Louise Atkins 18-1003

From: Jim Irre
Sent: Friday, June 22, 2018 4:33 PM
To: jpa.permits@mrc.virginia.gov
Subject: Northfax_Fairfax_Joint Permit Application
Attachments: Northfax_JPA_062218.pdf

Please find attached a Joint Permit Application for the Northfax project in the City of Fairfax, VA. Please distribute as necessary for review. Thank you.

James E. Irre, PWD, PWS, RLD
Jim.irre@apexcos.com
540-313-6282

RECEIVED
JUN 25 2018
MARINE RESOURCES
COMMISSION

Executive Summary

The Northfax project is proposed to be constructed in the northwest quadrant at the intersection of Fairfax Boulevard (Rt. 50) and Chain Bridge Road (Rt. 123) in the City of Fairfax (the City). The site consists of an assemblage of sixteen parcels with an aggregate area of approximately 10.6 acres of land with historical uses as residential and commercial properties. The site is accessed via Orchard Street from Route 123 (see Appendix A for a USGS vicinity map).

The intersection of these two major roadways is viewed as the keystone of the City and is anticipated to be a focal point for the daily lives of the people who will live and work there. Redevelopment of this land area will provide uses for commercial enterprises, residential options for working families and facilities for senior citizens to enjoy the city and its amenities. The Grading Exhibit (see Appendix D, Sheet 3 of 5 for Grading Exhibit) depicts the Senior Living building and Townhouse development in the western portion of the property. The eastern portion of the site is shown as potential future development likely for higher density residential and/or commercial use which would be proposed for businesses that would complement existing commercial development and benefit the surrounding residential use.

The City has been involved in planning for the redevelopment of this area, centered on the intersection of Routes 50 and 123, for many years and the progression can be viewed on the City of Fairfax website (www.fairfaxva.gov). The project started some 15 years ago when the City approached a developer with strong ties to Fairfax and proposed that an assemblage of parcels at this location be gathered together for the purpose we are proposing in this application. The project has always included plans to upgrade the traffic flow through this hub by making changes to roadway configuration and signaling. These changes have been designed to improve vehicular traffic flow and allow pedestrian and bicycle traffic to traverse the intersection and streets more safely. The traffic upgrades have begun and are progressing as a joint effort between the City and Virginia Department of Transportation (VDOT).

Project Purpose

The project is part of a larger effort by the City to concentrate living and working environments in an area that is viewed as the gateway to Fairfax. The overall Northfax development effort has begun with upgrades to the Route 29/50/123 corridors that include improvements to traffic flow, easier pedestrian and bicycle access, and mitigation of the impacts from flooding at the intersection of Rt. 29/50/123 and the surrounding area. This project proposes to extend those culverts to the northwest in order to pick up the flooding from residential areas and carry it safely downstream. In addition, the existing 42-inch storm drain will be piped into the box culverts and alleviate a significant amount of downstream sediment deposition (see Appendix D, Sheet 1 of 1 for Stream Impact Exhibit, and Sheet 4 of 5 for Storm Sewer Plan & Profiles).

With the alleviation of the flooding issue, the applicant proposes to construct buildings that will house both residential and commercial interests. Planned tenants include small shops to cater to the needs of residents in the immediate area. Residential living spaces are planned for active family living and for those in their later years.

A development project with these features is desired by the City and will be well suited to the plans to make this a hub of activity in the City and County of Fairfax. This project will bring additional commercial shops to the downtown area that will benefit new and existing residents as well. The benefits of flood mitigation will help to make this development an all-weather addition to the City.

Project Need

It was always known that remediation of flooding in and around the intersection would be necessary and an integral part of the overall development. Flooding has been caused by a combination of undersized culverts and an increase in impervious cover in the surrounding area. Part of the process of relieving the flooding would be redirection of floodwaters both from the City's storm sewer system, and from the stream systems in the immediate area. The Drainage Exhibit (see Appendix D, Sheet 5 of 5 for Drainage Exhibit) shows the existing 100-year floodplain without improvements from this project and the current City/VDOT project. The completion of the City/VDOT project and the Northfax project will relieve major flooding in this area, protecting residential and commercial interests in this immediate area.

The City, in partnership with VDOT, has begun the process of reducing impacts from flooding through construction of upgraded culverts under Rt. 123, and for an additional 2,000 feet to the east. That portion of the overall Northfax project has been authorized by Department of the Army Permit NAO-2014-1871 (See Appendix B for culvert replacement permit and plans). Installation of twin 8-foot box culverts approximately 2,101 feet long to replace one smaller round culvert pipe currently in place has begun. The existing pipe carries the North Fork of Accotink Creek, as well as significant storm flow, along Route 50 to its eastern discharge. With development that has occurred in the area in past decades, the existing pipes are no longer adequately sized to convey the 100 year storm through this area without flooding the streets, making travel difficult and sometimes dangerous. The installation of the 8-foot box culverts from Rt. 123 to the east is the first part of flood mitigation.

It was always known that additional flood mitigation would need to occur on the west side of Rt. 123. Storm flows discharged from a 42-inch RCP in the southwest corner of the property add to the volume of water during storm events. The installation of the box culverts from Rt. 123 to the east, and the installation of box culverts on this project site, which will also pick up storm flow from the southwest corner of the property, will alleviate the flooding problems at this location.

Sheet 5 of 5 in Appendix D depicts the property location and shows two drainage areas as well as the 100-year floodplain. The larger of the two drainage areas (182.1 Acres) is for North Fork Accotink Creek. The smaller of the two (65.5 Acres) is for unnamed drainage, primarily overland runoff, which is discharged from an existing 42-inch culvert pipe in the southwest corner of this property. As depicted on the Drainage Exhibit, the current 100-year floodplain affects a large portion of this property and also causes complete flooding of the Rt 29/50/123 intersection. The City/VDOT project will carry a significant volume of floodwater well downstream, relieving parts of Route 123 and the commercial properties to the east. The

Northfax project will continue the piping upstream and will relieve the entire intersection as well as this property of the damaging effects of flooding.

Additionally, the project will make better use of valuable land area by creating higher population densities in an already highly urbanized area. Currently, two of the parcels contain one single-family home each, with basements that are not useable because of flooding. A third lot contained a home that has been razed after being rendered uninhabitable by flooding. A large parking lot in the eastern portion of the site is currently used for parking automobiles. This condition results in untreated runoff being discharged into surface waters. Development of this area will result in treatment of this runoff before it is discharged.

Discussion of Impacts

The Project contains features which have been identified as jurisdictional waters of the United States (WUS), and which fall under the purview of the U.S. Army Corps of Engineers (COE) and VA Dept. of Environmental Quality (DEQ). These areas consist of R3-Perennial and R4-Intermittent streams (see the Stream Impact Exhibit, Sheet 1 of 5 in Appendix D). A Jurisdictional Determination (JD) letter from the Dept. of the Army, Corps of Engineers is provided with this application (see Appendix H for Corps JD Letter).

The applicant proposes to impact the WOUS necessary to construct the internal connector roads and high-density housing in this highly urbanized area. The applicant is proposing impacts to approximately 1,749 linear feet of perennial and intermittent stream for this project.

The following table quantifies the impacts proposed for the site, with detailed descriptions afterward.

Table 1. - Proposed impacts to surface waters.

Impact	Impact Type	Wetland Type	Impact Amount
A1	Permanent – Fill	R3 Stream	797 LF (11,096 SF/0.25 Ac)
A2	Permanent – Fill	R3 Stream	312 LF (3,780 SF/0.09 Ac)
A3	Permenent – Fill	R3 Stream	295 LF (2,989 SF/0.07 Ac)
B1	Permanent – Fill	R4 Stream	345 LF (4,488 SF/0.10 Ac)
		Totals	**1,749 LF (22,353 SF/0.51 Ac)**

Impact A1, from the upstream end down to the confluence with Segment B1 – will result in re-direction of the perennial stream from its current location into twin 8-foot box culverts. The culverts will traverse the site as shown on the attached grading plan and join with existing twin 8-foot box culverts on the west side of Route 123. Fill material will be placed in the abandoned stream channel.

Impact A2, from the confluence with Segments A1/B1 – will result in re-direction of the perennial stream from its current location into twin 8-foot box culverts. The culverts will traverse the site as shown on the attached grading plan and join with existing twin 8-foot

box culverts on the west side of Route 123. Fill material will be placed in the abandoned stream channel.

Impact A3 – will result in removal of the newly constructed riprap inlet structure prior to joining the proposed twin 8-foot box culverts to the existing culverts. Fill material will be placed in the abandoned channel.

Impact B1 – will result in connecting the existing 42-inch RCP with a proposed 72-inch RCP that will discharge into the proposed box culverts. Fill material will be placed in the abandoned stream channel.

Alternatives

On-site alternatives to the proposed development schematic are limited due to the type of development which is to occur on the site, and the configuration of the streams. Because the perennial stream runs diagonally across the site, it makes construction of larger buildings like the one proposed for the senior living center, impossible due to site boundary constraints. The senior living center is key to this development because of the demographic it will bring to the downtown area. The applicant did investigate acquisition of adjacent properties, but the office building and gas station to the northeast and commercial auto business to the south are not available.

To have no impacts to Accotink Creek, development would be limited to the areas north and east of the stream. To have access to the west side of the stream, Orchard Street would have to be extended and a bridge would need to be constructed over the stream. The alternative site design would severely limit the space available for development due to the central location, and diagonal orientation of the perennial stream on the site. The alternative to have no impacts on the perennial stream would prove to be cost prohibitive for development of the site.

Off-site alternatives were investigated, but were limited for a couple of reasons. First, the overall Northfax project is confined to the immediate area centered on the Rt. 29/50/123 intersection so moving out of this localized area would defeat the project purpose. Second, the types of facilities to be constructed as part of this plan, which is strongly endorsed by the City, requires a larger area of land not typically available in a highly urbanized area. As discussed in the Executive Summary above, the applicant was approached by the City some 15 years ago with a vision for this project and has been working with the City to acquire the parcels necessary to achieve this goal.

Two off-site locations were identified in the immediate area that would have lesser or no impacts to jurisdictional surface waters (See Alternative Sites Map in Appendix F). Alternative Site 1 (GPIN: 47 4 02 2B 002): Approximately one-half mile east of the current site, along Fairfax Boulevard, is a parcel with potential for development. The parcel is an undeveloped area approximately 6.8 acres in size located directly adjacent to Fairfax Blvd. The parcel is smaller in size than the current site, which would limit the developer's overall plans. Accotink Creek also runs through this parcel and stream impacts would be like those of the current site. The parcel is

owned by the City of Fairfax and is zoned as Open Space with future plans by the city to zone the site as Open Space - Conservation. Due to the zoning and size limitations of the parcel, development of the parcel was deemed not feasible.

Alternative Site 2 (GPIN: 57 2 02 024 & 57 2 02 027): Approximately 500 feet east of the preferred site are two parcels which comprise an auto dealership. The two parcels combined are similar in size to the preferred site, although slightly smaller at approximately 7 acres. The entirety of the parcels is a paved parking lot with two small one-story structures. While environmental impacts would be lessened by development of the site, due to its smaller size and the unavailability of the parcels for purchase, these parcels are also not a feasible alternative to the current site.

Mitigation

Mitigation for impacts to jurisdictional surface waters at the site will be accomplished through the purchase of credits at approved mitigation bank(s).

Mitigation for stream impacts is expected to be accomplished based on mitigation ratios provided through the use of the Unified Stream Methodology (USM). Lack of suitable buffer area for preservation prevents the reduction of required mitigation through on-site preservation. Appendix E contains the USM Stream Assessment Forms prepared for each of the four stream reaches. The forms list the Reach Condition Index (RCI) for each impact location, and the Compensation Requirement (CR). The RCI is a multiplier that identifies the number of credits that must be purchased to offset each linear foot of disturbance. The Stream Assessment Summary Form lists the Total CR for this project as 1,672 credits required to offset 1,749 linear feet of disturbance as currently proposed.

The applicant will determine the appropriate mitigation bank(s) to use based on the cost of credits available from the banks under consideration. We will provide letters of credit availability from the chosen banks as soon as that information is available.

Threatened/Endangered Species Review

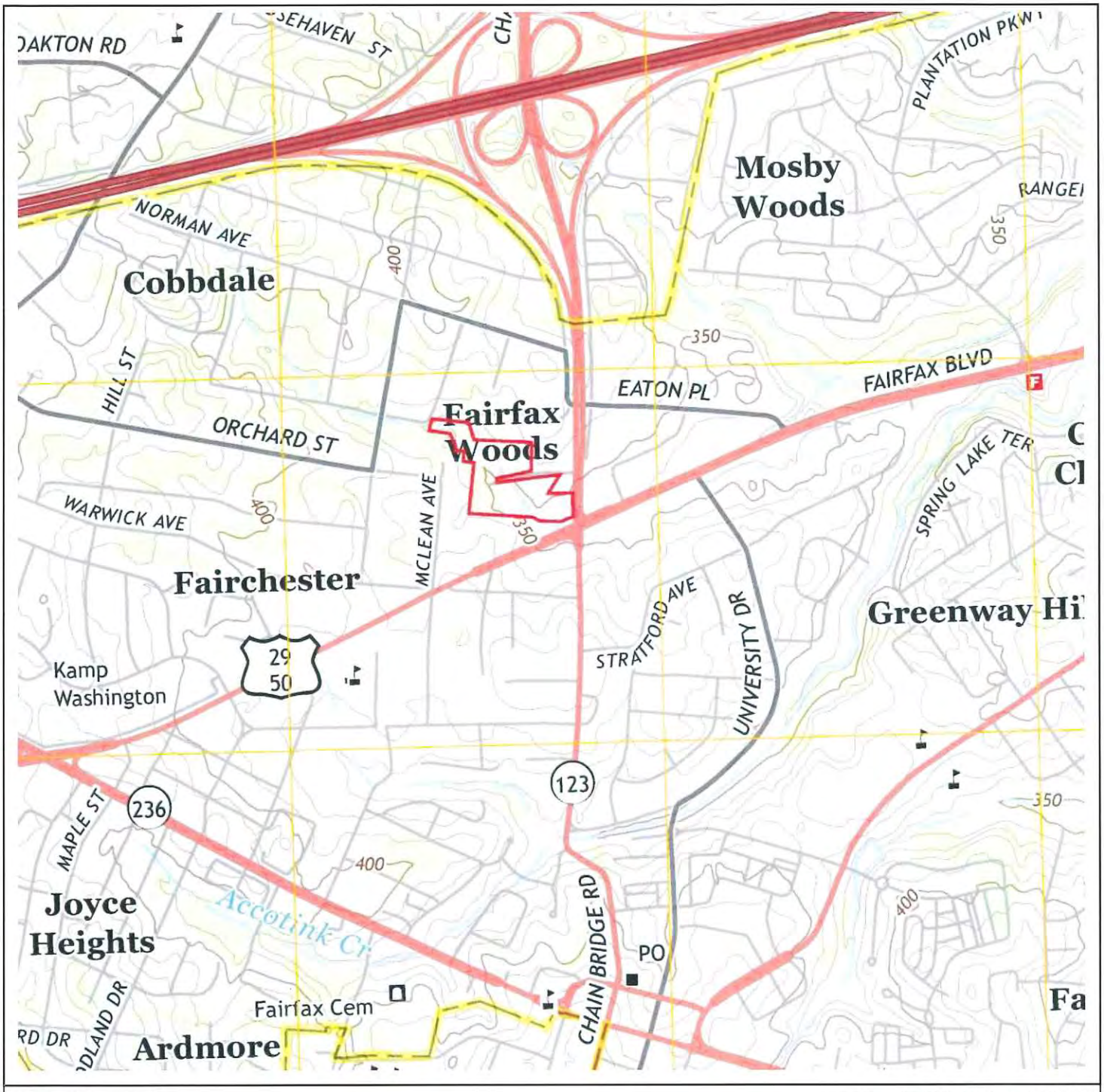
Information included with this submittal has been gathered and prepared through the use of the on-line certification system provided by the U.S. Fish & Wildlife Service (see Appendix F). This information lists one species to be considered during review of this application. The Northern Long-Eared Bat (*Myotis septentrionalis*), listed as Threatened.

The applicant will make a decision before the permit is issued regarding compliance with the Biological Opinion and imposition of a time-of-year restriction on tree clearing, or the other option which would be to conduct all tree clearing during the period from September 16 through April 14 of any year. Tree clearing on the site is expected to include up to 4.5 acres of forested land.

A letter is included from Department of Conservation and Recreation (DCR) reporting the results of a request for project review (see Appendix F). DCR reports that the Rusty Patched Bumble Bee has been documented within two miles of the site. DCR requests that native flowers be planted to encourage pollinator habitat and that pesticide and herbicide use be avoided wherever possible.

Cultural Resources

The Department of Historic Resources (DHR) was contacted and asked to review the project site for potential impacts to cultural resources. DHR replied that it is their opinion that *the proposed project will have no effect on any known architectural or archaeological resource listed in or eligible for listing in the National Register of Historic Places or the Virginia Landmarks Register. No additional study is warranted at this time.* A copy of the response from DHR is included in Appendix I for reference.



Scale: Not to Scale

Date: USGS Quadrangle 2013

JEI Enterprises, LLC

Passage Creek Environmental

221 Lower Valley Road
Strasburg, VA 22657
540-313-6282
jirre@passagecreekenv.com

USGS Quadrangle Map
Northfax
38.859309 N/ -77.310054 W
Fairfax USGS Quadrangle
Fairfax County, VA

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Prepared for:
Apex Companies, LLC
9700 Capital Ct., Suite 100
Manassas, VA 20110

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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1096

NOVEMBER 24, 2014

Reply to
Attention of

Special Projects Regulatory Section
NAO-2014-1871 (N. Fk. Accotink Creek)

City of Fairfax
ATTN: Ms. Wendy Block-Sandford
Transportation Department
10455 Armstrong Street, Room 200A
Fairfax, VA 22030

Dear Ms. Block-Sandford:

This is in regard to your Department of the Army permit application number NAO-2014-1871 to impact approximately 2147 linear feet of stream. You propose to make improvements to the Route 123/50/29 intersection, including widening of portions of Route 123 and Route 29/50 and improving the drainage system, along with some realignment of Route 123. As part of the work, you will construct a new 2,101 linear foot, twin 8 foot by 8 foot box culvert to convey the North Fork Accotink Creek; approximately 1,564 linear feet of the stream is already contained within an existing culvert which will be replaced with the new culvert. You will also install riprap in an additional 46 linear feet of channel. The work will occur at the City of Fairfax, Virginia. These impacts are detailed on the enclosed drawings entitled "Nationwide Permit PCN, Route 29.50/123 Intersection, Proposed Roadway & Drainage Improvements," dated June 2012 and date stamped as received by this office on October 3, 2014, prepared and submitted on behalf of the applicant by Rinker Design Associates, P.C. (attached).

Your proposed work as outlined above satisfies the criteria contained in the Corps Nationwide Permits 23, attached. The Corps Nationwide Permits were published in the February 21, 2012 Federal Register notice (77 FR 10184) and the regulations governing their use can be found in 33 CFR 330 published in Volume 56, Number 226 of the Federal Register dated November 22, 1991.

This nationwide permit verification is contingent upon the following project specific condition:

You have indicated that mitigation for the proposed impacts would be accomplished by purchasing credits from an approved mitigation bank that includes the impact area in its geographic service area. As compensation for impacting 583 linear feet of stream, a total of 343 credits (based on the application of the Unified Stream Methodology) will be debited from an approved bank. Prior to purchasing the credits, you must submit to the Corps of Engineers (USACE) your proposed mitigation bank for acceptance. Once USACE has agreed to your proposed bank, you may proceed to acquire the

required credits. Evidence that you have purchased these credits must be provided to USACE prior to commencing the authorized activities in jurisdictional waters.

Provided the project specific condition (above) and the Nationwide Permit General Conditions (enclosed) are met, an individual Department of the Army Permit will not be required. *You should note Regional Condition 9 which requires countersinking of culverts and insure compliance with this condition.*

In addition, the Virginia Department of Environmental Quality has provided an unconditional §401 Water Quality Certification for Nationwide Permit Number 23. A permit may be required from the Virginia Marine Resources Commission and/or your local wetlands board, and this verification is not valid until you obtain their approval, if necessary. This authorization does not relieve your responsibility to comply with local requirements pursuant to the Chesapeake Bay Preservation Act (CBPA), nor does it supersede local government authority and responsibilities pursuant to the Act. Before you begin work, you should find out how the CBPA applies to your project.

Enclosed is a "compliance certification" form, which must be signed and returned within 30 days of completion of the project, including any required mitigation. Your signature on this form certifies that you have completed the work in accordance with the nationwide permit terms and conditions.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2017. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 330.4(e) and 33 CFR 330.5 (c) or (d). Project specific conditions listed in this letter continue to remain in effect after the NWP verification expires, unless the district engineer removes those conditions. Activities completed under the authorization of an NWP which was in effect at the time the activity was completed continue to be authorized by that NWP.

If you have any questions, please contact Alice Allen-Grimes at (757) 201-7219 or alice.w.allen-grimes@usace.army.mil.

Sincerely,

Kimberly A. Prisco-Baggett

Kimberly A. Prisco-Baggett, MBA
Chief, Special Projects Section

Enclosures

Copies furnished (w/o encl.):

Virginia Marine Resources Commission, Newport News
Rinker Design Associates, PC, Manassas

FOR AGENCY USE ONLY	
	Notes:
JPA# 18-1003-	

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APPLICANTS

PLEASE PRINT OR TYPE ALL ANSWERS. If a question does not apply to your project, please print N/A (not applicable) in the space provided. ***If additional space is needed, attach extra 8 ½ x 11 inch sheets of paper.***

Check all that apply			
Pre-Construction Notification (PCN) ☐ NWP # _____ *(For Nationwide Permits ONLY - No DEQ-VWP permit writer will be assigned)*	SPGP ☒	DEQ Reapplication ☐ Existing permit number: _____	Receiving federal funds ☐ Agency providing funding: _____

PREVIOUS ACTIONS RELATED TO THE PROPOSED WORK (Include all federal, state, and local pre-application coordination, site visits, previous permits, or applications whether issued, withdrawn, or denied)

Historical information for past permit submittals can be found online with VMRC - https://webapps.mrc.virginia.gov/public/habitat/ - or VIMS - http://ccrm.vims.edu/perms/newpermits.html

Agency	Action / Activity	Permit/Project number, including any non-reporting Nationwide permits previously used (e.g., NWP 13)	Date of Action	If denied, give reason for denial
USACE	Jurisdictional Determination	NAO-2017-02192	02/05/18	N/A

1. APPLICANT, AGENT, PROPERTY OWNER, AND CONTRACTOR INFORMATION
The applicant(s) is/are the legal entity to which the permit may be issued (see How to Apply at beginning of form). The applicant(s) can either be the property owner(s) or the person/people/company(ies) that intend(s) to undertake the activity. The agent is the person or company that is representing the applicant(s). If a company, please also provide the company name that is registered with the State Corporation Commission (SCC), or indicate no registration with the SCC.

