

July 17, 2024

Mr. Jake Holness Maryland Department of the Environment Regulatory Services Section Montgomery Park Business Center, Suite 430 1800 Washington Boulevard

Dear Mr. Holness,

Wes Moore, Governor Aruna Miller, Lt. Governor Paul J. Wiedefeld. Chairman

Board Members:

Dontae Carroll Cynthia D. Penny-Ardinger

William H. Cox, Jr. Jeffrey S. Rosen

W. Lee Gaines, Jr. Samuel D. Snead, MCP, MA

Mario J. Gangemi, P.E. John F. von Paris

Bruce Gartner, Executive Director

The Maryland Transportation Authority (MDTA) is submitting a Joint Federal/State Application for the Alteration of Any Floodplain, Waterway, Tidal or Non-Tidal Wetland in Maryland (JPA) and supporting documentation for the I-695 Francis Scott Key Bridge Rebuild project, located in Baltimore/Dundalk, Maryland (AI# 4229). The project is within the Baltimore Harbor Maryland 8-digit Watershed (02130903). This application is submitted pursuant to the requirements of the Code of Maryland Regulations, Sections 26.17, 26.23 and 26.24, and Section 404 of the Clean Water Act via MDE's E-collaboration tool. The application and supporting documentation include the following:

- Joint Permit Application
- Attachment A: Additional Information
- Attachment B: Project Location Map
- Attachment C: Impact Plates & Summary of Impacts
- Attachment D: Section 106 Consultation
- Attachment E: Rare Threatened and Endangered Species (RTE) Coordination
- Attachment F: Public Notice Billing Approval Form
- Attachment G: NAB Statement of Credit Availability Form
- Attachment H: Natural Resources Inventory / Forest Stand Delineation (NRI/FSD)

Work associated with this project includes installing new piers, bridge deck, and pier protection structures, reconfiguring the roadway approaches to accommodate the new bridge, temporary construction access, and installation of erosion and sediment control measures.

MDTA anticipates a USACE Nationwide Permit will authorize the impacts associated with the project. Due to the emergency nature of this project, we are asking for relief from the following time of year restrictions included in the regional conditions for NWPs in the State of Maryland.

- Regional Condition A. Anadromous fish spawning restriction February 15 to June 15
- Regional Condition B.4.b. Pile driving in tidal waters November 30 to March 15
- Regional Condition B.5. Sediment disturbance April 1 to June 30

The project will continue to coordinate with state and federal agencies protecting aquatic species, and follow aquatic species protection recommendations to the maximum extent practicable.

MDTA anticipates the need for a public hearing on the project and is providing the following hearing details for inclusion in the public notice.

Location: Community College of Baltimore County

Dundalk Campus

7200 Sollers Point Rd, Baltimore, MD 21222

Date: September 17, 2024 Time: 5:00 PM to 8:00 PM

If you need further assistance, please contact our authorized agent Mr. Justin Reel at (703) 338-4139 or via email at jreel@rkk.com.

Sincerely,

Julie McCarthy

Natural Resources Lead, Maryland Transportation Authority

CC: Joseph DaVia, Nicole Nasteff, Kathy Anderson - US Army Corps of Engineers

Jitesh Parikh, Alex Bienko, Melissa Toni - FHWA

Hal Pitts - USCG

Julie McCarthy

Karen Greene, Brian Hopper, Jonathan Watson - NOAA Fisheries

Tammy Roberson, Danielle Spendiff, Matt Wallach - MDE

Melissa Williams, Brian Wolfe, Carl Chamberlin - MDTA

 $Eric\ Almquist,\ Rick\ Maddox,\ Justin\ Reel-RK\&K$

Scott Miller, Leyla Lange – JMT

Caryn Brookman, Stacy Hawver – Blackwater

JOINT FEDERAL/STATE APPLICATION FOR THE ALTERATION OF ANY FLOODPLAIN, WATERWAY, TIDAL OR NONTIDAL WETLAND IN MARYLAND

FOR AGENCY USE ONLY Application Number Date Received by State Date Received by Corps		Date(s) Returned					
Typ	pe of State permit needed	Date of Field Review					
Тур	pe of Corps permit needed	Agency Performed Field Revie	w				
• P	Please submit 1 original and 6 copies of this forms noted on the last page of this form.	m, required maps and plans to the Wetlands an is accompanied by poor quality drawings may	d Waterways Protection Program				
Plea	se check one of the following:						
JUR	ISDICTIONAL DETERMINATION ONLY:	NDMENT: MODIFICATION TO APPLYING FOR AUTHO	ORIZATION				
DA	TE						
1.	APPLICANT INFORMATION:						
APF	PLICANT NAME:						
A.	Name:	B. Daytime Teleph	one:				
C.	Company:	D. Email Address:					
E.	Address:						
F.	City:	State:	Zip:				
AGl	ENT/ENGINEER INFORMATION:						
A.	Name:	B. Daytime Teleph	one:				
C.	Company:	D. Email Address:					
E.	Address:						
F.	City:	State:	Zip:				
ENV	VIRONMENTAL CONSULTANT:						
A.	Name:	B. Daytime Teleph	one:				
C.	Company:	D. Email Address:					
E.	Address:						
F.	City:	State:	Zip:				
CO	NITD ACTOD (ICL)						
A.	Name:	R Davtime Telenh	one:				
C.	Company:	D. Email Address:					
E.	Address:						
F.	City:	State:	Zip:				
PRI	NCIPAL CONTACT:						
A.	Name:	B. Daytime Teleph	one:				
C.	Company:	D. Email Address:					
E.	Address:						
F.	City:	State:	Zip:				

2. PROJECT DESCRIPTION

a. GIVE WRITTEN DESCRIPTION OF PROJECT:

Has aı	ny portion of the proj	ect been complet	ed?	Yes _	No	If Yes, explain	:			
	s a residential subdiv lopment? Yo		cial							
	s, total number of acre		8	acres						
-	ere be temporary or per				erall project	site (i.e., upland	s and wetland	ls), including	but not limited	
	clearing for site develo									
	ission, etc.)? Yes		•							
If yes,	total estimated acres of	tree clearing for th	e overall p	project site:		acres				
Does th	ne application propose to	emporary fill impa	cting wetla	ands or wate	rwavs that w	ill remain in plac	e for more th	an one vear?	Yes	No
	CTIVITY: Check al		•		•	•		•		-
approp		i activities that a	ге ргоро.	sea in the v	retialia, wat	erway, nooapi	am, and non	tidai wetian	d outlet as	
Α.	filling	D		flooding	or impound	ing	F.	gra	ding	
В.	dredging			water			G.	ren	noving or destroying	
C	excavating	E		draining					getation	
							Н.	bui	lding structures	
A	£:4(-) -11 1.	W-414		(A)	Dff (N	T 4 : J - 1 W 7 - 4 1	.1 ()1)		(A)	
Area	for item(s) checked:				,	Iontidal Wetlar	• /		(sq. ft.)	
		Expanded Buff			d Only)		(sq. ft.)			
	of stream impact		_ (sq. ft.)							
Leng	th of stream affected		_ (lineai	r feet) See	Attachm	ent C for mo	re detailed	l summar	y of impacts	
^ Т	YPE OF PROJECT	S. Project Dime								
c. 1	TIE OF TROJECT	5. Troject Dillic	11510115							
	ch activity, give over									
	e feet in column 3. Fo									
ponds	, give average depth (in feet) for the co	ompleted	project in	column 5. (redged mate		
				**** 1.1		Maximum/A			Volume of fill/dredge	
		J	Length	Width	Area	Channelward		Pond	material (cubic yards)	
			(Ft.)	(Ft.)	(Sq. Ft.)	Encroachmer	ıt	Depth	below MHW or OH	N
	D-11-1		1	2	3	4		5	6	
A	Bulkhead									
В	Revetment									
C	Vegetative Sta	bilization								
D	Gabions									
E	Groins									
F	Jetties								-	
G	Boat Ramp									
Н	Pier									
I	Breakwater									
J	Repair & Maii									
K	Road Crossing					-				
L	Utility Line					-				
Μ.	Outfall Constr	uction								
N	Small Pond					_				
О.	Dam									
Р.	Lot Fill									
Q.	Building Struc	tures								
R.	Culvert									
S.	Bridge					•				
Т.	Stream Chann	elization				·				
U.	Parking Area					-				
V	 Dredging				-	-				
_									·	
	1 New	2	Mai	ntenance	3	Hydrai	ılic	4	Mechanical	
W	Other (explain	.)								

