

**Pre-Construction Notification
and
Project Description**

For

The Orchard Manor Site
Sussex County, Delaware
Tax parcel: #234-35.05-165,00

Prepared for

Mrs. Michaelena Hayes
P.O. Box 966
Dover, DE 19903

and

Submission to:

Department of the Army
U.S. Army Corps of Engineers
Philadelphia District
Wanamaker Building
100 Penns Square East
Philadelphia, Pennsylvania 19107-3390

by

Douglas E, Potts WC

Environmental Consulting Services, Inc.
100 South Cass Street
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302-378-9881

February 21, 2025

ECSI 2024-335

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I. SITE LOCATION AND SIZE

The Orchard Manor Site consists of an undeveloped parcel within the Orchard Manor subdivision, located in the unincorporated area of Oak Orchard, approximately 6.4 miles east of the town of Millsboro, Sussex County, Delaware. A point near the center of the property, is at LAT: 38.601234° and LON: -75.170347°. The site encompasses approximately ± 4.70 acres (Attachment 1).

II. GENERAL/HISTORICAL INFORMATION

Historic aerial imagery shows most of the project site as being in the same condition for nearly a century, and is currently bordered by forest on neighboring land to the west, tidal waters of Emily Gut to the north, and residential properties to the south and east, on prior agricultural land. The property is within easy access to State Route 24, a major east-west corridor spanning between U.S. Route 113 to the west, and State Route 1 to the east (Appendix A- Figures 1, 3, and 4). The project site consists primarily of intertidal, emergent wetland habitat, with uplands predominating along the southern and southwestern property lines (Appendix A – Figure 5 and Appendix B – On-site Photographs). While portions of the parcel include tidal wetlands identified as being under State regulation, the parcel is not located within or near an area designated by the county as Protected Land, or as Critical Habitat. The project site does however, lie within a FEMA designated special flood hazard area (Appendix A- Figure 6).

III. PROJECT PURPOSE/DESCRIPTION

The proposed project on the Orchard Manor Site will be the construction of a single-family residential home, with a footprint of 3,144 S.F., as well as installation of a stone driveway, totaling 3,383 S.F., that connects to the northern terminus of Basin Road. Total impacts to waters of the U.S. related to fill for construction of the home and driveway, under the combined use of Nationwide Permits 18 and 14, will not exceed ½ acre. Wetland impacts proposed under this project will total 0.23 acres, and is within the allowable limits (Attachments 1 through 4).

In compliance with Nationwide Permit General Condition #10, the proposed project will comply with floodplain management regulations described under Sussex County Code, Chapter 115, Article XV111 “Flood Prone Districts.” Under the regulations, requirements for all structures include design and construction methods that safely resist flood loads, utilize construction methods that minimize flood damage, and utilize flood resistant materials where necessary. Residential structures must be adequately elevated, with the lowest floor built at or above the base flood elevation, and placement of electrical, heating and air conditioning, and plumbing systems made above the lowest floor elevation. Land preparation requirements, where fill is required, must utilize soil and rock material only. Fill material will be placed and compacted to provide for stability under flooding conditions, and the material must resist erosion, scour, and settling. Additionally, grading of fill material must have slope of no steeper than one vertical on two horizontals, and must extend laterally from the building footprint to provide for adequate access. Provisions must also be made for adequate drainage and there must be no adverse effects on adjacent properties from the placement of fill (Attachment 5).

The building and design plan for this project proposes to utilize approximately 5.0 percent of the total parcel area in an effort to minimize the impacts to the existing natural resources and to avoid

areas of lower elevation where additional fill material would be required. As The balance of the parcel will remain undeveloped, and will be protected through deed restrictions. These protections will preserve existing wildlife habitat, as well as maintain current water quality functions, with minimal impact to existing flood attenuation and storage functions.

IV. EFFECTS ON SURROUNDING PROPERTIES

Development of the proposed home on the project site is unlikely to result in detrimental environmental effects on surrounding properties to the south, east, and west, as it will occupy land that sits at a lower topographic position. Due to the lower elevation, placement of the proposed home has been the primary focus of the siting and design plan. In an effort to minimize impacts to surrounding natural resources, the homesite will utilize only a small portion of the parcel, where surface elevations are higher and where a transition to uplands begins. Located adjacent to Basin Road, this area provides ease of access for connections to currently existing utilities (sewer, water, and power), with minimal infrastructure upgrades being required.

V. EFFECTS ON THREATENED AND ENDANGERED SPECIES

The project site consists almost entirely of estuarine intertidal and estuarine tidal wetlands. The proposed project will occur completely within, and impact only a small portion of designated intertidal wetlands, located near the southern property boundary. Impacts to identified palustrine, forested wetlands along the western property line and estuarine tidal wetlands to the north and abutting Emily Gut, are not being proposed.

Intertidal wetlands on the project site are typical for the region, and critical habitat for specific threatened or endangered animal species has not been designated for the site. Under the A U.S. Fish and Wildlife Service (USFWS) review of threatened or endangered animal species identifies three species that may occur in the area, to include the tricolored bat (*Perimyotis subflavus*), the Eastern black rail (*Laterallus jamaicensis spp. jamaicensis*), and the monarch butterfly (*Danaus Plexippus*). All three of the species are transient visitors and would not be directly impacted by the activities proposed for the project. Additional review by the National Marine Fisheries Service (NMFS) indicates that Atlantic Sturgeon (*Acipenser oxyrinchus*), as well as four species of sea turtle (Green sea turtle [*Chelonia mydas*], Kemp's ridley sea turtle [*Lepidochelys kempi*], Leather back sea turtle [*Dermochelys coriacea*], and Loggerhead sea turtle [*Caretta caretta*]) may occur in the area, primarily during periods of migration and foraging. The proposed project will not impact any of these listed species, as they require marine habitat for survival (Attachment 6).

VI. PROJECT BENEFITS

Construction of a single-family home on the parcel is consistent with the strategies of the Sussex County Comprehensive Plan, as it relates to development in areas designated for future growth. The project parcel and neighboring lands are zoned as General Residential by Sussex County, and are further classified for land planning purposes as Coastal Area. Under this classification, future growth is permitted, however potential impacts to existing natural resources, and utilization of appropriate best management practices for environmental protection must be considered in site planning and design. The siting and design plan for the project has considered direct and indirect impacts of the proposed home construction, and will implement the appropriate design BMP's.

VII. PROJECT ALTERNATIVES

Alternatives to the current development plan on the parcel are limited due to the sites geomorphic position. The naturally low elevation, poorly drained soils, and regular tidal inundation that occurs over a large portion of the parcel, restricts development to the southern portion of the site, where elevations are slightly higher and where tidal influence is minimal. The initial siting design placed the home-site footprint approximately 80-feet from the eastern property line, in an area with a lower elevation and within tidal wetlands exhibiting criteria consistent with wetlands under State jurisdiction. Wetland impacts under the initial plan proposed approximately 11,000 S.F. of disturbance. The current design plan however, places the home-site foot print approximately 120 feet further west, within an area of slightly higher elevation that is less impacted by tidal influence. Based on the revised plan, while fill material will remain necessary in order to increase the elevation and establish a stable base for construction, the total volume of fill material required has been reduced by 700 S.F., resulting in an overall reduction in wetland impacts.

Although not developing the site remains an alternative, the inland bays are a very popular area for both current residents and for seasonal, out of state visitors. Land for residential uses is therefore in high demand. The project on the Orchard Manor site is consistent with surrounding land uses, and is within an area, designated by the county, where residential uses are permitted. Maintaining development within designated growth areas will help to reduce the loss of natural resources and habitat that occur on land outside designated growth areas.

The owners of the project site have made a substantial investment in the parcel specifically for their personal use. Although the lot acreage is large in comparison to other parcels within the Orchard Manor Subdivision, limitations to development previously described, dictate that a single-family residence constructed on the parcel is the preferred option that will provide the best return on the owner's investment. The project does not propose any additional subdivision of the parcel in the future, and protections to natural resources within the parcel boundaries will be preserved in perpetuity through the placement of deed restrictions.

APPENDIX A: FIGURES

- Figure 1. The Orchard Manor Site location on Sussex County ADC map.
- Figure 2. The Orchard Manor Site location on the USGS map, Frankford, DE Quadrangle map.
- Figure 3. The Orchard Manor Site location on the 1954 aerial image.
- Figure 4. The Orchard Manor Site location on 2024 Sussex County GIS ortho-imagery.
- Figure 5. The Orchard Manor Site location on the National Wetlands Inventory (NWI) map.
- Figure 6 The Orchard Manor Site outlined on 2024 FEMA FIRMette map #10005C0481K.



