DUFFIELD ASSOCIATES
Soil, Water & the Environment

Duffield Associates, LLC
5400 Limestone Road
Wilmington, DE 19808
Phone: 302.239.6634
Fax: 302.239.8485
duffnet.com

September 29, 2021

Department of Natural Resources and Environmental Control
Coastal Programs Section
100 W. Water Street, Suite 7B
Dover, DE 19904

RE: Duffield Associates, LLC Project No. 10692.CJ
Federal Consistency Form
650 Churchmans Road
New Castle, Delaware

To Whom It May Concern:

On behalf of Churchmans 273, LLC, Duffield Associates, LLC is submitting a Nationwide Permit 39 application and a Subaqueous Lands Permit to construct an 810,000± square foot warehouse fulfillment distribution center and associated infrastructure at 650 Churchmans Road in New Castle, Delaware (the "project site"). This application is required because the construction of the facility will require the filling of approximately 360 linear feet (0.106 ± acres) of a blue line watercourse located on the project site. During the February 18, 2021, Joint Permit Process (JPP) meeting, Ms. Laura Mensch of the DNREC Coastal Zone Management (DNREC-CZM) program indicated that Consistency for NWP 39 had been denied. As such, we are submitting for your review a Coastal Zone Management Act, Federal Consistency Form.

During the February 18, 2021, Joint Permit Process (JPP) meeting, representatives from the State of Delaware, Department of Natural Resources and Environmental Control – Wetlands and Subaqueous Lands Section (DNREC-WSLS) and the United States Army Corps of Engineers (USACE) indicated that compensatory mitigation would be required at a 1:1 ratio to replace the function and values of the impacted resource. Details of the proposed mitigation plan are included in the enclosed application.

Enclosed for your review, please find the following items:

1. Completed Federal Consistency Form
2. "Wetland Delineation Report & Mitigation Plan"; prepared by Duffield Associates, LLC; dated September 2021. This report includes:
   - A plan titled "Concept Plan No. 2, 650 Churchmans Road"; dated January 21, 2021; prepared by Duffield Associates, LLC; and
   - A plan titled "Mitigation Plan for Jester Park, 650 Churchmans Road"; dated September 3, 2021; prepared by Duffield Associates, LLC
3. Completed Basic Application Form and applicable appendices.
4. Completed ENG Form 4345

Please do not hesitate to contact us with any questions or if you require additional information.

Very truly yours,

Duffield Associates, LLC

Kate Bullock
Environmental Scientist

Ralph B. Downard, Jr., CPSS
Senior Project Manager

KEB/RBD:tcm
10692.CJ.0921-USACE Cover Letter.COR

Enclosures: Completed Federal Consistency Form
Wetland Delineation Report & Mitigation Plan
Completed Basic Application Form
Completed ENG Form 4345

Delaware Department of Natural Resources and
Environmental Control
Delaware Coastal Management Program

Initial Review: _____
Updated On: _____
Complete: _____
Official Use Only

Coastal Zone Management Act
Federal Consistency Form

This document provides the Delaware Coastal Management Program (DCMP) with a Federal Consistency Determination or Certification for activities regulated under the Coastal Zone Management Act of 1972, as amended, and NOAA's Federal Consistency Regulations, 15 C.F.R. Part 930. Federal agencies and other applicants for federal consistency are not required to use this form; it is provided to applicants to facilitate the submission of a Consistency Determination or Consistency Certification. In addition, federal agencies and applicants are only required to provide the information required by NOAA's Federal Consistency Regulations.

Project/Activity Name:	650 Churchmans Road

I. Federal Agency or Non-Federal Applicant Contact Information:

Contact Name/Title: Keith Stoltz; Churchmans 273, LLC; c/o Stoltz Mgmt. of DE, Inc.

Federal Agency Contractor Name (if applicable): Not Applicable

Federal Agency: USACE, Philadelphia District
(either the federal agency proposing an action or the federal agency issuing a federal license/permit or financial assistance to a non-federal applicant)

Mailing Address: P.O Box 2087

City: Bala Cynwyd State: PA Zip Code: 19004

E-mail: KStoltz@stoltzusa.com Telephone #: 610-388-0777

II. Federal Consistency Category:

- ○ Federal Activity or Development Project (15 C.F.R. Part 930, Subpart C)
- ○ Outer Continental Shelf Activity (15 C.F.R. Part 930, Subpart E)
- ○ Federal Financial Assistance (15 C.F.R. Part 930, Subpart F)
- ◉ Federal License or Permit Activity (15 C.F.R. Part 930, Subpart D)
- ○ Federal License or Permit Activity which occurs wholly in another state (interstate consistency activities identified in DCMP's Policy document)

III. Detailed Project Description (attach additional sheets if necessary):

Applicant is proposing to construct an 807,860 square foot warehouse distribution center at 650 Churchmans Road, New Castle, DE. Project details are provided in the enclosed plan titled "Concept Plan No. 2, 650 Churchmans Road"; prepared by Duffield Associates, LLC; dated January 2021.

The construction of the warehouse will require the filling of 360 linear feet (0.106 acres) of a blue line stream. The stream is a headwater to a tributary of Army Creek. During a JPP meeting, the USACE confirmed that these activities could be authorized under Nationwide Permit 39.

IV. General Analysis of Coastal Effects (attach additional sheets if necessary):

No direct, cumulative, or secondary indirect coastal effects are anticipated.

V. Detailed Analysis of Consistency with DCMP Enforceable Policies (attach additional sheets if necessary):

Policy 5.1: Wetlands Management

Not applicable. No wetlands as defined by the Coastal Zone Management Plan are present on the project site.

Policy 5.2: Beach Management

Not applicable. No beaches as defined by the Coastal Zone Management Plan are present on the project site.

Policy 5.3: Coastal Waters Management (includes wells, water supply, and stormwater management. Attach additional sheets if necessary)

Stormwater management will be in compliance with State regulations.

Policy 5.4: Subaqueous Land and Coastal Strip Management

The project does not involve heavy industry, manufacturing, offshore transfer facilities, drilling, dredging or mineral development. A permit application has been submitted to DNREC WSLS to request authorization to impact the watercourse on the project site.

Policy 5.5: Public Lands Management

No state public lands are present on the project site.

Policy 5.6: Natural Lands Management

No applicable. No designated natural lands are present within the project site.

Policy 5.7: Flood Hazard Areas Management

The project will comply local floodplain management programs.

Policy 5.8: Port of Wilmington

The proposed project is not anticipated to adversely affect the Port of Wilmington.

Policy 5.9: Woodlands and Agricultural Lands Management

Not applicable. No woodlands are present on the project site.

Policy 5.10: Historic and Cultural Areas Management

A description of the proposed project has been submitted to the Delaware Division of Historical and Cultural Affairs. No response has been received.

Policy 5.11: Living Resources

The project is not anticipated to adversely impact living resources or any of the wetland values identified in the Coastal Zone Management Plan. The impacted watercourse is a low-quality ephemeral stream that receives stormwater runoff from the New Castle Airport. In addition the stream is severely eroded and dominated by invasive species.

Policy 5.12 Mineral Resources Management

Not applicable. The proposed project does not involve mineral extraction or production.

Policy 5.13: State Owned Coastal Recreation and Conservation

Not applicable. The project site does not contain state owned lands important for recreation or conservation as defined in the Coastal Zone Management Plan.

Policy 5.14: Public Trust Doctrine

Not applicable. The project site is not located in a tidal zone between the high and low water marks.

Policy 5.15: Energy Facilities

Not applicable. The project site does not involve the construction of an energy facility.

Policy 5.16: Public Investment

Not applicable. The project does not require use of the Delaware Water Pollution Control Revolving Fund (SRF), does not involve large scale resource recovery or recycling of materials, and does not involve improvements to highway systems or public housing.

Policy 5.17: Recreation and Tourism

No recreation or tourism activities will likely occur on the project site or be adversely affected by the project.

Policy 5.18: National Defense and Aerospace Facilities

Not applicable. The project does not involve national defense and aerospace facilities.

Policy 5.19: Transportation Facilities

Not applicable. The project does not involve the construction of a transportation facility.

Policy 5.20: Air Quality Management

Emissions to the atmosphere generated during construction and during facility operation will be in compliance with DNREC air quality standards.

Policy 5.21: Water Supply Management

The project will not require surface or groundwater withdraws or underground injection. The Artesian Water Company will be providing potable water.

Policy 5.22: Waste Disposal Management

The project will comply with DNREC regulations regarding wastewater disposal. The project does not involve the construction of a landfill, resource recovery facility, or transfer station. No solid waste will be discharged into regulated waters. Any solid waste or hazardous substances generated or used by the project will be handled and disposed of in accordance with DNREC regulations. Any underground storage tanks installed at the project site will be in compliance with DNREC UST regulations.

Policy 5.23: Development

The project is located in a heavily developed area in New Castle, DE.

Policy 5.24: Pollution Prevention

Waste generation for the project will be minimized to the greatest extent.

Policy 5.25: Coastal Management Coordination

Permit applications for the project are also being submitted to DNREC Wetlands and Sub-aqueous Lands Section.

VI. JPP and RAS Review (Check all that apply):

Has the project been reviewed in a monthly Joint Permit Processing and/or Regulatory Advisory Service meeting?

☒ JPP ☐ RAS ☐ None

*If yes, provide the date of the meeting(s): February 18, 2021

VII. **Statement of Certification/Determination and Signature** (Check one and sign below):

☐ **FEDERAL AGENCY CONSISTENCY DETERMINATION.** Based upon the information, data, and analysis included herein, the federal agency, or its contracted agent, listed in (I) above, finds that this proposed activity is consistent to the maximum extent practicable with the enforceable policies of the Delaware Coastal Management Program.

OR

☐ **FEDERAL AGENCY NEGATIVE DETERMINATION.** Based upon the information, data, and analysis included herein, the federal agency, or its contracted agent, listed in (I) above, finds that this proposed activity will not have any reasonably foreseeable effects on Delaware's coastal uses or resources (Negative Determination) and is therefore consistent with the enforceable policies of the Delaware Coastal Management Program.

OR

■ **NON-FEDERAL APPLICANT'S CONSISTENCY CERTIFICATION.** Based upon the information, data, and analysis included herein, the non-federal applicant for a federal license or permit, or state or local government agency applying for federal funding, listed in (I) above, finds that this proposed activity complies with the enforceable policies of the Delaware Coastal Management Program and will be conducted in a manner consistent with such program.

Signature:	
Printed Name: Keith Stoltz, Manager	Date: 9/2/2021

Pursuant to 15 C.F.R. Part 930, the Delaware Coastal Management Program must provide its concurrence with or objection to this consistency determination or consistency certification in accordance with the deadlines listed below. Concurrence will be presumed if the state's response is not received within the allowable timeframe.

Federal Consistency Review Deadlines:

Federal Activity or Development Project (15 C.F.R. Part 930, Subpart C)	60 days with option to extend an additional 15 days or stay review. (15 C.F.R. § 930.41)
Federal License or Permit (15 C.F.R. Part 930, Subpart D)	Six months, with a status letter at three months. The six month review period can be stayed by mutual agreement. (15 C.F.R. § 930.63)
Outer Continental Shelf Activity (15 C.F.R. Part 930, Subpart E)	Six months, with a status letter at three months. If three month status letter not issued, then concurrence presumed. The six month review period can be stayed by mutual agreement. (15 C.F.R. § 930.78)
Federal Financial Assistance to State or Local Governments (15 C.F.R. Part 930, Subpart F)	State Clearinghouse schedule

OFFICIAL USE ONLY:

Reviewed by:	Fed Con ID:	Date Received:
Public notice dates: to	Comments Received: ☐ NO ☐ YES (attach comments)	
Decision type:	Decision Date:	

WETLAND DELINEATION REPORT & MITIGATION PLAN

650 CHURCHMANS ROAD
TAX PARCEL 10-024.00-025
NEW CASTLE COUNTY, DELAWARE

September 2021

Prepared for:

Churchmans 273, LLC
P.O. Box 2087
Bala Cynwyd, Pennsylvania 19004

Prepared by:

Duffield Associates, LLC
5400 Limestone Road
Wilmington, Delaware 19808

Project No. 10692.CJ

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TABLE OF CONTENTS

SECTION	DESCRIPTION	PAGE
1.0	**INTRODUCTION**	**1**
2.0	**WETLAND EVALUATION RESULTS**	**1**
2.1	**DESK-TOP REVIEW**	**1**
2.2	**FIELD RECONNAISSANCE**	**2**
2.2.1	**VEGETATION**	**2**
2.2.2	**SOILS**	**3**
2.2.3	**HYDROLOGY**	**3**
3.0	**WETLAND IMPACTS/PERMITTING**	**4**
4.0	**MITIGATION PLANS AT JESTER PARK**	**5**
4.1	**FUNCTION AND VALUE ASSESSMENTS**	**5**
4.2	**MITIGATION SITE SELECTION**	**6**
5.0	**REFERENCES**	**6**

FIGURES

Figure 1	USGS Quadrangle
Figure 2	National Wetlands Inventory
Figure 3	Soil Survey Map
Figure 4	Aerial Photograph

PLANS

"Concept Plan No. 2, 650 Churchmans Road"; dated January 21, 2021; prepared by Duffield Associates, LLC

"Mitigation Plan for Jester Park, 650 Churchmans Road"; dated September 3, 2021; prepared by Duffield Associates, LLC

APPENDICES

Appendix A	Historical Aerials – 650 Churchmans Road
Appendix B	Site Photographs
Appendix C	Field Data Forms
Appendix D	Function and Value Assessment – 650 Churchmans Road
Appendix E	Function and Value Assessment – Jester Park – Current Conditions
Appendix F	Function and Value Assessment – Jester Park – Post Mitigation

1.0 INTRODUCTION

Duffield Associates, LLC (Duffield) has field delineated existing and functional wetlands and other "waters of the United States" on Tax Parcel 10-024.00-025; hereafter referred to as the project site or site. The project site is located at 650 Churchmans Road in New Castle, Delaware. Refer to the plan titled "Concept Plan No. 2, 650 Churchmans Road", dated January 21, 2021, prepared by Duffield Associates, LLC for the limits of the project site.

The project site was the location of an extractive use operation that has subsequently used for various commercial ventures. Based on the current development, the developer is proposing to construct an 810,000± square foot warehouse with associated infrastructure at the site.

2.0 WETLAND EVALUATION RESULTS

The wetland evaluation involved a desktop review of available maps and a field reconnaissance of the project site.

2.1 Desk-Top Review

The boundaries of the project site were approximated on historical aerials provided on New Castle County's Parcelview website (http://www3.nccde.org/parcel/search) [(1)], the U.S. Geologic Survey (USGS) Topographic On-line map [(2)], the U.S. Department of the Interior Fish and Wildlife Service National Wetlands Inventory (NWI) [(3)], and the U.S. Natural Resource Conservation Service On-line Soil Survey [(4)].

Duffield reviewed historical aerials provided on New Castle County's Parcelview website (http://www3.nccde.org/parcel/search) [(1)] to evaluate the land use history of the project site. Historical aerials were obtained for the years 1937, 1961, 1968, 1992, and 2002. The project site was the location of an extractive use operation that was subsequently used for various commercial ventures. Images from 1937 and 1961 depict the project site as a maintained upland field. Extensive soil disturbance is depicted on the project site in the aerial image from 1968, suggesting that the extractive use operation began on the project site prior to this year. The soil disturbance is also apparent in historical photographs from 1992 and 2002. Increased vegetative cover depicted in the 2017 aerial indicates the extractive use activities likely stopped on the project site prior to this year. Historical aerials of the project site are included as Appendix A.

According to the USGS Map (Figure 1), the project site is located north of Christiana Road (Route-273), between the streets identified as Churchmans Road and Old Churchmans Road in New Castle, Delaware. The project site is bordered by the New Castle County Airport to the northeast and by commercial properties to the south and west. A small pond in depicted in the center of the project site.