	TROJECT FURFUSE: Give other written description of the project purpose.
3.	PROJECT LOCATION:
a.	LOCATION INFORMATION:
A. D. E.	State stream use class designation:
F.	Directions from nearest intersection of two state roads:
	Is your project located in the Chesapeake Bay Critical Area (generally within 1,000 feet of tidal waters or tidal wetlands)?:
	YesNo
Η.	County Book Map Coordinates (Alexandria Drafting Co.); Excluding Garrett and Somerset Counties: Map: Letter: Number: (to the nearest tenth)
I. J.	Map: Letter: Number: (to the nearest tenth) FEMA Floodplain Map Panel Number (if known): & 2400100535G 1 latitude
b. pro	ACTIVITY LOCATION: Check one or more of the following as appropriate for the type of wetland/waterway where you are posing an activity:
A. B. C. D. E.	Tidal Wetlands of special State concern) (outside stream channel) Special Aquatic Site G. In stream channel I. River, lake, pond (e.g., mudflat, 1. Tidal 2. Nontidal J. Other (Explain) vegetated shallows)
c.	wetlands only) LAND USE:
A.	Current Use of Parcel Is: 1. Agriculture: Has SCS designated project site as a prior converted cropland?Yes No
2.	Wooded 3 Marsh/Swamp 4 Developed
5.	Other:
В.	Present Zoning Is: 1 Residential 2 Commercial/Industrial 3 Agriculture 4 Marina 5 Other
C.	Project complies with current zoning Yes No
ТН	E FOLLOWING INFORMATION IS REQUIRED BY THE STATE (blocks 4-7):
	REDUCTION OF IMPACTS: Explain measures taken or considered to avoid or minimize wetland losses in F. Also check ns A-E if any of these apply to your project.
A.	Reduced the area of B. Reduced size/scope of C. Relocated structures disturbance project D. Redesigned project
E.	Other

F.

Explanation

G.	Cost	K.	Parcel size	N.	Safety/public welfare issue
Н.	Extensive wetlands on site	L	Other regulatory		Inadequate zoning
I	Engineering/design		requirement	P	Other
-	constraints	М	Failure to accomplish		
J	Other natural features		project purpose		
Q. I	Description				
	CTTER OF AUTHORIZATION: I		ing for a letter of authorization	for activition	es in nontidal wetlands and/or
A.	No significant plant or	В.	Repair existing structure/fi	11	
	vildlife value and wetland impact	C	Mitigation Project		
	Less than 5,000 square	D.	Utility Line		
	feet	1.	Overhead		
2	2. In an isolated nontidal	2.	Overhead Underground		
	vetland less than 1 acre in size Other (explain)				
F	Check here if you are not apply IF YOU ARE APPLYING		of authorization. TER OF AUTHORIZATION,	PROCEE	D TO BLOCK 10
6 AI	TERNATIVE SITE ANALYSIS:	Explain why o	ther sites that were considered	for this pro	ject were rejected in M. Also
check a	my items in D-L if they apply to your	project. (If yo			
check a block.) A.	ny items in D-L if they apply to your	B.	ou are applying for a letter of 2 - 4 sites		ion, do not complete this
check a block.) A.	ny items in D-L if they apply to your	B.	ou are applying for a letter of 2 - 4 sites wing reason(s): Greater wetlands		ion, do not complete this
check a block.) A. Alterna D.	nny items in D-L if they apply to your 1 site tive sites were rejected/not considere Cost	B d for the follow	ou are applying for a letter of 2 - 4 sites ving reason(s): Greater wetlands impact	C	5 or more sites
check a block.) A Alterna D E	nny items in D-L if they apply to your 1 site tive sites were rejected/not considere Cost Lack of availability	B d for the follow H.	ou are applying for a letter of 2 - 4 sites wing reason(s): Greater wetlands impact Water dependency	C	5 or more sites
check a block.) A. Alterna D.	ny items in D-L if they apply to your 1 site tive sites were rejected/not considere Cost Lack of availability Failure to meet project	B d for the follow H. I J	2 - 4 sites ving reason(s): Greater wetlands impact Water dependency Inadequate zoning	C	5 or more sites
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AAlterna DFG	In pitems in D-L if they apply to your 1 site tive sites were rejected/not considere Cost Lack of availability Failure to meet project purpose Located outside general/market area	B d for the follow H. I J	2 - 4 sites ving reason(s): Greater wetlands impact Water dependency Inadequate zoning	C	5 or more sites
AAlterna DFG	lary items in D-L if they apply to your 1 site tive sites were rejected/not considere Cost Lack of availability Failure to meet project purpose Located outside general/market area Explanation:	B d for the follow H. I J K	2 - 4 sites ving reason(s): Greater wetlands impact Water dependency Inadequate zoning Engineering/design constraints	C L	5 or more sites Other
AAlterna D F M. H	In pitems in D-L if they apply to your 1 site tive sites were rejected/not considere Cost Lack of availability Failure to meet project purpose Located outside general/market area	B d for the follow H. I J K	ou are applying for a letter of 2 - 4 sites ving reason(s):	C L	5 or more sites Other
AAlterna D F M. H	1 site tive sites were rejected/not considere Cost Lack of availability Failure to meet project purpose Located outside general/market area Explanation: JBLIC NEED: Describe the public to	B d for the follow H. I J K	ou are applying for a letter of 2 - 4 sites ving reason(s):	C L	5 or more sites Other
A Alterna D E G M. H. F. PUyour pr	l site 1 site tive sites were rejected/not considere Cost Lack of availability Failure to meet project purpose Located outside general/market area Explanation: UBLIC NEED: Describe the public roject. (If you are applying for a let	B d for the follow H. I J. K	2 - 4 sites ving reason(s): Greater wetlands impact Water dependency Inadequate zoning Engineering/design constraints s that the project will provide in on, do not complete this block	C L a.F. Also cl	5 or more sites Other
A Alterna D E G M. H 7. PU your pr	l site 1 site	B d for the follow H. I J. K need or benefit ter of exemption	ou are applying for a letter of 2 - 4 sites ving reason(s): Greater wetlands impact Water dependency Inadequate zoning Engineering/design constraints s that the project will provide in on, do not complete this block Health/welfare	C L a.F. Also cl	5 or more sites Other

	MITIGATION PLAN: Ple the Critical Area, do not con			formati	on. (If yo	u are applying	for a lo	etter of autho	orization outside
	Description of a monetary cessary.	ompensation	proposal, if ap	plicable	(for state)	requirements o	nly). A	ttach another s	sheet if
b.	Give a brief description of	the proposed	d mitigation pro	oject.					
c.	Describe why you selected rejected.	l your propos	ed mitigation s	ite, inclu	uding what	other areas were	e consid	dered and why	they were
d.	Describe how the mitigation	on site will b	e protected in the	he futuro	e.				
	HAVE ADJACENT PRovide names and mailing address complete this block.)							es B for a letter o	No f exemption, do
10.	OTHER APPROVALS NI	EEDED/GRA	ANTED:						
A.	a. Agency	b.	Date Sought	1.	c. Dec Granted	2. Denied	d.	Decision Date	e. Other Status
33 civi	FEDERALLY AUTHORIZ U.S.C. 408 because it will alte il works project, structure, pro perty, etc.)?Yes	er or tempora operty, or eas	rily or permane	ently occ	cupy or use	a U.S. Army C	orps of	Engineers' fe	derally authorized
(i.e	res, have you submitted a writ ., Baltimore district in Maryla res, please provide the date your	ten request found or Philado	elphia district in	n C & D	canal)?		having .	jurisdiction o	ver that project

located	ISTING CORPS, MDE, OR ENVIRON: It in an area encumbered by an existing significants required as a condition of a prior U.S. y authorization? Yes	te protection instru S. Army Corps of E	ment such as a conservation easem	ent, deed restri	ction, or declaration of restri	ictive
•	HISTORIC PROPERTIES: Is old, archeological sites, shell mound Yes B No	s, Indian or Colo	nial artifacts). Provide any sup	•	-	er 50
12. if neces	ADDITIONAL INFORMATIO essary:	N: Use this spac	e for detailed responses to any	of the previou	us items. Attach another s	sheet
Check	s box if data is enclosed for any one	or more of the fol	llowing (see checklist for requi	red information	on):	
A.	Soil borings	D.	Field surveys	G.	Site plan	
В.	Wetland data sheets	E			Avoidance and	
C.	Photographs	F	Market analysis	mini	mization analysis	
I	Other (explain)					

CERTIFICATION:

Application is hereby made for a permit or permits to authorize the work described in this application. I hereby designate and authorize the agent named above to act on my behalf in the processing of this application and to furnish any information that is requested. I certify that the information on this application form and on the attached plans and specifications is true and accurate to the best of my knowledge and belief. I understand that any of the agencies involved in authorizing the proposed works may request information in addition to that set forth herein as may be deemed appropriate in considering this proposal. I certify that all wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and all streams have been identified and delineated on site, and that all jurisdictional wetlands have been delineated in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and appropriate regional supplement(s). I grant permission to the agencies responsible for authorization of this work, or their duly authorized representative, to enter the project site for inspection purposes during working hours. I will abide by the conditions of all permit(s) or license(s) if issued and will not begin work without the appropriate authorization. I also certify that the proposed works are consistent with Maryland's Coastal Zone Management Plan. All information, including permit applications and related materials, submitted to MDE may be subject to public disclosure consistent with the Maryland Public Information Act, §4-101 et seq., General Provisions Article of the Maryland Code and the Freedom of Information Act, 5 USC Section 552 et seq. Pursuant to Clean Water Act Section 404(o), 33 USC 1344 (o), permit applications and permits will be available to the public. I understand that I may request that additional required information be considered confidential under applicable laws. I further understand that failure of the landowner to sign the application will result in the application being deemed incomplete.