Figure 1

Vicinity Map & Aerial Photo
 Project: Orchard Manor Site – Federal 404 Wetlands Permit
 Sussex County Delaware, Tax parcel #234-35.05-165.00
 ADC Map Coordinates: Sussex County, DE Map, map 34; Letter B Number 4
 Proposed Project For:
 Michaelena Hayes
 P.O. Box 966
 Dover, DE 19903

Environmental

Consulting Services, Inc.

100 S. Cass St., Middletown, DE 19709

Orchard Manor

Vicinity Map & Aerial View

Project: Federal 404 Wetlands Permit

Date: 02/18/25

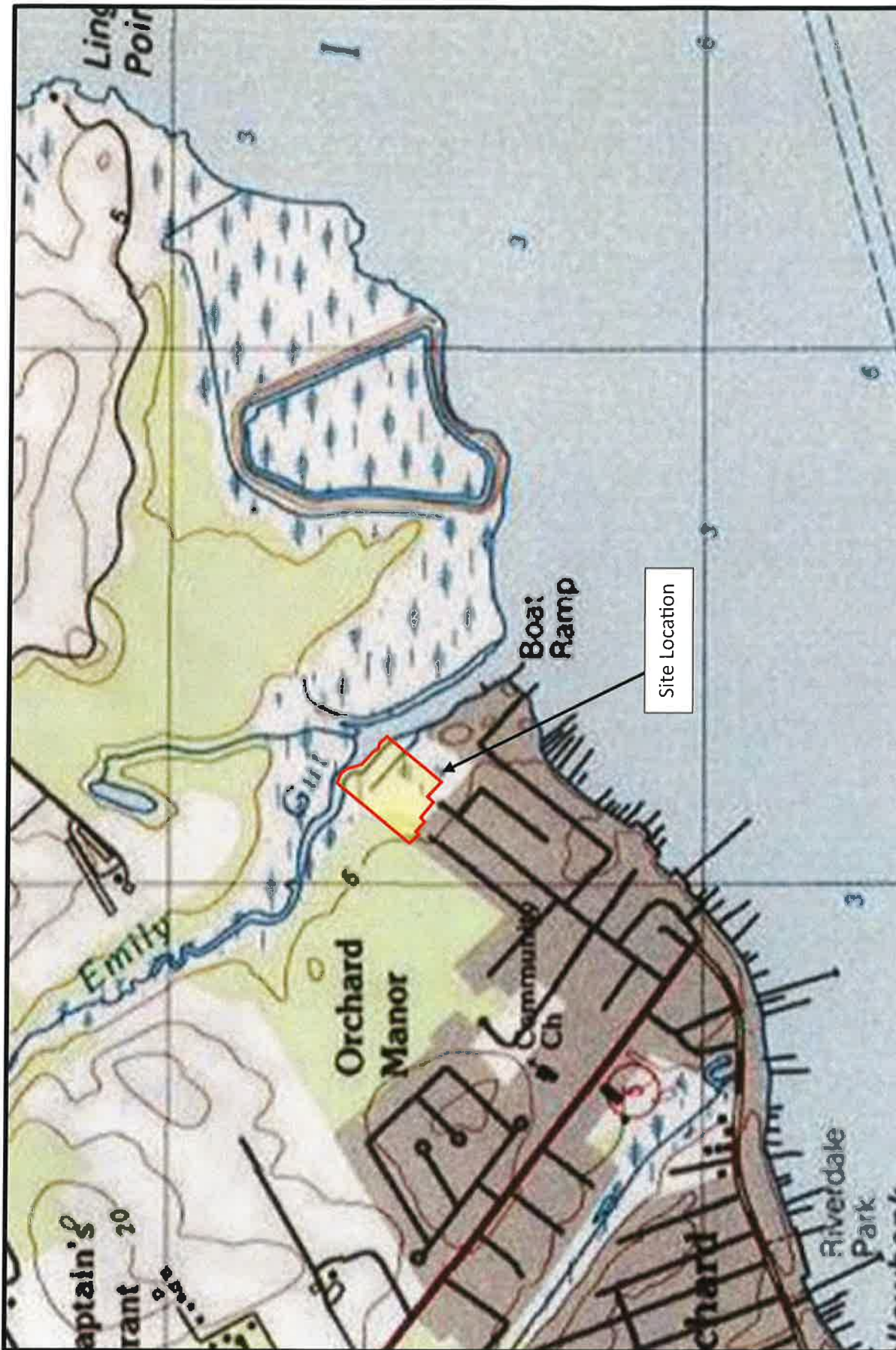


Figure 2
Orchard Manor Site Location
 Topographic map (The National Map Viewer, <http://nationalmap.gov/viewer.html>)

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Figure 3
Orchard Manor Site Location
1954 aerial image (Demac.udel.edu/data/aerial-photography)



U.S. Fish and Wildlife Service

National Wetlands Inventory

Orchard Manor Site



November 14, 2024

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This map is based on data for the 4004 manor

Environmental Consulting Services, Inc.

100 S. Cass Street, Middletown, DE 19709

Figure 5

Orchard Manor Site Location
National Wetlands Inventory Map (<http://www.fws.gov/nwi/>)

National Flood Hazard Layer FIRMette



43° 07' 31" N, 108° 36' 18" W



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Environmental

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100 S. Cass Street, Middletown, DE 19709

Figure 6

Orchard Manor Site Location
FEMA FIRMette (U.S. Department of Homeland Security FEMA Map Service Center, <http://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=...>)

Legend

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

- SPECIAL FLOOD HAZARD AREAS**
 - Without Base Flood Elevation (BFE)
 - With BFE or Depth Zone AE, AO, AH, VE, AP
 - Regulatory Floodway
- OTHER AREAS OF FLOOD HAZARD**
 - D.2% Annual Chance Flood Hazard, Area 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 Levees, See Notes, Zone X
 - Area with Flood Risk due to Levees Zone C
- OTHER AREAS**
 - NO SCREEN
 - Area of Minimal Flood Hazard Zone 2
 - Effective LOMRS
 - Area of Undetermined Flood Hazard Zone 2
- GENERAL STRUCTURES**
 - Channel, Culvert, or Storm Sewer
 - Levee, Dike, or Floodwall

- OTHER FEATURES**
 - 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

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 10/8/2024 8:42:17 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.

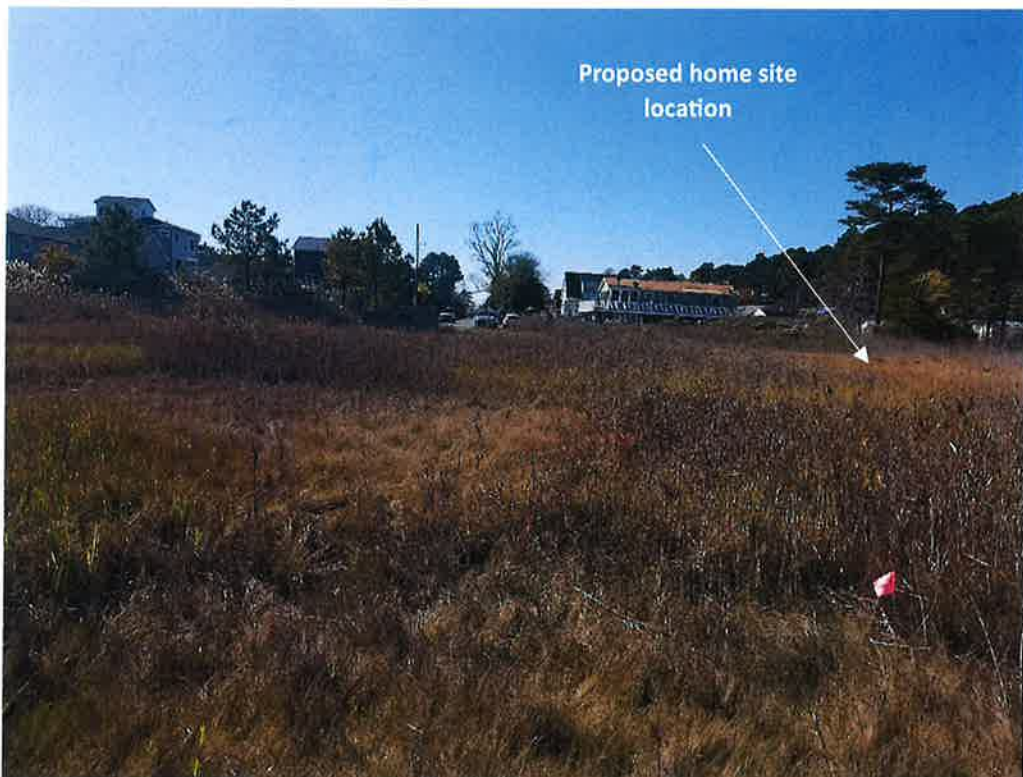
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory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

APPENDIX B: ON-SITE PHOTOGRAPHS

DRAFT



View taken from a point near Emily Gut, looking south toward existing residential homes of Orchard Manor (11/08/2024).