Online NWI Mapping (Figure 2) indicates that a Riverine, Intermittent, Streambed, Seasonally Flooded (R4SBC) wetland is mapped in the southern portion of the project site. The riverine system appears to drain into Army Creek, which is a tributary of the Delaware River. The NWI Map does not show the small pond depicted in the center of the project site by the USGS Map.

The Web Soil Survey (Figure 3) shows two (2) soil mapping units that underlie the project site. The Udorthents, borrow area (UdB) is mapped across much of the project site. The UdB soil map unit is common to knolls and flats and has a depth to water table of approximately 20 to 40 inches. It is moderately well drained and is not listed as a hydric soil. The Udorthents, 10 to 30 percent slopes (UzF) is mapped along the southern portion of the wetland on the project site. The UzF soil map unit is common to hillslopes and has a depth to water table of approximately 40 to 72 inches. It is well drained and is not classified as a hydric soil. The Web Soil Survey depicts a watercourse in the same area designated by the NWI map to contain the riverine wetland.

2.2 Field Reconnaissance

Duffield's personnel completed the field reconnaissance of the project site on August 25, 2021. At the time of the field reconnaissance, most of the project site was undeveloped. A dense hedgerow was observed along the perimeter of the project site. The remainder of the project site consisted of shrub-scrub uplands, overgrown paved areas, and a gravel swale that drained into the riverine wetland, which is an unnamed tributary of Army Creek. Based on the position of the surrounding landscape, this riverine system appears to have been excavated within an upland. No evidence of the pond shown on the USGS Map was observed during the field reconnaissance. The accompanying plan titled "Concept No. 2, 650 Churchmans Road" illustrates the approximate location of the man-made Army Creek tributary. The boundaries of the Army Creek tributary correspond to the elevation of the Ordinary High Waterline (OHW) for the tributary.

The identification and delineation of wetlands was based upon the methods outlined in U.S. Army Corps of Engineers' Wetlands Delineation Manual (1987) [4] as modified by the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (2010) [5]. Evidence of the Ordinary High Water Mark (OHW) were used to delineate the boundaries around the "water of the United States" when no wetlands were found.

Vegetation, soil and hydrologic data were collected from two sample points at representative locations on the project site. Photographs of the project site are provided in Appendix B. The field data forms for each sample point are provided in Appendix C.

2.2.1 Vegetation

Two distinct plant communities were identified and characterized on the project site. Duffield adapted the U.S. Fish and Wildlife Service classification system presented on the NWI Map to identify the plant communities. The plant community described in Sample Point 1 consisted of vegetation associated with the hedgerow and the shrub-scrub uplands on the project site. The plant community described in Sample Point 2 consisted of vegetation located along the unnamed tributary of Army Creek on the project site.

Upland Shrub-Scrub

The tree stratum in the shrub-scrub upland community consisted of black locust (*Robinia pseudoacacia*) and black cherry (*Prunus serotina*). Species in the sapling stratum included Callery pear (*Pyrus calleryana*), black locust, and black cherry. No species were present in the woody vine stratum. Species in the herbaceous stratum included goldenrods (*Solidago* spp.), *Phragmites australis*, common wormwood (*Artemisia vulgaris*), and Queen Anne's-Lace (*Daucus carota*). Other species noted in the near vicinity of Sample Point 1 included Persian silk tree (*Albizia julibrissin*), staghorn sumac (*Rhus typhina*), autumn olive (*Elaeagnus umbellate*), royal paulownia (*Paulownia tomentosa*), red maple (*Acer rubrum*), American sweet gum (*Liquidambar styraciflua*), Virginia creeper (*Parthenocissus quinquefolia*), bristle grasses (*Setaria* spp.), lesser burdock (*Arctium minus*), white heath aster (*Symphyotrichum ericoides*), and common ragweed (*Ambrosia artemisifolia*). The vegetation in this upland community was dominated by upland, facultative upland, and facultative wetland species [(6)].

Forested Upland

The tree stratum in the forested upland community consisted of black cherry, mulberry (*Morus* spp.) and black willow (*Salix nigra*). Species in the sapling stratum included black cherry, mulberry, and staghorn sumac. Species in the woody vine stratum included grapevines (*Vitus* spp.). No species were present in the herbaceous stratum. Other species noted in the near vicinity of Sample Point 2 included Virginia creeper and peppervine (*Ampelopsis* spp.). The vegetation in this upland community was dominated by obligate and facultative upland species [(6)].

2.2.2 Soils

No attempts were made to classify the soils because soils were frequently disturbed and filled while the project site operated as a borrow pit. Several feet of fill were noted adjacent to the delineated watercourse. Additional information can be found in Appendix C.

2.2.3 Hydrology

The primary hydrologic feature on the project site is an unnamed tributary of Army Creek, which forms in the southern portion of the project site. Stormwater runoff from up-gradient portions of the project site and the New Castle County Airport flows southward through the project site and converges in a gravel swale before flowing into the tributary. Indicators such as negligible terrestrial vegetation and shelving were used to determine the elevation of the OHW. No hydrologic indicators were observed higher than the OHW in the unnamed tributary.

3.0 WETLAND IMPACTS/PERMITTING

As depicted in the plan titled "Concept Plan No. 2, 650 Churchmans Road", current construction plans include the development of an ± 810,000 square foot warehouse distribution center and associated infrastructure. The construction of this facility will require the filling of the entire segment of the blue line watercourse located on the project site, which is approximately 360 linear feet (0.106 ± acres). The U.S. Army Corps of Engineers requires permits for the filling of federally regulated wetlands and watercourses. The U.S. Army Corps of Engineers has two types of permits, Nationwide and Individual. Nationwide Permits authorize pre-approved activities that comply with the conditions stated therein. Duffield attended a Joint Permit Process (JPP) meeting with representatives from the USACE and DNREC on February 18, 2021. During this meeting, the USACE stated that the proposed filling of the watercourse could be authorized under Nationwide Permit 39 (NWP 39). A representative from DNREC's Coastal Zone Management (CZA) section stated that DNREC had denied Consistency for NWP-39 and that a separate permit application would be required by DNREC-CZA. DNREC's Wetland and Subaqueous Lands Section (DNREC-WSLS) indicated that a Subaqueous Land Permit would also be required.

During the JPP meeting, both the USACE and DNREC stated that the loss of the headwater stream would require compensation at a ratio of 1:1 as part of the permitting process. Details regarding Duffield's proposed mitigation plan and site selection are provided in the following section.

4.0 MITIGATION PLANS AT JESTER PARK

Jester Park, located at 2818 Grubb Road in Wilmington, Delaware, is a historic site that previously operated as a working farm until recently. New Castle County (the "County") acquired the site several years ago and is currently interested in executing an ecological restoration plan on the site, which will include creating wetlands, restoring wetlands, and installing trails and educational signs for the public. Completing ecological restoration at the Jester Park site is expected to improve the water quality of the Brandywine Creek watershed, which is located in the same Hydrologic Unit Code 8 (HUC-8) group as Army Creek.

4.1 Function and Value Assessments

To evaluate mitigation options Duffield assessed the functions and values of the watercourse to be impacted at 650 Churchmans Road, functions and values of the existing wetlands at Jester Park, and the functions and values of the wetlands at Jester Park after the proposed mitigation activities.

650 Churchmans Road

In order to quantity the value of the impacted resource, Duffield utilized the methodologies described in the USACE's Assessment Variables in Appalachian Headwater and Perennial Streams. This method works as a guide for assessing the value of different ecosystem functions of headwater streams, such as canopy cover, bank erosion, and riparian zone quality.

In order to conduct this assessment, the headwater stream on the project site was divided and evaluated as three, 120-linear foot segments. The approximate locations of each of the segments is provided in Figure 4. A total of eleven variables were analyzed for each segment. Stream segments were assigned one point for each of the ecosystem functions that the segment successfully provided. The full function and value rubric can be found in the USACE's Assessment Variables in Appalachian Headwater and Perennial Streams. Two of the three segments were awarded one point, suggesting the headwater stream located at 650 Churchmans Road is a low-quality resource. The full function and value assessment results for the stream are provided in Appendix D.

Jester Park

The selection of the site to create the compensatory mitigation involved the collection of baseline information about the quality of the wetland area being enhanced. Baseline information for the wetland enhancement/creation area at Jester Park will be evaluated using DNREC's Delaware Wetland Value Assessment Form, Version 1.1. This method assigns points to wetlands depending on the quality of their ecosystem functions. The current quality of the Jester Park wetlands were evaluated and assigned a "limited" value category (less than 30 points). Duffield expects that following wetland enhancement/creation efforts, the Jester Park wetlands could obtain a "moderate" value category (between 30 and 45 points). The pre- and post- mitigation function and value assessments for the wetlands at Jester Park are provided in Appendix E and Appendix F, respectively.

The objectives of the wetland mitigation plans are to improve the current functions and values of the Jester Park wetlands by enhancing and expanding the existing system. Value metrics described in DNREC's Delaware Wetland Value Assessment Form that are anticipated to improve include the amount of wildlife availability, increased habitat structure and complexity, and enhancements in

flood water storage and water quality. Current mitigation plans will also create additional public education opportunities, including educational signs and walking trails.

4.2 Mitigation Site Selection

In order to compensate for the loss of 360 linear feet of a headwater stream, Duffield is planning to create 0.50 acres of Palustrine Forested wetlands and enhance 0.10 acres of existing wetlands at Jester Park. The mitigation site most recently operated as pastureland and New Castle County currently has plans to ecologically restore the site and convert the land into a public park. The objective of the wetland enhancement and creations plans are to provide functions such as flood control, water quality improvement, and improve wildlife habitat. As mentioned above, the functional assessment of the current wetland ecosystem on the project site was given a "limited" rating.

A review of existing conditions at Jester Park was conducted in order to develop the proposed mitigation plan. The current mitigation plan identifies one area for wetland enhancement and one area for wetland creation. Details for the proposed mitigation plan are provided in the enclosed plan titled "Mitigation Plan for Jester Park, 650 Churchmans Road". Once this mitigation option is approved by the USACE Duffield will use the procedures and guidelines of 33 CFR Part 332, Compensatory Mitigation for Losses of Aquatic Resources (U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency Final Rule of Compensatory Mitigation for Losses of Aquatic Resources (33 CFR 325 and 332, and 40 CFR 230), June 9, 2008) and the U.S. Army Corps of Engineers, Regulatory Branch, Memorandum to the Field, dated November 7, 2003 were used to prepare the wetland mitigation plan. In accordance with the USACE requirements, Duffield will monitor groundwater levels with piezometers in order to ensure the hydrologic conditions at the site are suitable for wetland creation. A final mitigation plan will be developed and submitted for approval once the site conditions are fully evaluated.

5.0 REFERENCES

1. New Castle County Parcel Search, Available online at http://www3.nccde.org/parcel/search.

2. United States Geologic Survey, Available online at http://www.fws.gov/wetlands/Data/Mapper.html, accessed 09/20/20121.

3. United States Department of the Interior, Fish and Wildlife Service, National Wetlands Inventory Map, Available online at http://www.fws.gov/wetlands/Data/Mapper.html, accessed 09/20/2021.

4. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/, accessed 09/20/2021.

5. Environmental Laboratory, 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y 87 1, United States Army Engineer Waterways Experiment Station, Vicksburg, MS.

6. U.S. Army Corps of Engineers, 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0 U.S. Army Engineer Research and Development Center. ERDC/EL TR-10-20.

7. Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X

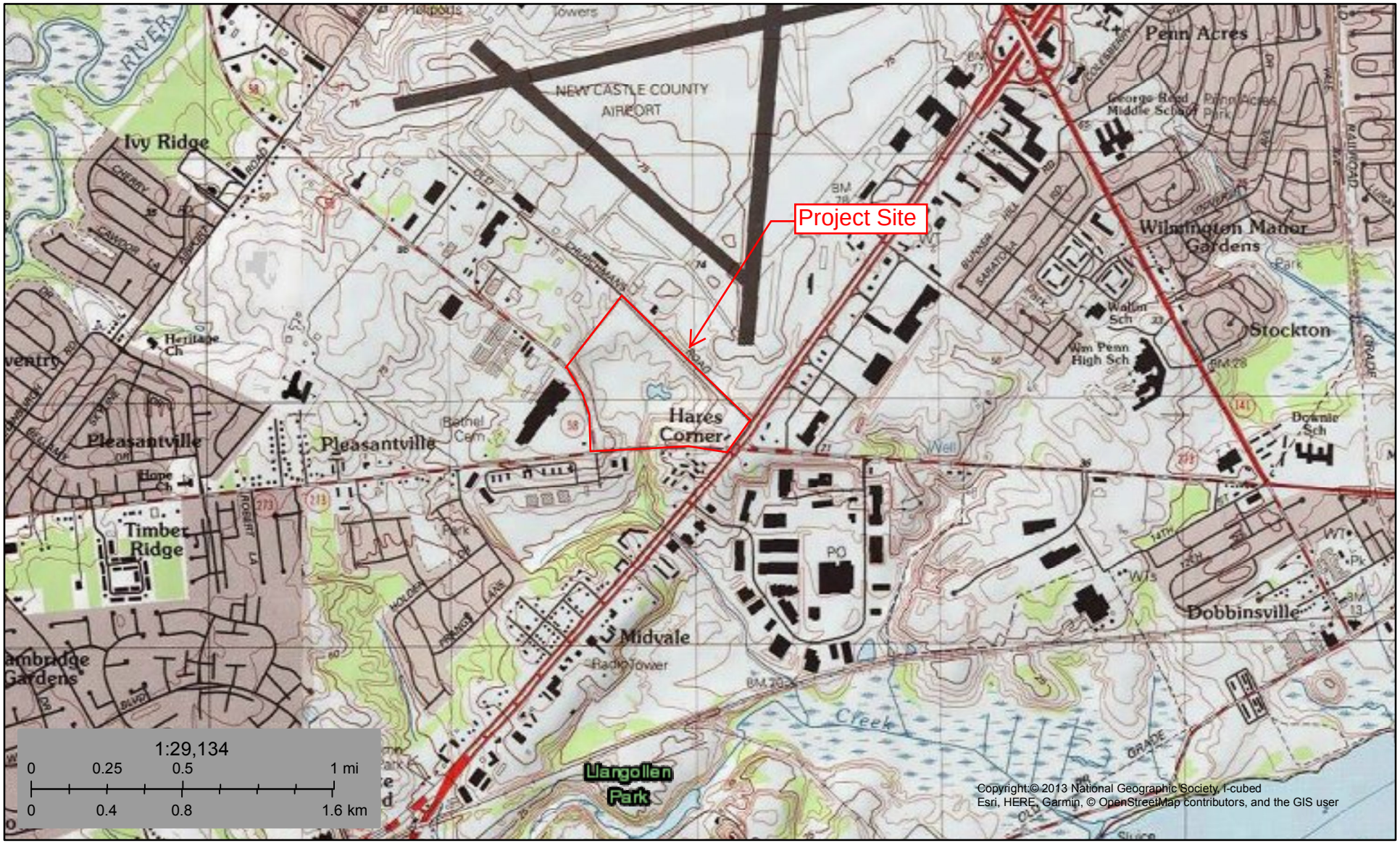
8. U.S. Army Corps of Engineers, Assessment Variables in Appalachian Headwater and Perennial Streams. U.S. Army Corps of Engineer Research and Development Center.

9. State of Delaware, Department of Natural Resources and Environmental Control, Delaware Wetland Value Assessment Form.

FIGURES

U.S. Fish and Wildlife Service
National Wetlands Inventory

FIGURE 1: USGS TOPO MAP



August 23, 2018

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.