LANDOWNER MUST SIGN: Qulis McCarthy DATE:

PRINTED NAME OF LANDOWNER
Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers, 33 CFR 320-332. Principal Purpose: Information provided on this JPA will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice. Submission of requested information is voluntary, however, if information is not provided, the permit application cannot be evaluated nor can a permit be issued.
State Authorities: Nontidal Wetlands Protection Act, Md. Ann. Code, Envir., Title 5, Subtitle 9; Waterway
Construction, Md. Ann. Code, Envir., Title 5, Subtitle 5; Tidal Wetlands Act, Md. Ann. Code, Envir., Title 16.
BEST MANAGEMENT PRACTICES VERIFICATION: I verify that my project will meet all Endangered Species Act Best Management Practices and Time of Year Restriction applicable to work in tidal waters and wetlands as required by the MDSPGP (see Section VII, General Conditions #14-15).
☐ Yes ☐ No ☐ Unknown Refer to the application instructions and the MDSPGP for additional information regarding these Best Management Practices.
I am the property owner/applicant and do not want to be contacted by MDE. All correspondence should occur with my authorized agent /principal contact designated in Section 3, located on the 1st page of this application. (By initializing the box, you are acknowledging that you will not receive any correspondence directly from MDE). I understand a copy of MDE's final decision regarding this application will be sent to me. This opt-out option does not apply to the U.S. Army Corps' correspondence, which will continue to be with the applicant/permittee.

WHERE TO MAIL APPLICATION

Maryland Department of the Environment Water and Science Administration Regulatory Services Coordination Office 1800 Washington Boulevard, Suite 430 Baltimore, Maryland 21230 Telephone: (410) 537-3752 1-800-633-6101

BEFORE YOU MAIL... DON'T FORGET...

- SIGN AND DATE THE APPLICATION. THE LANDOWNER MUST SIGN.
- <u>SEVEN (7) COPIES</u> OF ALL DOCUMENTS (APPLICATION, PLANS, MAPS, REPORTS, ETC.) MUST BE RECEIVED TO BEGIN OUR REVIEW.
- INCLUDE <u>SEVEN (7) COPIES</u> OF A <u>VICINITY MAP</u> (LOCATION MAP) WITH THE <u>PROJECT SITE</u> <u>PINPOINTED.</u>
- PAYMENTS: SEND AN APPLICATION FEE OF \$750 ALONG WITH A COPY OF THE FIRST PAGE OF THE APPLICATION TO:

MARYLAND DEPARTMENT OF THE ENVIRONMENT P.O. BOX 2057, BALTIMORE, MD 21203-2057 PCA: 13910 OBJ: 4142

 PLEASE REFER TO OUR WEBSITE http://www.mde.maryland.gov FOR FURTHER INSTRUCTIONS.

SUPPLEMENTAL INFORMATION TO BE INCLUDED ON PLANS, DRAWINGS, OR VICINITY MAPS

In addition to the information indicated on the previous pages, you should include the following on the $8 \frac{1}{2} \times 11$ site plans and any blueprints you have submitted:

- 1. Delineation of any wetland buffers or expanded buffers, clearly marked and differentiated.
- 2. Location of mitigation area, if proposed on the same site as the project.

Note: If you are proposing a complex project you may wish to submit engineering blueprints of your project with the application form to expedite review.

Mitigation Location Map: If you are proposing that nontidal wetland mitigation be done at a different location than the proposed project, you should submit a map showing the location of the mitigation site in relation to the proposed nontidal wetland losses.

DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS

Applications must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and streams on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and appropriate regional supplement published by the Corps. Wetlands must be shown on all plans submitted with the application. All wetlands on site must be delineated and shown on the overall site plan. $8\frac{1}{2} \times 11$ inch plans with topography showing relation of the wetlands and project impacts must be submitted. Copies of the wetland reports and data sheets used in making the determination must be included with your application submittal.

ATTACHMENT A: ADDITIONAL INFORMATION

Attachment A: Additional Information in Support of the JPA Form

Purpose and Need

The Project's purpose is to replace the Francis Scott Key Bridge (Key Bridge) over the Patapsco River that was in operation prior to the March 26, 2024 collapse. The new replacement bridge will meet current roadway and bridge design and safety standards, and navigational clearance requirements.

The needs for the Project are to:

- Expedite restoring local connectivity between Curtis Bay and Dundalk.
- Expedite restoring regional mobility and the interstate transportation network.

The Key Bridge was a critical link in the regional and interstate transportation network and was the primary interstate route for hazardous material loads traveling through Baltimore. The collapse has negatively impacted community mobility and connectivity by creating a major gap in the Baltimore transportation network for both local and regional traffic.

In 2022, the Key Bridge had an average annual daily traffic (AADT) volume of approximately 33,200 vehicles per day (vpd)¹. Following the bridge collapse, this daily traffic volume has needed to find and use alternate routes, increasing vehicle miles traveled (VMT) and contributing to higher levels of congestion on the available interstate transportation network including on I-95 through Baltimore (the Fort McHenry Tunnel), I-895 (the Baltimore Harbor Tunnel), and I-695. Arterial routes such as MD 2, MD 710, MD 173, MD 150, MD 151, and other local roadways have also experienced increased detour traffic, including an increase in truck traffic. I-95 and I-895 were already operating over capacity during the peak hours prior to the collapse of the Key Bridge. The diverted traffic from the Key Bridge collapse has exacerbated congestion and delay issues along these parallel routes as well the remainder of I-695 around Baltimore.

A comparison of weekday speed and travel time data² from April 2024 (post-collapse) versus April 2023 (pre-collapse) shows that motorists on I-95 experience more than 30 minutes of additional delay during the morning peak period (7:00am-8:00am) and more than 20 minutes of additional delay in the afternoon peak period (4:00pm-6:00pm). This equates to more than 14,000 collective vehicle-hours of additional delay each weekday for traffic on I-95. Similarly, motorists on I-895 experience approximately 20 minutes of additional delay during the morning peak period and approximately 15 minutes of additional delay in the afternoon peak period. This equates to approximately 7,000 collective vehicle-hours of additional delay to each weekday for traffic on I-895. Combining the impacts to both of these major freeways, the traffic diversions to I-95 and I-895 resulting from the collapse of the Key Bridge have resulted in approximately 21,000 collective hours of additional delay each day of the work week.

https://maps.roads.maryland.gov/itms_public/AADT_AAWDT_Detail.aspx?station_id=T0006

² INRIX data from the RITIS platform (www.ritis.org) Tuesday through Thursday April 18-20, 2023, and Tuesday through Thursday April 9-11, 2024. Data from I-895 for the entire length of the facility. Data from I-95 from the I-95/I-895 interchange south of Baltimore to the I-95/I-695 interchange north of Baltimore.

In addition, the Key Bridge was the only route for over-height and hazardous material loads traveling through the port area, southern Baltimore metro region, and the I-95 corridor as these vehicles and loads are prohibited from using the I-95 and I-895 tunnels.³ Over-height vehicles and vehicles transporting hazardous loads previously relied on the Key Bridge but are now required to use less efficient alternate surface routes, such as the western section of I-695 around Baltimore, which adds approximately 25 miles of additional VMT

The Key Bridge also provided a critical alternative route for traffic across the Patapsco River and Baltimore Harbor, serving as a detour for traffic incidents on I-95 and I-895 through Baltimore, especially during nighttime closures of the I-95 and I-895 tunnels for maintenance and repair. As these tunnels are 39 and 57 years old, respectively, nighttime closures of the tunnels for maintenance are a regular occurrence.

Regionally, the Key Bridge played a critical role in the transportation network, including the transport of goods to and from the Port of Baltimore and nearby distribution centers such as Tradepoint Atlantic at Sparrows Point. A recent study indicated that the economic cost of the bridge collapse to the Port of Baltimore is estimated at \$15 million per day.⁴ The same study determined that the Key Bridge collapse has impacted jobs, income, and industries locally and throughout the state. The impacts caused by the loss of this key infrastructure element present significant challenges to residents, businesses, and industries with long-term implications. Therefore, rebuilding the bridge is an urgent and essential project to restore and maintain the local, regional, and national economy.

