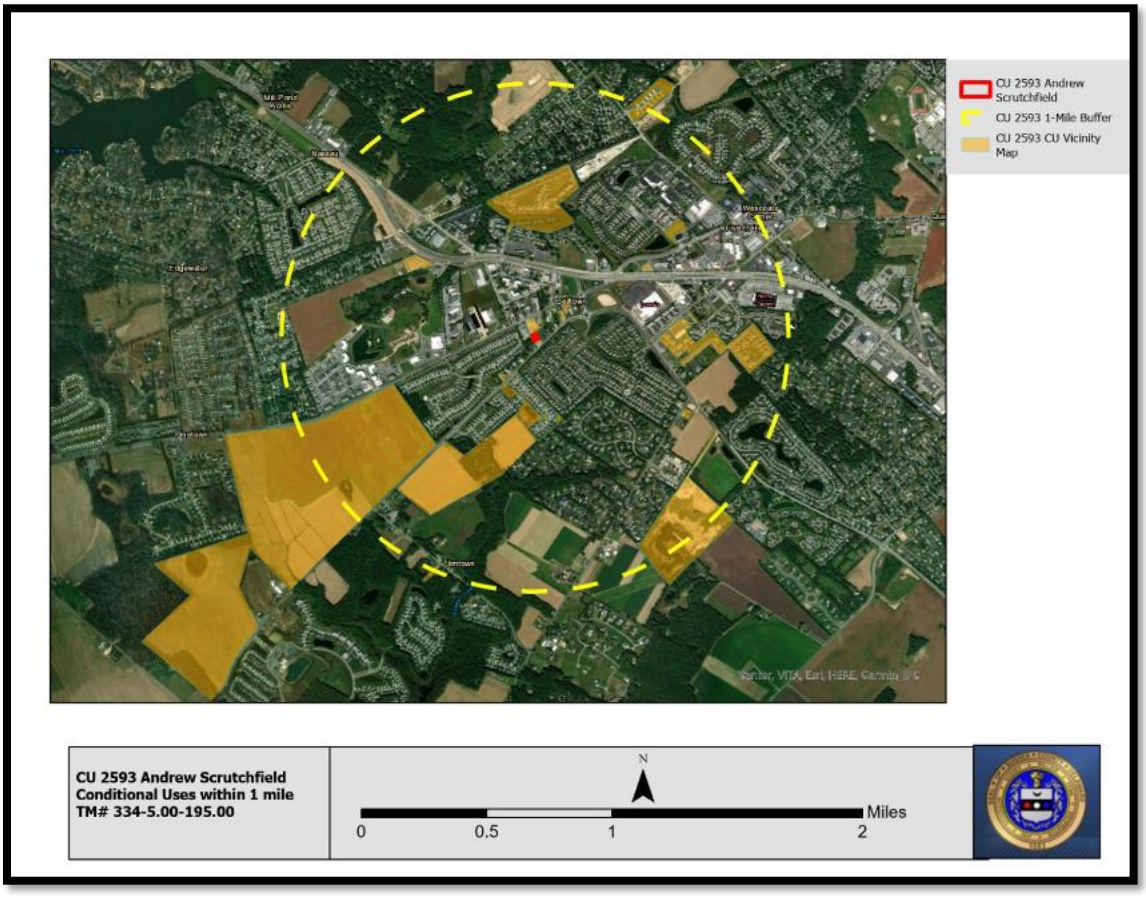
- **Density:** N/A
- **Open Space Provisions:** N/A
- **Agricultural Areas:** N/A
- **Interconnectivity:** N/A
- **Transportation Improvement District (TID):** The Parcel is located within an established Transportation Improvement District (TID).
- **Forested Areas:** N/A
- **Wetlands Buffers/Waterways:** N/A
- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):** The property is located within Flood Zone "X". The Parcel is not located within any Wellhead Protection Area. The subject property is located within an "Good" Groundwater Recharge Area.

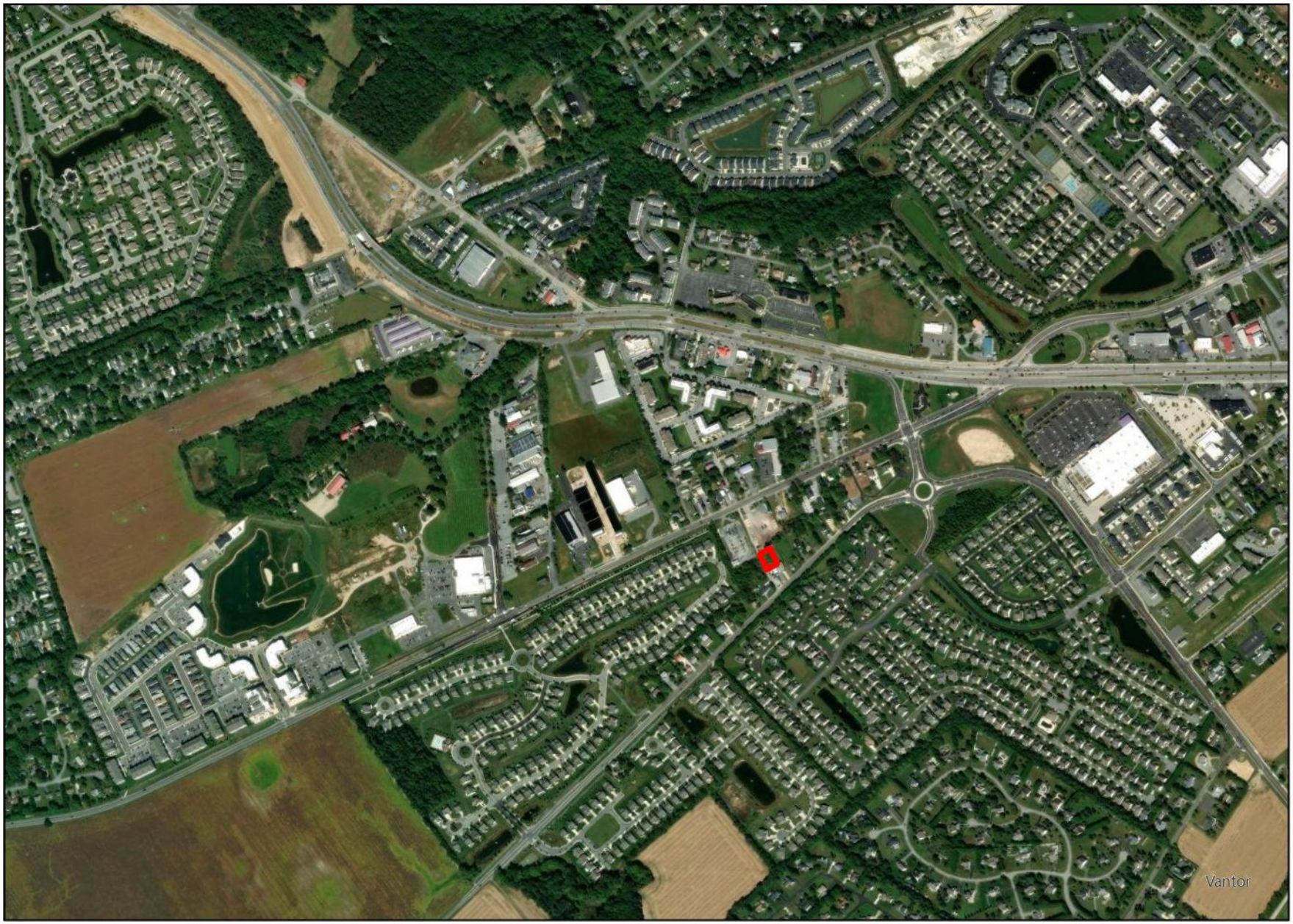
Based on the analysis of the land use, surrounding zoning and uses, a Conditional Use Application to allow for indoor storage units, subject to considerations of scale and impact, could be considered as being consistent with the land use, area zoning and surrounding uses.

Existing Conditional Uses within the Vicinity of the Subject Site: A Data Table and Supplemental Maps have been supplied which provide further background regarding the approval status of Applications in the area, including the location of all other Conditional Use Applications that are less than 1 mile distance from the subject site.

There have been 27 Conditional Use Applications within a 1-mile radius of the Application Site.

CU No.	APPLICANT	Tax Parcel #	Zoning	Proposed Use	CC Date	CC Decision
1068	Robert E. Mitchell	334-6.00-550.02	AR-1	Mechanics shop for auto & boat repair	3/15/1994	APPROVED
1736	Matthew & Karen Weidman	334-6.00-550.02	AR-1	Towing Services & Vehicle/Boat Storage	12/2/2008	APPROVED
1868	Old Towne Pointe, L.L.C.	335-12.00-1.10	AR-1	Pharmacy/community service	5/24/2011	Approved
1928	Devin Rice	334-5.00-180.00	AR-1	Storage of Equipment and a Home Office	5/15/2012	Approved
2002	Beach Bum Distilling	334-5.00-74.01	C-1	DISTILLERY WITH TOURS/TASTING/RETAIL	12/16/2014	Approved
2012	Ocean Atlantic Communities (Covered Bridge Trails)	335-11.00-59.00	MR	Multi-family - Townhouses and Condo Units	12/15/2015	Approved
2024	Stockley Materials, LLC	334-5.00-192.00	AR-1	Commerical landscaping materials, storage and sales	9/15/2015	Approved
2033	BDRP, LLC	334-5.00-222.01	MR	Multi-family Dwelling Structures (Duplexes)	2/12/2016	Withdrawn
2034	Beachfire Brewery Co., LLC	334-5.00-215.00	AR-1	Restaurant and Brewery	3/8/2016	Approved
2058	Old Orchard Ventures - Oyster Cove	335-8.00-25.00	MR	Multi-family (duplex) dwelling structures (24 units)	10/25/2016	Approved
2067	Stockley Materials, LLC	334-5.00-192.00	AR-1	Landscaping material sales and storage	4/11/2017	Approved
2106	MDI Investment Group, LLC (C/O Doug Compher)	334-6.00-511.00	MR	Multi-family (52 townhouses)	3/20/2018	Approved
2149	Covered Bridge Trails, LLC	335-11.00-59.00	MR	Amended Condition of Approval of CU 2012	7/24/2018	Approved
2184	Linda Ann Yupco-Connors	334-11.00-15.00	GR	Office with equipment storage	11/12/2019	Denied
2188	Donovan's Painting and Drywall, LLC	334-5.00-205.01	AR-1	Contractor's office with storage	10/29/2019	Approved
2190	Steven & Helene Falcone	334-5.00-212.00	AR-1	Office	1/7/2020	Approved
2261	What Is Your Voice, Inc.	334-6.00-515.00	AR-1	Use Existing Garage for Office uses and one-story pole bu	9/14/2021	Approved
2281	Susan Riter	334-12.00-7.00	AR-1	Borrow Pit	6/8/2021	Withdrawn
2316	Southern Delaware Medical Center	334-6.00-511.02	AR-1	Medical Office Building	9/27/2022	Approved
2321	Coastal Construction, LLC	334-5.00-196.00	AR-1	Kitch/Bathroom Showroom	1/3/2023	Denied
2327	Howard L. Ritter & Sons, Inc.	334-12.00-7.00	AR-1	Expansion of a non-conforming borrow pit	1/24/2023	Approved
2345	Janice CRP3, LLC	334-5.00-153.00	Ar-1/C-1	Multi-family		WITHDRAWN
2352	CB Lewes, LLC	334-6.00-504.02	MR	Multi-family (30 units)	6/14/2022	Approved
2409	Bryan Stewart	334-6.00-2.00	C-1	Crab Shack Vendor	2/27/2024	Approved
2487	Jose Sandoval	334-5.00-208.01	AR-1	LED Message Board Sign	2/25/2025	Approved
2499	Northstar Property, LLC	334-5.00-175.00	AR-1	Multi-family	5/20/2025	APPROVED
2593	Andrew Scrutchfield	334-5.00-195.00	AR-1	Indoor Storage (5 Units)		Pending
2620	Kevin & Nichole Wright	334-6.00-511.03	AR-1	Food Trucks		Pending

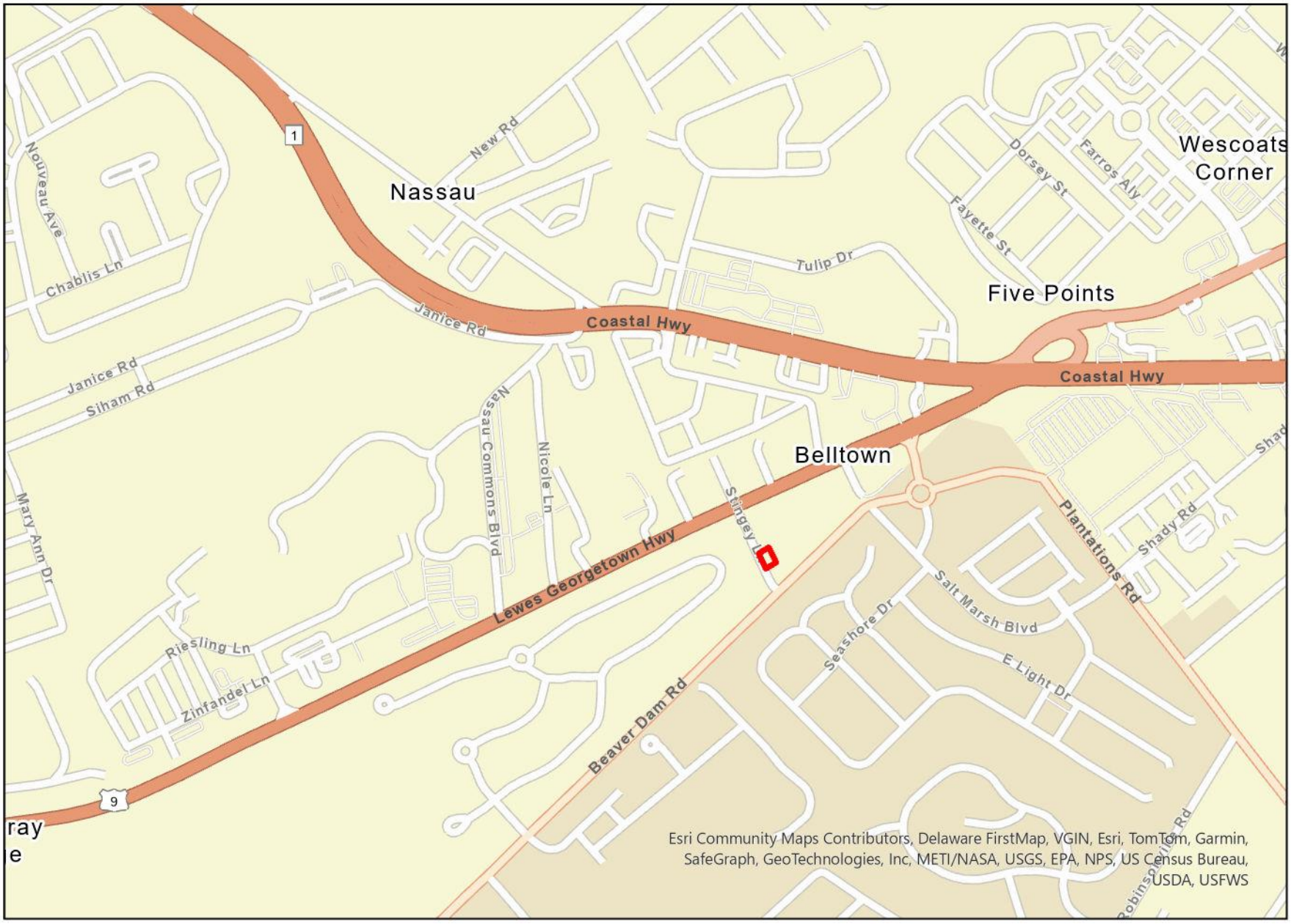




CU 2593 Andrew Scrutchfield
Aerial Map
Tax Map No. 334-5.00-195.00

N

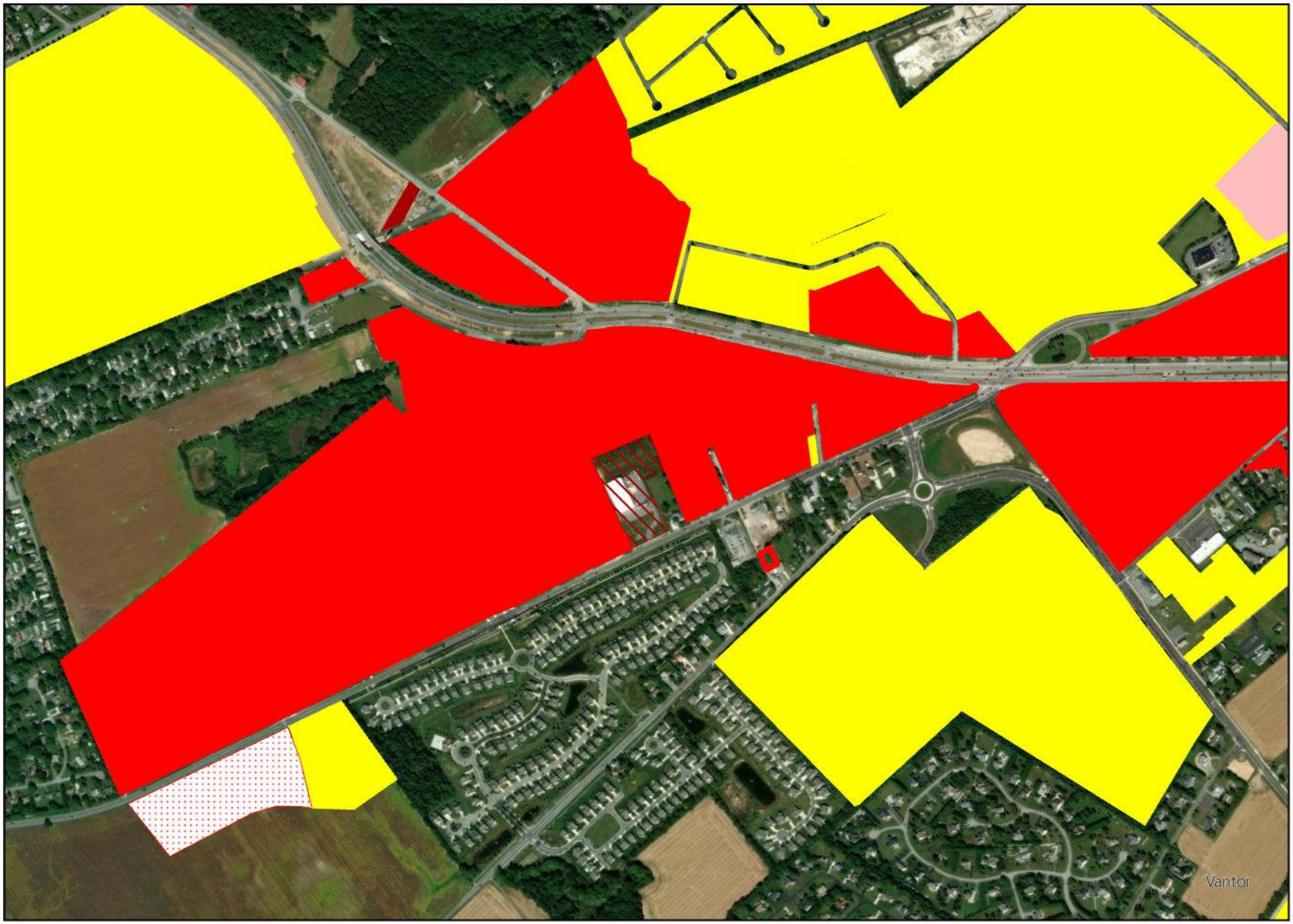
0 0.25 0.5 1 Miles



CU 2593 Andrew Scrutchfield
Street Map
Tax Map No. 334-5.00-195.00

N

0 0.25 0.5 1 Miles



CU 2593 Andrew Scrutchfield

Zoning

- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial -
- Light Industrial -
- Heavy Industrial -
- C1: General
- C2: Medium
- C3: Heavy
- C4: Planned
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business

CU 2593 Andrew Scrutchfield
Zoning Map
Tax Map No. 334-5.00-195.00

N

0 0.25 0.5 1 Miles

File #: _____

Planning & Zoning Commission 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)
Conditional Use ___
Zoning Map Amendment ___

Site Address of Conditional Use/Zoning Map Amendment

17659 Stingey Lane, Lewes, DE 19958

Type of Conditional Use Requested:

Requesting conditional use approval to build a Single family detached home with a 2,690 square foot self-storage business in extra garage space. Five garage bays are to be used as storage units.

Tax Map #: 334-5.00-195.00 **Size of Parcel(s)**: 9,552 Sq. Ft. (0.22 ac)

Current Zoning: AR-1 **Proposed Zoning:** AR-1 **Size of Building**: 88' x 31'

Land Use Classification: Single Family Dwellings

Water Provider: Tidewater **Sewer Provider:** Sussex County

Applicant Information

Applicant Name: Andrew Scrutchfield
Applicant Address: 49 Blackpool Road
City: Rehoboth Beach State: DE ZipCode: 19971
Phone #: (302) 258-5888 E-mail: ascrutch122@gmail.com

Owner Information

Owner Name: Andrew Scrutchfield
Owner Address: 49 Blackpool Road
City: Rehoboth Beach State: DE Zip Code: 19971
Phone #: (302) 258-5888 E-mail: ascrutch122@gmail.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: _____
Agent/Attorney/Engineer Address: _____
City: _____ State: _____ Zip Code: _____
Phone #: _____ E-mail: _____

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

___ **Completed Application**

___ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

___ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

___ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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

Digitally signed by Andrew Scrutchfield
Date: 2025.05.07 13:59:42 -04'00'

Date: 5/7/25

Signature of Owner

Andrew Scrutchfield Digitally signed by Andrew Scrutchfield
Date: 2025.05.07 13:57:16 -04'00'

Date: 5/7/25

or office use only

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

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

SHANTÉ A. HASTINGS
SECRETARY

April 4, 2025

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Andrew Scrutchfield (17659 Stingey Lane, Lewes, Delaware 19958)** proposed land use application, which we received on March 20, 2025. This application is for an approximate 0.22-acre parcel (Tax Parcel: 334-5.00-195.00). The parcel is located on the east side of Stingey Lane (Not a State Maintained Road) and approximately 195 feet north from the intersection of Beaver Dam Road (Delaware Route 23) and Stingey Lane. The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a conditional use approval to build a Single family detached home with a 2,690 square foot self-storage business in extra garage space.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Beaver Dam Road, where the subject land is located, which is from Dairy Farm Road (Sussex County Road 261) to Plantations Road (Sussex County Road 275), is 3,710 vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 151/GFA 2.69 and LUC 210/GFA 1), we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Tijah Jones, at tijah.jones@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Engineer
Development Coordination

SM:tjm
cc: Andrew Scrutchfield, Applicant
Amy Hollis, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, M&O
James Argo, South District Project Reviewer, M&O
Tara Summers-Strong, South District Public Works Admin. M&O
Todd Sammons, Assistant Director, Development Coordination
John Pietrobono, Acting Sussex Review Coordinator, Development Coordination
Kevin Hickman, Sussex Reviewer, Development Coordination
Derek Sapp, Sussex Review Engineer, Development Coordination
Thomas Gagnon, Sussex Review Engineer, Development Coordination
Jose Quixtan, Sussex Review Engineer, Development Coordination
Annamaria Furmato, TIS Review Engineer, Development Coordination
Ben Fisher, TIS Review Engineer, Development Coordination
Tijah Jones, TIS Review Engineer, Development Coordination

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

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **9/21/2026**

APPLICATION: **CU 2593 Andrew Scrutchfield**

APPLICANT: **Andrew Scrutchfield**

FILE NO: **OM-9.041**

TAX MAP & PARCEL(S): **334-5.00-195.00**

LOCATION: **Lying on the east side of Stingey Lane, approximately 195' north of Beaver Dam Road (Rt. 23). 17659 Stingey Lane, Lewes**

NO. OF UNITS: **Indoor Storage Units**

GROSS ACREAGE: **0.22**

SYSTEM DESIGN ASSUMPTION, MAXIMUM NO. OF UNITS/ACRE: **Choose an item.**

SEWER:

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

Yes ☒ No ☐

a. If yes, see question (2).
b. If no, see question (7).

(2). Which County Tier Area is project in? **Tier 1**

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

(4). Is a Construction Agreement required? **Yes** 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? Is it likely that additional SCCs will be required? **Yes**
If yes, the current System Connection Charge Rate is **Unified $10,700.00** per EDU. Please contact **Christine Fletcher** 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? **N/A**

(8). Comments:

(9). Is a Sewer System Concept Evaluation required? **Yes, Contact Utility Planning at 302-855-7370 to apply**

(10). Is a Use of Existing Infrastructure Agreement Required? **Yes**

(11). **All residential roads must meet or exceed Sussex County minimum design standards.**

UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
Choose an item.

From: John J. Ashman
Sent: Tue, 4 Aug 2026 18:25:46 +0000
To: Susan Isaacs
Subject: RE: CU#2593 Andrew Scrutchfield - 17659 Stingey Lane

Susan,

Should not have a negative impact on our system as long as nobody lives in the garages.

John J. Ashman
Director of Utility Planning & Design Review
Sussex County Engineering Department
302-855-7370

From: Susan Isaacs <sisaacs@sussexcountyde.gov>
Sent: Tuesday, August 4, 2026 12:52 PM
To: John J. Ashman <jashman@sussexcountyde.gov>
Subject: CU#2593 Andrew Scrutchfield - 17659 Stingey Lane

Hi John,

The Planning and Zoning Department has received a Conditional Use application from Andrew Scrutchfield, 334-5.00-195.00 located at 17659 Stingey Lane to build a single-family residence with a 2,690 square foot self-storage business in extra garage space. Five garage bays are to be used as storage units.

Does the Engineering Department have any objections?

Thanks,

Susan Isaacs
Planner I

Department of Planning & Zoning
#2 The Circle
P.O. Box 417
Georgetown, DE 19947
(302) 855-7878

PLEASE NOTE: Effective April 8th, 2026, the Department of Planning and Zoning now requires the completion and submittal of the "Minor Subdivision & Survey Plan Review Checklist" with all Minor Subdivision and Survey Plats submitted to the Department. The submitting Engineer or Surveyor shall be responsible for confirming the accuracy and completeness of all information provided to the Department at the time of submission.

****FRAUD ALERT**: The Office of Planning and Zoning is aware of third-party attempts to defraud Applicants by using publicly accessible information to demand payments by means of wire transfer.**

The Planning & Zoning Department DOES NOT email invoices containing requests with wire transfer instructions. All official email communication from the Planning & Zoning Department will have an email address ending in "sussexcountyde.gov."

If at any point during your Application or Public Hearing process you receive a suspicious payment inquiry, please feel free to contact our office at the phone number, email address, or physical address in this email signature to verify the validity of such request.

PLEASE NOTE: As of July 1st, 2026, the Department of Planning and Zoning has updated its list of Service Fees. Please find the Department's current Listing of Service Fees here: https://sussexcountyde.gov/sites/default/files/PDFs/Planning_and_Zoning_Fees.pdf

For information on pending Land Use Applications in the County, please visit the Application Docket: Sussex - Land Use Application Docket

For more information on the County's latest Comprehensive Plan, please visit the following location: 2018 Sussex County Comprehensive Plan

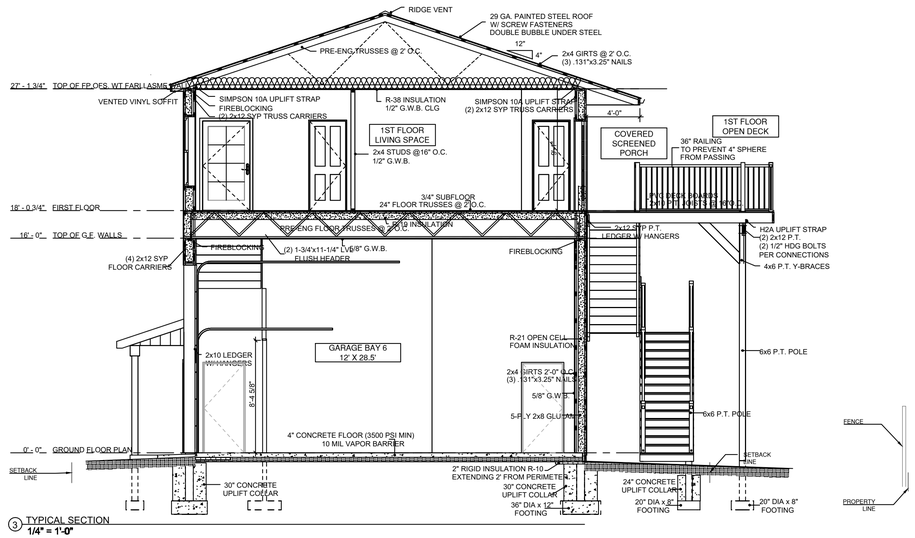
Site and Project Data

Property Tax No.: 334-5.00-195.00
Address: 17659 Stingey Lane
Lewes, DE, 19958

Zoning: AR-1
Use: Single Family Dwelling
Other Accessory Uses: Home Occupation
Self-Storage
Lot Size: 119' x 82'
9,552 SQ FT +/-

Setbacks:
Front: 30 FT FROM CL OF R.O.W.
Sides: 5 FT
Rear: 15 FT
Per Ordinance No. 2557 - Small Lots
Height: 42 FT

ESC And Stormwater Data
Disturbed Area: 9552 SQ FT
Proposed Impervious: 4969 SQ FT
Hydrologic Soil Group: HSG B
Existing Curve No.: 81.1
Proposed Curve No.: 80.2



3 TYPICAL SECTION
1/4" = 1'-0"

RIGHT SECTION

$\frac{3}{16}$" = 1'-0"

FRONT ELEVATION

$\frac{3}{16}$" = 1'-0"

REV	REVISION	DATE

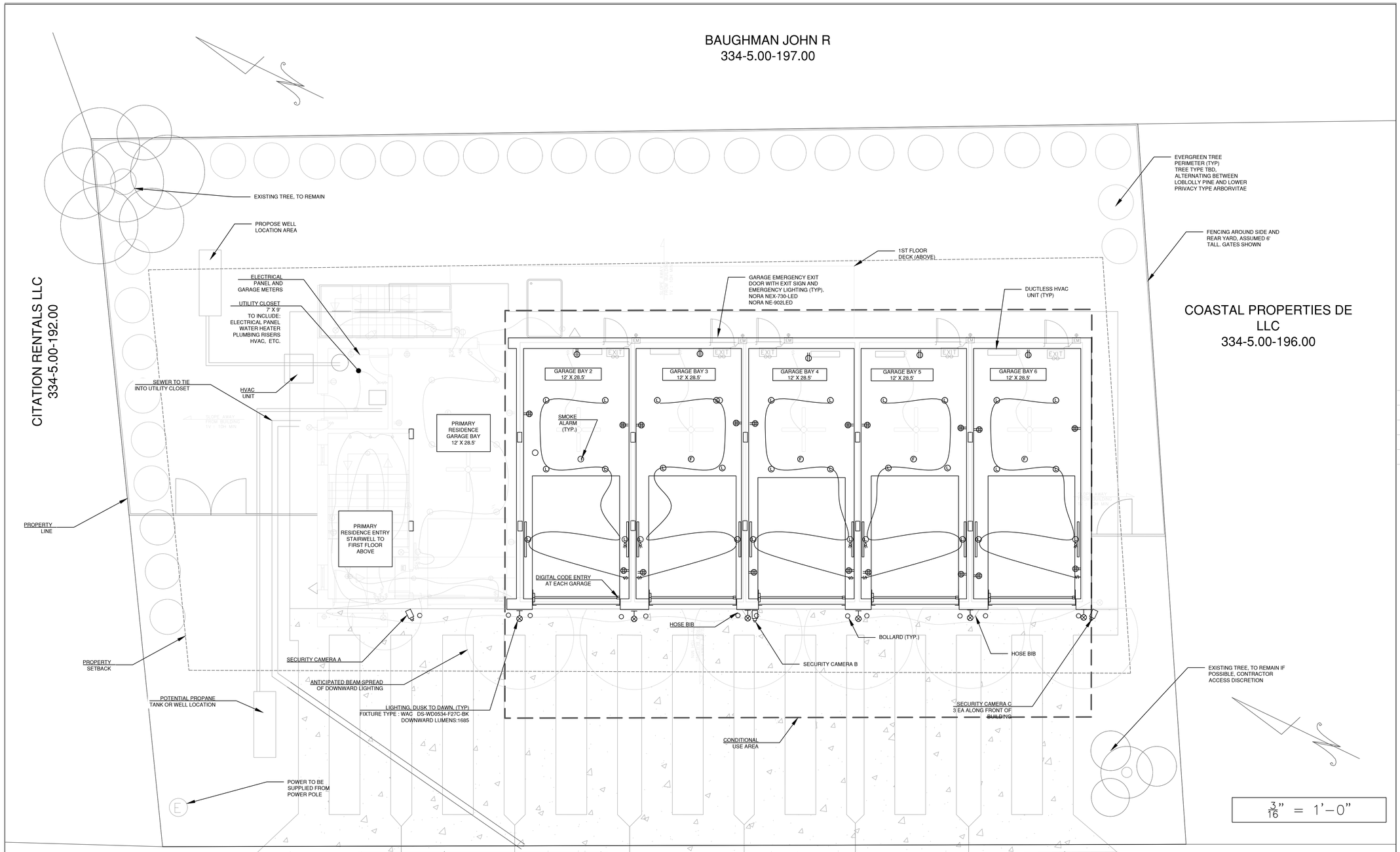
revisions

project
SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
RENDERINGS AND SITE DATA

drawn by; AJS
checked by; AJS
date; 2/3/25
drawing no.
G-01



NOTES
SITE ACCESS & CIRCULATION

- Primary access is provided via **Stingey Lane**, a **20-ft-wide access aisle** suitable for emergency vehicles and tenant circulation.
- Stingey Lane connects to **Beaver Dam Road** and **Route 9**, providing dual-direction ingress and egress.
- The nearest fire hydrant is located approximately **300 linear feet** from the site on Beaver Dam Road.
- Turning radii at the entrance to Stingey Lane range from **25 ft to 51 ft**, accommodating emergency apparatus and delivery vehicles.
- All access drives and maneuvering areas will remain unobstructed and maintained for emergency response.

USE & OPERATIONS

- Ground-floor units are intended for **personal storage, small-scale workshop use, and non-hazardous materials only**.
- No automotive repair, spray finishing, welding, or hazardous material storage is permitted unless approved by the Fire Marshal.
- Tenants receive a **Fire Escape & Safety Plan** at lease signing, and a copy is posted inside each unit near the emergency exit door.
- Marked floor areas inside each unit indicate the required **clear zone** for emergency exit access.
- **No outdoor storage** of any kind is permitted on the property.

NOTES
SITE SECURITY & ACCESS CONTROL

- The site is monitored by **three security cameras** mounted along the front of the structure, providing continuous coverage of the access aisle and unit entrances.
- Garage and unit access is controlled by a **digital key system** that records all entry and exit times for security and operational oversight.
- Standard tenant access hours are **7:00 AM to 8:00 PM**.
- Any access outside these hours requires **24-hour advance notification** to the property owner and approval prior to entry.
- Security lighting is provided along the front façade to ensure safe nighttime visibility.

PARKING & TRIP GENERATION

- Each storage/workshop unit is assigned **one dedicated parking space** for loading and unloading.
- Trip generation is minimal and consistent with low-impact storage uses; typical activity consists of **1–2 short visits per unit per week**, primarily for loading, unloading, or brief workspace use.
- No commercial truck traffic or high-volume vehicle activity is anticipated.
- Parking areas and access aisles will remain free of obstructions at all times.

NOTES
EGRESS & LIFE SAFETY

- Each storage unit includes a **rear emergency man door** with illuminated exit signage and **90-minute battery-backup emergency lighting** inside and outside the door.
- Fire extinguishers are mounted on the exterior of the building such that all units are within **75 ft travel distance**, in accordance with IFC 906 and NFPA 10.
- The R-3 residence includes smoke and CO detection per residential code requirements, with alarms located in bedrooms, hallways, living areas, and at the top of the interior stair.
- The residence provides two means of egress:
- Primary egress through the main entry door
- Secondary egress via the **rear deck stair** discharging directly to grade

FIRE PROTECTION SUMMARY

- The building is not required to be sprinklered; the S-1 fire area is **2,640 sq ft**, below the **12,000 sq ft** threshold.
- Required fire-resistance separations between S-1 and R-3 occupancies are provided per IBC.
- All penetrations through rated assemblies are protected with **listed firestop systems**.
- Exterior walls exceed **5 ft** from the property line and therefore do not require a fire-resistance rating.

REV	REVISION	DATE

revisions

project
SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
CONSTRUCTION PLANS
CONDITIONAL USE PLAN

drawn by; AJS
checked by; AJS
date; 2/2/2025
drawing no.

CU-01

N/F
JOHN & JOY BAUGHMAN

S 27°16' 16" E

119.00'

CONCRETE PA

80.80'

82.00'

ALS, LLC

COASTAL P

FLOW FLOW FLOW FLOW FLOW

DIRT STOCKPILE

19 EA. LOADS OF DUMPED SOIL. APPROXIMATELY 4 FEET TALL EACH

S 59°35' 49" W

N 57°42' 51" E

EXISTING CONCRETE PAD

CONCRETE P

3.7'

EXISTING SEWER LOCATED

N 26°35' 19" W

116.43'

STINGEY LANE

+/-

SCALE
$\frac{3}{16}$"=1'–0"

REV	REVISION	DATE

revisions

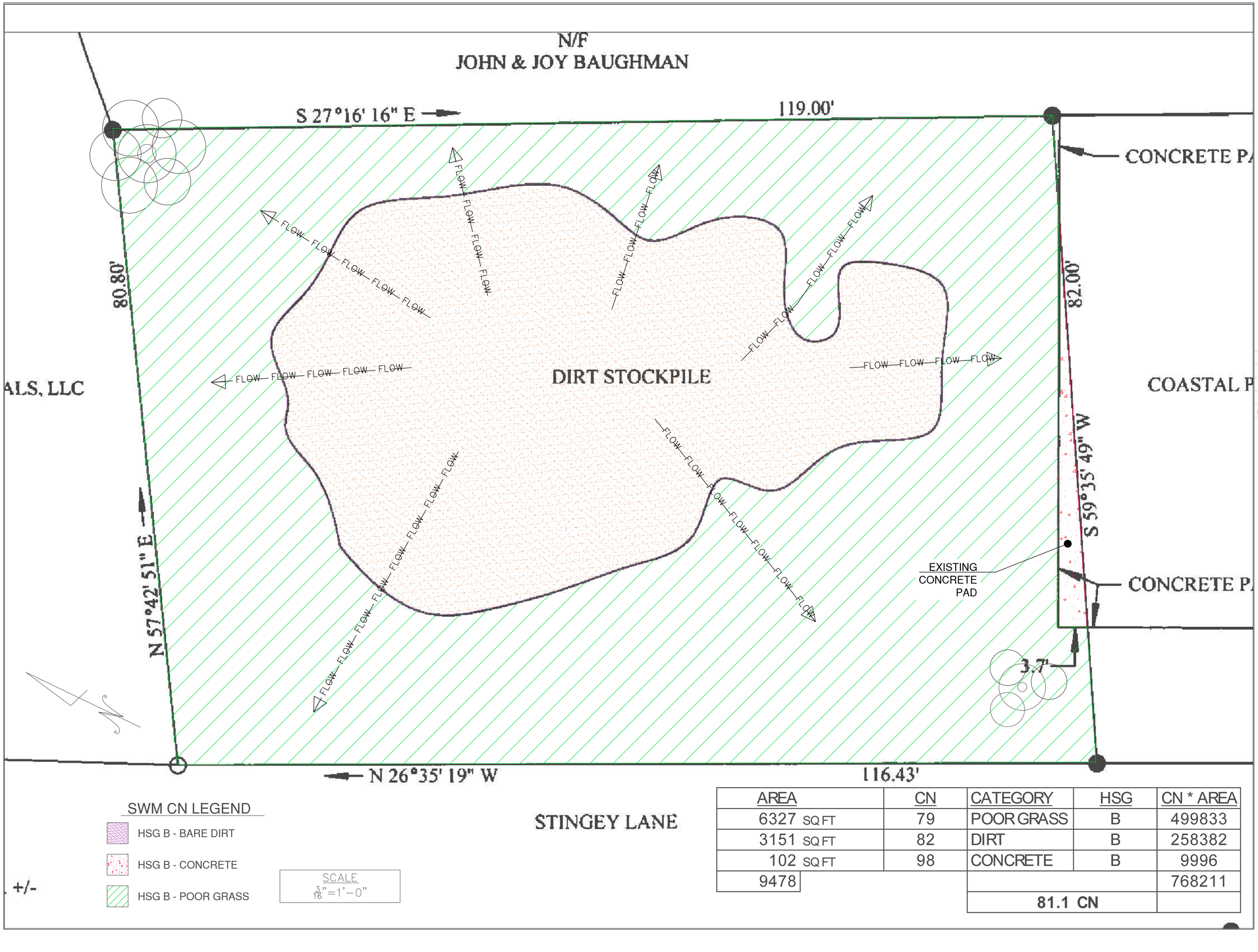
project
SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
EXISTING SITE PLANS

drawn by; AJS
checked by; AJS
date; 2/2/2025
drawing no.