Legal Name(s) of Applicant(s)			Agent (if applicable)		
Northfax JV, LLC c/o John E. Napolitano			Apex Companies, LLC c/o Jason Franti		
Mailing address 3900 Jermantown Road, Suite 300			Mailing address 9700 Capital Court, Suite 100		
City Fairfax	State VA	ZIP Code 22030	City Manassas	State VA	ZIP Code 20110
Phone number w/area code 703-934-4600	Fax 703-934-4699		Phone number w/area code 703-396-6730	Fax	
Mobile 703-402-3355	E-mail john@lann.com		Mobile 571-330-7751	E-mail jfranti@apexcos.com	
State Corporation Commission Name and ID number (if applicable) 03780574			State Corporation Commission Name and ID number (if applicable) T0305658		

Certain permits or permit authorizations may be provided via electronic mail. If the applicant wishes to receive their permit via electronic mail, please provide an e-mail address here: john@lann.com

1. APPLICANT, AGENT, PROPERTY OWNER, AND CONTRACTOR INFORMATION (Continued)

Property owner(s) legal name, if different from applicant			Contractor, if known		
Mailing address			Mailing address		
City	State	ZIP code	City	State	ZIP code
Phone number w/area code	Fax		Phone number w/area code	Fax	
Mobile	E-mail		Mobile	E-mail	
State Corporation Commission Name and ID number (if applicable)			State Corporation Commission Name ID number (if applicable)		

2. PROJECT LOCATION INFORMATION

(Attach a copy of a detailed map, such as a USGS topographic map or street map showing the site location and project boundary, so that it may be located for inspection. Include an arrow indicating the north direction. Include the drainage area if the SPGP box is checked on Page 7.)

Street Address (911 address if available) N/A	City/County/ZIP Code City of Fairfax
Subdivision Northfax	Lot/Block/Parcel #

Name of water body(ies) within project boundaries and drainage area (acres or square miles).
R3 and R4 unnamed tributaires to Accotink Creek D.A. = 260.2 Acres (0.41 Sq. Mi.)

Tributary(ies) to: Accotink Creek
Basin: Potomac River Sub-basin: Middle Potomac River
(*Example: Basin: James River Sub-basin: Middle James River*)

Special Standards (based on DEQ Water Quality Standards 9VAC25-260 et seq.): _____

Project type (check one)
- ☐ Single user (private, non-commercial, residential)
- ☑ Multi-user (community, commercial, industrial, government)
- ☐ Surface water withdrawal

Latitude and longitude at center of project site (decimal degrees): 38.859417 / -77.309689
(Example: 37.33164/-77.68200)

USGS topographic map name: Fairfax (2013)

8-digit USGS Hydrologic Unit Code (HUC) for your project site (See http://cfpub.epa.gov/surf/locate/index.cfm): 02070010
If known, indicate the 10-digit and 12-digit USGS HUCs (see *http://dswcapps.dcr.virginia.gov/htdocs/maps/HUExplorer.htm* :
0207001004 (PL-K) 020700100402 (PL30)

Name of your project (*Example: Water Creek driveway crossing*) Northfax

Is there an access road to the project? ☑ Yes ☐ No. If yes, check all that apply: ☑ public ☐ private ☑ improved ☐ unimproved

Total size of the project area (in acres): 10.6

2. PROJECT LOCATION INFORMATION (Continued)

Provide driving directions to your site, giving distances from the best and nearest visible landmarks or major intersections:

From intersection of Interstate 66 and Route 123, proceed south on 123 approximately one-half mile and turn right onto Orchard Street.

Does your project site cross boundaries of two or more localities (i.e., cities/counties/towns)? ☐ Yes ☑ No
If so, name those localities:

3. DESCRIPTION OF THE PROJECT, PROJECT PRIMARY AND SECONDARY *PURPOSES*, PROJECT *NEED*, INTENDED USE(S), AND ALTERNATIVES CONSIDERED (Attach additional sheets if necessary)

- The purpose and need must include any new development or expansion of an existing land use and/or proposed future use of residual land.
- Describe the physical alteration of surface waters, including the use of pilings (#, materials), vibratory hammers, explosives, and hydraulic dredging, when applicable, and *whether or not tree clearing will occur* (include the area in square feet and time of year).
- Include a description of alternatives considered and measures taken to avoid or minimize impacts to surface waters, including wetlands, to the maximum extent practicable. Include factors such as, but not limited to, alternative construction technologies, alternative project layout and design, alternative locations, local land use regulations, and existing infrastructure
- For utility crossings, include both alternative routes and alternative construction methodologies considered
- For surface water withdrawals, public surface water supply withdrawals, or projects that will alter in-stream flows, include the water supply issues that form the basis of the proposed project.

See additional information in narrative description of project. Narrative includes purpose, physical alteration of surface waters, and alternatives.

Date of proposed commencement of work (MM/DD/YYYY)	Date of proposed completion of work (MM/DD/YYYY)
10/01/2020	05/31/2024
Are you submitting this application at the direction of any state, local, or federal agency? ☐ Yes ☑ No	Has any work commenced or has any portion of the project for which you are seeking a permit been completed? ☐ Yes ☑ No

If you answered "yes" to either question above, give details stating when the work was completed and/or when it commenced, who performed the work, and which agency (if any) directed you to submit this application. In addition, you will need to clearly differentiate between completed work and proposed work on your project drawings.

Are you aware of any unresolved violations of environmental law or litigation involving the property? ☐ Yes ☑ No
(If yes, please explain)

4. PROJECT COSTS

Approximate cost of the entire project, including materials and labor: $ N/A
Approximate cost of only the portion of the project affecting state waters (channelward of mean low water in tidal areas and below ordinary high water mark in nontidal areas): $ N/A

5. PUBLIC NOTIFICATION (Attach additional sheets if necessary)

Complete information for all property owners adjacent to the project site and across the waterway, if the waterway is less than 500 feet in width. If your project is located within a cove, you will need to provide names and mailing addresses for all property owners within the cove. If you own the adjacent lot, provide the requested information for the first adjacent parcel beyond your property line.

Failure to provide this information may result in a delay in the processing of your application by VMRC.

Property owner's name	Mailing address	City	State	ZIP code

Name of newspaper having general circulation in the area of the project: The Fairfax Times
Address and phone number (including area code) of newspaper P.O. Box 8791, Reston, VA 20195 703-437-5400

Have adjacent property owners been notified with forms in Appendix A? ☐ Yes ☑ No (attach copies of distributed forms)

6. THREATENED AND ENDANGERED SPECIES INFORMATION

Please provide any information concerning the potential for your project to impact state and/or federally threatened and endangered species (listed or proposed). Attach correspondence from agencies and/or reference materials that address potential impacts, such as database search results or confirmed waters and wetlands delineation/jurisdictional determination. Include information when applicable regarding the location of the project in Endangered Species Act-designated or -critical habitats. Contact information for the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, Virginia Dept. of Game and Inland Fisheries, and the Virginia Dept. of Conservation and Recreation-Division of Natural Heritage can be found on page 4 of this package.

7. HISTORIC RESOURCES INFORMATION

Note: Historic properties include but are not limited to archeological sites, battlefields, Civil War earthworks, graveyards, buildings, bridges, canals, etc. Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the USACE from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the USACE, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant.

Are any historic properties located within or adjacent to the project site? ☐ Yes ☐ No ☑ Uncertain
If Yes, please provide a map showing the location of the historic property within or adjacent to the project site.

Are there any buildings or structures 50 years old or older located on the project site? ☐ Yes ☐ No ☑ Uncertain
If Yes, please provide a map showing the location of these buildings or structures on the project site.

Is your project located within a historic district? ☐ Yes ☐ No ☑ Uncertain

If Yes, please indicate which district: _____

7. HISTORIC RESOURCES INFORMATION (Continued)

Has a survey to locate archeological sites and/or historic structures been carried out on the property?
☐ Yes ☐ No ☑ Uncertain

If Yes, please provide the following information: Date of Survey: _____

Name of firm: _____

Is there a report on file with the Virginia Department of Historic Resources? ☐ Yes ☐ No ☑ Uncertain

Title of Cultural Resources Management (CRM) report: _____

Was any historic property located? ☐ Yes ☐ No ☑ Uncertain

8. WETLANDS, WATERS, AND DUNES/BEACHES IMPACT INFORMATION

Report each impact site in a separate column. If needed, attach additional sheets using a similar table format. Please ensure that the associated project drawings clearly depict the location and footprint of each numbered impact site. For dredging, mining, and excavating projects, use Section 17.

	Impact site number A1	Impact site number A2	Impact site number A3	Impact site number B1	Impact site number
Impact description (use all that apply): F=fill EX=excavation S=Structure T=tidal NT=non-tidal TE=temporary PE=permanent PR=perennial IN=intermittent SB=subaqueous bottom DB=dune/beach IS=hydrologically isolated V=vegetated NV=non-vegetated MC=Mechanized Clearing of PFO (*Example: F, NT, PE, V*)	F, NT, PE, PR, NV (This impact consists of diverting a perennial stream to installed box culverts and placement of fill material)	F, NT, PE, PE, NV (This impact consists of placement of fill material in a stream channel)	F, NT, PE, PR, NV (This impact consists of filling a man-made inlet feature constructed as part of USACE Permit #NAO-2014-1871)	F, NT, PE, IN, NV (This impact consists of placement of fill material and installation of a culvert)	
Latitude / Longitude (in decimal degrees)	38.859532/-77.310147	38.858487/-77.308498	38.858631/-77.307937	38.858658/-77.309750	
Wetland/waters impact area (square feet / acres)	N/A	N/A	N/A	N/A	
Dune/beach impact area (square feet)	N/A	N/A	N/A	N/A	
Stream dimensions at impact site (length and average width in linear feet, and area in square feet)	797 LF x 13.92 ft = 11,096 SF	3780 SF x 12.12 ft = 3,780 SF	2989 SF x 10.13 ft = 2,989 SF	4488 SF x 13 ft = 4,488 SF	
Volume of fill below Mean High Water or Ordinary High Water (cubic yards)	411 CY	140 CY	55 CY	415 CY	

8. WETLANDS/WATERS IMPACT INFORMATION (Continued)					
Cowardin classification of impacted wetland/water or geomorphological classification of stream *Example wetland: PFO; Example stream: 'C' channel and if tidal, whether vegetated or non-vegetated wetlands per Section 28.2-1300 of the Code of Virginia*	R3 stream channel	R3 stream channel	R3 stream channel	R4 stream channel	
Average stream flow at site (flow rate under normal rainfall conditions in cubic feet per second) and method of deriving it (gage, estimate, etc.)	10 cfs	8 cfs	8 cfs	3 cfs	
Contributing drainage area in acres or square miles (*VMRC cannot complete review without this information*)	0.28 sq. miles (182.1 Acres)	0.41 sq. miles (260.2 Acres)	0.48 sq. miles (310.2 Acres)	0.12 sq. miles (78.1 Acres)	
DEQ classification of impacted resource(s): Estuarine Class II; Non-tidal waters Class III; Mountainous zone waters Class IV; Stockable trout waters Class V; Natural trout waters Class VI; Wetlands Class VII http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+9VAC25-260-50	Class III	Class III	Class III	Class III	
For DEQ permitting purposes, also submit as part of this section a wetland and waters boundary delineation map – see (3) in the Footnotes section in the form instructions.					
For DEQ permitting purposes, also submit as part of this section a written disclosure of all wetlands, open water, or streams that are located within the proposed project or compensation areas that are also under a deed restriction, conservation easement, restrictive covenant, or other land-use protective instrument.					

9. APPLICANT, AGENT, PROPERTY OWNER, AND CONTRACTOR CERTIFICATIONS

READ ALL OF THE FOLLOWING CAREFULLY BEFORE SIGNING

PRIVACY ACT STATEMENT: The Department of the Army permit program is authorized by Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act, and Section 103 of the Marine Protection Research and Sanctuaries Act of 1972. These laws require that individuals obtain permits that authorize structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters prior to undertaking the activity. Information provided in the Joint Permit Application will be used in the permit review process and is a matter of public record once the application is filed. Disclosure of the requested information is voluntary, but it may not be possible to evaluate the permit application or to issue a permit if the information requested is not provided.

CERTIFICATION: I am hereby applying for permits typically issued by the DEQ, VMRC, USACE, and/or Local Wetlands Boards for the activities I have described herein. I agree to allow the duly authorized representatives of any regulatory or advisory agency to enter upon the premises of the project site at reasonable times to inspect and photograph site conditions, both in reviewing a proposal to issue a permit and after permit issuance to determine compliance with the permit.

In addition, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

9. APPLICANT, AGENT, PROPERTY OWNER, AND CONTRACTOR CERTIFICATIONS (Continued)

Is/Are the Applicant(s) and Owner(s) the same? ☑ *Yes* ☐ *No*

Legal name & title of Applicant Andrea Sylos-Labini - Manager	Second applicant's legal name & title, if applicable John E. Napolitano - Manager
Applicant's signature	Second applicant's signature
Date 6-20-18	Date 6-20-18
Property owner's legal name, if different from Applicant Northfax.JV, LLC	Second property owner's legal name, if applicable
Property owner's signature, if different from Applicant	Second property owner's signature
Date	Date

CERTIFICATION OF AUTHORIZATION TO ALLOW AGENT(S) TO ACT ON APPLICANT'S(S') BEHALF (IF APPLICABLE)

I (we), Andrea Sylos-Labini (and) John E. Napolitano,
APPLICANT'S LEGAL NAME(S) – *complete the second blank if more than one Applicant*

hereby certify that I (we) have authorized Jason Franti (and) James E. Irre
AGENT'S NAME(S) – *complete the second blank if more than one Agent*

to act on my (our) behalf and take all actions necessary to the processing, issuance, and acceptance of this permit and any and all standard and special conditions attached. I (we) hereby certify that the information submitted in this application is true and accurate to the best of my (our) knowledge.

Applicant's signature	Second applicant's signature, if applicable
Date 6-20-18	Date 6-20-18
Agent's signature and title SR. PROJECT MGR.	Second agent's signature and title, if applicable
Date 6/21/18	Date 6/22/18

CONTRACTOR ACKNOWLEDGEMENT (IF APPLICABLE)

I (we), _____ (and) _____.
APPLICANT'S LEGAL NAME(S) – *complete the second blank if more than one Applicant*

have contracted _____ (and) _____
CONTRACTOR'S NAME(S) – *complete the second blank if more than one Contractor*

to perform the work described in this Joint Permit Application, signed and dated _____

I (we) will read and abide by all conditions as set forth in all federal, state, and local permits as required for this project. I (we) understand that failure to follow the conditions of the permits may constitute a violation of applicable federal, state, and local statutes and that we will be liable for any civil and/or criminal penalties imposed by these statutes.
In addition, I (we) agree to make available a copy of any permit to any regulatory representative visiting the project site to ensure permit compliance. If I (we) fail to provide the applicable permit upon request, I (we) understand that the representative will have the option of stopping our operation until it has been determined that we have a properly signed and executed permit and are in full compliance with all of the terms and conditions.

Contractor's name or name of firm (printed/typed)	Contractor's or firm's mailing address	
Contractor's signature and title	Contractor's license number	Date
Applicant's signature	Second applicant's signature, if applicable	
Date	Date	

18. FILL (not associated with backfilled shoreline structures) AND OTHER STRUCTURES (other than piers and boathouses) IN WETLANDS OR WATERS, OR ON DUNES/BEACHES

Source and composition of fill material (percentage sand, silt, clay, rock):

Off-site: 70% sand, 25% clay, 4% silt, 1% rock

Provide documentation (i.e., laboratory results or analytical reports) that *fill* material from *off-site* locations is free of toxics. If not free of toxics, provide documentation of proper disposal (i.e., bill of lading from commercial supplier or disposal site). Documentation is not necessary for fill material obtained from on-site areas.

Explain the purpose of the filling activity and the type of structure to be constructed over the filled area (if any):

Purpose of filling activity is for the construction of a mixed use community in a highly urbanized city setting.

Describe any structure that will be placed in wetlands/waters or on a beach dune and its purpose:

N/A

Will the structure be placed on pilings? ☐ Yes ☑ No	Total area occupied by any structure. N/A Square Feet
How far will the structure be placed channelward from the back edge of the dune? N/A feet	How far will the structure be placed channelward from the back edge of the beach? N/A feet

19. NONTIDAL STREAM CHANNEL MODIFICATIONS FOR RESTORATION OR ENHANCMENT, or TEMPORARY OR PERMANENT RELOCATIONS

If proposed activities are being conducted for the purposes of compensatory mitigation, please attach separate sheets of paper providing all information required by the most recent version of the stream assessment methodology approved by the Norfolk District of the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality, in lieu of completing the questions below. Required information outlined by the methodology can be found at: http://www.nao.usace.army.mil/Missions/Regulatory/UnifiedStreamMethodology.aspx *or* http://www.deq.virginia.gov/Programs/Water/WetlandsStreams/Mitigation.aspx.

For all projects proposing stream restoration provide a completed Natural Channel Design Review Checklist and Selected Morphological Characteristics form. These forms and the associated manual can be located at: https://www.fws.gov/chesapeakebay/StreamReports/NCD%20Review%20Checklist/Natural%20Channel%20Design%20Checklist%20Doc%20V2%20Final%2011-4-11.pdf

Has the stream restoration project been designed by a local, state, or federal agency? ☐ Yes ☐ No. If yes, please include the name of the agency here: _____.

Is the agency also providing funding for this project? ☐ Yes ☐ No

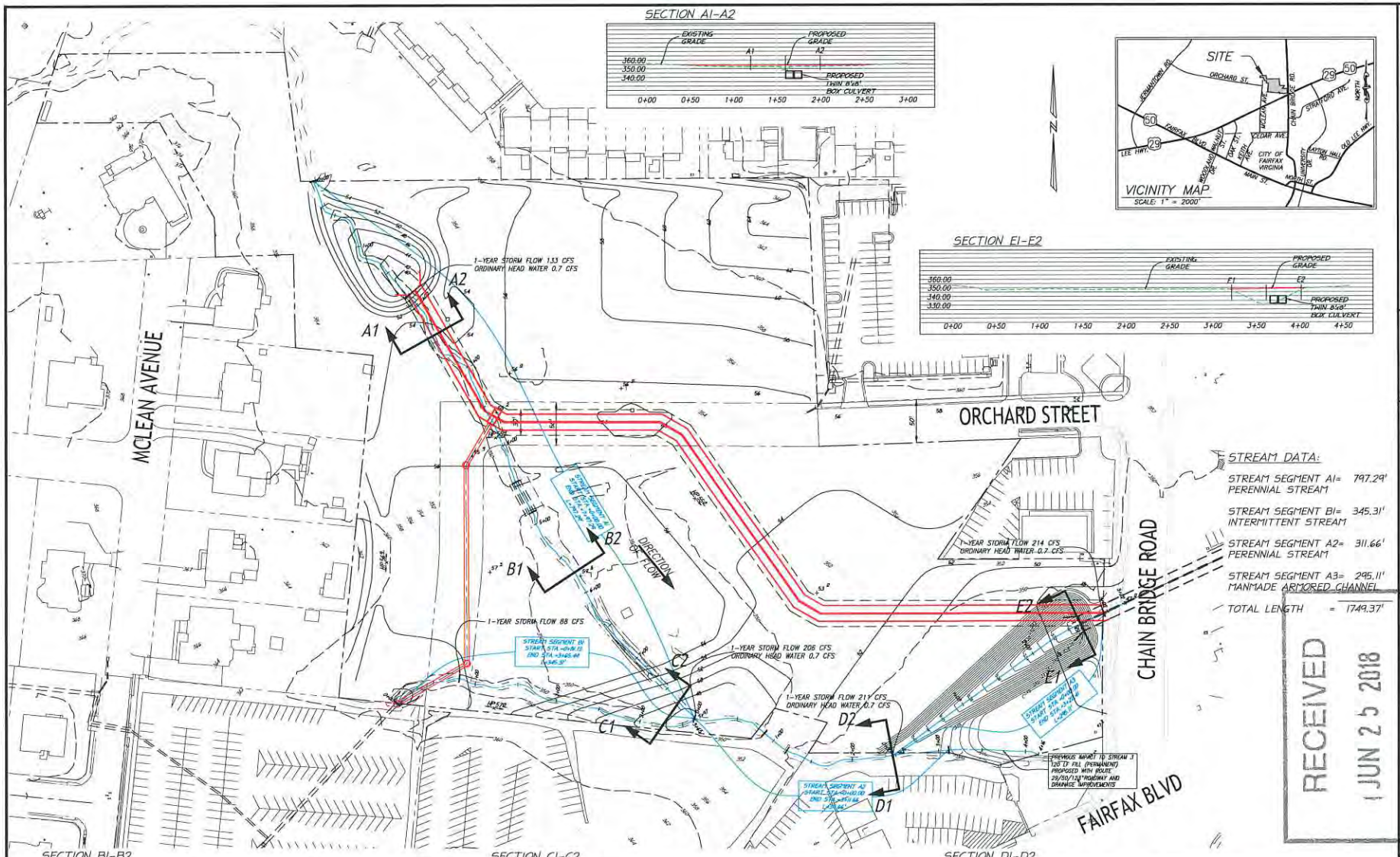
Stream dimensions at impact site (length and average width in linear feet, and area in square feet):
L: _____(feet) AW:_____ (feet) Area:_____ (square feet)

Contributing drainage area: _____acres *or* _____square miles

Existing average stream flow at site (flow rate under normal rainfall conditions): _____cfs	Proposed average stream flow at site after modifications (flow rate under normal rainfall conditions): _____cfs

Explain, in detail, the method to be used to stabilize the banks:

Explain the composition of the existing stream bed (percent cobble, rock, sand, etc.):