U.S. Fish and Wildlife Service
National Wetlands Inventory

FIGURE 2: NWI MAP

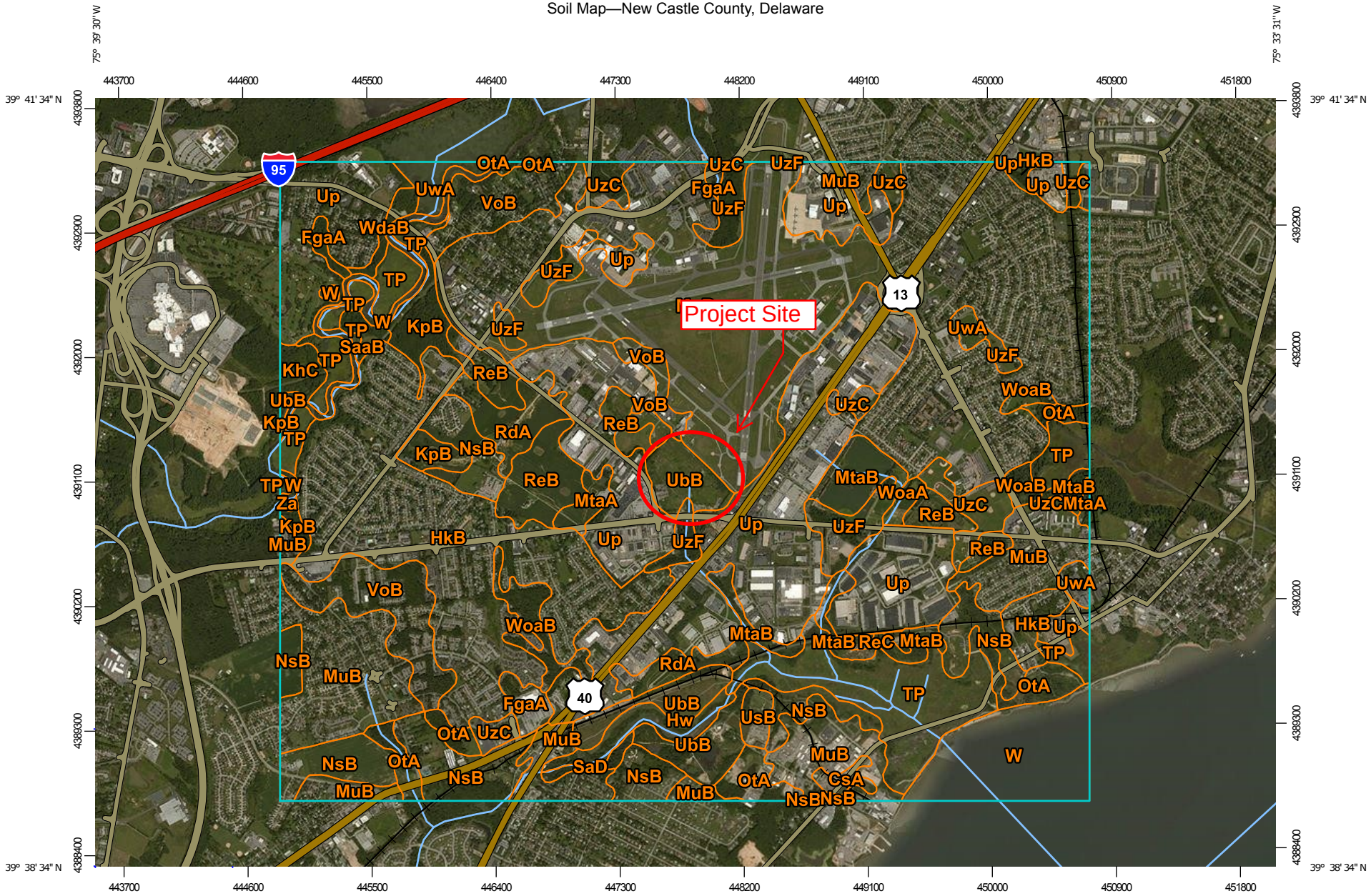
August 23, 2018

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 page was produced by the NWI mapper


75° 39' 30" W
75° 33' 31" W
443700
444600
445500
446400
447300
448200
449100
450000
450900
451800
39° 41' 34" N
39° 38' 34" N
4393800
4392900
4392000
4391100
4390200
4389300
4388400
Project Site
95
13
40
OtA
UzC
UzF
UpHkB
Up
UwA
VoB
FgaA
MuB
WdaB
TP
W
KpB
SaaB
KhC
ReB
UbB
RdA
NsB
MtaB
WoaA
WoaB
UzCMtaA
HkB
ReC
Za
MuB
VoB
WoaB
NsB
RdA
FgaA
Hw
UsB
SaD
CsA
W
Map Scale: 1:39,200 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 500 1000 2000 3000
Feet
0 1500 3000 6000 9000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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: New Castle County, Delaware
Survey Area Data: Version 12, Oct 2, 2017

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

Date(s) aerial images were photographed: Mar 19, 2011—Sep 22, 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 Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CsA	Crosiadore silt loam, 0 to 2 percent slopes	15.7	0.2%
FgaA	Fallsington loams, 0 to 2 percent slopes, Northern Coastal Plain	42.6	0.6%
HkB	Hambrook-Urban land complex, 0 to 5 percent slopes	737.6	11.0%
Hw	Hatboro-Codorus complex, 0 to 3 percent slopes, frequently flooded	48.8	0.7%
KhC	Keyport sandy loam, 5 to 10 percent slopes	26.5	0.4%
KpB	Keyport silt loam, 2 to 5 percent slopes	86.8	1.3%
MtaA	Mattapex silt loam, 0 to 2 percent slopes, Northern Coastal Plain	28.8	0.4%
MtaB	Mattapex silt loam, 2 to 5 percent slopes, Northern Coastal Plain	94.3	1.4%
MuB	Mattapex-Urban land complex, 0 to 5 percent slopes	2,092.4	31.1%
NsB	Nassawango silt loam, 2 to 5 percent slopes	358.1	5.3%
OtA	Othello silt loams, 0 to 2 percent slopes, Northern Coastal Plain	126.9	1.9%
RdA	Reybold-Queponco complex, 0 to 2 percent slopes	105.8	1.6%
ReB	Reybold silt loam, 2 to 5 percent slopes	169.4	2.5%
ReC	Reybold silt loam, 5 to 10 percent slopes	40.1	0.6%
SaaB	Sassafras sandy loam, 2 to 5 percent slopes, Northern Coastal Plain	15.4	0.2%
SaD	Sassafras sandy loam, 10 to 15 percent slopes	12.1	0.2%
TP	Transquaking and Mispillion soils, very frequently flooded, tidal	375.7	5.6%
UbB	Udorthents, borrow area, 0 to 5 percent slopes	176.2	2.6%
Up	Urban land	1,222.9	18.2%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UsB	Udorthents, refuse substratum, 0 to 5 percent slopes	20.7	0.3%
UwA	Udorthents, wet substratum, 0 to 2 percent slopes	55.1	0.8%
UzC	Udorthents, 0 to 10 percent slopes	130.4	1.9%
UzF	Udorthents, 10 to 30 percent slopes	145.4	2.2%
VoB	Urban land-Othello complex, 0 to 5 percent slopes	245.4	3.6%
W	Water	251.1	3.7%
WdaB	Woodstown sandy loam, 2 to 5 percent slopes, Northern Coastal Plain	17.9	0.3%
WoaA	Woodstown loam, 0 to 2 percent slopes, Northern Coastal Plain	12.8	0.2%
WoaB	Woodstown loam, 2 to 5 percent slopes, Northern Coastal Plain	73.0	1.1%
Za	Zekiah sandy loam, frequently flooded	1.9	0.0%
Totals for Area of Interest		**6,729.9**	**100.0%**

Figure 4
Aerial Map

Author:

N
W E
S

Date: 3/3/2020

0 0.085 0.17 mi

New Castle County Delaware GIS: http://gis.nccde.org

Disclaimer: For informational purposes only - not to be used as official documentation.

DUFFIELD ASSOCIATES
Soil, Water & the Environment

PLAN

APPENDIX A

HISTORICAL AERIALS

Appendix A: Historical Aerials – 650 Churchmans Road

1937

1961


Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

1968


Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

1992


Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

2002


58
CHURCHMANS RD
CHRISTIANA
58
273
FRENCHTOWN RD
13
N DUPONT HWY
N DUPONT HWY
S DUPONT HWY
S DUPONT HWY

2017

APPENDIX B

SITE PHOTOGRAPHS

Photograph 1: Shrub-scrub uplands on the project site, looking north.

Photograph 2: Overgrown paved areas on the project site.

Photograph 3 : Location of Data Point 2 and gravel swale on the project site, looking north. Flow from the swale drains southward into the riverine system.

Photograph 4: Flow from the pipe then travels through a second pipe. The second pipe transports flow off the project site, where it eventually drains into Army Creek.

Photograph 5: Location of Data Point 1, looking north. Data Point 1 was taken in the northeast corner of the project site.

APPENDIX C

FIELD DATA FORMS

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 650 Churchmans Road City/County: Wilmington/New Castle Sampling Date: 8/25/2021

Applicant/Owner: 273 Churchmans, LLC State: DE Sampling Point: 1

Investigator(s): Ralph B. Downard, Kate Bullock Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Convex Slope (%): 0-5

Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Udorthents, borrow area NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

DP-1 was collected from an upland scrub-shrub community.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrological indicators.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: 1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Prunus serotina	10	Y	FACU
2. Robinia pseudoacacia	10	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	20	= Total Cover	

50% of total cover: 10 20% of total cover: 2

Sapling/Shrub Stratum (Plot size:)			
1. Pyrus calleryana	10	Y	--
2. Prunus serotina	5	N	FACU
3. Robinia pseudoacacia	5	N	UPL
4.			
5.			
6.			
7.			
8.			
	20	= Total Cover	

50% of total cover: 10 20% of total cover: 2

Herb Stratum (Plot size:)			
1. Solidago spp.	20	Y	--
2. Phragmites australis	10	Y	FACW
3. Artemisia vulgaris	5	N	UPL
4. Daucus carota	5	N	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35	= Total Cover	

50% of total cover: 17.5 20% of total cover: 7

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

50% of total cover: 20% of total cover:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	25	x 5 =	125
Column Totals:	50 (A)		205 (B)

Prevalence Index = B/A = 4.1

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	--	--	--	--	--	--	--	FILL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

The soils on the project site were not described because of the project site's historic use as a borrow pit.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 650 Churchmans Road City/County: Wilmington/New Castle Sampling Date: 8/25/2021

Applicant/Owner: 273 Churchmans, LLC State: DE Sampling Point: 1

Investigator(s): Ralph B. Downard, Kate Bullock Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Convex Slope (%): 0-5

Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Udorthents, borrow area NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

DP-1 was collected from an upland scrub-shrub community.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrological indicators.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: 1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Prunus serotina	10	Y	FACU
2. Robinia pseudoacacia	10	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	20	= Total Cover	

50% of total cover: 10 20% of total cover: 2

Sapling/Shrub Stratum (Plot size:)			
1. Pyrus calleryana	10	Y	--
2. Prunus serotina	5	N	FACU
3. Robinia pseudoacacia	5	N	UPL
4.			
5.			
6.			
7.			
8.			
	20	= Total Cover	

50% of total cover: 10 20% of total cover: 2

Herb Stratum (Plot size:)			
1. Solidago spp.	20	Y	--
2. Phragmites australis	10	Y	FACW
3. Artemisia vulgaris	5	N	UPL
4. Daucus carota	5	N	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35	= Total Cover	

50% of total cover: 17.5 20% of total cover: 7

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

50% of total cover: 20% of total cover:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	25	x 5 =	125
Column Totals:	50 (A)		205 (B)

Prevalence Index = B/A = 4.1

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	--	--	--	--	--	--	--	FILL

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

The soils on the project site were not described because of the project site's historic use as a borrow pit.

APPENDIX D

FUNCTION AND VALUE ASSESSMENT

650 CHURCHMANS ROAD

APPENDIX D – FUCTION AND VALUE ASSESSMENT – 650 CHURCHMANS ROAD

Segment A

ASSESSMENT VARIABLES

1. Channel Canopy Cover
    a. Average percent cover of vegetation of the stream channel
    b. Over 88% receives score 1.0
    c. SCORE = 0

2. Channel Substrate Embeddedness
    a. Average embeddedness index of stream substrate
    b. Measure 30 points along the stream reach, randomly select particle
    c. Ratings between 3.5 and 4 receive a score of 1.0
    d. SCORE= 0

3. Channel Substrate Size
    a. Median substrate size of bed material
    b. Median substrate size of 2 and 6 inches receives a score of 1.0
    c. SCORE = 0

4. Channel Bank Erosion
    a. Proportion of stream channel with eroded bank
    b. Range from 0 – 200 %
    c. Less than 14% receives a score of 1.0
    d. SCORE = 0

5. Riparian/Buffer Zone - Large Woody Debris
    a. Number of down woody stems in the riparian/buffer zone per 100ft of stream
    b. Within 25 feet of channel (both sides)
    c. Broken logs = one piece
    d. At least 4 in diameter and 36 in long
    e. 8-20 pieces of LWD receive a score of 1.0
    f. SCORE = 0

6. Riparian/Buffer Zone - Tree Diameter
    a. Average DBH of trees in riparian zone
    b. Average greater than 8.6 DBH receives a score of 1.0
    c. SCORE = 0

7. Riparian/Buffer Zone – Snag Density
    a. Number of snags per 100 ft of stream
    b. At least 4 in DBH and 36 in high
    c. 1 – 3 snags per 100 feet receive score of 1.0
    d. SCORE = 0

8. Riparian Buffer Zone - Sapling/Shrub Density
    a. Density of woody stems at least 36 in high and less than 4 in DBH
    b. Only for reaches less than 20% canopy
    c. Greater than 65 stems per 100 feet receive score of 1.0
    d. SCORE = 0

9. Riparian Buffer Zone – Vegetation Species Richness
    a. Count number of native TREES and number of exotic species (any)
    b. Use shrub/sapling for native if cover less than 20%
    c. SCORE = 0

10. Riparian Buffer Zone – Soil Detritus
    a. Average percent cover of detrital material on the soil surface (aka organic material)
    b. Use 8 random 1m plots
    c. Stream reaches with at least 82% detritus cover receive a score of 1.0
    d. SCORE= 0

11. Riparian Buffer Zone – Herbaceous Cover
    a. Average percent cover of herbaceous vegetation in the zone
    b. Use only is less than 20% cover
    c. Stream reaches with greater than 75% receive a score of 1.0
    d. SCORE = 0

APPENDIX D – FUCTION AND VALUE ASSESSMENT – 650 CHURCHMANS ROAD

Segment B

ASSESSMENT VARIABLES

1. Channel Canopy Cover
    a. Average percent cover of vegetation of the stream channel
    b. Over 88% receives score 1.0
    c. SCORE = 0

2. Channel Substrate Embeddedness
    a. Average embeddedness index of stream substrate
    b. Measure 30 points along the stream reach, randomly select particle
    c. Ratings between 3.5 and 4 receive a score of 1.0
    d. SCORE= 0

3. Channel Substrate Size
    a. Median substrate size of bed material
    b. Median substrate size of 2 and 6 inches receives a score of 1.0
    c. SCORE = 1

4. Channel Bank Erosion
    a. Proportion of stream channel with eroded bank
    b. Range from 0 – 200 %
    c. Less than 14% receives a score of 1.0
    d. SCORE = 0

5. Riparian/Buffer Zone - Large Woody Debris
    a. Number of down woody stems in the riparian/buffer zone per 100ft of stream
    b. Within 25 feet of channel (both sides)
    c. Broken logs = one piece
    d. At least 4 in diameter and 36 in long
    e. 8-20 pieces of LWD receive a score of 1.0
    f. SCORE = 0

6. Riparian/Buffer Zone - Tree Diameter
    a. Average DBH of trees in riparian zone
    b. Average greater than 8.6 DBH receives a score of 1.0
    c. SCORE = 0

7. Riparian/Buffer Zone – Snag Density
    a. Number of snags per 100 ft of stream
    b. At least 4 in DBH and 36 in high
    c. 1 – 3 snags per 100 feet receive score of 1.0
    d. SCORE = 0

