

ENVIRONMENTAL IMPACT REPORT

MARLBORO PARKE

Block 415, Lot 22
South Main Street (NJSH Route 79)
Township of Marlboro
Monmouth County, New Jersey

Prepared For:

EL at Marlboro 79, LLC
2465 Kuser Road, 3rd Floor
Hamilton, NJ 08690

Date: January 27, 2020

BCG File No.: 080726-F1-003

Prepared by:

Bowman
CONSULTING

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NJ Certificate of Authorization 24GA28222600

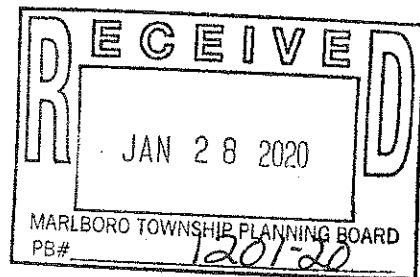


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I. INTRODUCTION

This Environmental Impact Report (EIR) has been prepared in accordance with the requirements of the Township of Marlboro Land Use and Development Ordinance, Article VIII. Subdivisions: Design and Performance Standards Section 220-159 Environmental Impact Report. The purpose of this report is to evaluate the environmental impacts of the proposed development as shown on the plans entitled Preliminary and Final Major Subdivision and Preliminary and Final Site Plan for EL at Marlboro 79, LLC Marlboro Parke, Block 415, Lot 22, Township of Marlboro, Monmouth County, New Jersey, prepared by Bowman Consulting Group, Ltd., dated January 17, 2020.

II. PROJECT DESCRIPTION

The project is proposed to contain a total of 280 multi-family dwelling units of which 56 units will be affordable units in two three-story buildings, with the remaining 224 dwelling units being townhouses in 32 buildings. The project will be part of Marlboro's obligation to satisfy its affordable housing obligation. The project will construct 8 new roads onsite with a single boulevard access to NJSH Route 79. A clubhouse and pool are proposed off the main entrance to the development. Additional onsite improvements will consist of sidewalks, sanitary and water mains, a storm sewer collection system, stormwater management basin, landscaping and lighting.

III. SITE DESCRIPTION AND INVENTORY

The subject property is located the eastbound side of NJSH Route 79 northbound as shown on Figures 1 and 2 in Appendix 1. The site is identified as Block 415, Lot 22 in the Township of Marlboro, Monmouth County, New Jersey (see Figure 3 in Appendix 1). The site encompasses approximately 33.6 acres of land and currently contains agricultural and wood land, a residence, and a shed.

Surrounding uses to the North are Champion Trading Corporation and single-family residential dwellings; to the west by Route 79 followed by Godek's Farm and a residential dwelling; to the south by wooded land, a tree nursery and a residential dwelling; and to the east by the Henry Hudson Trail followed by agricultural and wooded land.

A. Air Quality

National and New Jersey Ambient Air Quality Standards (AAQS) have been adopted, in accordance with requirements of the Clean Air Act, for several pollutants to protect the public health and welfare, allowing for an adequate margin of safety. Primary AAQS have been established to protect public welfare.

As the proposed project involves the construction of residential structures, air quality issues of concern for the project are fugitive dust emissions during construction and carbon monoxide emissions from increased vehicular traffic during operation of the project.

Although traffic generated by the proposed project during peak street hours will cause a slight increase in ambient carbon monoxide levels near the existing roadways, overall carbon monoxide levels will still remain well below National and New Jersey Ambient Air Quality Standards.

Although fugitive dust emissions have the potential to create locally high levels of total suspended particulates due to construction activities, impacts will be minimized by the use of mitigation measures including: the use of properly maintained construction equipment, the use of trap covers on trucks transporting materials to and from the site, the prohibition of burning of construction waste material, the dampening and weekly cleaning of all on and offsite entrances to the site. The certified Soil Erosion and Sediment Control Plan standards for dust control would be followed until the site has been completely stabilized.

B. Water Quality

The existing residence onsite is serviced by a private well and septic system. To the south of the site is a tributary to Tepehemus Brook which flows in a southerly direction away from the property. The proposed development will remove the existing well and septic systems from the site. The site contains no environmentally sensitive areas in the form of onsite streams, waterbodies or wetlands. A NJDEP presence / absence LOI was issued for the site on 9/25/17 (See Appendix 2). The LOI confirmed that no wetlands were present on the property.

The proposed development will contain a stormwater management system consisting of an infiltration / extended detention basin and a stormwater conveyance system. The infiltration basin will treat the runoff generated by the proposed onsite impervious surfaces by removing 80% of the total suspended solids from the runoff as required by the NJ Stormwater Management Rule (NJAC 7:8) and the NJ Best Management Practices Manual.

C. Water Supply

Water supply is provided to the surrounding area by Gordon's Corner Water Company. Currently, the site is served by an onsite private well. The existing well will be removed in accordance with NJDEP requirements. The proposed development will extend the 12" water main from the intersection of Old Mill Road and Route 79 along the northbound shoulder of Route 79 to a 12" stub located within

the driveway of the 79 Plaza commercial center located north of the property. Water mains will be extended onto the property to service the proposed development.

There is sufficient capacity within the water system to service the proposed development.

D. Soils

According to the U.S. Department of Agriculture (USDA) Web Soil Survey website, the subject property is underlain by Evesboro Sand, Freehold loamy sand, Freehold sandy loam, Freehold loam, and Tinton loamy sand (see Appendix 3).

Per a geotechnical investigation performed by GTA Associated dated October 2016, the site contains an approximately 6 to 9-inch layer of topsoil, averaging about 8 inches over the site. The natural soils encountered below the topsoil appeared consistent with the geologic mapping.

The development proposed earthmoving activities onsite to provide a balanced earthwork condition. The intent of the grading design for the project is to provide a balanced site with limited import and export of soils to the property.

E. Geology

According to the NJ-GeoWeb website maintained by the New Jersey Department of Environmental Protection (NJDEP), the site is situated in the Coastal Plain Physiographic Province (see Appendix 3). Specifically, the site is indicated to be underlain by the Navesink Formation, which is described as clayey glauconite sand.

The Coastal Plain is underlain by both unconfined and confined aquifers of unconsolidated sediments. Groundwater storage and movement are functions of the primary porosity of the sediments. Larger storage is provided by gravel and sand, with little to no storage provided by clay. Near-surface, unconfined aquifers typically consist of sediments of higher permeability and are recharged locally, primarily through precipitation that permeates through the unsaturated zone into the aquifer. The water table in unconfined aquifers is therefore highly variable, fluctuating with the seasons and with rates of precipitation.