EX-01



SWM CN LEGEND

- HSG B - BARE DIRT
- HSG B - CONCRETE
- HSG B - POOR GRASS

+/-

SCALE
$\frac{3}{16}$"=1'-0"

AREA	CN	CATEGORY	HSG	CN * AREA
6327 SQ FT	79	POOR GRASS	B	499833
3151 SQ FT	82	DIRT	B	258382
102 SQ FT	98	CONCRETE	B	9996
9478				768211
			81.1 CN	

REV	REVISION	DATE

revisions

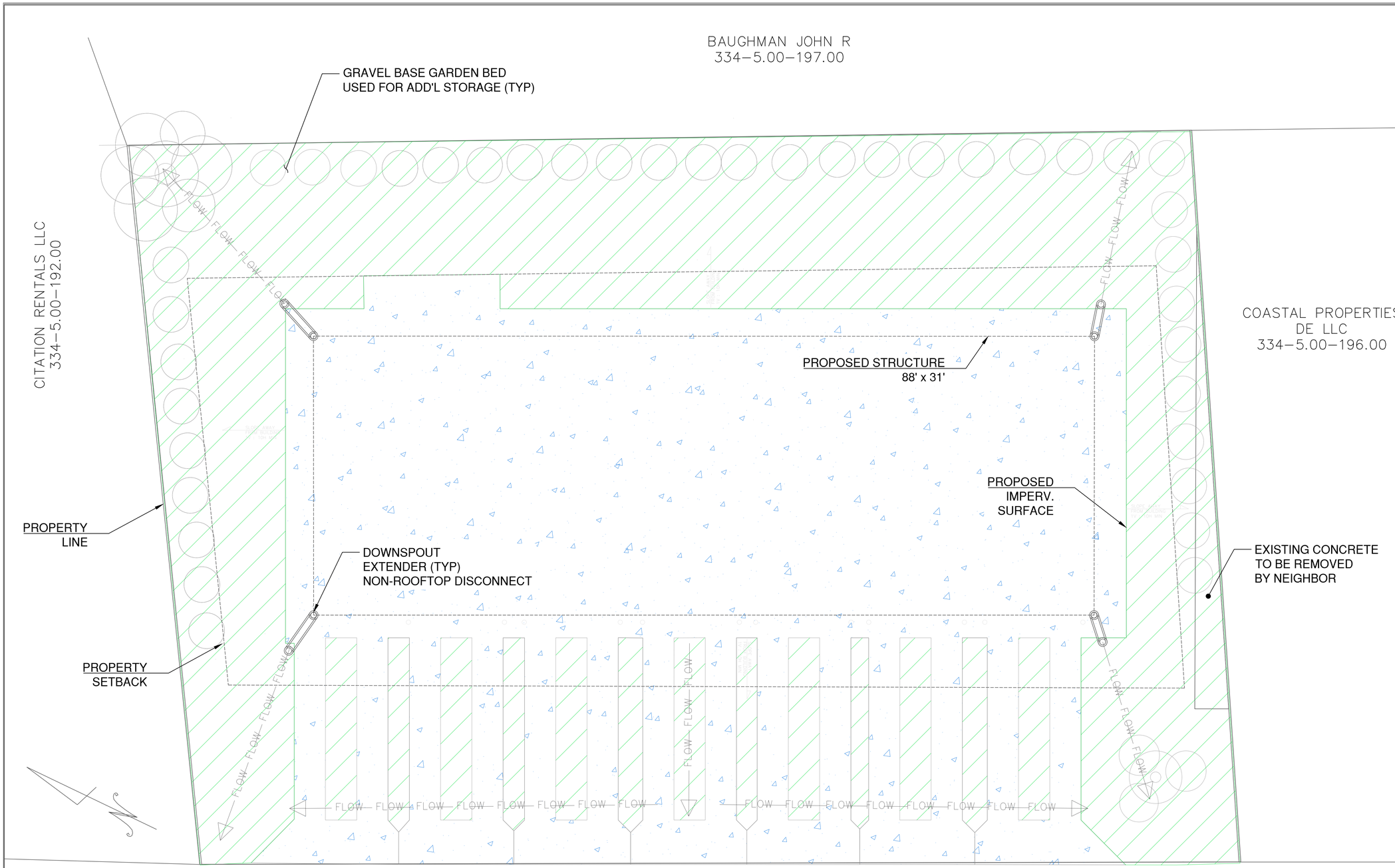
project
SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
EXISTING SITE PLANS
PRE-SWM PLAN

drawn by; AJS
checked by; AJS
date; 2/2/2025
drawing no.

SWM-1



SWM CN LEGEND

HSG B – GRASS, GOOD

HSG B – CONCRETE AND IMPERV.

AREA	CN	CATEGORY	HSG	CN* AREA
4969 SQ FT	98	IMPERVIOUS	B	486962
4617 SQ FT	61	GRASS - GOOD	B	281637
9586				768599
		80.2 CN		

REV	REVISION	DATE

revisions

project
SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
POST-SWM PLAN

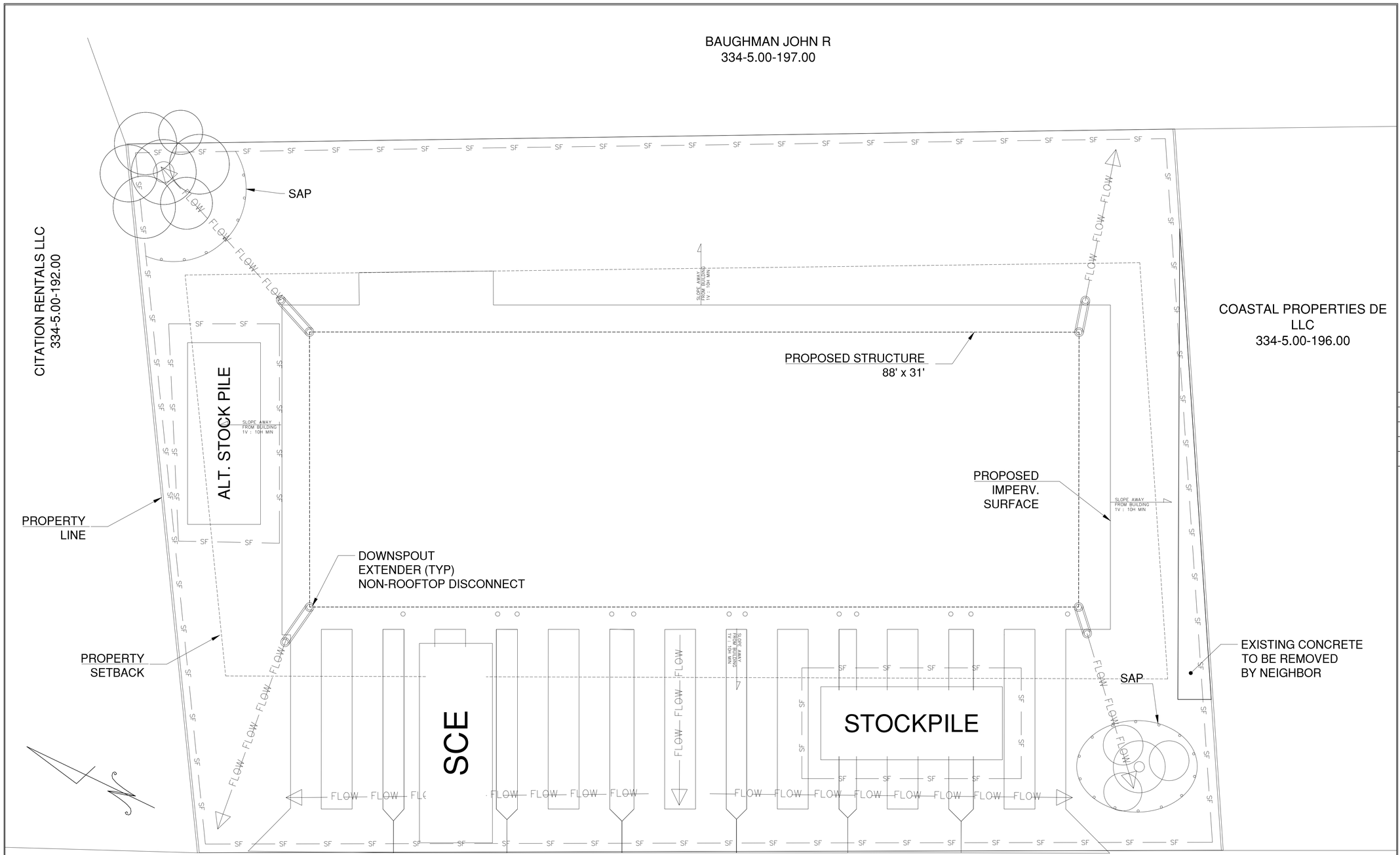
drawn by; AJS

checked by; AJS

date; 2/2/2025

drawing no.

SWM-2



ESC LEGEND

- SF — SILT FENCE
- SENSITIVE AREA PROTECTION (SAP)
- SCE — STABLILIZED CONST. ENTRANCE
- FLOW — RUNOFF FLOW
- STOCKPILE — STOCKPILE AREA

REV	REVISION	DATE

revisions

project
SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
EROSION AND SEDIMENT CONTROL PLANS

drawn by; AJS
checked by; AJS
date; 2/2/2025
drawing no.

ESC-1

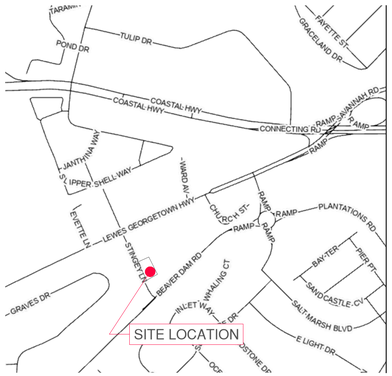
Site and Project Data

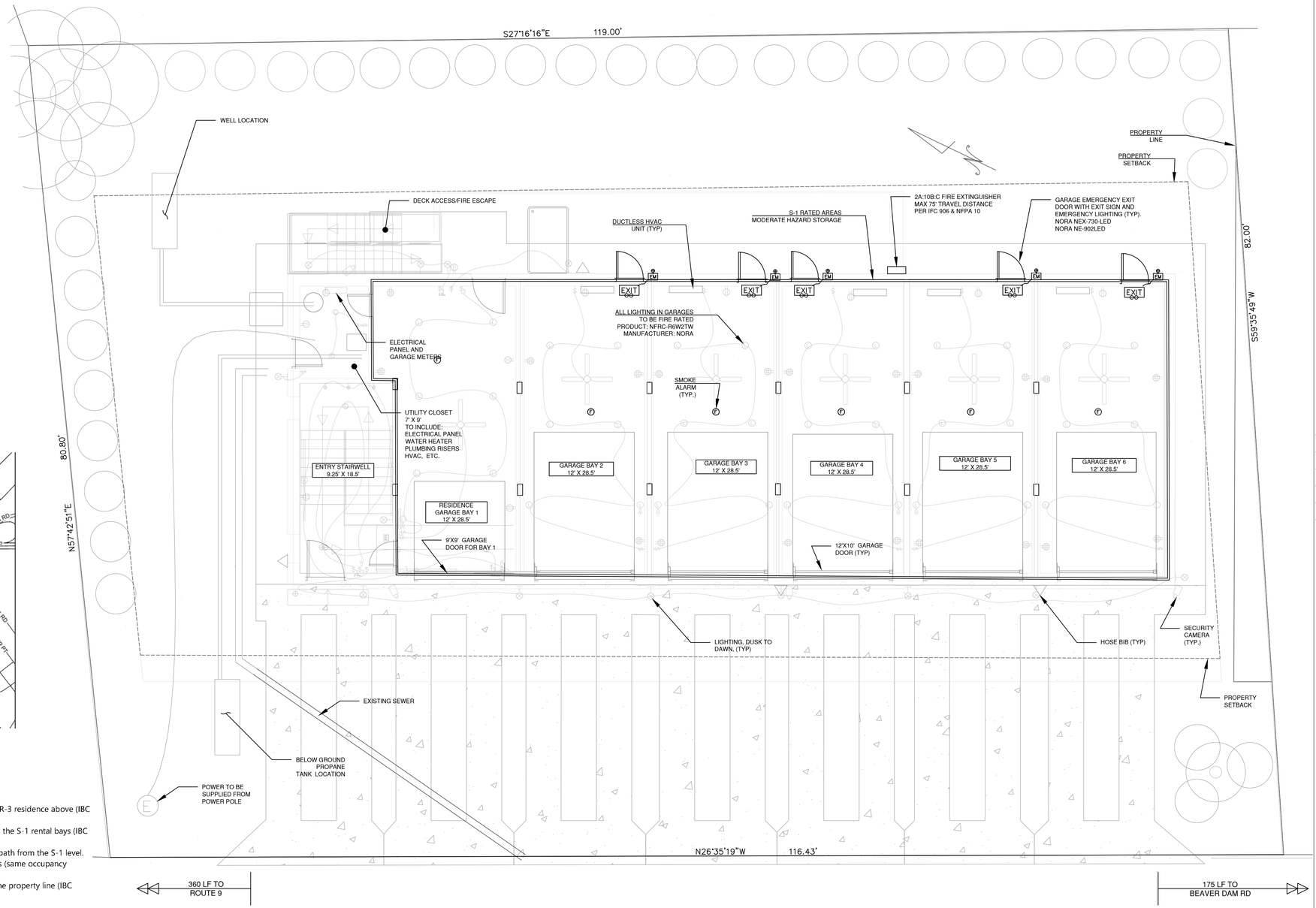
Property Tax No.: 334-5.00-195.00
Address: 17659 Stingey Lane
Lewes, DE, 19958

Zoning: AR-1
Use: Single Family Dwelling
Other Accessory Uses: Home Occupation
Self-Storage
Lot Size: 119' x 82'
9,552 SQ FT +/-

Setbacks:
Front: 30 FT FROM CL OF R.O.W.
Sides: 5 FT
Rear: 15 FT
Per Ordinance No. 2557 - Small Lots
Height: 42 FT

ESC And Stormwater Data
Disturbed Area: 9552 SQ FT
Proposed Impervious: 4969 SQ FT
Hydrologic Soil Group: HSG B
Existing Curve No.: 81.1
Proposed Curve No.: 80.2





GROUND FLOOR SITE FIRE PROTECTION PLAN
3/16" = 1'-0"

FIRE PROTECTION & LIFE SAFETY NOTES
OCCUPANCY CLASSIFICATION
- **Ground Floor:** S-1 Moderate-Hazard Storage (IBC 311.2)
- **Upper Floor:** R-3 Residential (IBC 310.5)

FIRE-RESISTANCE REQUIREMENTS
- **1-hour horizontal assembly** separating S-1 garage/storage level from R-3 residence above (IBC Table 508.4).
- **1-hour vertical fire barrier** between the R-3 residential garage bay and the S-1 rental bays (IBC 508.4; IBC 406.3.4).
- **1-hour fire-resistance-rated stair enclosure** protecting the R-3 egress path from the S-1 level.
- **No fire-resistance rating required** between individual S-1 storage units (same occupancy classification).
- **Exterior walls:** No rating required; all walls are **greater than 5 ft** from the property line (IBC Table 602).

SPRINKLER REQUIREMENTS
- **Automatic sprinklers are NOT required.**
  S-1 fire area = **2,640 sq ft**, below the **12,000 sq ft** threshold for Group S-1 (IBC 903.2.9).
- Building is **two stories**, but the S-1 occupancy is on the **ground floor**, so no additional sprinkler triggers apply.

SITE ACCESS & FIRE DEPARTMENT ACCESS
- **Nearest fire hydrant:** Approximately **300 linear feet** from the site on Beaver Dam Road.
- **Access aisle: 20+ ft wide** along Stingey Lane, compliant with fire apparatus access width requirements.
- **Ingress/Egress:** Stingey Lane provides access to both **Beaver Dam Road** and **Route 9**, ensuring dual-direction emergency access.
- **Turning radii:** Minimum **25 ft** and maximum **51 ft** turning radius at the Stingey Lane entrance, suitable for fire apparatus maneuvering.
- **Fire lanes:** As required, shall remain unobstructed at all times. No exterior storage allowed onsite.

EGRESS & EMERGENCY FEATURES
- **Emergency man doors** provided at the rear of each storage unit.
- Each emergency door equipped with:
  - **Internally illuminated exit sign**
  - **Battery backup emergency lighting** providing **90 minutes (1.5 hours)** of illumination
  - **Exterior emergency light** above the man door for nighttime egress
- **Egress paths** from each unit are clearly defined and unobstructed.
- **Floor markings** inside each unit identify the required **clear zone** leading to the emergency exit door.

FIRE PROTECTION & LIFE SAFETY NOTES CONT'D
PORTABLE FIRE EXTINGUISHERS
- Fire extinguishers are **mounted on the exterior**, located such that **all units are within 75 ft travel distance**, per IFC 906 and NFPA 10.
- Extinguishers are **not placed inside individual units** to maintain accessibility and inspection compliance.

TENANT SAFETY INFORMATION
- Each tenant will receive a **Fire Escape & Safety Plan** at the time of lease signing.
- A copy of the Fire Escape & Safety Plan will be **posted inside each unit** near the emergency exit door.
- Tenants are required to maintain the **marked floor area** leading to the emergency exit door free of storage or obstruction.

ADDITIONAL NOTES
- All penetrations through rated assemblies shall be protected with **listed firestop systems.**
- All emergency lighting, exit signage, and life-safety systems shall be installed per **IFC**, **IBC**, and **NFPA** standards.

SHEET LIST

EX-01	EXISTING SITE PLAN	EXISTING SITE PLAN
SWM-1	EXISTING SITE PLAN	PRE-SWM PLAN
SWM-2	SITE PLAN	POST-SWM PLAN
ESC-11	SITE PLANS	EROSION AND SEDIMENT CONTROL PLANS
F-01	FIRE & SITE PLANS	GARAGE AND SITE
F-02	FIRE & SITE PLANS	RESIDENTIAL FLOOR
C-01	CONSTRUCITON PLANS	FOUNDATION PLANS
C-02	CONSTRUCITON PLANS	GARAGE LEVEL
C-03	CONSTRUCITON PLANS	1ST FLOOR RESIDENCE
C-04	CONSTRUCITON PLANS	1ST FLOOR ELECTRICAL
C-05	CONSTRUCITON PLANS	KITCHEN DETAILS
C-06	CONSTRUCITON PLANS	PROJECT DETAILS
A101	ARCHITECTURAL PLANS	GROUND FLOOR
A102	ARCHITECTURAL PLANS	1ST FLOOR
A103	ARCHITECTURAL PLANS	ELECTIONS

REV	REVISION	DATE

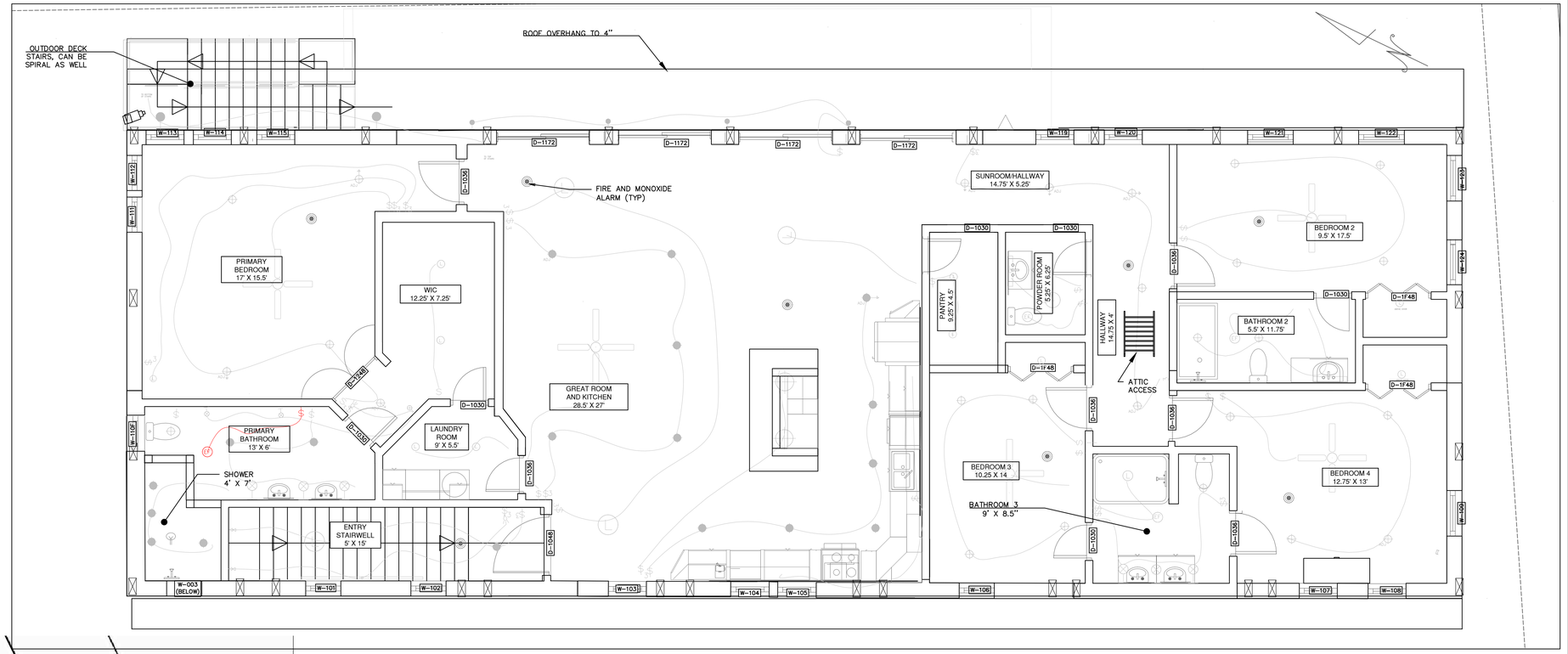
revisions

project
SCRUTCHFIELD RESIDENCE
FOR PERMIT APPROVAL
17659 STINGEY LANE
LEWES, DE, 19958

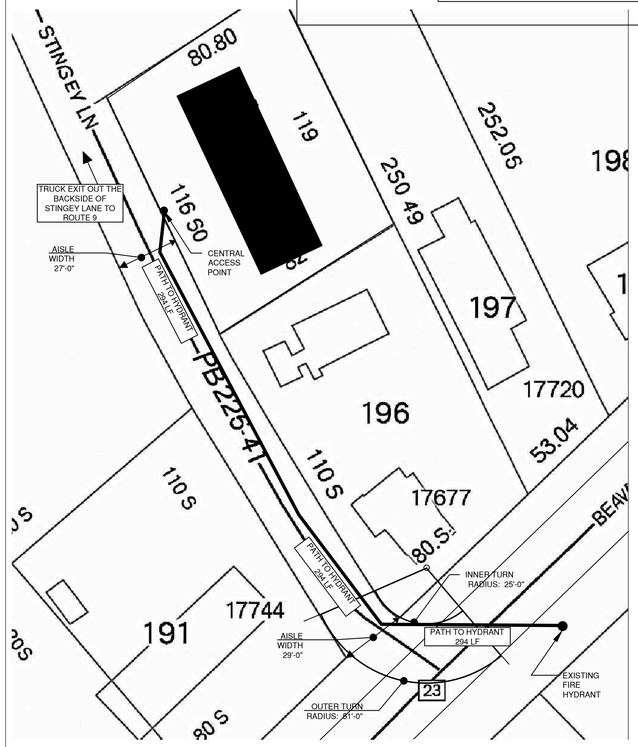
client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
FIRE & SITE PLANS
GARAGE AND SITE PLANS

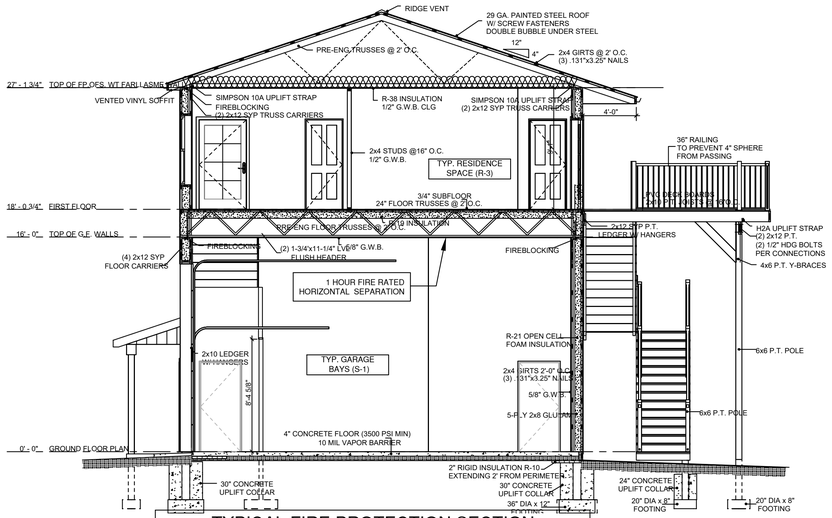
drawn by; AJS
checked by; AJS
date; 01/25/2026
drawing no.
F-01



R-3 RESIDENCE FLOOR
$\frac{1}{4}$" = 1'-0"



SITE MAP FIRE PROTECTION PLAN
$\frac{1}{32}$ " = 1'-0"



TYPICAL FIRE PROTECTION SECTION
$\frac{3}{16}$ " = 1'-0"

R-3 RESIDENCE — FIRE & LIFE SAFETY NOTES

SMOKE & CO DETECTION

- Smoke alarms provided in each bedroom, in the hallway outside bedrooms, in the main living area, and at the top of the interior stair.
- Carbon monoxide alarm provided outside sleeping areas.
- All alarms are hardwired, interconnected, and equipped with battery backup.
- Install per manufacturer instructions:
  - Ceiling-mounted or high-wall mounted
  - Minimum 4 in. from wall/ceiling intersections
  - Minimum 3 ft from bathroom doors, HVAC vents, and ceiling fans
  - Minimum 10 ft from cooking appliances
- Combination smoke/CO alarms permitted.

EGRESS REQUIREMENTS

- Primary egress provided through the main entry door.
- Secondary egress provided via the rear deck stair discharging directly to grade.
- Emergency lighting with 90-minute battery backup provided at the top of the interior stair and at the exterior landing of the rear deck exit.
- Bedroom egress windows provided per code (minimum clear opening, sill height, and dimensions per residential egress requirements).
- Maintain a clear, unobstructed path to all exits.

SHEET LIST

EX-01	EXISTING SITE PLAN	EXISTING SITE PLAN
SWM-1	EXISITNG SITE PLAN	PRE-SWM PLAN
SWM-2	SITE PLAN	POST-SWM PLAN
ESC-11	SITE PLANS	EROSION AND SEDIMENT CONTROL PLANS
F-01	FIRE & SITE PLANS	GARAGE AND SITE
F-02	FIRE & SITE PLANS	RESIDENTIAL FLOOR
C-01	CONSTRUCTION PLANS	FOUNDATION PLANS
C-02	CONSTRUCTION PLANS	GARAGE LEVEL
C-03	CONSTRUCTION PLANS	1ST FLOOR RESIDENCE
C-04	CONSTRUCTION PLANS	1ST FLOOR ELECTRICAL
C-05	CONSTRUCTION PLANS	KITCHEN DETAILS
C-06	CONSTRUCTION PLANS	PROJECT DETAILS
A101	ARCHITECTURAL PLANS	GROUND FLOOR
A102	ARCHITECTURAL PLANS	1ST FLOOR
A103	ARCHITECTURAL PLANS	ELECTIONS

REV	REVISION	DATE

revisions

project
SCRUTCHFIELD RESIDENCE
FOR PERMIT APPROVAL
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
FIRE & SITE PLANS
RESIDENTIAL FLOOR

drawn by; AJS
checked by; AJS
date; 01/25/2026
drawing no.
F-02

ANDREW SCRUTCHFIELD - POLE BUILDING

DRAWING LIST:

C1 COVER PAGE
A1 GROUND LEVEL FLOOR PLAN
A2 UPPER LEVEL FLOOR PLAN
A3 FRONT AND REAR ELEVATION
A4 RIGHT AND LEFT ELEVATION
S1 WALL SECTIONS
S2 CONNECTION DETAILS
LEAN-TO SECTION
CONCRETE DETAIL

CODE ANALYSIS

TOTAL BUILDING AREA -5,280 SQUARE FEET

MAIN LEVEL - 2,640 SQUARE FEET
UPPER LEVEL - 2,640 SQUARE FEET

INTERNATIONAL RESIDENTIAL CODE - 2021
INTERNATIONAL ENERGY CONSERVATION CODE - 2018
NATIONAL FIRE PREVENTION CODE 101 & 221 - 2021
DELAWARE STATE FIRE PREVENTION REGULATIONS - 2021

CLASSIFICATION -
BUILDING TYPE - DETACHED 2 FAMILY DWELLING
BUILDING HEIGHT - 2 STORY, 30'-8"

FIRE PROTECTION -
AUTOMATIC SPRINKLER SYSTEM - NOT REQUIRED
PORTABLE FIRE EXTINGUISHER - PROVIDED

WOODROCK ENGINEERING
101 CASSIDY DRIVE SUITE C
DOVER, DE 19901

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DESIGN DATA:

RISK CATEGORY: II
GROUND SNOW LOAD: 25 PSF
DEAD LOAD: 10 PSF
ROOF LIVE LOAD: 20 PSF
ULTIMATE WIND SPEED: 115 MPH
WIND EXPOSURE: C
PRESUMED SOIL BEARING: 1,500 PSF

CODE:
IBC 2021 (AMENDED)

DELMARVA BUILDINGS

CLIENT NAME:
ANDREW SCRUTCHFIELD

PROJECT ADDRESS:
17659 STINGREY LANE,
LEWES, DE 19958

DRAWING TITLE:
COVER PAGE

DATE:
FEB 10, 2026

DRAWN BY:
M.SNIDER

APPROVED BY:
J. KENNEDY

REV NO:	DESCRIPTION:	DATE:

DWG NO.:
1 OF 7

SCALE:

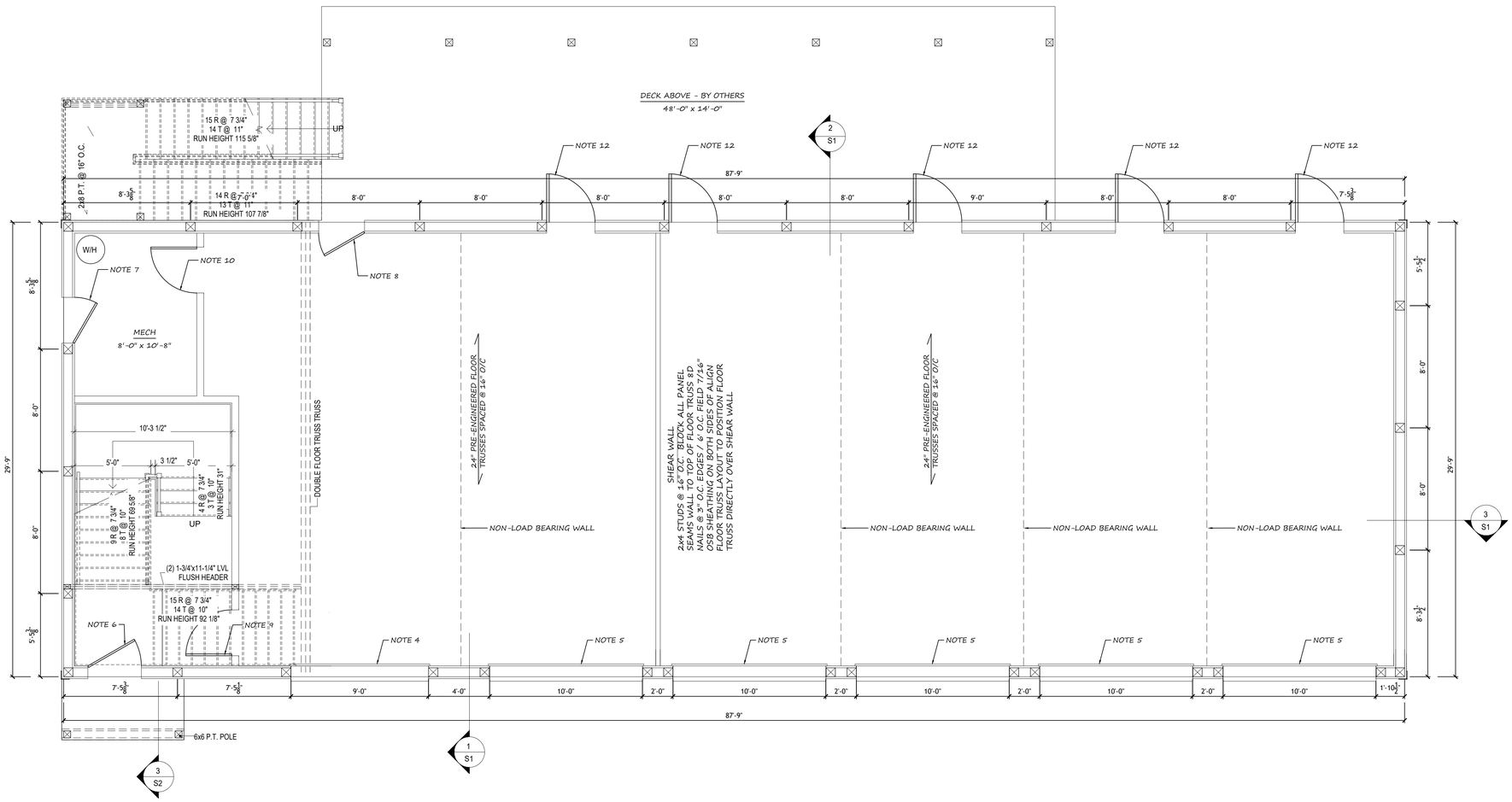
SHEET NO.:
C1

GENERAL NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION OF ALL UTILITY SERVICES AND SLOPE PRIOR TO BID/INSTALLATION.
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING WORK AND REPORT ANY AND ALL DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THESE PLANS TO THE ENGINEER/ARCHITECT IMMEDIATELY.
3. CONTRACTOR SHALL MAKE ALL NECESSARY MODIFICATIONS DURING THE CONSTRUCTION PROCESS TO COMPLY WITH I.B.C. (INTERNATIONAL BUILDING CODE), LATEST EDITION, OR APPLICABLE CODES AT SITE.
4. CONTRACTOR SHALL VERIFY ALL INTERIOR FINISHES, FLOOR COVERINGS, AND TRIM SIZES & CONFIGURATIONS WITH OWNER PRIOR TO CONSTRUCTION.
5. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY CLEARANCES OF THE ITEMS MENTIONED IN THE DRAWINGS PRIOR TO THE CONSTRUCTION.
6. EXTERIOR WALL AND ROOF FINISHES AS PER CUSTOMER'S CHOICE.
7. REFER TO MANUFACTURER'S SPECS FOR ROUGH OPENING DIMENSIONS, FOR DOOR AND WINDOWS.

BUILDING NOTES:

1. EXTERIOR WALLS SHALL BE 2x4 WOOD PURLINS @ 2'-0" O.C. HORIZ. WITH 29 GAUGE METAL. PAINTED STEEL PANELS.
2. ALL DIMENSIONS ARE TO FACE AND/OR CENTER OF STRUCTURE.
3. 12" BUILDING OVERHANG AT EAVES AND 12" BUILDING OVERHANG AT GABLES.
4. 9'-0" x 9'-0" CHI 2251/4251 INSULATED RESIDENTIAL OVERHEAD GARAGE DOOR.
5. 10'-0" x 12'-0" CHI 2251/4251 INSULATED RESIDENTIAL OVERHEAD GARAGE DOOR.
6. 42" x 80" REEB S1203-QBGCWLE SMOOTH STAR FIBERGLASS EXTERIOR DOOR. LHI
7. 36" x 80" REEB S960 SMOOTH STAR FIBERGLASS EXTERIOR. LHI.
8. 36" x 80" REEB S960 SMOOTH STAR FIBERGLASS EXTERIOR. RHI.
9. 36" x 80" REEB SSF960 20 MIN. NEUTRAL PRESSURE SMOOTH FIBERGLASS. LHI.
10. 36" x 80" REEB SSF960 20 MIN. NEUTRAL PRESSURE SMOOTH FIBERGLASS. RHI.
11. WINDOW TO BE SUPPLIED BY CUSTOMER, INSTALLED BY DPBS.
12. DOOR TO BE SUPPLIED BY CUSTOMER, INSTALLED BY DPBS.