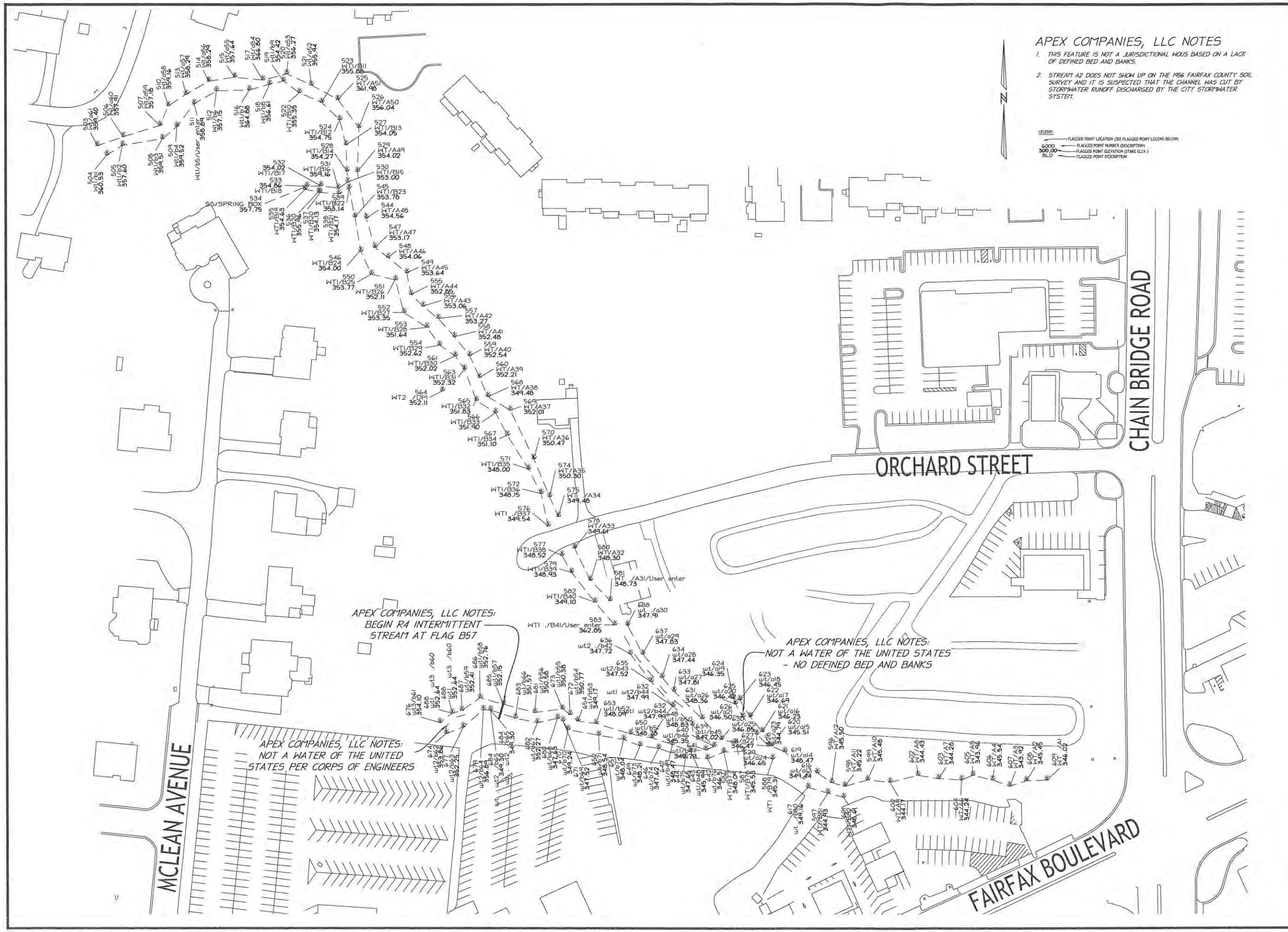
RECEIVED
JUN 25 2018
MARINE RESOURCES
NORTHERN REGION
CITY OF FAIRFAX

christopher consultants
9990 main street (suite 400) · fairfax, va 22031
phone 703.273.6820 · fax 703.273.6820

STREAM IMPACT EXHIBIT

PROJECT NO:	13139.004.00
SCALE:	1"=50'
DATE:	06/15/2018
DESIGN:	EJ
DRAWN:	JS
CHECKED:	KTW
SHEET No.	1 OF 5

108133



christopher consultants
9900 main street (suite 400) · fairfax, va 22031
phone 703.273.6820 · fax 703.273.6820

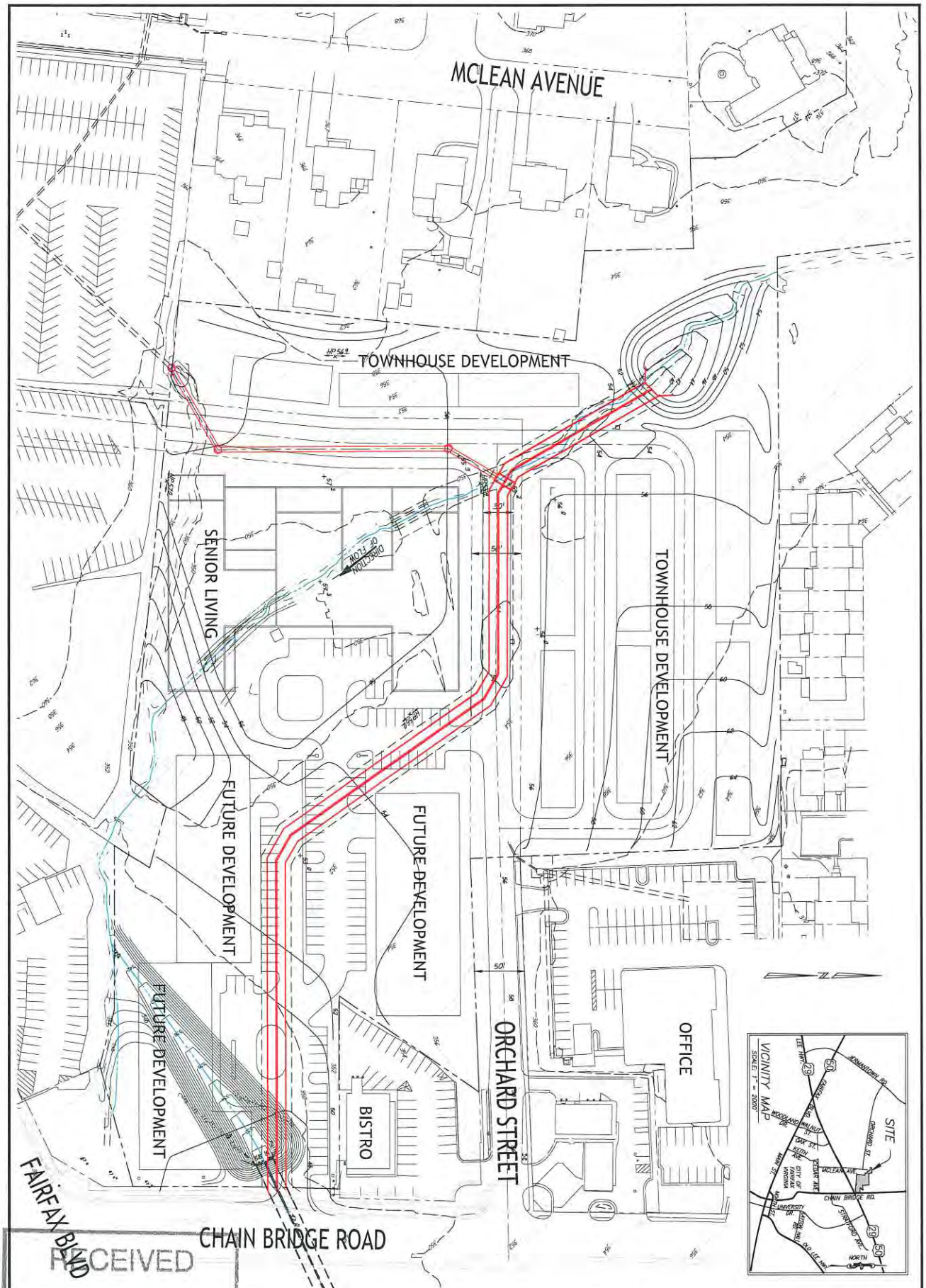
WETLAND EXHIBIT

NORTHFAX AREA
CITY OF FAIRFAX

PROJECT NO: 13139.004.00
SCALE: 1"=50'
DATE: 06/08/2018
DESIGN: EJ
DRAWN: JS
CHECKED: KMW
SHEET No.
2 OF 5

108133

P:\Projects\13139\00400\EXHIBITS\108133 Wetland Concept Exhibit\Wetland StreTopo NAD83 NGVD29 - MS.dwg, 6/15/2018 9:22:58 AM, 1:1



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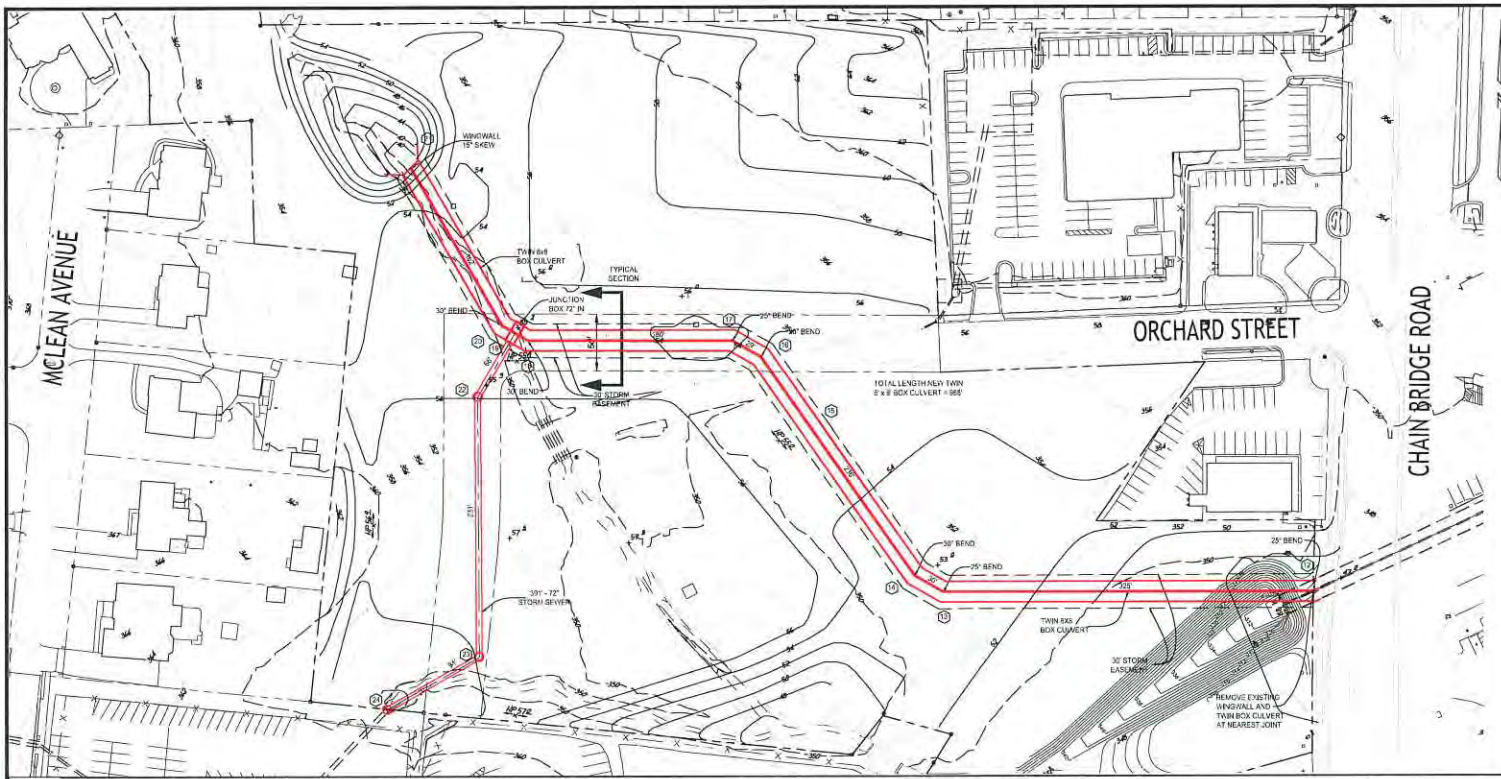
MARINE RESOURCES COMMISSION

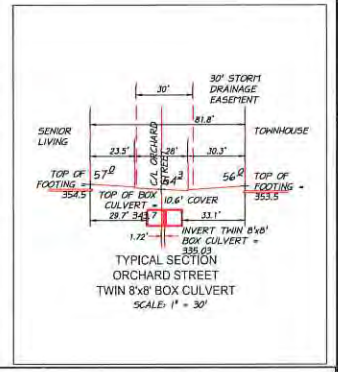
SHEET No. 3 OF 5	DATE: 06/15/2018	SCALE: 1"=40'	PROJECT NO. 1139.00
DESIGN: EJ	DRAWN: JS	CHECKED: KYW	

NORTHFAX AREA
CITY OF FAIRFAX

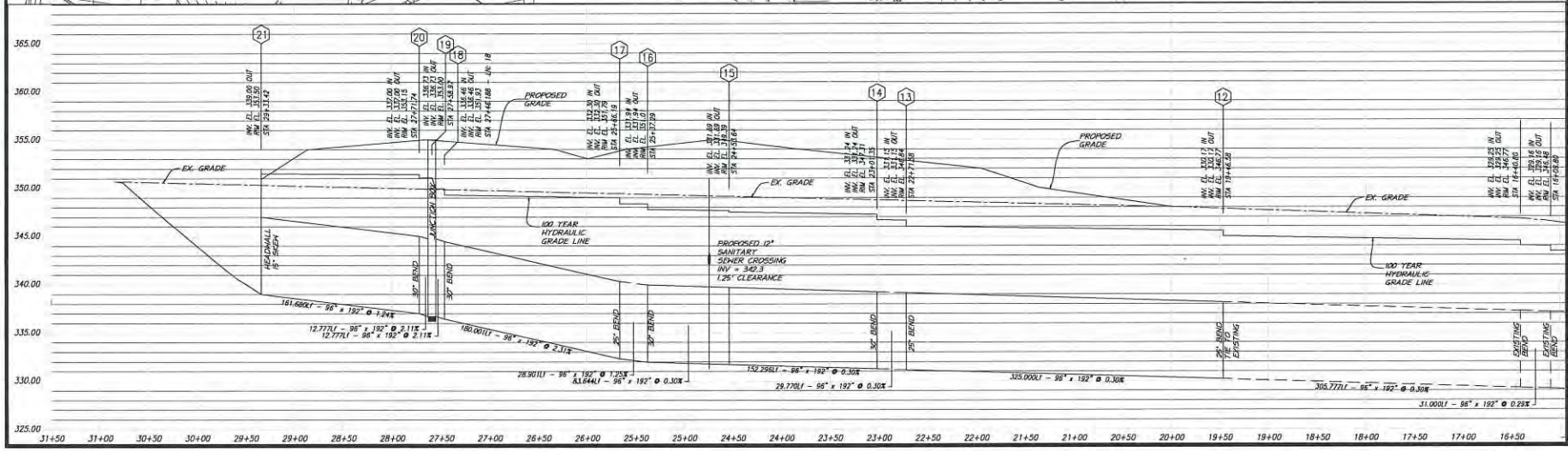
GRADING EXHIBIT

christopher consultants
9900 main street (suite 400) · fairfax, va 22031
phone 703.273.6820 · fax 703.273.6820





TYPICAL SECTION
ORCHARD STREET
TWIN 8'x8' BOX CULVERT
SCALE: 1" = 30'



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christopher consultants
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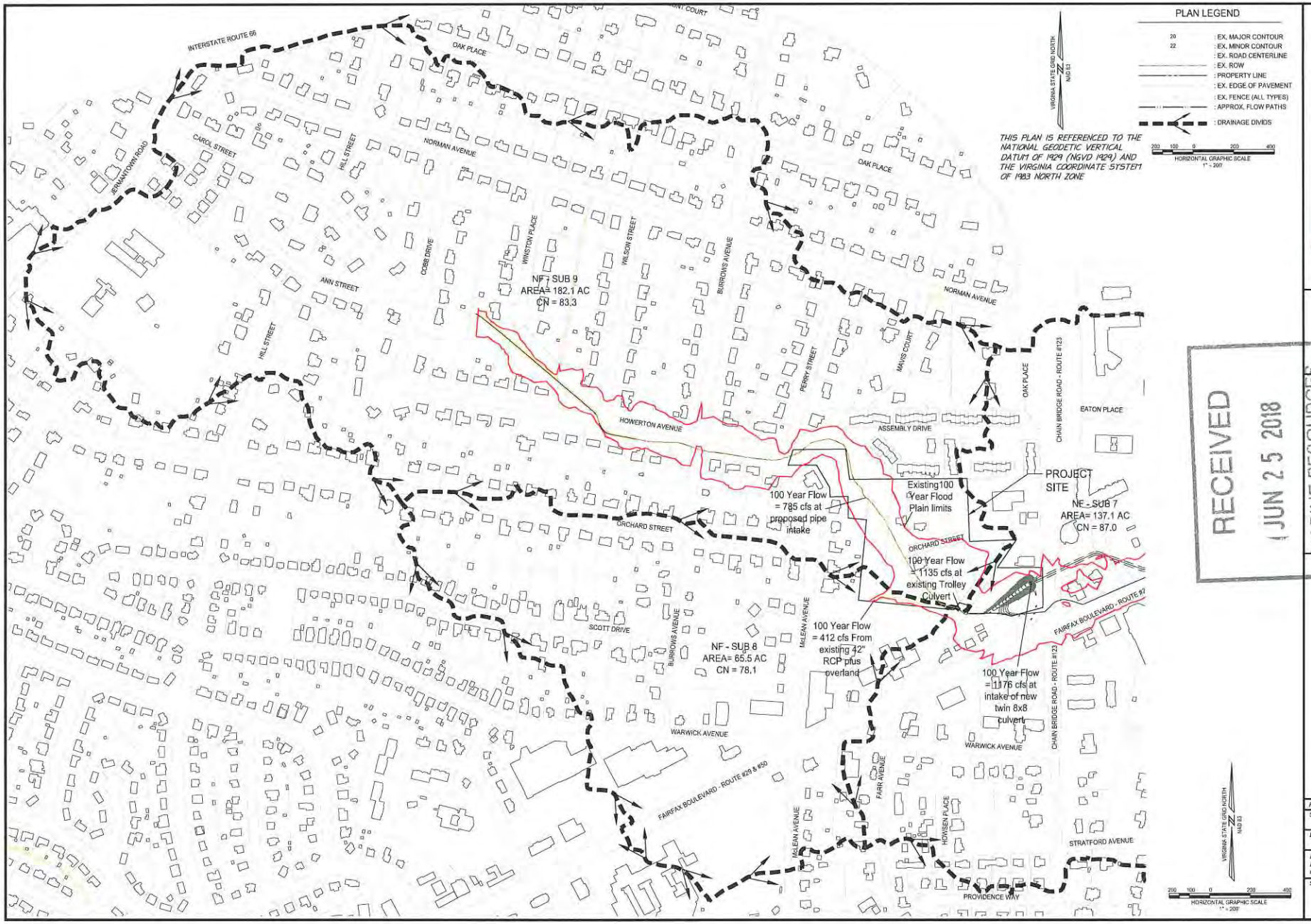
phone 703.273.6820 · fax 703.273.6820

PLAN & PROFILE
STORM SEWER

NORTHFAX AREA
CITY OF FAIRFAX

PROJECT NO: 19139.004.00
SCALE: 1"=50' HORZ 1" =5' VERT
DATE: 06/15/2018
DESIGN: EJ
DRAWN: JS
CHECKED: KTW
SHEET No. 4 OF 5

108133



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JUN 25 2018
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NORTHFAX AREA
CITY OF FAIRFAX

PROJECT NO. 13139.004.00
SCALE: 1"=200'
DATE: 06/15/2018
DESIGN: EJ
DRAWN: JS
CHECKED: KMH
SHEET No.
5 OF 5

10813

STORM SEWER DESIGN
COMPUTATIONS

NORTHFAX
PROPOSED STORM COMPUTATIONS

06/12/2018 EJ

FROM POINT	TO POINT	DRAIN. AREA	RUNOFF COEFF.	CA		INLET TIME	RAINFALL INTENSITY	RUNOFF Q100yr	INVERT ELEVATIONS (ft)		LENGTH	SLOPE	DIA.	n	CAPACITY	VELOCITY	FLOW TIME				NOTES
				INCREM.	ACCUM.																
		ACRES	C			MIN.	IN./HR.	C.F.S.	UPPER	LOWER	ft	ft/ft	IN.		C.F.S.	FPS	SEC.	Q/Qfull	V/Vfull	Vfull	
24	23	100 YEAR RUNOFF PER FEMA EFFECTIVE HYDROLOGIC MODEL						411.69	346.50	344.72	93.40	0.0191	72	0.013	584.66	22.2	4.2	0.70	1.07	20.68	PROP. 72" RCP STORM
23	22							411.69	344.47	340.04	231.01	0.0192	72	0.013	586.47	22.2	10.4	0.70	1.07	20.74	PROP. 72" RCP STORM
22	21							411.69	339.79	338.54	65.43	0.0191	72	0.013	585.36	22.2	2.9	0.70	1.07	20.70	PROP. 72" RCP STORM
21	20	100 YEAR RUNOFF PER FEMA EFFECTIVE HYDROLOGIC MODEL						785.80	339.00	337.00	161.68	0.0124	146.5	0.013	3131.33	22.2	7.3	0.25	0.83	26.75	PROP. TWIN 8"x 8" BOX CULVERT
20	19							785.80	337.00	336.73	12.78	0.0211	146.5	0.013	4092.70	26.1	0.5	0.19	0.75	34.96	PROP. TWIN 8"x 8" BOX CULVERT
19	18							1135.30	336.73	336.46	12.78	0.0211	146.5	0.013	4092.70	29.9	0.4	0.28	0.86	34.96	PROP. TWIN 8"x 8" BOX CULVERT
18	17							1135.30	336.46	332.30	180.00	0.0231	146.5	0.013	4280.08	30.4	5.9	0.27	0.83	36.56	PROP. TWIN 8"x 8" BOX CULVERT
17	16							1163.96	332.30	331.97	28.90	0.0114	146.5	0.013	3008.45	23.7	1.2	0.39	0.92	25.70	PROP. TWIN 8"x 8" BOX CULVERT
16	15							1163.96	331.97	331.71	83.64	0.0031	146.5	0.013	1569.68	14.7	5.7	0.74	1.09	13.41	PROP. TWIN 8"x 8" BOX CULVERT
15	14							1167.48	331.71	331.24	152.30	0.0031	146.5	0.013	1564.04	14.6	10.4	0.75	1.09	13.36	PROP. TWIN 8"x 8" BOX CULVERT
14	13							1167.78	331.24	331.15	29.77	0.0030	146.5	0.013	1548.01	14.5	2.1	0.75	1.09	13.22	PROP. TWIN 8"x 8" BOX CULVERT
13	12							1175.85	331.15	330.17	325.00	0.0030	146.5	0.013	1546.02	14.5	22.5	0.76	1.09	13.21	PROP. TWIN 8"x 8" BOX CULVERT

THE PIPE CAPACITIES SHOWN ARE BASED ON GRAVITY FLOW. THIS SYSTEM WILL OPERATE UNDER PRESSURE FLOW BASED ON DOWNSTREAM HYDRAULIC CONDITIONS.

Stream Assessment Summary Form (Form 2)

Unified Stream Methodology
for use in Virginia

Project #	Applicant	Date
Northfax	The Lann Companies	5/16/2018

Evaluators	HUC	Locality
J. Irre	2070010	City of Fairfax

Stream Name	Reach ID	Length of Impact (L_I) (feet)	Reach Condition Index (RCI)	Impact Factor (IF)	Compensation Requirement (CR) ($L_I \times RCI \times IF$)
N. Fork Accotink Creek	A1	797	1.24	1.00	988
N. Fork Accotink Creek	A2	312	0.90	1.00	281
N. Fork Accotink Creek	A3	295	0.50	1.00	148
UT N. Fork Accotink Ck	B1	345	0.74	1.00	255
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
	Total L_I	**1,749**		**Total CR**	**1,672**

Note: Round all feet & CR's to the nearest whole number.