Another view, taken from a point near the center of the parcel and northeast of the location of the proposed homesite, looking in the direction of Basin Road (11/08/2024).



View taken from a point near the center of the parcel and just north of the proposed homesite location, looking east towards residential homes within the Orchard Manor subdivision (11/08/2024).



View taken from the same point as the previous photo, looking north in the direction of Emily Gut (11/08/2024).



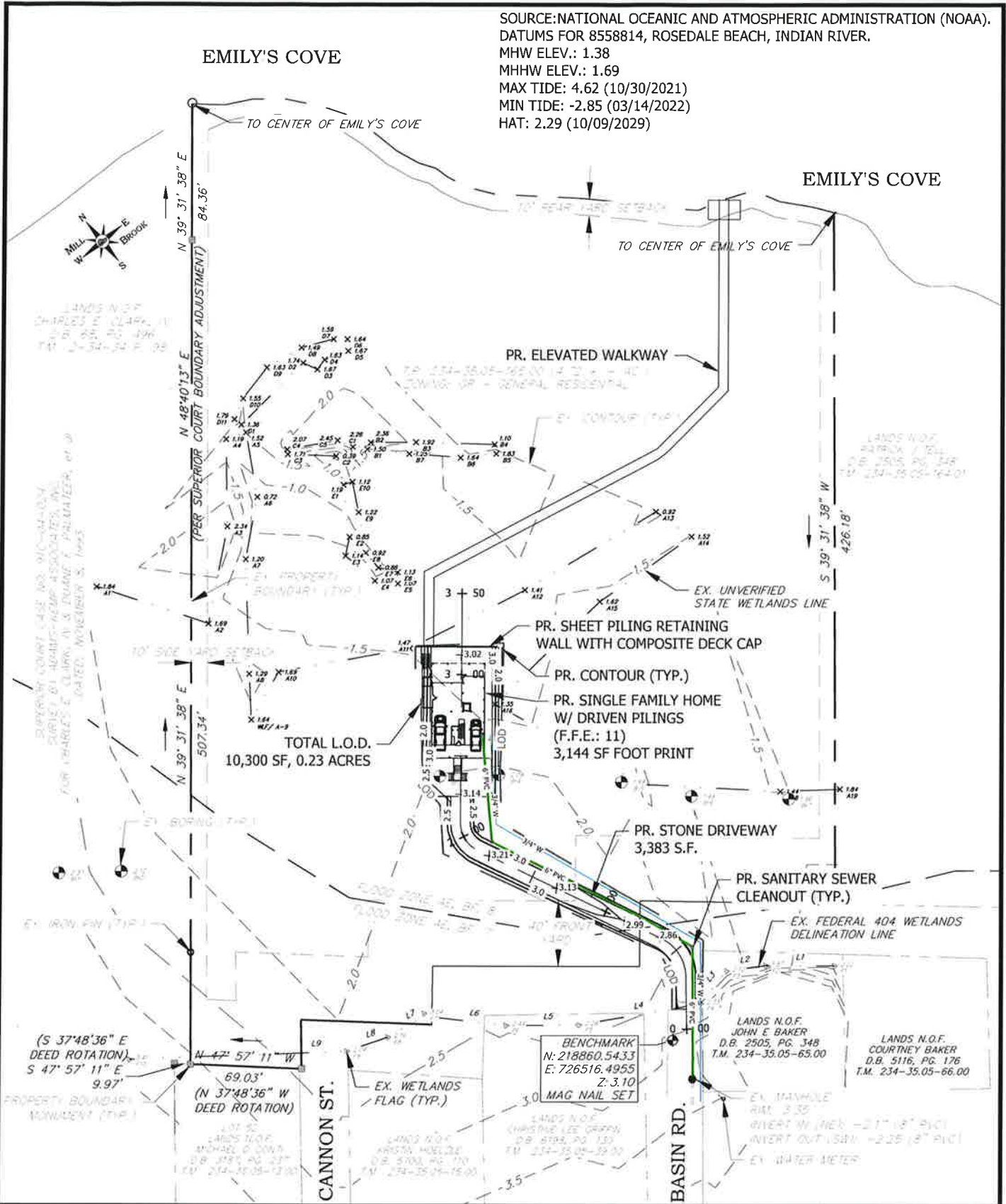
Street view taken from a point at the northern end of Basin Road, looking north toward the location of the proposed home site (GoogleMaps street view).

ATTACHMENT 1:

Overall Improvements Plan

prepared by Mill Brook Engineering, LLC, Dover, DE.

SOURCE: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA).
 DATUMS FOR 8558814, ROSEDALE BEACH, INDIAN RIVER.
 MHW ELEV.: 1.38
 MHHW ELEV.: 1.69
 MAX TIDE: 4.62 (10/30/2021)
 MIN TIDE: -2.85 (03/14/2022)
 HAT: 2.29 (10/09/2029)



OVERALL IMPROVEMENTS PLAN

TAX PARCEL
 234-35.05-165.00

MILLSBORO SUSSEX COUNTY DELAWARE

DATE: FEB. 2025
 PROJECT #: HAYES-007

SHEET 3

0 80'

SCALE: 1" = 80'

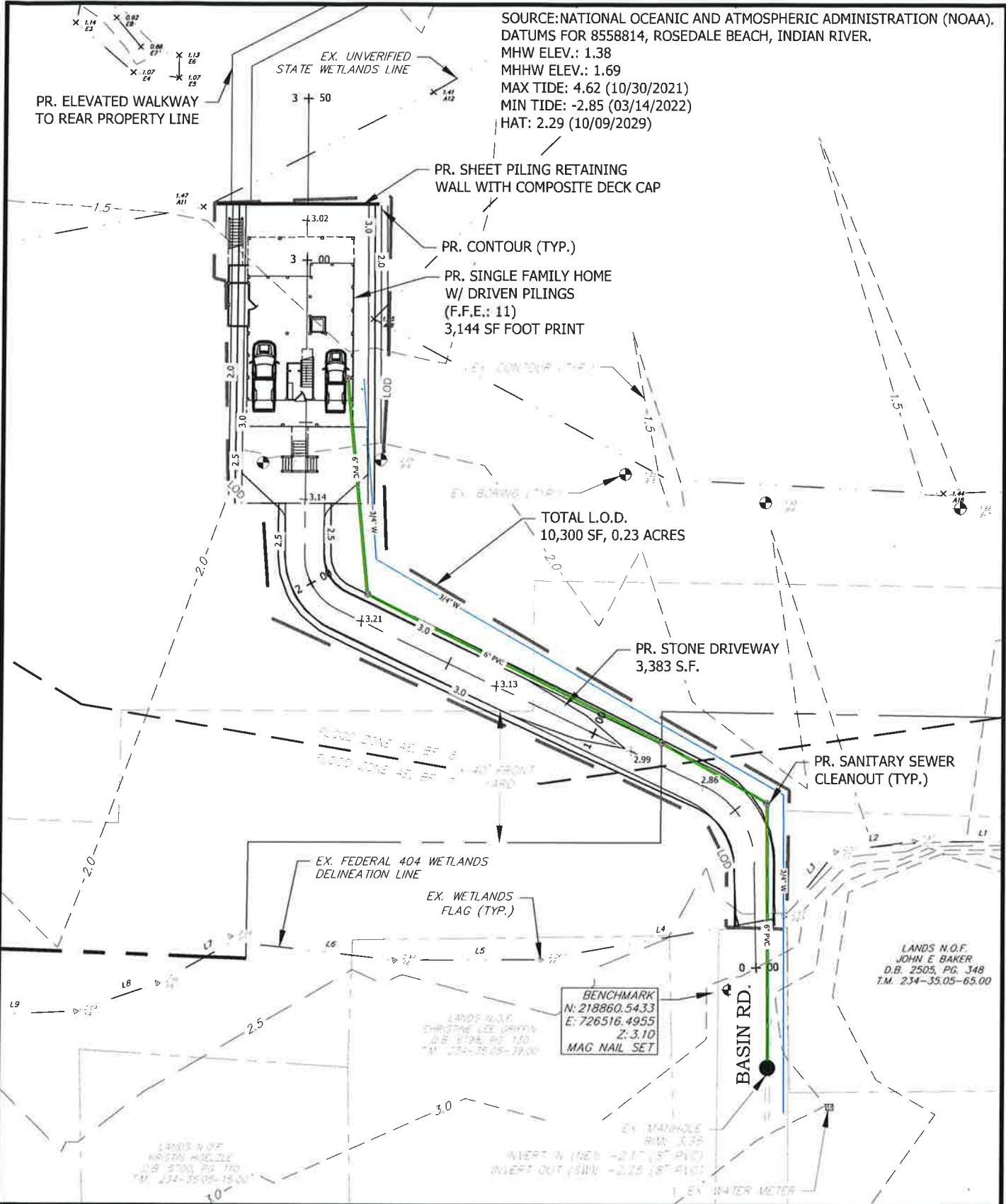
ENGINEER: MMH
 DESIGN BY: MMH
 DRAWN BY: EMB
 CHECKED BY: MB