1 GROUND LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"

WOODROCK ENGINEERING

101 CASSIDY DRIVE SUITE C
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DELMARVA BUILDINGS

CLIENT NAME:
ANDREW SCRUTCHFIELD

PROJECT ADDRESS:
17659 STINGREY LANE,
LEWES, DE 19958

DRAWING TITLE:
GROUND LEVEL FLOOR PLAN

DATE:
FEB 10, 2026

DRAWN BY:
M.SNIDER

APPROVED BY:
J. KENNEDY

REV NO:	DESCRIPTION:	DATE:

DWG NO.:
2 OF 7

SCALE:
1/4" = 1'-0"

SHEET NO.:
A1

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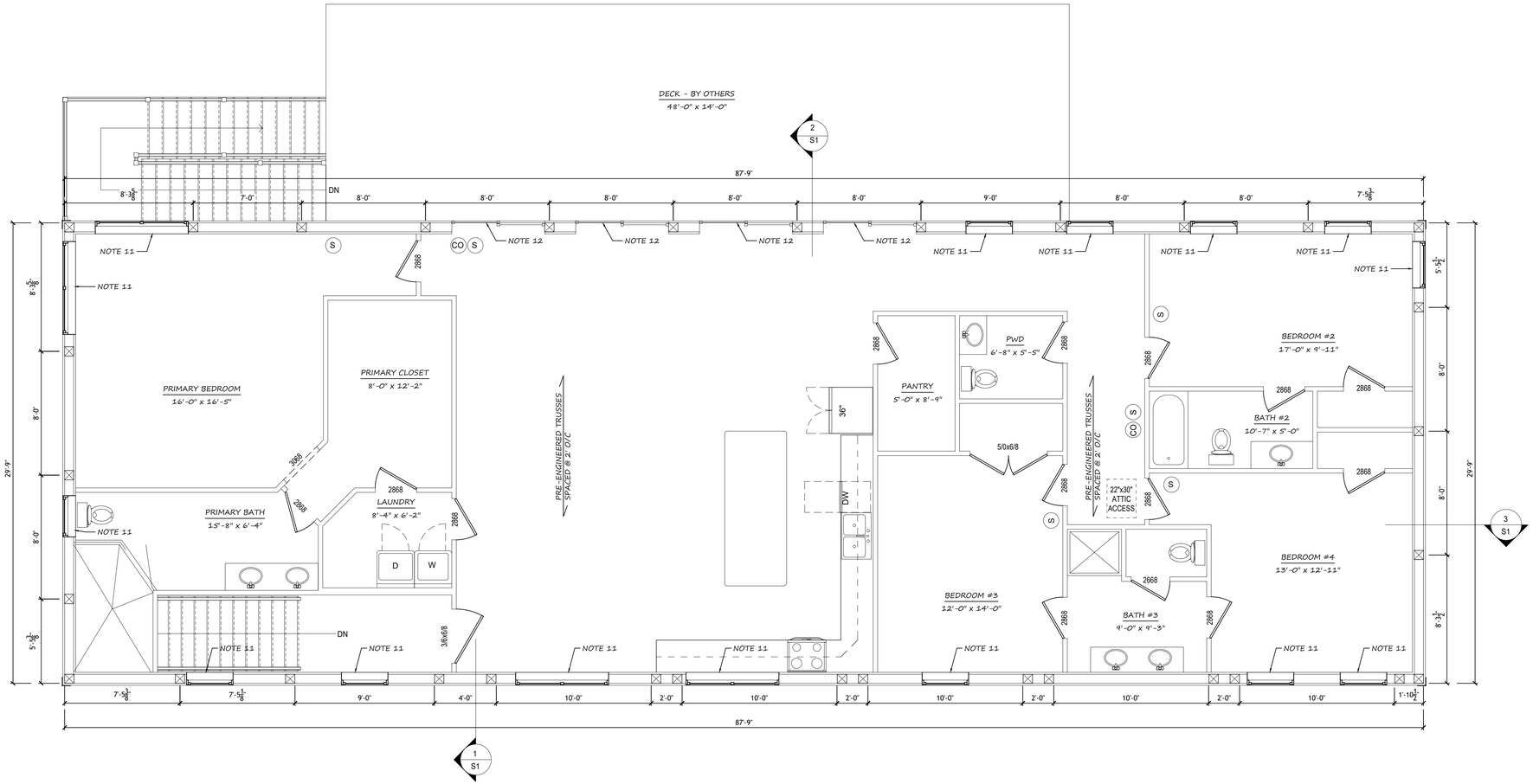

1 UPPER LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"

WOODROCK ENGINEERING

101 CASSIDY DRIVE SUITE C
DOVER, DE 19901

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PRESUMED SOIL BEARING: 1,500 PSF

CODE:
IBC 2021 (AMENDED)

DELMARVA BUILDINGS

CLIENT NAME:
ANDREW SCRUTCHFIELD

PROJECT ADDRESS:
17659 STINGREY LANE,
LEWES, DE 19958

DRAWING TITLE:
UPPER LEVEL FLOOR PLAN

DATE:
FEB 10, 2026

DRAWN BY:
M.SNIDER

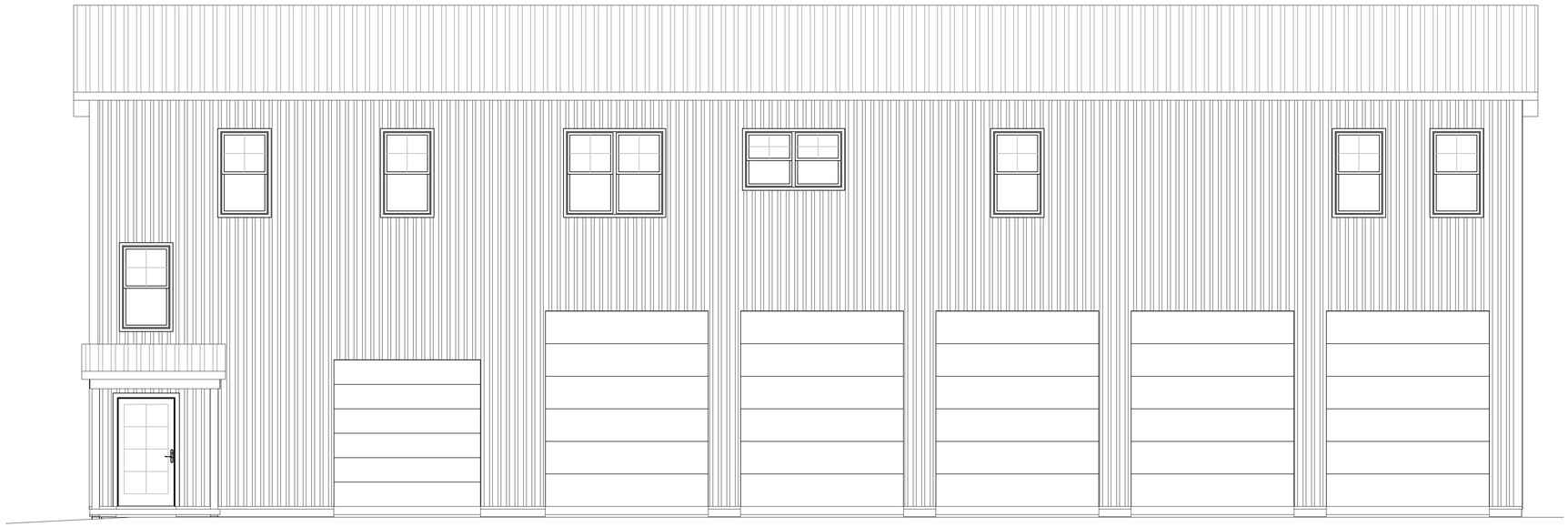
APPROVED BY:
J. KENNEDY

REV NO:	DESCRIPTION:	DATE:

DWG NO.:
3 OF 7

SCALE:
1/4" = 1'-0"

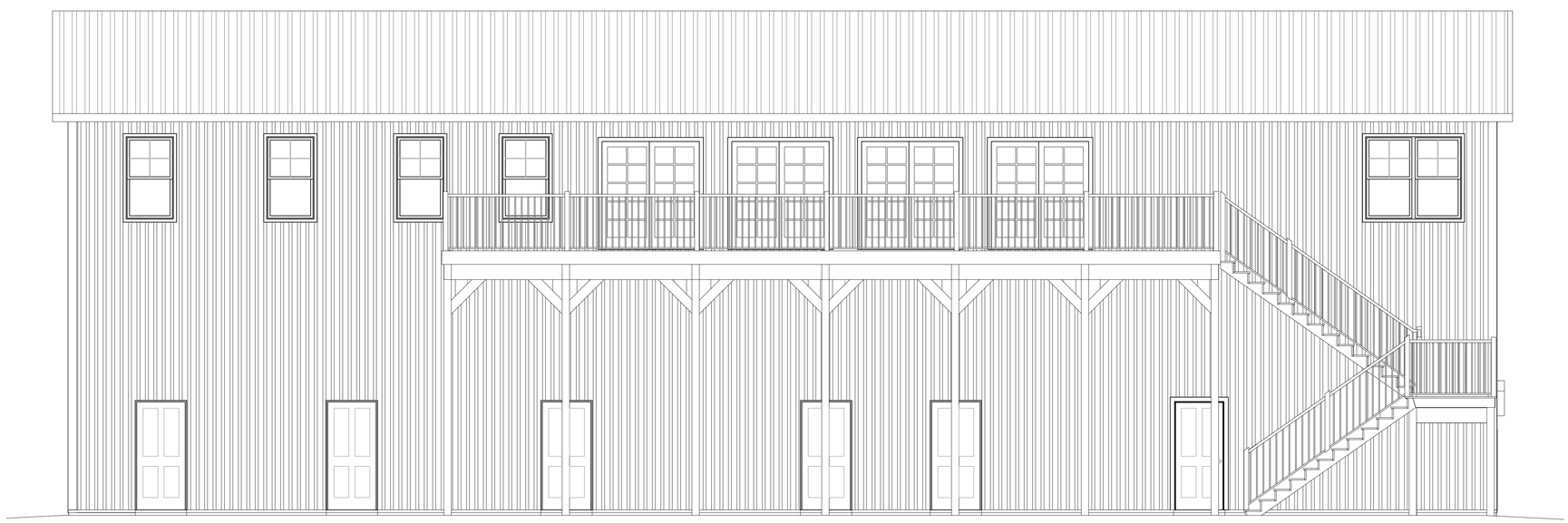
SHEET NO.:
A2



1 FRONT ELEVATION
SCALE: 1/4" = 1'-0"

EXTERIOR ELEVATION NOTES:

1. CONTRACTOR TO VERIFY ALL WINDOW AND DOOR STYLES AND SIZES WITH OWNER PRIOR TO CONSTRUCTION.
2. PROVIDE STEPS AND GUARD RAILS AS PER CODE BASED ON SITE CONDITIONS.
3. GROUND LINES SHOWN FOR REFERENCE ONLY AND VARY DEPENDING ON SITE CONDITIONS.
4. ALL FINISH MATERIALS TO BE VERIFIED WITH OWNER PRIOR TO CONSTRUCTION.
5. REFER TO TYPICAL WALL DETAIL FOR FRAMING METHODS AND OTHER MISC. INFORMATION.
6. CONTRACTOR TO PROVIDE ADEQUATE ROOF VENTILATION AS REQ'D BY CURRENT CODES.
7. COORDINATE OPENINGS NOT SHOWN FOR LOUVERS AND FANS. COORDINATE WITH WALL MOUNTED DEVICES AND EQUIPMENT INCLUDING LIGHT FIXTURES, ETC.



2 REAR ELEVATION
SCALE: 1/4" = 1'-0"

WOODROCK ENGINEERING

101 CASSIDY DRIVE SUITE C
DOVER, DE 19901

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CODE:
IBC 2021 (AMENDED)

DELMARVA BUILDINGS

CLIENT NAME:
ANDREW SCRUTCHFIELD

PROJECT ADDRESS:
17659 STINGREY LANE,
LEWES, DE 19958

DRAWING TITLE:
FRONT & REAR ELEVATIONS

DATE:
FEB 10, 2026

DRAWN BY:
M.SNIDER

APPROVED BY:
J. KENNEDY

REV NO:	DESCRIPTION:	DATE:

DWG NO.:
4 OF 7

SCALE:
1/4" = 1'-0"

SHEET NO.:
A3

EXTERIOR ELEVATION NOTES:

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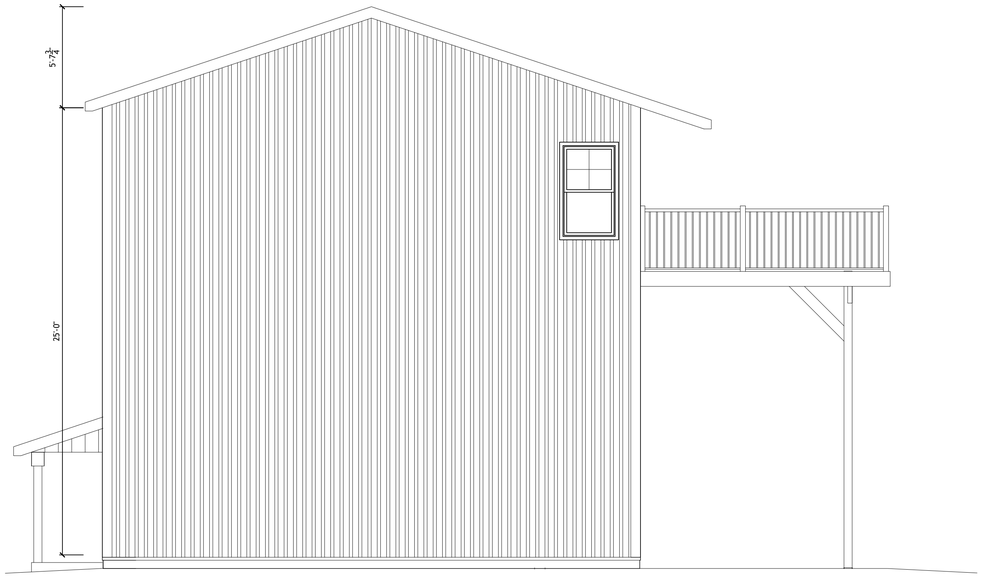
1 LEFT ELEVATION
SCALE: 1/4" = 1'-0"



2 RIGHT ELEVATION
SCALE: 1/4" = 1'-0"

WOODROCK ENGINEERING

101 CASSIDY DRIVE SUITE C
DOVER, DE 19901

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CODE:
IBC 2021 (AMENDED)

DELMARVA BUILDINGS

CLIENT NAME:
ANDREW SCRUTCHFIELD

PROJECT ADDRESS:
17659 STINGREY LANE,
LEWES, DE 19958

DRAWING TITLE:
LEFT & RIGHT ELEVATIONS

DATE:
FEB 10, 2026

DRAWN BY:
M.SNIDER

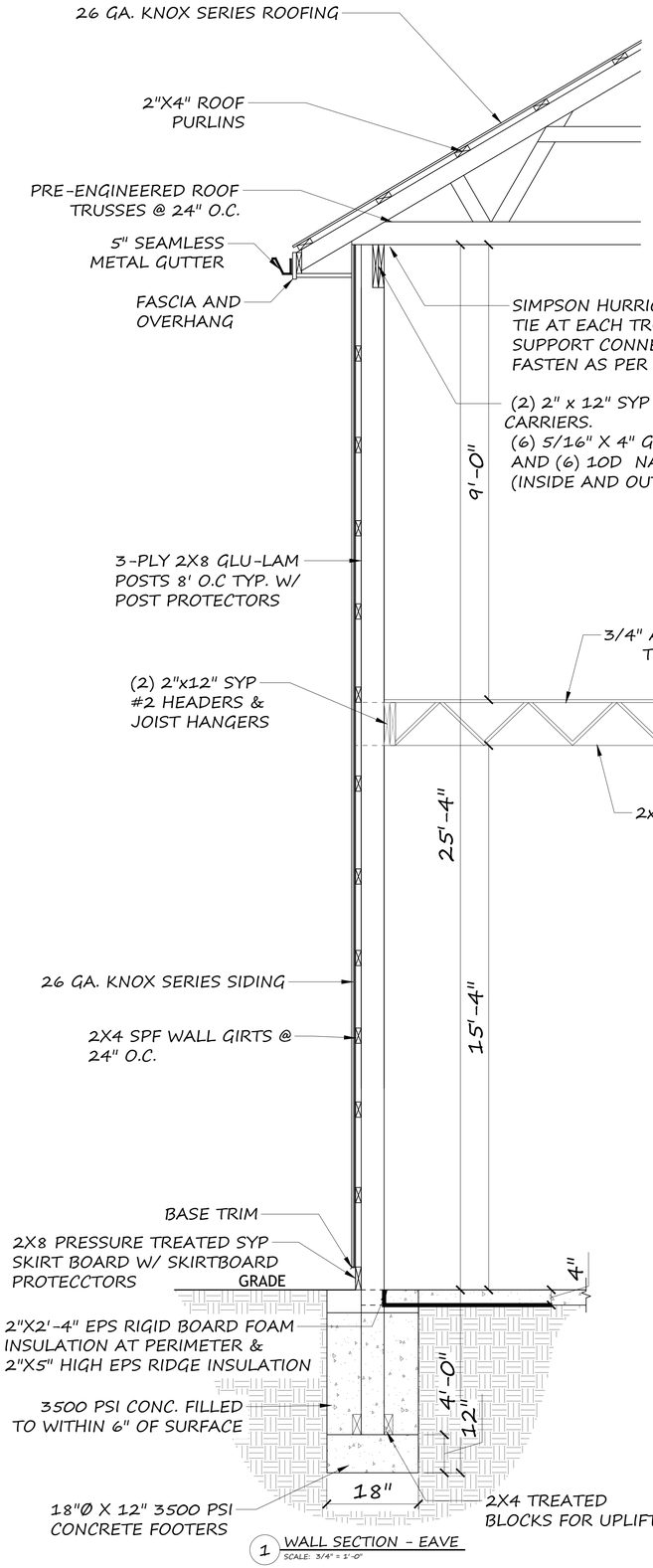
APPROVED BY:
J. KENNEDY

REV NO:	DESCRIPTION:	DATE:

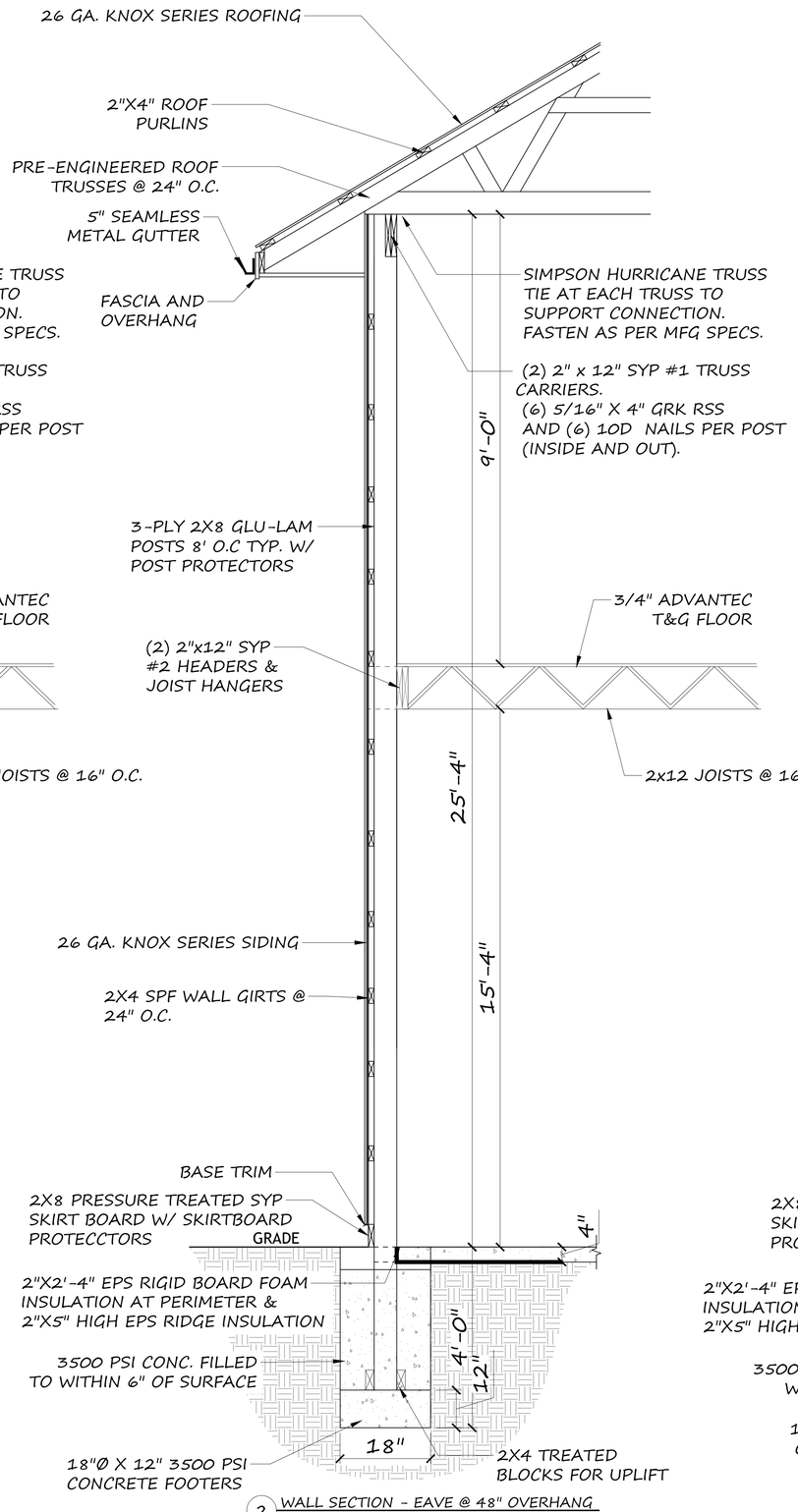
DWG NO.:
5 OF 7

SCALE:
1/4" = 1'-0"

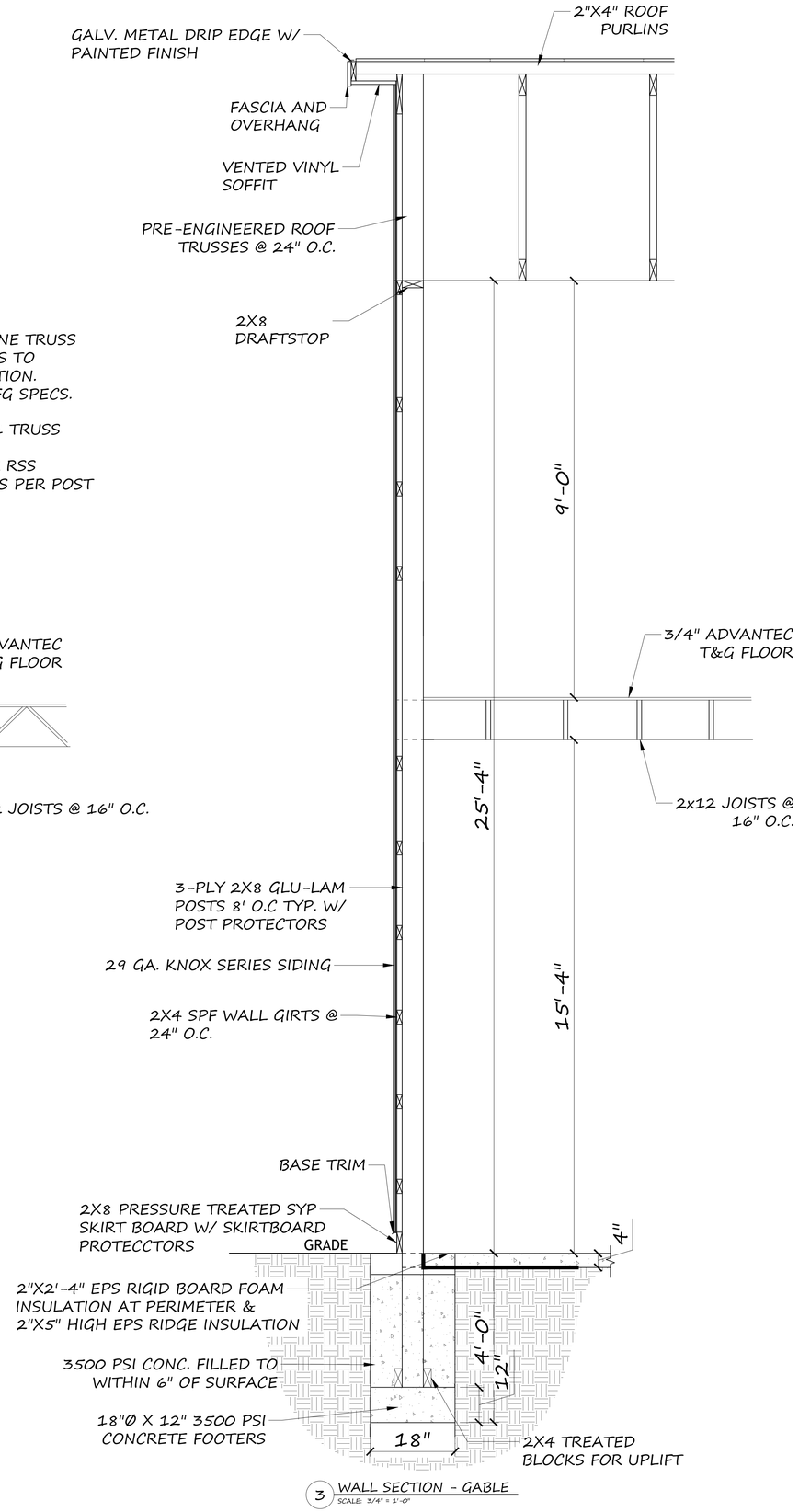
SHEET NO.:
A4



1 WALL SECTION - EAVE
SCALE: 3/4" = 1'-0"



2 WALL SECTION - EAVE @ 48" OVERHANG
SCALE: 3/4" = 1'-0"



3 WALL SECTION - GABLE
SCALE: 3/4" = 1'-0"

WOODROCK ENGINEERING
101 CASSIDY DRIVE SUITE C
DOVER, DE 19901

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DELMARVA BUILDINGS

CLIENT NAME:
ANDREW SCRUTCHFIELD

PROJECT ADDRESS:
17659 STINGREY LANE, LEWES, DE 19958

DRAWING TITLE:
WALL SECTIONS

DATE:
FEB 10, 2026

DRAWN BY:
M.SNIDER

APPROVED BY:
J. KENNEDY

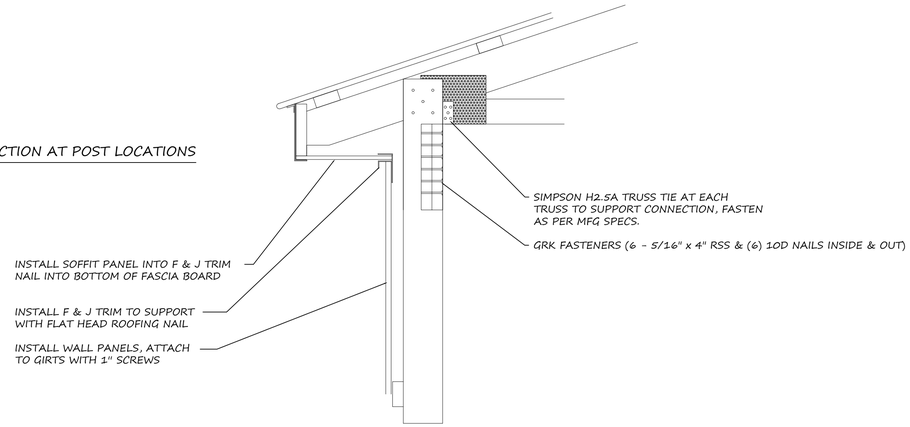
REV NO:	DESCRIPTION:	DATE:

DWG NO.:
6 OF 7

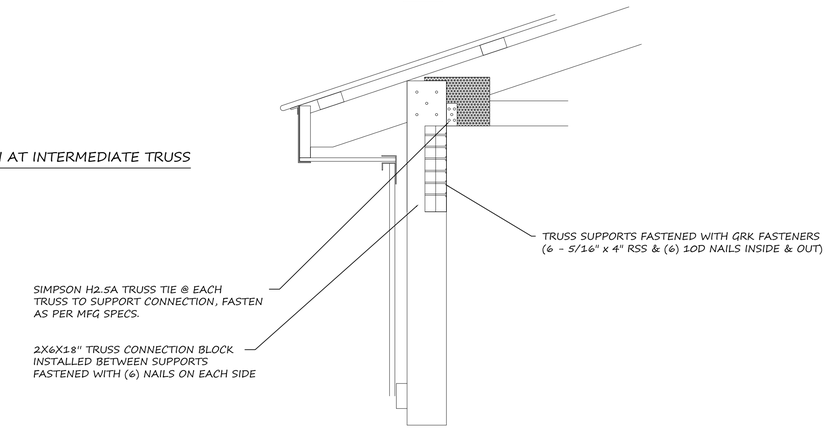
SCALE:
AS NOTED

SHEET NO.:
S1

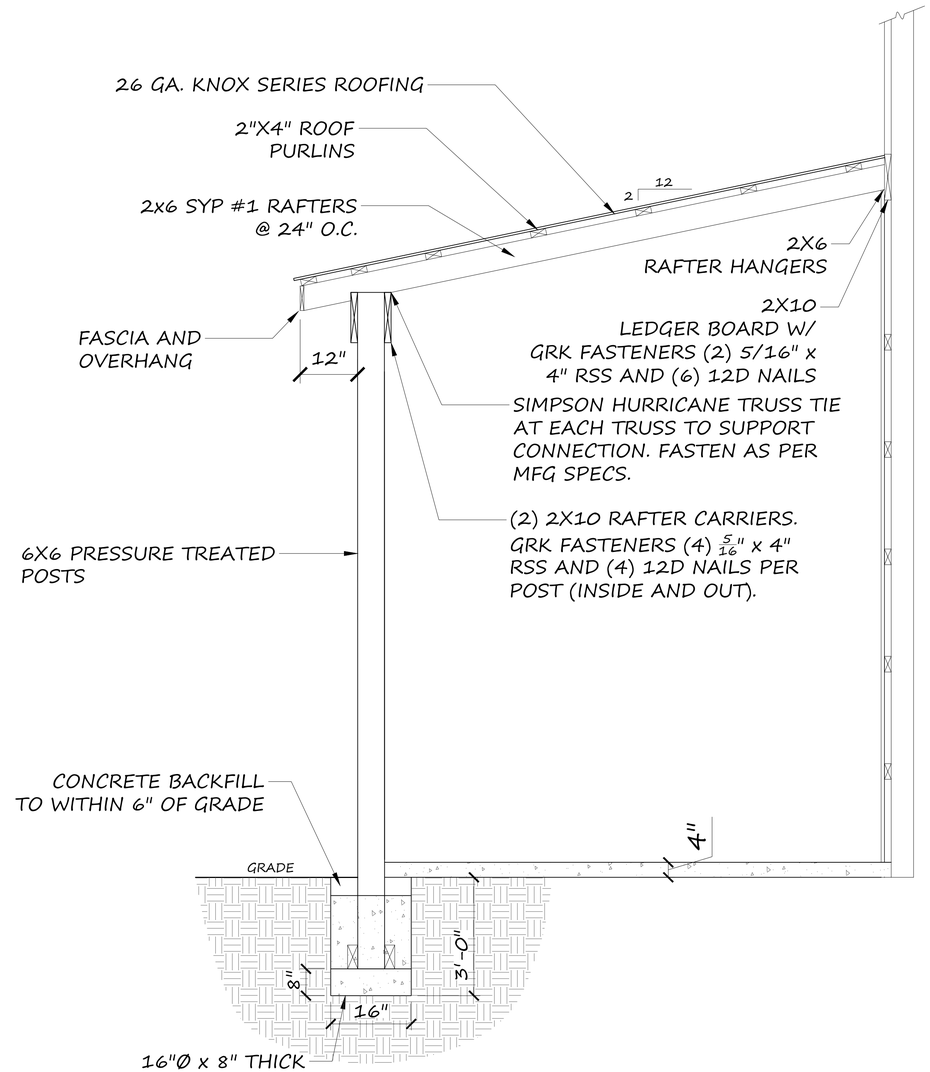
CONNECTION AT POST LOCATIONS



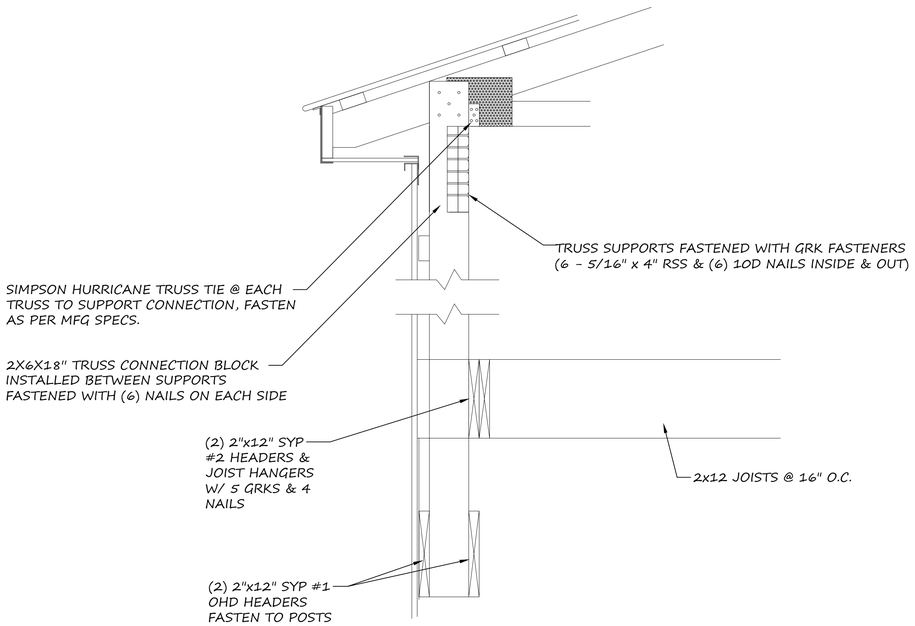
CONNECTION AT INTERMEDIATE TRUSS



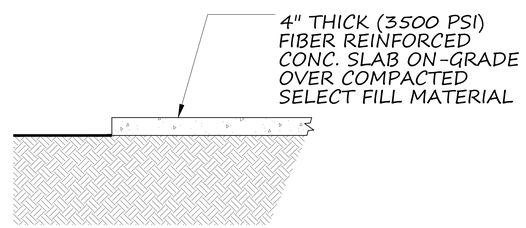
1 CONNECTION DETAILS
SCALE:



3 LEAN-TO SECTION
SCALE: 3/4" = 1'-0"



2 CONNECTION DETAILS @ OVERHEAD DOORS
SCALE:



4 CONCRETE DETAIL
SCALE: 3/4" = 1'-0"

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101 CASSIDY DRIVE SUITE C
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DELMARVA BUILDINGS

CLIENT NAME:
ANDREW SCRUTCHFIELD

PROJECT ADDRESS:
17659 STINGREY LANE, LEWES, DE 19958

DRAWING TITLE:
CONNECTION DETAILS & LEAN-TO SECTION

DATE:
FEB 10, 2026

DRAWN BY:
M.SNIDER

APPROVED BY:
J. KENNEDY

REV NO:	DESCRIPTION:	DATE:

DWG NO.:
7 OF 7

SCALE:
AS NOTED

SHEET NO.:
S2

Site and Project Data

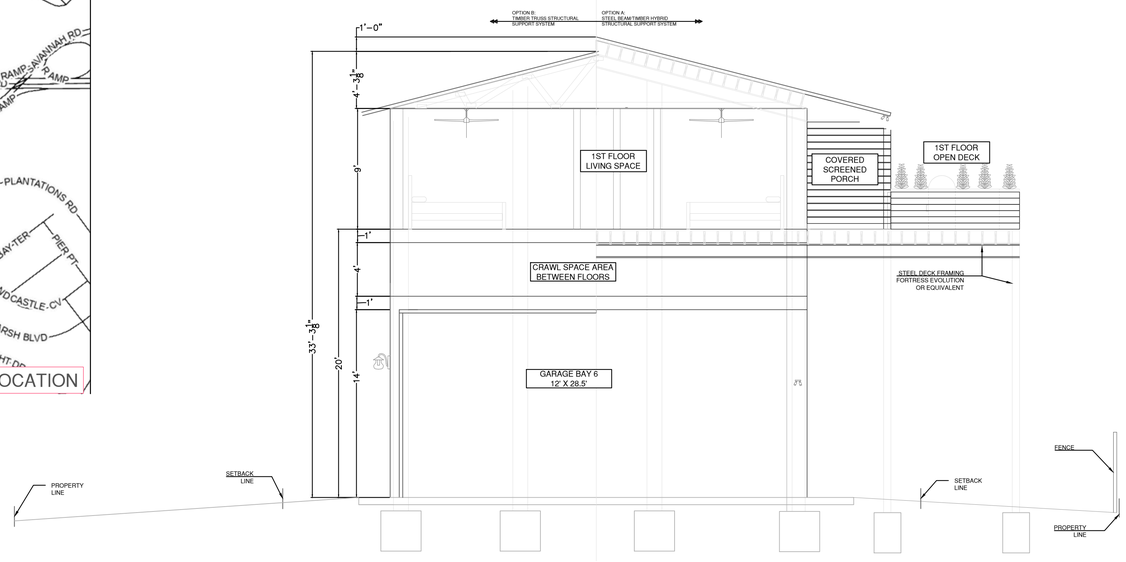
Property Tax No.:	334-5.00-195.00
Address:	17659 Stingey Lane Lewes, DE, 19958
Zoning:	AR-1
Use:	Single Family Dwelling
Other Accessory Uses:	Home Occupation Self-Storage
Lot Size:	119' x 82' 9,552 SQ FT +/-

Setbacks:

Front:	30 FT FROM CL OF R.O.W.
Sides:	5 FT
Rear:	15 FT
Per Ordinance No.	2557 - Small Lots
Height:	42 FT

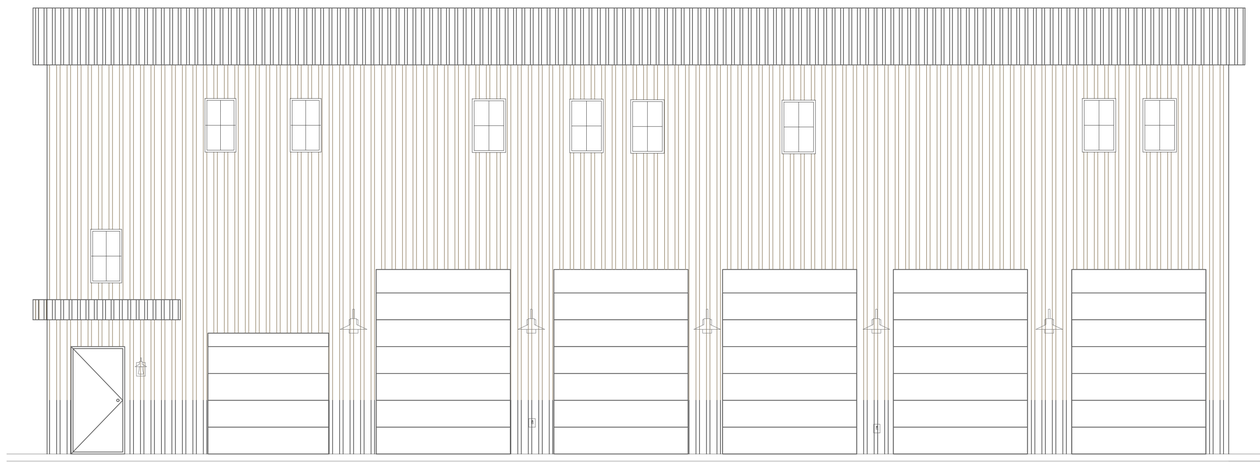
ESC And Stormwater Data

Disturbed Area:	9552 SQ FT
Proposed Impervious:	4969 SQ FT
Hydrologic Soil Group:	HSG B
Existing Curve No.:	81.1
Proposed Curve No.:	80.2



RIGHT SECTION

$\frac{3}{16}$" = 1'-0"



FRONT ELEVATION

$\frac{3}{16}$" = 1'-0"

REV	REVISION	DATE

revisions

project

SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client

ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content

RENDERINGS AND SITE DATA

drawn by; AJS

checked by; AJS

date; 2/3/25

drawing no.