Groundwater flow direction in the site vicinity is assumed to mirror surficial topography. Accordingly, the groundwater flow direction is assumed to be toward tributaries of Tepehemus Brook located to the north, west and south of the subject site.

The proposed development will require the placement of impervious surfaces in addition to site filling, cutting and grading in order to provide suitable soil conditions

prior to construction of the site improvements. No impacts to the site geology will occur and the development will utilities existing site topography for site drainage.

F. Topography

As shown on the site plans referenced in Section I above, the site varies in elevation from elevation 215 in the northern center of the site to elevations 190 to 200 along Route 79, elevation 175 along the southern property line and elevations 190 to 195 along the eastern property line.

The proposed development will maintain the existing topographic patterns onsite to provide suitable grades along proposed roadways and lawn areas.

G. Vegetation

The site contains approximately 17.77 acres of vegetative areas onsite. The remainder of the site consists of agricultural fields. Within the vegetative areas, there are several trees over 8 inches in caliper that have been identified. These trees consist mainly of Black Cherry, Black Locust, Oak, and Sassafras trees. Multiflora rose and heavy brush undergrowth are also substantially present in approximately 12 of the 17.77 acres of onsite vegetation. A review of the NJ GeoWeb website did not identify any onsite vegetation as threatened or endangered.

The project proposes the removal of a majority of the vegetation onsite. A Landscape Plan has been prepared for the site showing the revegetation of disturbed areas. A total of 951 trees are proposed to be planted with 231 of the trees to be planted as street trees. In addition, a tree replacement calculation has been provided within the site plan set. A total of 12,396 trees are required to be replanted of which 720 are proposed. The remainder will either be planted onsite in agreed upon locations or an escrow fee provided to the planting of the trees elsewhere in the Township.

H. Animal Life

A review of the NJDEP's Landscape Project Maps (version 3.3) for the Piedmont Plains region indicate that 1 habitat parcel is identified onsite identified as Rank 1. The area is located along the southwest corner of the site and is primarily located on the adjacent property to the south. A Rank of 1 is assigned to patched with potentially suitable habitat. There are not records for any threatened or endangered species onsite.

The vegetation onsite is suitable for small woodland animals, and birds. The proposed development will replant the site and in doing so will reestablish the habitats currently available onsite.

I. Land Use

Land use in the immediate area primarily consists of agricultural uses and single-family residential areas. The proposed development will provide multi-family residential uses including affordable housing units in accordance with the recently adopted GH-2 Generational Housing District Zone and to address the Township's affordable housing obligation. The proposed uses are permitted under the GH-2 Zone.

The proposed development is consistent with the development within the surrounding area.

J. Aesthetics

A review of the New Jersey and National Registers of Historic Places did not indicate the site as a historic property. The proposed development will match the general aesthetics found in developed properties in the area.

K. History

Historically, the site vicinity contained agricultural and wooded land, orchards, residences and farm buildings from at least 1930. By 1969, the existing Champion Trading Corporation site located directly north of the subject property was developed. Residential development became more prevalent in the surrounding region by the 2000s.

The subject property contained agricultural and wooded land from at least 1930 with farmstead buildings on the western portion of the subject site. By the 1950s, several additional outbuildings were apparent at the farmstead and orchards were located on northwestern and central portions of the property. By the mid-1980s, the orchard areas were no longer apparent on the subject site.

L. Additional Factors

1. Sewerage systems

The site is currently served by an onsite septic system. The proposed development will remove the septic system and install a gravity based sanitary sewer conveyance system onsite. The sanitary sewer system will connect into the existing system located within an easement on the adjacent residential

development to the north that fronts on Pecan Valley Drive. The existing sanitary sewer main is owned and maintained by the Western Monmouth Utilities Authority.

2. Noise

The New Jersey Noise Control Code (N.J.A.C. 7:29-1.1 et seq.) provides standards and guidelines applicable to potential community impacts from the implementation of projects such as the one proposed. The proposed project site is comprised primarily of agricultural use and does not contravene any New Jersey Noise Control Code rules.

Construction activities are expected to cause temporary impacts to noise levels. Construction equipment, usage, operations and resultant sound levels can vary according to the type of construction activities performed. The major source of noise from construction equipment is usually due to internal combustion engines, such as those found typically in earthmoving equipment (loaders, bulldozes, dump trucks, scrapers and graders) and handling equipment (compressors and generators).

The use of properly maintained equipment along with muffler mechanisms will minimize temporary impacts to noise levels due to construction. Construction activities will be limited to daytime hours as per Township ordinances to further reduce any noise related impacts to surrounding properties. During the operation phase of the proposed development, the activities will be in conformance with the local and State requirements. On-site activity is expected to have little to no impact on off-site ambient noise levels.

IV. LIST OF ADVERSE ENVIRONMENTAL IMPACTS

A. Air Quality

No appreciable effects to the local air quality are anticipated due to the proposed development. Limited dust generation might be noticed during construction; however, the site conditions will be monitored to address any dust generation during construction.

B. Water Quality

As the site will conform to the Stormwater Management Rules at N.J.A.C. 7:8, minimal impact to onsite and offsite properties and watercourse are anticipated. Water quality to the Tepehemus Brook may actually be improved due to the reduction in fertilizers used in the agricultural use and with the creation of the stormwater management system.

C. Water Supply

The site will be serviced by the existing water system owned and operated by Gordon's Corner Water Company. No adverse impacts are expected.

D. Soils

Onsite soils will be disturbed for earthwork activities. The disturbance will be temporary, and no long-term adverse impacts are expected.

E. Geology

The underlying geology onsite will be maintained, and no adverse impacts are expected.

F. Topography

The development will maintain the existing drainage patterns onsite as part of the earthwork and grading activities. No adverse impacts to surrounding properties is expected.

G. Vegetation

Existing vegetation onsite will be removed due to the proposed development. The project proposes to replant significant amounts of landscaping onsite and along the adjoining property boundaries. While there will be an immediate impact with the removal of the mature trees onsite, the replanted trees will provide a suitable replacement to the removed trees. There are no long-term adverse impacts expected.

H. Animal Life

Existing habitat will be removed during construction. Upon completion, new landscaping habitat will be planted onsite. No long-term adverse impacts to animal life habitats are expected.