8. Riparian Buffer Zone - Sapling/Shrub Density
    a. Density of woody stems at least 36 in high and less than 4 in DBH
    b. Only for reaches less than 20% canopy
    c. Greater than 65 stems per 100 feet receive score of 1.0
    d. SCORE = 0

9. Riparian Buffer Zone – Vegetation Species Richness
    a. Count number of native TREES and number of exotic species (any)
    b. Use shrub/sapling for native if cover less than 20%
    c. SCORE = 0

10. Riparian Buffer Zone – Soil Detritus
    a. Average percent cover of detrital material on the soil surface (aka organic material)
    b. Use 8 random 1m plots
    c. Stream reaches with at least 82% detritus cover receive a score of 1.0
    d. SCORE= 0

11. Riparian Buffer Zone – Herbaceous Cover
    a. Average percent cover of herbaceous vegetation in the zone
    b. Use only is less than 20% cover
    c. Stream reaches with greater than 75% receive a score of 1.0
    d. SCORE = 0

APPENDIX D – FUCTION AND VALUE ASSESSMENT – 650 CHURCHMANS ROAD

Segment C

ASSESSMENT VARIABLES

1. Channel Canopy Cover
    a. Average percent cover of vegetation of the stream channel
    b. Over 88% receives score 1.0
    c. SCORE = 0

2. Channel Substrate Embeddedness
    a. Average embeddedness index of stream substrate
    b. Measure 30 points along the stream reach, randomly select particle
    c. Ratings between 3.5 and 4 receive a score of 1.0
    d. SCORE= 0

3. Channel Substrate Size
    a. Median substrate size of bed material
    b. Median substrate size of 2 and 6 inches receives a score of 1.0
    c. SCORE = 0

4. Channel Bank Erosion
    a. Proportion of stream channel with eroded bank
    b. Range from 0 – 200 %
    c. Less than 14% receives a score of 1.0
    d. SCORE = 0

5. Riparian/Buffer Zone - Large Woody Debris
    a. Number of down woody stems in the riparian/buffer zone per 100ft of stream
    b. Within 25 feet of channel (both sides)
    c. Broken logs = one piece
    d. At least 4 in diameter and 36 in long
    e. 8-20 pieces of LWD receive a score of 1.0
    f. SCORE = 0

6. Riparian/Buffer Zone - Tree Diameter
    a. Average DBH of trees in riparian zone
    b. Average greater than 8.6 DBH receives a score of 1.0
    c. SCORE = 0

7. Riparian/Buffer Zone – Snag Density
    a. Number of snags per 100 ft of stream
    b. At least 4 in DBH and 36 in high
    c. 1 – 3 snags per 100 feet receive score of 1.0
    d. SCORE = 0

8. Riparian Buffer Zone - Sapling/Shrub Density
    a. Density of woody stems at least 36 in high and less than 4 in DBH
    b. Only for reaches less than 20% canopy
    c. Greater than 65 stems per 100 feet receive score of 1.0
    d. SCORE = 1

9. Riparian Buffer Zone – Vegetation Species Richness
    a. Count number of native TREES and number of exotic species (any)
    b. Use shrub/sapling for native if cover less than 20%
    c. SCORE = 0

10. Riparian Buffer Zone – Soil Detritus
    a. Average percent cover of detrital material on the soil surface (aka organic material)
    b. Use 8 random 1m plots
    c. Stream reaches with at least 82% detritus cover receive a score of 1.0
    d. SCORE= 0

11. Riparian Buffer Zone – Herbaceous Cover
    a. Average percent cover of herbaceous vegetation in the zone
    b. Use only is less than 20% cover
    c. Stream reaches with greater than 75% receive a score of 1.0
    d. SCORE = 0

APPENDIX E

FUNCTION AND VALUE ASSESSMENT

JESTER PARK – CURRENT CONDITIONS

DELAWARE WETLAND VALUE ASSESSMENT FORM Version 1.1

Site # _____ **Site Name** Jester Park **Date** 8/21/2021

Observers Ralph B. Downard, Jr., Kate Bullock **Lat / Long** 39.824273 / -75.527191 **AA moved from original location?** yes / (no)

HGM _____ **Cowardin** PFO1A **LLWW** Terrene, Basin, Isolated, PD3a **Wetland AA size and shape** Circular / 0.10 acres

VALUE-ADDED METRICS — Points

1. UNIQUENESS/SIGNIFICANCE — 0

- ☐ 20 pts Wetland is ecologically significant in DE
- ☐ 5 pts Wetland is rare in the given landscape
- ☐ 5 pts Wetland has been restored, established, or enhanced

Specify: _____

2. WETLAND SIZE — 0

0.04 ha

- ☐ 10 pts ≥ 300 ha
- ☐ 8 pts ≥ 150 to < 300 ha
- ☐ 6 pts ≥ 50 to < 150 ha
- ☐ 4 pts ≥ 15 to < 50 ha
- ☐ 2 pt ≥ 5 to < 15 ha
- ☑ 0 pts < 5 ha

3. HABITAT AVAILABILITY — 2

1.6 ha/6.16ha = 26 %

- ☐ 10 pts 100% of buffer unfragmented and natural
- ☐ 8 pts ≥80 to <100% of buffer unfragmented and natural
- ☐ 6 pts ≥60 to <80% of buffer unfragmented and natural
- ☐ 4 pts ≥30 to <60% of buffer unfragmented and natural
- ☑ 2 pts ≥5 to <30% of buffer is unfragmented and natural
- ☐ 0 pts <5% of buffer is unfragmented and natural

4. DELAWARE ECOLOGICAL NETWORK — 0

Select one of the following:

- ☐ 8 pts AA and buffer entirely within core area
- ☐ 6 pts AA entirely within core area, buffer partially within
- ☐ 4 pts AA partially within core area
- ☑ 0 pts None of AA within core area

Select all that apply:

- ☐ 2 pts AA partially in polygon with Final Score ≥0.50
- ☐ 4 pts AA partially in polygon that contains a BCD element occurrence

_____ DEN Final Score value _____ # of BCD EO

VALUE-ADDED METRICS — Points

5. HABITAT STRUCTURE AND COMPLEXITY — 4

2 pts for each structure present in AA

- ☐ Snags (≥15cm DBH, ≥45°) # _____
- ☐ ≥ 3 Large downed wood (≥15cm DBH, <45°) # _____
- ☐ Coarse woody debris (7.5-15cm DBH, <45°)
- ☐ Microtopographic relief (≥10% of AA)
- ☐ Surface water suitable for amphibians/macroinvertebrates
- ☐ Surface water suitable for fish
- ☐ Tree canopy gap est: _____% of AA

1 pt for each stratum present in AA

Plant Layers (≥10% of AA)

- ☐ Submerged aquatic vegetation
- ☑ Herb
- ☑ Shrub/Sapling
- ☑ Tree
- ☑ Vine

6. FLOOD STORAGE/WATER QUALITY — 4

2 pts for each present

- ☐ AA is adjacent to surface waters
- ☑ Water pools on ≥ 50% of AA
- ☑ AA is 75% vegetated and has evidence of storm flow (wrack, sedimentation)

Complete with GIS (Cowardin and LLWW classifications):

- ☐ AA has water regime C or wetter
- ☐ AA rated 'Moderate' or 'High' for sediment retention
- ☐ AA rated 'High' for surface water detention

7. EDUCATIONAL VALUE — 2

1 pt for each present

- ☑ AA is viewable from a public road
- ☑ AA is on public property with public access

For public property only:

- ☐ Parking available for ≥ 2 vehicles
- ☐ Trail system relatively close to AA
- ☐ Elevated boardwalk/trail through the AA

Y / N / NA Will proposed activity increase public access and/or opportunity for education?

COMMENTS:

Value metrics evaluated using current site conditions at Jester Park. Potential value metrics after mitigation are included as Appendix E.

FINAL SCORE:

Sum of values: 12

Value Category: ☐ Rich ≥45 ☐ Moderate <45 ≥30 ☒ Limited <30

Refer to protocol for variable scoring and detailed descriptions

entered:_____

checked:_____

APPENDIX F

FUNCTION AND VALUE ASSESSMENT

JESTER PARK – POST MITIGATION

DELAWARE WETLAND VALUE ASSESSMENT FORM Version 1.1

Site # _____ **Site Name** Jester Park **Date** 8/21/2021

Observers Ralph B. Downard, Jr., Kate Bullock **Lat / Long** 39.824273 / -75.527191 **AA moved from original location?** yes / (no)

HGM _____ **Cowardin** PFO1A **LLWW** Terrene, Basin, Isolated, PD3a **Wetland AA size and shape** 0.60 acres / circular

VALUE-ADDED METRICS — Points

1. UNIQUENESS/SIGNIFICANCE — 5

- ☐ 20 pts Wetland is ecologically significant in DE
- ☐ 5 pts Wetland is rare in the given landscape
- ☒ 5 pts Wetland has been restored, established, or enhanced

Specify: _____

2. WETLAND SIZE — 0

0.24 ha

- ☐ 10 pts ≥ 300 ha
- ☐ 8 pts ≥ 150 to < 300 ha
- ☐ 6 pts ≥ 50 to < 150 ha
- ☐ 4 pts ≥ 15 to < 50 ha
- ☐ 2 pt ≥ 5 to < 15 ha
- ☒ 0 pts < 5 ha

3. HABITAT AVAILABILITY — 4

1.9 ha/6.16ha = 31%

- ☐ 10 pts 100% of buffer unfragmented and natural
- ☐ 8 pts ≥80 to <100% of buffer unfragmented and natural
- ☐ 6 pts ≥60 to <80% of buffer unfragmented and natural
- ☒ 4 pts ≥30 to <60% of buffer unfragmented and natural
- ☐ 2 pts ≥5 to <30% of buffer is unfragmented and natural
- ☐ 0 pts <5% of buffer is unfragmented and natural

4. DELAWARE ECOLOGICAL NETWORK — 0

Select one of the following:

- ☐ 8 pts AA and buffer entirely within core area
- ☐ 6 pts AA entirely within core area, buffer partially within
- ☐ 4 pts AA partially within core area
- ☒ 0 pts None of AA within core area

Select all that apply:

- ☐ 2 pts AA partially in polygon with Final Score ≥0.50
- ☐ 4 pts AA partially in polygon that contains a BCD element occurrence

0 DEN Final Score value _____ # of BCD EO

VALUE-ADDED METRICS — Points

5. HABITAT STRUCTURE AND COMPLEXITY — 14

2 pts for each structure present in AA

- ☐ Snags (≥15cm DBH, ≥45°) # _____
- ☒ ≥ 3 Large downed wood (≥15cm DBH, <45°) # 3
- ☒ Coarse woody debris (7.5-15cm DBH, <45°)
- ☒ Microtopographic relief (≥10% of AA)
- ☒ Surface water suitable for amphibians/macroinvertebrates
- ☐ Surface water suitable for fish
- ☒ Tree canopy gap est: 50 % of AA

1 pt for each stratum present in AA

Plant Layers (≥10% of AA)

- ☐ Submerged aquatic vegetation
- ☒ Herb
- ☒ Shrub/Sapling
- ☒ Tree
- ☒ Vine

6. FLOOD STORAGE/WATER QUALITY — 4

2 pts for each present

- ☐ AA is adjacent to surface waters
- ☒ Water pools on ≥ 50% of AA
- ☒ AA is 75% vegetated and has evidence of storm flow (wrack, sedimentation)

Complete with GIS (Cowardin and LLWW classifications):

- ☐ AA has water regime C or wetter
- ☐ AA rated 'Moderate' or 'High' for sediment retention
- ☐ AA rated 'High' for surface water detention

7. EDUCATIONAL VALUE — 5

1 pt for each present

- ☒ AA is viewable from a public road
- ☒ AA is on public property with public access

For public property only:

- ☒ Parking available for ≥ 2 vehicles
- ☒ Trail system relatively close to AA
- ☒ Elevated boardwalk/trail through the AA

Y / N / NA Will proposed activity increase public access and/or opportunity for education?

COMMENTS:

Value metrics evaluated using proposed site conditions at Jester Park. Current value metrics after mitigation are included as Appendix D.

FINAL SCORE:

Sum of values: 32

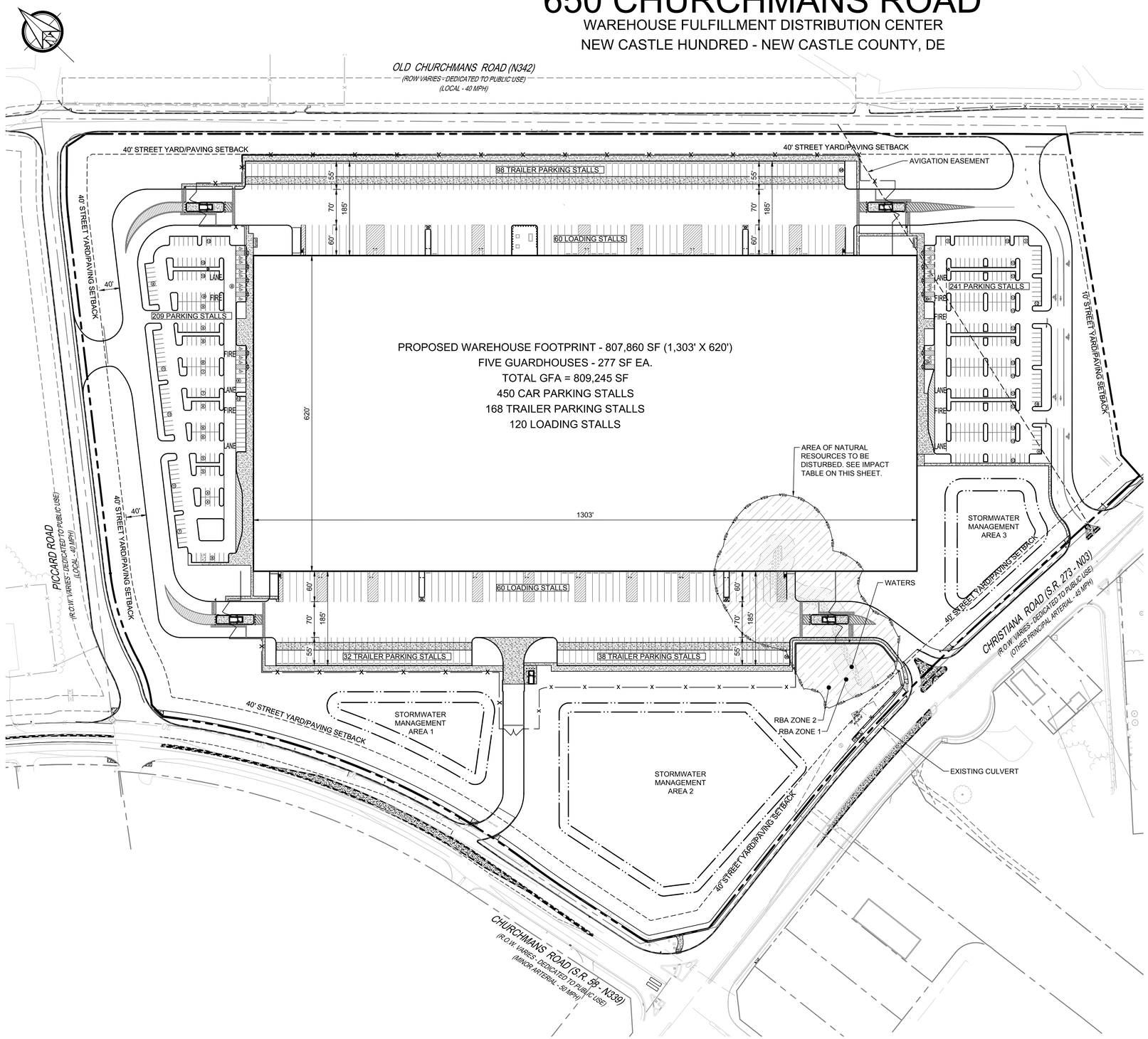
Value Category:		Rich ≥45	X	Moderate <45 ≥30		Limited <30

Refer to protocol for variable scoring and detailed descriptions

entered: _____

checked: _____

CONCEPT PLAN NO. 2
650 CHURCHMANS ROAD
WAREHOUSE FULFILLMENT DISTRIBUTION CENTER
NEW CASTLE HUNDRED - NEW CASTLE COUNTY, DE



MAP: 48 & 54 — LOCATION MAP — SCALE: 1" = 800'

SITE DATA

1. TAX PARCEL NUMBERS: 10-024.00-025

2. SITE ACREAGE: (EXISTING) 58.8962 AC. (GROSS AREA) -2.6675 AC. (OLD CHURCHMAN ROAD, PICCARD ROAD AND CHRISTIANA ROAD ROW) 56.2287 AC. (NET AREA)

3. AREA CALCULATIONS:

	EXISTING	PREVIOUSLY APPROVED PER INST. #20200527-0042226	PROPOSED (AS SHOWN ON THIS PLAN)
BUILDING COVERAGE	0.0000 AC.	14.9967 AC.	18.9620 AC.
IMPERVIOUS SURFACES	5.2182 AC.	23.0400 AC.	18.0776 AC.
OPEN SPACE	51.0105 AC.	13.1950 AC.	13.9146 AC.
SWM AREA 1	0.0000 AC.	0.8470 AC.	0.8470 AC.
SWM AREA 2	0.0000 AC.	3.1390 AC.	3.1390 AC.
SWM AREA 3	0.0000 AC.	1.0110 AC.	1.2885 AC.
TOTAL	56.2287 AC	56.2287 AC.	56.2287 AC.