G-01

N/F
JOHN & JOY BAUGHMAN

S 27°16' 16" E

119.00'

CONCRETE PA

80.80'

82.00'

ALS, LLC

COASTAL P

FLOW FLOW FLOW FLOW FLOW

DIRT STOCKPILE

19 EA. LOADS OF DUMPED SOIL. APPROXIMATELY 4 FEET TALL EACH

S 59°35' 49" W

N 57°42' 51" E

EXISTING CONCRETE PAD

CONCRETE P

3.7'

EXISTING SEWER LOCATED

N 26°35' 19" W

116.43'

STINGEY LANE

+/-

SCALE
$\frac{3}{16}$"=1'–0"

REV	REVISION	DATE

revisions

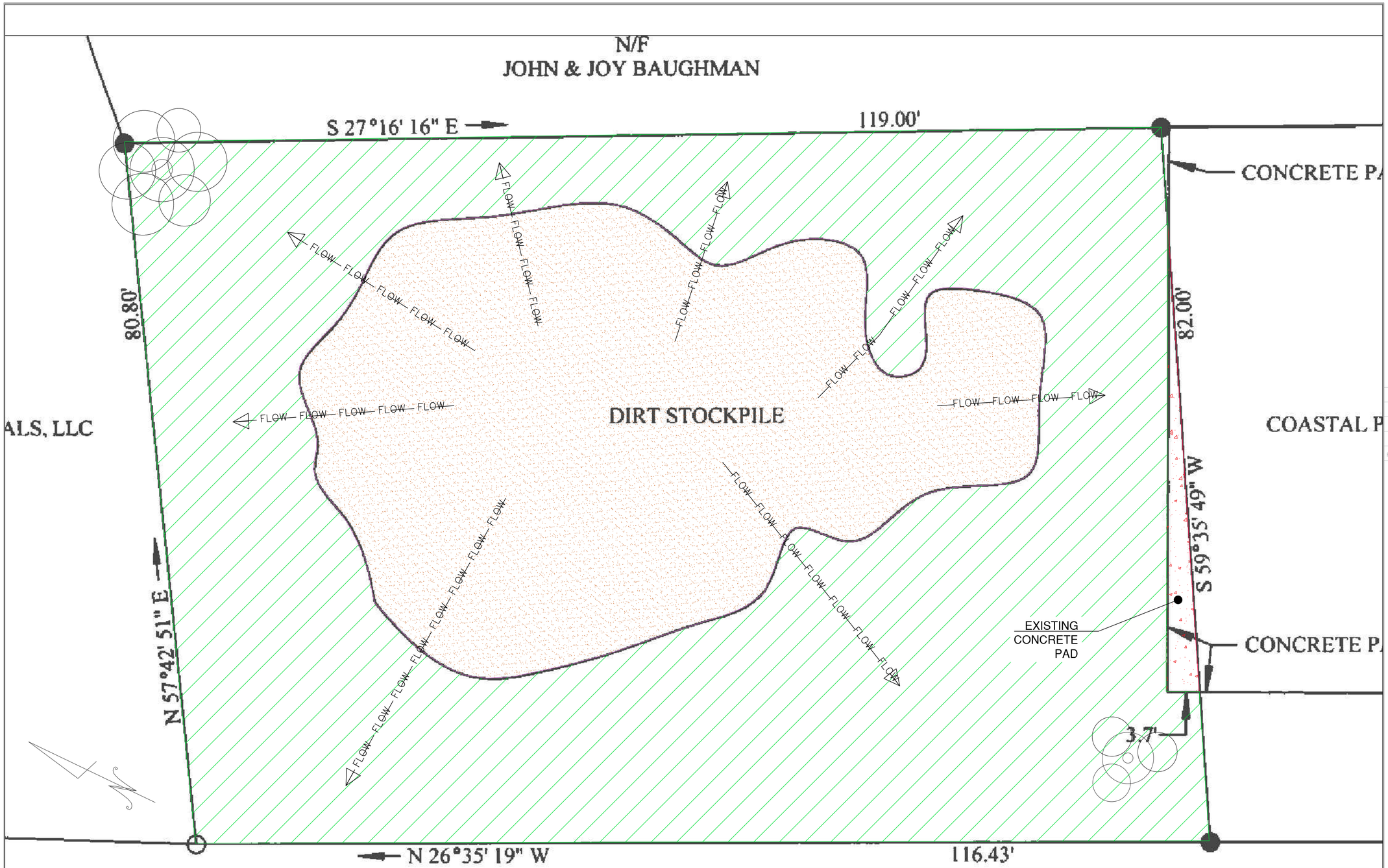
project
SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
EXISTING SITE PLANS

drawn by; AJS
checked by; AJS
date; 2/2/2025
drawing no.

EX-01



SWM CN LEGEND

- HSG B - BARE DIRT
- HSG B - CONCRETE
- HSG B - POOR GRASS

+/-

SCALE
$\frac{3}{16}$"=1'-0"

AREA	CN	CATEGORY	HSG	CN * AREA
6327 SQ FT	79	POOR GRASS	B	499833
3151 SQ FT	82	DIRT	B	258382
102 SQ FT	98	CONCRETE	B	9996
9478				768211
			81.1 CN	

REV	REVISION	DATE

revisions

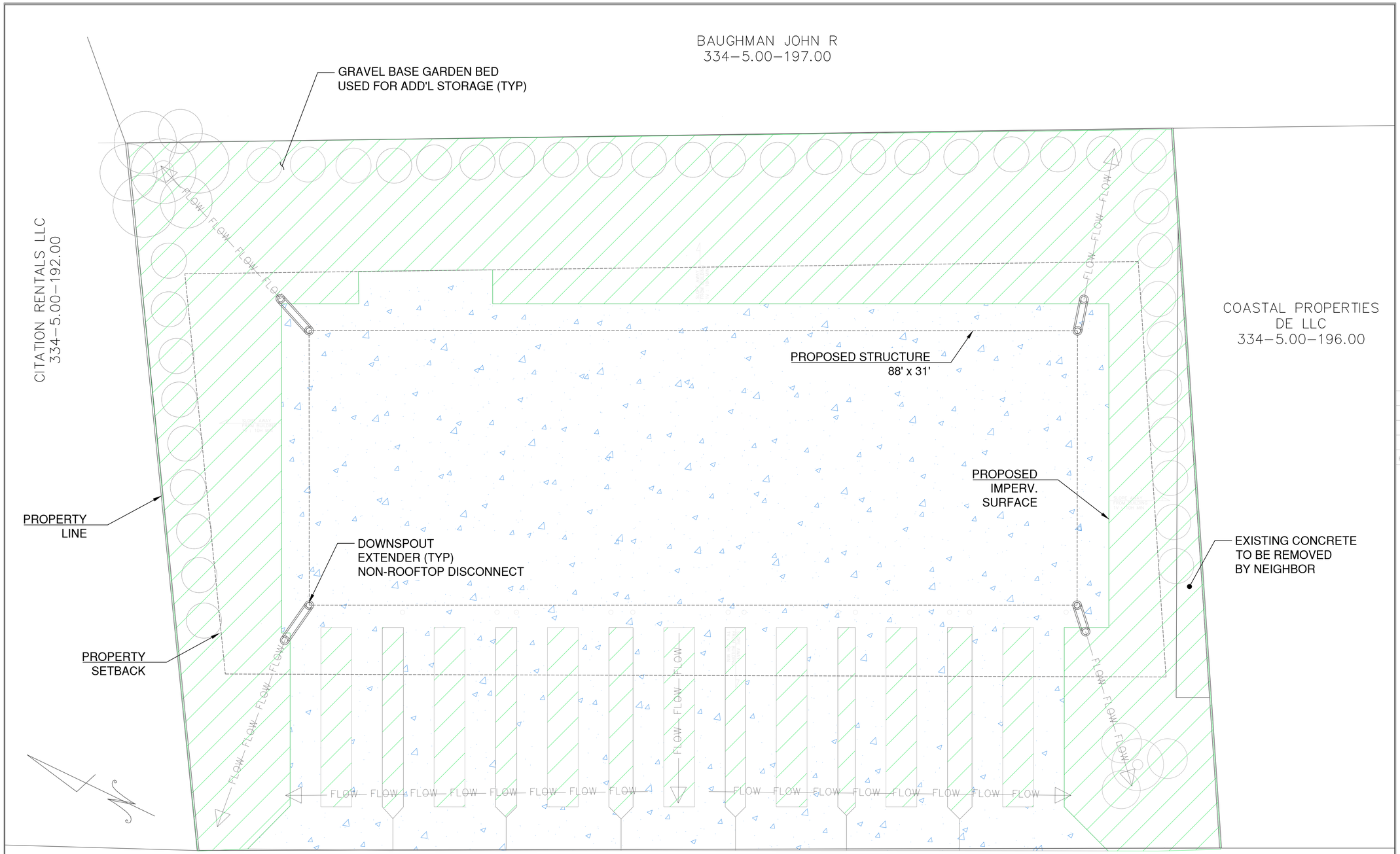
project
SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
EXISTING SITE PLANS
PRE-SWM PLAN

drawn by; AJS
checked by; AJS
date; 2/2/2025
drawing no.

SWM-1



SWM CN LEGEND

HSG B – GRASS, GOOD

HSG B – CONCRETE AND IMPERV.

AREA	CN	CATEGORY	HSG	CN* AREA
4969 SQ FT	98	IMPERVIOUS	B	486962
4617 SQ FT	61	GRASS - GOOD	B	281637
9586				768599
		80.2 CN		

REV	REVISION	DATE

revisions

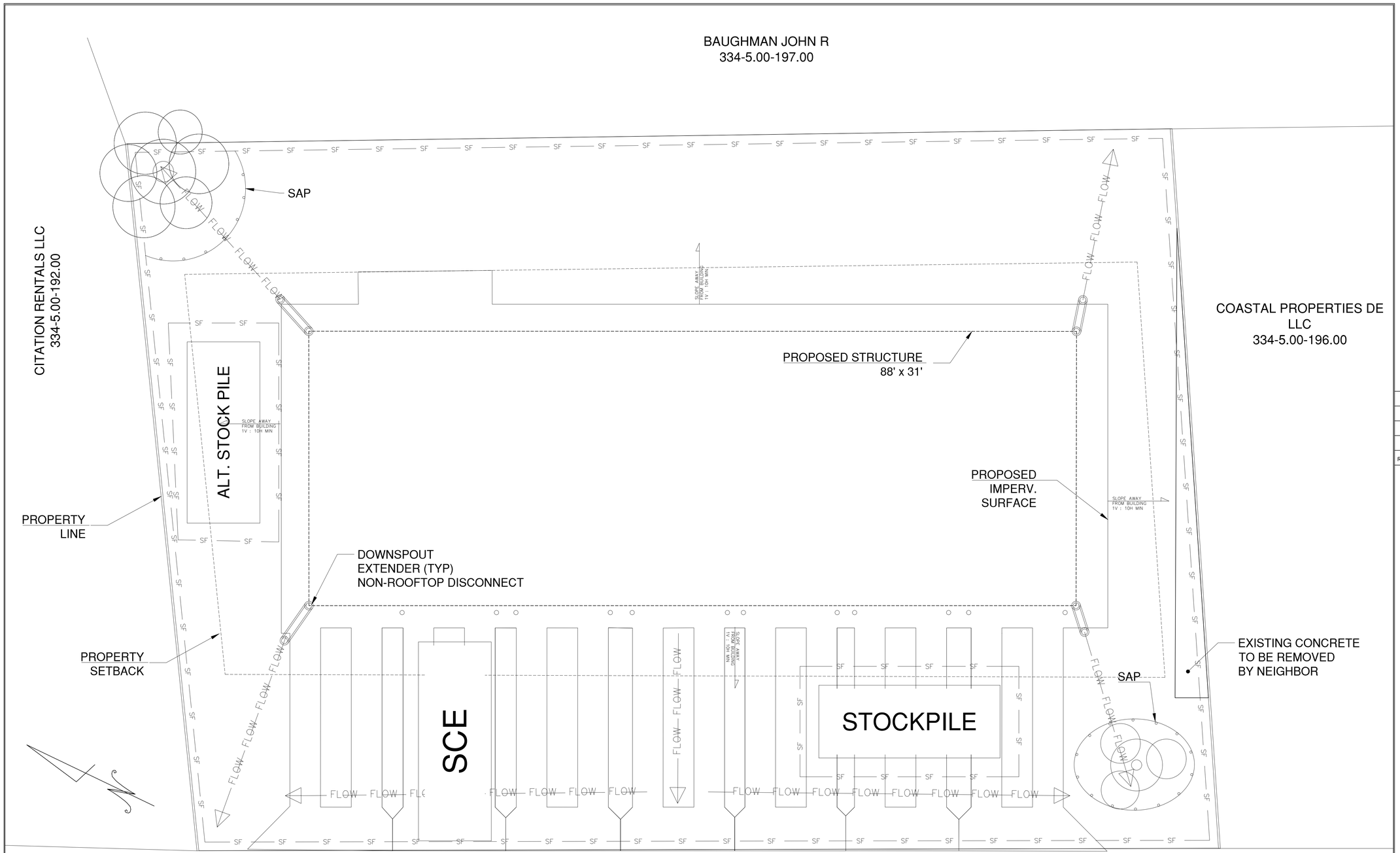
project
SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
POST-SWM PLAN

drawn by; AJS
checked by; AJS
date; 2/2/2025
drawing no.

SWM-2



ESC LEGEND

- SF — SILT FENCE
- SENSITIVE AREA PROTECTION (SAP)
- SCE — STABLILIZED CONST. ENTRANCE
- FLOW — RUNOFF FLOW
- STOCKPILE — STOCKPILE AREA

STINGEY LANE

REV	REVISION	DATE

revisions

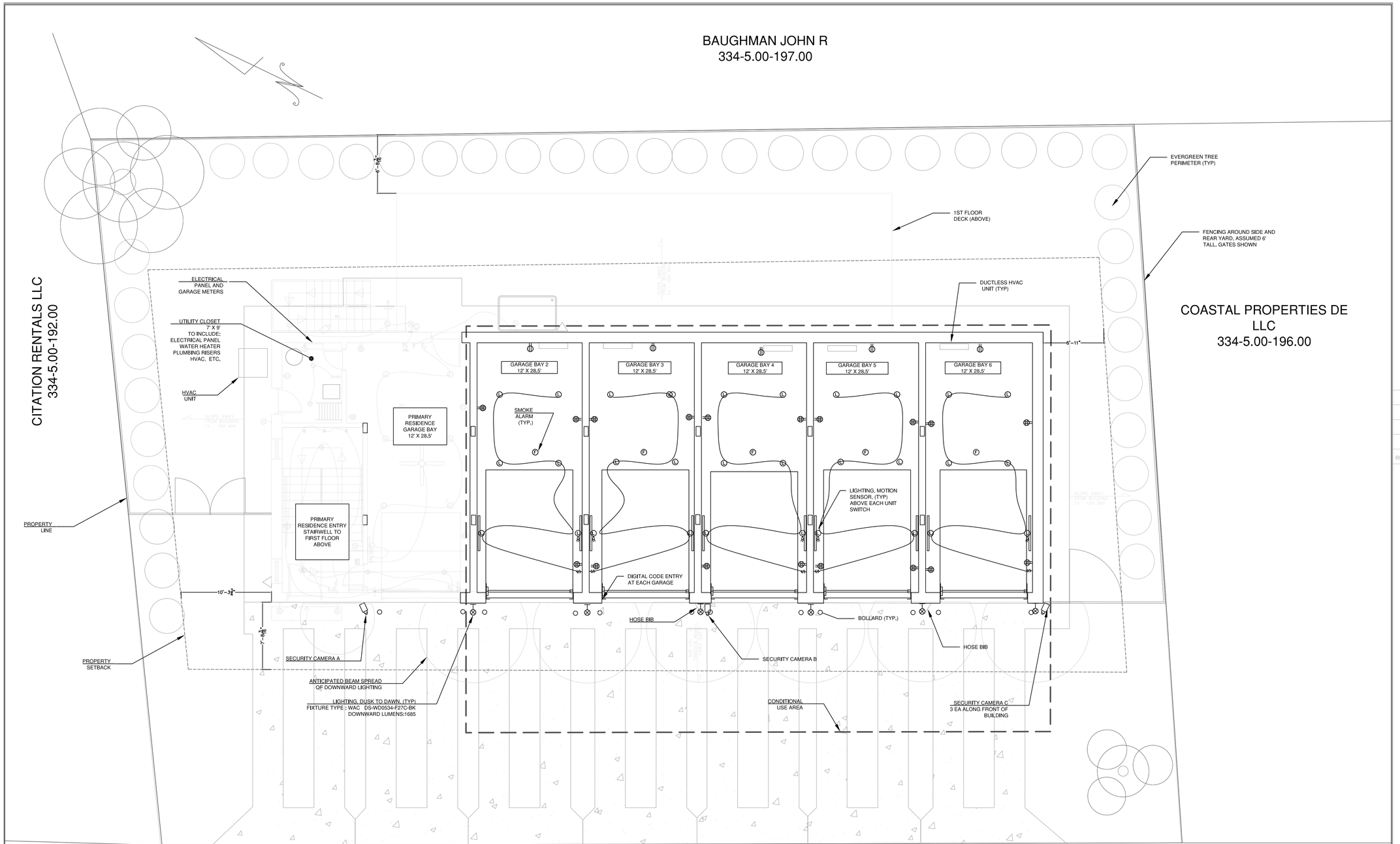
project
SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
EROSION AND SEDIMENT CONTROL PLANS

drawn by; AJS
checked by; AJS
date; 2/2/2025
drawing no.

ESC-1



NOTES:

GARAGE BAY BASIS OF DESIGN:
EACH GARAGE BAY IS TO BE INDIVIDUALLY METERED FOR ELECTRICITY USE. METERS SHOULD BE LOCATED IN THE UTILITY CLOSET. DUCTLESS HAVC UNITS SHALL BE TIED TO EACH UNITS RESPECTIVE METER.

SECURITY:
3 SECURITY CAMERAS PLACED ALONG FRONT OF STRUCTURE. (2 IN REAR FOR RESIDENTIAL SECURITY)
EACH GARAGE TO BE ACCESSED VIA DIGITAL KEY PAD AT EACH DOOR. ALLOWS FOR NOTIFICATION TO OWNER OF ENTRY AND RECORD KEEPING OF ACCESS TO UNITS. NEW DIGITAL CODES ARE ASSIGNED TO EACH NEW TENET. OPTIONAL PAD LOCK AVAILABLE FOR TENET USE FOR ADDITIONAL SAFTEY.

LIGHTING:
AT THE EXTERIOR, LIGHTING IS PROVIDED ALONG THE ENTIRE FRONT FACE OF BUILDING FOR UNIT ACCESS. THESE WILL OPERATE ON A DUSK TO DAWN BASIS.
IN EACH UNIT, A MOTION SENSOR LIGHT WILL TURN ON ABOVE THE LIGHT SWITCH. AFTER WHICH, A USER MAY TURN ON REST OF LIGHTING.

NOTES:

ACCESS:
UNITS WILL BE AVAILABLE FOR ACCESS 24/7. HOWEVER, ACCESS OUTSIDE THE HOURS OF 7AM TO 8PM WILL REQUIRE NOTIFICATION TO OWNER 24 HOURS IN ADVANCE.

STORAGE SAFETY:
TENETS WILL SIGN A STORAGE SAFTEY AGREEMENT TO THE NATIONAL STANDARDS FOR TYPICAL REQUIREMENTS FOR HEALTH AND SAFTEY, FIRE SAFETY, AND HAZARDOUS MATERIALS. OWNER WILL RETAIN THE RIGHT OF INSPECTION OF ANY UNIT IF NECESSARY FOR SAFTEY OR SUSPICIOUS ACTIVITIES.

PARKING:
EACH UNIT WILL BE GIVEN THE DRIVE AREA IN FRONT OF THE UNIT FOR TEMPORARY PARKING WHEN ACCESSING THE UNIT. NO OVERNIGHT PARKING FOR TENETS WILL BE AVAILABLE. NO OUTDOOR STORAGE WILL BE OFFER EITHER.

$\frac{3}{16}$" = 1'–0"

REV	REVISION	DATE

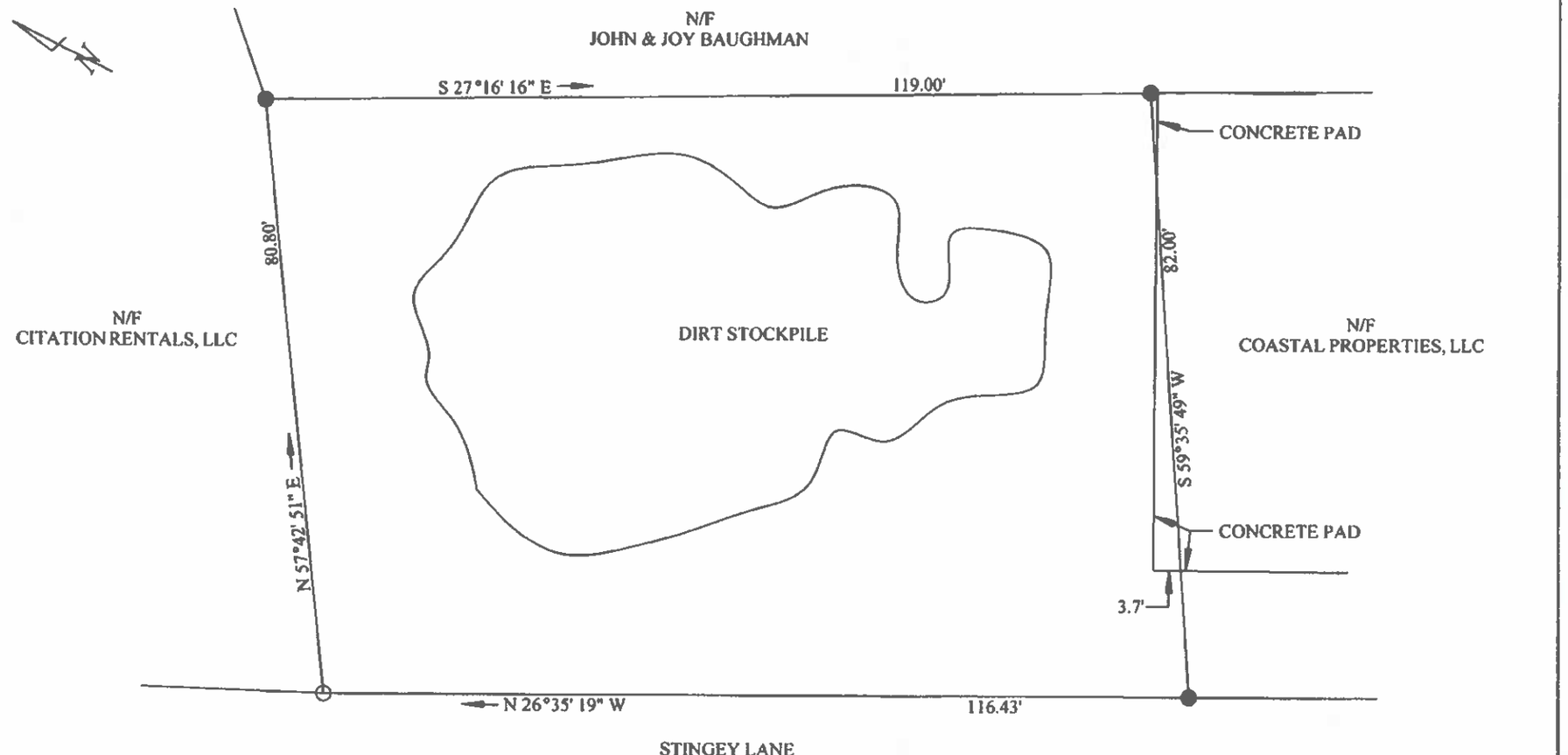
revisions

project
SCRUTCHFIELD RESIDENCE
PRELIMINARY PLANS
17659 STINGEY LANE
LEWES, DE, 19958

client
ANDREW SCRUTCHFIELD
49 BLACKPOOL RD
REHOBOTH BEACH, DE, 19971

content
CONSTRUCTION PLANS
CONDITIONAL USE PLAN

drawn by; AJS
checked by; AJS
date; 2/2/2025
drawing no.
CU-01



AREA = 9,552 SQ. FT. +/-

APPROVED
Boundary Survey
Apr. 18, 2024
1 page
AMY SUSSEX COUNTY
PLANNING & ZONING COMMISSIO

ADDRESS: 17659 STINGEY LANE

TAX PARCEL #: 334-5.00-195.00

I CERTIFY THAT THIS SURVEY WAS PREPARED FOR IDENTIFICATION PURPOSES ONLY FOR THE INDIVIDUAL NOTED BELOW. NO RESPONSIBILITY IS EXTENDED AND/OR ASSUMED BY THE ENGINEER TO ANY FUTURE LAND OWNERS OR OCCUPANTS.

Richard K. Vetter
RICHARD K. VETTER, P.E. #10329

BUYER: ANDREW J. SCRUTCHFIELD

SURVEY BASED ON PHYSICAL EVIDENCE DISCOVERED IN THE FIELD AND A PLOT OF "STINGEY LANE", AS RECORDED IN PLOT BOOK 247, PAGE 51.

LEGEND

- ○ FOUND IRON PIPE
- ● FOUND IRON PIN

SURVEY PLAN
LANDS OF COURTNEY GIBBS
LEWES & REHOBOTH HUNDRED SUSSEX COUNTY, DELAWARE
RICHARD K. VETTER, P.E. 17398 TARAMINO PLACE LEWES, DE 19958
SCALE: 1" = 20'
APRIL 12, 2024

Gmail Andrew Scrutchfield <ascrutch122@gmail.com>

stingy lane

1 message

Smith, James (DelDOT) <JamesA.Smith@delaware.gov> Fri, Mar 21, 2025 at 12:21 PM
To: "ascrutch122@gmail.com" <ascrutch122@gmail.com>

Good afternoon,

Stingy lane isn’t a state road.

Thanks,

James Smith

Delaware Department of Transportation

Entrance Permit Supervisor

302-853-1342

Document# 2024000012835 BK: 6087 PG: 145
Recorder of Deeds, Alexandra Reed Baker On 4/18/2024 at 1:09:54 PM Sussex County, DE
Consideration: $149,000.00 County/Town: $2,235.00 State: $3,725.00 Total: $5,960.00
Doc Surcharge Paid Town: SUSSEX COUNTY

Parcel #334-5.00-195.00
Prepared by:
Fuqua, Willard & Schab, PA
26 The Circle
Georgetown, DE 19947
File No. 240061

Return to:
Andrew J. Scrutchfield
49 Black Pool Road
Rehoboth Beach, DE 19971

THIS DEED is made this 16th day of April, 2024, between:

Courtney Gibbs, of 203 Harford Road, Salisbury, MD 21801, party of the first part,

and

Andrew J. Scrutchfield, of 49 Black Pool Road, Rehoboth Beach, DE 19971 party of the second part.

WITNESSETH: That the party of the first part, for and in consideration of the sum of One Hundred Forty-Nine Thousand and 00/100 Dollars ($149,000.00), lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the party of the second part, the following described lands, situate, lying and being in Sussex County, State of Delaware;

ALL that certain lot, piece or parcel of land situated in Lewes and Rehoboth Hundred, Sussex County, State of Delaware, lying on the east side of Stingey Lane between U.S. Route 9 (Lewes – Georgetown Highway) and Delaware Route 23 (Beaver Dam Road), being bounded on the north by lands now or formerly of Citation Rentals, LLC, on the east by lands now or formerly of John and Joy Baughman, on the south by lands now or formerly of Coastal Properties, LLC, and on the west by Stingey Lane, and being more particularly described in accordance with a survey by Richard Vetter, P.E., dated April 12, 2024, as follows, to wit:

BEGINNING at a found iron pipe in the east line of Stingey Lane at a corner for this lot and lands now or formerly of said Citation Rentals; said point of beginning being located the following two courses and distances from the intersection of the east line of Stingey Lane and the south line of U.S. Route 9: (1) South 24 degrees 26 minutes 49 seconds East, 221.10 feet to a point; thence (2) South 24 degrees 29 minutes 14 seconds East, 125.01 feet to the point of beginning; thence running from said point of beginning with said Citation Rentals lands, North 57 degrees 42 minutes 51 seconds East, 80.80 feet

Document# 2024000012835 BK: 6087 PG: 146
Recorder of Deeds, Alexandra Reed Baker On 4/18/2024 at 1:09:54 PM Sussex County, DE
Doc Surcharge Paid

to a found iron pin at a corner for this lot and lands now or formerly of said Baughman; thence turning and running with said Baughman lands, South 27 degrees 16 minutes 16 seconds East, 119.00 feet to a found iron pin at a corner for this lot and lands now or formerly of said Coastal Properties; thence turning and running with said Coastal Properties lands, South 59 degrees 35 minutes 49 seconds West, 82.00 feet to a found iron pin in the east line of Stingey Lane at a corner for this lot; thence turning and running with the east line of Stingey Lane, North 26 degrees 35 minutes 19 seconds West, 116.43 feet to the point and place of beginning, and containing 9,552 square feet of land, be the same more or less.

BEING the same land conveyed unto Courtney Gibbs, by Deed of Braven O. Duffie, dated December 28, 2017, and recorded with the Recorder of Deeds, Georgetown, Delaware, in Deed Book 4823, Page 47.

SUBJECT to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

IN WITNESS WHEREOF, the party of the first part has hereunto set her hand and seal the day and year written below.

Witness

Courtney Gibbs (SEAL)

State of Delaware :
: S.S.
County of Sussex :

BE IT REMEMBERED, that on this 16th day of April, 2024, personally came before me, the Subscriber, a Notary Public for the State and County aforesaid, Courtney Gibbs, party to this Indenture, known to me personally to be such, and acknowledged this Indenture to be her act and deed.

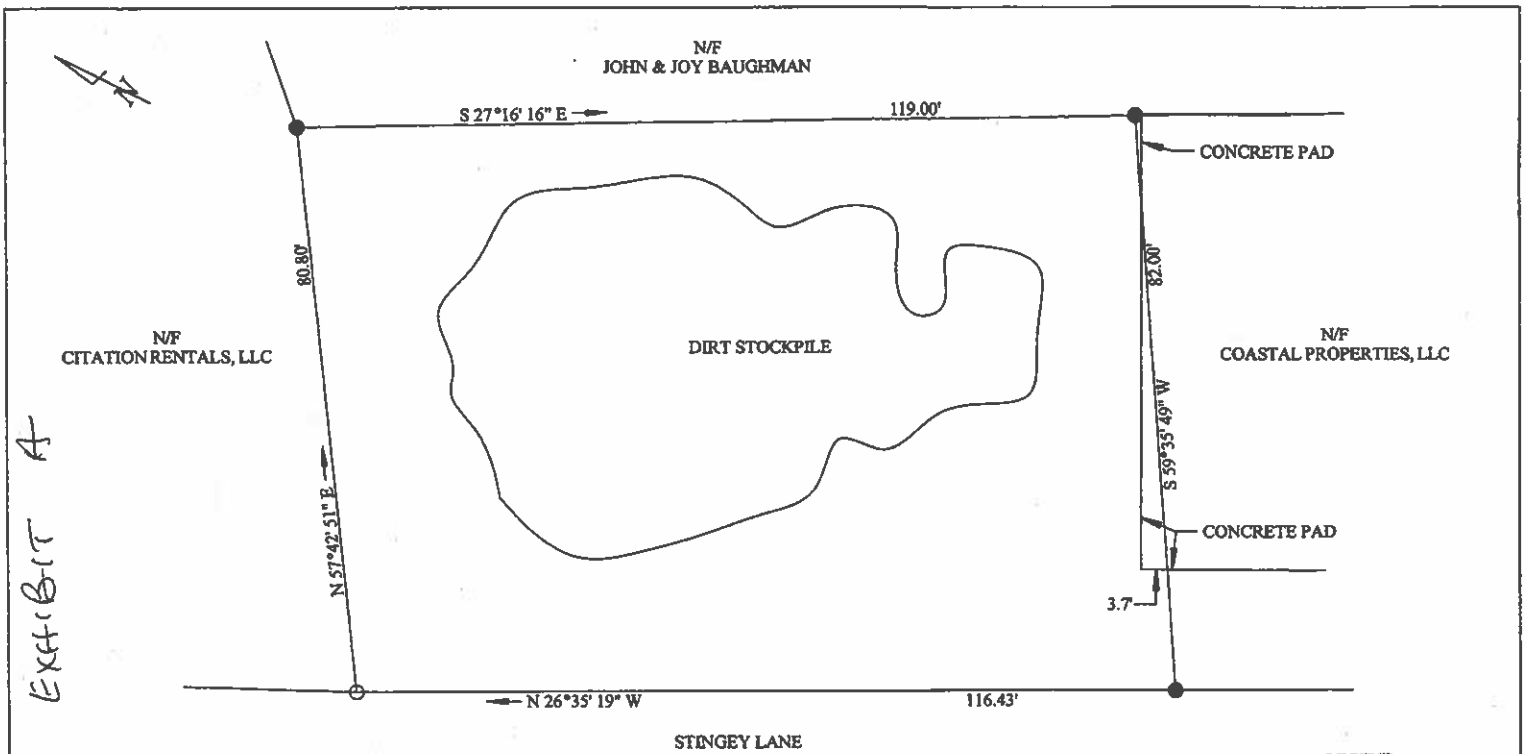
GIVEN under my Hand and Seal of Office the day and year aforesaid.

WILLIAM SCHAB, ESQ
NOTARIAL OFFICER
PURSUANT TO
29 DEL C. SEC 4323(a)(3)

Notary Public
Printed Name: _____
My Commission Expires: _____

Document# 2024000012835 BK: 6087 PG: 147
Recorder of Deeds, Alexandra Reed Baker On 4/18/2024 at 1:09:54 PM Sussex County, DE
Doc Surcharge Paid

EXHIBIT A



AREA = 9,552 SQ. FT. +/-

LEGEND

○ FOUND IRON PIPE

● FOUND IRON PIN

ADDRESS: 17659 STINGEY LANE

TAX PARCEL #: 334-5.00-195.00

I CERTIFY THAT THIS SURVEY WAS PREPARED FOR IDENTIFICATION PURPOSES ONLY FOR THE INDIVIDUAL NOTED BELOW. NO RESPONSIBILITY IS EXTENDED AND/OR ASSUMED BY THE ENGINEER TO ANY FUTURE LAND OWNERS OR OCCUPANTS.

Richard K. Vetter

RICHARD K. VETTER, P.E. #10329

BUYER: ANDREW J. SCRUTCHFIELD

SURVEY BASED ON PHYSICAL EVIDENCE DISCOVERED IN THE FIELD AND A PLOT OF "STINGEY LANE", AS RECORDED IN PLOT BOOK 247, PAGE 51.

SURVEY PLAN
LANDS OF COURTNEY GIBBS
LEWES & REHOBOTH HUNDRED SUSSEX COUNTY, DELAWARE
RICHARD K. VETTER, P.E. 17398 TARAMINO PLACE LEWES, DE 19958
SCALE: 1" = 20'
APRIL 12, 2024

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Planning and Zoning Commission Members
From: Ann Lepore, Planner I
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: October 1, 2026
RE: Staff Analysis for C/U 2609 Walter Gonzalez Diaz

The purpose of this memo is to provide background and analysis for the Planning and Zoning Commission to consider as a part of Application C/U 2609 Walter Gonzalez Diaz to be reviewed during the October 7, 2026, Planning and Zoning Commission Meeting. This analysis should be included in the record of this Application and is subject to comments and information that may be presented during the public hearing.

Please note that the following staff analysis is for informational purposes only and does not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.

Tax Parcel ID: 135-19.00-16.22

Proposal: The request is for a Conditional Use for Tax Parcel: 135-19.00-16.22 to allow for an Auto Repair Business within an Agricultural Residential (AR-1) District as required under §115-22 of the Sussex County Code. The property is lying on the east side of Vaughn Road (S.C.R. 520), approximately 0.35 mile north of Asbury Road (S.C.R. 446). The property contains 13.50 acres more or less and is located at 22027 Vaughn Road in Georgetown, Delaware.

Zoning: The Parcel is zoned Agricultural Residential (AR-1) District. The adjacent parcels to the north, south, east, and west are zoned Agricultural Residential (AR-1) District.

Future Land Use Map Designation w/in Comprehensive Plan: Low Density Area

Applicability to Comprehensive Plan: The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use map in the plan indicates that the subject property is designated as a Rural Area and has a land use designation of "Low Density Area." All surrounding properties to the north, south, east, and west of the subject site contain the Future Land Use Map designation of "Low Density Area".

As outlined in the 2018 Sussex County Comprehensive Plan, Low Density Areas are areas that the County envisions as "a predominantly rural landscape where farming co-exists with appropriate residential uses and permanently preserved property" (Sussex County Comprehensive Plan, 4-18).

The Plan also notes that commercial uses "should be limited in their location, size and hours of operation" and "more intense commercial uses should be avoided" and commercial uses "may be appropriate depending on surrounding uses" (Sussex County Comprehensive Plan, 4-19).

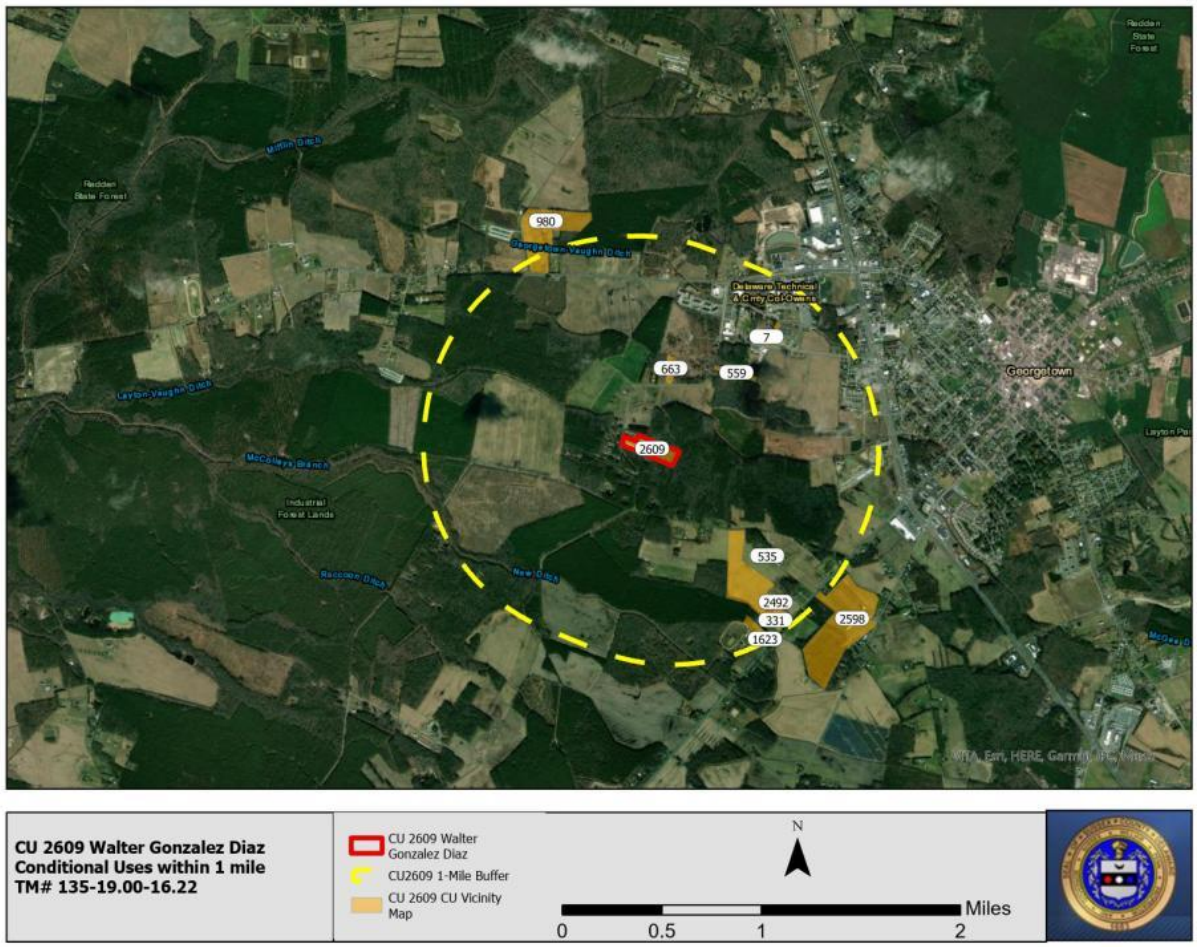
Further Site Considerations:

- **Density: N/A**
- **Open Space Provisions: N/A**
- **Agricultural Areas:** N/A
- **Interconnectivity: N/A**
- **Transportation Improvement District (TID):** The parcel is not within the Henlopen Transportation Improvement District.
- **Forested Areas:** N/A
- **Wetlands Buffers/Waterways:** N/A
- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):**

Existing Conditional Uses within the Vicinity of the Subject Site

Since 1970, there have been 10 Conditional Use Applications within a 1-mile radius of the Application Site.