I. Land Use

The proposed project is consistent with the newly adopted zoning regulations for the property. In addition, the site will provide 56 affordable units which is a benefit to the Township in meeting their Affordable Housing requirements. No adverse impacts to the site or surrounding properties are expected.

J. Aesthetics

The proposed development will provide residentially appealing facades and building treatments that will be consistent with surrounding residential uses. No adverse impact is expected.

K. History

The existing and historical use of the property will be eliminated with the proposed development. The new use will be consistent with surrounding uses and therefore no adverse impacts are expected.

L. Additional Factors

1. Sewerage systems

The proposed development will eliminate an onsite septic system and provide a gravity sanitary sewer main onsite to connect into an existing system located within an easement immediately adjacent to the site on the north side of the property. No adverse impacts are expected.

2. Noise

Construction activities are expected to cause temporary impacts to noise levels. Construction equipment, usage, operations and resultant sound levels can vary according to the type of construction activities performed. The major source of noise from typical construction equipment is usually due to internal combustion engines, such as those found in earthmoving equipment (loaders, bulldozes, dump trucks, scrapers and graders) and handling equipment (compressors and generators).

Permanent noise generated from the site will result from automobile traffic and is expected to be typical of an existing residential development. Noise levels generated by the proposed development are expected to be within acceptable limits for similar use types. No adverse impacts onsite or to surrounding properties are expected.

V. STEPS TO MINIMIZE ENVIRONMENTAL IMPACTS

A. Soil Erosion and Sediment Control

A Soil Erosion and Sediment Control Plan has been prepared in order to prevent any negative impacts the construction could potentially have on surrounding areas. The

onsite soils will be monitored during construction to ensure that no soil erosion occurs.

B. Preservation of Trees

Trees located along the southern and eastern property boundaries will be preserved to the maximum extent practical. Other areas of vegetation onsite will be removed and replanted in accordance with an approved landscape plan for the project.

C. Protection of Watercourses

The proposed development will comply with the Stormwater Management Rules at N.J.A.C. 7:8 to prevent any disturbance or degradation to the Tepehemus Brook Tributary. The Tepehemus Brook is classified as FW2-NT, meaning is it not designated as a Category-One waterway by the NJDEP.

D. Protection of Air Resources

Any protection of air resources deemed necessary will be implemented during construction in accordance with standard construction practices.

E. Noise Control

Any measures to control noise during construction will be implement in accordance with standard construction practices.

F. Traffic Control

Any measure to control traffic during construction and once operations begin will be implemented in accordance with standard construction practices.

VI. ALTERNATIVES

In order to determine any irreversible and irretrievable commitment of resources, the following alternatives were considered.

A. No Project

If the project is not developed, then the land will continue to operate as an agricultural use. While this is a legitimate use, the proposed development will bring more to the community. Failure to move forward with this development will be a lost opportunity to increase the Marlboro Township tax base and provide employment and housing, including court mandated affordable housing, to the area. The site is not utilized by any threatened and endangered species and is

of little ecological importance. Therefore, there is no real benefit to not developing the property.

B. Alternative Development

A smaller but more dense development is a potential alternative. Further, the development as presented is consistent with the site plan design approved by the court and Marlboro Township in the affordable housing settlement process. However, it would not be economically viable to not use the entire development area of the site. As stated in the no project alternative, the site is not utilized by any threatened and endangered species and is of little ecological importance. Therefore, there is no real benefit to developing the property with a smaller development.

C. Costs and Social Impacts

If the project were not developed, then the land will continue to operate as an agricultural use. While this is a legitimate use, the proposed development will bring more to the community, including but not limited to satisfying the court ordered affordable housing obligation of Marlboro Township. The roadways onsite will be private and maintained by the homeowners' association reducing the impact to the municipality for maintenance costs. Emergency services will continue to be required for the property as the site currently contains an existing residence.

The affordable housing will be implemented within the community and have access to the amenities proposed onsite thus creating an integrated community.

VII. LICENSES, PERMITS, AND APPROVALS REQUIRED BY LAW

Summary of permits and approvals that may be required:

- Township of Marlboro Planning Board – Site plan and Subdivision Approval
- Monmouth County Planning Board – Subdivision Approval
- Freehold Soil Conservation District – Soil Erosion and Sediment Control Plan Certification
- NJDEP 5G3 – Stormwater Discharge during construction activities
- Western Monmouth Utilities Authority – Sanitary Sewer
- NJDEP TWA – Sanitary Sewer Extension Permit
- Gordon's Corner Water Company – Water main
- NJDEP BWSE – Water Main Extension
- NJDOT – Major Access Permit
- NJDOT – Utility Permit – water main