The Key Bridge was opened in 1977 and consisted of two 12-foot-wide travel lanes in each direction and two-foot-wide outside shoulders. According to the Maryland Department of Transportation (MDOT) *Policy for Bridge Width* and the American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* (7th Edition published in 2018), travel lanes should be a minimum of 12 feet wide, and lane and shoulder widths on bridges should match the approach roadway. For bridges longer than 200 feet, shoulder widths can be narrowed but a minimum width of four feet is still required. Thus, the Key Bridge did not meet current design standards for lane and shoulder width. The replacement bridge will meet current design standards while remaining within the current MDTA ROW.

The height of the Key Bridge at 185 feet of vertical clearance had the potential to limit larger ships traveling into the Port of Baltimore.⁵ This clearance restricted certain current classifications of cargo vessels, as did other crossings, such as the Bay Bridge, along the marine route into the Port of Baltimore. Currently the largest class of cargo vessel able to call at the Port of Baltimore is the Post Panamax (PPX) Generation III Max. There is a trend toward even larger vessels, and cargo ships are expected to increase in size due to the cost savings of utilizing larger ships to transport larger quantities of goods. Accommodating future ship navigation and traffic

³ https://roads.maryland.gov/OOTS/FORBIDDEN HAZARDOUS MATERIALS.pdf

⁴ https://www.mdchamber.org/2024/03/28/understanding-key-bridge-collapse-impact/

⁵ Navigational Vertical Clearance according to the National Bridge Inventory (https://infobridge.fhwa.dot.gov/Data/BridgeDetail/24651806)

on the Patapsco River is important to maintaining the vitality of the Port of Baltimore and commerce in Maryland and the Mid-Atlantic region.

Project Description

The Project is a replacement of the collapsed Key Bridge. The project location will be the same as the original bridge, following the existing centerline across the Patapsco River and the approaches along I-695. The new bridge will remain within MDTA's existing ROW. The Key Bridge was a tolled bridge, and the replacement bridge will also be a tolled bridge.

The Project will account for the vertical clearance required by current and future vessels and will comply with anticipated bridge permits from the U.S. Coast Guard (USCG) under the General Bridge Act of 1946 and Section 9 of the Rivers and Harbors Act of 1899. These permits are required to preserve the public right of navigation and to prevent interference with interstate and foreign commerce along navigable waters. The USCG issued a Preliminary Navigation Clearance Determination (PNCD) for the new bridge on June 6, 2024, setting the minimum vertical clearance at 230 feet above mean high water and the minimum horizontal clearance at 1,100 feet through the main navigation span of the bridge. Anticipated permits will also identify required protective systems, clearance gauges, navigational lighting, and temporary construction measures that will be incorporated into the Project.

The Project includes several changes to engineering parameters from the original Key Bridge to meet current roadway standards. The replacement bridge will have a minimum vertical clearance of 230 feet over the 800-foot-wide authorized Fort McHenry Navigation Channel, per coordination with the USCG and as documented in the PNCD.⁶ The vertical clearance will be a minimum of 45 feet higher than the original Key Bridge to provide clearance for large vessels traveling underneath. The Fort McHenry Navigation Channel is Congressionally Authorized to be 800-foot-wide.

Similar to the original Key Bridge, the replacement bridge will have a 4 percent grade on both sides of the navigation channel. Due to the increased vertical clearance over the navigation channel, the limits of the bridge and the elevation change will extend beyond the limits of the original bridge but still within the existing MDTA ROW. The total length of the bridge will be approximately 2.4 miles, which is approximately 0.7 miles longer than the original Key Bridge. A portion of this 2.4-mile length will include retaining walls and grading where the bridge profile approaches the existing ground. The limits of bridge structure versus retaining walls and grading will be determined in final design.

The main bridge span over the navigation channel is anticipated to be approximately 1,400 feet long between the main bridge piers, which will accommodate the placement of the new piers outside the existing piers. In compliance with the USCG PNCD, the horizontal clearance between the pier protection islands that will surround the new piers will be no less than 1,100 feet.⁴ The remaining bridge spans will include piers both in the Patapsco River and on both the

⁶ The USCG issued a PNCD on June 6, 2024, stating that the replacement bridge is required to have a minimum vertical clearance of 230 feet above mean high water and a minimum horizontal clearance of 1,100 feet through the main navigation span.

approaches over land. In addition to the main piers, there will be pier protections around all piers as required by current design standards.

The new typical section for the bridge and approaches will meet the design guidelines outlined in the AASHTO *A Policy on Geometric Design of Highways and Streets* (7th Edition published in 2018) for lane and shoulder widths and will include two 12-foot-wide lanes in each direction with 10-foot-wide outside shoulders and 4-foot-wide inside shoulders. This preliminary design increases the width of the bridge from approximately 62-66 feet wide to approximately 82 feet wide. Note that the final design of the bridge is pending, and the bridge width could change.

The Project will consider a different bridge type than the original Key Bridge to support the increased main span length. The final structure type will be determined by the design-builder in coordination with MDTA and FHWA during final design. Refer to **Table 1** below for a comparison between the Key Bridge and the replacement bridge engineering assumptions.

Table 1: Structural Comparison between the Key Bridge and Replacement Bridge

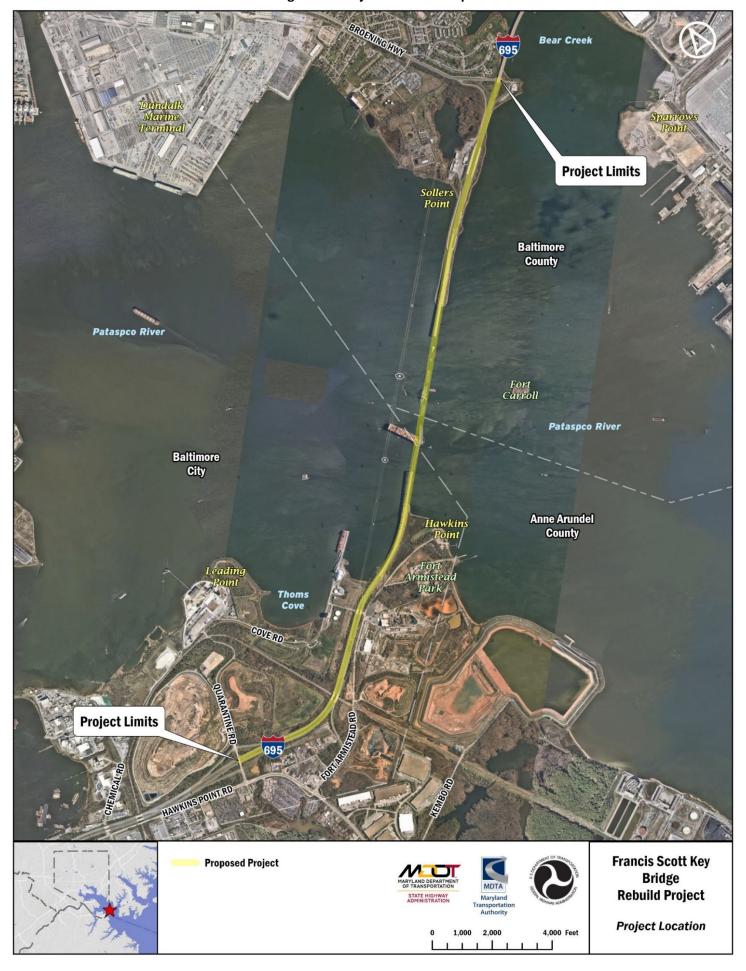
	Approx Structure Height (feet)	Vertical Clearance (feet)	Main Span Length (feet)	Total Bridge Length (miles)	Number of Travel Lanes	Lane Width (feet)	Outside Shoulder Width (feet)	Inside Shoulder Width (feet)	Profile/ Grade on Both Sides of the Main Channel
Key Bridge	358	185	1,200	1.7	4	12	2	0	4%
Replacement Bridge* (Approximate)	500-550	230	1,400	2.4**	4	12	10	4	4%
Total Change	142-192	45	200	0.7	0	0	8	4	0

^{*}For the purposes of this JPA, engineering assumptions for the replacement bridge were based on a cable-stayed bridge type. The bridge type and dimensions will be determined during final design.

**The total bridge length will be determined during final design. For the purposes of this JPA, the length includes the full limits where the profile elevation will change.