CU No.	APPLICANT	Tax Parcel #	Current Zoning	Proposed Use	CC Decision Date	CC Decision	Ord. NO.
7	Indian River School District	135-14.00-41.01	AR-1	School (Ennis)	4/27/1971	Approved	N/A
331	William D Stevenson Jr	135-19.00-23.07	AR-1	Auto body shop	4/20/1976	Approved	N/A
535	William D Stevenson	135-19.00-23.00	AR-1	Sale of used cars	7/3/1979	Approved	N/A
559	John Moffitt	135-14.00-51.00	AR-1	Mobile home park	12/18/1979	Approved	N/A
663	Frank Tallent	135-14.00-48.00	AR-1	Used car & repair shop	3/9/1982	Approved	N/A
980	Brian Bearese	135-13.00-5.00	AR-1	Outdoor yard crafts & produce sales	9/10/1991	Approved	785
1623	Dawson & Bedsworth	135-19.00-22.00	AR-1	Electrical contracting business	11/1/2005	Approved	1801
2492	Fernando Robles	135-19.00-23.03	AR-1	Restaurant		WITHDRAWN	
2598	TPE DE SU245, LLC	135-19.00-43.00	AR-1	Solar Facility		Pending	
2609	Walter Gonzalez Diaz	135-19.00-16.22	AR-1	Auto Repair Business		Pending	



Based on the analysis provided, the Conditional Use to allow for an Auto Repair Business could be consistent with the surrounding land uses, zoning, and general environment given considerations of scale and impact.

PLANNING & ZONING COMMISSION
HOLLY J. WINGATE, CHAIR
JEFF ALLEN
G. SCOTT COLLINS
JOHN PASSWATERS
DAVID PETTYJOHN

Sussex County
DELAWARE
SUSSEXCOUNTYDE.GOV
302-855-7878

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR

PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: October 7, 2026
Sussex County Council Public Hearing Date: December 1, 2026

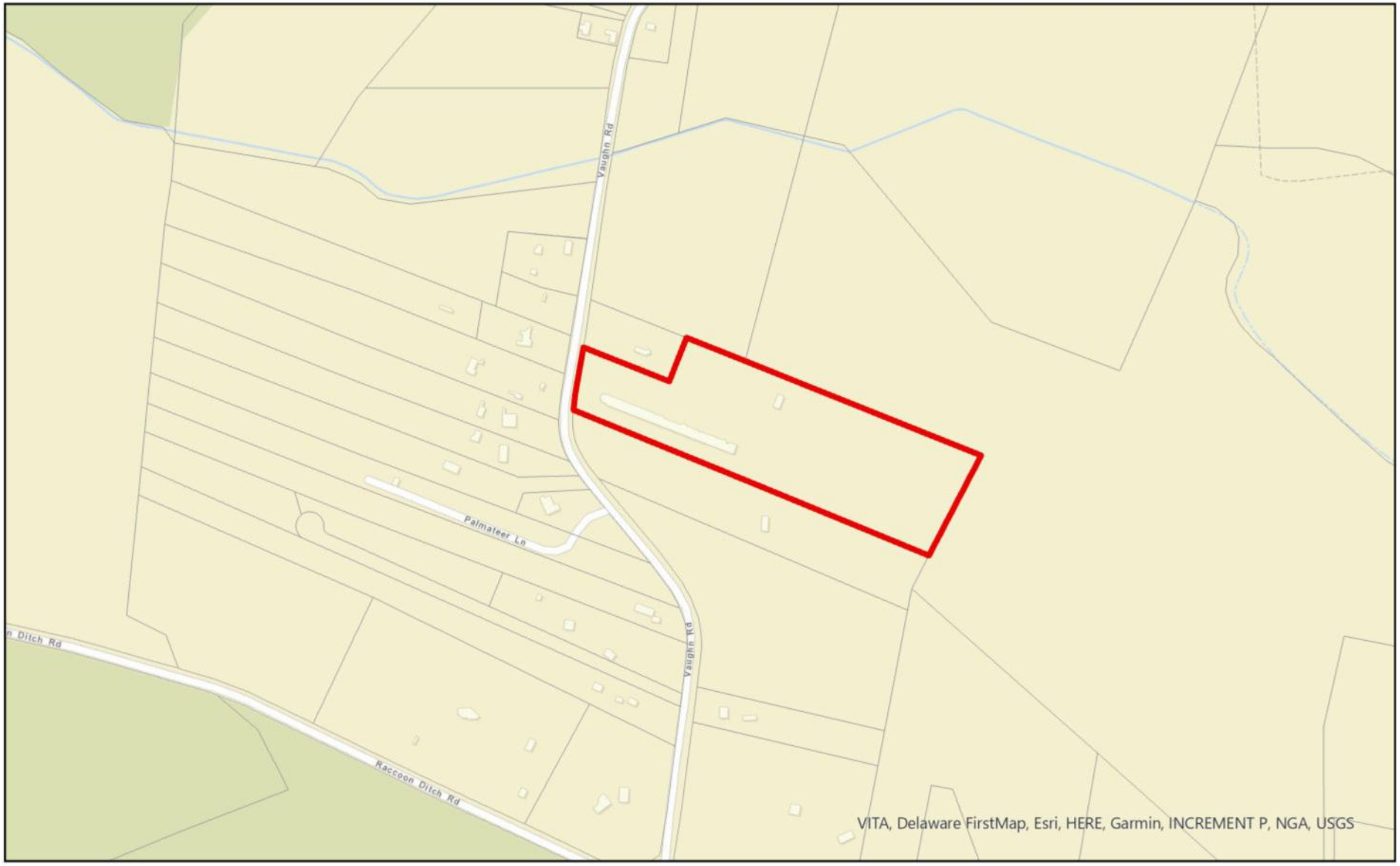
Application:	CU 2609 Walter Gonzalez Diaz
Applicant:	Walter Gonzalez Diaz 22027 Vaughn Road Georgetown, DE 19947
Owner:	Walter Gonzalez Diaz 22027 Vaughn Road Georgetown, DE 19947
Site Location:	22027 Vaughn Road, Georgetown
Site Location:	Located on the east side of Vaughn Road (S.C.R. 520), approximately 0.35 mile north of Asbury Road (S.C.R. 446).
Current Zoning:	Agricultural Residential (AR-1) Zoning District
Proposed Use:	Auto Repair Business
Comprehensive Land Use Plan Reference:	Low Density
Councilmanic District:	District 5 – Mr. Rieley
School District:	Indian River School District
Fire District:	Georgetown Fire Company
Sewer:	Private Septic
Water:	Private Well
Site Area:	13.53-acre(s) +/-
Tax Map ID.:	135-19.00-16.22

EQUAL HOUSING OPPORTUNITY

CU 2609 Walter Gonzalez Diaz
Aerial Map
TM# 135-19.00-16.22

N

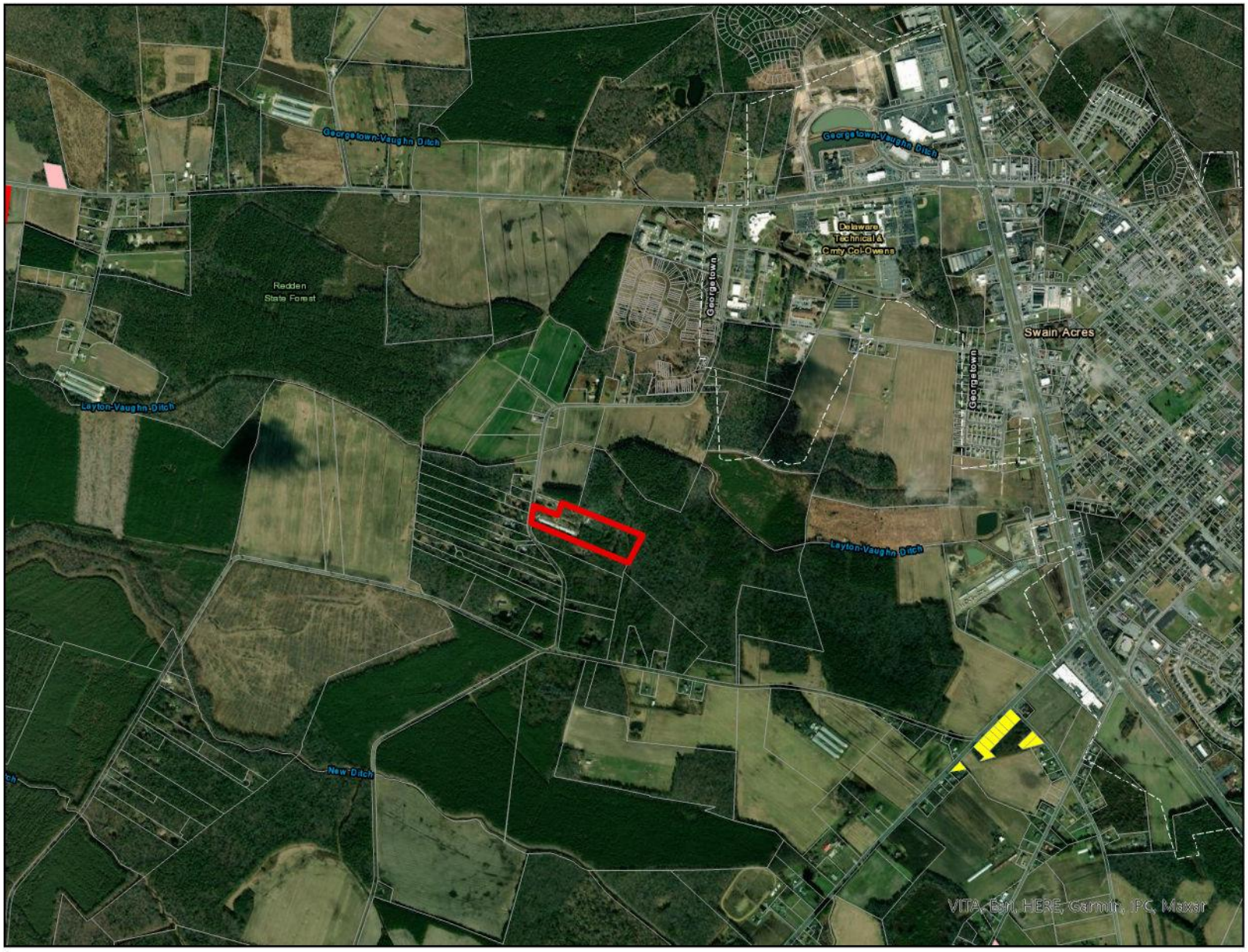
0 0.13 0.25 0.5 Miles



CU 2609 Walter Gonzalez Diaz
Aerial Map
TM# 135-19.00-16.22

N

0 0.13 0.25 0.5 Miles



CU 2609 Walter Gonzalez Diaz

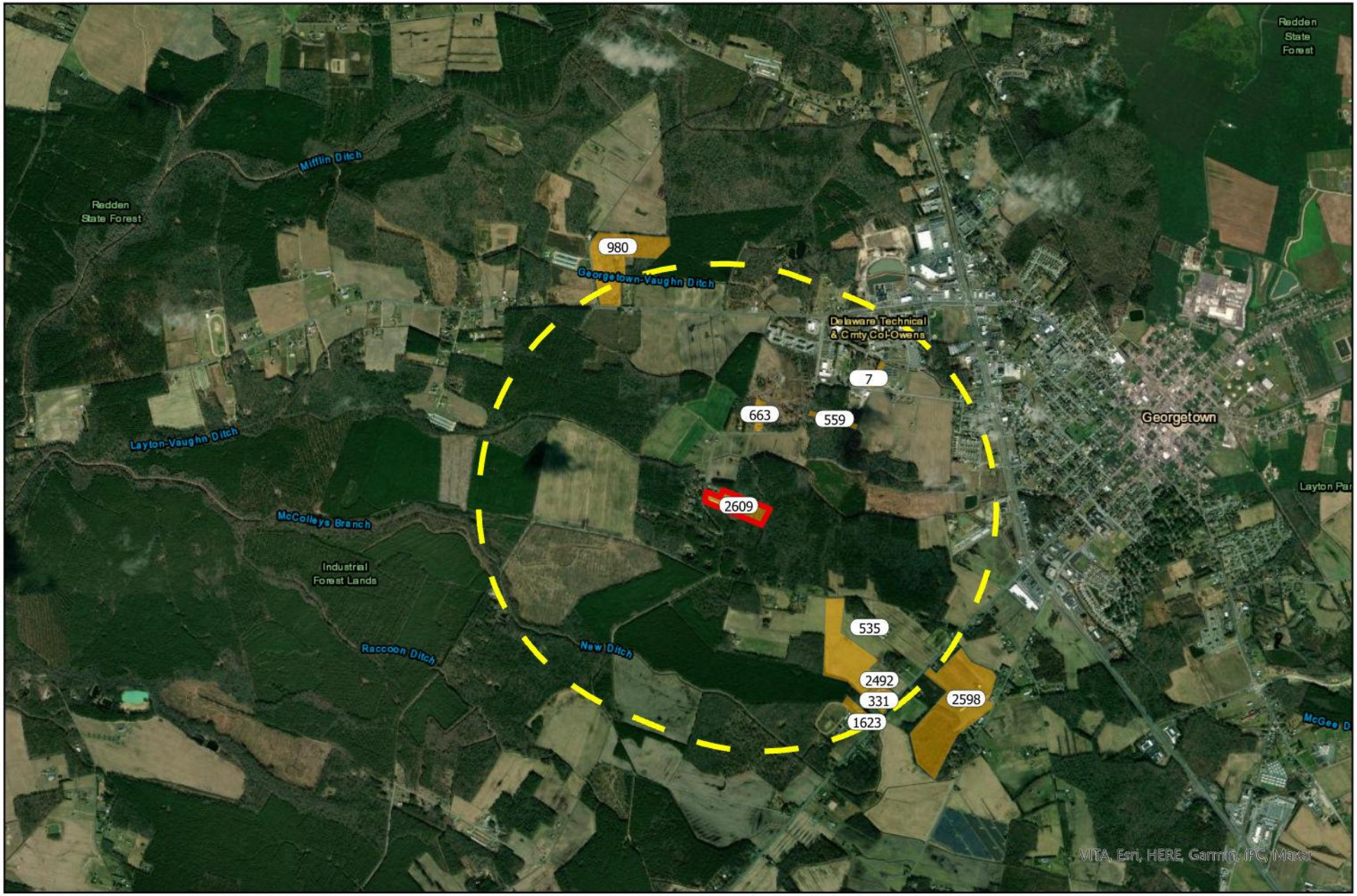
Zoning

- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

CU 2609 Walter Gonzalez Diaz
Zoning Map
TM# 135-19.00-16.22

N

0 0.5 1 2 Miles



CU 2609 Walter Gonzalez Diaz
Conditional Uses within 1 mile
TM# 135-19.00-16.22

CU 2609 Walter Gonzalez Diaz
CU2609 1-Mile Buffer
CU 2609 CU Vicinity Map

N

0 0.5 1 2 Miles

File #: C/U 2609
20251099

RECEIVED
Processed Application
AUG 15 2025
SUSSEX COUNTY
PLANNING & ZONING

Planning & Zoning Commission 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

RECEIVED
Incomplete Application
JUN 23 2025
SUSSEX COUNTY
PLANNING & ZONING

Type of Application: (please check applicable)
Conditional Use ✔
Zoning Map Amendment ___

Site Address of Conditional Use/Zoning Map Amendment

Vaughn Road, Georgetown, Delaware 19947

Type of Conditional Use Requested:
To operate a small auto repair shop.

Tax Map #: 135-19.00-16.22 **Size of Parcel(s):** 13.5 Acre

Current Zoning: AR-1 **Proposed Zoning:** AR-1 **Size of Building:** 2,500 Sqft.

Land Use Classification: AH2-AH2 / 103-Mobile Home / Low Density

Water Provider: Residential Water Well **Sewer Provider:** Residential Sewer

Applicant Information

Applicant Name: Walter Gonzalez Diaz
Applicant Address: 22027 Vaughn Road
City: Georgetown State: DE ZipCode: 19947
Phone #: (302) 727-9347 E-mail: waltergonzales2345@gmail.com
Contact for Applicant Alma Torres P) 302-422-2600, alma@tmsfastax.com

Owner Information

Owner Name: Walter Gonzalez Diaz
Owner Address: 22027 Vaughn Road,
City: Georgetown State: DE Zip Code: 19947
Phone #: (302) 727-9347 E-mail: waltergonzales2345@gmail.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Danny Perez
Agent/Attorney/Engineer Address: 320 NE Front Street
City: Milford State: DE Zip Code: 19963
Phone #: (302) 422-2600 E-mail: rai@tmsfastax.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✔ **Completed Application**

✔ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

___ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✔ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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: 06/16/2025

Signature of Owner

_____ Date: 6/16/25

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

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

RECEIVED
JUN 23 2025
SUSSEX COUNTY
PLANNING & ZONING

January 22, 2025

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Walter Gonzalez Diaz (22027 Vaughn Road, Georgetown, Delaware 19947)** proposed land use application, which we received on January 09, 2025. This application is for an approximate 13.5-acre parcel (Tax Parcel: 135-19.00-16.22). The parcel is located on the east side of Vaughn Road (Sussex County Road 520) and approximately 1,815 feet north from the intersection of Asbury Road (Sussex County Road 446) and Vaughn Road. The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a conditional use approval to build a 2,500 square foot Auto Repair Shop on portion of an existing 21,976 square foot building.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Vaughn Road, where the subject land is located, which is from Seashore Highway (Delaware Route 18) to Asbury Road, is 1,642 vehicles per day.

Based on our review (ITE Trip Generation Manual 11th Edition, LUC 942 / GFA 2.5), we estimate that the above land use will generate fewer than 50 vehicle trips per day. This number of trips is below DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. DelDOT's regulations specify the minimum TIS warrants as 50 vehicle trips in any hour and/or 500 vehicle trips per day. Because the proposed land use would generate fewer than 50 vehicle trips per day, we consider the development's traffic impact to be **diminutive** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as diminutive with regard to warranting a TIS does not mean that it is diminutive in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

DelDOT

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Tijah Jones, at tijah.jones@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Group Manager
Development Coordination

SAM:tjm
cc: Walter Gonzalez Diaz, Applicant
Ashley Paugh, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
James Argo, South District Project Reviewer
Tara Summers-Strong, South District Public Works Admin.
Todd Sammons, Assistant Director, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination
Kevin Hickman, Sussex Subdivision Reviewer, Development Coordination
Derek Sapp, Sussex Subdivision Engineer, Development Coordination
Thomas Gagnon, Sussex Subdivision Engineer, Development Coordination
José Quixtan, Sussex Subdivision Engineer, Development Coordination
Annamaria Furmato, TIS Group Engineer, Development Coordination
Ben Fisher, TIS Group Engineer, Development Coordination
Tijah Jones, TIS Group Engineer, Development Coordination

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

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **9/21/2026**

APPLICATION: **CU 2609 Walter Gonzalez Diaz**

APPLICANT: **Walter Gonzalez Diaz**

FILE NO: **WSPA-5.02**

TAX MAP & PARCEL(S): **135-19.00-16.22**

LOCATION: **Lying on the east side of Vaughn Road (SCR 520), approximately 0.35 mile north of Asbury Road (SCR 446).**

NO. OF UNITS: **Auto Repair Business**

GROSS ACREAGE: **13.53 +/-**

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

SEWER:

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

Yes ☐ No ☒

a. If yes, see question (2).
b. If no, see question (7).

(2). Which County Tier Area is project in? **Tier 4**

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

(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? Is it likely that additional SCCs will be required? **No**
If yes, the current System Connection Charge Rate is **Unified $10,700.00** 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? **No**

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

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

(8). Comments: **The proposed Conditional Use is not located in an area where the Sussex County Engineering Department has a schedule to provide sanitary sewer and/or water.**

(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**

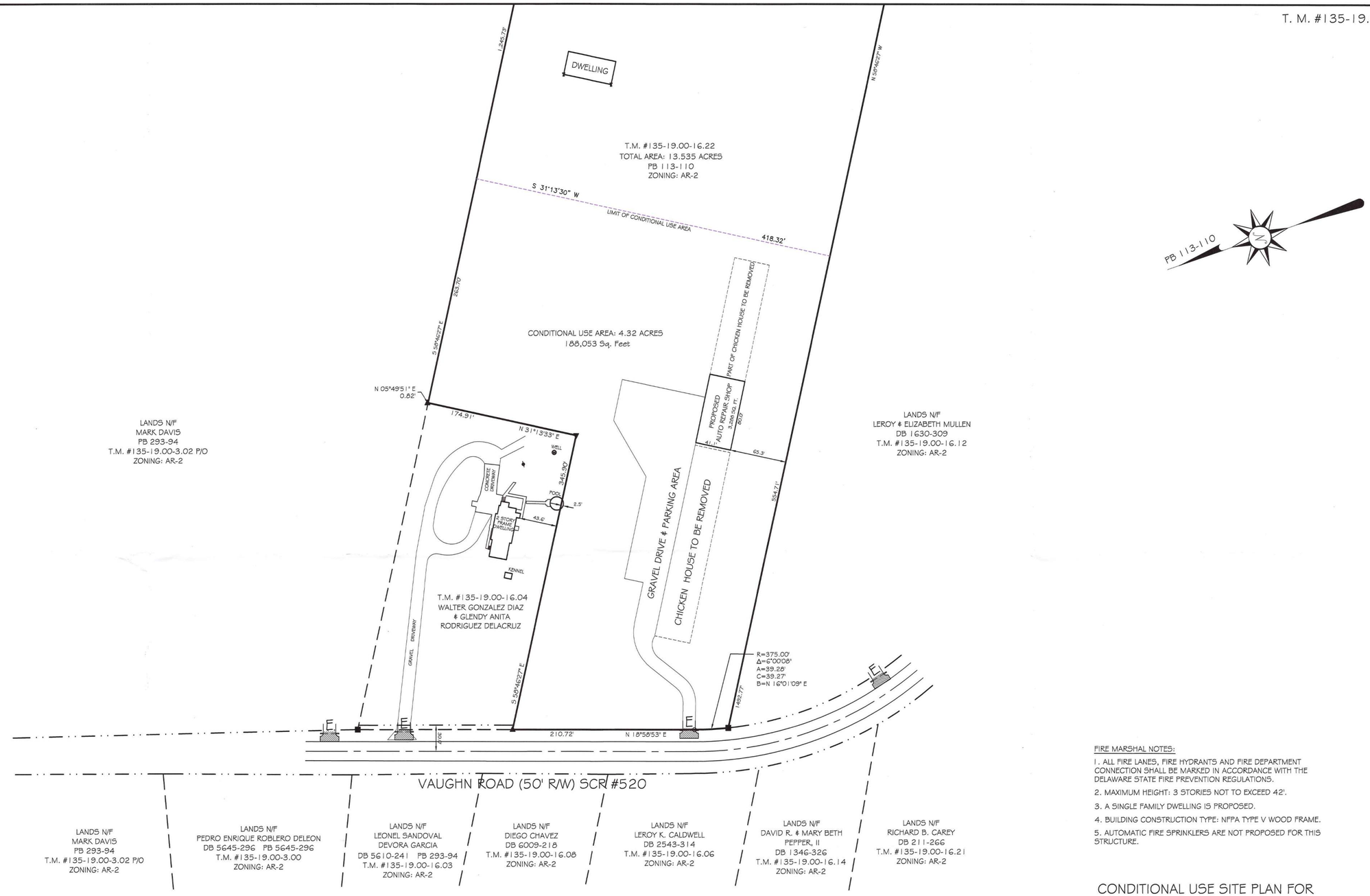
(11). **All residential roads must meet or exceed Sussex County minimum design standards.**

UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
No Permit Tech Assigned

T. M. #135-19.00-16.22



FIRE MARSHAL NOTES:

1. ALL FIRE LANES, FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTION SHALL BE MARKED IN ACCORDANCE WITH THE DELAWARE STATE FIRE PREVENTION REGULATIONS.
2. MAXIMUM HEIGHT: 3 STORIES NOT TO EXCEED 42'.
3. A SINGLE FAMILY DWELLING IS PROPOSED.
4. BUILDING CONSTRUCTION TYPE: NFPA TYPE V WOOD FRAME.
5. AUTOMATIC FIRE SPRINKLERS ARE NOT PROPOSED FOR THIS STRUCTURE.

DATA COLUMN:

T.M. #135-19.00-16.04
PURPOSE: CONDITIONAL USE-MARKET
BUILDING SETBACKS:
FRONT: 30 FEET
SIDE: 15 FEET
REAR: 20 FEET
AREA AFFECTED BY CONDITIONAL USE:
TRACT AREA: 1.465 ACRES±
PRESENT USE: RESIDENTIAL
PROPOSED USE: MARKET/RESIDENTIAL
ACCESS: S.C.R. #520 (VAUGHN ROAD)
ROADWAY CLASSIFICATION: LOCAL ROAD
WATER AND SEWER: INDIVIDUAL ON-SITE
EXISTING ENTRANCE: GRAVEL DRIVEWAY

LEGEND

- ■ CONCRETE MONUMENT (FOUND)
- ● IRON PIPE (FOUND)
- ⊙ POINT
- E EXISTING ENTRANCE
- UTILITY POLE
- MAILBOX
- PHONE PULL BOX

0 100 200 300

SCALE: 1" = 60'

OTHER THAN SHOWN, THIS SURVEY AND PLAT DOES NOT VERIFY THE EXISTENCE OR NON-EXISTENCE OF RIGHTS-OF-WAY OR EASEMENTS CROSSING THIS PROPERTY.
NO TITLE SEARCH PROVIDED OR STIPULATED.

SURVEY CLASS: RURAL

I, DONALD K. MILLER REGISTERED AS A PROFESSIONAL LAND SURVEYOR IN THE STATE OF DELAWARE, HEREBY STATE THAT THE INFORMATION SHOWN ON THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND MEETS THE STANDARDS OF PRACTICE AS ESTABLISHED BY THE STATE OF DELAWARE BOARD OF PROFESSIONAL LAND SURVEYORS. ANY CHANGES TO THE PROPERTY CONDITIONS, IMPROVEMENTS, BOUNDARY OR PROPERTY CORNERS AFTER THE DATE SHOWN HEREON SHALL NECESSITATE A NEW REVIEW AND CERTIFICATION FOR ANY OFFICIAL OR LEGAL USE.

D.K. Mill — 8/8/25

DONALD K. MILLER, PLS 407 — DATE

CONDITIONAL USE SITE PLAN FOR

WALTER GONZALEZ DIAZ & GLENDY ANITA RODRIGUEZ DELACRUZ

22027 VAUGHN ROAD, GEORGETOWN, DE 19947

MILLER LEWIS, INC.
LAND SURVEYING
1560 MIDDLEFORD RD.
SEAFORD, DELAWARE 19973
PH: 302-629-9895 FAX: 302-629-2391

DONALD K. MILLER — REGISTERED — No. 407 — PROFESSIONAL LAND SURVEYOR — DELAWARE

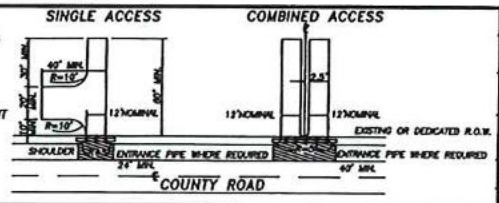
D.K. Mill

JULY 2025

HUNDRED: GEORGETOWN	COUNTY: SUSSEX
STATE: DELAWARE	DRAWN BY: D.K. MILLER
REF.: DB 4793-337	FILE: GONZALEZ DIAZ 135-19-16.04

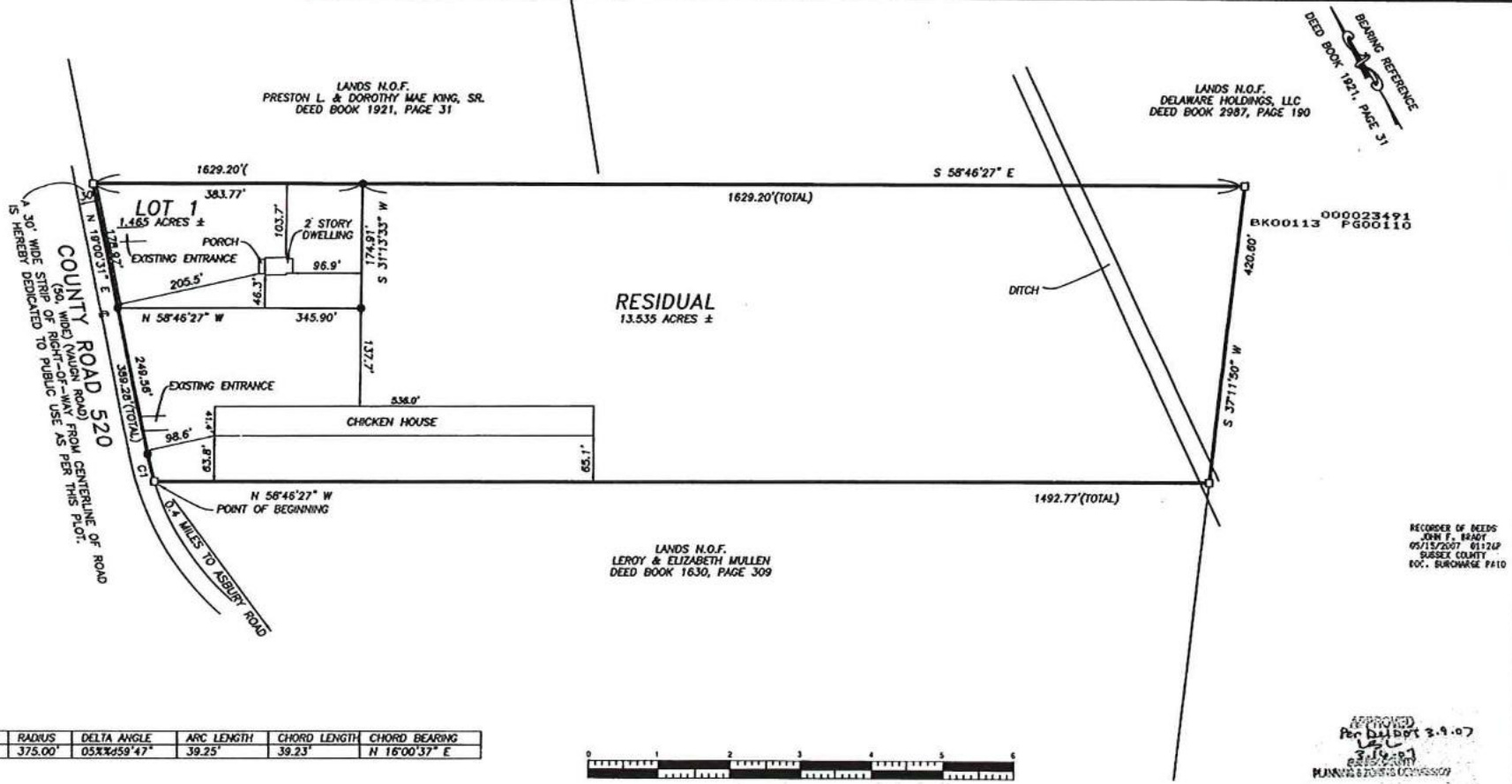
TAX MAP NO. 1-35-19.00,, PARCEL 16.04

1) WHERE DRIVEWAY SERVES TWO ADJACENT RESIDENCES (COMBINED DRIVEWAY ACCESS), THE DRIVEWAY WIDTH AT THE RIGHT OF WAY WILL BE 29 FEET.
2) DRIVEWAY WIDTHS MAY BE INCREASED WITH DIVISION OF HIGHWAYS APPROVAL FOR SPECIAL PURPOSE VEHICLES (i.e. FARM VEHICLES, ETC.).
3) ENTRANCE PIPE FURNISHED BY THE PROPERTY OWNER WILL BE INSTALLED BY THE DIVISION OF HIGHWAYS ON REQUEST.
4) MINIMUM RESIDENTIAL PAVEMENT SECTION – BITUMINOUS SURFACE TREATMENT ON 6" SELECT BORROW BASE COURSE.
5) ACCESS TO RESIDENTIAL LOTS SHALL BE LIMITED TO ONE ACCESS POINT.



TYPICAL RESIDENTIAL ACCESS:

LOCATION MAP: SCALE: 1"=1MILE



CURVE	RADIUS	DELTA ANGLE	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	375.00'	05°59'47"	39.25'	39.23'	N 16°00'37" E

0 1 2 3 4 5 6

NOTES:

1) CLASS "B", SUBURBAN SURVEY.
2) RESIDUAL FRONTAGE – 288.81'
3) RESIDUAL AREA – 13.535 ACRES ±
4) OWNER: HOWARD S. & WANDA J. HASTINGS
12405 MIREY BRANCH ROAD
LAUREL, DE 19956
5) IF THE RESIDUAL LANDS OF HOWARD S. & WANDA J. HASTINGS ARE EVER DEVELOPED AS A SUBDIVISION, THEN THESE LOTS MAY BE REQUIRED TO HAVE ACCESS FROM AN INTERNAL SUBDIVISION STREET AND ANY DIRECT ACCESS TO COUNTY ROAD 520 WILL BE ELIMINATED.

LEGEND:

● SET IRON BAR
□ FOUND CONCRETE MONUMENT

C. E. ADAMS JR. 506

PREPARED BY
ADAMS-KEMP ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS AND PLANNERS
217 SOUTH RACE STREET
GEORGETOWN, DELAWARE 19947

SUBDIVISION SURVEY PLAN

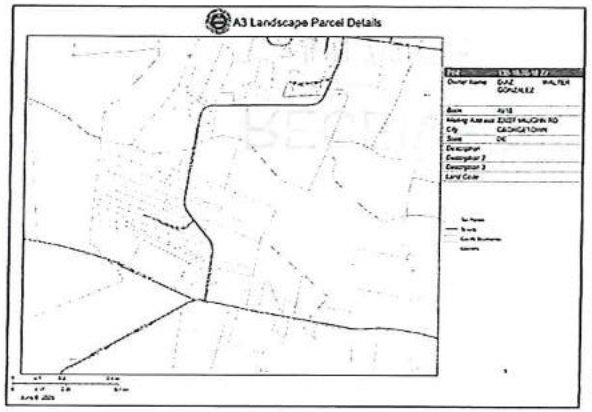
PREPARED FOR

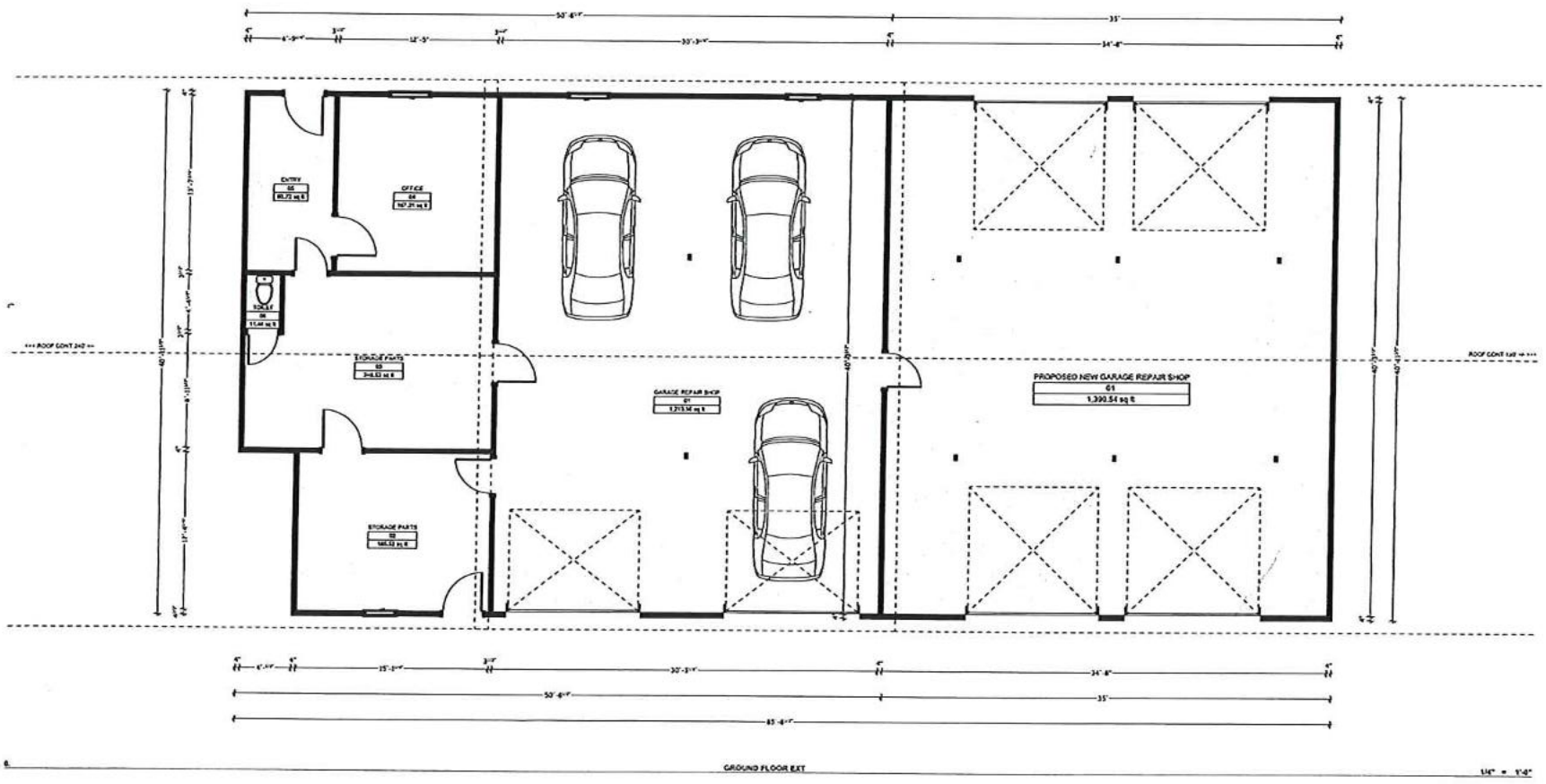
HOWARD S. & WANDA J. HASTINGS

SITUATED IN
GEORGETOWN HUNDRED, SUSSEX COUNTY, STATE OF DELAWARE
SCALE: 1" = 100'
DATE: FEBRUARY 9, 2007

PLAN NO. 930425-C-2

ZONES		
Zone Category	Measured Net Area	2D Plan Preview
EXISTENT PLAN	1,917.08	
PROPOSED PLAN	1,390.54	
	3,307.62 ft²	





Layout ID
02.14

Layout Name
EXISTENT PROPOSED BUILDING

Drawing Scale
1/4" = 1'-0", 1" = 1'-0", 1:1.67

Drawing ID
R. SCHEDULE

Date
6/9/2025

Drawn by
Leandro Viola

PRO BUILDERS
probuildersonline@gmail.com

Project Adress

Project name
GARAGE REPAIR SHOP

23537

BK: 4910 PG: 232

RECEIVED

JUN 2 3 2025

SUSSEX COUNTY
PLANNING & ZONING

Commitment Number: 170417653
Seller's Loan Number: 7601098060

After Recording Return To:
~~ServiceLink, LLC~~ Haller & Hudson
~~1400 Cherrington Parkway~~ 101 S. Bedford St.
~~Moon Township, PA 15108~~ Georgetown DE 19947

PROPERTY APPRAISAL (TAX/APN) PARCEL IDENTIFICATION NUMBER
1-35-19.00-16.04 and 1-35-19.00-16.22

This instrument prepared by:
Brian T. Murray, 903 South College Avenue, Newark, Delaware 19713, Delaware Bar Number: 2485.