Stream Assessment Form (Form 1)

Unified Stream Methodology for use in Virginia

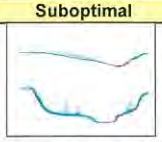
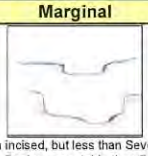
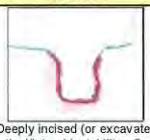
For use in wadeable channels classified as intermittent or perennial

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	SAR #	Impact/SAR length	Impact Factor
	Northfax	Fairfax	R3	02070010	5/11/18	A1	797	1

Name(s) of Evaluator(s)	Stream Name and Information
J. Irre	North Fork Accotink Creek

1. Channel Condition: Assess the cross-section of the stream and prevailing condition (erosion, aggradation)

Conditional Category

	Optimal	Suboptimal	Marginal	Poor	Severe	
Channel Condition	Very little incision or active erosion; 80-100% stable banks. Vegetative surface protection or natural rock, prominent (80-100%). AND/OR Stable point bars/bankfull benches are present. Access to their original floodplain or fully developed wide bankfull benches. Mid-channel bars, and transverse bars few. Transient sediment deposition covers less than 10% of bottom.	 Slightly incised, few areas of active erosion or unprotected banks. Majority of banks are stable (60-80%). Vegetative protection or natural rock prominent (60-80%) AND/OR Depositional features contribute to stability. The bankfull and low flow channels are well defined. Stream likely has access to bankfull benches, or newly developed floodplains along portions of the reach. Transient sediment covers 10-40% of the stream bottom.	 Often incised, but less than Severe or Poor. Banks more stable than Severe or Poor due to lower bank slopes. Erosion may be present on 40-60% of both banks. Vegetative protection on 40-60% of banks. Streambanks may bevertical or undercut. AND/OR 40-60% of stream is covered by sediment. Sediment may be temporary/transient, contribute instability. Deposition that contribute to stability, may be forming/present. AND/OR V-shaped channels have vegetative protection on > 40% of the banks and depositional features which contribute to stability.	Overwidened/incised. Vertically/laterally unstable. Likely to widen further. Majority of both banks are near vertical. Erosion present on 60-80% of banks. Vegetative protection present on 20-40% of banks, and is insufficient to prevent erosion. AND/OR 60-80% of the stream is covered by sediment. Sediment is temporary/transient in nature, and contributing to instability. AND/OR V-shaped channels have vegetative protection is present on > 40% of the banks and stable sediment deposition is absent.	 Deeply incised (or excavated), vertical/lateral instability. Severe incision, flow contained within the banks. Streambed below average rooting depth, majority of banks vertical/undercut. Vegetative protection present on less than 20% of banks, is not preventing erosion. Obvious bank sloughing present. Erosion/raw banks on 80-100%. AND/OR Aggrading channel. Greater than 80% of stream bed is covered by deposition, contributing to instability. Multiple thread channels and/or subterranean flow.	CI
Score	3	2.4	2	1.6	1	2.0
NOTES>>						

2. RIPARIAN BUFFERS: Assess both bank's 100 foot riparian areas along the entire SAR. (rough measurements of length & width may be acceptable)

Conditional Category

	Optimal	Suboptimal		Marginal		Poor		NOTES>>
Riparian Buffers	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover and a non-maintained understory. Wetlands located within the riparian areas.	**High Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.	**Low Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with > 30% tree canopy cover and a maintained understory. Recent cutover (dense vegetation).	**High Marginal:** Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh >3 inches) present, with <30% tree canopy cover with maintained understory.	**High Poor:** Lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.	
		High	Low	High	Low	High	Low	
Condition Scores	1.5	1.2	1.1	0.85	0.75	0.6	0.5	

1. Delineate riparian areas along each stream bank into Condition Categories and Condition Scores using the descriptors.
2. Determine square footage for each by measuring or estimating length and width. Calculators are provided for you below.
3. Enter the % Riparian Area and Score for each riparian category in the blocks below.

Ensure the sums of % Riparian Blocks equal 100

Right Bank	% Riparian Area>	50%	50%					100%			
	Score >	1.2	0.6								
									CI= (Sum % RA * Scores*0.01)/2		
Left Bank	% Riparian Area>	100%						100%	Rt Bank CI >	0.90	CI
	Score >	1.5							Lt Bank CI >	1.50	1.20

3. INSTREAM HABITAT: Varied substrate sizes, water velocity and depths; woody and leafy debris; stable substrate; low embededness; shade; undercut banks; root mats; SAV; riffle poole complexes, stable features.

Conditional Category

	Optimal	Suboptimal	Marginal	Poor	NOTES>>	
Instream Habitat/ Available Cover	Habitat elements are typically present in greater than 50% of the reach.	Stable habitat elements are typically present in 30-50% of the reach and are adequate for maintenance of populations.	Stable habitat elements are typically present in 10-30% of the reach and are adequate for maintenance of populations.	Habitat elements listed above are lacking or are unstable. Habitat elements are typically present in less than 10% of the reach.		CI
Score	1.5	1.2	0.9	0.5		1.50

Stream Impact Assessment Form Page 2

Project #	Applicant	Locality	Cowardin Class.	HUC	Date	Data Point	SAR length	Impact Factor
							500	1

4. CHANNEL ALTERATION: Stream crossings, riprap, concrete, gabions, or concrete blocks, straightening of channel, channelization, embankments, spoil piles, constrictions, livestock

NOTES>>

	Conditional Category						
	Negligible	Minor		Moderate		Severe	
Channel Alteration	Channelization, dredging, alteration, or hardening absent. Stream has an unaltered pattern or has naturalized.	Less than 20% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines.	20-40% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines.	40 - 60% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered.	60 - 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered.	Greater than 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines AND/OR 80% of banks shored with gabion, riprap, or cement.	
SCORE	1.5	1.3	1.1	0.9	0.7	0.5	1.50

REACH CONDITION INDEX and STREAM CONDITION UNITS FOR THIS REACH

NOTE: The CIs and RCI should be rounded to 2 decimal places. The CR should be rounded to a whole number.

THE REACH CONDITION INDEX (RCI) >>	1.24

RCI= (Sum of all CI's)/5

COMPENSATION REQUIREMENT (CR) >>	988

CR = RCI X LF X IF

INSERT PHOTOS:

DESCRIBE PROPOSED IMPACT:

Stream will be picked up in northwest corner of property and piped to east side of property to join existing new culverts under Route 123.

Stream Assessment Form (Form 1)

Unified Stream Methodology for use in Virginia

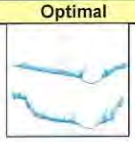
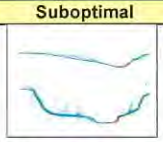
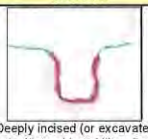
For use in wadeable channels classified as intermittent or perennial

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	SAR #	Impact/SAR length	Impact Factor
	Northfax	Fairfax	R3	02070010	5/11/18	A2	312	1

Name(s) of Evaluator(s)	Stream Name and Information
J. Irre	North Fork Accotink Creek

1. Channel Condition: Assess the cross-section of the stream and prevailing condition (erosion, aggradation)

Conditional Category

	Optimal	Suboptimal	Marginal	Poor	Severe	
Channel Condition	 Very little incision or active erosion; 80-100% stable banks. Vegetative surface protection or natural rock, prominent (80-100%). AND/OR Stable point bars/bankfull benches are present. Access to their original floodplain or fully developed wide bankfull benches. Mid-channel bars, and transverse bars few. Transient sediment deposition covers less than 10% of bottom.	 Slightly incised, few areas of active erosion or unprotected banks. Majority of banks are stable (60-80%). Vegetative protection or natural rock prominent (60-80%) AND/OR Depositional features contribute to stability. The bankfull and low flow channels are well defined. Stream likely has access to bankfull benches, or newly developed floodplains along portions of the reach. Transient sediment covers 10-40% of the stream bottom.	Often incised, but less than Severe or Poor. Banks more stable than Severe or Poor due to lower bank slopes. Erosion may be present on 40-60% of both banks. Vegetative protection on 40-60% of banks. Streambanks may bevertical or undercut. AND/OR 40-60% of stream is covered by sediment. Sediment may be temporary/transient, contribute instability. Deposition that contribute to stability, may be forming/present. AND/OR V-shaped channels have vegetative protection on > 40% of the banks and depositional features which contribute to stability.	Overwidened/incised. Vertically/laterally unstable. Likely to widen further. Majority of both banks are near vertical. Erosion present on 60-80% of banks. Vegetative protection present on 20-40% of banks, and is insufficient to prevent erosion. AND/OR 60-80% of the stream is covered by sediment. Sediment is temporary/transient in nature, and contributing to instability. AND/OR V-shaped channels have vegetative protection is present on > 40% of the banks and stable sediment deposition is absent.	 Deeply incised (or excavated), vertical/lateral instability. Severe incision, flow contained within the banks. Streambed below average rooting depth, majority of banks vertical/undercut. Vegetative protection present on less than 20% of banks, is not preventing erosion. Obvious bank sloughing present. Erosion/raw banks on 80-100%. AND/OR Aggrading channel. Greater than 80% of stream bed is covered by deposition, contributing to instability. Multiple thread channels and/or subterranean flow.	CI
Score	3	2.4	2	1.6	1	1.6

NOTES>>

2. RIPARIAN BUFFERS: Assess both bank's 100 foot riparian areas along the entire SAR. (rough measurements of length & width may be acceptable)

Conditional Category

NOTES>>

	Optimal	Suboptimal		Marginal		Poor	
Riparian Buffers	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover and a non-maintained understory. Wetlands located within the riparian areas.	**High Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.	**Low Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with > 30% tree canopy cover and a maintained understory. Recent cutover (dense vegetation).	**High Marginal:** Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh >3 inches) present, with <30% tree canopy cover with maintained understory.	**High Poor:** Lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.
		High	Low	High	Low	High	Low
Condition Scores	1.5	1.2	1.1	0.85	0.75	0.6	0.5

1. Delineate riparian areas along each stream bank into Condition Categories and Condition Scores using the descriptors.
2. Determine square footage for each by measuring or estimating length and width. Calculators are provided for you below.
3. Enter the % Riparian Area and Score for each riparian category in the blocks below.

Ensure the sums of % Riparian Blocks equal 100

Right Bank	% Riparian Area>	100%						100%			
	Score >	0.6									
									CI= (Sum % RA * Scores*0.01)/2		
Left Bank	% Riparian Area>	100%						100%	Rt Bank CI >	0.60	CI
	Score >	0.6							Lt Bank CI >	0.60	0.60

3. INSTREAM HABITAT: Varied substrate sizes, water velocity and depths; woody and leafy debris; stable substrate; low embededness; shade; undercut banks; root mats; SAV; riffle poole complexes, stable features.

NOTES>>

Conditional Category

	Optimal	Suboptimal	Marginal	Poor	
Instream Habitat/ Available Cover	Habitat elements are typically present in greater than 50% of the reach.	Stable habitat elements are typically present in 30-50% of the reach and are adequate for maintenance of populations.	Stable habitat elements are typically present in 10-30% of the reach and are adequate for maintenance of populations.	Habitat elements listed above are lacking or are unstable. Habitat elements are typically present in less than 10% of the reach.	CI
Score	1.5	1.2	0.9	0.5	1.20

Stream Impact Assessment Form Page 2

Project #	Applicant	Locality	Cowardin Class.	HUC	Date	Data Point	SAR length	Impact Factor
							500	1

4. CHANNEL ALTERATION: Stream crossings, riprap, concrete, gabions, or concrete blocks, straightening of channel, channelization, embankments, spoil piles, constrictions, livestock

NOTES>>

	Conditional Category						
	Negligible	Minor		Moderate		Severe	
Channel Alteration	Channelization, dredging, alteration, or hardening absent. Stream has an unaltered pattern or has naturalized.	Less than 20% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines.	20-40% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines.	40 - 60% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered.	60 - 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered.	Greater than 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines AND/OR 80% of banks shored with gabion, riprap, or cement.	
SCORE	1.5	1.3	1.1	0.9	0.7	0.5	1.10

REACH CONDITION INDEX and STREAM CONDITION UNITS FOR THIS REACH

NOTE: The CIs and RCI should be rounded to 2 decimal places. The CR should be rounded to a whole number.

THE REACH CONDITION INDEX (RCI) >>	0.90
RCI= (Sum of all CI's)/5	
COMPENSATION REQUIREMENT (CR) >>	281
CR = RCI X LF X IF	

INSERT PHOTOS:

DESCRIBE PROPOSED IMPACT:

Stream will be picked up in northwest corner of property and piped to east side of property to join existing new culverts under Route 123.

Stream Assessment Form (Form 1)

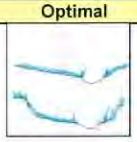
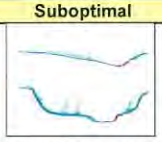
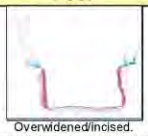
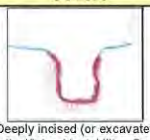
Unified Stream Methodology for use in Virginia

For use in wadeable channels classified as intermittent or perennial

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	SAR #	Impact/SAR length	Impact Factor
	Northfax	Fairfax	R3	02070010	5/11/18	A3	295	1

Name(s) of Evaluator(s)	Stream Name and Information
J. Irre	North Fork Accotink Creek

1. Channel Condition: Assess the cross-section of the stream and prevailing condition (erosion, aggradation)

	Conditional Category					
	Optimal	Suboptimal	Marginal	Poor	Severe	
						
Channel Condition	Very little incision or active erosion; 80-100% stable banks. Vegetative surface protection or natural rock, prominent (80-100%). AND/OR Stable point bars/bankfull benches are present. Access to their original floodplain or fully developed wide bankfull benches. Mid-channel bars, and transverse bars few. Transient sediment deposition covers less than 10% of bottom.	Slightly incised, few areas of active erosion or unprotected banks. Majority of banks are stable (60-80%). Vegetative protection or natural rock prominent (60-80%) AND/OR Depositional features contribute to stability. The bankfull and low flow channels are well defined. Stream likely has access to bankfull benches, or newly developed floodplains along portions of the reach. Transient sediment covers 10-40% of the stream bottom.	Often incised, but less than Severe or Poor. Banks more stable than Severe or Poor due to lower bank slopes. Erosion may be present on 40-60% of both banks. Vegetative protection on 40-60% of banks. Streambanks may bevertical or undercut. AND/OR 40-60% of stream is covered by sediment. Sediment may be temporary/transient, contribute instability. Deposition that contribute to stability, may be forming/present. AND/OR V-shaped channels have vegetative protection on > 40% of the banks and depositional features which contribute to stability.	Overwidened/incised. Vertically/laterally unstable. Likely to widen further. Majority of both banks are near vertical. Erosion present on 60-80% of banks. Vegetative protection present on 20-40% of banks, and is insufficient to prevent erosion. AND/OR 60-80% of the stream is covered by sediment. Sediment is temporary/transient in nature, and contributing to instability. AND/OR V-shaped channels have vegetative protection is present on > 40% of the banks and stable sediment deposition is absent.	Deeply incised (or excavated), vertical/lateral instability. Severe incision, flow contained within the banks. Streambed below average rooting depth, majority of banks vertical/undercut. Vegetative protection present on less than 20% of banks, is not preventing erosion. Obvious bank sloughing present. Erosion/raw banks on 80-100%. AND/OR Aggrading channel. Greater than 80% of stream bed is covered by deposition, contributing to instability. Multiple thread channels and/or subterranean flow.	CI
Score	3	2.4	2	1.6	1	1.0

NOTES>> New temporary man-made channel to be created and armored for inlet protection. No natural features present.

2. RIPARIAN BUFFERS: Assess both bank's 100 foot riparian areas along the entire SAR. (rough measurements of length & width may be acceptable)

	Conditional Category							NOTES>>
	Optimal	Suboptimal		Marginal		Poor		
Riparian Buffers	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover and a non-maintained understory. Wetlands located within the riparian areas.	**High Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.	**Low Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with > 30% tree canopy cover and a maintained understory. Recent cutover (dense vegetation).	**High Marginal:** Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh >3 inches) present, with <30% tree canopy cover with maintained understory.	**High Poor:** Lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.	
		High	Low	High	Low	High	Low	
Condition Scores	1.5	1.2	1.1	0.85	0.75	0.6	0.5	

1. Delineate riparian areas along each stream bank into Condition Categories and Condition Scores using the descriptors.
2. Determine square footage for each by measuring or estimating length and width. Calculators are provided for you below.
3. Enter the % Riparian Area and Score for each riparian category in the blocks below.

Ensure the sums of % Riparian Blocks equal 100

Right Bank	% Riparian Area>	100%						100%			
	Score >	0.5									
									CI= (Sum % RA * Scores*0.01)/2		
Left Bank	% Riparian Area>	100%						100%	Rt Bank CI >	0.50	CI
	Score >	0.5							Lt Bank CI >	0.50	0.50

3. INSTREAM HABITAT: Varied substrate sizes, water velocity and depths; woody and leafy debris; stable substrate; low embededness; shade; undercut banks; root mats; SAV; riffle poole complexes, stable features.

NOTES>>

	Conditional Category				
	Optimal	Suboptimal	Marginal	Poor	
Instream Habitat/ Available Cover	Habitat elements are typically present in greater than 50% of the reach.	Stable habitat elements are typically present in 30-50% of the reach and are adequate for maintenance of populations.	Stable habitat elements are typically present in 10-30% of the reach and are adequate for maintenance of populations.	Habitat elements listed above are lacking or are unstable. Habitat elements are typically present in less than 10% of the reach.	CI
Score	1.5	1.2	0.9	0.5	0.50

Stream Impact Assessment Form Page 2

Project #	Applicant	Locality	Cowardin Class.	HUC	Date	Data Point	SAR length	Impact Factor
							500	1

4. CHANNEL ALTERATION: Stream crossings, riprap, concrete, gabions, or concrete blocks, straightening of channel, channelization, embankments, spoil piles, constrictions, livestock

NOTES>>

	Conditional Category						
	Negligible	Minor		Moderate		Severe	
Channel Alteration	Channelization, dredging, alteration, or hardening absent. Stream has an unaltered pattern or has naturalized.	Less than 20% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines.	20-40% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines.	40 - 60% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered.	60 - 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered.	Greater than 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines AND/OR 80% of banks shored with gabion, riprap, or cement.	
SCORE	1.5	1.3	1.1	0.9	0.7	0.5	0.50

REACH CONDITION INDEX and STREAM CONDITION UNITS FOR THIS REACH

NOTE: The CIs and RCI should be rounded to 2 decimal places. The CR should be rounded to a whole number.

THE REACH CONDITION INDEX (RCI) >>	0.50

RCI= (Sum of all CI's)/5

COMPENSATION REQUIREMENT (CR) >>	148

CR = RCI X LF X IF

INSERT PHOTOS:

No photos currently available. Structure not yet constructed.

DESCRIBE PROPOSED IMPACT:

Stream segment will be filled when piping is completed across the property.

Stream Assessment Form (Form 1)

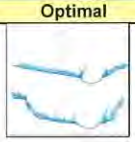
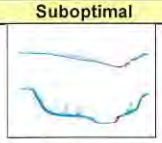
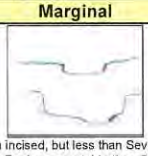
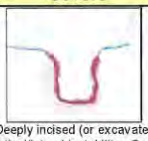
Unified Stream Methodology for use in Virginia

For use in wadeable channels classified as intermittent or perennial

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	SAR #	Impact/SAR length	Impact Factor
	Northfax	Fairfax	R4	02070010	5/11/18	B1	345	1

Name(s) of Evaluator(s)	Stream Name and Information
J. Irre	UT to North Fork Accotink Creek

1. Channel Condition: Assess the cross-section of the stream and prevailing condition (erosion, aggradation)

	Conditional Category					
	Optimal	Suboptimal	Marginal	Poor	Severe	
						
Channel Condition	Very little incision or active erosion; 80-100% stable banks. Vegetative surface protection or natural rock, prominent (80-100%). AND/OR Stable point bars/bankfull benches are present. Access to their original floodplain or fully developed wide bankfull benches, Mid-channel bars, and transverse bars few. Transient sediment deposition covers less than 10% of bottom.	Slightly incised, few areas of active erosion or unprotected banks. Majority of banks are stable (60-80%). Vegetative protection or natural rock prominent (60-80%) AND/OR Depositional features contribute to stability. The bankfull and low flow channels are well defined. Stream likely has access to bankfull benches, or newly developed floodplains along portions of the reach. Transient sediment covers 10-40% of the stream bottom.	Often incised, but less than Severe or Poor. Banks more stable than Severe or Poor due to lower bank slopes. Erosion may be present on 40-60% of both banks. Vegetative protection on 40 60% of banks. Streambanks may bevertical or undercut. AND/OR 40-60% of stream is covered by sediment. Sediment may be temporary/transient, contribute instability. Deposition that contribute to stability, may be forming/present. AND/OR V-shaped channels have vegetative protection on > 40% of the banks and depositional features which contribute to stability.	Overwidened/incised. Vertically/laterally unstable. Likely to widen further. Majority of both banks are near vertical. Erosion present on 60-80% of banks. Vegetative protection present on 20-40% of banks, and is insufficient to prevent erosion. AND/OR 60-80% of the stream is covered by sediment. Sediment is temporary/transient in nature, and contributing to instability. AND/OR V-shaped channels have vegetative protection is present on > 40% of the banks and stable sediment deposition is absent.	Deeply incised (or excavated), vertical/lateral instability. Severe incision, flow contained within the banks. Streambed below average rooting depth, majority of banks vertical/undercut. Vegetative protection present on less than 20% of banks, is not preventing erosion. Obvious bank sloughing present. Erosion/raw banks on 80-100%. AND/OR Aggrading channel. Greater than 80% of stream bed is covered by deposition, contributing to instability. Multiple thread channels and/or subterranean flow.	CI
Score	3	2.4	2	1.6	1	1.0
NOTES>>						

2. RIPARIAN BUFFERS: Assess both bank's 100 foot riparian areas along the entire SAR. (rough measurements of length & width may be acceptable)

	Conditional Category							NOTES>>
	Optimal	Suboptimal		Marginal		Poor		
Riparian Buffers	Tree stratum (dbh > 3 inches) present, with > 60% tree canopy cover and a non-maintained understory. Wetlands located within the riparian areas.	**High Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with 30% to 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.	**Low Suboptimal:** Riparian areas with tree stratum (dbh > 3 inches) present, with > 30% tree canopy cover and a maintained understory. Recent cutover (dense vegetation).	**High Marginal:** Non-maintained, dense herbaceous vegetation with either a shrub layer or a tree layer (dbh > 3 inches) present, with <30% tree canopy cover.	**Low Marginal:** Non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, hay production, ponds, open water. If present, tree stratum (dbh >3 inches) present, with <30% tree canopy cover with maintained understory.	**High Poor:** Lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, recently seeded and stabilized, or other comparable condition.	**Low Poor:** Impervious surfaces, mine spoil lands, denuded surfaces, row crops, active feed lots, trails, or other comparable conditions.	
		High	Low	High	Low	High	Low	
Condition Scores	1.5	1.2	1.1	0.85	0.75	0.6	0.5	

1. Delineate riparian areas along each stream bank into Condition Categories and Condition Scores using the descriptors.
2. Determine square footage for each by measuring or estimating length and width. Calculators are provided for you below.
3. Enter the % Riparian Area and Score for each riparian category in the blocks below.