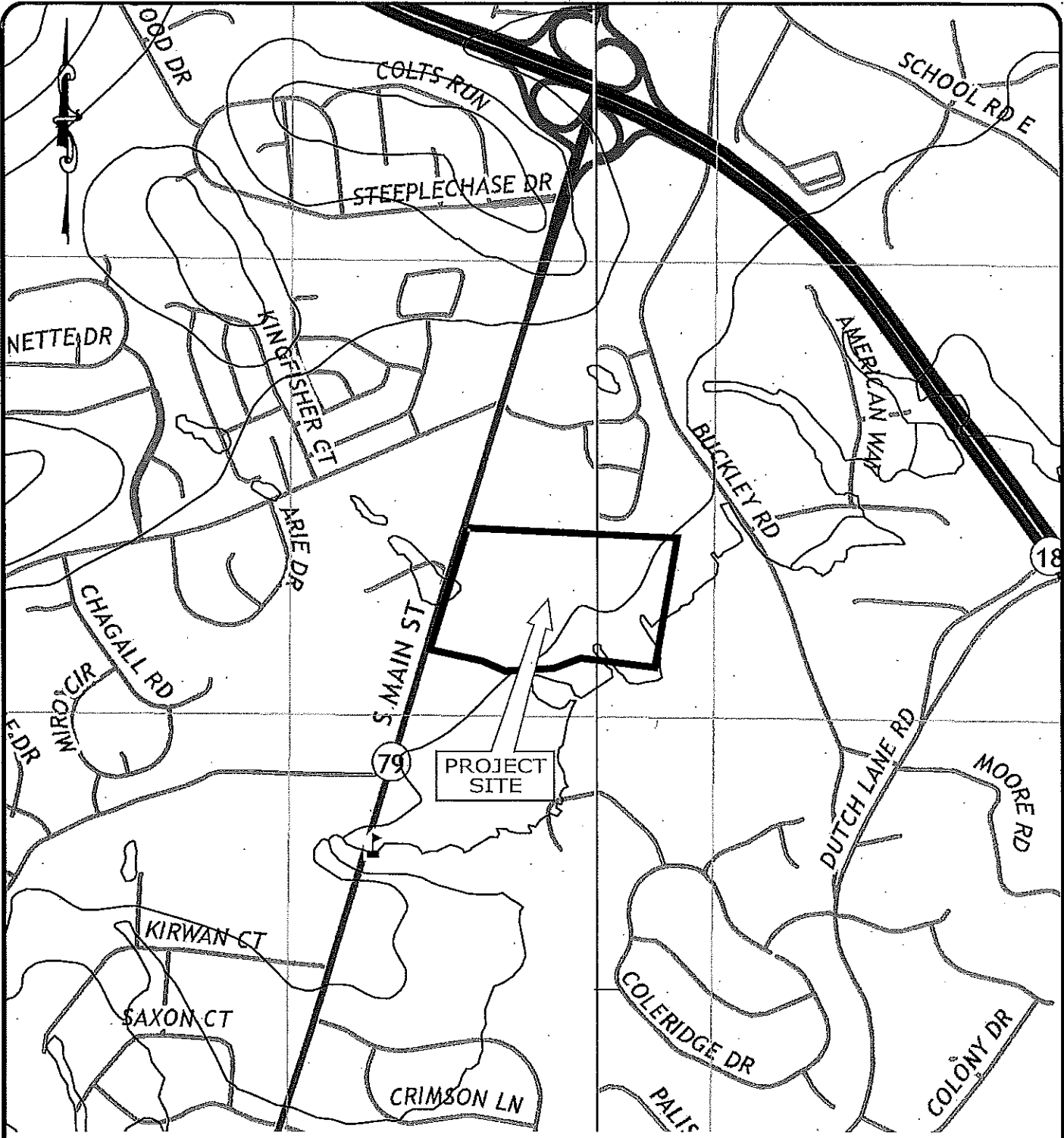
VIII. DOCUMENTATION

1. ALTA / NSPS Land Title and Topographic Survey prepared by Maser Consulting, P.A, dated June 21, 2016, last revised 4/26/17;
2. Report of Phase 1 Environment Site Assessment for Marlboro Site Route 79, Marlboro Township, Monmouth County, New Jersey prepared by Geo-Technology Associates, Inc. dated May 4, 2017;
3. Geotechnical Engineering Report for Marlboro Block 415, Lot 22, Marlboro Township, Monmouth County, New Jersey prepared by Geo-Technology Associates, Inc. dated October 2016;
4. Geotechnical Engineering Report Addendum for Marlboro Block 415, Lot 22, Marlboro Township, Monmouth County, New Jersey prepared by Geo-Technology Associates, Inc. dated October 26, 2016;
5. Traffic Engineering Evaluation for EL at Marlboro 79, Township of Marlboro, Monmouth County, New Jersey prepared by Bowman Consulting Group, Ltd dated December 3, 2019;
6. Stormwater Management Report for Proposed Residential Development, Block 415, Lot 22, Township of Marlboro, Monmouth County, NJ, prepared by Bowman Consulting Group, Ltd., dated January 16, 2020; and
7. Preliminary and Final Major Subdivision and Preliminary and Final Site Plan for EL at Marlboro 79, LLC Marlboro Parke, Block 415, Lot 22, Township of Marlboro, Monmouth County; New Jersey, prepared by Bowman Consulting Group, Ltd., dated January 17, 2020.
8. New Jersey Department of Environmental Protection GeoWeb 3.0 Website;
9. New Jersey Department of Environmental Protection Landscape 3.3 Viewer;
10. NJDEP, Division of Science, Research and Technology, Geological Survey, 1999;
11. Natural Resources Conservation Service, Web Soil Survey, November 25, 2019;
12. Township of Marlboro Land Use and Development Ordinance;
13. The "Standards for Soil Erosion and Sediment Control in New Jersey" by NJDA;

APPENDIX No. 1:

FIGURES

V:\080726 - Route 79 - Marlboro - Multi Family Res\Engineering\Engineering Plans\04 EIS MAPS\MONROE PARKE - EIS MAPS-080726.dwg 01/27/20 12:59:39PM sdelany, LAYOUT:FIG 1