ATTACHMENT 2:

Wetlands Disturbance Plan

prepared by Mill Brook Engineering, LLC., Dover, DE

SOURCE: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA),
 DATUMS FOR 8558814, ROSEDALE BEACH, INDIAN RIVER.
 MHW ELEV.: 1.38
 MHHW ELEV.: 1.69
 MAX TIDE: 4.62 (10/30/2021)
 MIN TIDE: -2.85 (03/14/2022)
 HAT: 2.29 (10/09/2029)



WETLANDS DISTURBANCE PLAN

TAX PARCEL
 234-35.05-165.00

MILLSBORO SUSSEX COUNTY DELAWARE

DATE: FEB. 2025
 PROJECT #: HAYES-007

SHEET 2

0 40'

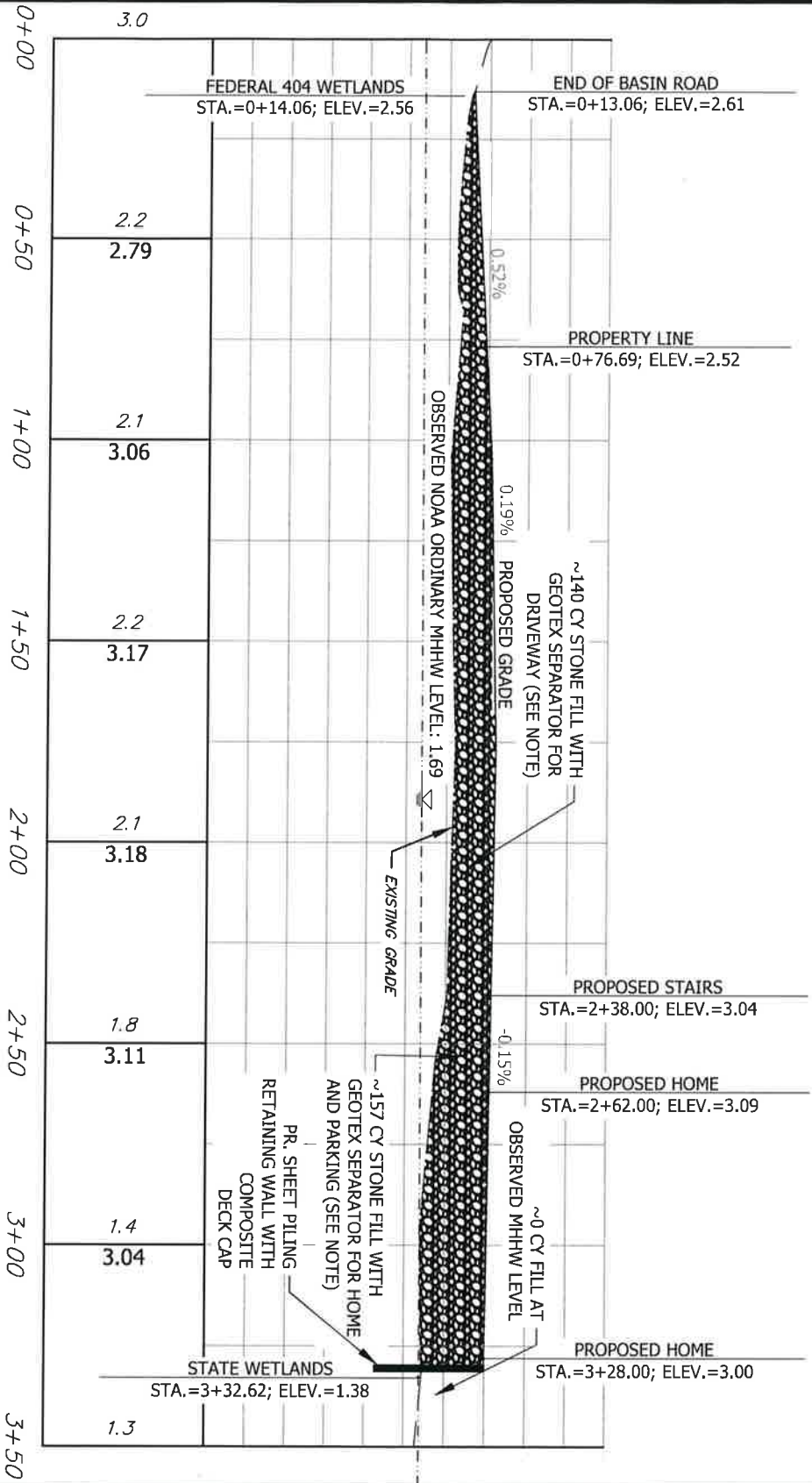
SCALE: 1" = 40'

ENGINEER: MMH
 DESIGN BY: MMH
 DRAWN BY: EMB
 CHECKED BY: MB

ATTACHMENT 3:

Wetlands Plan, Profile View: Driveway
prepared by Mill Brook Engineering, LLC., Dover, DE

THIS PROJECT SITE IS LOCATED WITHIN A FLOOD ZONE AREA AS IDENTIFIED BY FEMA. ALL PERMANENT ABOVE-GRADE FILL IN WATERS OF THE U.S. WITHIN THE 100-YEAR FLOOD PLAIN ARE PROPOSED TO COMPLY WITH FEMA AND FEMA-APPROVED LOCAL FLOOD PLAIN DEVELOPMENT REQUIREMENTS. SPECIFICALLY, THIS PROJECT DEMONSTRATES ADHERENCE TO SECTIONS 115-141.4 AND 115-141.5 OF ARTICLE XVIII FLOOD-PRONE DISTRICTS WITHIN THE CODE OF SUSSEX COUNTY. DOCUMENTATION OF COMPLIANCE WITH THESE REQUIREMENTS IS INCLUDED AS PART OF THIS PERMIT APPLICATION.



PROFILE VIEW: DRIVEWAY
HORZ. SCALE: 1"=40'
VERT. SCALE: 1"=4'

MATERIAL: DE 57 CRUSHED STONE RANGES IN SIZE FROM 1 INCH TO 1/4 INCH AND CR-6 (DGA) IS GENERALLY 3/4" USED FOR SUB BASE. QUALITY: THE STONE MUST BE CLEAN, WASHED, AND FREE OF FINES AND CONTAMINANTS TO ENSURE PROPER DRAINAGE AND STABILITY. PLACEMENT: BASE LAYER: PLACE A GEOTEXTILE FABRIC ON THE WETLAND SOIL TO SEPARATE THE FILL MATERIAL FROM THE NATIVE SOIL. FILL LAYER: SPREAD 6 INCHES OF CR-6 OVER THE GEOTEXTILE FABRIC THEN SPREAD THE DE 57 STONE EVENLY OVER THE CR-6. THE THICKNESS OF THE FILL LAYER SHOULD BE SUFFICIENT TO SUPPORT THE DRIVEWAY LOAD, 12 INCHES TOTAL.