Ensure the sums of % Riparian Blocks equal 100

Right Bank	% Riparian Area>	100%						100%			
	Score >	1.2									
									CI= (Sum % RA * Scores*0.01)/2		
Left Bank	% Riparian Area>	30%	70%					100%	Rt Bank CI >	1.20	CI
	Score >	0.85	0.5						Lt Bank CI >	0.61	0.90

3. INSTREAM HABITAT: Varied substrate sizes, water velocity and depths; woody and leafy debris; stable substrate; low embededness; shade; undercut banks; root mats; SAV; riffle pool complexes, stable features.

NOTES>>

	Conditional Category				
	Optimal	Suboptimal	Marginal	Poor	
Instream Habitat/ Available Cover	Habitat elements are typically present in greater than 50% of the reach.	Stable habitat elements are typically present in 30-50% of the reach and are adequate for maintenance of populations.	Stable habitat elements are typically present in 10-30% of the reach and are adequate for maintenance of populations.	Habitat elements listed above are lacking or are unstable. Habitat elements are typically present in less than 10% of the reach.	CI
Score	1.5	1.2	0.9	0.5	0.90

Stream Impact Assessment Form Page 2

Project #	Applicant	Locality	Cowardin Class.	HUC	Date	Data Point	SAR length	Impact Factor

4. CHANNEL ALTERATION: Stream crossings, riprap, concrete, gabions, or concrete blocks, straightening of channel, channelization, embankments, spoil piles, constrictions, livestock

NOTES>>

	Conditional Category						
	Negligible	Minor		Moderate		Severe	
Channel Alteration	Channelization, dredging, alteration, or hardening absent. Stream has an unaltered pattern or has naturalized.	Less than 20% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines.	20-40% of the stream reach is disrupted by any of the channel alterations listed in the parameter guidelines.	40 - 60% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered.	60 - 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines. If stream has been channelized, normal stable stream meander pattern has not recovered.	Greater than 80% of reach is disrupted by any of the channel alterations listed in the parameter guidelines AND/OR 80% of banks shored with gabion, riprap, or cement.	
SCORE	1.5	1.3	1.1	0.9	0.7	0.5	0.90

REACH CONDITION INDEX and STREAM CONDITION UNITS FOR THIS REACH

NOTE: The CIs and RCI should be rounded to 2 decimal places. The CR should be rounded to a whole number.

THE REACH CONDITION INDEX (RCI) >>	0.74

RCI= (Sum of all CI's)/5

COMPENSATION REQUIREMENT (CR) >>	255

CR = RCI X LF X IF

INSERT PHOTOS:

DESCRIBE PROPOSED IMPACT:

Storm flow from existing pipe will be picked up and piped to 8-foot box culverts.

APEX 8854 Rixlew Lane Manassas, VA 20109

Northfax - Alternative Site Analysis
City of Fairfax, Virginia

N
0 150 300 600
Feet

Drawn by: TW
Date: 2/15/2018

Figure 1.
Alternative Sites

Executive Summary

The environmental assessment of the Northfax property, was conducted in order to identify jurisdictional waters of the U.S. (WOUS), including wetlands, and any water bodies with perennial flow located within the boundaries of the site. WOUS identified during this investigation were delineated by JEI Enterprises, LLC d/b/a Passage Creek Environmental (PCE) in accordance with 33 CFR Part 328 – Definition of Waters of the United States, the 1987 Corps of Engineers' Wetlands Delineation Manual (the Manual)[1], and the Regional Supplement to the Manual (the Supplement)[2] and represent those areas that are most likely within the regulatory purview of the U.S. Army Corps of Engineers (USACE) and/or the Virginia Department of Environmental Quality (DEQ). The identification of water bodies with perennial flow was conducted using the *2002 Perennial Streams Field Identification Protocol* published by the Fairfax County Stormwater Planning Division. Water bodies with perennial flow are identified using a data collection system which results in a number valuation based on certain observable characteristics of the water body under study. All studied water bodies which achieve a score of 25 or greater, using this system, are considered water bodies having perennial flow.

This report represents the consultant's professional opinion based on examination of the vegetation, soils, hydrology and available reference documents. Field indicators can change dramatically with variations in hydrology as well as other factors. Therefore, our conclusions may vary from future observations by others. The delineation of surface waters described by this report and plans constitutes an assessment of features at the site at the time of our review during November 2017 and does not represent conditions which may exist in the future. PCE, its affiliates and subcontractors will not be liable for any unauthorized impacts to jurisdictional wetlands and waters which may result from reliance solely on this report and plans. This report does not, in any way, represent a legal jurisdictional determination of the landward limits of waters and wetlands which may be regulated by the USACE or the DEQ. Nor does this report represent a legal determination regarding the identification of perennial water bodies which may be regulated by Prince William County. It is strongly recommended that the aforementioned agencies be consulted in an effort to gain written confirmation of the delineation described by this report and plans prior to engaging in any design or construction on the property described herein.

The appropriate permits must be obtained from the federal, state and local regulatory agencies prior to any proposed impacts to WOUS or perennial water bodies, including wetland fills and stream crossings.

[1] Environmental Laboratory. (1987). "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

[2] U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0*, ed. J.F. Berkowitz, J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Property Description

The property described herein is located in the City of Fairfax, Virginia and consists of sixteen (16) parcels of land in the northwest quadrant at the intersection of Chain Bridge Road (Route 123) and Fairfax Blvd (Routes 29/50). The property is identified on the USGS Fairfax, VA 7.5' Quadrangle Maps (see Appendix A for the USGS Quadrangle Map) and is located at 38.859309 N latitude and -77.310054 W longitude. The property contains two single-family residences on Orchard Street, and car lots in the southeast portion of the site (see Appendix B for the Aerial Photograph).

The property slopes generally to the southeast and directs runoff to an unnamed tributary to Accotink Creek. The property is located within the Middle Potomac River drainage area identified by Hydrologic Unit Code (HUC) 02070010.

Methodology

Wetlands

The Manual outlines a three-parameter approach to identifying wetlands: dominant hydrophytic vegetation, hydric soils, and indicators of surface and subsurface hydrology. All three parameters must be present for an area to be considered a jurisdictional wetland in accordance with these criteria.

PCE performed a preliminary evaluation using available map resources prior to the field investigation. These resources include, but may not be limited to:

- City of Fairfax Soil Survey (Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture, Web Soil Survey. Available online at: http://websoilsurvey.nrcs.usda.gov/)

- USGS 7.5' Quadrangle, Fairfax, VA (2013). (United States Department of the Interior, United States Geological Service, Washington, DC. Available online at: http://www.usgs.gov/)

- National Wetlands Inventory (United States Department of the Interior, United States Fish and Wildlife Service, Washington, DC. Available online at: http://www.fws.gov/)

The reference information was verified by on-site inspections conducted by PCE during November 2017 to characterize soils, vegetation, and hydrology, and to define the boundaries of waters of the U.S., including wetlands, that may be present on the Property.

Any waters of the U.S. identified on the Property were classified according to the Cowardin System, as described in *Classification of Wetlands and Deepwater Habitats of the United States* (1979). The Cowardin system provides a classification hierarchy which allows resource managers and others to define wetlands according to hydrologic, geomorphologic, chemical, and biological factors.

The NWI map a waterway that crosses the site in a northwest to southeast direction (see Appendix C for the NWI map).

Soils

The Natural Resources Conservation Service defines a hydric soil as a "soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part." The most recent version of Field Indicators of Hydric Soils in the United States[3] provides indicators of hydric soils for the Land Resource Region in which the Property is located. A hydric soil may also be identified by listing in The National List of Hydric Soils, published by the USDA Soil Conservation Service, and state and local hydric soils lists.

The Soil Survey of the City of Fairfax, accessed through the Web Soil Survey on the Natural Resources Conservation Service website, lists the following soil types on the Property (see Appendix D for the Soils Map):

Table 1: Soils Summary Table

Map Unit	Map Unit Name	NRCS Hydric Rating
95	Urban Land	0 - Non-hydric
101	Urban land-Wheaton complex	0 - Non-hydric
103A	Wheaton-Codorus complex, 0-2% slopes	5 - Partially Hydric
105B	Wheaton-Glenelg complex, 2-7% slopes	0 – Non-hydric
107B	Wheaton-Meadowville complex, 2-7% slopes	0 – Non-hydric

Soil samples taken during the field investigation were documented at two (2) locations around the site (see Appendix G for wetland data sheets).

Vegetation

Plant species observed on the site were identified and the wetland indicator status for each species was determined from the *National Wetland Plant List*[4]. The indicator status of a species indicates the probability that the species will occur in a wetland of the northeast region of the United States (Table 2).

[3] United States Department of Agriculture, Natural Resources Conservation Service. 2010. *Field Indicators of Hydric Soils in the United States*, Version 7.0. L.M. Vasilas, G.W. Hurt, and C.V. Noble (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

[4] Robert W. Lichvar and John T. Kartesz. 2009. North American Digital Flora: National Wetland Plant List, version 2.4.0 (https://wetland_plants.usace.army.mil). U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH, and BONAP, Chapel Hill, NC.

Table 2: Plant Indicator Status

Plant Indicator Category	Indicator Symbol	Definition
Obligate Wetland	OBL	Occur almost always (estimated probability >99%) under natural conditions in wetlands
Facultative Wetland	FACW	Usually occur in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands
Facultative	FAC	Equally likely to occur in wetlands and non-wetlands (estimated probability 34%-66%)
Facultative Upland	FACU	Usually occur in non-wetlands (estimated probability 67%-99%) but occasionally found in wetlands (estimated probability 1%-33%)
Obligate Upland	UPL	Occur in wetlands in another region, but occur almost always (estimated probability >99%) under natural conditions in non-wetlands in the region specified.

Undisturbed areas of the site consist of woodland dominated by a mix of upland and bottomland species. The woodland is primarily located in the western portion of the site where development has not occurred. The residential lots include mowed lawns, and the vehicle storage lots are paved.

The woodlands are primarily identified as a Yellow Poplar forest association dominated by Yellow Poplar (*Liriodendron tulipifera*), Oak (*Quercus sp.*), Red Maple (*Acer rubrum*), Eastern Red Cedar (*Juniperus virginiana*) and Sycamore (*Platanus occidentalis*). The shrub layer is dominated by young canopy species, and contains a significant presence of American Bittersweet (*Celastrus scandens*).

Hydrology

The Manual and Supplement state that wetland hydrology encompasses all hydrologic characteristics of areas that are periodically inundated or have soils that are saturated to the surface at some time during the growing season. Hydrologic indicators include, but are not limited to, sediment deposits, visual inundation, drift lines, soil erosion, and hummocking. Evidences of these indicators are present even during dry periods, and therefore are useful indicators of wetland hydrology.

Evidence of hydrologic activity is confined primarily to the banks of the stream channels on site. The primary drainage through the site is to the southeast in an unnamed tributary to Accotink Creek. One other channel along the south side of the site carries flow from a storm drain system to the primary channel. Overland runoff and groundwater discharge provide a minimal amount of input.

Results

Based on the results of this investigation there are areas of the site that have been identified as containing potentially jurisdictional waters. These waters constitute an unnamed drainage

feature identified as an unnamed tributary to Accotink Creek (see Appendix F for Wetland Delineation Map).

Stream A1

Stream A1 is identified as a mapped R3 perennial stream. The stream originates offsite and to the northwest of the property. The channel bed and banks are very well defined with an average depth of 3-6 feet over its length. The channel has a well-defined riffle/pool sequence and sorting of material is strong. Gravel and large cobble dominate the riffles and the pools contain sand and other fine material. Small schools of fish were observed in several areas of the channel. The channel averages 15-18 feet in width over its length and is moderately sinuous.

Stream A2

Stream A2 is a secondary channel that carries flow from a storm-sewer system in an easterly direction to its confluence with Stream A1. The channel originates at the terminus of a 36-inch storm-sewer pipe. The channel is severely degraded from high flows, and is 6 feet deep or more in some locations. Standing water was observed in some locations in the channel, but continuous flow was absent.

Stream A3

Stream A3 is a very short ephemeral stream that carries overland flow to Stream A1from Lots 5 and 6. The channel bed consists of soil material with no other rock/gravelly substrate.

Other

A concrete structure was located on the west side of Stream A1 on Lot 15. The structure is square and appears to have been placed to allow groundwater discharge when the houses to the west, on McLean Avenue, were constructed. Consistent flow from the structure was observed and discharges into Stream A1. Probing with the soil auger did not indicate the presence of a storm-drain pipe inside the structure.

Stream and Wetland Summary

The following table is a summary of the wetlands and streams identified within, or adjacent to, the subject area:

Table 3: Stream and Wetland Summary Table

Classification	Length (LF)	Area (SF)	Area (Ac)
Streams	2,064	N/A	N/A
Wetlands	N/A	N/A	N/A
Total Streams and Wetlands*	**2,064**	**N/A**	**N/A**

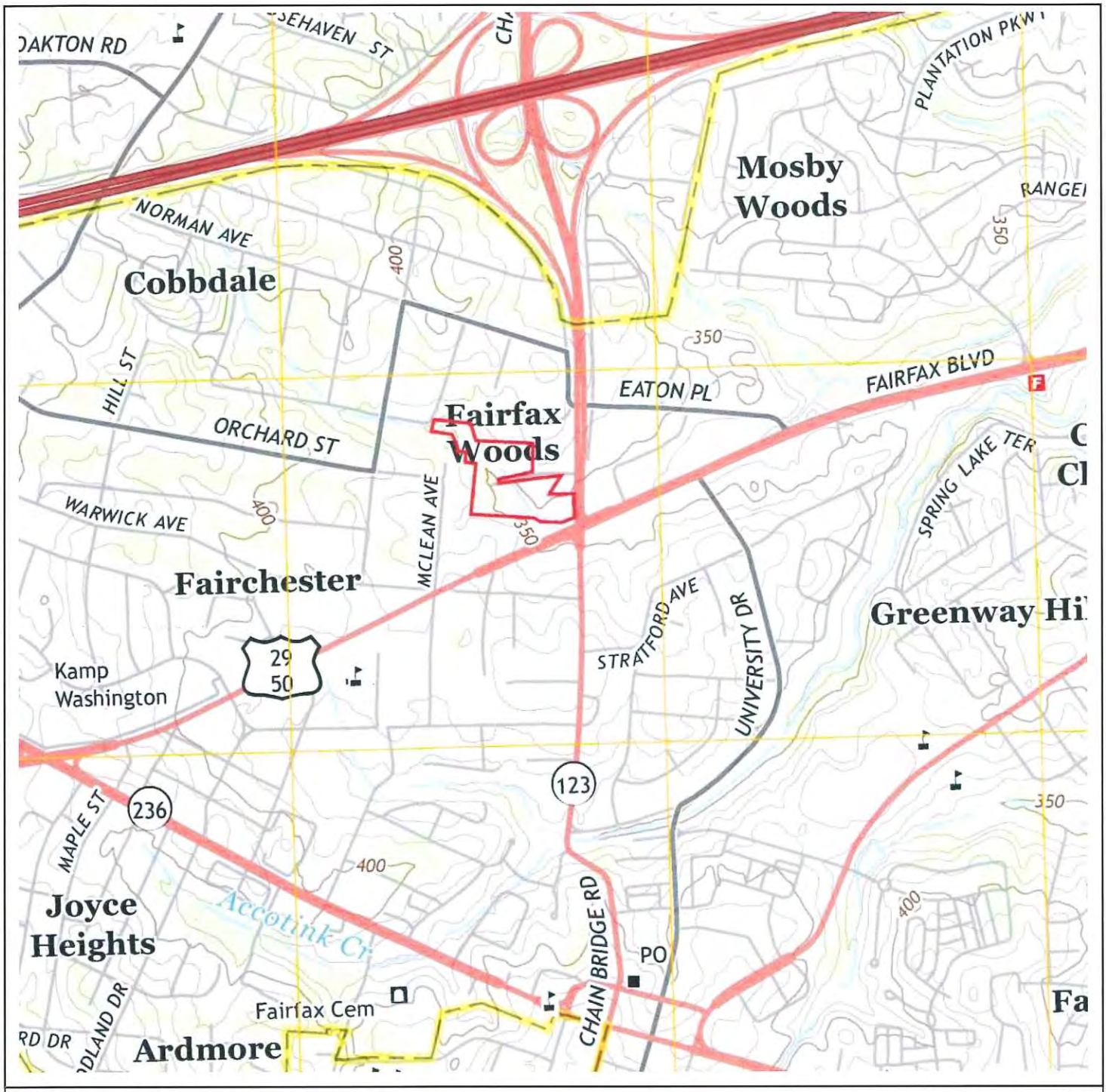
** - The listing of Total Streams and Wetlands shown above is an estimation based upon observed conditions on the date of this site visit. The actual amount of streams and wetlands will be clarified based upon a field survey of actual flagged limits.*

Perennial Flow Determination

The site contains three (3) identifiable stream channels within its boundaries. For purposes of the evaluation the channels are identified as segments and are labeled on the attached map (see Appendix F for Wetland Delineation and PFD Map). Stream A1 is centrally located on the property and carries flow in a southeasterly direction. Stream A2 is located along the southern property boundary and has its confluence with Segment A1. Stream A3 is a very short ephemeral stream.

Table 4: PFD Summary Table

Stream	Flow Regime	PFD Score
A1	R3 Perennial	Mapped
A2	R4 Intermittent	12.5
A3	RE Ephemeral	2.5



Scale: Not to Scale

Date: USGS Quadrangle 2013

JEI Enterprises, LLC

Passage Creek Environmental

221 Lower Valley Road
Strasburg, VA 22657
540-313-6282
jirre@passagecreekenv.com

© Passage Creek Environmental

USGS Quadrangle Map
Northfax
38.859309 N/ -77.310054 W
Fairfax USGS Quadrangle
Fairfax County, VA

Prepared for:
Apex Companies, LLC
8854 Rixlew Lane
Manassas, VA 20109

Scale: Not to Scale

Date: USGS Quadrangle 2013

JEI Enterprises, LLC

Passage Creek Environmental

221 Lower Valley Road
Strasburg, VA 22657
540-313-6282
jirre@passagecreekenv.com

© Passage Creek Environmental

USGS Aerial Map

Northfax

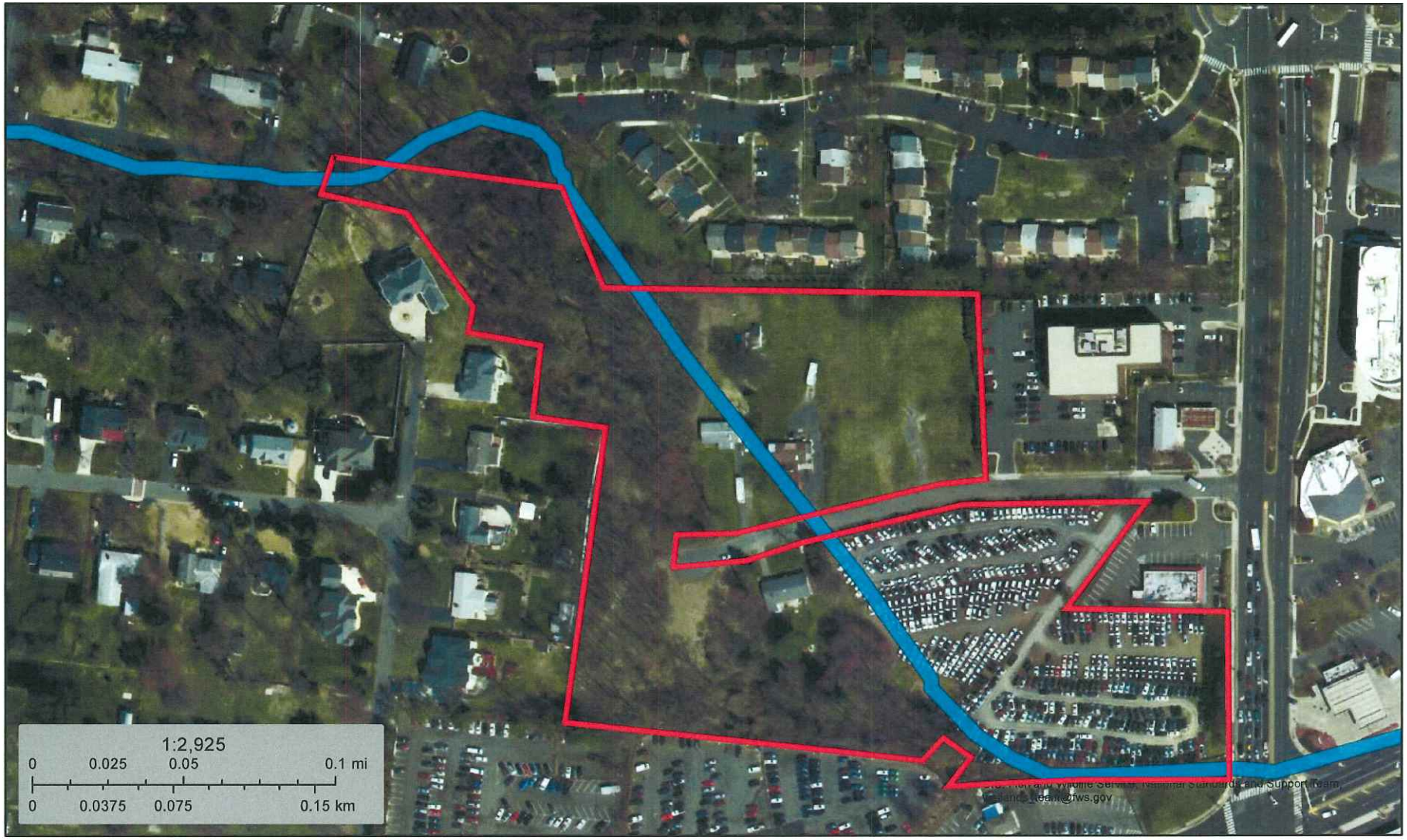
38.859309 N/ -77.310054 W
Fairfax USGS Quadrangle
Fairfax County, VA

Prepared for:
Apex Companies, LLC
8854 Rixlew Lane
Manassas, VA 20109

U.S. Fish and Wildlife Service

National Wetlands Inventory

Northfax Property



November 7, 2017

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

Soil Map—Fairfax City, Virginia
(Northfax Property)

Map Scale: 1:2,300 if printed on A landscape (11" x 8.5") sheet.