4. GROSS FLOOR AREA (GFA): EXISTING: 0 SF; PREVIOUSLY APPROVED: 1,168,211 SF; PROPOSED TOTAL: 809,245 SF

5. PARKING - REQUIRED: WAREHOUSE REQUIRES 5 SPACES MINIMUM + 0.5 SPACES PER 1,000 SF OF GROSS AREA REQUIRED PARKING = 5 + (809,245/1,000) X 0.5 = 410 SPACES

PROPOSED PARKING: PROPOSED PASSENGER VEHICLE PARKING: 450 SPACES (INCLUDES 23 HC)

PROPOSED TRAILER SPACES: 168 SPACES

6. LOADING - REQUIRED: WAREHOUSE REQUIRES 1 SPACE FOR BUILDINGS WITH 8,000 TO 20,000 GFA + 1 PER EACH 20,000 GFA NOT TO EXCEED 4 ADDITIONAL LOADING BAYS REQUIRED = 5 LOADING BAYS
PROPOSED LOADING: 120 LOADING BAYS

NATURAL RESOURCE AREA IMPACT TABLE:

NATURAL RESOURCE	PROTECTION LEVEL	TOTAL AREA	MIN. PROTECTED LAND	PROPOSED DISTURBANCE PER INST. #20200527-0042226	PROPOSED DISTURBANCE (AS SHOWN ON THIS PLAN)	PROPOSED PROTECTED LAND (AS SHOWN ON THIS PLAN)
WATERS	1.0	0.106 AC.	0.106 AC.	0.000 AC.	0.106 AC.	0.000 AC.
RIPARIAN BUFFER	1.0	1.967 AC.	1.967 AC.	1.700 AC.	1.967 AC.	0.000 AC.
DRAINAGEWAY	0.0	1.660 A.C	0.000 A.C	1.660 A.C	1.660 A.C	0.000 A.C.

LENGTH OF BLUELINE STREAM ON-SITE: 360 LF
DISTURBED LENGTH PER THIS PLAN: 360 LF

VARIANCE NOTE: A VARIANCE WAS GRANTED BY THE BOARD OF ADJUSTMENT TO RELIEVE THE 100 PERCENT PROTECTION OF THE RIPARIAN BUFFER AND PERMIT THE DISTURBANCE OF 1.7 ACRES OF THAT BUFFER PER INSTRUMENT NO. 20120822-0046986. SEE APPLICATION 2009-0429-A DECISION DATE 10/08/09.

100' 0 100' 200'
DRAWING SCALE 1" = 100'

DUFFIELD ASSOCIATES
Soil, Water & the Environment
5400 LIMESTONE ROAD
WILMINGTON, DE 19808-1232
TEL: 302.239.6634
FAX: 302.239.8485
OFFICES IN DELAWARE, MARYLAND, PENNSYLVANIA AND NEW JERSEY
WEB: HTTP://DUFFNET.COM
E-MAIL: DUFFIELD@DUFFNET.COM

CHKD BY: MJK/SHP
DESIGNED BY: SMC/SHP
DRAWN BY: SMC
FILE NAME: I:\692\CH-CO-CONCEPT
MICHAEL J. KASZYSKI JR., P.E.
STATE: DELAWARE P.E. #15284

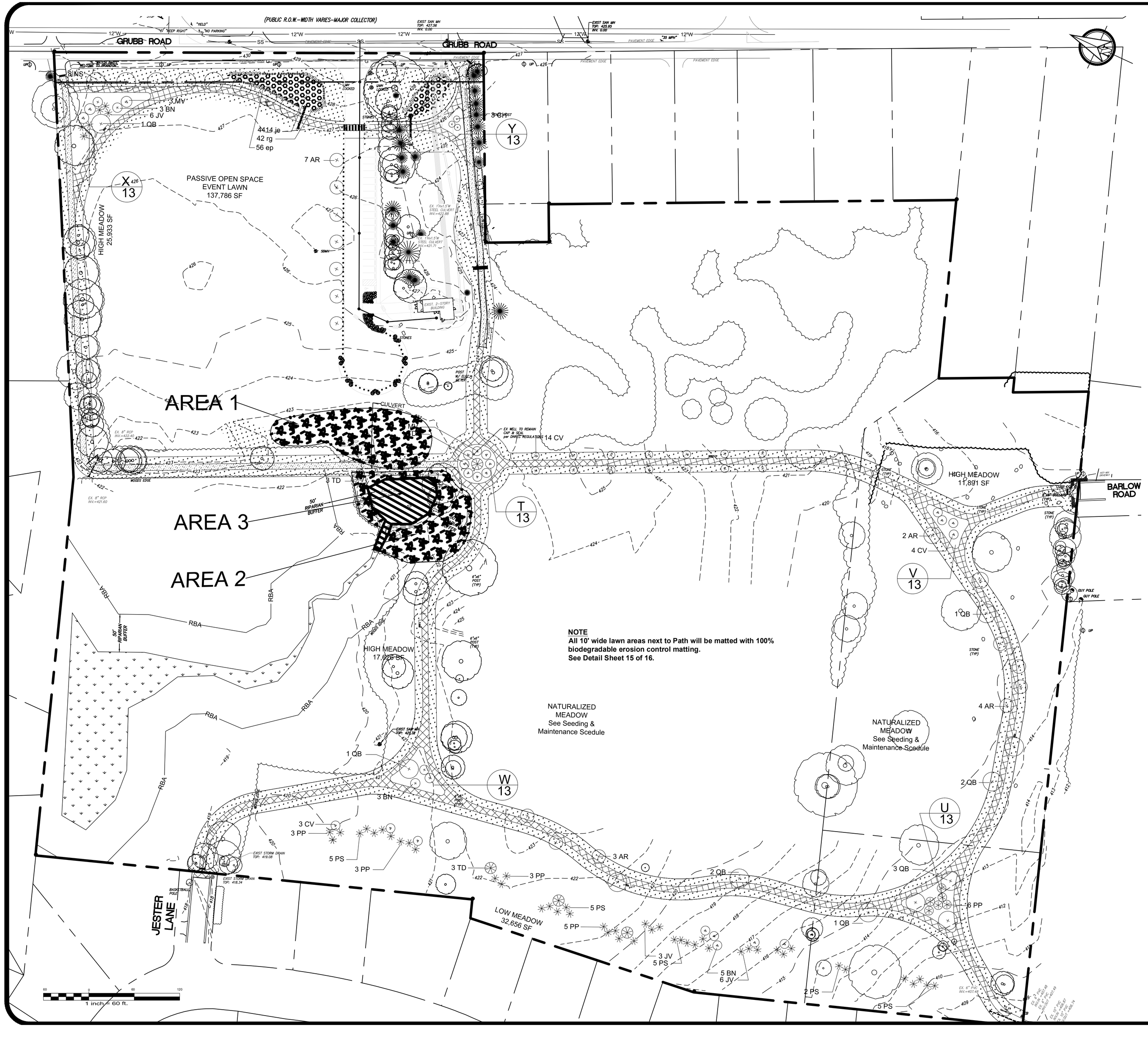
No.	REVISION	CHKD BY DATE
1	REVISED BUILDING SIZE FOR ADDITIONAL PARKING ON THE WEST	

AGENCY APPROVAL:

OWNER/ DEVELOPER: CHURCHMANS 273 LLC
20 MONTCHANIN ROAD, SUITE 250
GREENVILLE, DE 19807
(610) 647-5800

CONCEPT PLAN NO. 2
650 CHURCHMANS ROAD
NEW CASTLE HUNDRED~NEW CASTLE COUNTY~DELAWARE

DATE: JANUARY 21, 2021
SCALE: 1" = 100'
PROJECT NO. 10692.CJ
SHEET: 1 OF 1



NOTE
All 10' wide lawn areas next to Path will be matted with 100% biodegradable erosion control matting.
See Detail Sheet 15 of 16.

GENERAL NOTES:
1. THIS PLAN IS NOT FOR CONSTRUCTION. THIS PLAN IS FOR DISCUSSION PURPOSES ONLY.
2. ON THIS 27 ACRE SITE, THIS PROJECT PROPOSES TO PRESERVE 8 ACRES OF WOODED WETLANDS AND CREATE 14 ACRES OF NATURALIZED & SEEDED MEADOWS.
3. THE PRE- AND POST-RUNOFF COEFFICIENT IS LESS THAN 1.0 DUE TO REMOVAL OF AGRICULTURAL BUILDINGS THAT ARE IN POOR CONDITION AND CONVERTING SOME PASTURE TO MEADOWS.
4. THE PROPOSED PLANTING PLAN USES 100% NATIVE PLANTINGS. ACCORDINGLY, THE PARK DEVELOPMENT PLAN WILL HAVE MINIMAL ENVIRONMENTAL IMPACT WHILE CREATING ADDITIONAL WILDLIFE AND POLLINATOR HABITAT, AND PROVIDING A TRAIL FOR RECREATION AND EXERCISE.

AREA 1 - WETLAND CREATION AREA:

OBJECTIVE: CREATE 0.27 ACRES OF WETLAND WITHIN THE FORMER COW PASTURE. THE AREA SELECTED IS ASSOCIATED WITH A LINEAR SHAPED LANDFORM WITHIN AN OLD FARM PASTURE AND ADJACENT TO AN EXISTING WATER CONTROL STRUCTURE.
ACTIONS:
1. GRADE THE PASTURE TO ENLARGE THE CONCAVE LANDFORM, WHICH WILL INCREASE WATER STORAGE AND PROMOTE THE ESTABLISHMENT OF WETLANDS.
2. PLANT HERBACEOUS WETLAND SPECIES AND MAINTAIN AS A "WET MEADOW." SEE RECOMMENDED PLANT LIST. PREFERENCE GIVEN TO PLANTS WITH AESTHETIC AND WILDLIFE VALUE.
3. FINAL CONSTRUCTION PLANS AND PLANT SELECTIONS WILL BE DETERMINED AFTER EXISTING VEGETATION, SOIL, AND HYDROLOGY OF THE FORMER PASTURE HAS BEEN ASSESSED AND APPROVAL OF THE CONCEPTUAL MITIGATION PLAN BY THE U.S. ARMY CORPS OF ENGINEERS AND THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL.
4. THE ASSESSMENT OF THE EXISTING VEGETATION, SOIL, AND HYDROLOGY OF THE AREA WILL OCCUR AFTER THE CONCEPTUAL MITIGATION PLANS ARE ACCEPTED BY THE U.S. ARMY CORPS OF ENGINEERS AND THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL..

RECOMMENDED PLAN LIST:
MILKWEED (ASCLEPIAS SPP.)
SEDGES (CYPERUS AND CAREX SPP.)
ASTERS (ASTER SPP.)
GOLDENRODS (SOLIDAGO SPP.)
CONEFLOWERS (RUDBECKIA SPP.)
SMARTWEEDSD (PERSICARIA SPP.)
RUSHES (JUNCUS SPP.)
GRAMMA GRASS (B. GRACILIS)
LITTLE BLUESTEM (S. SCOPARIUM)
SHEEPS FESCUE (F. OVINIA)

AREA 2 - WETLAND CREATION AREA:

OBJECTIVE: CREATE APPROXIMATELY 0.23 ACRES ADJACENT TO THE WETLANDS ASSOCIATED WITH THE FARM POND.
ACTIONS:
1. GRADE THE PASTURE TO ENLARGE THE CONCAVE LANDFORM ADJACENT TO THE POND, WHICH WILL INCREASE WATER STORAGE AND PROMOTE THE ESTABLISHMENT OF WETLANDS.
2. PLANT WOODY AND HERBACEOUS PLANTS TO INCREASE SHADE AROUND THE POND AND CREATE MORE VEGETATION DIVERSITY. SEE RECOMMENDED PLANT LIST. PREFERENCE WILL BE GIVEN TO PLANTS WITH AESTHETIC AND WILDLIFE VALUE.
3. FINAL CONSTRUCTION PLANS AND PLANT SELECTIONS WILL BE DETERMINED AFTER EXISTING VEGETATION, SOIL, AND HYDROLOGY OF THE FORMER PASTURE HAS BEEN ASSESSED AND APPROVAL OF THE CONCEPTUAL MITIGATION PLAN BY THE U.S. ARMY CORPS OF ENGINEERS AND THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL.
4. THE ASSESSMENT OF THE EXISTING VEGETATION, SOIL, AND HYDROLOGY OF THE AREA WILL OCCUR AFTER THE CONCEPTUAL MITIGATION PLANS ARE ACCEPTED BY THE U.S. ARMY CORPS OF ENGINEERS AND THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL.

RECOMMENDED PLANT LIST:
TREES/SHRUBS
WINTER RED WINTERBERRY HOLLY (I.VERTICILLATA)
SWEETBAY MAGNOLIA (M. VIRGINIANA)
BUTTON BUSH (C. OCCIDENTALIS)
VIBURNUM SPP.
HYDRANGEA SPP.

HERBACEOUS
LIZARD'S TAIL (C. CERNUUS)
SEDGES (CYPERUS AND CAREX SPP.)
ASTERS (ASTER SPP.)
CONEFLOWERS (RUDBECKIA SPP.)
GRASSES (ANDROPOGON AND PANICUM)

AREA 3 - WETLAND ENHANCEMENT AREA:

OBJECTIVE: ENHANCE THE QUALITY OF THE EXISTING 0.11 ACRE WETLAND ASSOCIATED WITH THE FARM POND.

1. GRADE POND TO PROMOTE VEGETATIVE DIVERSITY, CREATE A HIGHER QUALITY WETLAND, AND PROMOTE BETTER HYDROLOGY.
2. ADD PLANTING WITHIN THE POND TO INCREASE VEGETATION DIVERSITY. SEE RECOMMENDED PLANT LIST. PREFERENCE WILL BE GIVEN TO PLANTS WITH AESTHETIC AND WILDLIFE VALUE.
3. FINAL CONSTRUCTION PLANS AND PLANT SELECTIONS WILL BE DETERMINED AFTER EXISTING VEGETATION, SOIL, AND HYDROLOGY OF THE FORMER PASTURE HAS BEEN ASSESSED AND APPROVAL OF THE CONCEPTUAL MITIGATION PLAN BY THE U.S. ARMY CORPS OF ENGINEERS AND THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL.
4. THE ASSESSMENT OF THE EXISTING VEGETATION, SOIL, AND HYDROLOGY OF THE AREA WILL OCCUR AFTER THE CONCEPTUAL MITIGATION PLANS ARE ACCEPTED BY THE U.S. ARMY CORPS OF ENGINEERS AND THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL.