ATTACHMENT B: PROJECT LOCATION MAP

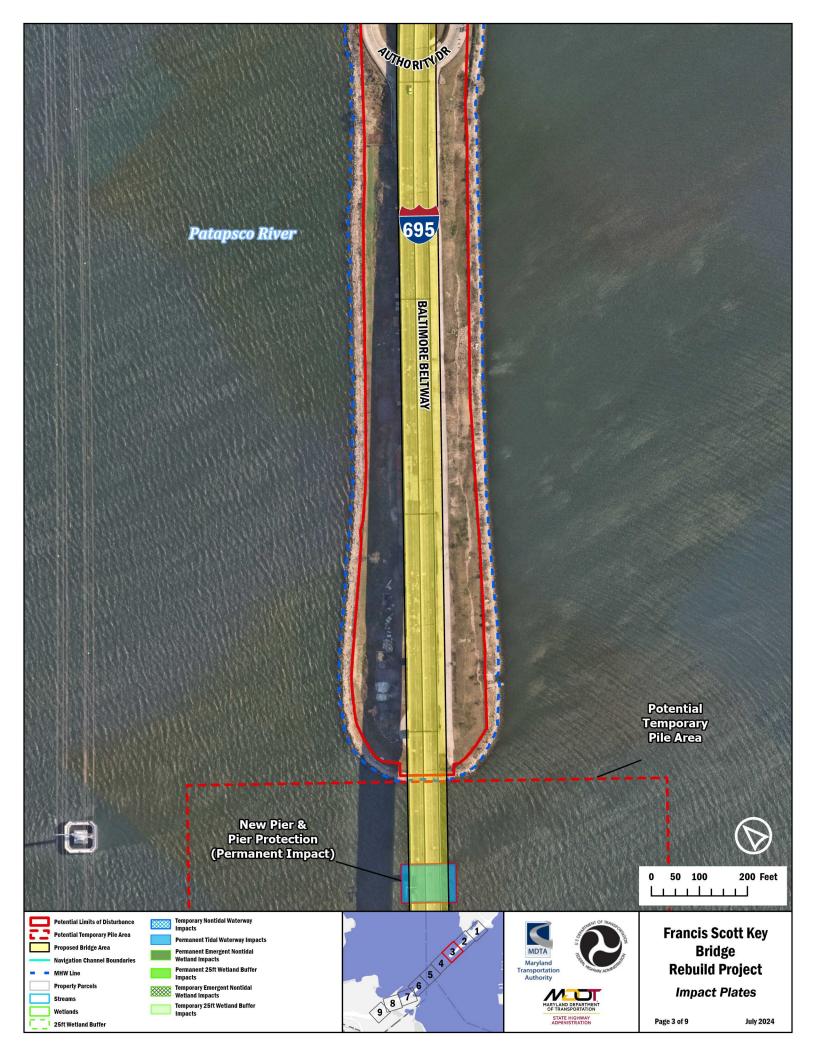
Figure 1 – Project Location Map

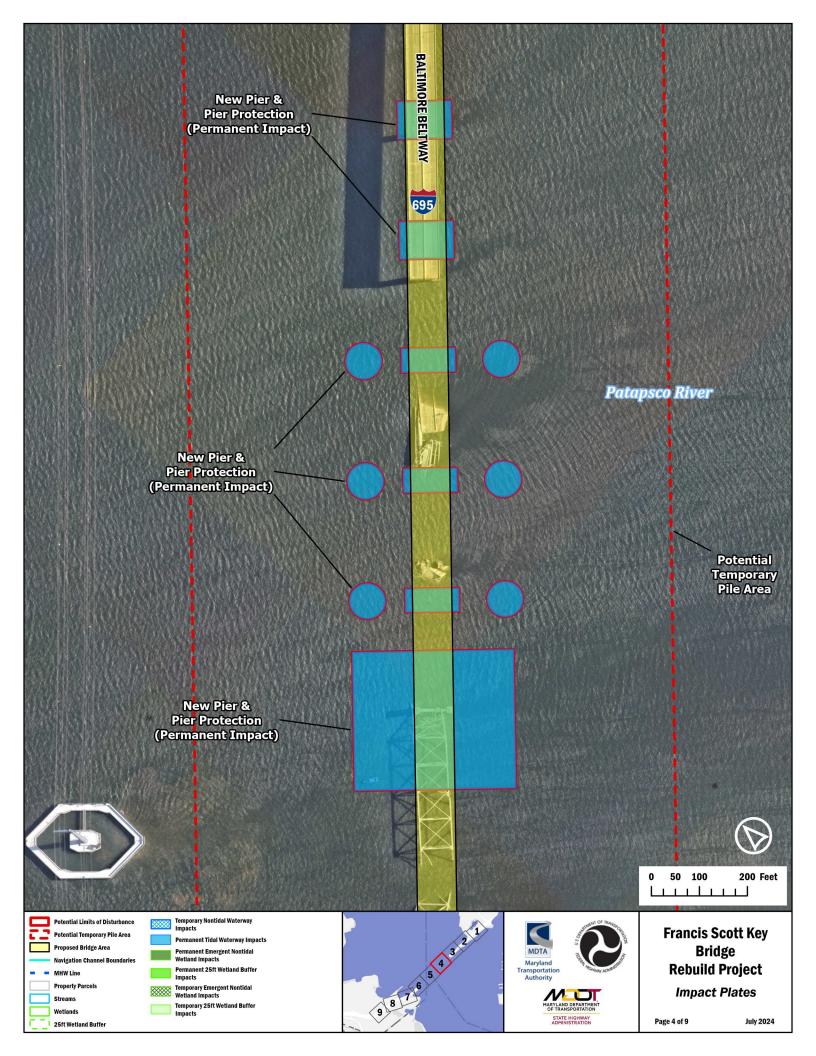


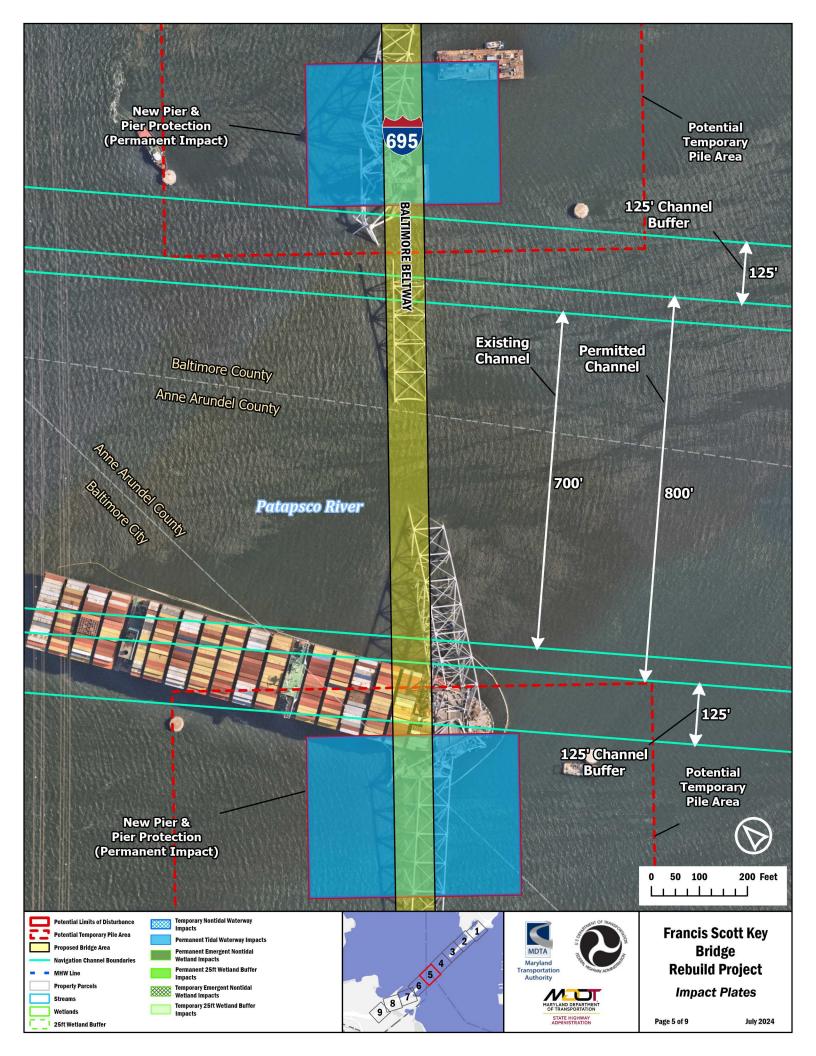
ATTACHMENT C: IMPACT PLATES & SUMMARY OF IMPACTS