SPECIAL/LIMITED WARRANTY DEED

U.S. BANK NATIONAL ASSOCIATION, NOT IN ITS INDIVIDUAL CAPACITY, BUT SOLELY AS TRUSTEE FOR THE RMAC TRUST, SERIES 2016-CTT, whose mailing address is **15480 Laguna Canyon Rd Ste 100, Irvine, CA 92618**, hereinafter grantor, for $112,100.00 (One Hundred Twelve Thousand One Hundred Dollars and Zero Cents) in consideration paid, grants with covenants of special warranty to **WALTER GONZALEZ DIAZ** and **GLENDY ANITA RODRIGUEZ DELACRUZ**, husband and wife, hereinafter grantees, whose tax mailing address is **22027 VAUGHN RD, GEORGETOWN, DE 19947**, the following real property:

ALL THAT CERTAIN PIECE, PARCEL OF LAND SITUATED IN GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A CONCRETE MONUMENT FOUND SITUATED ON THE EASTERLY RIGHT-OF-WAY OF SUSSEX COUNTY ROAD 520, SAID MARKER BEING APPROXIMATELY 1,846 FEET NORTH OF SUSSEX COUNTY ROAD 446; THENCE CONTINUING WITH THE SAID RIGHT-OF-WAY AND A CURVE TO THE RIGHT DESCRIBED AS FOLLOWS: ARC DISTANCE EQUALS 39.25 FEET, RADIUS EQUALS 375.00 FEET, DELTA EQUALS 05 DEG. 59 MIN. 48 SEC., AND A CHORD NORTH 16 DEG. 00 MIN. 53 SEC. EAST 39.24 FEET TO A POINT OF TANGENCY; THENCE CONTINUING WITH SAID RIGHT-OF-WAY NORTH 19 DEG. 31 SEC. EAST 389.28 FEET TO A CONCRETE MONUMENT FOUND; THENCE WITH THE LANDS OF P. KING AND CONTINENTAL

JH JH

BROADCASTING, INC. SOUTH 58 DEG. 46 MIN. 27 SEC. EAST 1,329.50 FEET TO A CONCRETE MONUMENT FOUND; THENCE CONTINUING WITH THE SAID CONTINENTAL LANDS SOUTH 37 DEG. 11 MIN. 50 SEC. WEST 420.60 FEET TO A POINT; THENCE WITH THE LANDS OF F.L. MULLEN, NORTH 58 DEG. 46 MIN. 27 SEC. WEST 1,492.77 FEET TO THE PLACE OF BEGINNING, SAID TO CONTAIN 15.00 ACRES OF LAND, MORE OR LESS, WITH ALL IMPROVEMENTS THEREON AS SURVEYED BY ADAMS-KEMP ASSOCIATES, INC., REGISTERED LAND SURVEYORS, ON MAY 3, 1993.
Property Address is: 22027 VAUGHN RD, GEORGETOWN, DE 19947

BEING the same land conveyed unto **U.S. BANK NATIONAL ASSOCIATION, NOT IN ITS INDIVIDUAL CAPACITY, BUT SOLELY AS TRUSTEE FOR THE RMAC TRUST, SERIES 2016-CTT** by Deed of **SHERIFF'S DEED LEV. FAC.** dated **10/25/2017** and filed for record in the Office of the Recorder of Deeds, in and for **SUSSEX** County, Delaware in Deed Book **4793**, Page **337**.

Seller makes no representations or warranties, of any kind or nature whatsoever, other than those set out above, whether expressed, implied, implied by law, or otherwise, concerning the condition of the title of the property.

The real property described above is conveyed subject to the following: All easements, covenants, conditions and restrictions of record; All legal highways; Zoning, building and other laws, ordinances and regulations; Real estate taxes and assessments not yet due and payable; Rights of tenants in possession.

TO HAVE AND TO HOLD the same together with all and singular the appurtenances thereunto belonging or in anywise appertaining, and all the estate, right, title interest, lien equity and claim whatsoever of the said grantor, either in law or equity, to the only proper use, benefit and behalf of the grantees forever.

RECEIVED
Jun 29,2018
ASSESSMENT DIVISION
OF SUSSEX COUNTY

Consideration: 112,100.00

County		840.75
State		2,802.50
Town	Total	3,643.25

Received: Mary W Jun 29,2018

BK: 4910 PG: 234

Executed by the undersigned on June 26, 2018:

U.S. BANK NATIONAL ASSOCIATION, NOT IN ITS INDIVIDUAL CAPACITY, BUT SOLELY AS TRUSTEE FOR THE RMAC TRUST, SERIES 2016-CTT, by Rushmore Loan Management Services LLC, Appointed As Attorney In Fact

By: _____

Name: Susan Christy

Assistant Vice President

Its: _____

7601898060

Witness Grantor's hand this 26th day of June 2018.

Signed, Sealed and Delivered
in the presence of these Witnesses

Gena K. Hollowell — Gena K. Hollowell

Witness (signature on above line)	Printed Name
	Ashley Glanton
Witness (signature on above line)	Printed Name

STATE OF Texas
COUNTY OF Dallas

The foregoing instrument was acknowledged before me on June 26, 2018 by Susan Christy its _____ on behalf of **U.S. BANK NATIONAL ASSOCIATION, NOT IN ITS INDIVIDUAL CAPACITY, BUT SOLELY AS TRUSTEE FOR THE RMAC TRUST, SERIES 2016-CTT, by Rushmore Loan Management Services LLC, Appointed As Attorney In Fact** who is personally known to me or has produced _____ as identification, and furthermore, the aforementioned person has acknowledged that his/her signature was his/her free and voluntary act for the purposes set forth in this instrument.

Kyra Gaddy
Notary Public

KYRA GADDY
Notary Public, State of Texas
Comm. Expires 08-20-2021
Notary ID 131179393

Recorder of Deeds
Scott Dailey
Jun 29,2018 09:17A
Sussex County
Doc. Surcharge Paid

23537

BK: 4910 PG: 232

Commitment Number: 170417653
Seller's Loan Number: 7601098060

After Recording Return To:
~~ServiceLink, LLC~~ Haller & Hudson
~~1400 Cherrington Parkway~~ 101 S. Bedford St.
~~Moon Township, PA 15108~~ Georgetown DE 19947

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1-35-19.00-16.04 and 1-35-19.00-16.22

This instrument prepared by:
Brian T. Murray, 903 South College Avenue, Newark, Delaware 19713, Delaware Bar Number: 2485.

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ALL THAT CERTAIN PIECE, PARCEL OF LAND SITUATED IN GEORGETOWN HUNDRED, SUSSEX COUNTY, DELAWARE, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A CONCRETE MONUMENT FOUND SITUATED ON THE EASTERLY RIGHT-OF-WAY OF SUSSEX COUNTY ROAD 520, SAID MARKER BEING APPROXIMATELY 1,846 FEET NORTH OF SUSSEX COUNTY ROAD 446; THENCE CONTINUING WITH THE SAID RIGHT-OF-WAY AND A CURVE TO THE RIGHT DESCRIBED AS FOLLOWS: ARC DISTANCE EQUALS 39.25 FEET, RADIUS EQUALS 375.00 FEET, DELTA EQUALS 05 DEG. 59 MIN. 48 SEC., AND A CHORD NORTH 16 DEG. 00 MIN. 53 SEC. EAST 39.24 FEET TO A POINT OF TANGENCY; THENCE CONTINUING WITH SAID RIGHT-OF-WAY NORTH 19 DEG. 31 SEC. EAST 389.28 FEET TO A CONCRETE MONUMENT FOUND; THENCE WITH THE LANDS OF P. KING AND CONTINENTAL

JH JH

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The real property described above is conveyed subject to the following: All easements, covenants, conditions and restrictions of record; All legal highways; Zoning, building and other laws, ordinances and regulations; Real estate taxes and assessments not yet due and payable; Rights of tenants in possession.

TO HAVE AND TO HOLD the same together with all and singular the appurtenances thereunto belonging or in anywise appertaining, and all the estate, right, title interest, lien equity and claim whatsoever of the said grantor, either in law or equity, to the only proper use, benefit and behalf of the grantees forever.

RECEIVED
Jun 29,2018
ASSESSMENT DIVISION
OF SUSSEX COUNTY

Consideration: 112,100.00

County		840.75
State		2,802.50
Town	Total	3,643.25

Received: Mary W Jun 29,2018

BK: 4910 PG: 234

Executed by the undersigned on June 26, 2018:

U.S. BANK NATIONAL ASSOCIATION, NOT IN ITS INDIVIDUAL CAPACITY, BUT SOLELY AS TRUSTEE FOR THE RMAC TRUST, SERIES 2016-CTT, by Rushmore Loan Management Services LLC, Appointed As Attorney In Fact

By: _____

Name: Susan Christy

Its: Assistant Vice President

7601898060

Witness Grantor's hand this 26th day of June 2018.

Signed, Sealed and Delivered
in the presence of these Witnesses

Gena K. Hollowell — Gena K. Hollowell

Witness (signature on above line)	Printed Name
	Ashley Glanton
Witness (signature on above line)	Printed Name

STATE OF Texas
COUNTY OF Dallas

The foregoing instrument was acknowledged before me on June 26, 2018 by Susan Christy its _____ on behalf of **U.S. BANK NATIONAL ASSOCIATION, NOT IN ITS INDIVIDUAL CAPACITY, BUT SOLELY AS TRUSTEE FOR THE RMAC TRUST, SERIES 2016-CTT, by Rushmore Loan Management Services LLC, Appointed As Attorney In Fact** who is personally known to me or has produced _____ as identification, and furthermore, the aforementioned person has acknowledged that his/her signature was his/her free and voluntary act for the purposes set forth in this instrument.

Kyra Gaddy
Notary Public

KYRA GADDY
Notary Public, State of Texas
Comm. Expires 08-20-2021
Notary ID 131179393

Recorder of Deeds
Scott Dailey
Jun 29,2018 09:17A
Sussex County
Doc. Surcharge Paid

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR
(302) 855-7878
jamie.whitehouse@sussexcountyde.gov

Sussex County
DELAWARE
sussexcountyde.gov

Memorandum

To: Sussex County Planning and Zoning Commission Members
From: Ann Lepore, Planner I
CC: Mr. Vince Robertson, Assistant County Attorney and Applicant
Date: September 23, 2026
RE: Staff Analysis for C/Z 2051 Arctec Properties, LLC

The purpose of this memo is to provide background and analysis for the Planning and Zoning Commission to consider as a part of Application C/Z 2051 Arctec Properties, LLC to be reviewed during the October 7, 2026, Planning and Zoning Commission Meeting. This analysis should be included in the record of this Application and is subject to comments and information that may be presented during the public hearing.

Please note that the following staff analysis is for informational purposes only and does not prejudice any decision that the Sussex County Planning & Zoning Commission or Sussex County Council may wish to make as part of any Application submitted to the Department.

Tax Parcel IDs: 530-17.00-9.00 & 10.00

Proposal: The request is for a Change of Zone for Tax Parcels 530-17.00-9.00 & 10.00 to allow for a change of zone from an Agricultural Residential (AR-1) District to a Medium Commercial (C-2) District. The properties are lying on the west side of Sussex Highway (Rt. 13), approximately 1.10 miles south of Adams Road (S.C.R. 583). The Parcels contain 8.99 acres +/-.

Zoning: The Parcels are zoned Agricultural Residential (AR-1) District. The adjacent parcels to the north, west and east are zoned Agricultural Residential (AR-1) District, the parcel to the south is zoned Heavy Industrial (HI-1) District.

Future Land Use Map Designation w/in Comprehensive Plan: Low Density Area

Comprehensive Plan Analysis: The 2018 Sussex County Comprehensive Plan Update (Comprehensive Plan) provides a framework of how land is to be developed. As part of the Comprehensive Plan, a Future Land Use Map is included to help determine how land should be zoned to ensure responsible development. The Future Land Use Map in the plan indicates that the parcel has a Growth Area designation of "Low Density Area." The adjoining parcels to the north, east, and west are also within the "Low Density Area". The adjoining parcel to the south has a Growth Area designation of "Industrial Area"

As outlined in the 2018 Sussex County Comprehensive Plan, Low Density Areas are areas that the County envisions as "a predominantly rural landscape where farming co-exists with appropriate residential uses and permanently preserved property" (Sussex County Comprehensive Plan, 4-18).

The Plan also notes that commercial uses "should be limited in their location, size and hours of operation" and "more intense commercial uses should be avoided" and commercial uses "may be appropriate depending on surrounding uses" (Sussex County Comprehensive Plan, 4-19).

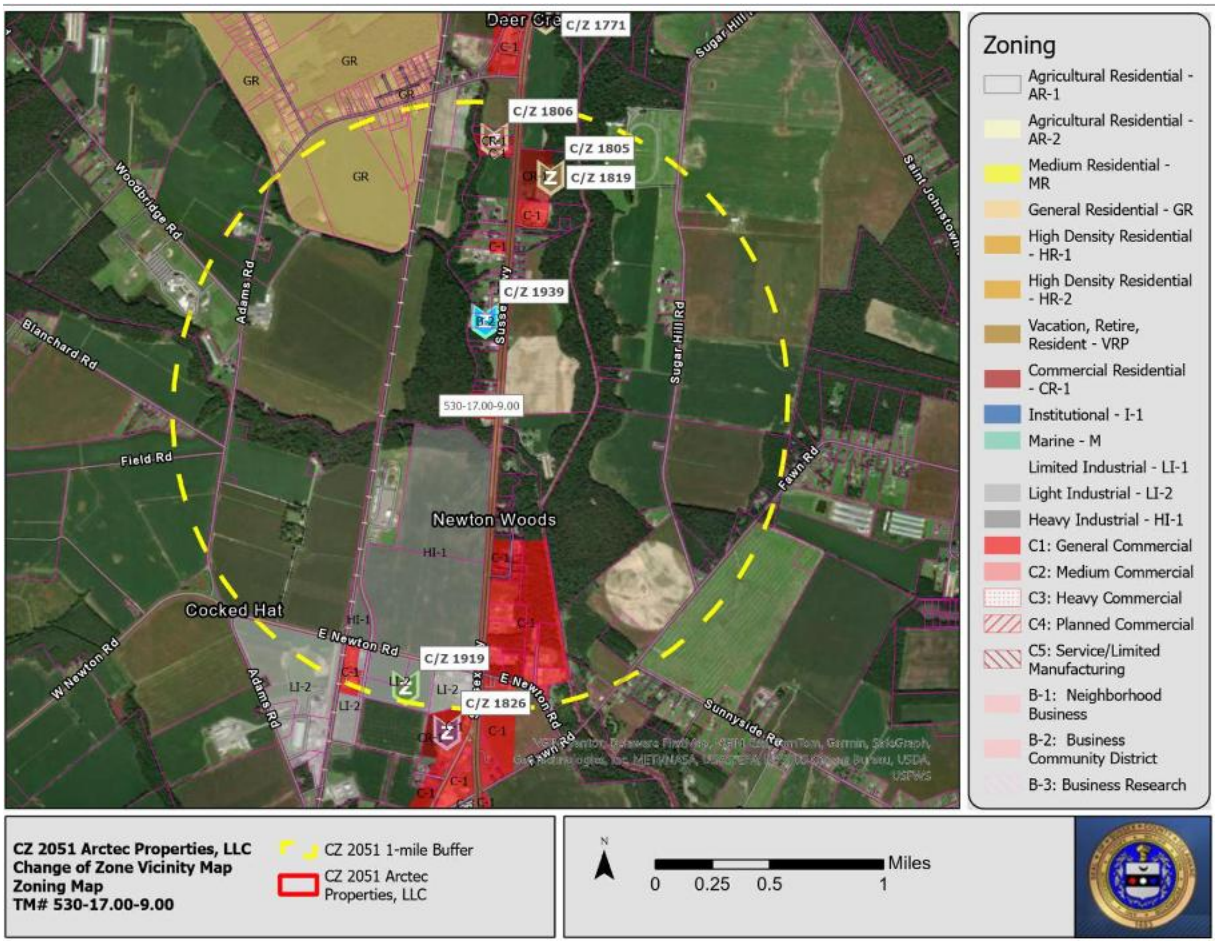
Further Site Considerations:

- **Density:** N/A
- **Open Space Provisions:** N/A
- **Agricultural Areas:** N/A
- **Interconnectivity:** N/A
- **Transportation Improvement District (TID):** The parcel is not within the Henlopen Transportation Improvement District.
- **Forested Areas:** N/A
- **Wetlands Buffers/Waterways:** N/A
- **Other Site Considerations (ie: Flood Zones, Tax Ditches, Groundwater Recharge Potential, etc.):** N/A

Existing Changes of Zone within the Vicinity of the Subject Site:

Staff notes that since 2011, there has been zero (8) Change of Zone Applications within a 1.0-mile radius of the Application Site.

CZ #	Applicant	Tax Map No.	Current Zoning	Proposed Zoning	CC Date	CC Decision
1771	B. Ray Investments, LLC	530-14.00-15.00	AR-1	CR-1	6/16/2015	Approved
1805	MTC Properties	530-14.00-24.00	AR-1	CR-1		Withdrawn
1806	WYWJ Ventures, LLC	530-14.00-21.00	AR-1	CR-1	10/4/2016	Approved
1819	MTC Properties, LLC	530-14.00-24.00 (P/O)	AR-1	CR-1	7/25/2017	Approved
1826	JKJ Properties, LLC	131-6.00-11.00 (P/O)	AR-1	CR-1	10/3/2017	Approved
1919	Newton Farms, LLC	131-6.00-8.00	C-1	LI-2	10/20/2020	Approved
1939	MARS-RE, LLC	134-1.00-191.00	AR-1	HR-2		Withdrawn
2051	Arctec Properties, LLC	530-17.00-9.00	AR-1	C-2		Pending



Based on the analysis of the land use, surrounding zoning and uses, a Change of Zone from Agricultural Residential (AR-1) District to Medium Commercial (C-2) District could be considered as being consistent with the land use, based on size and scale, with area zoning and surrounding uses.

PLANNING & ZONING COMMISSION
HOLLY J. WINGATE, CHAIR
JEFF ALLEN
G. SCOTT COLLINS
JOHN PASSWATERS
DAVID PETTYJOHN

Sussex County
DELAWARE
SUSSEXCOUNTYDE.GOV
302-855-7878

JAMIE WHITEHOUSE, AICP MRTPI
PLANNING & ZONING DIRECTOR

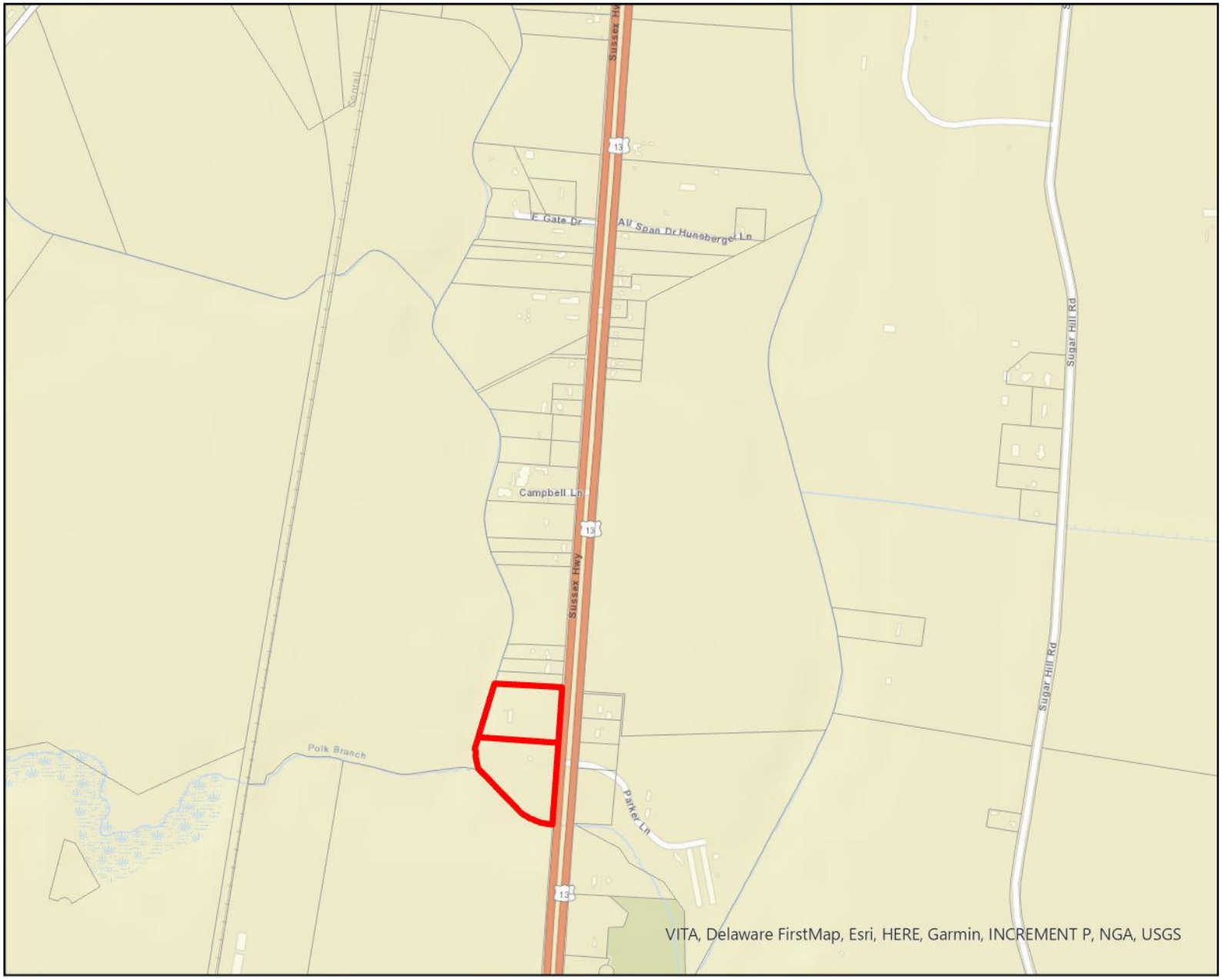
PLANNING AND ZONING AND COUNTY COUNCIL INFORMATION SHEET
Planning Commission Public Hearing Date: October 7, 2026
Sussex County Council Public Hearing Date: December 1, 2026

Application:	C/Z 2051 Arctec Properties, LLC
Applicant:	Arctec Properties, LLC 21965 Palomino Way Bridgeville, DE 19933
Owner:	Arctec Properties, LLC 21965 Palomino Way Bridgeville, DE 19933
Site Location:	Located on the west side of Sussex Highway (Rt. 13), approximately 1.10 miles south of Adams Road (S.C.R. 583).
Current Zoning:	Agricultural Residential (AR-1) Zoning District
Proposed Zoning:	Medium Commercial (C-2) Zoning District
Comprehensive Land Use Plan Reference:	Low Density
Councilmanic District:	District 2 – Mr. McCarron
School District:	Woodbridge School District
Fire District:	Bridgeville Fire Company
Sewer:	Private Septic
Water:	Private Well
Site Area:	8.985 acres +/-
Tax Map IDs:	530-17.00-9.00 & 10.00

CZ 2051 - Arctec Properties, LLC
Aerial Map
TM# 530-17.00-9.00 & 10.00

N

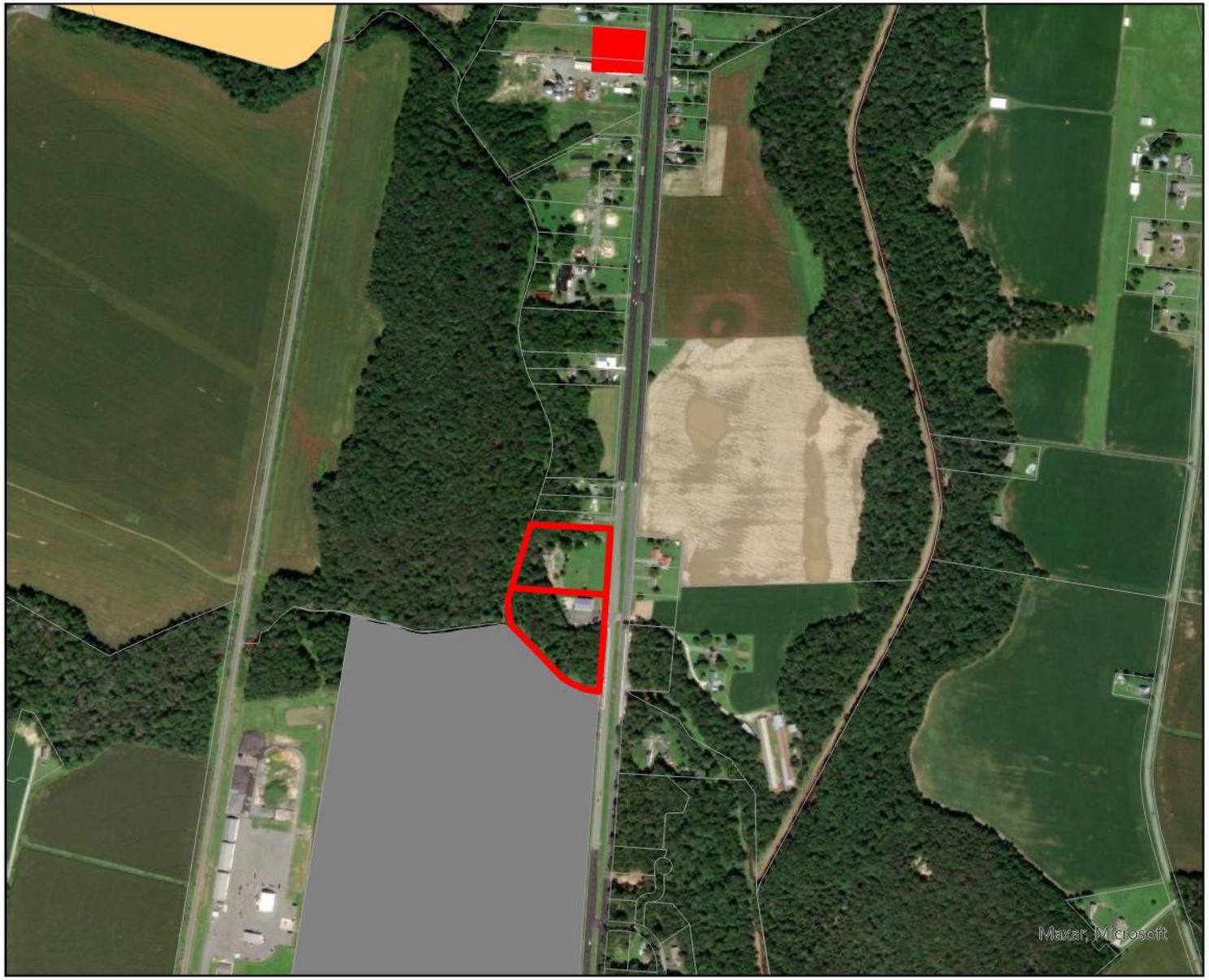
0 0.25 0.5 1 Miles



CZ 2051 - Arctec Properties, LLC
Street Map
TM# 530-17.00-9.00 & 10.00

N

0 0.25 0.5 1 Miles



CZ 2051 Artec Properties, LLC

Zoning

- Agricultural Residential - AR-1
- Agricultural Residential - AR-2
- Medium Residential - MR
- General Residential - GR
- High Density Residential - HR-1
- High Density Residential - HR-2
- Vacation, Retire, Resident - VRP
- Commercial Residential - CR-1
- Institutional - I-1
- Marine - M
- Limited Industrial - LI-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- C2: Medium Commercial
- C3: Heavy Commercial
- C4: Planned Commercial
- C5: Service/Limited Manufacturing
- B-1: Neighborhood Business
- B-2: Business Community District
- B-3: Business Research

CZ 2051 Artec Properties, LLC
Zoning Map
TM# 530-17.00-9.00

N

0 0.25 0.5 1 Miles

1700

File #: C/Z 2051

2025033165
2025033166

Planning & Zoning Commission 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)
Conditional Use ___
Zoning Map Amendment ✓

RECEIVED
MAR 17 2025
SUSSEX COUNTY
PLANNING & ZONING

Site Address of Conditional Use/Zoning Map Amendment
14910 Sussex Hwy., Bridgeville, DE 19933

Type of Conditional Use Requested:
Request Rezoning Change

Tax Map #: 530-17.00-9.00 & 10.00 **Size of Parcel(s):** 4.245 and 4.740 Acres

Current Zoning: AR-1 **Proposed Zoning:** C-2 **Size of Building:** 4 - 6,000 SF

Land Use Classification: ~~Medium Commercial District~~ Low Density

Water Provider: Private Well **Sewer Provider:** Private Septic

Applicant Information

Applicant Name: Arctec Properties, LLC
Applicant Address: 21965 Palomino Way
City: Harringtone State: DE ZipCode: 19933
Phone #: (302) 381-9571 E-mail: Jeremy@arctecair.com

Owner Information

Owner Name: Arctec Properties, LLC.
Owner Address: 21965 Palomino Way
City: Bridgeville State: DE Zip Code: 19933
Phone #: (302) 381-9571 E-mail: Jeremy@arctecair.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Siteworks Engineering, LLC.
Agent/Attorney/Engineer Address: P.O. Box 2, 39 Commerce St.
City: Harrington State: DE Zip Code: 19952
Phone #: (302) 542-0774 E-mail: edwin.tennefoss@siteworkseng.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✔ **Completed Application**

✔ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✔ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional Information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✔ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter (if required)**

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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

Edwin [signature] Date: 3/17/25

Signature of Owner

[signature] Date: 3/17/25

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

_____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

Sussex County Government
Treasury
2 The Circle, PO Box 601
Georgetown, DE 19947

03/21/2025 12:07PM Megan D.
33029187-0016 001175833

PERMITS / INSPECTIONS
2025 202503365|Z015 $1,000.00

$1,000.00

Subtotal $1,000.00
Total $1,000.00

CHECK $1,000.00
Check Number001755

Change due $0.00

Paid by: SITEWORKS ENGINEERING

Thank you for your payment.

CUSTOMER COPY

1755

3/14/2025

1,000.00

RECEIVED
MAR 17 2025
SUSSEX COUNTY
PLANNING & ZONING

Siteworks Engineering, LLC.

Sussex County Planning & Zoning

24-495 - Arctec Air

1,000.00

WSFS Checking 202503365

LETTER OF TRANSMITTAL

SITEWORKS
ENGINEERING LLC

PO Box 2
39 Commerce St
Harrington, DE 19952

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

DATE	3/14/25	JOB NO.	24-495
ATTENTION	Sussex County Planner		
RE:	Arctec Air Rezoning Application		

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

☐ Shop Drawings ☐ Prints ☒ Plans ☐ Samples ☐ Specifications

☐ Copy of Letter ☐ Change Order ☐ _____

p

LIST OF ITMS TRANSMITTED

COPIES	DATE	NO:	DESCRIPTION
	3/14/25	1	Rezoning Application
2	12/11/24	2	Arctec Air Survey/Site Plan
1	3/14/25	3	Application Fee
1	3/3/24	4	DelDOT Service Level Evaluation

RECEIVED
MAR 17 2025
SUSSEX COUNTY
PLANNING & ZONING

THESE ARE TRANSMITTED as checked below:

☒ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval

☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution

☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints

☐ For review and comment ☐ _____

☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

COPY TO _____

SIGNED: Edwin Tennefoss

Received by: _____

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

SHANTÉ A. HASTINGS
SECRETARY

March 03, 2025

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Siteworks Engineering LLC (14910 Sussex Highway, Bridgeville, Delaware 19933)** proposed land use application, which we received on February 03, 2025. This application is for an approximate 8.74-acre assemblage of parcels (Tax Parcels: 530-17.00-9.00, 10.00). The parcels are located on the west side of Sussex Highway (Delaware Route 13) and approximately 5,813 feet south from the intersection of Adams Road (Sussex County Road 583) and Sussex Highway. The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a conditional use approval to build 4 - 6,000 square foot buildings for HVAC Business and Warehouse Buildings.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Sussex Highway, where the subject land is located, which is from Cheer Lane to East Newton Road (Delaware Route 404), is 24,283 vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 150/GFA 24), we estimate that the above land use will generate fewer than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day. These numbers of trips are DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. Because the proposed land use would not meet these warrants, we consider the development's traffic impact to be **negligible** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as negligible with regard to warranting a TIS does not mean that it is negligible in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

The above-mentioned property is adjacent to US Route 13, making it subject to the Department's Corridor Capacity Preservation Program. The Program was established in

accordance with the provisions of Title 17, Section 145 of the Delaware Code. The main goal of the Program is to maintain the capacity of the existing highway by minimizing and consolidating the number of high densities, direct access points on the arterial highway. According to the Office of State Planning Coordination's Strategies for State Policies and Spending document, the property is located within a **Level 4 Investment Area**. In this area, State policies will encourage the preservation of a rural lifestyle and discourage new development. The Corridor Capacity Preservation Program policy can be viewed on the Department's website at Corridor Capacity Preservation Program - Delaware Department of Transportation (deldot.gov). The manual is located under the programs link. The applicant should contact Mr. Stephen Bayer, Planner Supervisor in DelDOT's Planning Regional Systems Section, at Stephen.Bayer@delaware.gov for information regarding the CCPP process.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Tijah Jones, at tijah.jones@delaware.gov, if you have questions concerning this correspondence.

Sincerely,

Sireen Muhtaseb, PE
TIS Engineer
Development Coordination

SM:tjm
cc: Siteworks Engineering LLC, Applicant
Ashley Paugh, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, M&O
James Argo, South District Project Reviewer, M&O
Tara Summers-Strong, South District Public Works Admin.
Todd Sammons, Assistant Director, Development Coordination, Planning
John Pietrobono, Acting Sussex Review Coordinator, Dev Coordination, Planning
Kevin Hickman, Sussex Reviewer, Development Coordination, Planning
Derek Sapp, Sussex Review Engineer, Development Coordination, Planning
Thomas Gagnon, Sussex Review Engineer, Development Coordination, Planning
José Quixtan, Sussex Review Engineer, Development Coordination, Planning
Annamaria Furmato, TIS Review Engineer, Development Coordination, Planning
Ben Fisher, TIS Review Engineer, Development Coordination, Planning
Tijah Jones, TIS Review Engineer, Development Coordination, Planning

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

TO: **Jamie Whitehouse**

REVIEWER: **Chris Calio**

DATE: **9/21/2026**

APPLICATION: **CZ 2051 Arctec Properties, LLC**

APPLICANT: **Arctec Properties, LLC**

FILE NO: **WSPA-5.02**

TAX MAP & PARCEL(S): **530-17.00-9.00 & 10.00**

LOCATION: **Lying on the west side of Sussex Highway (Rt. 13), approximately 1.10 miles south of Adams Road (SCR 583).**

NO. OF UNITS: **Upzone from AR-1 to C-2**

GROSS ACREAGE: **8.985 +/-**

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

SEWER:

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

Yes ☐ No ☒

a. If yes, see question (2).
b. If no, see question (7).