RECOMMENDED PLANT LIST:

LIZARD'S TAIL (C. CERNUUS)
SEDGES (CYPERUS ANDD CAREX SPP.)
ASTERS (ASTER SPP.)
CONEFLOWERS (RUDBECKIA SPP.)
GRASSES (ANDROPOGON AND PANICUM)

BASEMAP DATA FROM THE JESTER PARK TRAIL SHEET 14 OF 17 PLANTING PLAN LAST REVISED 06.17.2021

LEGEND
- Proposed Wetland Creation Area
- Proposed Wetland Enhancement Area
- Existing Wetlands Area
- Riparian Buffer Area (50')
- Tree Line

STATEMENT OF ACCURACY
I, MATTHEW SPONG, HEREBY STATE THAT I AM A REGISTERED LANDSCAPE ARCHITECT IN THE STATE OF DELAWARE, THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD LANDSCAPE ARCHITECTURAL PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF DELAWARE.

DATE MATTHEW T. SPONG #126-E

DUFFIELD ASSOCIATES
Soil, Water & the Environment
5400 LIMESTONE ROAD
WILMINGTON, DE 19808-1232
TEL: 302.239.6634
FAX 302.239.8485
OFFICES IN DELAWARE, MARYLAND, PENNSYLVANIA AND NEW JERSEY
WEB: HTTP://DUFFNET.COM
E-MAIL: DUFFIELD@DUFFNET.COM

CHECKED BY: KEB
FILE NAME: 10-12-21 FINALBASED
DESIGNED BY: RBD/MTS
DRAWN BY: JLF
CHKD BY 10/21

No.	REVISION

OWNER:

650 CHURCHMANS ROAD

MITIGATION PLAN FOR JESTER PARK

WILMINGTON ~ NEW CASTLE COUNTY ~ DELAWARE

DATE: 03 SEPTEMBER 2021
SCALE: 1" = 60'
PROJECT NO. 10629.CJ
SHEET: 1 (OF 1)

WETLANDS AND SUBAQUEOUS LANDS SECTION PERMIT APPLICATION FORM

For Subaqueous Lands, Wetlands, Marina and 401 Water Quality Certification Projects

State of Delaware
Department of Natural Resources and Environmental Control
Division of Water

Wetlands and Subaqueous Lands Section

APPLICATION FOR APPROVAL OF
SUBAQUEOUS LANDS, WETLANDS, MARINA
AND WATER QUALITY CERTIFICATION PROJECTS

Last Revised on: March 28, 2017

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

Application Instructions:

1. Complete each section of this basic application and appropriate appendices as thoroughly and accurately as possible. Incomplete or inaccurate applications will be returned.

2. All applications must be accompanied by a scaled plan view and cross-section view plans that show the location and design details for the proposed project. Full construction plans must be submitted for major projects.

3. All applications must have an original signature page and proof of ownership or permitted land use agreement.

4. Submit an original and two (2) additional copies of the application (total of 3) with the appropriate application fee and public notice fee* (prepared in separate checks) to:

Department of Natural Resources and Environmental Control
Wetlands and Subaqueous Lands Section
89 Kings Highway
Dover, Delaware 19901

*Application and public notice fees are non-refundable regardless of the Permit decision or application status.

5. No construction may begin at the project site before written approval has been received from this office.

Helpful Information:

1.	Tax Parcel Information:	New Castle County	(302) 395-5400
		Kent County	(302) 736-2010
		Sussex County	(302) 855-7878
2.	Recorder of Deeds:	New Castle County	(302) 571-7550
		Kent County	(302) 744-2314
		Sussex County	(302) 855-7785

3. A separate application and/or approval may be required through the Army Corps of Engineers. Applicants are strongly encouraged to contact the Corps for a determination of their permitting requirements. For more information, contact the Philadelphia District Regulator of the Day at (215) 656-6728 or visit their website at: http://www.nap.usace.army.mil/Missions/Regulatory.aspx.

4. For questions about this application or the Wetlands and Subaqueous Lands Section, contact us at (302) 739-9943 or visit our website at: http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx. Office hours are Monday through Friday 8:00 AM to 4:30 PM, except on State Holidays.

APPLICANT'S REVIEW BEFORE MAILING

DID YOU COMPLETE THE FOLLOWING?

X	Yes	BASIC APPLICATION
X	Yes	SIGNATURE PAGE (Page 3)
X	Yes	APPLICABLE APPENDICES
X	Yes	SCALED PLAN VIEW
X	Yes	SCALED CROSS-SECTION OR ELEVATION VIEW PLANS
X	Yes	VICINITY MAP
X	Yes	COPY OF THE PROPERTY DEED & SURVEY
X	Yes	THREE (3) COMPLETE COPIES OF THE APPLICATION PACKET
X	Yes	APPROPRIATE APPLICATION FEE & PUBLIC NOTICE FEE (Separate checks made payable to the State of Delaware)

Submit 3 complete copies of the application packet to:

Department of Natural Resources and Environmental Control
Wetlands and Subaqueous Lands Section
89 Kings Highway
Dover, Delaware 19901

Before signing and mailing your application packet, please read the following:

The Department requests that the contractor or party who will perform the construction of your proposed project, if other than the applicant, sign the application signature page along with the applicant in the spaces provided. When the application is signed by the contractor as well as the applicant, the Department will issue the Permit to both parties. For Leases, the contractor will receive a separate construction authorization that will make them subject to all of the terms and conditions of the Lease relating to the construction

Section 1: Applicant Identification

1. Applicant's Name: Keith Stoltz
   Mailing Address: Churchmans 273, LLC;
   c/o Stoltz Mgmt. of DE, Inc.
   P.O. Box 2087; Bala Cynwyd; PA 19904
   Telephone #: 610-388-0777
   Fax #:
   E-mail: KStoltz@stoltzusa.com

2. Consultant's Name: Ralph Downard
   Mailing Address: 5400 Limestone Rd
   Wilmington, DE 19808
   Company Name: Duffield Associates
   Telephone #: 302-270-8635
   Fax #:
   E-mail: r.downard@duffnet.com

3. Contractor's Name:
   Mailing Address:
   Company Name:
   Telephone #:
   Fax #:
   E-mail:

Section 2: Project Description

4. Check those that apply:
☑ New Project/addition to existing project? ☐ Repair/Replace existing structure? (If checked, must answer #16)

5. Project Purpose (attach additional sheets as necessary):

Applicant is proposing to construct an 807,860 sqft warehouse distribution center at the above referenced project site.

6. Check each Appendix that is enclosed with this application:

	A. Boat Docking Facilities		G. Bulkheads		N. Preliminary Marina Checklist
	B. Boat Ramps	✓	H. Fill		O. Marinas
✓	C. Road Crossings		I. Rip-Rap Sills and Revetments		P. Stormwater Management
	D. Channel Modifications/Dams		J. Vegetative Stabilization		Q. Ponds and Impoundments
	E. Utility Crossings		K. Jetties, Groins, Breakwaters		R. Maintenance Dredging
✓	F. Intake or Outfall Structures		M. Activities in State Wetlands		S. New Dredging

Section 3: Project Location

7. Project Site Address: 650 Churchmans Rd
   New Castle, DE 19720
   County: ☑ N.C. ☐ Kent ☐ Sussex
   Site owner name (if different from applicant):
   Address of site owner:

8. Driving Directions: See attached map
(Attach a vicinity map identifying road names and the project location)

9. Tax Parcel ID Number: 1002400025 Subdivision Name: 650 Churchmans Road

WSLS Use Only: **Permit #s:**

Type **SP** ☐ **SL** ☐ **SU** ☐ **WE** ☐ **WQ** ☐ **LA** ☐ **SA** ☐ **MP** ☐ **WA** ☐

Corps Permit: SPGP 18 ☐ **20** ☐ **Nationwide Permit #:** **Individual Permit #**
Received Date: **Project Scientist:**
Fee Received? Yes ☐ **No** ☐ **Amt: $** **Receipt #:**
Public Notice #: **Public Notice Dates: ON** **OFF**

Section 3: Project Location (Continued)

10. Name of waterbody at Project Location: Unnamed stream waterbody is a tributary to: Army Creek

11. Is the waterbody: ☐ Tidal ☑ Non-tidal Waterbody width at mean low or ordinary high water ~ 6 ft

12. Is the project: ☐ On public subaqueous lands? ☑ On private subaqueous lands?*
☐ In State-regulated wetlands? ☐ In Federally-regulated wetlands?

*If the project is on private subaqueous lands, provide the name of the subaqueous lands owner:

(Written permission from the private subaqueous lands owner must be included with this application)

13. Present Zoning: ☐ Agricultural ☐ Residential ☐ Commercial ☑ Industrial ☐ Other

Section 4: Miscellaneous

14. A. List the names and complete mailing addresses of the immediately adjoining property owners on all sides of the project (attach additional sheets as necessary):
See attached sheet for adjoining property owners

B. For wetlands and marina projects, list the names and complete mailing addresses of property owners within a 1,000 foot radius of the project (attach additional sheets as necessary):
N/A

15. Provide the names of DNREC and/or Army Corps of Engineers representatives whom you have discussed the project with:

Matt Jones - DNREC
John Brundage - USACE
Laura Mensch - DNREC
Mike Yost - USACE
Katie Kadlubar - DNREC

A. Have you had a State Jurisdictional Determination performed on the property ☐ Yes ☑ No

B. Has the project been reviewed in a monthly Joint Permit Processing Meeting ☑ Yes ☐ No
*If yes, what was the date of the meeting? 02/18/2021

16. Are there existing structures or fill at the project site in subaqueous lands? ☐ Yes ☑ No
*If yes, provide the permit and/or lease number(s):

*If no, were structures and/or fill in place prior to 1969? ☐ Yes ☑ No

17. Have you applied for or obtained a Federal permit from the Army Corps of Engineers?
☐ No ☑ Pending ☐ Issued ☐ Denied Date:

Type of Permit: Nationwide Permit 39 Federal Permit or ID #:

18. Have you applied for permits from other Sections within DNREC?
☑ No ☐ Pending ☐ Issued ☐ Denied Date: Permit or ID #:

Type of permit (circle all that apply): Septic Well NPDES Storm Water

Other:

Section 5: Signature Page

19. Agent Authorization:

If you choose to complete this section, all future correspondence to the Department may be signed by the duly authorized agent. In addition, the agent will become the primary point of contact for all correspondence from the Department.

I do not wish to authorize an agent to act on my behalf ☐

I wish to authorize an agent as indicated below: ☑

I, Keith Stoltz (Name of Applicant), hereby designate and authorize Ralph Downard (Name of Agent) to act on my behalf in the processing of this application and to furnish any additional information requested by the Department.

Authorized Agent's Name: Ralph Downard
Mailing Address: 5400 Limestone Rd
Wilmington, DE 19808

Telephone #: 302-270-8635
Fax #:
E-mail: rdownard@dnrec.com

20. Agent's Signature:

I hereby certify that the information on this form and on the attached plans are true and accurate to the best of my knowledge. I further understand that the Department may request information in addition to that set forth herein if deemed necessary to appropriately consider this application.

Agent's Signature

September 2, 2021
Date

21. Applicant's Signature:

I hereby certify that the information on this form and on the attached plans are true and accurate to the best of my knowledge and that I am required to inform the Department of any changes or updates to the information provided in this application. I further understand that the Department may request information in addition to that set forth herein if deemed necessary to appropriately consider this application. I grant permission to authorized Department representatives to enter upon the premises for inspection purposes during working hours.

Applicant's Signature

9/2/21
Date

Keith Stoltz, Managing Member
Print Name

22. Contractor's Signature:

I hereby certify that the information on this form and on the attached plans are true and accurate to the best of my knowledge, and that I am required to inform the Department of any changes or updates to the information provided in this application. I further understand that the Department may request information in addition to that set forth herein if deemed necessary to appropriately consider this application.

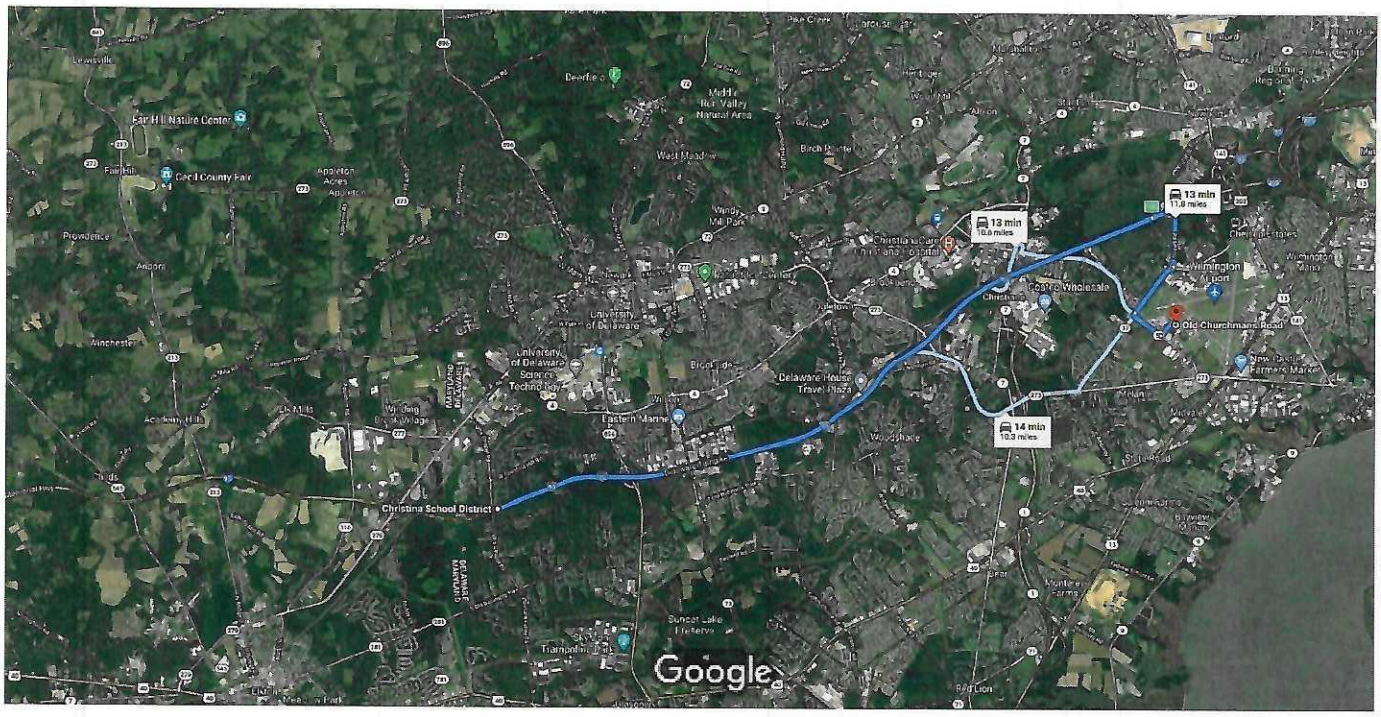
Contractor's Name

Date

Print Name

Google Maps Christina School District, Delaware to Old Churchmans Rd, New Castle, DE 19720

Drive 11.8 miles, 13 min



Imagery ©2021 Landsat / Copernicus, Maxar Technologies, PA Department of Conservation and Natural Resources-PAMAP/USGS, 1 mi
U.S. Geological Survey, USDA Farm Service Agency, Map data ©2021 Google

Christina School District

Delaware

Follow I-95 N to Airport Rd. Take exit 5A from I-95 N

9 min (9.6 mi)

1. Head northeast on I-95 N
   ⚠ Toll road

108 ft

2. Keep left at the fork to stay on I-95 N
   ⚠ Toll road

9.3 mi

3. Take exit 5A toward DE-141 S/U.S.202 S/New Castle/New Castle County Airport

0.3 mi

4. Keep right at the fork, follow signs for Delaware Fire Service Center and merge onto Airport Rd

256 ft

Continue on Airport Rd. Take DE-37 S and DE-58 E to Old Churchmans Rd

5 min (2.2 mi)

5. Merge onto Airport Rd

0.7 mi

6. Turn right onto DE-37 S

0.8 mi

7. Use the left 2 lanes to turn left onto DE-58 E

0.5 mi

8. Turn left onto Co Rd 339A

0.2 mi

9. Turn right onto Old Churchmans Rd

318 ft

Old Churchmans Rd

Delaware 19720

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

14. List the names and complete mailing addresses of the immediately adjoining property owners on all sides of the project.