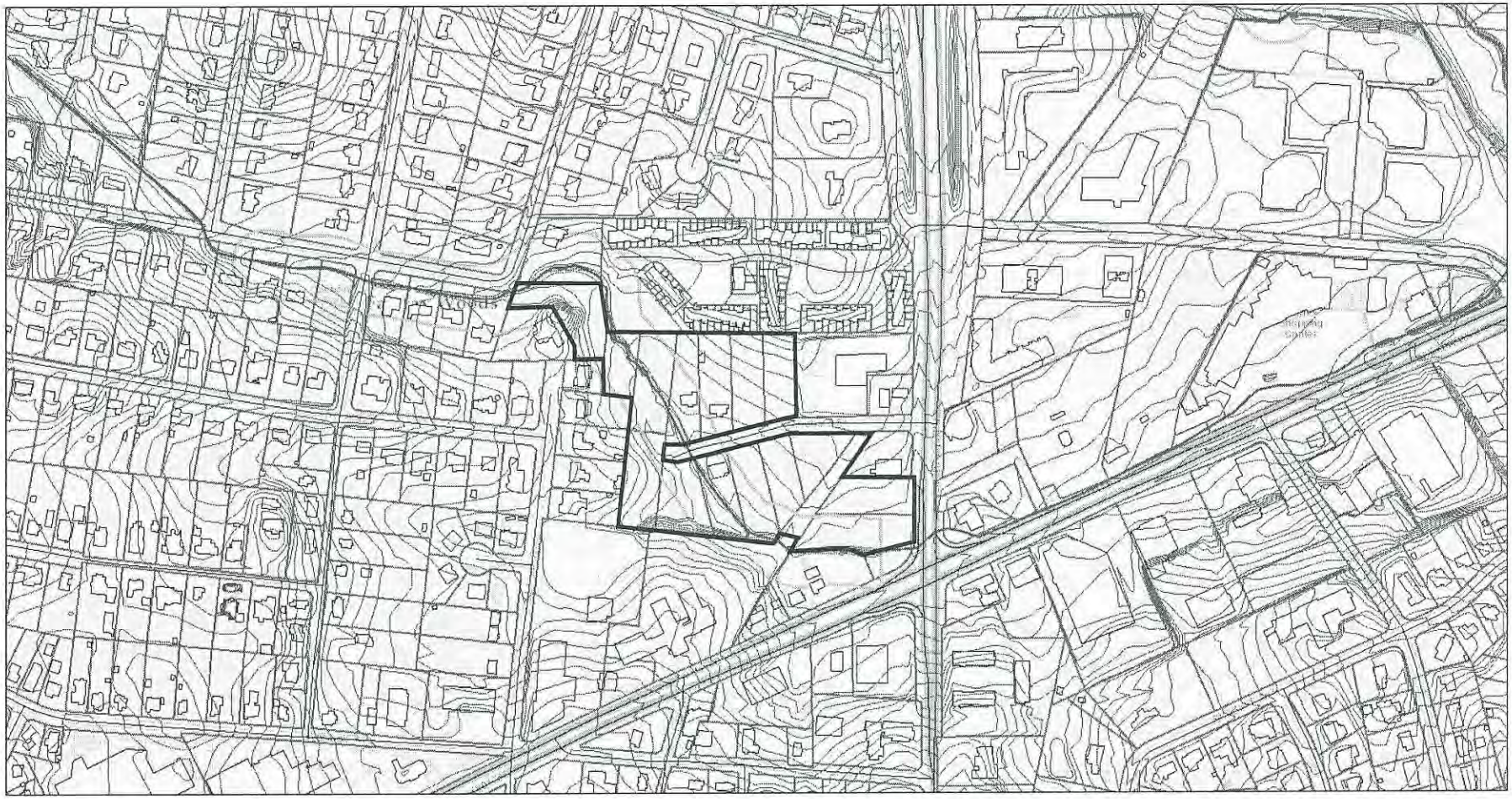
N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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

Northfax Property



October 25, 2016

- Contour Lines (2 foot intervals)
- Streets
- Streams
- Buildings
- Resource Protection Areas
- City Limits
- Parcels

1:4,514

0 0.05 0.1 0.2 mi

0 0.075 0.15 0.3 km

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

City of Fairfax

County of Fairfax, County of Prince William, VITA, Esri, HERE, DeLorme, INCREMENT P, Intermap, USGS, EPA, USDA |

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Northfax **City/County:** City of Fairfax **Sampling Date:** 06-Nov-17

Applicant/Owner: Madison Homes **State:** Virginia **Sampling Point:** DP1

Investigator(s): J. Irre **Section, Township, Range:** S ____ T ____ R ____

Landform (hillslope, terrace, etc.): Floodplain **Local relief (concave, convex, none):** concave **Slope:** 0.0% / 0.0 °

Subregion (LRR or MLRA): MLRA 148 in LRR S **Lat.:** -77.310553 **Long.:** 38.859830 **Datum:** WGS84

Soil Map Unit Name: Wheaton-Codorus complex (103A) **NWI classification:** None

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

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

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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)
- ☐ True Aquatic Plants (B14)
- ☐ 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)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches): 0	
Water Table Present?	Yes ○ No ◉	Depth (inches): 0	**Wetland Hydrology Present?** Yes ○ No ◉
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches): 0	

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

Remarks:

no indicators present

VEGETATION (Five/Four Strata)- Use scientific names of plants.

Sampling Point: DP1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1. Acer rubrum	80	☑	97.6%	FAC
2. Liriodendron tulipifera	2	☐	2.4%	FACU
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
	82	= Total Cover		
Sapling-Sapling/Shrub Stratum (Plot size: 15')				
1. Liriodendron tulipifera	5	☐	13.9%	FACU
2. Lindera benzoin	25	☑	69.4%	FAC
3. Lonicera tatarica	3	☐	8.3%	FACU
4. Ilex opaca	3	☐	8.3%	FACU
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	36	= Total Cover		
Shrub Stratum (Plot size:)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 10')				
1. Allium canadense	5	☑	100.0%	FACU
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
	5	= Total Cover		
Woody Vine Stratum (Plot size: 15')				
1. Lonicera japonica	15	☑	37.5%	FACU
2. Hedera helix	25	☑	62.5%	FACU
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
	40	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

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

Percent of dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	105	x 3 =	315
FACU species	58	x 4 =	232
UPL species	0	x 5 =	0
Column Totals:	163 (A)		547 (B)

Prevalence Index = B/A = 3.356

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is > 50%
- ☐ Prevalence Index is ≤3.0 [1]
- ☐ Morphological Adaptations [1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation [1] (Explain)

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

Definition of Vegetation Strata:

Four Vegetation Strata:

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

Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

Woody vines – Consists of all woody vines greater than 3.28 ft in height.

Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vines – Consists of all woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ○ No ◉

Remarks: (Include photo numbers here or on a separate sheet.)

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: DP1

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
0-10	10YR	4/3	100						Loam	
10-16	10YR	4/3	95	10YR	4/6	5	C	M	Loam	

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) (LRR N)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (MLRA 147,148)
- ☐ Thin Dark Surface (S9) (MLRA 147, 148)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- ☐ Umbric Surface (F13) (MLRA 136, 122)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 148)
- ☐ Red Parent Material (F21) (MLRA 127, 147)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (MLRA 147)
- ☐ Coast Prairie Redox (A16) (MLRA 147,148)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

Does not meet F19 - less than 20% redoximorphic features

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Northfax **City/County:** City of Fairfax **Sampling Date:** 06-Nov-17

Applicant/Owner: Madison Homes **State:** Virginia **Sampling Point:** DP2

Investigator(s): J. Irre **Section, Township, Range:** S ____ T ____ R ____

Landform (hillslope, terrace, etc.): Floodplain **Local relief (concave, convex, none):** concave **Slope:** 0.0% / 0.0 °

Subregion (LRR or MLRA): MLRA 148 in LRR S **Lat.:** -77.310457 **Long.:** 38.860215 **Datum:** WGS84

Soil Map Unit Name: Wheaton-Codorus complex (103A) **NWI classification:** None

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

Are Vegetation ☐ **, Soil** ☐ **, or Hydrology** ☐ **significantly disturbed?** **Are "Normal Circumstances" present?** Yes ◉ No ○

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

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

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

Remarks:

Hydrology

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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)
- ☐ True Aquatic Plants (B14)
- ☐ 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)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ○ No ◉	Depth (inches): 0	
Water Table Present?	Yes ○ No ◉	Depth (inches): 0	**Wetland Hydrology Present?** Yes ◉ No ○
Saturation Present? (includes capillary fringe)	Yes ○ No ◉	Depth (inches): 0	

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

Remarks:

small depression

VEGETATION (Five/Four Strata)- Use scientific names of plants.

Sampling Point: DP2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1. Acer rubrum	45	☑	56.3%	FAC
2. Liriodendron tulipifera	35	☑	43.8%	FACU
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
	80	= Total Cover		

Sapling-Sapling/Shrub Stratum (Plot size: 15')	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1. Ulmus americana	15	☑	34.1%	FACW
2. Lindera benzoin	2	☐	4.5%	FAC
3. Ligustrum vulgare	20	☑	45.5%	FACU
4. Ilex opaca	5	☐	11.4%	FACU
5. Rosa multiflora	2	☐	4.5%	FACU
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	44	= Total Cover		

Shrub Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
	0	= Total Cover		

Herb Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1. Hedera helix	10	☑	100.0%	FACU
2. Lonicera japonica	0	☐	0.0%	FACU
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
11.	0	☐	0.0%	
12.	0	☐	0.0%	
	10	= Total Cover		

Woody Vine Stratum (Plot size: 15')	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
1. Hedera helix	10	☑	50.0%	FACU
2. Lonicera japonica	10	☑	50.0%	FACU
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
6.	0	☐	0.0%	
	20	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	47	x 3 =	141
FACU species	92	x 4 =	368
UPL species	0	x 5 =	0
Column Totals:	154 (A)		539 (B)

Prevalence Index = B/A = 3.500

Hydrophytic Vegetation Indicators:

- ☐ **Rapid Test for Hydrophytic Vegetation**
- ☐ **Dominance Test is > 50%**
- ☐ **Prevalence Index is ≤3.0** [1]
- ☐ **Morphological Adaptations** [1] **(Provide supporting data in Remarks or on a separate sheet)**
- ☐ **Problematic Hydrophytic Vegetation** [1] **(Explain)**

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

Definition of Vegetation Strata:

Four Vegetation Strata:

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

Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

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

Woody vines – Consists of all woody vines greater than 3.28 ft in height.

Five Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody species, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vines – Consists of all woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ○ No ◉

Remarks: (Include photo numbers here or on a separate sheet.)

all Green Ash is dead

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil

Sampling Point: DP2

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

Depth (inches)	Matrix Color (moist)		Matrix %	Redox Features Color (moist)		Redox %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR	4/2	98	10YR	4/4	2	C	M	Loam	
6-13	10YR	4/2	98	10YR	3/4	2	C	M	Clay Loam	
13-21	2.5Y	4/1	95	2.5Y	3/4	5	C	M	Clay	

[1] Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2] Location: PL=Pore Lining. M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) (LRR N)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (MLRA 147,148)
- ☐ Thin Dark Surface (S9) (MLRA 147, 148)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- ☐ Umbric Surface (F13) (MLRA 136, 122)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 148)
- ☐ Red Parent Material (F21) (MLRA 127, 147)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) (MLRA 147)
- ☐ Coast Prairie Redox (A16) (MLRA 147,148)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

Site ID: Northfax - A2 **Total Score:** 12.5

Watershed: Accotink Creek Recorder: J. Irre

Date: 11/6/17 Time: 1409 Evaluators: J. Irre

Field Indicators:

I.) Streamflow and Hydrology	Absent	Weak	Moderate	Strong
1.) Presence or absence of flowing water and > 48 hrs since last rainfall	0 ○	1 ⦿	2 ○	3 ○
2.) Presence of high groundwater table or seeps and springs	0 ⦿	1 ○	2 ○	3 ○
3.) Leaflitter in streambed	1.5 ○	1 ⦿	0.5 ○	0 ○
4.) Drift lines	0 ○	0.5 ⦿	1 ○	1.5 ○
5.) Sediment on debris or plants	0 ⦿	0.5 ○	1 ○	1.5 ○

Total Streamflow and Hydrology Points: 2.5

II.) Geomorphology	Absent	Weak	Moderate	Strong
1.) Riffle-pool sequence	0 ○	1 ⦿	2 ○	3 ○
2.) USDA texture in streambed	0 ○	1 ○	2 ⦿	3 ○
3.) Natural Levees	0 ⦿	1 ○	2 ○	3 ○
4.) Sinuosity	0 ○	1 ⦿	2 ○	3 ○
5.) Active or Relic Floodplain	0 ○	1 ⦿	2 ○	3 ○
6.) Braided Channel	0 ⦿	1 ○	2 ○	3 ○
7.) Recent Alluvial Deposits	0 ⦿	1 ○	2 ○	3 ○
8.) Bankfull Bench present	0 ○	1 ⦿	2 ○	3 ○
9.) Continuous Bed and Bank	0 ○	1 ○	2 ○	3 ⦿
10.) 2nd order or greater **channel** present	***Yes*** = 3 ○		***No*** = 0 ⦿	

Total Geomorphology Points: 9

III.) Streambed Soils				
1.) Redoximorphic features present in sides of channel or head cut.	***Present*** = 0 ⦿		***Absent*** = 1.5 ○	
2.) Chroma	gleyed = 3 ○	1 = 2 ○	2 = 1 ⦿	> 2 = 0 ○

Total Streambed Soils Points: 1

IV.) Vegetation	Absent	Weak	Moderate	Strong
1.) Rooted AQUATIC Plants in Streambed	0 ⦿	1 ○	2 ○	3 ○
2.) Presence of Periphyton/green algae	0 ⦿	1 ○	2 ○	3 ○
3.) Iron Oxidizing Bacteria/Fungus	0 ⦿	0.5 ○	1 ○	1.5 ○

4.) Wetland Plants in Streambed (Skip if no plants present in streambed)

SAV = 3 ○ Mostly OBL = 1.5 ○ Mostly FACW = 1 ○ Mostly FAC = 0.5 ○ Mostly FACU, UPL, or None = 0 ⦿

Total Vegetation Points: 0

Comments:

Front Page Total 612.5 points

V.) Benthic Macroinvertebrates	Absent	Weak	Moderate	Strong
1.) Benthic Macroinvertebrates	0 ◉	0.5 ○	1 ○	1.5 ○
2.) Bivalves	0 ◉	1 ○	2 ○	3 ○
3.) EPT taxa	***Present*** = 3 ○			***Absent*** = 0 ◉

Total Benthic Macroinvertebrates Points: 0

VI.) Vertebrates	Absent	Weak	Moderate	Strong
1.) Fish	0 ◉	0.5 ○	1 ○	1.5 ○
2.) Amphibians	0 ◉	0.5 ○	1 ○	1.5 ○

Total Vertebrates Points: 0

Total Score: 12.5

Benthics/Amphibians Found:

None

Weather

Rain Gauge NOAA.GOV Date of Last Rainfall 11/5/17 Rainfall Amount 0.10" at Dulles

Reach Description

Upstream: Trib ○ Headcut ○ Grade Control ◉ Structure ○ Other: storm-drain outfall

Downstream: Trib ◉ Headcut ○ Grade Control ○ Structure ○ Other:

Comments:

Storm Network Connections and Watershed Observations

input from city storm-sewer system and uncontrolled runoff from adjacent impervious areas.

Riparian Buffers Width

LB: Distance >25 feet ○ 26-50 ◉ 51-75 ○ 76-100 ○ 100+ ○

Cover type: Tree ◉ Shrub ○ Herbaceous ○ Lawn ○ Other: ○

Dominant Species: Tulip Tree, Black Cherry, Black Walnut

RB: Distance >25 feet ○ 26-50 ○ 51-75 ○ 76-100 ○ 100+ ◉

Cover type: Tree ◉ Shrub ○ Herbaceous ○ Lawn ○ Other: ○

Dominant Species: Same as left buffer

Riparian Buffer Comments

buffer in very poor condition from past disturbance

Other Observations and Comments:

stream reach is highly disturbed from past storm events.

Is the reach perennial? **YES** ○ **NO** ◉

Photo #	Direction (US, DS, LB, RB)	Notes
18	US	facing west looking at storm-drain outfall
19	DS	facing east looking downstream

Site ID: Northfax - A3 **Total Score:** 2.5

Watershed: Accotink Creek Recorder: J. Irre

Date: 11/6/17 Time: 1435 Evaluators: J. Irre

Field Indicators:

I.) Streamflow and Hydrology	Absent	Weak	Moderate	Strong
1.) Presence or absence of flowing water and > 48 hrs since last rainfall	0 ⦿	1 ○	2 ○	3 ○
2.) Presence of high groundwater table or seeps and springs	0 ⦿	1 ○	2 ○	3 ○
3.) Leaflitter in streambed	1.5 ○	1 ○	0.5 ⦿	0 ○
4.) Drift lines	0 ⦿	0.5 ○	1 ○	1.5 ○
5.) Sediment on debris or plants	0 ⦿	0.5 ○	1 ○	1.5 ○

Total Streamflow and Hydrology Points: 0.5

II.) Geomorphology	Absent	Weak	Moderate	Strong
1.) Riffle-pool sequence	0 ⦿	1 ○	2 ○	3 ○
2.) USDA texture in streambed	0 ⦿	1 ○	2 ○	3 ○
3.) Natural Levees	0 ⦿	1 ○	2 ○	3 ○
4.) Sinuosity	0 ⦿	1 ○	2 ○	3 ○
5.) Active or Relic Floodplain	0 ⦿	1 ○	2 ○	3 ○
6.) Braided Channel	0 ⦿	1 ○	2 ○	3 ○
7.) Recent Alluvial Deposits	0 ⦿	1 ○	2 ○	3 ○
8.) Bankfull Bench present	0 ⦿	1 ○	2 ○	3 ○
9.) Continuous Bed and Bank	0 ○	1 ○	2 ⦿	3 ○
10.) 2nd order or greater **channel** present	***Yes*** = 3 ○		***No*** = 0 ⦿	

Total Geomorphology Points: 2

III.) Streambed Soils				
1.) Redoximorphic features present in sides of channel or head cut.	***Present*** = 0 ○		***Absent*** = 1.5 ⦿	
2.) Chroma	gleyed = 3 ○	1 = 2 ○	2 = 1 ○	> 2 = 0 ⦿

Total Streambed Soils Points: 1.5

IV.) Vegetation	Absent	Weak	Moderate	Strong
1.) Rooted AQUATIC Plants in Streambed	0 ⦿	1 ○	2 ○	3 ○
2.) Presence of Periphyton/green algae	0 ⦿	1 ○	2 ○	3 ○
3.) Iron Oxidizing Bacteria/Fungus	0 ⦿	0.5 ○	1 ○	1.5 ○

4.) Wetland Plants in Streambed (Skip if no plants present in streambed)

SAV = 3 ○ Mostly OBL = 1.5 ○ Mostly FACW = 1 ○ Mostly FAC = 0.5 ○ Mostly FACU, UPL, or None = 0 ⦿

Total Vegetation Points: 0

Comments:

Front Page Total 2.5 points

V.) Benthic Macroinvertebrates	Absent	Weak	Moderate	Strong
1.) Benthic Macroinvertebrates	0 ⦿	0.5 ○	1 ○	1.5 ○
2.) Bivalves	0 ⦿	1 ○	2 ○	3 ○
3.) EPT taxa	***Present*** = 3 ○			***Absent*** = 0 ⦿

Total Benthic Macroinvertebrates Points: 0

VI.) Vertebrates	Absent	Weak	Moderate	Strong
1.) Fish	0 ⦿	0.5 ○	1 ○	1.5 ○
2.) Amphibians	0 ⦿	0.5 ○	1 ○	1.5 ○

Total Vertebrates Points: 0

Total Score: 2.5

Benthics/Amphibians Found:

None

Weather

Rain Gauge NOAA.GOV Date of Last Rainfall 11/5/17 Rainfall Amount 0.10" at Dulles

Reach Description

Upstream: Trib ○ Headcut ○ Grade Control ○ Structure ⦿ Other: upland

Downstream: Trib ⦿ Headcut ○ Grade Control ○ Structure ○ Other:

Comments:

Storm Network Connections and Watershed Observations

Riparian Buffers Width

LB: Distance >25 feet ○ 26-50 ○ 51-75 ○ 76-100 ○ 100+ ⦿

Cover type: Tree ⦿ Shrub ○ Herbaceous ○ Lawn ○ Other: ○

Dominant Species: Tulip Tree, Black Cherry, Black Walnut, Red Maple

RB: Distance >25 feet ○ 26-50 ○ 51-75 ○ 76-100 ⦿ 100+ ○

Cover type: Tree ⦿ Shrub ○ Herbaceous ○ Lawn ○ Other: ○

Dominant Species: Same as left buffer

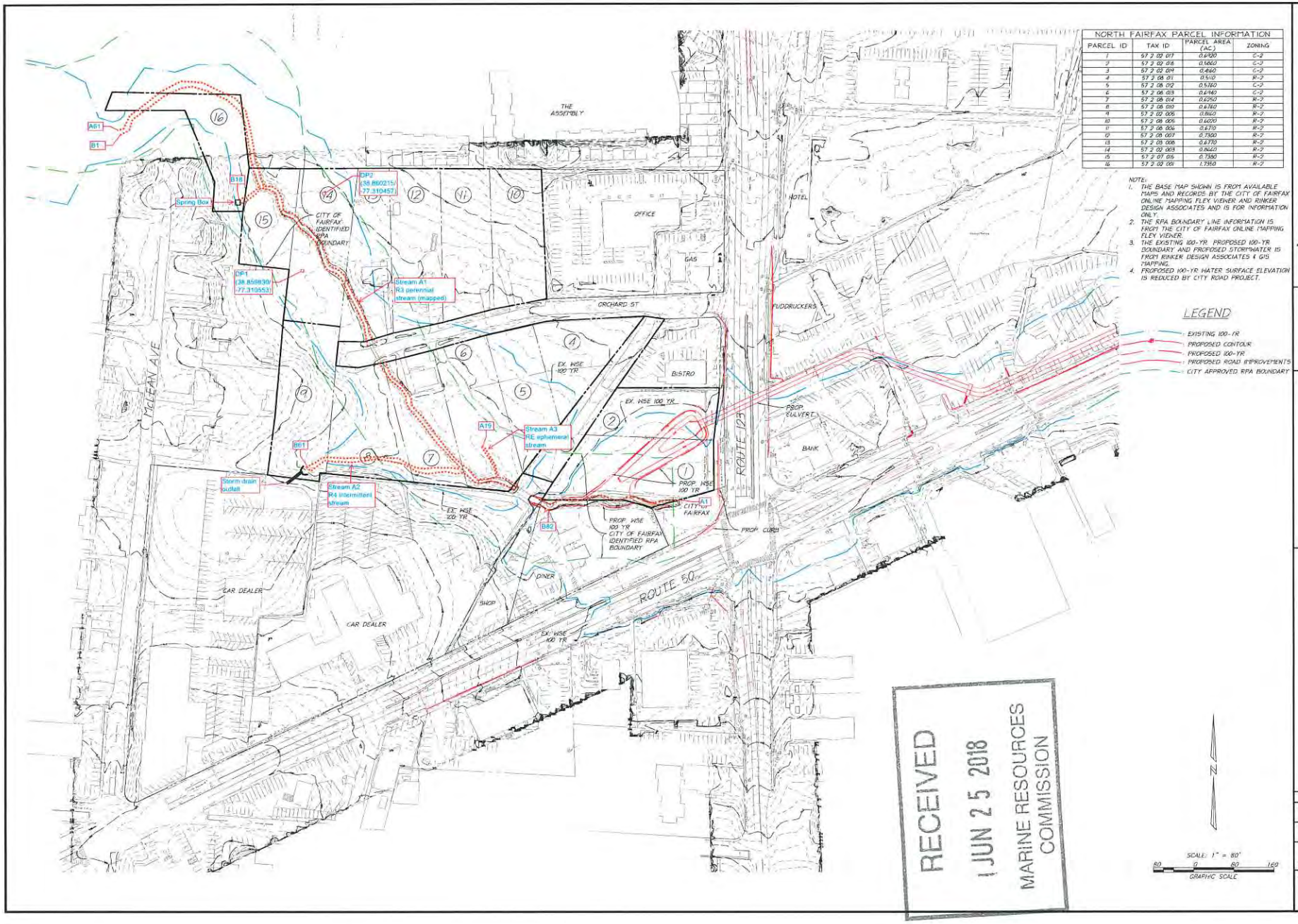
Riparian Buffer Comments

buffer in very poor condition from past disturbance

Other Observations and Comments:

Is the reach perennial? **YES** ○ **NO** ⦿

Photo #	Direction (US, DS, LB, RB)	Notes
3	US	looking upstream in ephemeral stream
4	DS	looking at head of ephemeral stream



NORTH FAIRFAX PARCEL INFORMATION

PARCEL ID	TAX ID	PARCEL AREA (AC)	ZONING
1	57 2 02 017	0.6920	C-2
2	57 2 02 016	0.5660	C-2
3	57 2 02 014	0.4660	C-2
4	57 2 08 011	0.5410	R-2
5	57 2 08 012	0.5760	C-2
6	57 2 08 013	0.6140	C-2
7	57 2 08 014	0.6250	R-2
8	57 2 08 010	0.6760	R-2
9	57 2 02 005	0.8160	R-2
10	57 2 08 005	0.6020	R-2
11	57 2 08 006	0.6710	R-2
12	57 2 08 007	0.7500	R-2
13	57 2 08 008	0.6770	R-2
14	57 2 02 003	0.6640	R-2
15	57 2 07 015	0.7380	R-2
16	57 2 02 001	1.7360	R-2

NOTE:
1. THE BASE MAP SHOWN IS FROM AVAILABLE MAPS AND RECORDS BY THE CITY OF FAIRFAX ONLINE MAPPING FLEX VIEWER AND RINKER DESIGN ASSOCIATES AND IS FOR INFORMATION ONLY.
2. THE RPA BOUNDARY LINE INFORMATION IS FROM THE CITY OF FAIRFAX ONLINE MAPPING FLEX VIEWER.
3. THE EXISTING 100-YR PROPOSED 100-YR BOUNDARY AND PROPOSED STORMWATER IS FROM RINKER DESIGN ASSOCIATES & GIS MAPPING.
4. PROPOSED 100-YR WATER SURFACE ELEVATION IS REDUCED BY CITY ROAD PROJECT.