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

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

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

(5). Are there any System Connection Charge (SCC) credits for the project? **No** If yes, how many? Is it likely that additional SCCs will be required? **No**
If yes, the current System Connection Charge Rate is **Unified $10,700.00** 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 Change of Zone is not located in an area where the Sussex County Engineering Department has a schedule to provide sanitary sewer and/or water.**

(9). Is a Sewer System Concept Evaluation required? **Not at this time**

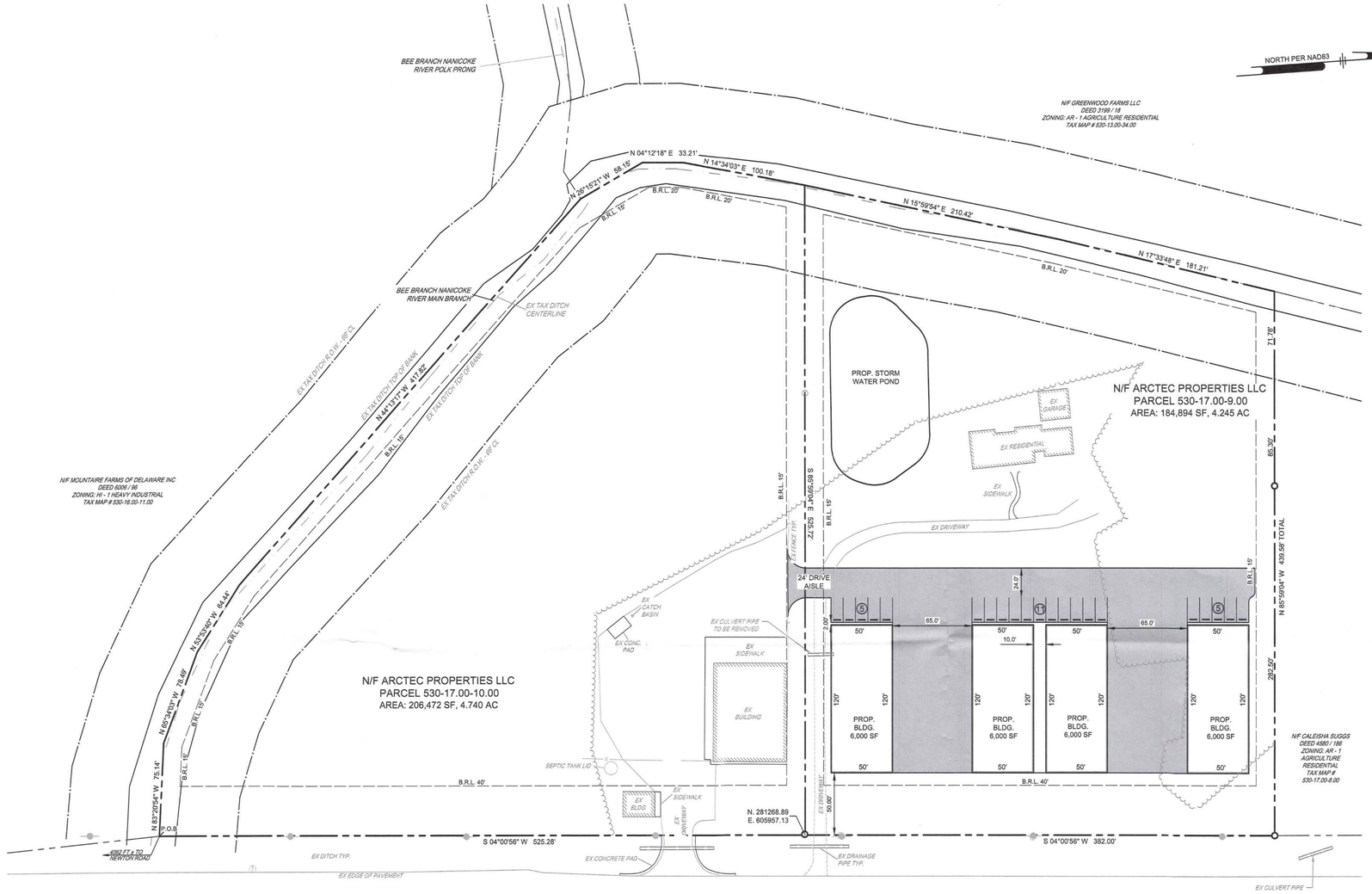
(10). Is a Use of Existing Infrastructure Agreement Required? **Not at this time**

(11). **All residential roads must meet or exceed Sussex County minimum design standards.**

UTILITY PLANNING & DESIGN REVIEW APPROVAL:

John J. Ashman
Director of Utility Planning & Design Review

Xc: Mike Harmer, P.E.
Christine Fletcher
No Permit Tech Assigned



SITE DATA:

1.	TAX MAP NUMBER	530-17.00-9.00 & 10.00
2.	OWNER	ARCTEC PROPERTIES, LLC. 21965 PALOMINO WAY, BRIDGEVILLE, DE 19933
3.	GROSS AREA / NET DEVELOPMENT AREA TAX PARCEL 530-17.00-9.00 TAX PARCEL 530-17.00-10.00 TOTAL	 184,894 SF, 4.245 AC 206,472 SF, 4.740 AC 919,366 SF, 8.985 AC
4.	EXISTING & PROPOSED LOTS:	2 EXISTING - 2 PROPOSED
5.	DEVELOPER NAME:	ARCTEC PROPERTIES, LLC.
6.	PROPERTY ADDRESS:	14910 SUSSEX HIGHWAY, BRIDGEVILLE, DE 19933
7.	GOVERNMENTAL ENTITY RESPONSIBLE FOR LAND USE APPROVAL:	SUSSEX COUNTY
8.	HUNDRED/COUNTY:	NORTHWEST FORK HUNDRED / SUSSEX COUNTY
9.	ZONING:	AR-1 (AGRICULTURAL RESIDENTIAL)
10.	PRESENT USE:	RESIDENTIAL / COMMERCIAL
11.	PROPOSED USE:	RESIDENTIAL / COMMERCIAL
12.	GROSS BUILDING AREA:	COMMERCIAL: 24,000 SF PROPOSED EXISTING RESIDENTIAL: 2,784 SF EXISTING 26,784 SF TOTAL
13.	REQUIRED B.R.L.:	FRONT: 40-FEET SIDE: 15-FEET REAR: 20-FEET
14.	MAXIMUM HEIGHT REQUIREMENT: PROPOSED HEIGHT:	42-FEET <35-FEET
15.	REQUIRED PARKING	(3,200 S.F. OFFICE) (1 SP/200 SF) = 16 SPACES
16.	WATER SUPPLIER:	ON SITE WELL
17.	SANITARY SEWER PROVIDER:	ON-SITE SEPTIC
18.	PROJECT DATUM HORIZONTAL: VERTICAL:	 NAD 83 NAVD88
19.	FEMA FLOOD MAP: PER FEMA FLOOD MAP 10005C0115K EFFECTIVE 3/16/2015, THE SITE IS LOCATED PARTLY WITHIN ZONE A (WITHOUT BASE FLOOD ELEVATION)	
20.	POSTED SPEED LIMIT FOR SUSSEX HWY (HWY13):	55 MPH
21.	2020 STATE INVESTMENT AREA:	LEVEL 4
22.	LATITUDE AND LONGITUDE STATE PLAN COORDINATES: LATITUDE: N 28°12'68.89" LONGITUDE: W 60°59'0957.13"	
23.	PROPOSED DISCHARGE LOCATION:	ON-SITE STORM-WATER POND
24.	PROXIMITY TO T.I.D.:	APPROX. 25.9 MILES EAST FROM MILTON T.I.D.
25.	LIMIT OF DISTURBANCE:	1.94 ACRES
26.	WATERSHED:	NANTICOKE RIVER
27.	IMPERVIOUS AREA (PERCENT OF SITE):	14.5%

NOTES:

1. SOURCE OF TITLE: DEED 4859 / 83, 6054 / 292
2. LEVEL OF ACCURACY IS BASED ON "SUBURBAN SURVEY" STANDARDS
3. THIS BOUNDARY SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT AND IS SUBJECT TO ANY ENCUMBRANCES, RESTRICTIONS, EASEMENTS AND/OR RIGHTS OF WAY THAT MIGHT BE REVEALED BY A THOROUGH TITLE SEARCH.
4. ALL SETBACKS MUST BE VERIFIED BY THE OWNER AND/OR GENERAL CONTRACTOR.
5. PROPERTY ZONE: (AGRICULTURE RESIDENTIAL - AR -1)
6. SURVEY DATE: 11/8/24
7. SETBACKS:
   FRONT 40-FEET
   SIDE 15-FEET
   REAR 20-FEET

LEGEND

IRON PIPE FOUND
PROPERTY LINE
PROP. LINE ADJ.
BUILDING SETBACK
EX UTILITY POLE
EX TREE
EX TPED
EXISTING TREE LINE
PROP. PAVEMENT AREA

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.

EDWIN TENNEFOSS, P.E. (DE LICENSE NO. #12695) DATE
39 COMMERCE STREET
HARRINGTON, DE 19952

THIS DRAWING INCLUDING DESIGN AND CONSTRUCTION FEATURES ARE PROPRIETARY TO SITEWORKS ENGINEERING LLC. AND SHALL NOT BE ALTERED OR REUSED WITHOUT WRITTEN PERMISSION. © CONTENTS COPYRIGHT 2024 SITEWORKS ENGINEERING, LLC.

SITEWORKS ENGINEERING
PO BOX 2 | 39 COMMERCE ST, HARRINGTON, DE 19952 Phone: (302) 841-7901

CONCEPT PLAN

ARCTEC AIR COMMERCIAL DEVELOPMENT

TAX PARCEL NO. 530-17.00-10.00 & 530-17.00-9.00

SUSSEX HIGHWAY - OTHER PRINCIPAL ARTERIALS

NORTHWEST FORK HUNDRED, BRIDGEVILLE CITY,
SUSSEX COUNTY, DELAWARE STATE

ISSUE / REVISION BLOCK
12/11/24 - CONCEPT PLAN

SCALE	PROJECT #	DRAWN BY
1" = 50'	24-495	ACC

DRAWING NUMBER

1

SHEET 1 OF 1

ARCTEC PROPERTIES, LLC.

Change of Zone No. 2051

Legal Owner
Arctec Properties, LLC.
21965 Palomino Way
Bridgeville, DE 19933

SCTP No. 530-17.00-9.00 & 10.00
14910 Sussex Hwy.
Bridgeville, DE 19933

Public Hearings:
Planning Commission: 10/07/2026
Sussex County Council: 12/08/2026

Project Engineer & Surveyor
Siteworks Engineering, LLC.
David Heatwole, PE
Edwin Tennefoss, PE
39 Commerce St., PO Box 2
Harrington, DE 19952

ARCTIC AIR COMMERCIAL STORAGE

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Tab “1”

File #: _____

Planning & Zoning Commission 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)
Conditional Use ___
Zoning Map Amendment ✓

Site Address of Conditional Use/Zoning Map Amendment

14910 Sussex Hwy., Bridgeville, DE 19933

Type of Conditional Use Requested:
Request Rezoning Change

Tax Map #: 530-17.00-9.00 & 10.00 **Size of Parcel(s):** 4.245 and 4.740 Acres

Current Zoning: AR-1 **Proposed Zoning:** C-2 **Size of Building:** 4 - 6,000 SF

Land Use Classification: Medium Commercial District

Water Provider: Private Well **Sewer Provider:** Private Septic

Applicant Information

Applicant Name: Arctec Properties, LLC
Applicant Address: 21965 Palomino Way
City: Harringtone State: DE ZipCode: 19933
Phone #: (302) 381-9571 E-mail: Jeremy@arctecair.com

Owner Information

Owner Name: Arctec Properties, LLC.
Owner Address: 21965 Palomino Way
City: Bridgeville State: DE Zip Code: 19933
Phone #: (302) 381-9571 E-mail: Jeremy@arctecair.com

Agent/Attorney/Engineer Information

Agent/Attorney/Engineer Name: Siteworks Engineering, LLC.
Agent/Attorney/Engineer Address: P.O. Box 2, 39 Commerce St.
City: Harrington State: DE Zip Code: 19952
Phone #: (302) 542-0774 E-mail: edwin.tennefoss@siteworkseng.com

Check List for Sussex County Planning & Zoning Applications

The following shall be submitted with the application

✔ **Completed Application**

✔ **Provide two (2) paper copies and one (1) electronic copy of the Site Plan or Survey of the property**

- Survey shall show the location of existing or proposed building(s), building setbacks, parking area, proposed entrance location, etc.
- Provide a PDF of Plans (may be e-mailed to a staff member)
- Deed or Legal description
- Drainage Assessment Report (if required, please refer to Section 115-193 (F))
- TIS or Area Wide Study Fee Memo (if required, please refer to the MOU)

✔ **Provide relevant Application Fee (please refer to fees effective July 1, 2022)**

___ **Optional - Additional information for the Commission/Council to consider** (ex. architectural elevations, photos, exhibit books, etc.) If provided submit 8 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.**

✔ **DelDOT Service Level Evaluation Request Response**

___ **PLUS Response Letter** (if required)

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 by behalf shall attend all public hearing before the Planning and Zoning Commission and the Sussex County Council 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: 3/17/25

Signature of Owner

Date: 3/17/25

For office use only:

Date Submitted: _____ Fee: Check #: _____

Staff accepting application: _____ Application & Case #: _____

Location of property: _____

Subdivision: _____

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

Date of CC Hearing: _____ Decision of CC: _____

Tab “2”

Document# 2024000005211 BK: 6054 PG: 292
Recorder of Deeds, Alexandra Reed Baker On 2/15/2024 at 2:36:50 PM Sussex County, DE
Consideration: $250,000.00 County/Town: $3,750.00 State: $6,250.00 Total: $10,000.00
Doc Surcharge Paid Town: SUSSEX COUNTY

TAX MAP AND PARCEL #:
5-30 17.00 9.00
PREPARED BY & RETURN TO:
Haller & Hudson
101 S. Bedford St.
P.O. Box 533
Georgetown, DE 19947
File No. 11771-HWH/

THIS DEED, made this 15th day of February, 2024,

- BETWEEN -

SERIES A RACE RENTALS, LLC, a Delaware limited liability company, of 824 Kiamensi Road, Wilmington, DE 19804, party of the first part,

- AND -

ARCTEC PROPERTIES LLC, a Delaware limited liability company, of 21965 Palomino Way, Bridgeville, DE 19933, party of the second part.

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

All that certain lot, piece or parcel of land, with the improvements thereon erected, situate in Northwest Fork Hundred, Sussex County and State of Delaware, known as 14890 Sussex Highway and being more particularly bounded and described as follows, to wit:

BEGINNING at an iron stob located on the Westerly side of the south bound lane of Route 13, said stob being 56.00 feet from the centerline of the said south bound lane of Route 13 and being .90 miles frm Road No. 584 and being a corner for this land and lands now or formerly of John H. Stewart; thence along the south bound lane of Route 13, North 13 degrees 00 minutes

East 382.00 feet to a pipe, said pipe being a corner for this land and other lands now or formerly of John H. Stewart; thence North 77 degrees 00 minutes West, a distance of 282.50 feet to a pipe; thence continuing in the same course, 85.3 feet to a stake; thence still continuing in the same course, 27.00 feet more or less, to a point in Bee Branch; thence with the meanderings of Bee Branch, 402.00 feet, more or less, to a point in lands now or formerly of the aforesaid John H. Stewart; thence along this land and lands now or formerly of John H. Stewart South 77 degrees 00 minutes East, 134.00 feet, more or less, to a nail in an oak tree; thence continuing in the same course, 91.50 feet to a pipe; thence still continuing in the same course, 266.40 feet back to the place of Beginning, said to contain 4.0 acres of land, be the same, more or less.

BEING the same land conveyed unto Series A Race Rentals LLC by deed of Ellen L. Race dated July 14, 2022, in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Deed Book 5754 at Page 170.

Above described property is subject to Bee Branch tax ditch assessment and/or right-of-way pursuant to Superior Court Order dated March 12, 2009 of record in the Office of the Prothonotary in and for Sussex County, Delaware, as C.A. No. 06M-11-014 and of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware, in Tax Ditch Book 6 at Page 124.

Above described property is subject to Nanticoke tax ditch assessment and/or right-of-way pursuant to Superior Court Order dated March 12, 2009 of record in the Office of the Prothonotary in and for Sussex County, Delaware, as C.A. No. 06-M-11-110 and of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware, in Tax Ditch Book 8 at Page 236.

SUBJECT to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

IN WITNESS WHEREOF, the said Series A Race Rentals, LLC, a Delaware limited liability company, has caused its name to be hereunto set under seal by Kimberly Ann McGinnis, Manager of Series A Race Rentals, LLC, the day and year first above written.

SERIES A RACE RENTALS, LLC

Witness

By: _____ (SEAL)
Kimberly Ann McGinnis, Manager

STATE OF DELAWARE, COUNTY OF SUSSEX: to-wit

BE IT REMEMBERED, that on this 15th day of February, A.D. 2024, personally appeared before me, the Subscriber, a Notary Public in and for the State and County aforesaid, Kimberly Ann McGinnis, Manager of Series A Race Rentals, LLC, a Delaware limited liability company, party to this Indenture, known to me personally to be such, and acknowledged this Indenture to be his/her act and deed and the act and deed of said limited liability company; that the signature of the Manager is in his/her own proper handwriting and by his/her authority to act; and that the act of signing, sealing, acknowledging and delivering the said Indenture was first duly authorized by a resolution of the limited liability company.

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

ADMITTED TO THE DELAWARE BAR 12/18/1970
BAR #354
Howard W. Hudson, Jr.
NOTARY
PURSUANT TO 29 DEL.C. SEC 4323 (A) (3)

Notary Public

My Commission Expires: A Hudson

10439

BK: 4859 PG: 83

TAX MAP AND PARCEL #: 5-30 17.00
10.00
PREPARED BY & RETURN TO:
Haller & Hudson
101 S. Bedford St.
P.O. Box 533
Georgetown, DE 19947
File No. 9970A-HWH/

THIS CORRECTIVE DEED, made this 19TH day of March, 2018,

- BETWEEN -

MILL CREEK ENTERPRISES, LLC, a limited liability company of the State of Maryland, of 24552 Williston Road, Denton, MD 21629, party of the first part,

- AND -

ARCTEC PROPERTIES, LLC, a limited liability company of the State of Delaware, of 21965 Palomino Way, Bridgeville, DE 19933, party of the second part.

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

ALL that certain piece or parcel of land, lying and being situated in Northwest Fork Hundred, Sussex County, State of Delaware, and being more particularly described as follows, to wit:

BEGINNING at a point on the westerly right-of-way line of U.S. Route No. 13 (southbound), said point being 0.90 more or less mile in a northerly direction from the right-of-way line of County Road No. 584, said point also being a common property corner for these lands and lands now or formerly of Robert Rider, said point also being located on the thread of

Bee Branch; thence running with the thread of Bee Branch the following seven (7) courses and distances (tie-line) (1) North 74 degrees 21 minutes 50 seconds West 75.14 feet (tie-Line) to a point; thence (2) North 56 degrees 34 minutes 59 seconds West 78.49 feet (tie Line) to a point; 3) North 44 degrees 54 minutes 36 seconds West 64.44 feet (tie-line) to a point; thence (4) North 35 degrees 14 minutes 13 seconds West 417.82 feet (tie Line) to a point; thence (5) North 17 degrees 16 minutes 17 seconds West 58.15 feet (tie-Line) to a point; thence (6) North 13 degrees 11 minutes 22 seconds East 33.21 feet (tie-line) to a point; thence (7) North 23 degrees 33 minutes 07 seconds East 100.18 feet (tie-line) to a point, said point being a common property corner for these lands and lands now or formerly of Jean Evans; thence leaving the thread of Bee Branch and running with a common property line for these lands and lands now or formerly of Jean Evans, South 77 degrees 00 minutes 00 seconds East 525.72 feet to a 1" pipe found on the most westerly right-of-way line of US. Route No. 13 (Southbound), said pipe being a common property corner for these lands and lands now or formerly of Jean Evans; thence turning and running with said westerly right-of-way line, South 13 degrees 00 minutes 00 seconds West 525.28 feet home to the point and place of beginning, containing 4.704 acres of land, be the same more or less, as surveyed and shown on a plat prepared by Theodore B. Simpler, P.L.S. 289, dated May 25, 2004.

THE PURPOSE of this corrective deed is to correct errors in the legal description in Deed from Mill Creek Enterprises, LLC to Arctec Properties, LLC dated December 15, 2016 and recorded December 19, 2016 in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Deed Book 4638 at Page 284.

SUBJECT is subject to Bee Branch tax ditch assessment and/or right-of-way pursuant to Superior Court Order dated January 4, 2007 of record in the Office of the Prothonotary in and for Sussex County, Delaware, as C.A. No. 06M-11-014 and of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware, in Tax Ditch Book 1 at Page 212.

SUBJECT to Nanticoke River Tax ditch assessment and/or right-of-way pursuant to Superior Court Order dated January 4, 2007 of record in the Office of the Prothonotary in and for Sussex County, Delaware, as C.A. No. 06M-11-110 and of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware, in Tax Ditch Book 3 at Page 1.

SUBJECT to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

IN WITNESS WHEREOF, the said Mill Creek Enterprises, LLC, a Delaware limited liability company, has caused its name to be hereunto set under seal by JWL, Inc., Member of Mill Creek Enterprises, LLC, the day and year first above written.

BK: 4859 PG: 85

MILL CREEK ENTERPRISES, LLC

Kendall M Teague
Witness

By: J. W. Logan, Jr. (SEAL)
JWL, Inc., Member, by John W. Logan, Jr., President

STATE OF Maryland, COUNTY OF Caroline : to-wit

BE IT REMEMBERED, that on this 19th day of March, A.D. 2018, personally appeared before me, the Subscriber, a Notary Public in and for the State and County aforesaid, JWL, Inc., Member of Mill Creek Enterprises, LLC, a Delaware limited liability company, by John W. Logan, Jr., President, party to this Indenture, known to me personally to be such, and acknowledged this Indenture to be his/her act and deed and the act and deed of said limited liability company.

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

SANDRA M LOGAN NOTARY PUBLIC CAROLINE CO. MD.

Sandra M Logan
Notary Public

My Commission Expires: 9/21/2020

Consideration: .00

County	.00
State	.00
Town Total	.00

Received: Maria T Mar 26,2018

RECEIVED
Mar 26,2018
ASSESSMENT DIVISION
OF SUSSEX COUNTY

Recorder of Deeds
Scott Dailey
Mar 26,2018 09:38A
Sussex County
Doc. Surcharge Paid

LEGAL DESCRIPTION FOR PARCELS 530-17.00-9.00 & 10.00

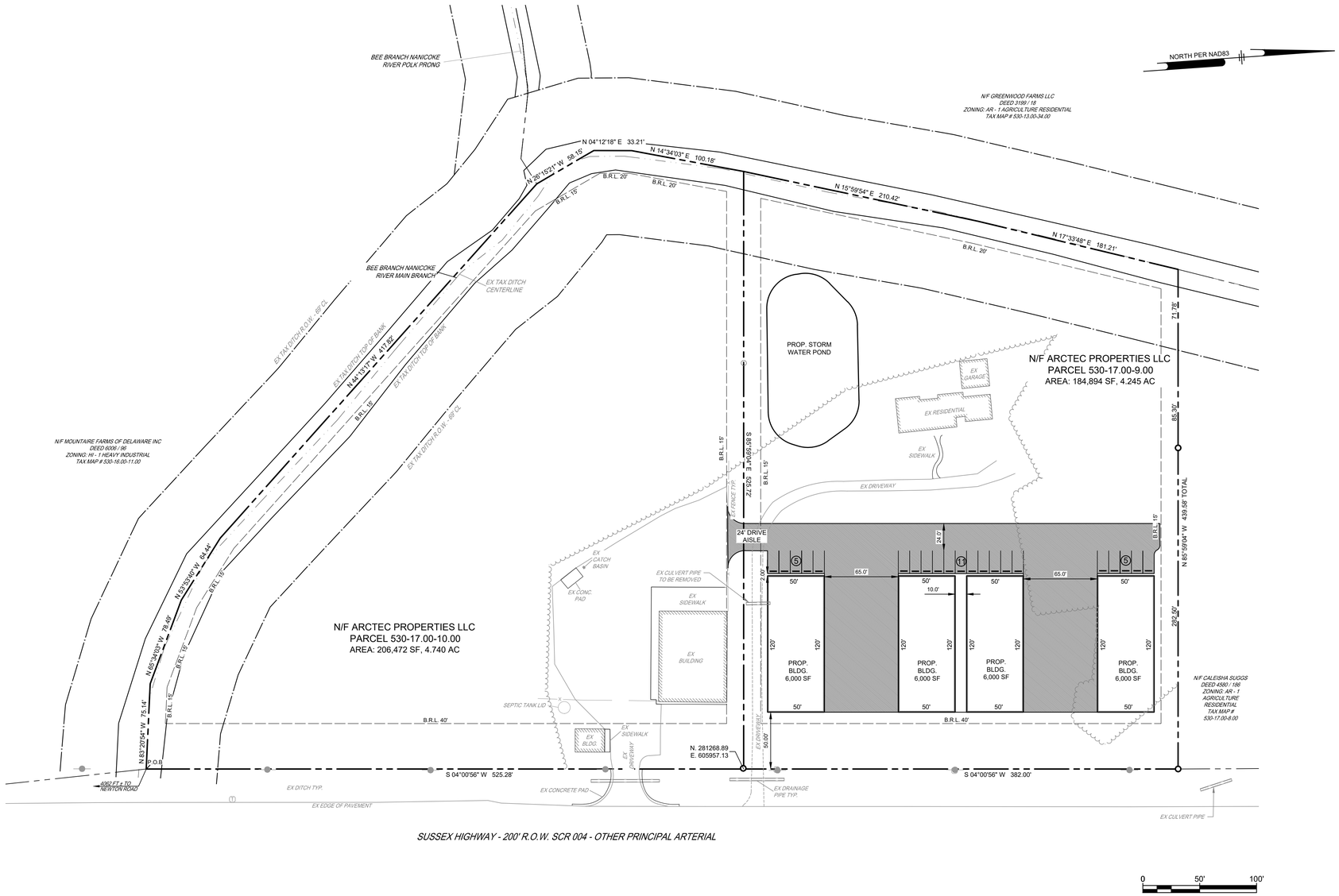
ALL that certain lot, piece or parcel of land with the improvements thereon erected situated in Northwest Fork Hundred, Sussex County and State of Delaware, lying on the west side of Sussex Highway, County Road #4, a 200' right of way, and being bounded on the east by Sussex Highway, on the south by lands now or formerly of Mountaire Farms of Delaware Inc, on the west by lands now or formerly of Greenwood Farms LLC, on the north by lands now or formerly of Caleisha Suggs, and being more particularly described as follows:

BEGINNING at a point in the westerly right of way line of Sussex Highway, in the centerline of Bee Branch Tax Ditch, at a corner for these lands and for lands of Mountaire Farms of Delaware Inc, said point being approximately 4,000 feet from Newton Road; thence from said point of beginning, along with Bee Branch Tax Ditch for the following 9 Courses:

1. North 83° 20' 54" West a distance of 75.14 feet to a point; thence,
2. North 65° 34' 03" West a distance of 78.49 feet to a point; thence,
3. North 53° 53' 40" West a distance of 64.44 feet to a point; thence,
4. North 44° 13' 17" West a distance of 417.82 feet to a point; thence,
5. North 26° 15' 21" West a distance of 58.15 feet to a point; thence,
6. North 04° 12' 18" East a distance of 33.21 feet to a point; thence,
7. North 14° 34' 03" East a distance of 100.18 feet to a point; thence,
8. North 15° 59' 54" East a distance of 210.42 feet to a point; thence,
9. North 17° 33' 48" East a distance of 181.21 feet to a point;

Thence, along with lands now or formerly of Suggs, South 85° 59' 04" East a total distance of 439.58 feet to an iron pipe found, passing over an iron pipe found at 157.11 feet; thence along with Sussex Highway, South 04° 00' 56" West a distance of 382.00 feet to a point, said point being North 62° 27' 49" East a distance of 0.76 feet from an iron pipe found; thence, continuing with Sussex Highway, South 04° 00' 56" West a distance of 525.28 feet to a point, said point being the point and place of beginning and containing 391,366 square feet, or 8.985 acres, of land, more or less.

Tab “3”



SUSSEX HIGHWAY - 200' R.O.W. SCR 004 - OTHER PRINCIPAL ARTERIAL

SITE DATA:

1.	TAX MAP NUMBER	530-17.00-9.00 & 10.00
2.	OWNER	ARCTEC PROPERTIES, LLC. 21965 PALOMINO WAY, BRIDGEVILLE, DE 19933
3.	GROSS AREA / NET DEVELOPMENT AREA TAX PARCEL 530-17.00-9.00 TAX PARCEL 530-17.00-10.00 TOTAL	 184,894 SF, 4.245 AC 206,472 SF, 4.740 AC 919,366 SF, 8.985 AC
4.	EXISTING & PROPOSED LOTS:	2 EXISTING - 2 PROPOSED
5.	DEVELOPER NAME:	ARCTEC PROPERTIES, LLC.
6.	PROPERTY ADDRESS:	14910 SUSSEX HIGHWAY, BRIDGEVILLE, DE 19933
7.	GOVERNMENTAL ENTITY RESPONSIBLE FOR LAND USE APPROVAL:	SUSSEX COUNTY
8.	HUNDRED/COUNTY:	NORTHWEST FORK HUNDRED / SUSSEX COUNTY
9.	ZONING:	AR-1 (AGRICULTURAL RESIDENTIAL)
10.	PRESENT USE:	RESIDENTIAL / COMMERCIAL
11.	PROPOSED USE:	RESIDENTIAL / COMMERCIAL
12.	GROSS BUILDING AREA:	COMMERCIAL: 24,000 SF PROPOSED EXISTING RESIDENTIAL: 2,784 SF EXISTING 26,784 SF TOTAL
13.	REQUIRED B.R.L.:	FRONT: 40-FEET SIDE: 15-FEET REAR: 20-FEET
14.	MAXIMUM HEIGHT REQUIREMENT: PROPOSED HEIGHT:	42-FEET <35-FEET
15.	REQUIRED PARKING	(3,200 S.F. OFFICE) (1 SP/200 SF) = 16 SPACES
16.	WATER SUPPLIER:	ON SITE WELL
17.	SANITARY SEWER PROVIDER:	ON-SITE SEPTIC
18.	PROJECT DATUM HORIZONTAL: VERTICAL:	 NAD 83 NAVD88
19.	FEMA FLOOD MAP: PER FEMA FLOOD MAP 10005C0115K EFFECTIVE 3/16/2015, THE SITE IS LOCATED PARTLY WITHIN ZONE A (WITHOUT BASE FLOOD ELEVATION)	
20.	POSTED SPEED LIMIT FOR SUSSEX HWY (HWY13):	55 MPH
21.	2020 STATE INVESTMENT AREA:	LEVEL 4
22.	LATITUDE AND LONGITUDE STATE PLAN COORDINATES: LATITUDE: N 28°12'68.89" LONGITUDE: W 60°59'0957.13"	
23.	PROPOSED DISCHARGE LOCATION:	ON-SITE STORM-WATER POND
24.	PROXIMITY TO T.I.D.:	APPROX. 25.9 MILES EAST FROM MILTON T.I.D.
25.	LIMIT OF DISTURBANCE:	1.94 ACRES
26.	WATERSHED:	NANTICOKE RIVER
27.	IMPERVIOUS AREA (PERCENT OF SITE):	14.5%

NOTES:

1. SOURCE OF TITLE: DEED 4859 / 83, 6054 / 292
2. LEVEL OF ACCURACY IS BASED ON "SUBURBAN SURVEY" STANDARDS
3. THIS BOUNDARY SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT AND IS SUBJECT TO ANY ENCUMBRANCES, RESTRICTIONS, EASEMENTS AND/OR RIGHTS OF WAY THAT MIGHT BE REVEALED BY A THOROUGH TITLE SEARCH.
4. ALL SETBACKS MUST BE VERIFIED BY THE OWNER AND/OR GENERAL CONTRACTOR.
5. PROPERTY ZONE: (AGRICULTURE RESIDENTIAL - AR -1)
6. SURVEY DATE: 11/8/24
7. SETBACKS:
   FRONT 40-FEET
   SIDE 15-FEET
   REAR 20-FEET

LEGEND

IRON PIPE FOUND
PROPERTY LINE
PROP. LINE ADJ.
BUILDING SETBACK
EX UTILITY POLE
EX TREE
EX TPED
EXISTING TREE LINE
PROP. PAVEMENT AREA

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.

EDWIN TENNEFOSS, P.E. (DE LICENSE NO. #12895) DATE
39 COMMERCE STREET
HARRINGTON, DE 19952

SITEWORKS ENGINEERING
PO BOX 2 | 39 COMMERCE ST, HARRINGTON, DE 19952 Phone: (302) 841-7901

CONCEPT PLAN

ARCTEC AIR COMMERCIAL DEVELOPMENT

TAX PARCEL NO. 530-17.00-10.00 & 530-17.00-9.00

SUSSEX HIGHWAY - OTHER PRINCIPAL ARTERIALS

NORTHWEST FORK HUNDRED, BRIDGEVILLE CITY,
SUSSEX COUNTY, DELAWARE STATE

ISSUE / REVISION BLOCK
12/11/24 - CONCEPT PLAN

SCALE	PROJECT #	DRAWN BY
1" = 50'	24-495	ACC

DRAWING NUMBER

1

SHEET 1 OF 1

THIS DRAWING INCLUDING DESIGN AND CONSTRUCTION FEATURES ARE PROPRIETARY TO SITEWORKS ENGINEERING LLC. AND SHALL NOT BE ALTERED OR REUSED WITHOUT WRITTEN PERMISSION. © CONTENTS COPYRIGHT 2024 SITEWORKS ENGINEERING, LLC.

Tab “4”

PLANNING & ZONING
Jamie Whitehouse, AICP ,MRTPI
Director
(302) 855-7878 T
(302) 854-5079 F

Sussex County
DELAWARE
sussexcountyde.gov

Service Level Evaluation Re uest Form

This form **shall** be submitted to the Planning and Zoning Office and a response **shall** be received back from DelDOT prior to the applicant being able to submit an application to the Planning and Zoning Office.

Date: 1/2/24

Site Information:

Site Address/Location: 21965 Palomino Way, Bridgeville, DE 19933

Tax Parcel Number: 530-17.00-9.00 & 10.00

Current Zoning: AR-1

Land Use Classification: _____

Acreage: 8.99

Subdivision: ☐

Conditional Use: ☐

Change of Zone: ☑ Proposed Zoning: _____

Proposed Use(s): HVAC Business and Warehouse Buildings

Square footage of any proposed buildings or number of units: 4 - 6,000 SF buildings

Applicant Information:

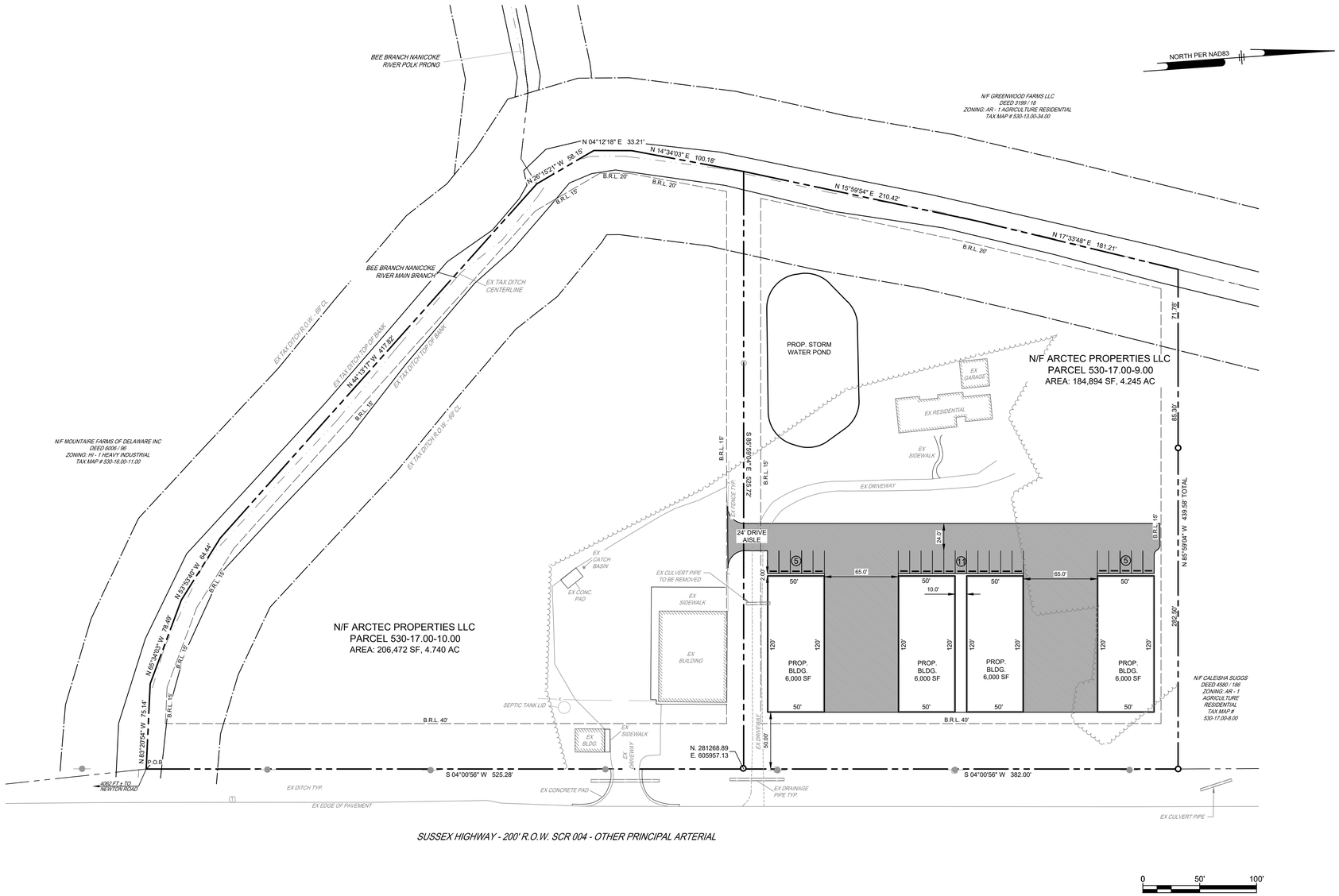
Applicant's Name: Siteworks Engineering, LLC.

Applicant's Address: P.O. Box 2

City: Harrington State: DE Zip Code: 19952

Applicant's Phone Number: 302-542-0774

Applicant's e-mail address: edwin.tennefoss@siteworkseng.com



SITE DATA:

1.	TAX MAP NUMBER	530-17.00-9.00 & 10.00
2.	OWNER	ARCTEC PROPERTIES, LLC. 21965 PALOMINO WAY, BRIDGEVILLE, DE 19933
3.	GROSS AREA / NET DEVELOPMENT AREA TAX PARCEL 530-17.00-9.00 TAX PARCEL 530-17.00-10.00 TOTAL	 184,894 SF, 4.245 AC 206,472 SF, 4.740 AC 919,366 SF, 8.985 AC
4.	EXISTING & PROPOSED LOTS:	2 EXISTING - 2 PROPOSED
5.	DEVELOPER NAME:	ARCTEC PROPERTIES, LLC.
6.	PROPERTY ADDRESS:	14910 SUSSEX HIGHWAY, BRIDGEVILLE, DE 19933
7.	GOVERNMENTAL ENTITY RESPONSIBLE FOR LAND USE APPROVAL:	SUSSEX COUNTY
8.	HUNDRED/COUNTY:	NORTHWEST FORK HUNDRED / SUSSEX COUNTY
9.	ZONING:	AR-1 (AGRICULTURAL RESIDENTIAL)
10.	PRESENT USE:	RESIDENTIAL / COMMERCIAL
11.	PROPOSED USE:	RESIDENTIAL / COMMERCIAL
12.	GROSS BUILDING AREA:	COMMERCIAL: 24,000 SF PROPOSED EXISTING RESIDENTIAL: 2,784 SF EXISTING 26,784 SF TOTAL
13.	REQUIRED B.R.L.:	FRONT: 40-FEET SIDE: 15-FEET REAR: 20-FEET
14.	MAXIMUM HEIGHT REQUIREMENT: PROPOSED HEIGHT:	42-FEET <35-FEET
15.	REQUIRED PARKING	(3,200 S.F. OFFICE) (1 SP/200 SF) = 16 SPACES
16.	WATER SUPPLIER:	ON SITE WELL
17.	SANITARY SEWER PROVIDER:	ON-SITE SEPTIC
18.	PROJECT DATUM HORIZONTAL: VERTICAL:	 NAD 83 NAVD88
19.	FEMA FLOOD MAP: PER FEMA FLOOD MAP 10005C0115K EFFECTIVE 3/16/2015, THE SITE IS LOCATED PARTLY WITHIN ZONE A (WITHOUT BASE FLOOD ELEVATION)	
20.	POSTED SPEED LIMIT FOR SUSSEX HWY (HWY13):	55 MPH
21.	2020 STATE INVESTMENT AREA:	LEVEL 4
22.	LATITUDE AND LONGITUDE STATE PLAN COORDINATES: LATITUDE: N 28°12'68.89" LONGITUDE: W 60°59'0957.13"	
23.	PROPOSED DISCHARGE LOCATION:	ON-SITE STORM-WATER POND
24.	PROXIMITY TO T.I.D.:	APPROX. 25.9 MILES EAST FROM MILTON T.I.D.
25.	LIMIT OF DISTURBANCE:	1.94 ACRES
26.	WATERSHED:	NANTICOKE RIVER
27.	IMPERVIOUS AREA (PERCENT OF SITE):	14.5%

NOTES:

1. SOURCE OF TITLE: DEED 4859 / 83, 6054 / 292
2. LEVEL OF ACCURACY IS BASED ON "SUBURBAN SURVEY" STANDARDS
3. THIS BOUNDARY SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT AND IS SUBJECT TO ANY ENCUMBRANCES, RESTRICTIONS, EASEMENTS AND/OR RIGHTS OF WAY THAT MIGHT BE REVEALED BY A THOROUGH TITLE SEARCH.
4. ALL SETBACKS MUST BE VERIFIED BY THE OWNER AND/OR GENERAL CONTRACTOR.
5. PROPERTY ZONE: (AGRICULTURE RESIDENTIAL - AR -1)
6. SURVEY DATE: 11/8/24
7. SETBACKS:
   FRONT 40-FEET
   SIDE 15-FEET
   REAR 20-FEET

LEGEND

IRON PIPE FOUND
PROPERTY LINE
PROP. LINE ADJ.
BUILDING SETBACK
EX UTILITY POLE
EX TREE
EX TPED
EXISTING TREE LINE
PROP. PAVEMENT AREA

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.