Owner	Property Address	Mailing Address
Delaware River & Bay Authority	9 DRBA Way, New Castle, DE	9 DRBA Way, New Castle, DE
State of Delaware	0 Old Churchmans Rd, New Castle, DE	21 The Green, Dover, DE
SCC Frenchtown, LLC	27 Christiana Rd, New Castle, DE	5307 Limestone Road (Suite 100), Wilmington, DE
O-Lands Two LLC	113 S. DuPont Hwy	3304 Old Capital Trl (Suite 100), Wilmington, DE
O-Lands One LLC	41 Christiana Rd, New Castle, DE	726 Loveville Rd (Cottage 17), Hockessin, DE
O-Lands One LLC	43 Christiana Rd, New Castle, DE	726 Loveville Rd (Cottage 17), Hockessin, DE
Trustees of New Castle Common	0 Christiana Rd, New Castle, DE	424 Delaware St.; P.O. Box 452, New Castle, DE
Parkway Gravel, Inc.	61 Christiana Rd, New Castle, DE	4048 New Castle Ave, New Castle, DE
Parkway Gravel, Inc.	63 Christiana Rd, New Castle, DE	4048 New Castle Ave, New Castle, DE
Parkway Gravel, Inc.	65 Christiana Rd, New Castle, DE	4048 New Castle Ave, New Castle, DE
Parkway Gravel, Inc.	67 Christiana Rd, New Castle, DE	4048 New Castle Ave, New Castle, DE
Parkway Gravel, Inc.	801 Churchmans Rd Ext. New Castle, DE	4048 New Castle Ave, New Castle, DE
Delaware State Employees FCU	80 Christiana Rd, New Castle DE	270 Beiser Blvd, Dover, DE
Churchmans CC, LLC	82 Christiana Rd, New Castle DE	234 N. James St, Wilmington DE

Road Crossings

Please respond to each question. Questions left blank may result in the application being returned as incomplete. In addition, the answers to all of the questions in this Appendix must correspond accurately to the information on the plan and section view drawings for the project.

General Information

1. Will the project be:

X New Construction
____ Repair or Replacement of an Existing Structure

2. Describe the purpose for the proposed road crossing activity:
Road crossing is required in order to direct flow from the project site to a culvert pipe that flows under Christiana Road.

3. Is the crossing a:

___ Bridge (preferred) ___ Bottomless or Arched Culvert ___ Pipe Culvert

X Box Culvert ___ Multiple Barrel Culvert

___ Other (describe)_____

If other than a bridge is proposed, could bridging be constructed to avoid impacts to the waterbody? ___ Yes X No If no, please provide specific justification:
Box culvert will tie into a pre-existing pipe that travels under Christiana Road.

4. If culvert pipes are proposed, provide the pipe lengths and diameters:
Not applicable.

If a bridge, bottomless culvert or box culvert is proposed, provide the dimensions:
8 x 8 feet

What will be the slope of the culvert?
To be determined

5. What materials will the structure(s) be made of?
Concrete.

Waterbody Information

6. Name of the waterbody at the project location: Unnamed stream
   Waterbody is a tributary to: Army Creek

7. What is the width of the waterbody at the project site? Approximately 8 feet at OHW

8. How many linear feet of stream will be affected by the crossing?
   Pipe - ln ft. Inlet Structure - ln ft. Outlet Structure 8 ln ft.

9. What is the total area of impact in the waterbody? (including inlet and outlet protection structures, sideslope embankments, etc.):

   Tidal Waters
   Below the mean high water line - sq. ft.
   Below the mean low water line - sq. ft.

   Non-tidal Waters
   Below the Ordinary high water line 8 sq. ft.

   In tidal wetlands - sq. ft. (attach appropriate appendix)

10. For non-tidal waters, what is the approximate median stream flow rate at the site:

    Before construction: See notes to the right cfs
    After construction: See notes to the right cfs

    Watercourse is intermittent and as such, flow rates are calculated as peak flow rates:

    Pre-construction: 1-year: 155cfs 2-year: 222 cfs
    Post-construction: 1-year: 150 cfs 2-year: 211 cfs

    What is the bankfull discharge (~1 yr storm) of the stream at the site? 155 cfs

11. What is the watershed area above the project site? Stream is a headwater (acres or square miles)

12. If the road crossing is not over undeeded public subaqueous lands or a DelDOT right of way, who is the owner of the underwater lands? Not applicable

13. Please include evidence of written permission from the underwater landowner indicated above (if other than the applicant) with this Appendix.

Design Features

14. Describe design features that will be incorporated to allow for fish passage:

The stream planned for impact is a headwater and ephemeral and therefore, likely not utilized by fish.

15. Describe design features that will maximize the preservation of natural channel features and minimize adverse impacts to stream morphology and stability:

Current construction plans will require the filling of the entire portion of the watercourse located on the project site.

16. If culvert pipes are proposed:

Will the pipe bottom be buried below the natural streambed? ___Yes X No
If yes, how far will the pipe invert be placed below the streambed elevation? _____ inches
If no, explain why:

The filling of the entire stream-bed is proposed in order to support current construction plans.

For multiple barrel culvert designs, will a low flow barrel be incorporated?
___Yes ___ No
If no, explain why:

Not applicable.

17. What storm event is the structure designed to pass? (i.e. 10 yr storm, 25 yr storm)

    100 year

18. Will the structure include an apron or other inlet/outlet protection? ___Yes ___X___ No
    If yes, describe the dimensions and materials that will be utilized:

19. Is any fill associated with the proposed activity? ___X___Yes ___ No If yes, attach the appropriate appendix.

20. Will any sideslope embankments be constructed in the waterbody? ___Yes ___X___ No
    If yes, what is the average slope of the embankments? _____

21. Will any utilities be associated with the road crossing? ___Yes ___X___No
    If yes, attach the appropriate appendix.

INTAKE OR OUTFALL STRUCTURES

Please make sure answers to all of the questions in this appendix correspond to information on the application drawings.

1. How many feet will the intake or outfall structure(s) be placed channelward of the:

   Tidal waters: mean high water line? _____ ft.
   mean low water line? _____ ft.

   Non-tidal waters: ordinary high water line? 8 ft.

2. What type of material(s) will be used to construct the intake or outfall structure(s)?
   Concrete
3. What is the appropriate median stream flow rate at the:

   intake site _____ cfs outfall site _____ cfs unknown X

4. What will be the daily rate of withdrawal at the intake site? N/A gpd

5. What will be the intake velocity? N/A fps

6. What will be the mesh size of the screen used on the intake structure?
   N/A inches _____ other (explain)

7. What will be the daily rate of return at the outfall site? N/A gpd

8. Have you applied for the National Pollutant Discharge Elimination System (NPDES) permit for this project?
   _____ Yes X No If your answer is "No", contact the Surface Water Discharges Section, DNREC.

9. Will a splash apron be employed at the outfall site? _____ Yes X No
   If your answer is "Yes" complete Appendix I.
   If your answer is "No", explain your proposed method of preventing erosion.

10. How far will any associated structures for support or erosion control (e.g. wing walls, pile, bents, splash aprons, etc.) extend channelward of the:

    Tidal waters: mean high water line? _____ ft.mean low water line? _____ ft.
    Non-tidal waters: ordinary high water line? 0 ft.

11. How many square feet of any associated structures for support or erosion control will be located:
    Channelward of mean high water? 0 sq. ft. In vegetated wetlands? 0 sq. ft.

12. Is there any dredging or fill associated with this project? _____Yes X No
    If yes, please complete the appropriate appendix.

FILL

Please make sure answers to all of the questions in this appendix correspond to information on the application drawings.

1. How many linear feet will the fill extend channelward of the:
   a. Tidal waters: mean high water line? - ft.
      mean low water line? - ft.
   b. Non-tidal waters: ordinary high water line? 8 ft.

2. What is the area of fill that will be located:
   a. on subaqueous land (channelward of mean high water) - sq. ft.
   b. on vegetated wetlands? - sq. ft.

3. What is the source of the fill?
   X Hauled in from upland sources: What is the source company/location/parcel number?
   _____ Obtained from dredged material: Complete Dredging Appendix.

4. What is the total volume of fill? 3400 cubic yards
   a. What is the total fill per running foot of shoreline? N/A cubic yards

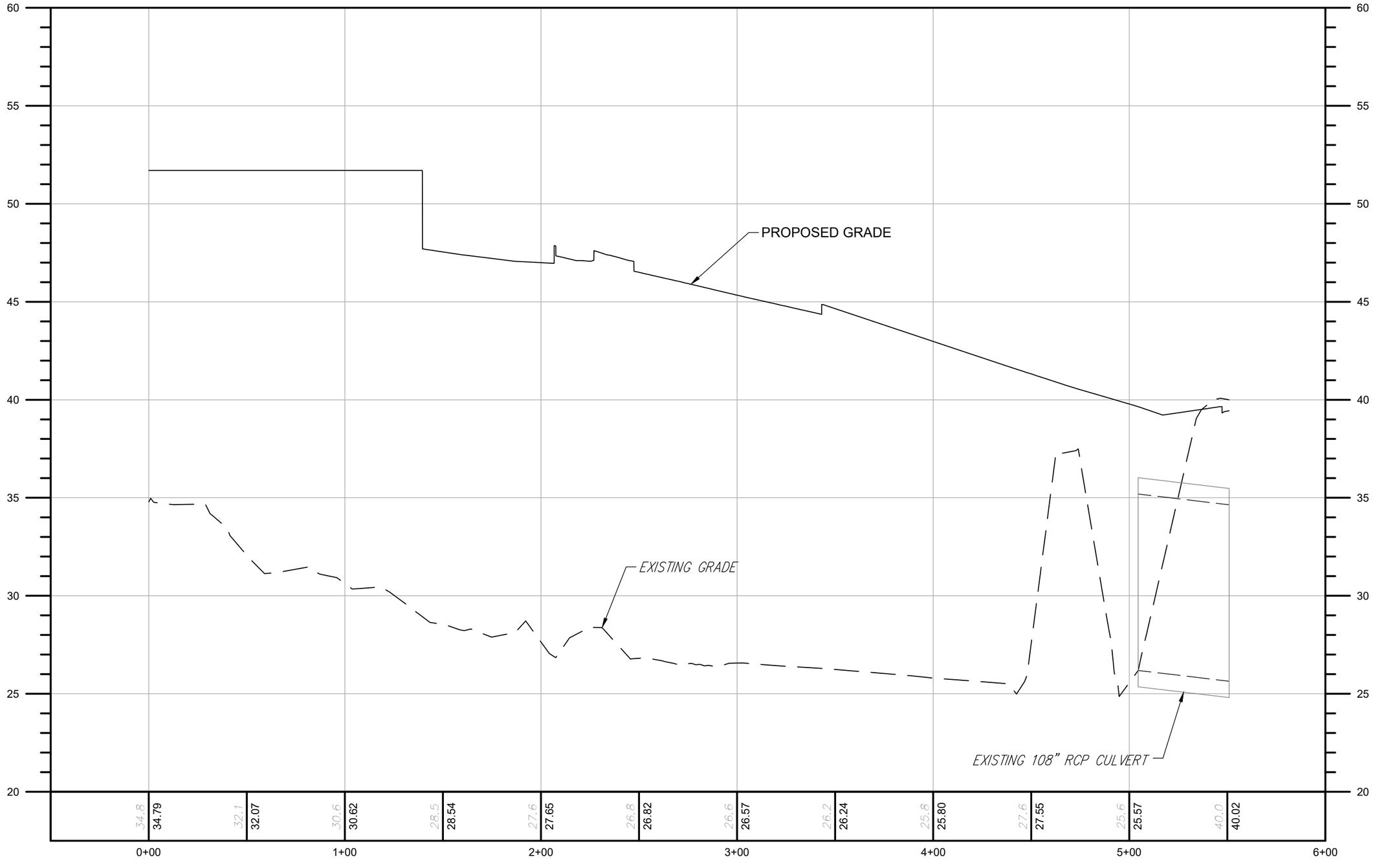
5. What method will be used to place the fill?
   Fill will be placed in 12 inch lifts utilizing excavators and dozers and compacted to a minimum of 90% Modified Proctor.

6. State the type and composition percentage of the fill material (e.g. sand 80%, silt 5%, clay 15%, etc.)
   Variable soils stockpiled during site bulk grading estimated to consist of silts (40%), clay (40%), and sand (20%).

7. How will the fill be retained? Complete appropriate appendix.
   Fill soil will be stockpiled on site and used to backfill the stream to be level with the surrounding grade sloped areas will be graded to a stable 3:1 slope or flatter.

8. What type of vegetation or ground cover will be provided for the filled area(s) to prevent soil erosion and help keep sediment from reaching State waters?
   Grass and/or impervious surface (pavement/concrete)

9. Describe the type(s) of structure(s) to be erected on the filled area (if any). Complete appropriate appendix.
   Filled area will either be paved or maintained as a grass field.