LEGEND

- EXISTING 100-YR
- PROPOSED CONTOUR
- PROPOSED 100-YR
- PROPOSED ROAD IMPROVEMENTS
- CITY APPROVED RPA BOUNDARY

RECEIVED
JUN 25 2018
MARINE RESOURCES COMMISSION

BASE MAP

NORTHFAX AREA
CITY OF FAIRFAX

PROJECT NO. 13139.001.00
SCALE: 1"=80'
DATE: 10-14-2013
DESIGN: JR
DRAWN: NBM
CHECKED: WRZ
SHEET No.
1 OF 1

101486

Photo 1 – Facing east looking at old concrete bridge

Photo 2 – Facing west, looking upstream from same location as previous photo

Photo 3 – Facing NW, looking upstream in Stream A3

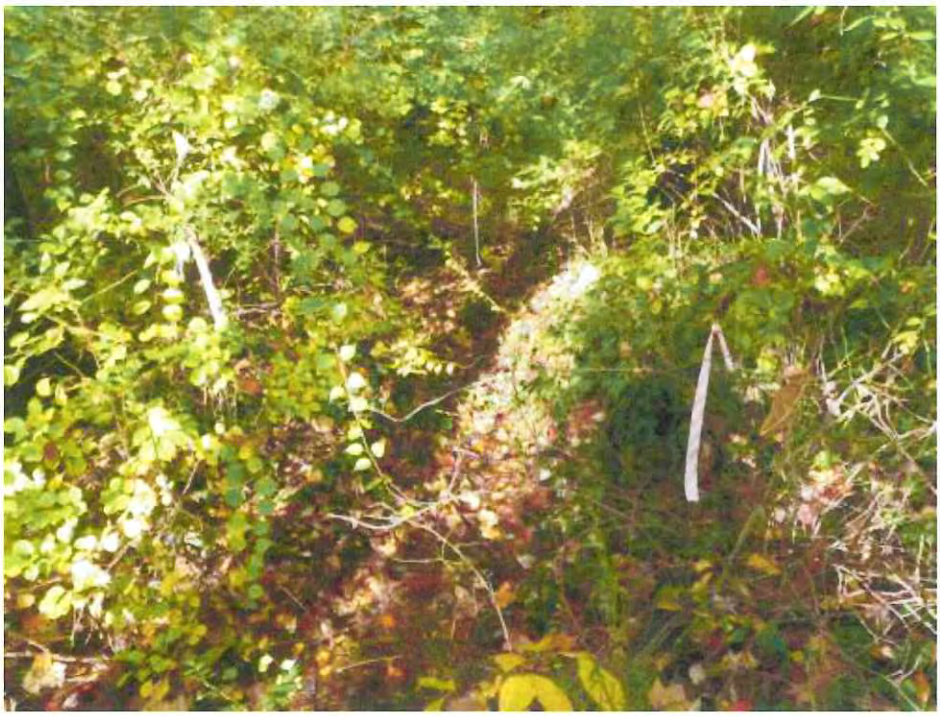


Photo 4 – Looking at head of Stream A3

Photo 5 – Facing NW, looking upstream in Stream A1 on Lot 7

Photo 6 – Facing SE, looking downstream in Stream A1 on Lot 7

Photo 7 – Looking at concrete structure on Lot 15

Photo 8 – Looking downstream from concrete structure shown in previous photo

Photo 9 – Facing E, looking at confluence of Stream A1 and discharge from concrete box

Photo 10 – Facing NW, looking upstream in Stream A1 from same location as previous photo

Photo 11 – Facing SE, looking downstream in Stream A1

Photo 12 – Location of wetland sample point DP1 west of Stream A1

Photo 13 – Soil profile at wetland sample point DP1

Photo 14 – Facing NW, looking upstream in Stream A1 on Lot 12/13 boundary

Photo 15 – Facing SE, looking downstream in Stream A1 from Lot 12/13 boundary

Photo 16 – Facing W, looking at City storm-drain outfall in Stream A2

Photo 17 – Facing E, looking downstream from same location as previous photo

Photo 18 – Facing E, looking at Stream A1 along rear of used car lot

Photo 19 – Location of wetland sample point DP2 east of Stream A1

Photo 20 – Soil profile at wetland sample point DP2

USACE Summary Sheet for a Jurisdictional Determination

Property Name: Richmond Station

Location: 38.748602 N Latitude, -77.444646 W Longitude

USGS 7.5' Quadrangle: Independent Hill/Manassas, VA

HUC Code: 02070010 (Middle Potomac River)

Tributary: UT to Russia Branch

Property Owner: Kline Ventures, LLC & Leo Geo Ventures et al.

Applicant/Agent Information:

Applicant:

Richmond American Homes of VA, Inc.
12220 Sunset Hills Rd., Suite 400
Reston, VA 20191
Attn: Robert J. Baker, VP

Agent:

Passage Creek Environmental
221 Lower Valley Road
Strasburg, VA 22657
Attn: James E. Irre, PWD, PWS

Inventory of jurisdictional areas on the property:

Classification	Length (LF)	Area (SF)	Area (Ac)
Streams	3,000	N/A	N/A
Wetlands	N/A	28,314	0.65
Total Streams and Wetlands*	**3,000**	**28,314**	**0.65**

** - The listing of Total Streams and Wetlands shown above is an estimation based upon observed conditions on the date of this site visit. The actual amount of streams and wetlands will be clarified based upon a field survey of actual flagged limit.*

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

February 5, 2018

PRELIMINARY JURISDICTIONAL DETERMINATION

Northern Virginia Regulatory Section
NAO-2017-02192 (Northfax Project)

Northfax JV LLC
c/o The Lann Companies
Attn: Mr. John Napolitano
3900 Jermantown Road, Suite 300
Fairfax, Virginia 22030

Dear Mr. Napolitano:

This letter is in regard to your request for a verification of a preliminary jurisdictional determination for waters of the U.S. (including wetlands) on property known as the Northfax Project, located on 16 parcels on approximately 10.3 acres, northwest quadrant at the intersection of Chain Bridge Road (Route 123) and Fairfax Boulevard (U.S. Routes 29/50) in the City of Fairfax, Virginia.

The map entitled "Northfax Project", by Christopher Consultants and submitted by Apex Companies, LLC dated December 4, 2017 and revised January 19, 2018 (*copy enclosed)* provides the location of waters and/or wetlands on the property listed above. The basis for this delineation includes the presence of an ordinary high water mark. This letter is not confirming the Cowardin classifications of these aquatic resources.

Discharges of dredged or fill material, including those associated with mechanized landclearing, into waters and/or wetlands on this site may require a Department of the Army permit and authorization by state and local authorities including a Virginia Water Protection Permit from the Virginia Department of Environmental Quality (DEQ), a permit from the Virginia Marine Resources Commission (VMRC) and/or a permit from your local wetlands board. This letter is a confirmation of the Corps preliminary jurisdiction for the waters and/or wetlands on the subject property and does not authorize any work in these areas. Please obtain all required permits before starting work in the delineated waters/wetland areas.

This is a preliminary jurisdictional determination and is therefore not a legally binding determination regarding whether Corps jurisdiction applies to the waters or wetlands in question. Accordingly, you may either consent to jurisdiction as set out in this preliminary jurisdictional determination and the attachments hereto if you agree with the determination, or you may request and obtain an approved jurisdictional determination.

"This preliminary jurisdictional determination and associated wetland delineation map may be submitted with a permit application."

Enclosed is a copy of the "Preliminary Jurisdictional Determination Form". Please review the document, sign, and return one copy to Ms. Theresita Crockett-Augustine either via email (**theresita.m.crockett-augustine@usace.army.mil**) or via standard mail to US Army Corps of Engineers, Northern Virginia Field Office at 18139 Triangle Plaza, Suite 213, Dumfries, Virginia 22026 within 30 days of receipt and keep one for your records. This delineation of waters and/or wetlands is valid for a period of five years from the date of this letter unless new information warrants revision prior to the expiration date.

If you have any questions, please contact Ms. Theresita Crockett-Augustine at (703) 221-9736 or **theresita.m.crockett-augustine@usace.army.mil**.

Sincerely,

Theresita Crockett-Augustine
Environmental Scientist
Northern Virginia Regulatory Section

Enclosures

AUGUSTINE.THERESITA.CROCKETT.1230827040

Digitally signed by AUGUSTINE.THERESITA.CROCKETT.1230827040
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=AUGUSTINE.THERESITA.CROCKETT.1230827040
Date: 2018.02.05 16:42:10 -05'00'

From: Apex Companies
Jason Franti
jfranti@apexcos.com
703-396-6730

To: U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061

March 9, 2018

Re: Project Review Request, Northfax, City of Fairfax, Virginia, 05E2VA00-2018-SLI-1551

We have reviewed the referenced project using the Virginia Field Office's online project review process and have followed all guidance and instructions in completing the review. We completed our review on March 9, 2018 and are submitting our project review package in accordance with the instructions for further review.

Our proposed action consists of: The Northfax project envisions the construction of residential homes, potentially a mix of townhouse, condominiums and a senior living facility, to maximize living space, while also providing commercial space for businesses and visitors.

The location of the project and the action area are identified on the enclosed map.

The project is expected to be completed, tentative start date mid-2020, work is expected to take approximately 24 months to complete.

This project review is needed for the City of Fairfax, Virginia

The enclosed project review package provides the information about the species, critical habitat, and bald eagles considered in our review, and the species conclusions table included in the package identifies our determinations for the resources that may be affected by the project.

For additional information, please contact Jason Franti at the address listed above.

Sincerely,

Jason Franti
Sr. Project Manager
Apex Companies, LLC

Enclosures:

1) ENTIRE PROJECT REVIEW PACKAGE
2) USGS Site Map

March 9, 2018

U.S. Fish & Wildlife Service Endangered Species Act Compliance
Northfax Development Project
City of Fairfax, Virginia

Consultation Code: 05E2VA00-2018-SLI-1551
Event Code: 05E2VA00-2018-E-04580

To Whom It May Concern:

Apex has been retained by Northfax JV, LLC, c/o The Lann Companies, to conduct permitting services for the proposed Northfax redevelopment project located in the City of Fairfax, Virginia. Northfax is part of a comprehensive strategy for the growth and redevelopment of the Fairfax Boulevard corridor through the City of Fairfax, as demonstrated by the City's Fairfax Boulevard Master Plan. In accordance with this Master Plan, the project is in the Northfax redevelopment node which is designed to create a mix of residential and commercial uses in a highly urbanized setting.

The current project proposes impacts across the entire project boundary. The site currently consists of two single family homes with mowed grass yards, two parking lots (approx. 3 acres) constructed of rolled stone over fabric, and approximately 4 acres of woods. The wooded area is a mix of pine and hardwoods, with perennial and intermittent streams that flow through the site. Orchard Street is located within the project limits and dead ends in a cul-de-sac. The perennial stream enters the site at the northwest corner, flows south and east through the woods, and enters a culvert that crosses under Route 123, near the intersection of Rt. 123 and Rt. 50. Stormwater enters the site, via a culvert, at the southwest corner of the project site, flows along the southern border into the perennial stream. A wetland delineation was performed on the site and a Preliminary Jurisdictional Determination was approved by the Army Corps of Engineers on February 5, 2018. It was determined, no vegetated non-tidal wetlands are located within the project boundaries.

Impacts to the site will remove all current structures located within the project boundary and clear the wooded section of the site, approximately 4 acres. The perennial stream will be piped across the site and will connect to a new culvert crossing under Rt. 123. As part of Rt. 123/Rt. 50 improvements the new culvert is currently under construction. The perennial stream will enter piping at the northwest corner of the site and flow southeast to enter the Rt. 123 culvert crossing. Stormwater entering the site, via the culvert, in the southwest corner will be piped north to intersect the piped perennial stream.

Tree removal will occur but will be conducted outside of the TOYR (April 15 - Sept 15) for noted species. Approximately 4 acres, of the 10.6-acre project site, is wooded and substantial portions will be cleared.

The site was reviewed for potential federally listed endangered, threatened, candidate, and proposed species habitat, including critical habitat. According to the USFWS Information, Planning, and Conservation System (IPaC) Official Species List, no species were identified to be considered in the effects analysis for the site. Prior to any land disturbance activities, erosion and sediment control measures, conforming to FERC and Virginia Standards, will be put in place to prevent any sediment runoff from impacting nearby streams and rivers. ESC measures will remain in place until the site is stabilized. According to the Virginia Department of Game and Inland Fisheries (VDGIF) map, features utilized by the northern long-eared bat for hibernacula (e.g., caves,

mines, or tunnels) are not located within 5.5 miles of any either site nor are maternity roost trees within 150 feet of the sites. If northern long-eared bats were to forage in and around the site, this activity would occur at dusk after construction activities ended for the day. The IPaC Official Species Lists generated is attached as part of this submittal package.

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Center for Conservation Biology (CCB) Bald Eagle Nest Locator was used to determine if bald eagle nests or bald eagle nest buffers occur within 660 feet of the Project sites. VA Eagles Maps were produced using the CCB Mapping Portal are included in this submittal package. No site occurs within 660 feet of an active bald eagle nest and project activities are not likely to disturb this species. Additionally, no site occurs within a designated bald eagle concentration area according to the USFWS Virginia Field Office's Bald Eagle Map Tool.

A Species Conclusion Table that summarizes IPaC identified federal T&E species/resources, species conclusions, Endangered Species Act (ESA) Section 7/ Eagle Act Determination, and documentation is included.

State level coordination with the Virginia Department of Conservation and Recreation-Division of Natural Heritage (VDCR-NH) is being conducted in parallel with Federal coordination.

Please do not hesitate to contact me should you have any questions or comments or require any additional information.

Sincerely,

Apex Companies, LLC

Jason Franti
Senior Project Manager

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
Phone: (804) 693-6694 Fax: (804) 693-9032
http://www.fws.gov/northeast/virginiafield/

In Reply Refer To:
Consultation Code: 05E2VA00-2018-SLI-1551
Event Code: 05E2VA00-2018-E-05151
Project Name: Northfax

March 09, 2018

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2018-SLI-1551

Event Code: 05E2VA00-2018-E-05151

Project Name: Northfax

Project Type: DEVELOPMENT

Project Description: Northfax is part of a comprehensive strategy for the growth and redevelopment of the Fairfax Boulevard corridor through the City of Fairfax, as demonstrated by the City's Fairfax Boulevard Master Plan. In accordance with this Master Plan, the project will create a mix of residential and commercial uses in a highly urbanized setting, serving the needs of the community while attracting those who would otherwise just pass through the area. The project will occur in an area which has not seen significant improvement in many years, and will allow residents to work near where they live, reducing traffic congestion on area roads. The Northfax project envisions the construction of residential homes, potentially a mix of townhouse, condominiums and a senior living facility, to maximize living space, while also providing commercial space for businesses and visitors.

The current project proposes impacts across the entire project boundary. The site currently consists of two single family homes with mowed grass yards, two parking lots (approx. 3 acres) constructed of rolled stone over fabric, and approximately 4 acres of woods. The wooded area is a mix of pine and hardwoods, with perennial and intermittent streams that flow through the site. Orchard Street is located within the project limits and dead ends in a cul-de-sac. The perennial stream enters the site at the northeast corner, flows south and east through the woods, and enters a culvert that crosses under Route 123, near the intersection of Rt. 123 and Rt. 50. Stormwater enters the site, via a culvert, at the southwest corner of the project site, flows along the southern border into the perennial stream. A wetland delineation was performed on the site and a Preliminary Jurisdictional Determination was approved by the Army Corps of Engineers on February 5, 2018. It was determined, no vegetated non-tidal wetlands are located within the project boundaries. Impacts to the site will remove all current structures located within the project boundary and clear substantial portions of the wooded section of the site. The perennial stream will be piped across the site and will connect to a new culvert crossing under Rt. 123. As part of Rt. 123/Rt. 50 improvements the new culvert is currently under construction. The perennial stream will enter piping at the northwest corner of the site and flow southeast to enter the

Rt. 123 culvert crossing. Stormwater entering the site, via the culvert, in the southwest corner will be piped north to intersect the piped perennial stream.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.85963005549672N77.31001509534696W

Counties: Fairfax, VA

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

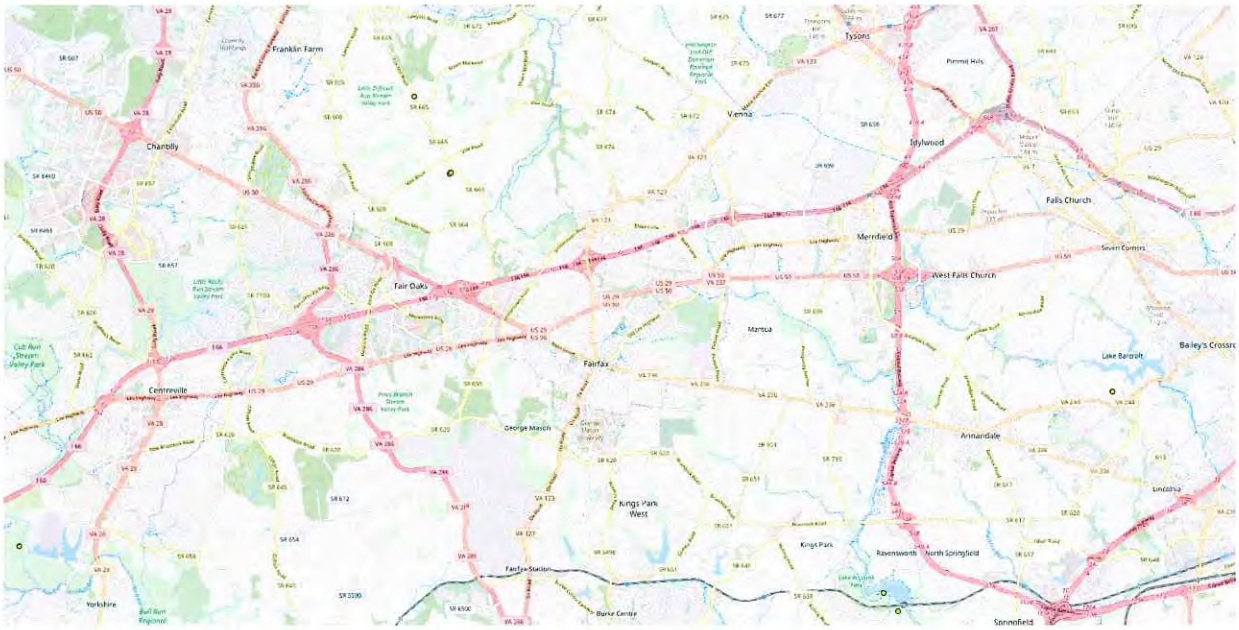
Species Conclusions Table

Project Name: Northfax

Development Date: March 9, 2018

Species / Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Notes / Documentation
ESA listed species	species not present	No effect	According to FWS, as stated in the IPaC report, there are a total of 0 threatened, endangered, or candidate species on this project location.
Critical habitat	no critical habitat present	Not Likely to Adversely Affect	
Northern Long Eared Bat	Suitable habitat present	No Effect/Not Likely to Adversely Affect	Implementing a TOYR (April 15 - Sept 15) for tree clearing that is not substantial acreage.
Bald eagle	Unlikely to disturb nesting bald eagles; does not intersect with an eagle concentration area	No Eagle Act permit required	According to the Center for Conservation Biology Va Eagles Nest Locator, the site does not occur within 660 feet of an active bald eagle nest. Additionally, the site does not occur within a designated bald eagle concentration area according to the USFWS Virginia Field Office's Bald Eagle Map Tool.