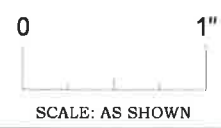
STREET PROFILE

TAX PARCEL
 234-35.05-165.00

MILLSBORO SUSSEX COUNTY DELAWARE

DATE: FEB. 2025
 PROJECT #:
 HAYES-007

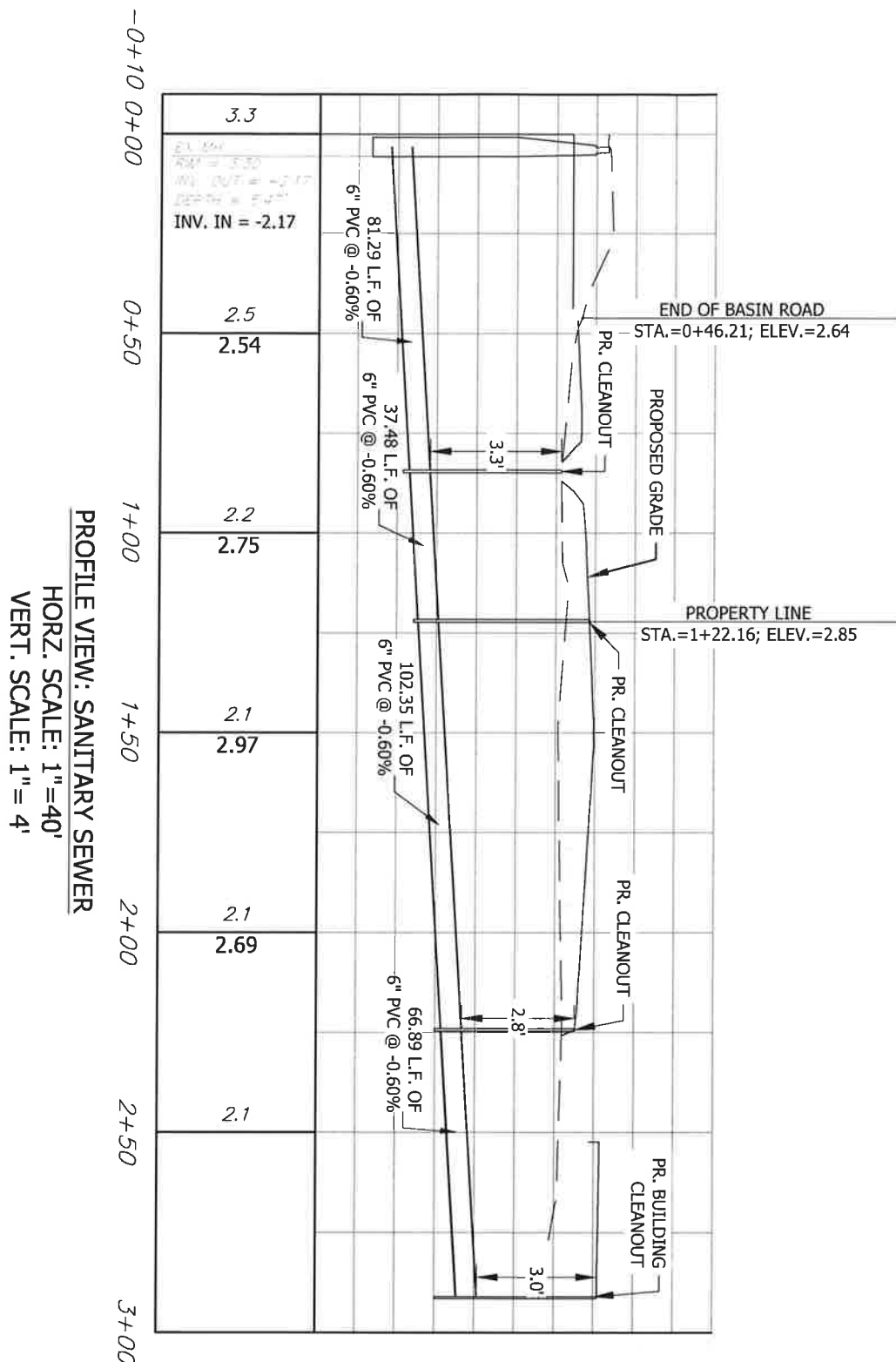
SHEET 5



ENGINEER: MMH
 DESIGN BY: MMH
 DRAWN BY: EMB
 CHECKED BY: MB

ATTACHMENT 4:

Wetlands Plan, Profile View: Sanitary Sewer,
prepared by Mill Brook Engineering, LLC, Dover, DE.



PROFILE VIEW: SANITARY SEWER
 HORZ. SCALE: 1"=40'
 VERT. SCALE: 1"=4'

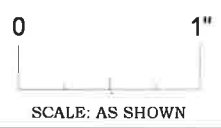


SANITARY SEWER PROFILE

TAX PARCEL
 234-35.05-165.00
 MILLSBORO SUSSEX COUNTY DELAWARE

DATE: FEB. 2025
 PROJECT #: HAYES-007

SHEET 4



ENGINEER: MMH
 DESIGN BY: MMH
 DRAWN BY: EMB
 CHECKED BY: MB

ATTACHMENT 5:

Sussex County Code, Chapter 115, Article XV111 “Flood Prone Districts

D. Application Required

Application for a permit shall be made by the owner of the property or his/her authorized agent, herein referred to as the applicant, prior to the actual start of construction. The application shall be on a form furnished for that purpose.

(1) Application Contents.

At a minimum, applications shall include:

- (a) Site plans drawn to scale showing the nature, location, dimensions, existing and proposed topography of the area in question, the limits of any portion of the site that was previously filled, and the location of existing and proposed structures, excavation, filling, storage of materials, drainage facilities, and other proposed activities.
- (b) Elevation of the existing natural ground where structures are proposed, referenced to the datum on the Flood Insurance Rate Map, and an Elevation Certificate that shows the ground elevation and proposed building elevations (identified in Section C of the Elevation Certificate as "Construction Drawings").
- (c) Delineation of special flood hazard areas, floodway boundaries, flood zones, and base flood elevations. Where surveyed natural ground elevations are lower than the base flood elevations, base flood elevations shall be used to delineate the boundary of special flood hazard areas. If proposed, changes in the delineation of special flood hazard areas shall be submitted to and approved by FEMA in accordance with Section 115-141.3.D.(2). Where special flood hazard areas are not delineated or base flood elevations are not shown on the flood hazard maps, the Floodplain Administrator has the authority to require the applicant to use information provided by the Floodplain Administrator, information that is available from other sources, or to determine such information using accepted engineering practices.
- (d) For subdivision proposals and development proposals containing at least 50 lots or at least 5 acres, whichever is the lesser, and where base flood elevations are not shown on Flood Insurance Rate Maps, hydrologic and hydraulic engineering analyses and studies as required by Section 115-141.4.B.(4). Studies, analyses, computation, etc., shall be submitted in sufficient detail to allow thorough technical review by the Office of Planning and Zoning and/or the Sussex County Engineering Department.
- (e) When other acceptable information is not available, the Floodplain Administrator may permit the use of any of the methods described in FEMA publication *Managing Floodplain Development in Approximate A Areas* (as that publication may be subsequently amended) or may permit the elevation to be determined by using the elevation of a point on the boundary of the identified floodplain area which is nearest the construction site. The Floodplain Administrator may require the applicant to determine the elevation with hydrologic and hydraulic engineering techniques. Hydrologic and hydraulic analyses shall be undertaken only by professional engineers registered in the State of Delaware, who shall certify that the technical methods used correctly reflect currently accepted technical concepts. Studies, analyses, computation, etc., shall be submitted in sufficient detail to allow thorough technical review by the Office of Planning and Zoning and/or the Sussex County Engineering Department.
- (f) Elevation of the lowest floor, including basement, or elevation of the bottom of the lowest horizontal structural member, as applicable to the flood zone, of all proposed structures, referenced to the datum on the Flood Insurance Rate Maps.
- (g) Such other material and information as may be requested by the Floodplain Administrator necessary to determine conformance with these regulations.
- (h) For work on an existing structure, including any improvement, addition, repairs, alterations, rehabilitation, or reconstruction, sufficient information to determine if the work constitutes substantial improvement, including:
 - i. Documentation of the market value of the structure before the improvement is started or before the damage occurred.

- ii. Documentation of the actual cash value of all proposed improvement work, or the actual cash value of all work necessary to repair and restore damage to the before damaged condition, regardless of the amount of work that will be performed.
- (i) Certifications and/or technical analyses prepared or conducted by an appropriate design professional licensed in the State of Delaware, as appropriate to the type of development activity proposed and required by these regulations:
 - [i] Floodproofing Certificate for dry floodproofed non-residential structures, as required in Section 115-141.5.C.
 - [ii] Certification that flood openings that do not meet the minimum requirements of Section 115-141.5.B.2.(c)[ii] are designed to automatically equalize hydrostatic flood forces.
 - [iii] Certification that the structural design, specifications and plans, and the methods of construction to be used, are in accordance with accepted standards of practice and meet the requirements of Section 115-141-6.C.(5).
 - [iv] Technical analyses to document that the flood carrying capacity of any watercourse alteration or relocation will not be diminished and documentation of maintenance assurances as required in Section 115-141-5.E.(3).
 - [v] Hydrologic and hydraulic engineering analyses demonstrating that the cumulative effect of proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood by more than one foot in special flood hazard areas where the Federal Emergency Management Agency has provided base flood elevations but has not delineated a floodway, as required by Section 115-141-5.E.(2).
 - [vi] Hydrologic and hydraulic engineering analyses of any development proposed to be located in an identified floodway, as required by Section 115-141-5.E.(1).
 - [vii] Hydrologic and hydraulic engineering analyses to develop base flood elevations for subdivisions and large-lot developments, as required by Section 115-141-4.B.(4) or otherwise required by the Floodplain Administrator.

(2) Right to Submit New Technical Data

The applicant has the right to seek a Letter of Map Change and to submit new technical data to FEMA regarding base maps, topography, special flood hazard area boundaries, floodway boundaries, and base flood elevations. Such submissions shall be prepared in a format acceptable by FEMA and the Floodplain Administrator shall be notified of such submittal.

(3) Requirement to Submit New Technical Data

The Floodplain Administrator shall notify FEMA of physical changes affecting flood hazard areas and flooding conditions by submitting technical or scientific data as soon as practicable, but not later than six (6) months after the date such information becomes available. The Floodplain Administrator has the authority to require applicants to submit technical data to FEMA for Letters of Map Change.