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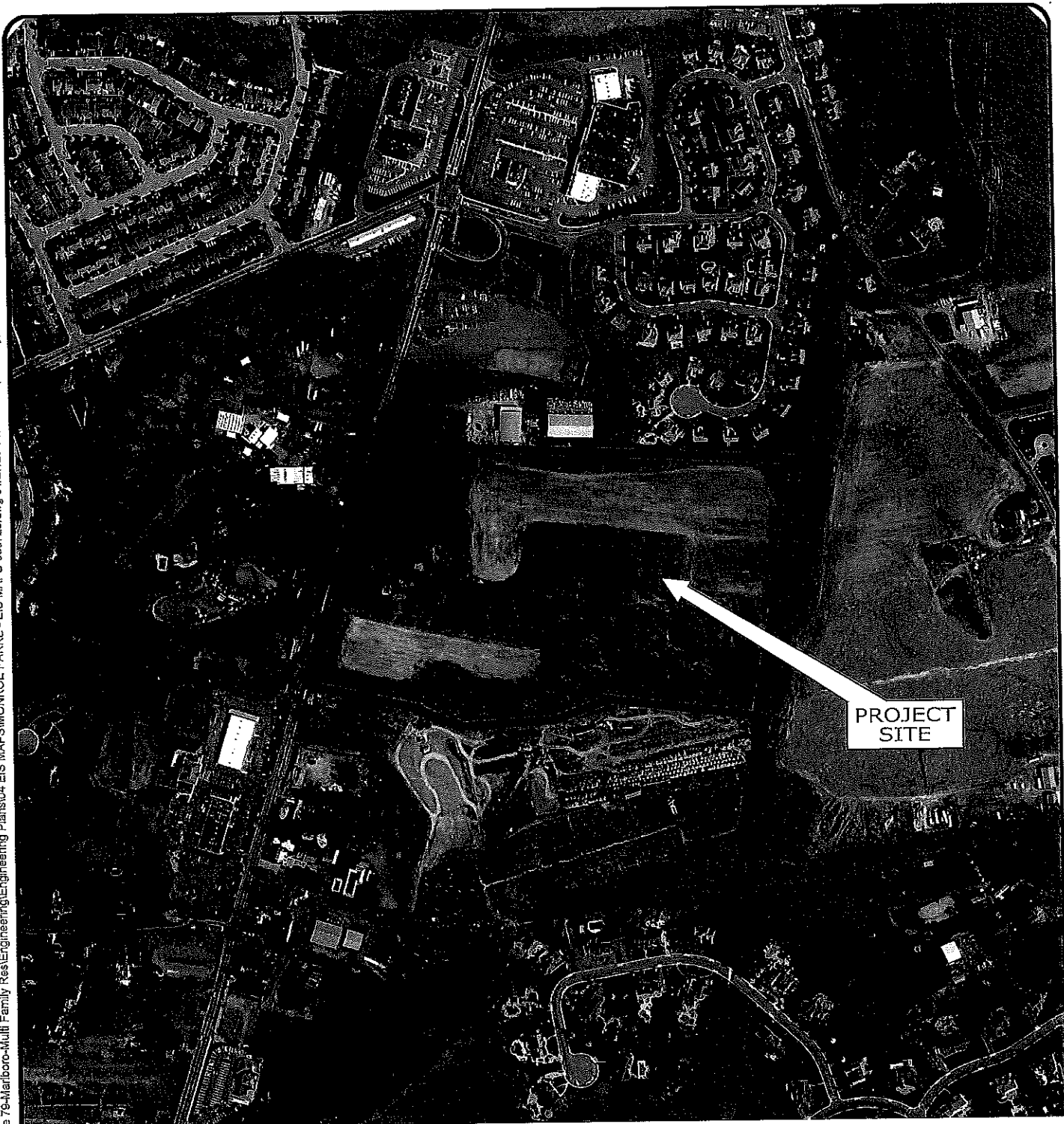
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 No. 24GA28222600

DATE: 1-27-2020 SCALE: AS NOTED CHKD.: SAD
 PROJ.: 080726-F1-003

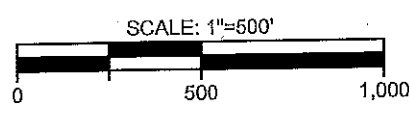
**MONROE PARKE
 FIGURE 1:
 LOCATION MAP**

BLOCK 415, LOT 22
 TOWNSHIP OF MARLBORO
 MONMOUTH COUNTY, NEW JERSEY

VA080726 - Route 79 - Marlboro080726-F1-003 (ENG) - Route 79-Marlboro-Multi Family Res.Engineering\Engineering Plans\04 EIS MAPS\MONROE PARKE - EIS MAPS-080726.dwg 01/27/20 01:00:37PM, scelany, LAYOUT:FIG 2



PROJECT SITE



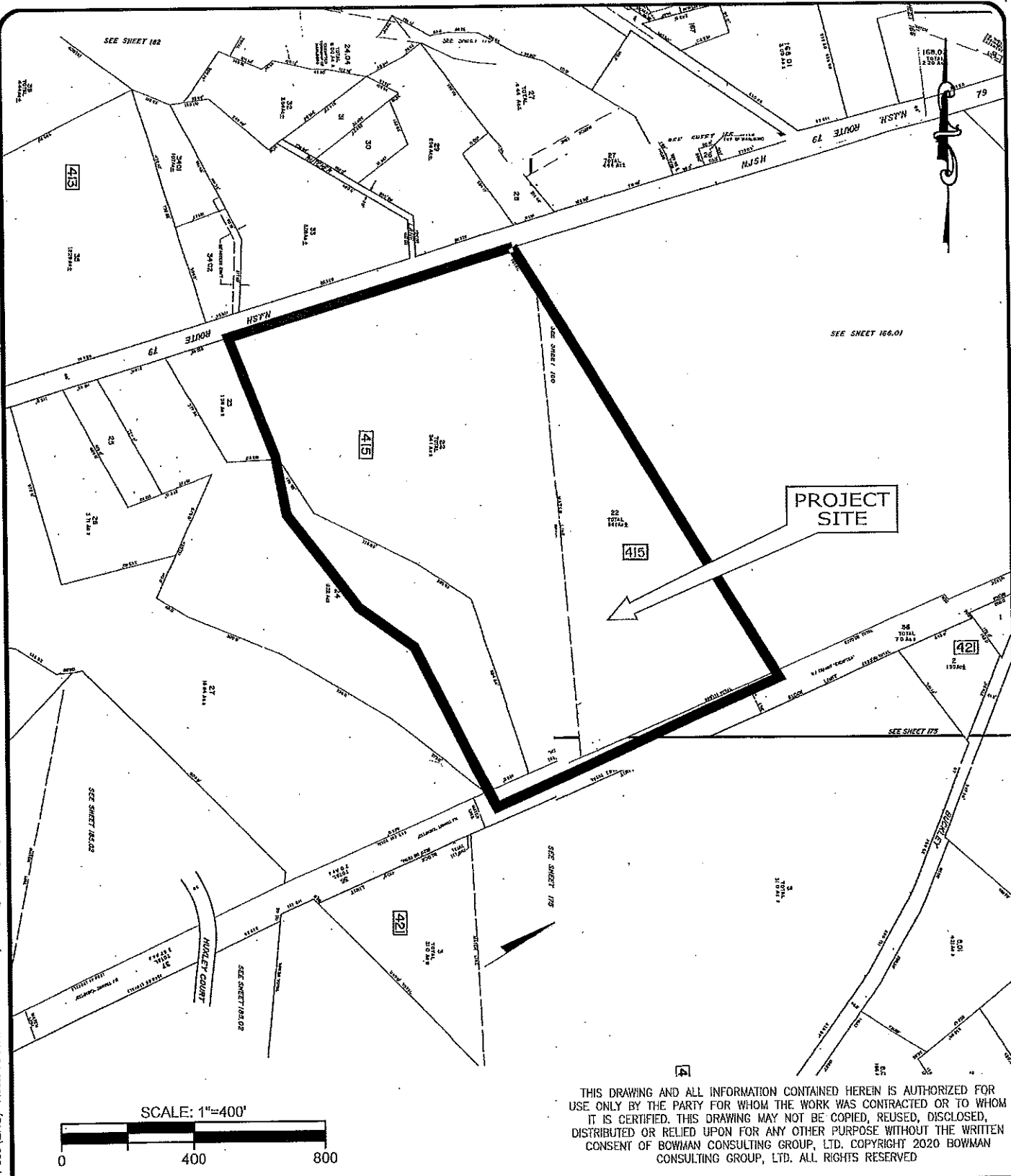
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No. 24GA28222600