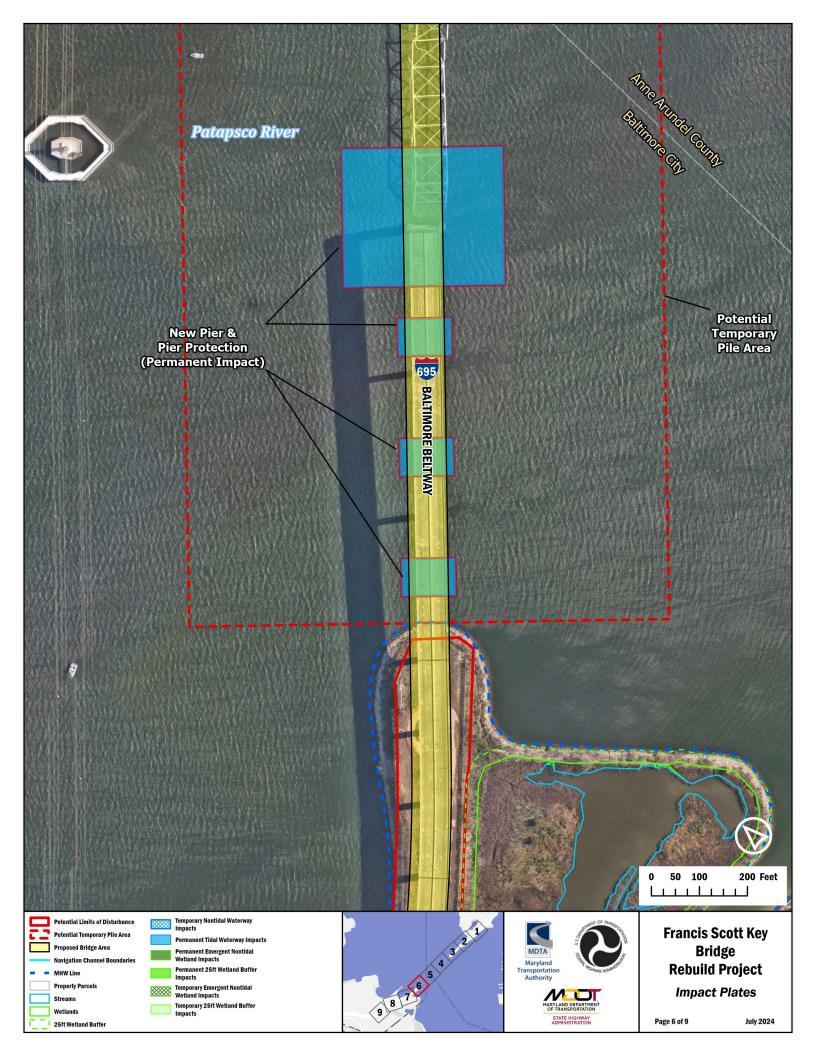


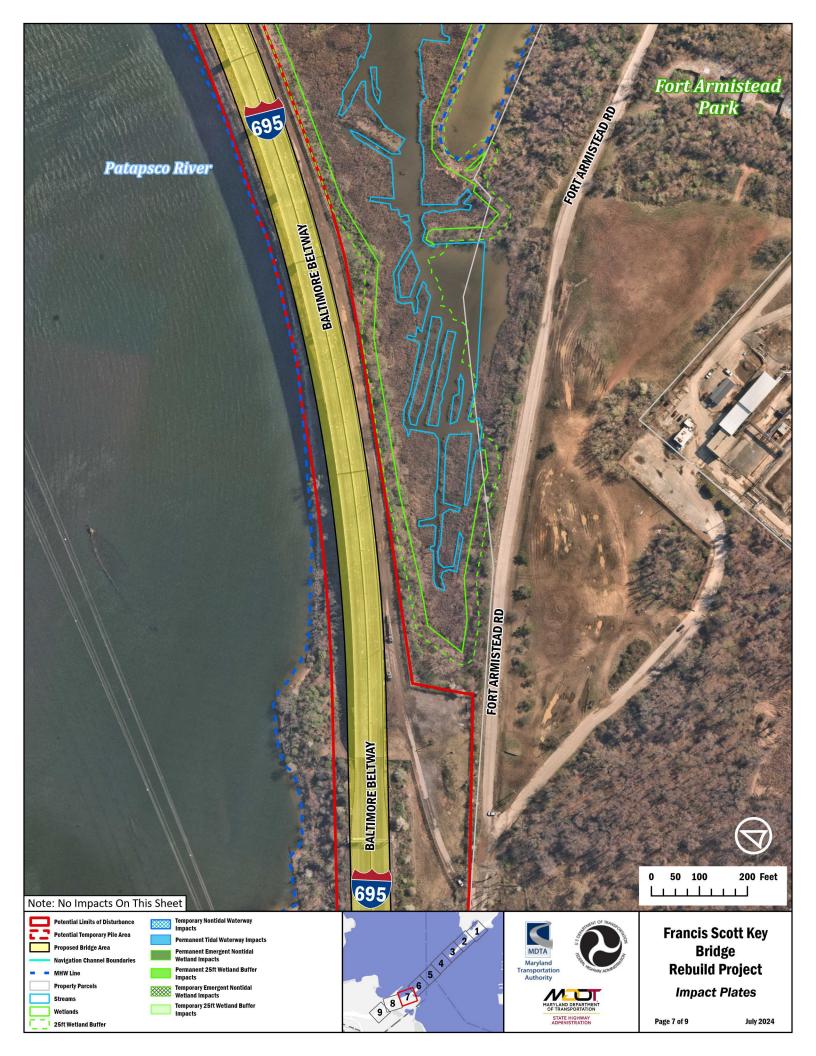


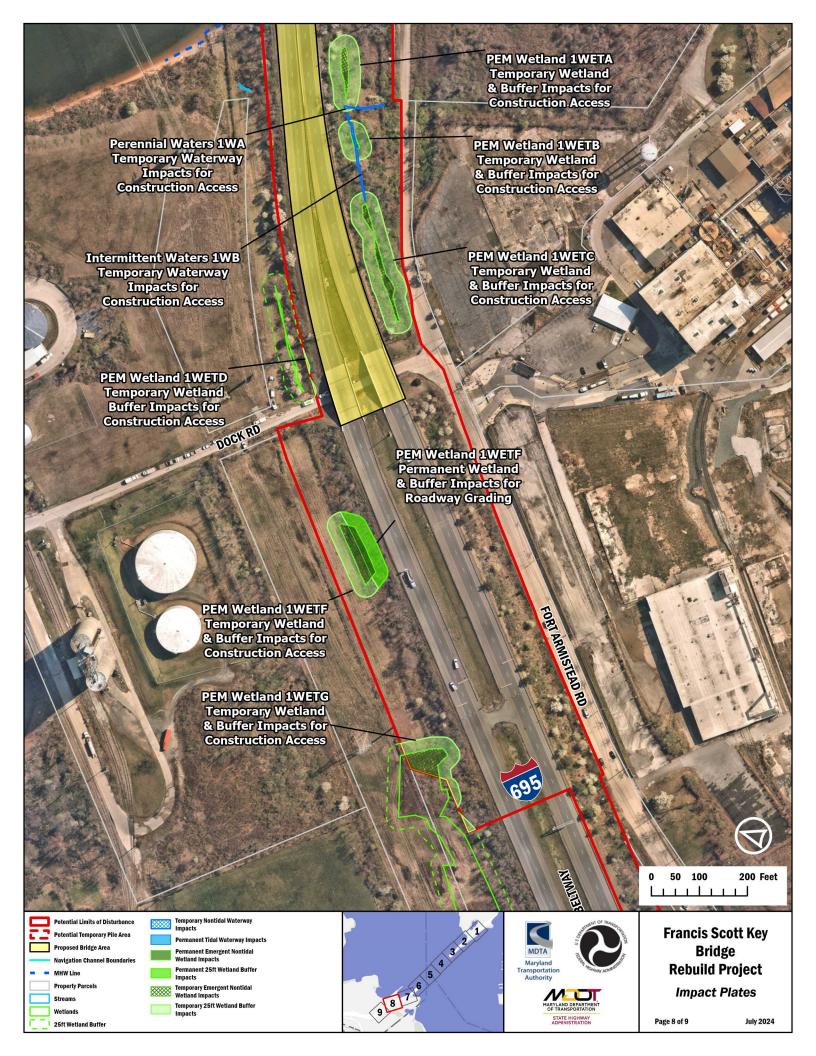


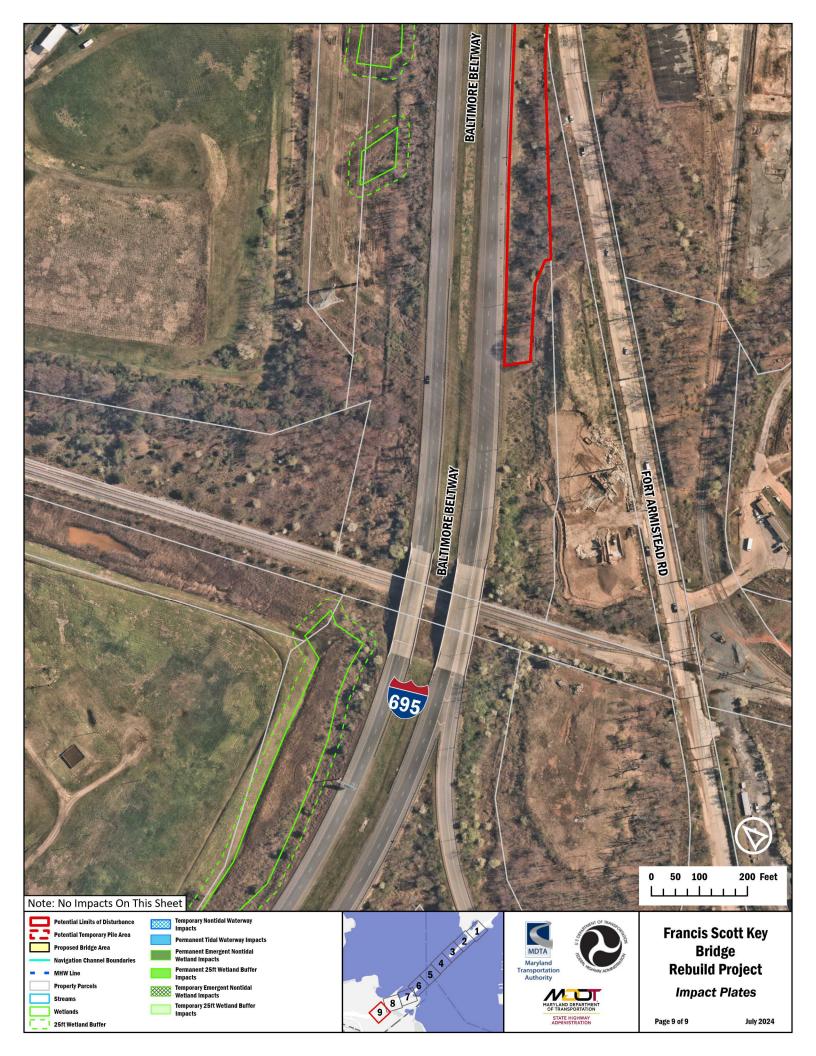




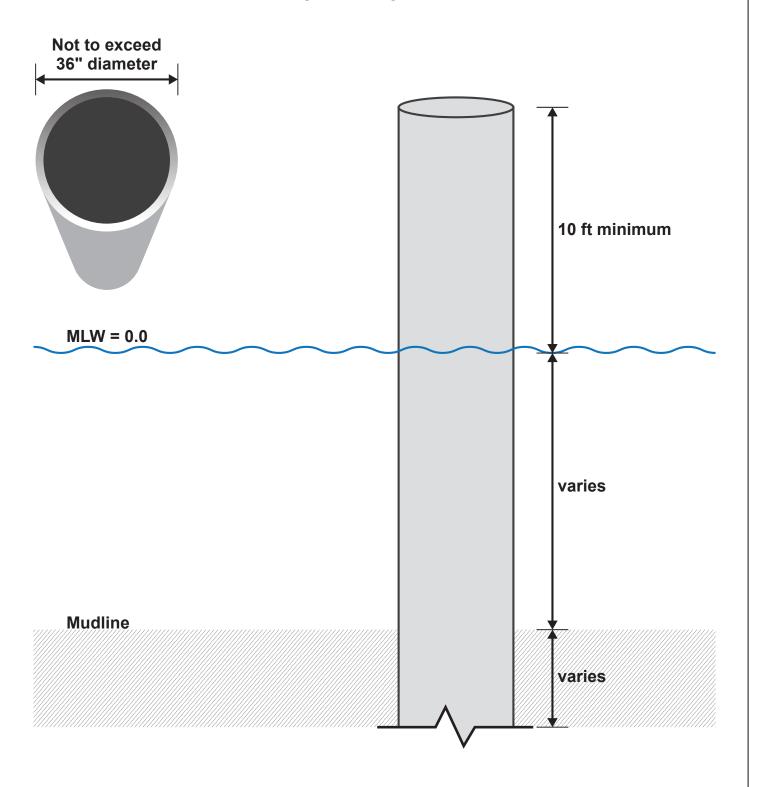








Temporary Pile Typical Section





Francis Scott Key Bridge Rebuild Project Impact Plates

July 2024

Not to scale

Francis Scott Key Bridge Rebuild Project - Total Impacts - July 2024						
Resource Type	Impacted Area (SF)	Impacted Length (LF)				
Temporary Perennial Nontidal Waterway Impacts	246	85				
Temporary Intermittent Nontidal Waterway Impacts	599	187				
Temporary Tidal Waterway Impacts	707*	-				
Permanent Tidal Waterway Impacts	553,820	-				
Temporary Emergent Nontidal Wetland Impacts	8,932	-				
Permanent Emergent Nontidal Wetland Impacts	2,032	-				
Temporary 25ft Wetland Buffer Impacts	37,492	-				
Permanent 25ft Wetland Buffer Impacts	9,109	-				

^{*}These impacts are for setting 100 temporary piles. The locations are not determined and are not shaded on the impact plates.

	Francis Scott Key Bridge Rebuild Project - Impacts by Resource - July 2024										
Resource ID	Resource Classification	Permanent Impact (SF)	Temporary Impact (SF)	Permanent Impact (LF)	Temporary Impact (LF)	Plate Number					
2WETD	PEM	674	-	-	-	2					
2WETD Buffer	25ft Wetland Buffer	4,777	-	-	-	2					
Patapsco River	Tidal Waters	553,820	707*	-	-	3-6					
1WETA	PEM	-	1,006	-	-	8					
1WETA Buffer	25ft Wetland Buffer	-	7,465	-	-	8					
1WA	Perennial Waters	-	246	-	85	8					
1WB	Intermittent Waters	-	599	-	187	8					
1WETB	PEM	-	166	-	-	8					
1WETB Buffer	25ft Wetland Buffer	-	3,872	-	-	8					
1WETC	PEM	-	2,249	-	-	8					
1WETC Buffer	25ft Wetland Buffer	-	15,061	-	-	8					
1WETD Buffer	25ft Wetland Buffer	-	179	-	-	8					
1WETF	PEM	1,358	2,304		-	8					
1WETF Buffer	25ft Wetland Buffer	4,332	5,306	-	-	8					
1WETG	PEM	-	3,207	-	-	8					
1WETG Buffer	25ft Wetland Buffer	-	5,609	-	-	8					

^{*}These impacts are for setting 100 temporary piles. The locations are not determined and are not shaded on the impact plates.

ATTACHMENT D: SECTION 106 CONSULTATION AND PROGRAMMATIC AGREEMENT

PROGRAMMATIC AGREEMENT

Among the

FEDERAL HIGHWAY ADMINISTRATION, MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION,

MARYLAND TRANSPORTATION AUTHORITY, AND MARYLAND STATE HISTORIC PRESERVATION OFFICER

Implementing Section 106 of the National Historic Preservation Act for the I-695 Over the Patapsco River Francis Scott Key Bridge Replacement Project

Anne Arundel and Baltimore Counties, and Baltimore City, Maryland

WHEREAS, the U.S. Department of Transportation, Federal Highway Administration (FHWA) plans to approve the I-695 Over the Patapsco River Francis Scott Key Bridge Replacement (The Project), administered by the Maryland Department of Transportation State Highway Administration (SHA) and the Maryland Transportation Authority (MDTA); and