CCB Mapping Portal



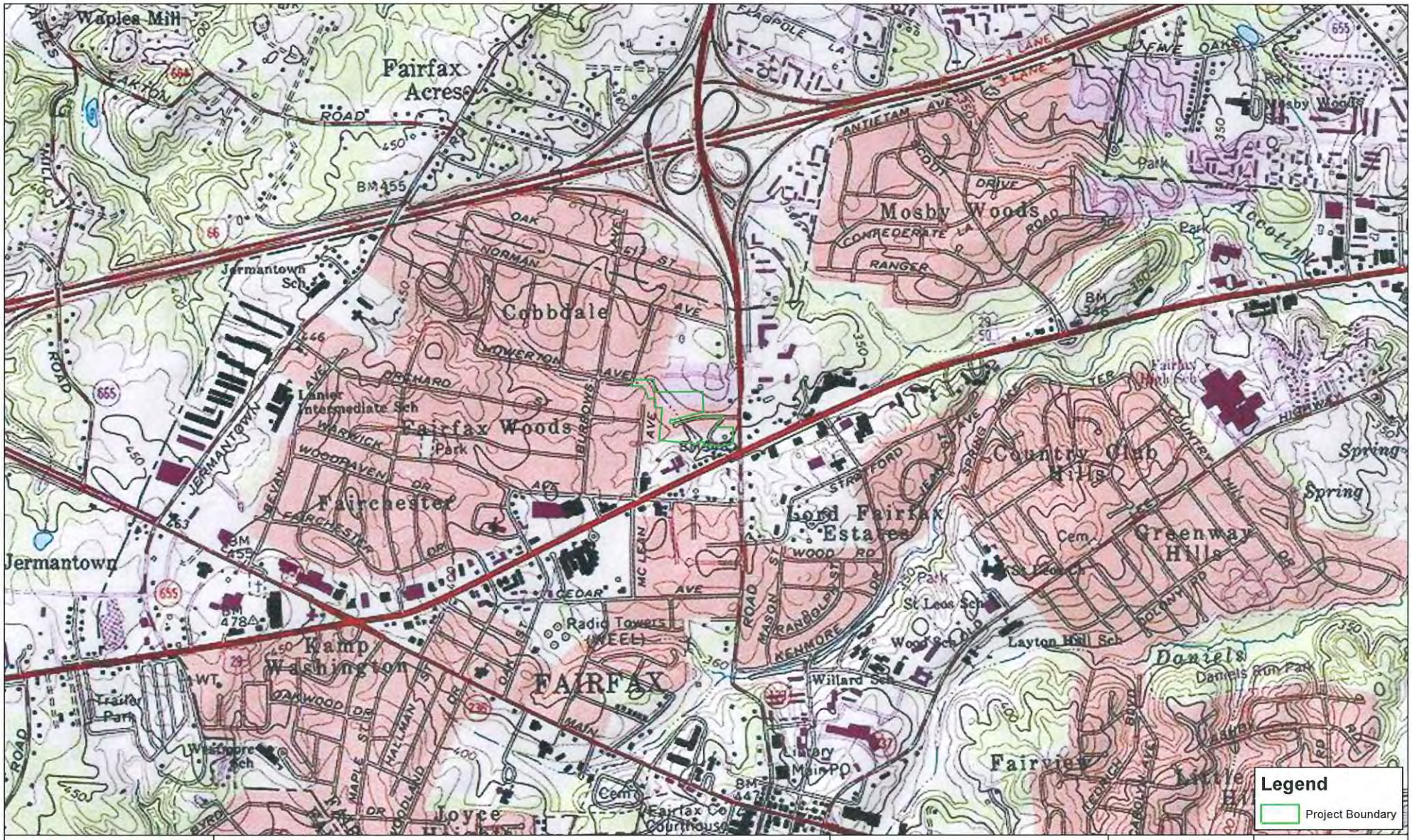
Layers: VA Eagle Nest Locator

Map Center [longitude, latitude]: [-77.30426788330077, 38.86290210952156]

Map Link:
http://www.ccbbirds.org/maps/#layer=VA+Eagle+Nest+Locator&zoom=13&lat=38.86290210952156&lng=-77.30426788330077&legend=legend_tab_7c321b7e-e523-11e4-aaa0-0e0c41326911&base=Street+Map+%28OSM%29

Report Generated On: 02/09/2018

The Center for Conservation Biology (CCB) provides certain data online as a free service to the public and the regulatory sector. CCB encourages the use of its data sets in wildlife conservation and management applications. These data are protected by intellectual property laws. All users are reminded to view the Data Use Agreement to ensure compliance with our data use policies. For additional data access questions, view our Data Distribution Policy, or contact our Data Manager, Marie Pitts, at mlpitts@wm.edu or 757-221-7503.



8854 Rixlew Lane
Manassas, VA 20109

APEX

Northfax Project Location Map

City of Fairfax, Virginia

N

0 500 1,000 2,000

Feet

38°51'33.44"N
77°18'36.93"W

Drawn by: TW
Date: 2/7/2018

Figure 1.
Site Location Map

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
Deputy Director of Administration and Finance

Russell W. Baxter
Deputy Director of Dam Safety & Floodplain Management and Soil & Water Conservation

Thomas L. Smith
Deputy Director of Operations

April 18, 2018

Jason Franti
Apex Environmental, Inc.
8854 Rixlew Lane
Manassas, VA 20109

Re: Northfax

Dear Mr. Franti:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to information currently in our files, the Rusty patched bumble bee (*Bombus affinis*, G1/S1/LE/NL) has been historically documented within two miles of the project site. The Rusty patched bumble bee is listed as endangered under the Endangered Species Act by U.S. Fish and Wildlife Service (USFWS) effective March 21, 2017. Since the late 1990s, the Rusty patched bumble bee has declined throughout its historical range including Virginia and is anticipated to be extinct in all ecoregions by 2030. Threats to the Rusty patched bumble bee include disease, pesticides, climate change, habitat loss and small population dynamics.

DCR recommends the implementation of the following USFWS voluntary measures for the conservation of the Rusty patched bumble bee: avoid pesticide use, avoid herbicide use, and plant native flowers that bloom throughout the spring and summer to support pollinator habitat.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

A fee of $125.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, Department of Conservation and Recreation, Division of Natural Heritage, 600 East Main Street, 24th Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dgif.virginia.gov.

Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on this project.

Sincerely,

S. René Hypes
Project Review Coordinator

Information Services Order Form

Updated 2016

Project Review Coordinator
Department of Conservation and Recreation
Natural Heritage Program
600 E. Main St., 24th Floor
Richmond, VA 23219
Voice: 804-371-2708, Fax: 804-371-2674
nhreview@dcr.virginia.gov

ENVIRONMENTAL REVIEW SERVICES:

☑ **Project Review** (30 calendar day turnaround)..**$90 per site**; add **$35 for 1-5** natural heritage occurrences (rare plants, rare animals, significant communities and karst) and **$60 for 6** or more occurrences.
Multi-quad project area **$90 per quad**.

☐ **Project Review with Accompanying Map...$250 per site;** for projects with potential impact to Natural Heritage Resources including alternative energy projects, written comments with 8.5 X 11 map displaying Natural Heritage Screening Coverage.

☐ **Project Review with Accompanying ArcGIS Shapefile...$500-** 1 to 5 1:24,000 quadrangles (intersecting the project area), **$1000** 6-12 quadrangles (intersecting the project area), **$1500** 13-100 quadrangles (intersecting the project area)...one-time release of spatial natural heritage screening coverage (Conservation Sites, Stream Conservation Units and General Location Records) data as identified in the project review letter...data is valid for 6 months and requires a signed license agreement

☐ **Priority Service** (15 calendar day turnaround)...**$300 surcharge**

☐ **Priority Service** (5 business day turnaround)..**$500 surcharge**

Details: Describe project in the space below, please include detailed project description, **any proposed tree removal**, project location information including **latitude, longitude**, acreage, and existing site conditions (photographs if available). Attach additional information as necessary. In order to ensure an accurate assessment, please attach an **electronic copy of a site map** (preferably from a USGS topo map with identified project boundaries) and all other information to the information services order form. **Incomplete submittal of information will delay the review process.**

Project Number & Title: Northfax JV LLC

Project Description: (Maximum Characters: 1000)
The current project proposes impacts across the entire project boundary. The site currently consists of two single family homes with mowed grass yards, two parking lots (approx. 3 acres) constructed of rolled stone over fabric, and approximately 4 acres of woods. The wooded area is a mix of pine and hardwoods, with perennial and intermittent streams that flow through the site. Orchard Street is located within the project limits and dead ends in a cul-de-sac. The perennial stream enters the site at the northwest corner, flows south and east through the woods, and enters a culvert that crosses under Route 123, near the intersection of Rt. 123 and Rt. 50. Stormwater enters the site, via a culvert, at the southwest corner of the project site, flows along the southern border into the perennial stream. A wetland delineation was performed on the site and a Preliminary Jurisdictional Determination was approved by the Army Corps of Engineers on February 5, 2018. It was determined, no vegetated non-tidal wetlands are located within the project boundaries.
Impacts to the site will remove all current structures located within the project boundary and clear substantial sections of the forested areas. The perennial stream will be piped across the site and will connect to a new culvert crossing under Rt. 123. As part of Rt. 123/Rt. 50 improvements the new culvert is currently under construction. The perennial stream will enter piping at the northwest corner of the site and flow southeast to enter the Rt. 123 culvert crossing. . Stormwater entering the site, via the culvert, in the southwest corner will be piped north to intersect the piped perennial stream.

Lat & Long: 38°51'33.94"N; 77°18'37.20"

Natural Heritage Resource Reports & Distribution Maps

☐ Custom NHR Maps (describe, call for more information).....**$80/hour**

☐ Custom NHR Reports (describe, call for more information).....**$60/hour**

SUBSCRIPTION SERVICES:

Natural Heritage Data Explorer Subscription Service:

☐ (unlimited access per subscription year, **a digital license agreement is required** (PDF)).....**$1000/yr.**

Digital Conservation Sites Subscription Service (specify area of interest; **a digital license agreement is required** (PDF))

☐ 1 county or 12 quads or less.....**$1000/yr.**

☐ 13-100 quads.....**$3500/yr.**

☐ Statewide coverage.....**$6000/yr.**

Please provide details in the space below: **(failure to provide information will delay subscription processing; Maximum characters: 700)**

Conditions:

1. Digitized DCR natural heritage resource locational data for GIS or map production, whether provided by DCR digitally or entered by the client from tables or reports, may not be used without first completing a data licensing agreement with DCR Division of Natural Heritage. A license form is available on request.
2. Although DCR-DNH data are closely quality controlled, DCR-DNH makes no warranty as to the fitness of the data for any purpose.
3. Any publication of data provided by DCR, whether as text, table or map, must acknowledge Virginia DCR-Natural Heritage Program, and include the date the data were provided by DCR.
4. If fees are assessed, an invoice will be included with the response. **Please do not pre-pay.** Payment is due within 30 days of receipt. **Minimum charge for hourly fees is $40.**

I understand and agree to the above conditions: ☐ Yes (Required for Fee Services)

DCR maintains lists of natural heritage resources monitored by the Natural Heritage Program. These lists provide information on taxonomy, rarity and federal/state legal statuses. These reports are not site specific and are **NOT** to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

Due to staff and budget constraints we ask that you use the online service whenever possible to download these lists of natural heritage resources:

Hyperlink to on-line reports

The Natural Communities of Virginia, 2nd Approximation

☐ **Natural Heritage Resources of Virginia: Rare Animals** (PDF)

☐ **Natural Heritage Resources of Virginia: Rare Plants** (PDF)

County lists of natural heritage resources can be generated using the Internet Database Search Tool or requested below:

Send data and invoice (if applicable) to: (Any fields with * are required fields. We will contact you if we have any questions regarding your data needs)

* Name:	* Company:
Jason Franti	Apex Companies, LLC

* Address:
8854 Rixlew Lane

* City:	* State:	* Zip:
Manassas	VA	20109

* Phone:	Fax:
703 - 396 - 6730	703 - 396 - 6730

* Taxpayer ID :
52-1562320

* Email:	* Type the Email Again:
jfranti@apexcos.com	jfranti@apexcos.com

Upload files:

Choose File Northfax_DCR.pdf

Choose File No file chosen

Upload another file

*** Human Check (2 + 1 =)**

Submit

Virginia Department of Conservation and Recreation
600 East Main Street | Richmond, VA 23219-2094 | 804-786-6124

Please send website comments to **web@dcr.virginia.gov**
Address general inquiries to **pco@dcr.virginia.gov**
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APEX

March 9, 2018

Project Review Coordinator
Department of Conservation and Recreation
Natural Heritage Program
600 E. Main St., 24th Floor
Richmond, VA 23219
Voice: 804-371-2708, Fax: 804-371-2674
nhreview@dcr.virginia.gov

Dear Project Review Coordinator,

Apex has been retained by Northfax JV, LLC, c/o The Lann Companies, to conduct permitting services for the proposed Northfax redevelopment project located in the City of Fairfax, Virginia. Northfax is part of a comprehensive strategy for the growth and redevelopment of the Fairfax Boulevard corridor through the City of Fairfax, as demonstrated by the City's Fairfax Boulevard Master Plan. In accordance with this Master Plan, the project is in the Northfax redevelopment node which is designed to create a mix of residential and commercial uses in a highly urbanized setting.

The current project proposes impacts across the entire project boundary. The site currently consists of two single family homes with mowed grass yards, two parking lots (approx. 3 acres) constructed of rolled stone over fabric, and approximately 4 acres of woods. The wooded area is a mix of pine and hardwoods, with perennial and intermittent streams that flow through the site. Orchard Street is located within the project limits and dead ends in a cul-de-sac. The perennial stream enters the site at the northwest corner, flows south and east through the woods, and enters a culvert that crosses under Route 123, near the intersection of Rt. 123 and Rt. 50. Stormwater enters the site, via a culvert, at the southwest corner of the project site, flows along the southern border into the perennial stream. A wetland delineation was performed on the site and a Preliminary Jurisdictional Determination was approved by the Army Corps of Engineers on February 5, 2018. It was determined, no vegetated non-tidal wetlands are located within the project boundaries.

Impacts to the site will remove all current structures located within the project boundary and clear portions of the wooded sections of the site. The perennial stream will be piped across the site and will connect to a new culvert crossing under Rt. 123. As part of Rt. 123/Rt. 50 improvements the new culvert is currently under construction. The perennial stream will enter piping at the northwest corner of the site and flow southeast to enter the Rt. 123 culvert crossing. Stormwater entering the site, via the culvert, in the southwest corner will be piped north to intersect the piped perennial stream.

Tree removal will occur but will be conducted outside the TOYR (April 15 - Sept 15) for noted species (NLEB). Substantial portions of the approximately 4 acres of forested area will be cleared.

This proposed Project submittal is made up of one site location. The site location is shown on the included Project Overview Map (Figure 1).

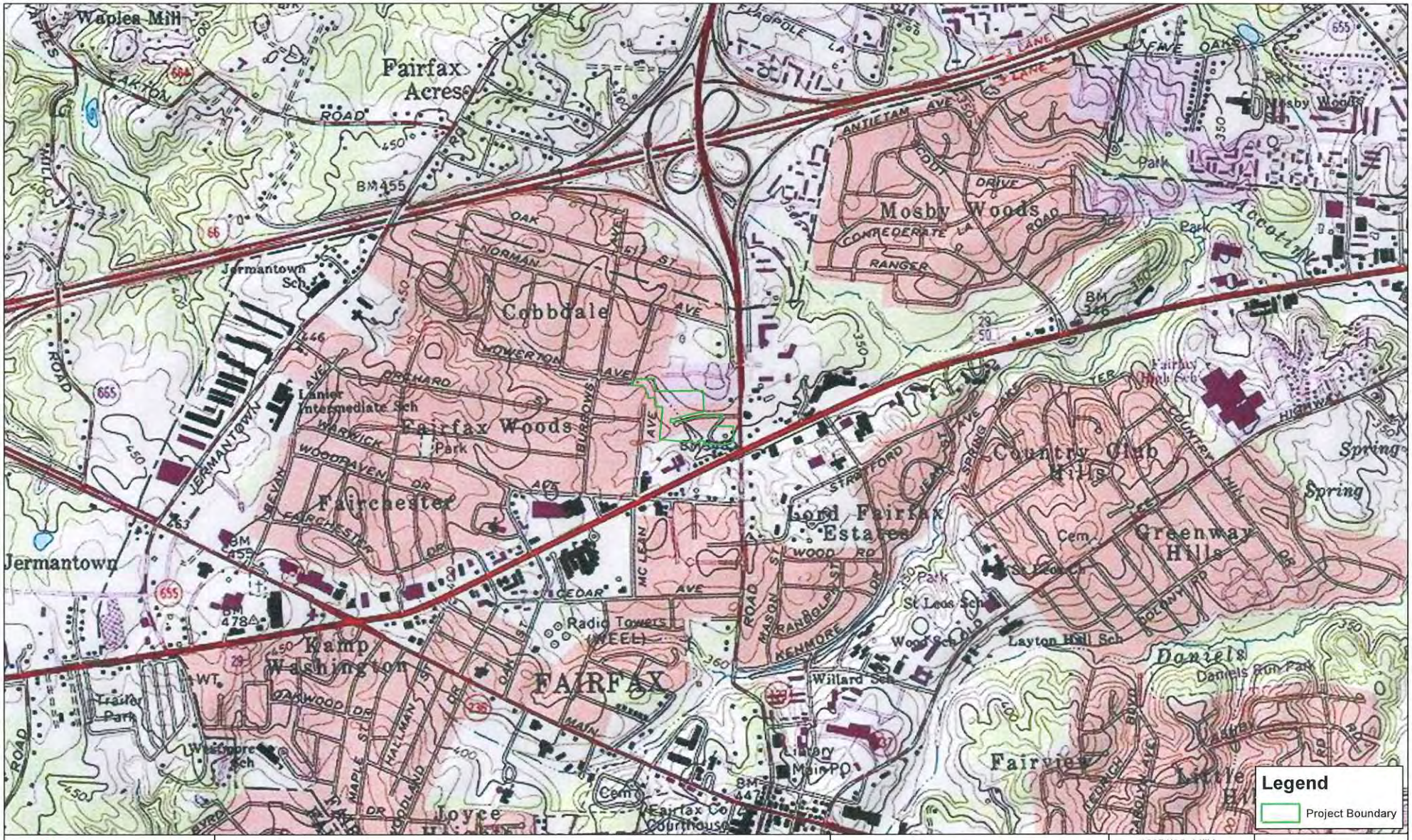
The site is located at: 38°51'33.94"N; 77°18'37.20"W. Boundaries of the site on a USGS topo map are attached, Please do not hesitate to contact me should you have any questions or comments or require any additional information.

Sincerely,

Apex Companies, LLC

Jason Franti

Senior Project Manager



8854 Rixlew Lane
Manassas, VA 20109

APEX

Northfax Project Location Map

City of Fairfax, Virginia

N

0 500 1,000 2,000

Feet

38°51'33.44"N
77°18'36.93"W

Drawn by: TW
Date: 2/7/2018

Figure 1.
Site Location Map

APEX
8854 Rixlew Lane
Manassas, VA 20109

Northfax Project Location Map

City of Fairfax, Virginia

N

0 87.5 175 350

Feet

38°51'33.44"N
77°18'36.93"W

Drawn by: TW
Date: 2/23/2018

Figure 1.
Project Location Map

APEX 8854 Rixlew Lane Manassas, VA 20109

Northfax Project APE Map

City of Fairfax, Virginia

N

0 87.5 175 350

Feet

38°51'33.44"N
77°18'36.93"W

Drawn by: TW
Date: 2/23/2018

Figure 2.
APE Map

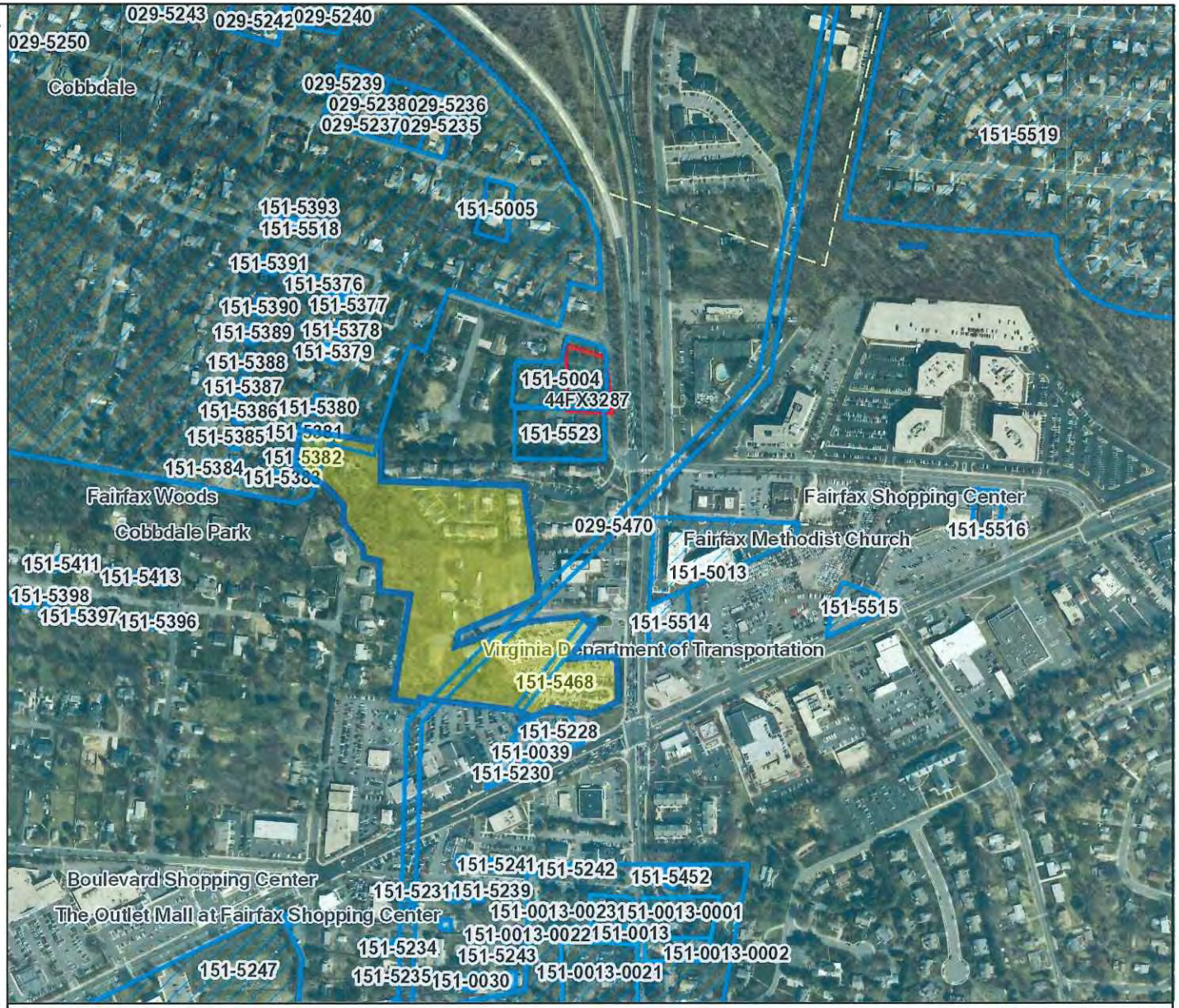
Virginia Dept. of Historic Resources

V-CRIS

Virginia Cultural Resource Information System

Legend

- Architecture Resources
- Architecture Labels
- Individual Historic District Properties
- Archaeological Resources
- Archaeology Labels
- USGS GIS Place names
- County Boundaries



N

Feet

0 200 400 600 800

1:9,028 / 1"=752 Feet

Title: Fairfax Figure 3. **Date: 10/31/2017**

DISCLAIMER: Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years from a variety of sources and the representation depicted is a cumulative view of field observations over time and may not reflect current ground conditions. The map is for general information purposes and is not intended for engineering, legal or other site-specific uses. Map may contain errors and is provided "as-is". More information is available in the DHR Archives located at DHR's Richmond office.

Notice if AE sites: Locations of archaeological sites may be sensitive the National Historic Preservation Act (NHPA), and the Archaeological Resources Protection Act (ARPA) and Code of Virginia §2.2-3705.7 (10). Release of precise locations may threaten archaeological sites and historic resources.