DATE: 1-27-2020 SCALE: AS NOTED CHKD.: SAD
PROJ.: 080726-F1-003

**MONROE PARKE
FIGURE 2:
AERIAL MAP**
BLOCK 415, LOT 22
TOWNSHIP OF MARLBORO
MONMOUTH COUNTY, NEW JERSEY

V:\080726 - Route 79 - Marlboro-Multi Family Res(Engineering)\Engineering Plans\04 EIS MAPS\MONROE PARKE - EIS MAPS\MONROE PARKE - EIS MAPS\080726.dwg 01/27/20 01:01:09PM, scdelany, LAYOUT:FIG 3



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 No. 24GA28222600

DATE: 1-27-2020
 PROJ.: 080726-F1-003

SCALE: AS NOTED

CHKD.: SAD

MONROE PARKE
FIGURE 3:
TAX MAP
 BLOCK 415, LOT 22
 TOWNSHIP OF MARLBORO
 MONMOUTH COUNTY, NEW JERSEY

APPENDIX No. 2:

**NJDEP DATA MINER
LAND USE PERMITTING REPORT**

Land Use Permitting Report

Freshwater Wetlands

PI Number: 1328-03-0016.1

Activity Type	Clock Status	Document Status	Elapsed	Applicant
FWL11 presence/absence LOI		Expired		SUNNY ACRES LLC SUNNY ACRES LLC
FWL14 Verification over an acre LOI		Withdrawn		SUNNY ACRES LLC SUNNY ACRES LLC

Activity Number	Assigned To Name	Task	Completed Date
FWW 030001	Dromboski, Andrew	Assign Project Manager	7/1/03
	Terry, James	Receive Application	7/1/03
	Sheppard, Patrick	End Administrative Review	7/30/03
		Document Withdrawn	11/19/04
	Dromboski, Andrew	Complete Project Manager Review	11/19/04
	Dromboski, Andrew	**Withdraw Application	11/19/04
	Dromboski, Andrew	site visit	7/15/04
	Dromboski, Andrew	Assign Project Manager	11/19/04
	Venose, Mary	Receive Application	11/19/04
	Sheppard, Patrick	End Administrative Review	11/23/04
FWW 040001	Dromboski, Andrew	Complete Project Manager Review	12/14/04
		Document Approved	3/8/05
	Fanz, Dave	*** Absent - all	3/8/05
	Fanz, Dave	Complete P.M. Supervisor Review	3/8/05
	Howell, Monique	send approval	3/21/05
	Document Expired	3/7/10	

PI Number: 1328-03-0016.2

Activity Type	Clock Status	Document Status	Elapsed	Applicant
FWL11 presence/absence LOI		Issued		EL AT MARLBORO 79 LLC EL AT MARLBORO 79 LLC

Activity Number	Assigned To Name	Task	Completed Date
FWW 170001	Bryant, Ramona	Start Administrative Review	7/17/17
	Olguin-Lira, Iman	Assign Project Manager	7/17/17
	Spera, Vickie	Receive Application	7/17/17
	Wair, Renee	Receive Fee	7/17/17
	Bryant, Ramona	End Administrative Review	7/18/17
	Olguin-Lira, Iman	End Technical Review	8/8/17
	Olguin-Lira, Iman	Start Technical Review	8/8/17
	Olguin-Lira, Iman	Site Visit	9/12/17
	Olguin-Lira, Iman	Complete Project Manager Review	9/19/17
		Document Issued	9/25/17
	Kozachek, Bob	Complete P.M. Supervisor Review	9/25/17
	Ostrowski, Alice	LU - Mailed Approval	9/25/17
	Ostrowski, Alice	Scanned Permit	9/25/17



Engineers
Planners
Surveyors
Landscape Architects
Environmental Scientists

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May 1, 2017

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VIA ELECTRONIC & 1ST CLASS MAIL

Mr. Mitch Newman
Lennar
2465 Kuser Road
Third Floor
Hamilton, NJ 08690

Re: Regulatory Constraints Assessment
Route 79
Block 415, Lot 22
Township of Marlboro, Monmouth County, NJ
MC Project No. 14001243B

Dear Mr. Newman:

Maser Consulting P.A. is pleased to submit this letter report regarding the regulatory constraints assessment of the aforementioned property. Specifically, we performed the site reconnaissance on April 20th, 2017, to determine potential regulatory constraints in regard to developing the site for your proposed use. Based on our site reconnaissance and review of New Jersey Department of Environmental Protection (NJDEP) available databases, the site is not constrained by NJDEP regulated features i.e. wetlands, wetland transition areas and/or flood hazard area regulated features.

We performed the freshwater wetlands assessment utilizing methodologies described in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands. These methodologies generally involve using a three parameter approach, in which vegetation, soils and hydrology are examined when making a wetland or non-wetland determination. Based on the aforementioned, no regulated features were identified on the site. No potential flood hazard areas and/or potential regulated features were observed on the site.

We also requested a search of the NJDEP's Natural Heritage Program (NHP) database regarding potential threatened and endangered species or their habitats that may be on or in the vicinity of the site. The results are pending from NHP and will be forwarded once received.

We would recommend applying to the NJDEP Division of Land Use Regulation (DLUR) for a Letter of Interpretation (LOI) Presence/Absence for an official designation regarding the absence of regulated features on the site. We believe the NJDEP DLUR will determine no wetland features exist on site.



Regulatory Constraints Assessment
14001243B
May 1, 2017
Page 2 of 2

If you should have any questions or require further information, please feel free to contact me at 732-383-1950. Thank you for your cooperation in this regard.

Very truly yours,

MASER CONSULTING P.A.

A handwritten signature in black ink, appearing to read 'Joseph P. Layton', is written over the typed name and title. The signature is fluid and cursive, with a large initial 'J' and 'L'.