WHEREAS, on March 26, 2024 the MDTA Francis Scott Key Bridge, which carries I-695 over the Patapsco River, was struck by a cargo ship leaving the Port of Baltimore, resulting in the collapse of the bridge, impairing essential traffic. Following the incident, Executive Order 01.01.2024.09 was released by the State of Maryland, declaring a State of Emergency as a result of the Key Bridge collapse.

WHEREAS, The Project consists of construction of a replacement bridge in the same location, following the existing centerline, and within existing right-of-way, while incorporating design upgrades that meet current standards and conditions, as described in detail in Attachment 4; and.

WHEREAS, FHWA has determined that the Project is an undertaking, as defined in 36 C.F.R. §800.16(y), and thus is subject to review under Section 106 of the National Historic Preservation Act (NHPA), 54 U.S.C. § 306108, and its implementing regulations, 36 C.F.R. Part 800 as amended; and

WHEREAS, SHA and MDTA intend to deliver the Project using a progressive design-build delivery method; and

WHEREAS, the Project may be implemented in construction phases, yet to be fully defined, and although this Programmatic Agreement (PA) reflects evaluation of the entire defined Project, certain commitments may require phased implementation; and

WHEREAS, pursuant to Section 9 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401 and 403) and the General Bridge Act of 1946, a Coast Guard Bridge Permit will likely be required from the United States Coast Guard (USCG) for this Project, and pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401 and 403) and Section 404 of the Clean Water Act of 1973 (33 U.S.C. 1344), a Department of the Army permit will likely be required from the United States Army Corps of Engineers (USACE) for this Project; and

I-695 Over the Patapsco River Francis Scott Key Bridge Replacement Section 106 Programmatic Agreement June 2024 WHEREAS, the USACE and USCG have agreed FHWA is the lead federal agency for purposes of ensuring that the Project complies with Section 106 of the NHPA, as amended, and codified in its implementing regulations, 36 C.F.R. Part 800, as amended (August 5, 2004) and have agreed to participate in this PA as consulting parties; and

WHEREAS, federal agencies which, at FHWA's invitation, designate FHWA as the lead federal agency for the Project may use this PA to fulfill their obligations under Section 106 of the NHPA according to 36 C.F.R. 800.2(a)(2), without the need for amendment of this PA, provided that FHWA follows the requirements of this PA; and