E. Review, Approval or Disapproval

(1) Review

The Floodplain Administrator shall:

- (a) Review applications for development in special flood hazard areas to determine the completeness of information submitted. The applicant shall be notified of incompleteness or additional information required to support the application.
- (b) Review applications for compliance with these regulations after all information required in Section 115-141.3.D or identified and required by the Floodplain Administrator has been received.

- (c) Review all permit applications to assure that all necessary permits have been received from those federal, state or local governmental agencies from which prior approval is required. The applicant shall be responsible for obtaining such permits, including but not limited to:

[i]. Permits issued by the U.S. Army Corps of Engineers under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act, and the Delaware Environmental Protection Agency under Section 401 of the Clean Water Act.

[ii]. Permits required by the State of Delaware.

(2) Approval or Disapproval

The Floodplain Administrator shall approve applications that comply with the applicable requirements of these regulations. The Floodplain Administrator shall disapprove applications for proposed development that do not comply with the applicable provisions of these regulations and shall notify the applicant of such disapproval, in writing, stating the reasons for disapproval.

(3) Expiration of Permit

A permit is valid provided the actual start of construction occurs within 180 days of the date of permit issuance. If the actual start of construction is not within 180 days of the date of permit issuance, requests for extensions shall be submitted in writing. Upon reviewing the request and the permit for continued compliance with these regulations, the Floodplain Administrator may grant, in writing, one or more extensions of time, for periods not more than 180 days each.

F. Inspections

The Floodplain Administrator shall make periodic inspections of development permitted in special flood hazard areas, at appropriate times throughout the period of construction in order to monitor compliance. Such inspections may include:

- (1) Stake-out inspection, to determine location on the site relative to the special flood hazard area and floodway.
- (2) Foundation inspection, upon placement of the lowest floor and prior to further vertical construction, to collect information or certification of the elevation of the lowest floor.
- (3) Enclosure inspection, including crawlspaces, to determine compliance with applicable provisions.
- (4) Utility inspection, upon installation of specified equipment and appliances, to determine appropriate location with respect to the base flood elevation.
- (5) Storage of materials.

G. Submissions Required Prior to Issuance of a Certificate of Occupancy

The following certifications are required to be submitted by the permittee for development that is permitted in special flood hazard areas prior to the issuance of a Certificate of Occupancy:

- (1) For new or substantially improved residential structures or nonresidential structures that have been elevated, an Elevation Certificate that shows the ground elevation and finished elevations (identified in Section C of the Elevation Certificate as "Finished Construction").
- (2) For nonresidential structures that have been dry floodproofed, a Floodproofing Certificate based on "Finished Construction" (identified in Section II of the Elevation Certificate form).
- (3) For all development activities subject to the requirements of Section 115-3.D.(2), a Letter of Map Revision shall be provided.

H. Flood Insurance Rate Map Use and Interpretation

The Floodplain Administrator shall make interpretations, where needed, as to the exact location of special flood hazard areas, floodplain boundaries, and floodway boundaries. The following shall apply to the use and interpretation of special flood hazard maps and data:

- (1) In FEMA-identified special flood hazard areas where base flood elevation and floodway data have not been identified and in areas where FEMA has not identified special flood hazard areas, any other flood hazard data available from a federal, state, or other source shall be reviewed and reasonably used.
- (2) Special flood hazard area delineations, base flood elevations, and floodway boundaries on FEMA maps and in FEMA studies shall take precedence over delineations, base flood elevations, and floodway boundaries by any other source that reflect a reduced special flood hazard area, reduced floodway width and/or lower base flood elevations, unless, with the approval of the Floodplain Administrator, such data is submitted to, and approved by FEMA.
- (3) Other sources of data shall be reasonably used, with the approval of the Floodplain Administrator, if they show increased base flood elevations and/or larger floodway areas than are shown on FEMA flood maps and studies, and if such data is submitted to, and approved by, FEMA.
- (4) Where field surveyed topography indicates that ground elevations are below the base flood elevation, even in areas not delineated as a special flood hazard on a flood hazard map, the area shall be considered as special flood hazard area.

§ 115-141.4 REQUIREMENTS IN ALL SPECIAL FLOOD HAZARD AREAS

A. Application of Requirements

The general requirements of this section apply to all development proposed within special flood hazard areas identified in Section 115-141.1.D.

B. Subdivisions and Developments

- (1) All subdivision and development proposals shall be consistent with the need to minimize flood damage and are subject to all applicable standards in these regulations.
- (2) All subdivision and development proposals shall have utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- (3) All subdivision and developments proposals shall have adequate drainage provided to reduce exposure to flood damage.
- (4) All subdivision proposals and development proposals containing at least 50 lots or at least 5 acres, whichever is the lesser, in FEMA-delineated special flood hazard areas where base flood elevation data are not available, shall be supported by hydrologic and hydraulic engineering analyses that determine base flood elevations and floodway delineations. The analyses shall be prepared by a professional engineer registered in the State of Delaware in a format required by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Studies, analyses, computation, etc., shall be submitted in sufficient detail to allow thorough technical review by the Office of Planning and Zoning and/or the Sussex County Engineering Department. In subdivisions in which the proposed lots are located outside of the floodplain, completion of the analysis may be waived provided that the subject area is designated and restricted to open space or a conservation area.

C. Protection of Water Supply and Sanitary Sewage Systems

- (1) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.
- (2) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into systems and discharges from systems into floodwaters.
- (3) On-site waste disposal systems shall be located to avoid impairment to or contamination from them during conditions of flooding.

D. Buildings and Structures

All new construction of buildings and structures, including placement of manufactured homes and substantial improvements to existing buildings and structures, that are to be located, in whole or in part, in special flood hazard areas shall meet the following requirements:

- (1) Be designed (or modified) and constructed to safely resist flood loads. The construction shall provide a complete load path capable of transferring all loads from their point of origin through the load-resisting elements to the foundation. Buildings and structures shall be designed, connected and anchored to resist flotation, collapse or permanent lateral movement due to structural loads and stresses from flooding equal to the base flood elevation, including hydrodynamic and hydrostatic loads and the effects of buoyancy.
- (2) Be constructed by methods and practices that minimize flood damage.
- (3) Use flood damage-resistant materials below the elevation of the lowest floor. See FEMA Technical Bulletin #2 – *Flood Damage-Resistant Materials Requirements* and FEMA Technical Bulletin #8 – *Corrosion Protection for Metal Connectors in Coastal Areas*, as both may be amended from time to time.
- (4) Have electrical systems, equipment and components, and heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment located at or above the elevation of the lowest floor. Electrical wiring systems are permitted to be located below the elevation of the lowest floor provided they conform to the provisions of the electrical part of this code for wet locations. If replaced as part of a substantial improvement, electrical systems, equipment and components, and heating, ventilation, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment shall meet the requirements of this section. See FEMA Technical Bulletin #4 – *Elevator Installation*, as may be amended.
- (5) As an alternative to subsection D.(4) above, electrical systems, equipment and components, and heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment are permitted to be located below the elevation of the lowest floor provided that they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of the base flood.
- (6) In special flood hazard areas other than coastal high hazard areas (Zones A, AE, and AO), meet the specific requirements of Section 115-141.5.
- (7) In all coastal high hazard areas (Zone VE), meet the specific requirements of Section 115-141.6.
- (8) In a special flood hazard area with more than one designation (Zones A, AE, and AO, floodway, Zones VE), meet the requirements of the most restrictive designation.

E. Fill

- (1) Disposal of fill, including but not limited to rubble, construction debris, woody debris, and trash, shall not be permitted in special flood hazard areas.
- (2) Where permitted by Section 115-141.5 (Zones A, AE, and AO), fill placed for the purpose of raising the ground level and to support a building or structure shall meet the following requirements:
 - (a) Extend laterally from the building footprint to provide for adequate access, as a function of use; the Floodplain Administrator may seek advice from the State Fire Marshal's Office and/or the local fire services agency.
 - (b) Placed and compacted to provide for stability under conditions of rising and falling floodwaters and resistance to erosion, scour, and settling.
 - (c) Consist of soil or rock materials only.
 - (d) Sloped no steeper than one (1) vertical on two (2) horizontal, unless approved by the Floodplain Administrator.

- (e) Designed with provisions for adequate drainage and no adverse effect on adjacent properties.
- (3) Fill placed for a purpose other than to support a building or structure shall meet the requirements of Sections 115-141.4.E.(2)(b) through (c).

F. Historic Structures

Repair, alteration, or rehabilitation of historic structures shall be subject to the requirements of these regulations unless a determination is made that compliance with these regulations will preclude the structure's continued designation as a historic structure and a variance is granted in accordance with Section 115-141.7 and such variance is the minimum necessary to preserve the historic character and design of the structure.