Joseph P. Layton
Assistant Department Manager, Ecological Services

APPENDIX No. 3:

**NRCS WEB SOIL SURVEY &
NEW JERSEY GEOLOGIC 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 **Monmouth County, New Jersey**



January 27, 2020

Preface

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

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

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

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

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

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

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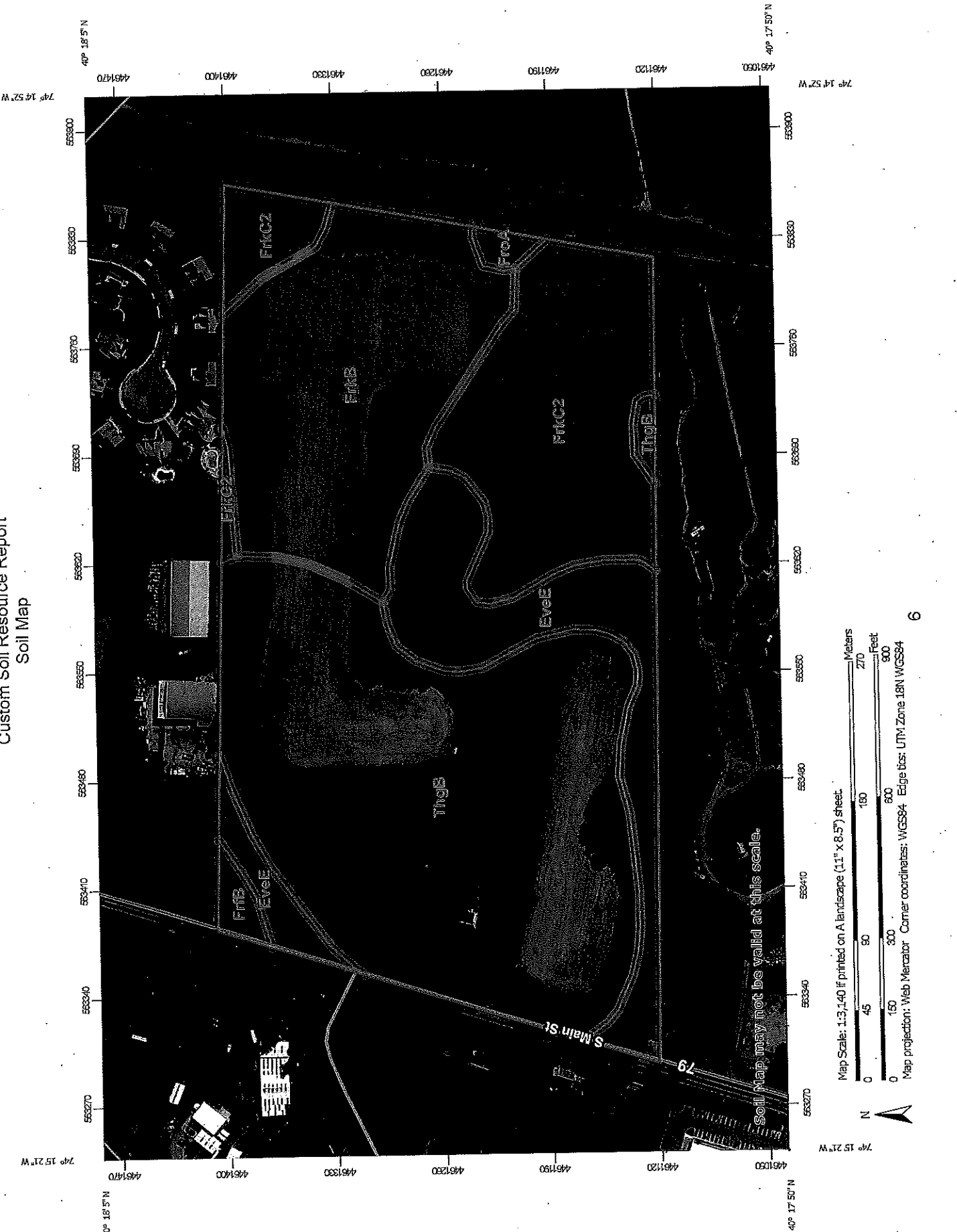
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Soil Map

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

Custom Soil Resource Report Soil Map



Map Scale: 1:3,140 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

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: Monmouth County, New Jersey
 Survey Area Data: Version 13, Sep 16, 2019

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

Date(s) aerial images were photographed: Aug 25, 2014—Sep 23, 2014

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 LEGEND

- | | | | |
|--|------------------------|--|-----------------------|
| | Area of Interest (AOI) | | Spoil Area |
| | Area of Interest (AOI) | | Stony Spot |
| | Soils | | Very Stony Spot |
| | Soil Map Unit Polygons | | Wet Spot |
| | Soil Map Unit Lines | | Other |
| | Soil Map Unit Points | | Special Line Features |
| | Special Point Features | | Water Features |
| | Blowout | | Streams and Canals |
| | Borrow Pit | | Transportation |
| | Clay Spot | | Rails |
| | Closed Depression | | Interstate Highways |
| | Gravel Pit | | US Routes |
| | Gravelly Spot | | Major Roads |
| | Landfill | | Local Roads |
| | Lava Flow | | Background |
| | Marsh or swamp | | Aerial Photography |
| | Mine or Quarry | | |
| | Miscellaneous Water | | |
| | Perennial Water | | |
| | Rock Outcrop | | |
| | Saline Spot | | |
| | Sandy Spot | | |
| | Severely Eroded Spot | | |
| | Sinkhole | | |
| | Slide or Slip | | |
| | Sodic Spot | | |

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
EveE	Evesboro sand, 15 to 25 percent slopes	4.8	13.8%
FrFB	Freehold loamy sand, 0 to 5 percent slopes	0.3	0.9%
FrkB	Freehold sandy loam, 2 to 5 percent slopes	7.8	22.1%
FrkC2	Freehold sandy loam, 5 to 10 percent slopes, eroded	6.9	19.6%
FroA	Freehold loam, 0 to 2 percent slopes	0.2	0.6%
ThgB	Tinton loamy sand, 0 to 5 percent slopes	15.2	43.0%
Totals for Area of Interest		35.2	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

Custom Soil Resource Report

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

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

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

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

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

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

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

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

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

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

Monmouth County, New Jersey

EveE—Evesboro sand, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 4j77
Elevation: 10 to 120 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Not prime farmland

Map Unit Composition

Evesboro and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Evesboro

Setting

Landform: Low hills
Landform position (three-dimensional): Interfluvial, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits and/or sandy fluviomarine deposits