EDWIN TENNEFOSS, P.E. (DE LICENSE NO. #12895) DATE
39 COMMERCE STREET
HARRINGTON, DE 19952

SITEWORKS ENGINEERING
PO BOX 2 | 39 COMMERCE ST, HARRINGTON, DE 19952 Phone: (302) 841-7901

CONCEPT PLAN

ARCTEC AIR COMMERCIAL DEVELOPMENT

TAX PARCEL NO. 530-17.00-10.00 & 530-17.00-9.00
SUSSEX HIGHWAY - OTHER PRINCIPAL ARTERIALS
NORTHWEST FORK HUNDRED, BRIDGEVILLE CITY,
SUSSEX COUNTY, DELAWARE STATE

ISSUE / REVISION BLOCK
12/11/24 - CONCEPT PLAN

SCALE	PROJECT #	DRAWN BY
1" = 50'	24-495	ACC

DRAWING NUMBER
1
SHEET 1 OF 1

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

SHANTÉ A. HASTINGS
SECRETARY

March 03, 2025

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

Dear Mr. Whitehouse:

The Department has completed its review of a Service Level Evaluation Request for the **Siteworks Engineering LLC (14910 Sussex Highway, Bridgeville, Delaware 19933)** proposed land use application, which we received on February 03, 2025. This application is for an approximate 8.74-acre assemblage of parcels (Tax Parcels: 530-17.00-9.00, 10.00). The parcels are located on the west side of Sussex Highway (Delaware Route 13) and approximately 5,813 feet south from the intersection of Adams Road (Sussex County Road 583) and Sussex Highway. The parcel is currently zoned AR-1 (Agricultural Residential District), and the applicant seeks a conditional use approval to build 4 - 6,000 square foot buildings for HVAC Business and Warehouse Buildings.

Per the 2023 Delaware Vehicle Volume Summary, the annual average daily traffic volumes along Sussex Highway, where the subject land is located, which is from Cheer Lane to East Newton Road (Delaware Route 404), is 24,283 vehicles per day.

Based on our review (ITE Trip Generation Manual 11th edition, LUC 150/GFA 24), we estimate that the above land use will generate fewer than 50 vehicle trips in any hour and fewer than 500 vehicle trips per day. These numbers of trips are DelDOT's minimum warrants for determining that a Traffic Impact Study (TIS) should be required for a particular development. Because the proposed land use would not meet these warrants, we consider the development's traffic impact to be **negligible** in the context of our agreement with the County regarding land development coordination and we do not recommend that the applicant be required to perform a TIS for the subject application. DelDOT's description of this application as negligible with regard to warranting a TIS does not mean that it is negligible in other respects. We recommend that the applicant not be required to perform a TIS for the subject application.

The above-mentioned property is adjacent to US Route 13, making it subject to the Department's Corridor Capacity Preservation Program. The Program was established in

accordance with the provisions of Title 17, Section 145 of the Delaware Code. The main goal of the Program is to maintain the capacity of the existing highway by minimizing and consolidating the number of high densities, direct access points on the arterial highway. According to the Office of State Planning Coordination's Strategies for State Policies and Spending document, the property is located within a **Level 4 Investment Area**. In this area, State policies will encourage the preservation of a rural lifestyle and discourage new development. The Corridor Capacity Preservation Program policy can be viewed on the Department's website at Corridor Capacity Preservation Program - Delaware Department of Transportation (deldot.gov). The manual is located under the programs link. The applicant should contact Mr. Stephen Bayer, Planner Supervisor in DelDOT's Planning Regional Systems Section, at Stephen.Bayer@delaware.gov for information regarding the CCPP process.

If the County approves this application, the applicant should be reminded that DelDOT requires compliance with State regulations regarding plan approvals and entrance permits, whether or not a TIS is required.

Please contact Ms. Tijah Jones, at tijah.jones@delaware.gov, if you have questions concerning this correspondence.

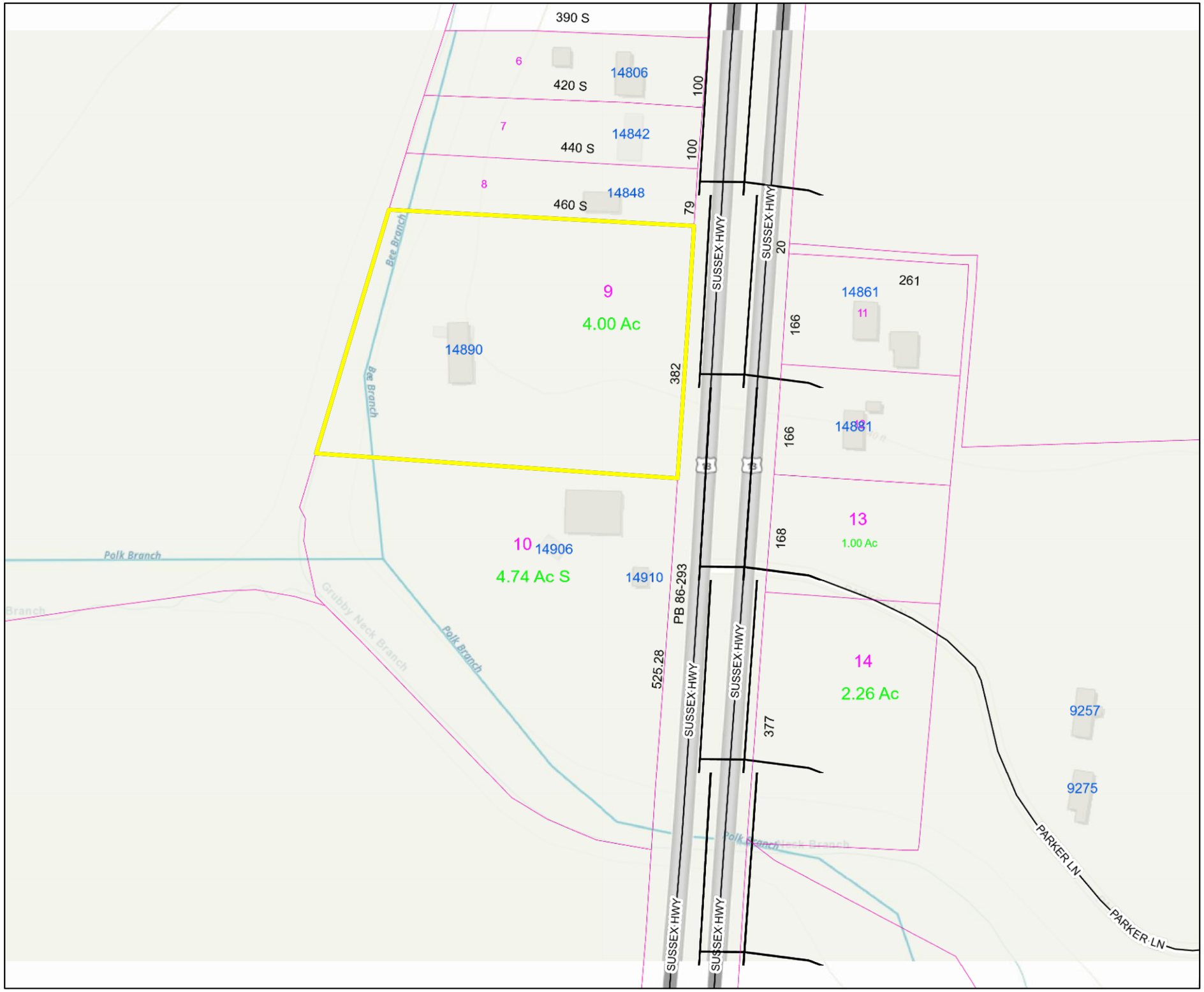
Sincerely,

Sireen Muhtaseb, PE
TIS Engineer
Development Coordination

SM:tjm
cc: Siteworks Engineering LLC, Applicant
Ashley Paugh, Sussex County Planning & Zoning
Sussex County Planning & Zoning
David Edgell, State Planning Director, Office of State Planning Coordination
Matt Schlitter, South District Public Works Engineer, M&O
James Argo, South District Project Reviewer, M&O
Tara Summers-Strong, South District Public Works Admin.
Todd Sammons, Assistant Director, Development Coordination, Planning
John Pietrobono, Acting Sussex Review Coordinator, Dev Coordination, Planning
Kevin Hickman, Sussex Reviewer, Development Coordination, Planning
Derek Sapp, Sussex Review Engineer, Development Coordination, Planning
Thomas Gagnon, Sussex Review Engineer, Development Coordination, Planning
José Quixtan, Sussex Review Engineer, Development Coordination, Planning
Annamaria Furmato, TIS Review Engineer, Development Coordination, Planning
Ben Fisher, TIS Review Engineer, Development Coordination, Planning
Tijah Jones, TIS Review Engineer, Development Coordination, Planning

Tab “5”

A3 Landscape Parcel Details



PIN:	530-17.00-9.00
Owner Name	ARCTEC PROPERTIES LLC
Book	6054
Mailing Address	21965 PALOMINO WAY
City	BRIDGEVILLE
State	DE
Description	
Description 2	
Description 3	
Land Code	

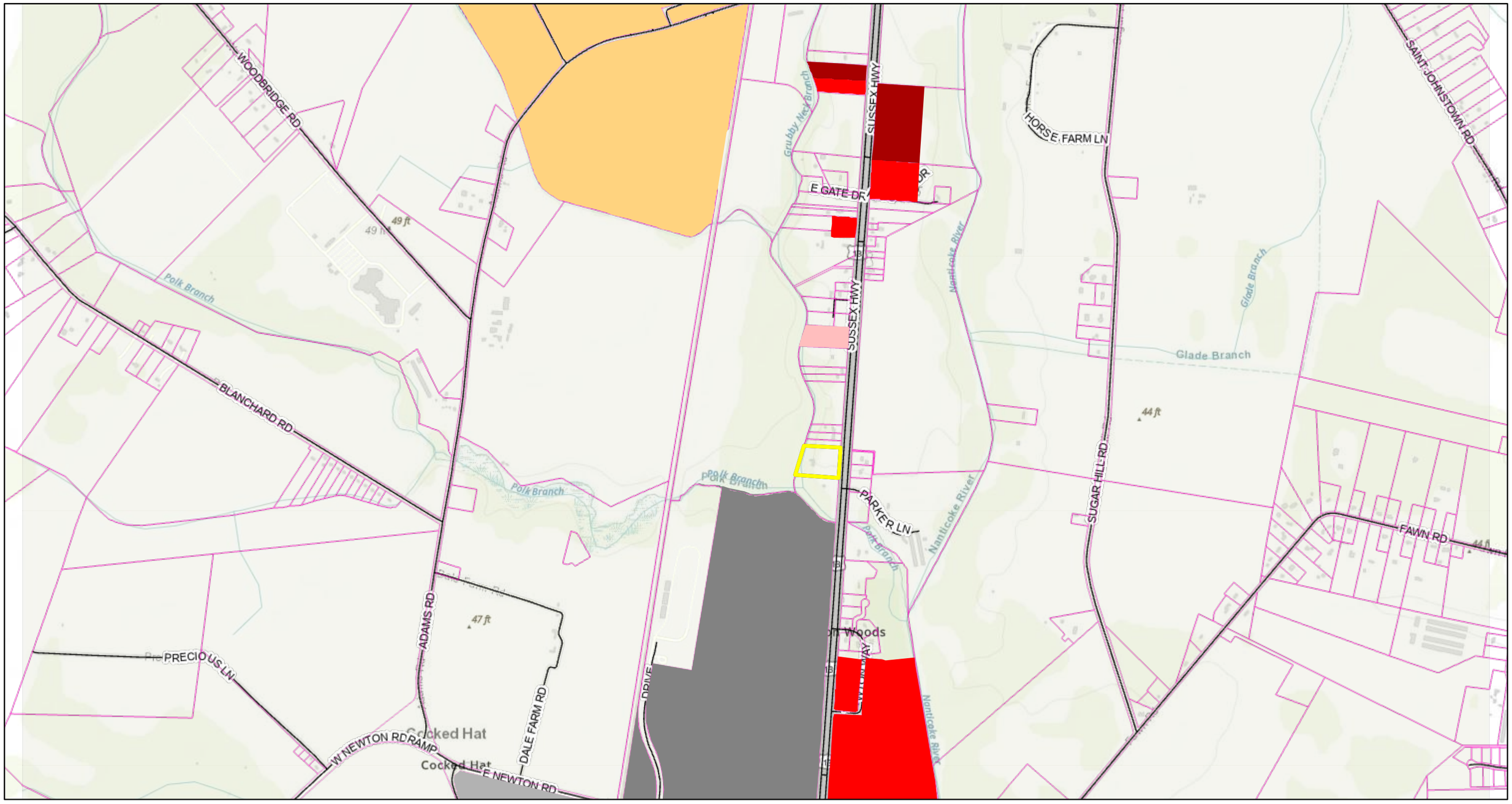
Tax Parcels
911 Address
TaxParcel
Encumbrance
Condo
Streets
County Boundaries
GIOLandRecords.PARCELFABRIC.Condo
Citations

0 0.03 0.06 0.11 mi
0 0.04 0.09 0.17 km

1:

September 23, 2026

Sussex County



September 23, 2026

polygonLayer

- Override 1
- Override 2

Zoning

- General Residential - GR
- Commercial Residential - CR-1
- Light Industrial - LI-2
- Heavy Industrial - HI-1
- C1: General Commercial
- B-2: Business Community District

- Tax Parcels
- TaxParcel
- Encumbrance
- Streets
- County Boundaries

layer1

- Red: Band_1
- Green: Band_2
- Blue: Band_3
- Citations

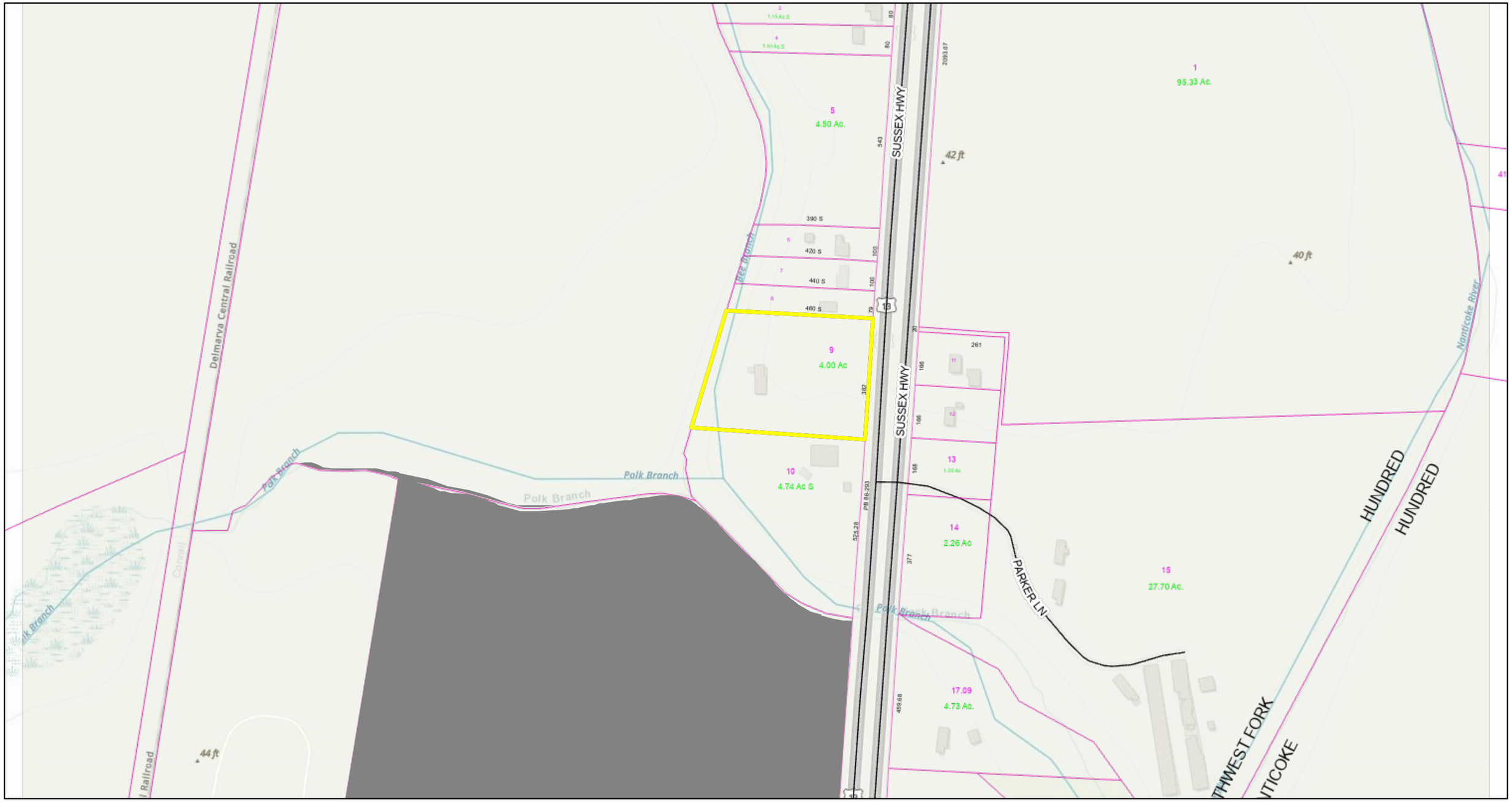
1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

Sussex County Government, County of Sussex, DE, Delaware FirstMap, VITA, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, Sussex County Mapping and Addressing

Sussex County



September 23, 2026

polygonLayer

- Override 1
- Override 2

Zoning

- Heavy Industrial - HI-1
- Tax Parcels

TaxParcel

- Streets
- County Boundaries

layer1

- Red: Band_1
- Green: Band_2
- Blue: Band_3

Citations

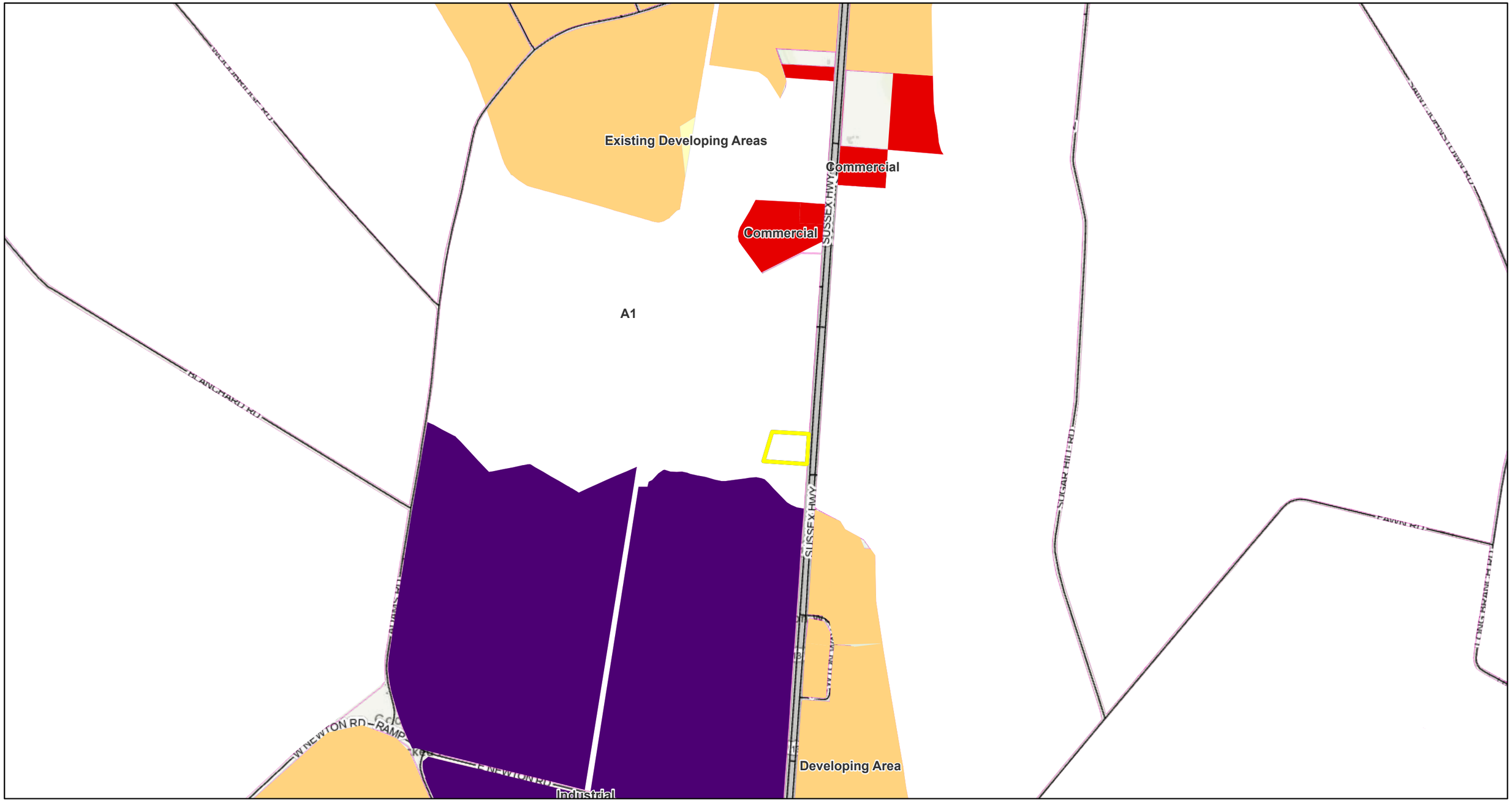
1:4,514

0 0.04 0.09 0.17 mi

0 0.05 0.1 0.2 km

County of Sussex, DE, Delaware FirstMap, VITA, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA, Sussex County Government, Sussex County Mapping and Addressing

Sussex County



September 23, 2026

polygonLayer

Override 1

Override 2

2019 Future Land Use

Low Density

Commercial

Developing Area

Existing Development Area

Industrial

Tax Parcels

TaxParcel

Encumbrance

Streets

County Boundaries

layer1

Red: Band_1

Green: Band_2

Blue: Band_3

Citations

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

Sussex County Government, County of Sussex, DE, Delaware FirstMap, VITA, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, Sussex County Mapping and Addressing

Sussex County

September 23, 2026

Override 1 Tax Parcels Streets

Override 1 TaxParcel County Boundaries

1:4,514

0 0.04 0.09 0.17 mi

0 0.05 0.1 0.2 km

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Tab “6”

National Flood Hazard Layer FIRMette

FEMA

75°35'56"W 38°46'32"N

75°35'18"W 38°46'4"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 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 *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

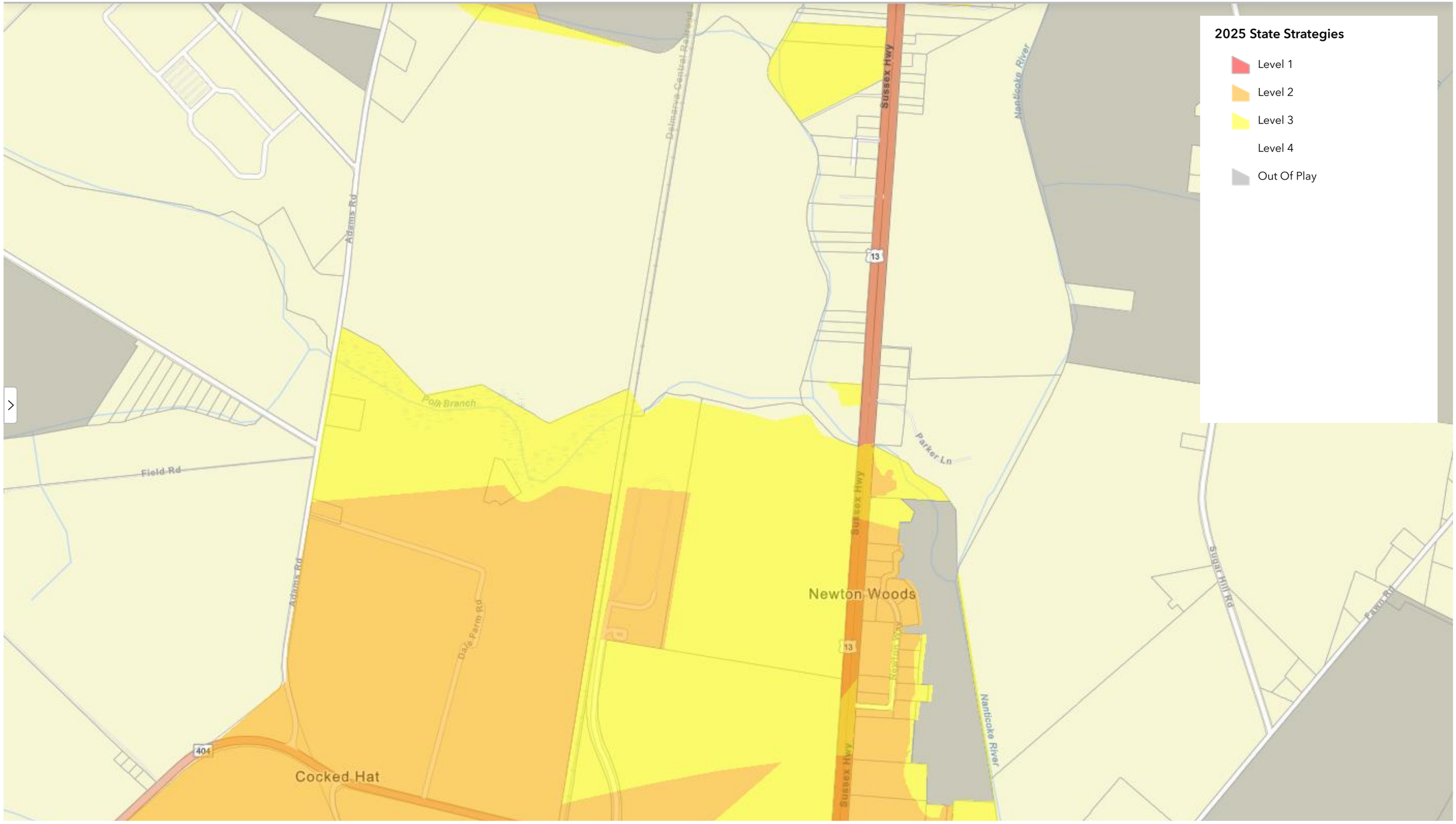
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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 11/11/2024 at 4:54 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.

Tab “7”



2025 State Strategies Map

Approved by Governor Meyer in Executive Order #16 On January 30th, 2026.

Find address or place

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Tab “8”

Google Maps

Arctec Air Heating & Cooling

Surrounding Area

Imagery ©2026 Airbus, Imagery ©2026 Airbus, Maxar Technologies, Map data ©2026 200 ft

Google Maps

14908 US-13

Street View Arctec Air Existing

Google Maps

14890 Sussex Hwy

Street View from the North

Tab “9”

PROPOSED FINDINGS OF FACTS
C/Z 2051

1. This is an application to amend the zoning map from a split zoning of AR-1 (Agricultural Residential) and AR-1 Conditional Use to C-2 (Medium Commercial District) for 8.985 Acres located in the Northwest Fork Hundred, Sussex County, being situated along the west side of Sussex Highway (U.S. Route 13) about a milie north of the northern boundary of the Town of Bridgeville, also being designated as Sussex County Tax District 530, Map 17, and parcels 9.00 and 10.00.

2. The applicant and owner of the property is Arctec Properties, LLC, a Delaware limited liability company.

3. Parcel 10.00 is currently a conditional use HVAC office and shop, and Parcel 9.00 is currently used for residential house.

4. The intended use of the site will be for a commercial storage facility.

5. In the 2019 Sussex County Comprehensive Plan update, the property is identified for purposes of future land use as being in a low density area. The property is surrounded by areas designated on the Future Land Use Map as being either Industrial or Low Density Area. Table 4.5-2 titled "Zoning Districts Applicable to Future Land Use Categories" identifies Medium Commercial District as an applicable district for the Low Density Area.

6. The property has good road access having a direct access entrance on U.S. Route 13. There is one residential home located behind the existing facility. Further, the property immediately to the south is currently zoned industrial.

7. The 2025 Delaware Strategies for State Policies and Spending identify the property as a split Investment Level 3 and 4. The parcels are adjacent to Level 3 areas and would appear to be more consistent to both be in a level 3 area.

8. The purpose of C-2 Medium Commercial District is to support uses that include performance of consumer services. The district shall be primarily located near arterial and collector streets. It accommodates community commercial uses that do not have outside storage or sales. The intended use of the property is consistent with these permitted uses.

9. The back portion of the site is located in a Zone A floodplain based upon FEMA Map Number 10005C0115K dated March 16, 2015. A bulk of the wooded area is located in the flood plain and the bulk of the open area along the road is an area designated

as Zone"X" (unshaded), which is an area determined to be outside the 500 year floodplain.

10. There are wetlands located on the property within the wooded area. However, the proposed development would not impact the wetlands area.

11. The property is located on U.S. Route 13 (Sussex Hwy.), a principal arterial, a place where the Zoning Code and Comprehensive Plan encourage growth and commercial uses. Sussex highway is one of Sussex County's primary north-south travel routes.

12. In the immediate area there are other existing commercial uses similar to the proposed use of this property. Less than half a mile up the road is zoned commercial and new commercial storage is currently being built.

13. DelDOT responded to the Service Level Evaluation Request and stated that the proposed project will have a diminutive impact on the local area roadways, and no Traffic Impact Study would be required.

14. The property is served with water and sewer with private well and septic.

15. As part of the site plan approval for any future use, stormwater management design and permitting will be required; thus, assuring neighboring and adjacent properties will be protected from any land disturbance activity on the site.

16. The Proposed C-2 (Medium Commercial District) zoning classification is in character with the nature of the area. It will not adversely affect the neighboring and adjacent properties and is consistent with the purpose of the C-2 Zoning.

17. The proposed project meets the purpose of the Zoning Ordinance in that it promotes orderly growth, convenience, order, prosperity, and welfare of the County.

18. All factors have been considered and the proposed C-2 (Medium Commercial District) classification meets the purposes and goals of the County's Comprehensive Plan and its Zoning Code.

Document# 2024000005211 BK: 6054 PG: 292
Recorder of Deeds, Alexandra Reed Baker On 2/15/2024 at 2:36:50 PM Sussex County, DE
Consideration: $250,000.00 County/Town: $3,750.00 State: $6,250.00 Total: $10,000.00
Doc Surcharge Paid Town: SUSSEX COUNTY

RECEIVED
MAR 17 2025
SUSSEX COUNTY
PLANNING & ZONING

TAX MAP AND PARCEL #:
5-30 17.00 9.00
PREPARED BY & RETURN TO:
Haller & Hudson
101 S. Bedford St.
P.O. Box 533
Georgetown, DE 19947
File No. 11771-HWH/

THIS DEED, made this 15th day of February, 2024,

- BETWEEN -

SERIES A RACE RENTALS, LLC, a Delaware limited liability company, of 824 Kiamensi Road, Wilmington, DE 19804, party of the first part,

- AND -

ARCTEC PROPERTIES LLC, a Delaware limited liability company, of 21965 Palomino Way, Bridgeville, DE 19933, party of the second part.

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

All that certain lot, piece or parcel of land, with the improvements thereon erected, situate in Northwest Fork Hundred, Sussex County and State of Delaware, known as 14890 Sussex Highway and being more particularly bounded and described as follows, to wit:

BEGINNING at an iron stob located on the Westerly side of the south bound lane of Route 13, said stob being 56.00 feet from the centerline of the said south bound lane of Route 13 and being .90 miles frm Road No. 584 and being a corner for this land and lands now or formerly of John H. Stewart; thence along the south bound lane of Route 13, North 13 degrees 00 minutes

Document# 2024000005211 BK: 6054 PG: 293
Recorder of Deeds, Alexandra Reed Baker On 2/15/2024 at 2:36:50 PM Sussex County, DE
Doc Surcharge Paid

East 382.00 feet to a pipe, said pipe being a corner for this land and other lands now or formerly of John H. Stewart; thence North 77 degrees 00 minutes West, a distance of 282.50 feet to a pipe; thence continuing in the same course, 85.3 feet to a stake; thence still continuing in the same course, 27.00 feet more or less, to a point in Bee Branch; thence with the meanderings of Bee Branch, 402.00 feet, more or less, to a point in lands now or formerly of the aforesaid John H. Stewart; thence along this land and lands now or formerly of John H. Stewart South 77 degrees 00 minutes East, 134.00 feet, more or less, to a nail in an oak tree; thence continuing in the same course, 91.50 feet to a pipe; thence still continuing in the same course, 266.40 feet back to the place of Beginning, said to contain 4.0 acres of land, be the same, more or less.

BEING the same land conveyed unto Series A Race Rentals LLC by deed of Ellen L. Race dated July 14, 2022, in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Deed Book 5754 at Page 170.

Above described property is subject to Bee Branch tax ditch assessment and/or right-of-way pursuant to Superior Court Order dated March 12, 2009 of record in the Office of the Prothonotary in and for Sussex County, Delaware, as C.A. No. 06M-11-014 and of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware, in Tax Ditch Book 6 at Page 124.

Above described property is subject to Nanticoke tax ditch assessment and/or right-of-way pursuant to Superior Court Order dated March 12, 2009 of record in the Office of the Prothonotary in and for Sussex County, Delaware, as C.A. No. 06-M-11-110 and of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware, in Tax Ditch Book 8 at Page 236.

SUBJECT to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

IN WITNESS WHEREOF, the said Series A Race Rentals, LLC, a Delaware limited liability company, has caused its name to be hereunto set under seal by Kimberly Ann McGinnis, Manager of Series A Race Rentals, LLC, the day and year first above written.

SERIES A RACE RENTALS, LLC

Witness

By: _____ (SEAL)
Kimberly Ann McGinnis, Manager

Document# 2024000005211 BK: 6054 PG: 294
Recorder of Deeds, Alexandra Reed Baker On 2/15/2024 at 2:36:50 PM Sussex County, DE
Doc Surcharge Paid

STATE OF DELAWARE, COUNTY OF SUSSEX: to-wit

BE IT REMEMBERED, that on this 15th day of February, A.D. 2024, personally appeared before me, the Subscriber, a Notary Public in and for the State and County aforesaid, Kimberly Ann McGinnis, Manager of Series A Race Rentals, LLC, a Delaware limited liability company, party to this Indenture, known to me personally to be such, and acknowledged this Indenture to be his/her act and deed and the act and deed of said limited liability company; that the signature of the Manager is in his/her own proper handwriting and by his/her authority to act; and that the act of signing, sealing, acknowledging and delivering the said Indenture was first duly authorized by a resolution of the limited liability company.

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

ADMITTED TO THE DELAWARE BAR 12/18/1970
BAR #354
Howard W. Hudson, Jr.
NOTARY
PURSUANT TO 29 DEL.C. SEC 4323 (A) (3)

Notary Public

My Commission Expires: A Hudson

10439

BK: 4859 PG: 83

RECEIVED

MAR 17 2025

SUSSEX COUNTY
PLANNING & ZONING

TAX MAP AND PARCEL #: 5-30 17.00
10.00
PREPARED BY & RETURN TO:
Haller & Hudson
101 S. Bedford St.
P.O. Box 533
Georgetown, DE 19947
File No. 9970A-HWH/

THIS CORRECTIVE DEED, made this 19TH day of March, 2018,

- BETWEEN -

MILL CREEK ENTERPRISES, LLC, a limited liability company of the State of Maryland, of 24552 Williston Road, Denton, MD 21629, party of the first part,

- AND -

ARCTEC PROPERTIES, LLC, a limited liability company of the State of Delaware, of 21965 Palomino Way, Bridgeville, DE 19933, party of the second part.

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

ALL that certain piece or parcel of land, lying and being situated in Northwest Fork Hundred, Sussex County, State of Delaware, and being more particularly described as follows, to wit:

BEGINNING at a point on the westerly right-of-way line of U.S. Route No. 13 (southbound), said point being 0.90 more or less mile in a northerly direction from the right-of-way line of County Road No. 584, said point also being a common property corner for these lands and lands now or formerly of Robert Rider, said point also being located on the thread of

AP

AP

Bee Branch; thence running with the thread of Bee Branch the following seven (7) courses and distances (tie-line) (1) North 74 degrees 21 minutes 50 seconds West 75.14 feet (tie-Line) to a point; thence (2) North 56 degrees 34 minutes 59 seconds West 78.49 feet (tie Line) to a point; 3) North 44 degrees 54 minutes 36 seconds West 64.44 feet (tie-line) to a point; thence (4) North 35 degrees 14 minutes 13 seconds West 417.82 feet (tie Line) to a point; thence (5) North 17 degrees 16 minutes 17 seconds West 58.15 feet (tie-Line) to a point; thence (6) North 13 degrees 11 minutes 22 seconds East 33.21 feet (tie-line) to a point; thence (7) North 23 degrees 33 minutes 07 seconds East 100.18 feet (tie-line) to a point, said point being a common property corner for these lands and lands now or formerly of Jean Evans; thence leaving the thread of Bee Branch and running with a common property line for these lands and lands now or formerly of Jean Evans, South 77 degrees 00 minutes 00 seconds East 525.72 feet to a 1" pipe found on the most westerly right-of-way line of US. Route No. 13 (Southbound), said pipe being a common property corner for these lands and lands now or formerly of Jean Evans; thence turning and running with said westerly right-of-way line, South 13 degrees 00 minutes 00 seconds West 525.28 feet home to the point and place of beginning, containing 4.704 acres of land, be the same more or less, as surveyed and shown on a plat prepared by Theodore B. Simpler, P.L.S. 289, dated May 25, 2004.

THE PURPOSE of this corrective deed is to correct errors in the legal description in Deed from Mill Creek Enterprises, LLC to Arctec Properties, LLC dated December 15, 2016 and recorded December 19, 2016 in the Office of the Recorder of Deeds, in and for Sussex County, Delaware, in Deed Book 4638 at Page 284.

SUBJECT is subject to Bee Branch tax ditch assessment and/or right-of-way pursuant to Superior Court Order dated January 4, 2007 of record in the Office of the Prothonotary in and for Sussex County, Delaware, as C.A. No. 06M-11-014 and of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware, in Tax Ditch Book 1 at Page 212.

SUBJECT to Nanticoke River Tax ditch assessment and/or right-of-way pursuant to Superior Court Order dated January 4, 2007 of record in the Office of the Prothonotary in and for Sussex County, Delaware, as C.A. No. 06M-11-110 and of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware, in Tax Ditch Book 3 at Page 1.

SUBJECT to any and all restrictions, reservations, conditions, easements and agreements of record in the Office of the Recorder of Deeds in and for Sussex County, Delaware.

IN WITNESS WHEREOF, the said Mill Creek Enterprises, LLC, a Delaware limited liability company, has caused its name to be hereunto set under seal by JWL, Inc., Member of Mill Creek Enterprises, LLC, the day and year first above written.

BK: 4859 PG: 85

MILL CREEK ENTERPRISES, LLC

Kendall M Teague
Witness

By: J W. Logan, Jr. (SEAL)
JWL, Inc., Member, by John W. Logan, Jr., President

STATE OF Maryland, COUNTY OF Caroline : to-wit

BE IT REMEMBERED, that on this 19th day of March, A.D. 2018, personally appeared before me, the Subscriber, a Notary Public in and for the State and County aforesaid, JWL, Inc., Member of Mill Creek Enterprises, LLC, a Delaware limited liability company, by John W. Logan, Jr., President, party to this Indenture, known to me personally to be such, and acknowledged this Indenture to be his/her act and deed and the act and deed of said limited liability company.

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

SANDRA M LOGAN NOTARY PUBLIC CAROLINE CO. MD.

Sandra M Logan
Notary Public

My Commission Expires: 9/21/2020

Consideration: .00

County	.00
State	.00
Town Total	.00

Received: Maria T Mar 26,2018

RECEIVED
Mar 26,2018
ASSESSMENT DIVISION
OF SUSSEX COUNTY

Recorder of Deeds
Scott Dailey
Mar 26,2018 09:38A
Sussex County
Doc. Surcharge Paid