STREAM CENTERLINE: STA. -0+50 TO STA. 6+00

SCALE: HORIZONTAL 1" = 50', VERTICAL 1" = 5'

DUFFIELD ASSOCIATES
Soil, Water & the Environment
5400 LIMESTONE ROAD
WILMINGTON, DE 19808-1232
TEL 302.239.6634
FAX 302.239.8485
OFFICES IN DELAWARE, MARYLAND
PENNSYLVANIA AND NEW JERSEY
E-MAIL: DUFFIELD@DUFFNET.COM

DESIGNED BY: SMC
DRAWN BY: SMC
CHECKED BY: SHP
Shtlnc Profile-10692.CJ.dwg

BLUE LINE STREAM PROFILE

650 CHURCHMANS ROAD

NEW CASTLE HUNDRED ~ NEW CASTLE COUNTY ~ DELAWARE Exhibit

DATE: SEPTEMBER 29, 2021

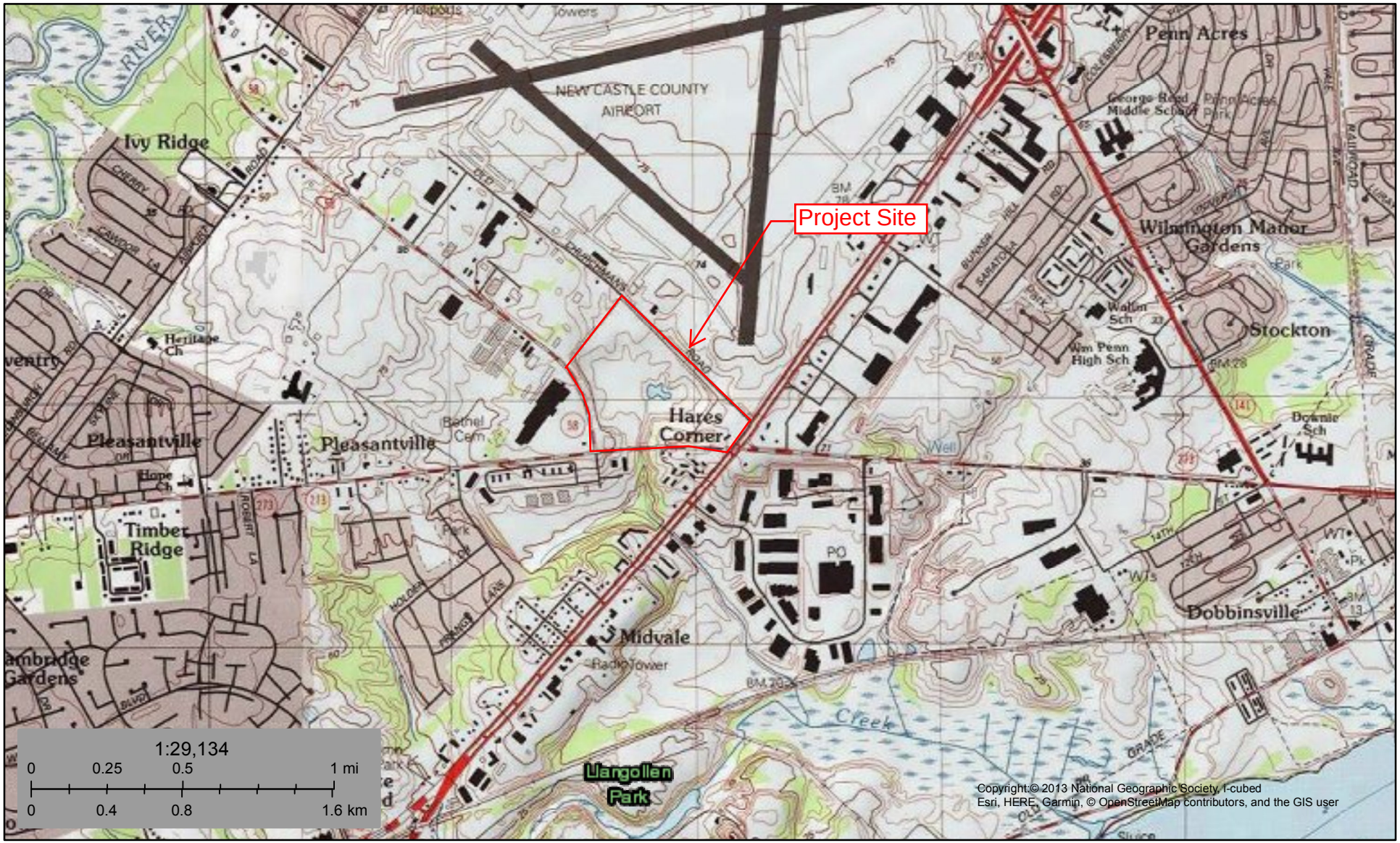
SCALE: 1" = 50'

PROJECT NO. 10692.CJ

SHEET: FIGURE #1

U.S. Fish and Wildlife Service
National Wetlands Inventory

FIGURE 1: USGS TOPO MAP



August 23, 2018

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.

20121214-0073940
Pages: 5 F: $90.00
12/14/12 04:05:24 PM
T20120039397
Michael E. Kozikowski
New Castle Recorder DEE

Tax Parcel No. 10-024.00-025
Prepared By/Return To:
William S. Gee, Esquire
Saul Ewing LLP
P.O. Box 1266
Wilmington, DE 19899

DEED

THIS DEED, MADE THIS 14 DAY OF **DECEMBER, 2012**

***BETWEEN*, PARKWAY GRAVEL, INC., a Delaware corporation,** party of the first part;

AND

CHURCHMANS 273 LLC, a Delaware limited liability company, party of the second part;

WITNESSETH, that the said party of the first part, for and in consideration of the sum of **TEN DOLLARS ($10.00)** in lawful money of the United States of America, the receipt whereof is hereby acknowledged, hereby grants and conveys unto the said party of the second part;

ALL that certain lot, piece or parcel of land, situate in New Castle Hundred, New Castle County and State of Delaware, more particularly bounded and described on Exhibit "A" attached hereto.

SUBJECT to any existing restrictions, easements, reservations, conditions and agreements of record, to the extent valid and subsisting.

BEING a portion of the same lands and premises which Eugene Greggo and Anne Greggo, his wife, Nicholas Ferrara and Mary Ferrara, his wife, by Deed dated April 11, 1960, of record in the Office of the Recorder of Deeds, in and for New Castle County, Delaware in Deed Record V, Volume 65, Page 206, did grant and convey unto Freeway Sand & Gravel Co., Inc., a corporation of the State of Delaware, in fee. The said Freeway Sand & Gravel Co., Inc., did merge via Certificate of Merger filed with the Delaware Secretary of State into and with Parkway Gravel, Inc., a Delaware corporation.

NCC 192757 12/14/12 15:59:00
$103500.00 ST
$103500.00 NC

ALSO BEING a portion of the same lands and premises which Churchmans Realty Co., a corporation of the State of Delaware, by Deed dated November 14, 1966, of record in the Office aforesaid in Deed Record E, Volume 78, Page 574, did grant and convey unto Parkway Gravel, Inc., a corporation of the State of Delaware.

[SIGNATURES APPEAR ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the said party of the first part has hereunto set its corporate hand and seal the day and year first above written.

SEALED AND DELIVERED
IN THE PRESENCE OF:

Parkway Gravel, Inc.

_____
Witness

By: _____ (SEAL)
Name: Vincent N. Greggo
Title: Vice-President

STATE OF DELAWARE :
: SS.
NEW CASTLE COUNTY :

BE IT REMEMBERED, that on this 14 day of December, 2012, personally came before me, a Notary Public for the State and County aforesaid, Vincent N. Greggo, Vice-President of Parkway Gravel, Inc., party to this Indenture, known to me personally to be such, and acknowledged this Indenture to be his/her act and Deed and the act and Deed of said corporation.

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

_____
Notary Public
Name typed:
My commission expires:

Grantee's Address:
20 Montchanin Road, Suite 250
Greenville, DE 19807

EXHIBIT "A"

All that piece or parcel of land located in New Castle Hundred, New Castle County, State of Delaware, in accordance with a ALTA/ASCM Land Title Survey of tax parcel 10-024.00-025 prepared by Apex Engineering Incorporated, dated December 12, 2012;

Said parcel being more particularly described as follows, to wit:

Beginning at a concrete monument found on the Northeasterly side of New Churchmans Road (at 100 feet wide) said point being a common corner with the lands herein described and lands now or formerly of New Castle County (Tax Parcel No. 10-018.00-006); Thence from said point of beginning and with said lands, North 38 degrees 27 minutes 27 seconds East a distance of 1,189.26 feet to a point in the centerline of Old Churchmans Road (at 33 feet wide), thence thereby, South 44 degrees 24 minutes 18 seconds East a distance of 2,011.37 feet to a point; thence leaving said centerline and with lands now or formerly of the State of Delaware (Tax Parcel No. 10-024.00-026), the following two courses and distances: (1) South 35 degrees 37 minutes 32 seconds West a distance of 655.70 feet to an iron pipe found and (2) South 3 degrees 22 minutes 32 seconds West a distance of 64.21 feet to a point on the northerly side of Christiania Road - Route No. 273 (width varies); thence thereby the following three courses and distances: (1) North 87 degrees 21 minutes 56 seconds West a distance of 471.69 feet to a point of curvature (2) along a curve to the left, having a radius of 2,935 feet and an arc length of 468.73 feet to a point, the chord of said curve being South 88 degrees 05 minutes 38 seconds West, 468.24 feet; and (3) South 83 degrees 30 minutes 32 seconds West a distance of 277.00 feet to a point at the southeasterly end of a corner cutoff joining the said northerly side of Christiania Road and the easterly side of New Churchmans Road, thence by said cutoff, North 57 degrees 08 minutes 58 seconds West a distance of 152.65 feet to a point on the aforesaid easterly side of New Churchmans Road, thence thereby the following two courses and distances; (1) North 11 degrees 33 minutes 58 seconds West a distance of 363.06 feet to a point of curvature and (2) along a curve to the left, having a radius of 1,482.69 feet and an arc length of 780.34 feet to a point, the chord of said curve being North 26 degrees 38 minutes 34 seconds West, 771.37 feet;

Containing 58.8962 acres of land, be the same, more or less.

Excepting therefrom, the lands dedicated to public use by Instrument No. 20120822-0046986, said lands being more particularly described as follows, to wit:

Beginning at a concrete monument found on the Northeasterly side of New Churchmans Road (at 100 feet wide) said point being a common corner with the lands herein described and lands now or formerly of New Castle County (Tax Parcel No. 10-018.00-006); Thence from said point of beginning and with said lands, North 38 degrees 27 minutes 27 seconds East a distance of 1,189.26 feet to a point in the centerline of Old Churchmans Road, thence thereby, South 44 degrees 24 minutes 18 seconds East a distance of 2,011.37 feet to a point; thence leaving said centerline, South 35 degrees 37 minutes 32 seconds West a distance of 16.75 feet to an iron pipe found at a point on the southerly side of Old Churchmans Road (at 33 feet wide), thence thereby the following three courses and distances: (1) North 44 degrees 24 minutes 18 seconds West a

distance of 98.53 feet to a point of curvature (2) along a curve to the left, having a radius of 4,970.00 feet and an arc length of 35.35 feet to a point, the chord of said curve being North 44 degrees 36 minutes 32 seconds West, 35.35 feet and (3) North 44 degrees 48 minutes 45 seconds West a distance of 1,804.92 feet to a point of curvature, thence along a curve to the left joining the said southerly side of Old Churchmans Road with the northeasterly side of Piccard Road, said curve having a radius of 25.00 feet and an arc length of 39.09 feet to a point, the chord of said curve being North 89 degrees 36 minutes 32 seconds West, 35.23 feet; thence thereby the said northeasterly side of Piccard Road, following five courses and distances: (1) South 45 degrees 35 minutes 42 seconds West a distance of 79.63 feet to a point of curvature (2) along a curve to the left, having a radius of 470.00 feet and an arc length of 58.55 feet to a point, the chord of said curve being South 42 degrees 01 minutes 35 seconds West, 58.51 feet (3) South 38 degrees 27 minutes 27 seconds West a distance of 705.17 feet to a point of curvature (4) along a curve to the left, having a radius of 470.00 feet and an arc length of 179.45 feet to a point of reverse curvature, the chord of said curve being South 27 degrees 31 minutes 10 seconds West, 178.36 feet; (5) along a curve to the right, having a radius of 230.00 feet and an arc length of 93.07 feet to a point of reverse curvature, the chord of said curve being South 28 degrees 10 minutes 26 seconds West, 92.44 feet; thence along a curve to the left joining the said northeasterly side of Piccard Road with the easterly side of New Churchmans Road (width varies), said curve having a radius of 25.00 feet and an arc length of 33.91 feet to a point of reverse curvature, the chord of said curve being South 00 degrees 54 minutes 45 seconds West, 31.37 feet; thence thereby said easterly side of New Churchmans Road, the following four courses and distances: (1) along a curve to the right, having a radius of 1,497.98 feet and an arc length of 783.66 feet to a point of reverse curvature, the chord of said curve being South 22 degrees 57 minutes 15 seconds East, 774.76 feet (2) along a curve to the left, having a radius of 1,912.91 feet and an arc length of 121.87 feet to a point, the chord of said curve being South 09 degrees 43 minutes 30 seconds East, 121.85 feet (3) South 11 degrees 33 minutes 02 seconds East a distance of 136.08 feet to a point of curvature and (4) along a curve to the left, having a radius of 117.33 feet and an arc length of 22.07 feet to a point at the southwesterly end of a corner cutoff joining the said easterly side of New Churchmans Road and the northerly side of Christiania Road , the chord of said curve being South 16 degrees 56 minutes 20 seconds East, 22.04 feet; thence by said cutoff , North 57 degrees 08 minutes 58 seconds West a distance of 15.15 feet to a point on the existing side of New Churchmans Road (at 100 feet wide); thence thereby the following two courses and distances: (1) North 11 degrees 33 minutes 58 seconds West a distance of 363.06 feet to a point of curvature and (2) along a curve to the left, having a radius of 1,482.69 feet and an arc length of 780.34 feet to the point and place of beginning, the chord of said curve being North 26 degrees 38 minutes 34 seconds West, 771.37 feet.

Containing 2.4043 acres of land, be the same, more or less of said lands dedicated to public use by instrument No. 20120822-0046986.

U.S. Army Corps of Engineers (USACE)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved - OMB No. 0710-0003 Expires: 02-28-2022

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collection@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Records Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570178/a1145b-be.aspx

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME
First - Keith Middle - Last - Stoltz
Company - Churchmans 273, LLC; c/o Stoltz Mgmt. of DE, Inc.
E-mail Address - KStoltz@stoltzusa.com

6. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Ralph Middle - B. Last - Dowvard
Company - Duffield Associates, LLC
E-mail Address - rdownard@duffnet.com

8. APPLICANT'S ADDRESS:
Address - P.O.Box 2087
City - Bala Cynwyd State - PA Zip - 19004 Country - USA

9. AGENTS ADDRESS:
Address - 5400 Limestone Road
City - Wilmington State - DE Zip - 19808 Country - USA

7. APPLICANT'S PHONE NOs. w/AREA CODE
a. Residence: N/A b. Business: 610-388-0777 c. Fax: N/A

10. AGENTS PHONE NOs. w/AREA CODE
a. Residence: N/A b. Business: 302-239-6634 c. Fax: 302-239-8485

STATEMENT OF AUTHORIZATION

11. I hereby authorize, Ralph Downard to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

Managing Member 6/2/21
SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)
650 Churchmans Road

13. NAME OF WATERBODY, IF KNOWN (if applicable)
Tributary of Army Creek

14. PROJECT STREET ADDRESS (if applicable)
Address 650 Churchmans Road
City - New Castle State - DE Zip - 19720

15. LOCATION OF PROJECT
Latitude - N 39°40'03.8" Longitude - W 75°36'29.9"

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)
State Tax Parcel ID 10-024.00-025 Municipality N/A
Section - N/A Township - N/A Range - N/A

17. DIRECTIONS TO THE SITE

From I-95 South in Wilmington, DE: Take exit 5A-5B to DE-141 S / US-202 S toward New Castle. Merge onto US-13 S / US-40 W / N DuPont Pkwy via the ramp to Dover/Baltimore. Turn right onto DE-273 W / Christiana Road and travel 0.2 miles. Destination on the right.

18. Nature of Activity (Description of project, include all features)

Applicant is proposing to construct an 807,860 square foot warehouse distribution center at the above referenced project site. Project details are provided on the enclosed plan titled "Concept Plan No. 2, 650 Churchmans Road"; prepared by Duffield Associates, LLC; dated January 2021

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The project site formerly functioned as an extractive use operation and is located within a highly developed area in New Castle, Delaware. Development of this distribution center in New Castle will enhance the local economy by providing additional job opportunities.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Applicant is requesting to fill 360 linear feet (0.106 acres) of a blue line stream in order to support the proposed construction designs for a warehouse distribution center. The blue line stream is a tributary to Army Creek.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
On-site soils (silt/clay) - 3,397 cy		

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.106

or

Linear Feet 360

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Construction designs require the filling of the entire 360 ft. segment of the portions of the watercourse on the project site. Compensatory mitigation was requested by USACE and DNREC representatives during the February 18, 2021 JPP meeting. A preliminary mitigation plan has been submitted for review with this application.

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK.

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody. (If more than two entries are needed, please attach a supplemental list.)

a. Address - 113 S DuPont Hwy

City - New Castle State - DE Zip - 19720

b. Address - 0 Christiana Road (NCC Airport Property)

City - New Castle State - DE Zip - 19720

c. Address -

City - State - Zip -

d. Address -

City - State - Zip -

e. Address -

City - State - Zip -

28. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
DNREC	WSLS	N/A	2021-09-03		

*Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

Managing Member 9/2/21
SIGNATURE OF APPLICANT DATE

SIGNATURE OF AGENT 9/2/2021 DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.