G. Recreational Vehicles

- (1) Recreational vehicles in special flood hazard areas shall be fully licensed and ready for highway use, and shall be placed on a site for less than 180 consecutive days.
- (2) Recreational vehicles that are not fully licensed and ready for highway use, or that are to be placed on a site for more than 180 consecutive days, shall meet the requirements of Section 115-141.5.B.(3) for manufactured homes or Section 115-141.6.C.(4), as applicable.

H. Gas or Liquid Storage Tanks

- (1) Underground tanks in special flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.
- (2) Above-ground tanks in special flood hazard areas shall be elevated and anchored to or above the base flood elevation or shall be anchored at-grade and designed and constructed to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.
- (3) In special flood hazard areas, tank inlets, fill openings, outlets and vents shall be:
 - (a) At or above the base flood elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the base flood.
 - (b) Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.

§ 115-141.5 REQUIREMENTS IN SPECIAL FLOOD HAZARD AREAS OTHER THAN COASTAL HIGH HAZARD AREAS

A. General Requirements

In addition to the general requirements of Section 115-141.4, the requirements of this section apply to all development proposed in special flood hazard areas other than coastal high hazard areas. These areas include Zones A, AE, and AO.

B. Residential Structures and Residential Portions of Mixed Use Structures

(1) Elevation Requirements

- (a) The lowest floor (including basement) shall be elevated to or above the base flood elevation.
- (b) In areas of shallow flooding (Zone AO), the lowest floor (including basement) shall be elevated at least as high above the highest adjacent grade as the depth number specified in feet on the Flood Insurance Rate Map, or at least 2 feet if a depth number is not specified; adequate drainage paths shall be provided to guide floodwaters around and away from the structure.
- (c) Enclosures below the lowest floor shall meet the requirements of Section 115-141.5.B.(2).

(2) Enclosures Below the Lowest Floor

- (a) Enclosures below the lowest floor shall be used solely for parking of vehicles, building access, crawlspaces, or limited storage.
- (b) Enclosures below the lowest floor shall be constructed using flood damage-resistant materials. See FEMA Technical Bulletin #2 – Flood Damage-Resistant Materials Requirements, as may be amended.
- (c) Enclosures below the lowest floor (including crawlspaces) shall be provided with flood openings which shall meet the following criteria (see FEMA Technical Bulletin #1 – Openings in Foundation Walls and Walls of Enclosures as may be amended):
 - [i] There shall be a minimum of two openings on different sides of each enclosed area; if a building has more than one enclosed area below the design flood elevation, each area shall have openings on exterior walls.
 - [ii] The total net area of all openings shall be at least 1 square inch for each square foot of enclosed area, or the openings shall be designed and certified by an engineer registered in the State of Delaware or architect licensed in the State of Delaware to provide for equalization of hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters.
 - [iii] The bottom of each opening shall be 1 foot or less above the adjacent ground level.
 - [iv] Any louvers, screens or other opening covers shall allow the automatic flow of floodwaters into and out of the enclosed area.
 - [v] Where installed in doors and windows, openings that meet requirements of Section 115-141.5 B.(2).(c).[i] through [iv] above are acceptable; however, doors and windows without installed openings do not meet the requirements of this section.
- (d) Crawlspaces shall have the finished interior ground level equal to or higher than the outside finished ground level on at least one entire side of the foundation wall.

(3) Manufactured Homes

New or replacement manufactured homes, including substantial improvement of existing manufactured homes, shall:

- (a) Be elevated on a permanent, reinforced foundation that raises the lowest floor to or above the base flood elevation and is otherwise in accordance with Section 115-141.5.B.(1).
- (b) Be installed in accordance with the anchor and tie-down requirements of the building code or the manufacturer's written installation instructions and specifications.
- (c) Have enclosures below the elevated manufactured home, if any, meet the requirements of Section 115-141.5.B.(2).

For the purpose of this requirement, the lowest floor of a manufactured home is the finished floor of the lowest floor.

C. Nonresidential Structures and Nonresidential Portions of Mixed Use Structures

(1) Elevation Requirements

- (a) The lowest floor (including basement) shall be elevated to or above the base flood elevation or the structure shall be dry floodproofed in accordance with Section 115-141.5.C.(2).
- (b) In areas of shallow flooding (Zone AO), if not dry floodproofed, the lowest floor (including basement) shall be elevated at least as high above the highest adjacent grade as the depth number specified in feet on the Flood Insurance Rate Map or at least 2 feet if a depth number is not specified; adequate drainage paths shall be provided to guide floodwaters around and away from the structure.
- (c) Enclosures below the lowest floor, if not dry floodproofed, shall meet the requirements of Section 115-141.5.B.(2).

(2) Dry Floodproofing Requirements

Dry floodproofed structures, together with attendant utility and sanitary facilities, shall:

- (a) Be designed to be dry floodproofed such that the structure is watertight with walls and floors substantially impermeable to the passage of water to the level of the base flood elevation. In areas of shallow flooding (Zone AO), the structure shall be dry floodproofed at least as high above the highest adjacent grade as the depth number specified in feet on the Flood Insurance Rate Map or at least 2 feet if a depth number is not specified.
- (b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- (c) Be certified by a professional engineer registered in the State of Delaware or a professional architect licensed in the State of Delaware with a Floodproofing Certificate, that the design and methods of construction meet the requirements of this section. Refer to FEMA Technical Bulletin #3 – *Non-Residential Floodproofing – Requirements and Certification*, as may be amended, for guidance.

D. Accessory Structures

Accessory structures shall meet the requirements of these regulations. Accessory structures that have a footprint of no more than 200 square feet may be allowed without requiring elevation or floodproofing provided such structures meet all of the following requirements:

- (1) Useable only for parking or limited storage;
- (2) Constructed with flood damage-resistant materials below the base flood elevation;
- (3) Constructed and placed to offer the minimum resistance to the flow of flood waters;
- (4) Firmly anchored to prevent flotation, collapse, and lateral movement;
- (5) Electrical service and mechanical equipment elevated to or above the level of the base flood elevation and
- (6) Equipped with flood openings that meet the requirements of Section 115.141.5.B.(2).(c).
- (7) For guidance, see FEMA Technical Bulletin #7 – *Wet Floodproofing Requirements*, as may be amended.

E. Protection of Flood-Carrying Capacity

(1) Development in Floodways

(a) Within any floodway area designated on the Flood Insurance Rate Map, no encroachments, including fill, new construction, substantial improvements, or other development shall be permitted unless it has been demonstrated through hydrologic and hydraulic engineering analysis that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge. Such technical data shall be submitted to the Floodplain Administrator and to FEMA. The analyses shall be prepared by a professional engineer registered in the State of Delaware in a format required by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant.

(b) The proposed development activity may be permitted upon submission, by the applicant, of the following:

- [i] Analyses demonstrating that the activity will not result in any increase in the base flood elevation; or
- [ii] Analyses demonstrating that the activity will result in an increase in the base flood elevation, provided a Conditional Letter of Map Revision has been issued by FEMA and the applicant completes all of the following:
 - [a] A submission of technical data required in Section 115-141.3 D.1.(i).[iv]

- [b] An evaluation alternative which would not result in increased base flood elevations and an explanation why these alternatives are not feasible;
- [c] A certification that no structures are located in areas which would be impacted by the increased base flood elevation;
- [iii] Documentation that individual legal notices have been delivered to all impacted property owners to explain the impact of the proposed action on their properties;
- [iv] Concurrence of the County Administrator and the Director of the Office of Planning and Zoning of Sussex County and the Chief Executive Officer of any other community impacted by the proposed actions; and
- [v] Documentation that the applicant has notified the Delaware Department of Natural Resources and Environmental Control (Division of Watershed Stewardship).

(2) Development in Areas with Base Flood Elevations but No Floodways

For development activities in a special flood hazard area with base flood elevations but no designated floodways, the applicant shall develop hydrologic and hydraulic engineering analyses and technical data reflecting the proposed activity and shall submit such analyses and data to the Floodplain Administrator and to FEMA. The analyses shall be prepared by a professional engineer registered in the State of Delaware in a format required by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant.

The proposed development activity may be permitted if the analyses demonstrate that the cumulative effect of the proposed development activity, when combined with all other existing and potential special flood hazard area encroachments will not increase the base flood elevation more than 1.0 (one) foot at any point.

(3) Deliberate Alterations of a Watercourse

For the purpose of these regulations, a watercourse is deliberately altered when a person causes a change to occur within its banks. Deliberate changes to a watercourse include, but are not limited to: widening, deepening or relocating of the channel; installation of culverts; construction of bridges, and excavation or filling of the channel or watercourse banks.