Typical profile

A - 0 to 4 inches: sand
AB - 4 to 17 inches: sand
Bw - 17 to 31 inches: sand
C - 31 to 80 inches: stratified loamy sand to sand

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): High to very high (2.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Westphalia

Percent of map unit: 5 percent
Landform: Knolls, hillslopes
Landform position (two-dimensional): Backslope

Custom Soil Resource Report

Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear
Hydric soil rating: No

FrfB—Freehold loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 4j7b
Elevation: 20 to 160 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Freehold

Setting

Landform: Low hills, knolls
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Glauconite bearing loamy eolian deposits and/or glauconite bearing loamy fluviomarine deposits

Typical profile

Ap - 0 to 10 inches: loamy sand
Bt1 - 10 to 14 inches: sandy loam
Bt2 - 14 to 21 inches: sandy clay loam
Bt3 - 21 to 35 inches: sandy loam
C - 35 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

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Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: B

Hydric soil rating: No

Minor Components

Shrewsbury

Percent of map unit: 5 percent

Landform: Flats, depressions

Down-slope shape: Linear, concave

Across-slope shape: Linear, concave

Hydric soil rating: Yes

Collington

Percent of map unit: 5 percent

Landform: Low hills, knolls

Down-slope shape: Linear, convex

Across-slope shape: Linear

Hydric soil rating: No

Tinton

Percent of map unit: 5 percent

Landform: Knolls

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Colts neck

Percent of map unit: 5 percent

Landform: Low hills, knolls

Down-slope shape: Linear, convex

Across-slope shape: Linear

Hydric soil rating: No

FrkB—Freehold sandy loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 4j7d

Elevation: 40 to 110 feet

Mean annual precipitation: 28 to 59 inches

Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 161 to 231 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Freehold and similar soils: 85 percent

Minor components: 15 percent

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

Custom Soil Resource Report

Description of Freehold

Setting

Landform: Low hills, knolls
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Glauconite bearing loamy eolian deposits and/or glauconite bearing loamy fluviomarine deposits

Typical profile

Ap - 0 to 10 inches: sandy loam
Bt1 - 10 to 14 inches: sandy loam
Bt2 - 14 to 21 inches: sandy clay loam
Bt3 - 21 to 35 inches: sandy loam
C - 35 to 80 inches: loamy sand

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.1 inches)

Interpretive groups

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

Minor Components

Colts neck

Percent of map unit: 5 percent
Landform: Low hills, knolls
Down-slope shape: Linear, convex
Across-slope shape: Linear
Hydric soil rating: No

Collington

Percent of map unit: 5 percent
Landform: Low hills, knolls
Down-slope shape: Linear, convex
Across-slope shape: Linear
Hydric soil rating: No

Shrewsbury

Percent of map unit: 5 percent
Landform: Flats, depressions
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Custom Soil Resource Report

FrkC2—Freehold sandy loam, 5 to 10 percent slopes, eroded

Map Unit Setting

National map unit symbol: 4j7g
Elevation: 10 to 170 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Freehold, eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Freehold, Eroded

Setting

Landform: Knolls, hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Glauconite bearing loamy eolian deposits and/or glauconite bearing loamy fluviomarine deposits

Typical profile

A - 0 to 9 inches: sandy loam
BA - 9 to 12 inches: sandy loam
Bt1 - 12 to 18 inches: sandy loam
Bt2 - 18 to 25 inches: sandy clay loam
BC - 25 to 35 inches: sandy loam
C - 35 to 70 inches: stratified loamy sand to sandy loam

Properties and qualities

Slope: 5 to 10 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B

Custom Soil Resource Report

Hydric soil rating: No

Minor Components

Collington

Percent of map unit: 5 percent
Landform: Knolls, low hills
Down-slope shape: Convex, linear
Across-slope shape: Linear
Hydric soil rating: No

Holmdel

Percent of map unit: 5 percent
Landform: Low hills, flats
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Colts neck

Percent of map unit: 5 percent
Landform: Low hills, knolls
Down-slope shape: Linear, convex
Across-slope shape: Linear
Hydric soil rating: No

FroA—Freehold loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 4j7l
Elevation: 10 to 170 feet
Mean annual precipitation: 28 to 59 inches
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 161 to 231 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Freehold

Setting

Landform: Low hills, flats
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Glauconite bearing loamy eolian deposits and/or glauconite bearing loamy fluviomarine deposits

Custom Soil Resource Report

Typical profile

Ap - 0 to 9 inches: loam
BA - 9 to 12 inches: loam
Bt1 - 12 to 18 inches: sandy loam
Bt2 - 18 to 25 inches: sandy clay loam
BC - 25 to 35 inches: sandy loam
C - 35 to 70 inches: stratified loamy sand to sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Sassafras

Percent of map unit: 5 percent
Landform: Knolls, low hills
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Collington

Percent of map unit: 5 percent
Landform: Low hills, interfluves
Down-slope shape: Linear, convex
Across-slope shape: Linear
Hydric soil rating: No

Holmdel

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

Colts neck

Percent of map unit: 5 percent
Landform: Knolls, low hills
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear

Custom Soil Resource Report

Hydric soil rating: No

Shrewsbury

Percent of map unit: 5 percent

Landform: Depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

ThgB—Tinton loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 4j8w

Elevation: 10 to 170 feet

Mean annual precipitation: 28 to 59 inches

Mean annual air temperature: 46 to 79 degrees F

Frost-free period: 161 to 231 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Tinton and similar soils: 85 percent

Minor components: 15 percent

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

Description of Tinton

Setting

Landform: Low hills

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy eolian deposits over glauconite bearing fluviomarine deposits

Typical profile

Ap - 0 to 7 inches: loamy sand

E - 7 to 32 inches: loamy sand

Bt - 32 to 46 inches: sandy clay loam

2C - 46 to 60 inches: stratified sand to sandy loam

Properties and qualities

Slope: 0 to 5 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Custom Soil Resource Report

Available water storage in profile: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Holmdel

Percent of map unit: 3 percent

Landform: Flats

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Collington

Percent of map unit: 3 percent

Landform: Low hills

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Freehold

Percent of map unit: 3 percent

Landform: Low hills, knolls

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear, convex

Hydric soil rating: No

Pemberton

Percent of map unit: 3 percent

Landform: Low hills, flats

Down-slope shape: Convex, linear

Across-slope shape: Linear

Hydric soil rating: No

Evesboro

Percent of map unit: 3 percent

Landform: Low hills

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

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