For any proposed deliberate alteration of a watercourse, the applicant shall develop hydrologic and hydraulic engineering analyses and technical data reflecting such changes and submit such technical data to the Floodplain Administrator and to FEMA. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant.

The proposed alteration of a watercourse may be permitted upon submission, by the applicant, of the following:

- (a) Documentation of compliance with Section 115-141.5.E.(1) if the alteration is in a floodway or Section 115-141.5.E.(2) if the alteration is in a watercourse with base flood elevations but no floodway.
- (b) A description of the extent to which the watercourse will be altered or relocated as a result of the proposed development.
- (c) A certification by a professional engineer registered in the State of Delaware that the bankful flood-carrying capacity of the watercourse will not be diminished.
- (d) Evidence that adjacent communities, the U.S. Army Corps of Engineers, and the Delaware Department of Natural Resources and Environmental Control (Division of Watershed Stewardship) have been notified of the proposal and evidence that such notifications have been submitted to the Federal Emergency Management Agency.

- (e) Evidence that the applicant shall be responsible for providing the necessary maintenance for the altered or relocated portion of the watercourse so that the flood carrying capacity will not be diminished. The Floodplain Administrator may require the permit holder to enter into an agreement with Sussex County specifying the maintenance responsibilities; if an agreement is required, the permit shall be conditioned to require that the agreement be recorded on the deed of the property which shall be binding on future owners.

§ 115-141.6 REQUIREMENTS IN COASTAL HIGH HAZARD AREAS

A. General Requirements

In addition to the general requirements of Section 115-141.4, the requirements of this section apply to all development proposed in coastal high hazard areas, also referred to collectively as “Zone V.”

B. Location and Site Preparation

- (1) The placement of structural fill for the purpose of elevating buildings is prohibited.
- (2) All new construction shall be located landward of the reach of mean high tide.
- (3) Generally, any reduction in the dimensions of dunes increases the potential for flood damage. Site preparations shall not alter sand dunes unless an engineering analysis demonstrates that the potential for flood damage is not increased.

C. Residential and Nonresidential Structures

(1) Foundations

- (a) Buildings and structures shall be supported on pilings or columns and shall be adequately anchored to such pilings or columns. Piling shall have adequate soil penetrations to resist the combined wave and wind loads (lateral and uplift). Water loading values used shall be those associated with the base flood. Wind loading values shall be those required by applicable building standards. Pile embedment shall include consideration of decreased resistance capacity caused by scour of soil strata surrounding the piling.
- (b) Slabs, pools, pool decks and walkways shall be located and constructed to be structurally independent of buildings and structures and their foundations to prevent transfer of flood loads to the buildings and structures during conditions of flooding, scour or erosion from wave-velocity flow conditions, and shall be designed to minimize debris impacts to adjacent properties and public infrastructure.

(2) Elevation Requirements

- (a) The bottom of the lowest horizontal structural member supporting the lowest floor (excluding the pilings, pile caps, columns, grade beams, and bracing), shall be located at or above the base flood elevation.
- (b) Basement floors that are below grade on all sides are prohibited.
- (c) The space below the lowest floor shall either be free of obstruction or, if enclosed by walls, shall meet the requirements of Section 115-141.6.C.(3). See FEMA Technical Bulletin #5 – *Free of Obstruction Requirements*, as may be amended.

(3) Enclosures Below the Lowest Floor

- (a) Enclosures below the lowest floor shall be used solely for parking of vehicles, building access or storage.
- (b) Walls and partitions are permitted below the elevated floor, provided that such walls and partitions are designed to break away under flood loads and are not part of the structural support of the building or structure. See FEMA Technical Bulletin #9 – *Design and Construction Guidance for Breakaway Walls*, as may be amended.
- (c) Electrical, mechanical, and plumbing system components shall not be mounted on or penetrate through walls that are designed to break away under flood loads.

- (d) Walls intended to break away under flood loads shall be constructed with insect screening or open lattice, or shall be designed to break away or collapse without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system. Such walls, framing and connections shall have a design safe loading resistance of not less than 10 pounds per square foot and no more than 20 pounds per square foot; or
- (e) Where wind loading values of the local building requirements exceed 20 pounds per square foot, the applicant shall submit a certification prepared and sealed by a professional engineer registered in the State of Delaware or professional architect licensed in the State of Delaware that:
 - [i] The walls and partitions below the lowest floor have been designed to collapse from a water load less than that which would occur during the base flood.
 - [ii] The elevated portion of the building and supporting foundation system have been designed to withstand the effects of wind and flood loads acting simultaneously on all building components (structural and nonstructural). Water loading values used shall be those associated with the base flood; wind loading values used shall be those required by the local building requirements.

(4) Manufactured Homes

New or replacement manufactured homes, including substantial improvement of existing manufactured homes, shall:

- (a) Meet the foundation requirements of Section 115-141.6.C.(1).
- (b) Meet the elevation requirements of Section 115-141.6.C.(2).
- (c) Meet the enclosure requirements of Section 115-141.6.C.(3).
- (d) Be installed in accordance with the anchor and tie-down requirements of the building code or the manufacturer's written installation instructions and specifications.

(5) Certification of Design

The applicant shall include in the application a certification prepared by a professional engineer registered in the State of Delaware or a professional architect licensed in the State of Delaware that the design and methods of construction to be used meet the applicable criteria of these regulations.

§ 115-141.7 VARIANCES

A. Variances

The Sussex County Board of Adjustment shall have the power to authorize, in specific cases, such variances from the requirements of these regulations, not inconsistent with Federal regulations, as will not be contrary to the public interest where, owing to special conditions of the lot or parcel, a literal enforcement of the provisions of these regulations would result in unnecessary hardship or exceptional practical difficulty.

(1). Application for a Variance

- (a) Any owner, or agent thereof, of property for which a variance is sought shall submit an application for a variance to the Floodplain Administrator.
- (b) At a minimum, such application shall contain the following information: Name, address, and telephone number of the applicant; legal description of the property; parcel map; description of the existing use; description of the proposed use; location of the floodplain; description of the variance sought; and reason for the variance request. Each variance application shall specifically address each of the considerations in Section 115-141.7.A.(2) and the limitations and conditions of Section 115-141.7.A.(3).

ATTACHMENT 6

**Threatened and Endangered Species lists
(USFWS and NMFS review documents)**



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:
Project Code: 2025-0047570
Project Name: Orchard Manor

01/27/2025 18:04:41 UTC

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: 2025-0047570

Project Name: Orchard Manor

Project Type: Residential Construction

Project Description: Permit application for proposed wetland impacts related to residential home construction

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.6015848,-75.17010283282423,14z>



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 Fisheries¹, 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.

-
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
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Potential habitat for Black Rail exists in this area. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

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.

ESTUARINE AND MARINE DEEPWATER

- E1UBL

FRESHWATER FORESTED/SHRUB WETLAND

- PFO4R

ESTUARINE AND MARINE WETLAND

- E2EM5P
- E2EM1N

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Douglas Potts
Address: 100 S Cass St
City: Middletown
State: DE
Zip: 19709
Email: dpotts@ecsi-del.com
Phone: 3022753217

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers





Drawn Action Area & Overlapping S7 Consultation Areas

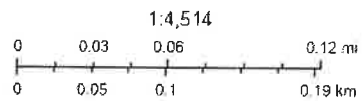
Area of Interest (AOI) Information

Area : 2,009.02 acres

Feb 20 2025 13:32:27 Eastern Standard Time



-  Atlantic Sturgeon
-  Sea Turtles



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 USDA, USFWS, Naxar

Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	2	1,599.76	N/A
Shortnose Sturgeon	0	0	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	4	3,199.56	N/A
Atlantic Large Whales	0	0	N/A
In or Near Critical Habitat	0	0	N/A

Atlantic Sturgeon

#	Feature ID	Species	Lifestage	Behavior	Zone
1	ANS_C50_ADU_MAF	Atlantic sturgeon	Adult	Migrating & Foraging	N/A
2	ANS_C50_SUB_MAF	Atlantic sturgeon	Subadult	Migrating & Foraging	N/A

#	From	Until	From (2)	Until (2)	Area(acres)
1	01/01	12/31	N/A	N/A	799.88
2	01/01	12/31	N/A	N/A	799.88

Sea Turtles

#	Feature ID	Species	Life Stage	Behavior	Zone
1	GRN_STS_AJV_MAF	Green sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia
2	KMP_STS_AJV_MAF	Kemp's ridley sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia
3	LTR_STS_AJV_MAF	Leatherback sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia
4	LOG_STS_AJV_MAF	Loggerhead sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia

#	From	Until	From (2)	Until (2)	Area(acres)
1	5/1	11/30	No Data	No Data	799.89
2	5/1	11/30	No Data	No Data	799.89
3	5/1	11/30	No Data	No Data	799.89
4	5/1	11/30	No Data	No Data	799.89