WHEREAS, SHA, on behalf of FHWA, has established the Area of Potential Effects (APE) for the project in consultation with the Maryland State Historic Preservation Office (MD SHPO), encompassing the corridor project limits as described above, including areas of direct limits of disturbance, inclusive of all project elements with the potential to affect historic properties, and a sufficient buffer for visual effects where they may be likely to occur; the detailed map of the APE is provided in Attachment 4; and

WHEREAS, FHWA, in consultation with MD SHPO, identified ten (10) historic properties that are listed in, or eligible for inclusion in the National Register of Historic Places (NRHP): Fort McHenry National Monument & Historic Shrine (Maryland Inventory of Historic Places [MIHP] B-8); Baltimore Harbor Tunnel (MIHP B-5333); Canton Grain Elevator (MIHP B-985); Baltimore Municipal Airport, Harbor Field (MIHP B-3603); Baltimore Municipal Airport Air Station (MIHP B-2094); Turner's Station African American Survey District (MIHP BA-3056); Sparrow's Point Shipyard District (MIHP BA-3208); Day Village Historic District (MIHP No. BA-3340); Fort Carroll (MIHP BA-451); and Fort Smallwood Park (MIHP AA-898); and

WHEREAS, FHWA has identified six (6) architectural resources requiring NRHP evaluation, as shown in Attachment 4: 6001 Dock Road; 3901 Fort Armistead Road; 3925 Fort Armistead Road; Fort Armistead Park; BG&E Parcels (Tax Map 110, Parcels 3, 26, 27, and 58); and MDTA's Francis Scott Key Bridge Administration Building; and

WHEREAS, FHWA has elected to phase the identification, evaluation, and effects assessment of certain portions of the APE and historic properties where timing, unavailability of access or design information precluded such identification, evaluation and assessment, as provided in 36 C.F.R. 800.4(b)(2), and 36 C.F.R. 800.5(a)(3); and

WHEREAS, FHWA will ensure additional identification, evaluation, and assessment is completed in a timely manner prior to final design and construction, to allow for meaningful consultation and practical opportunities to avoid, minimize, or mitigate for any potential adverse effects to historic properties; and

WHEREAS, FHWA has initiated consultation pursuant to 36 C.F.R. 800.3(c) with the MD SHPO by letter on May 16, 2024; SHA on behalf of FHWA will continue to consult with MD SHPO and consulting parties under the terms of this PA in order to identify historic properties, assess the

I-695 Over the Patapsco River Francis Scott Key Bridge Replacement Section 106 Programmatic Agreement June 2024 effects of the Project on historic properties, and, if necessary, resolve adverse effects to historic properties; and

WHEREAS, FHWA, pursuant to 36 C.F.R. 800.6(a)(1)(i)(C), on May 16, 2024, initiated Section 106 consultation with the Advisory Council on Historic Preservation (ACHP), and the ACHP has chosen not to participate in the consultation pursuant to 36 C.F.R. 800.6(a)(1)(iii); and

WHEREAS, FHWA, ACHP, SHA, MDTA and the MD SHPO, under the Amended Programmatic Agreement Among the Federal Highway Administration, the Maryland Department of Transportation State Highway Administration, the Advisory Council on Historic Preservation, the Maryland State Historic Preservation Officer, Implementing Section 106 of the National Historic Preservation Act for the Federal-aid Highway Program in Maryland ("Statewide PA"), linked in Attachment 2, have agreed to delegate certain authorities relating to Section 106 of the NHPA to SHA and MDTA for Federal-aid Highway Projects in Maryland; and

WHEREAS, SHA, pursuant to the Statewide PA, employs professionals meeting the Secretary of the Interior's Professional Qualifications Standards (48 Fed. Reg. 44738-39, September 29, 1983) with experience and background in the fields of archaeology, architectural history and/or history who will oversee implementation of stipulations in this PA; and

WHEREAS, SHA and MDTA, on behalf of FHWA, pursuant to 36 C.F.R. 800.4(a)(1), has established the APE for the Project in consultation with the MD SHPO, and, per 36 C.F.R 800.4(b) in consultation with MD SHPO proposed a scope of effort to identify historic properties within the APE, and offered Federally-recognized Native American Tribal Nations (Tribes) an opportunity to provide input on this scope of effort; and

WHEREAS, SHA, MDTA and FHWA, pursuant to 36 C.F.R 800.2(d) have sought and considered the views of the public regarding the Project's effects on historic properties by providing notice to the public via the project website, and in stakeholder public meetings on June 11, 2024; and

WHEREAS, SHA and MDTA, during the course of consultation, have invited the parties listed in Attachment 4 to participate in consultation on the Project; and

WHEREAS, SHA, MDTA and FHWA, have initiated consultation with Tribes listed in Attachment 4 and provided the Tribes with information about the Project. SHA, on behalf of FHWA, has invited the same Tribes to be consulting parties, as shown in Attachment 4; and

WHEREAS, FHWA, SHA and MDTA have determined archaeological properties are unlikely to be affected by the Project based on information available at the time of execution of the PA; and

WHEREAS, no historic properties exist within the expected limits of disturbance of the project, and no physical effects to historic properties are likely to occur based on information available at the time of execution of this PA; and

WHEREAS, FHWA has invited SHA and MDTA to be invited Signatories to this PA, based on their responsibilities for implementation of its terms, and all Signatories, required and invited, are

I-695 Over the Patapsco River Francis Scott Key Bridge Replacement Section 106 Programmatic Agreement June 2024 referred to as "Signatories" to this document; and.

WHEREAS, FHWA intends to use this PA to comply with 36 C.F.R. Part 800, 54 U.S.C. § 100902, 36 C.F.R. Part 14 and to govern the implementation of the Project and the identification and resolution of any adverse effects.

NOW, THEREFORE, FHWA, SHA, MDTA and MD SHPO, (hereinafter "Signatories") agree that the Project will be implemented in accordance with the following Stipulations in order to take into account the effect of the Project on historic properties and that these Stipulations will govern compliance of the Project with Section 106 of the NHPA until this PA expires or is terminated.

Stipulations

I. Roles and Responsibilities

- **A. FHWA** is the lead federal agency and is responsible for ensuring the terms of this PA are carried out.
- **B.** SHA and MDTA are delegated authority by FHWA under this PA and the Statewide PA to continue defined aspects of consultation, project compliance review, and implementation of this PA's terms. SHA and MDTA will jointly be responsible for implementation of this PA excepting where otherwise specified. Additionally:
 - 1. MDTA and/or SHA, using FHWA funding in whole or in part, will enter into an agreement or agreements with a design-build contractor to design and build the Project, using a progressive design-build model. MDTA, in its administrative role with the contractor, will coordinate with and provide SHA all information necessary, and exercise oversight of the contractor to ensure compliance with this PA and its implementation. MDTA and SHA will work informally to resolve any disagreement, but will follow Stipulation X of the PA if resolution is not reached informally. SHA and MDTA may not delegate consultation obligations or other responsibilities related to Section 106 consultation specified in this PA to the design-builder.
 - 2. SHA, on behalf of MDTA and FHWA, will consult with MD SHPO for actions under this PA and 36 C.F.R. 800.
- **C. SHPO**: The MD SHPO has jurisdiction as established in the NHPA for historic properties in Maryland. MD SHPO will:
 - 1. Respond to requests from SHA for concurrence on eligibility determinations, effect determinations, and technical documents within a 30-day review period unless otherwise specified in this PA, or SHA specifically provides for an extended review period at the time of submittal. SHA and FHWA may assume concurrence or no objection to determinations and submittals if no response is received within 30 days, if no extended timeline is specifically

- established in the review request or if no timeline is specified in 36 C.F.R. 800. All durations referenced in this PA refer to calendar days.
- 2. Provide written comments, share general technical assistance/guidance, and make available survey records or other documents necessary to fulfill the requirements of this PA to SHA or its designates.

D. Consulting Parties/Public

- 1. SHA has consulted with or provided the opportunity to consult to the parties listed in Attachment 4 prior to finalizing this PA.
- 2. SHA will provide consulting parties who have elected to participate in consultation, regardless of concurring status, with opportunities to consult on Project changes or new elements with the potential to affect historic properties. Consulting parties may sign this PA as concurring parties at any time after execution of the PA with the invitation of SHA or FHWA. Additional consulting parties may be identified at a later time without the need to amend this PA.
- 3. Concurrence with the PA by a party does not necessarily indicate that the party supports the Project or endorses all stipulations of this PA, but rather indicates the desire of such parties to acknowledge consultation and/or remain involved in implementation of specific terms of this PA.
- 4. SHA and MDTA will provide for notification of the public for substantial changes to the Project that would result in an expanded APE or new effects to historic properties consistent with 36 CFR 800.8(c)(1)(iv) and procedures under NEPA to ensure ongoing opportunities for public input. As appropriate, this process may identify new consulting parties who may wish to consult at a later time in response to Project refinement.

II. Professional Standards

- **A.** Guidelines, standards and regulations relevant to this PA and its purposes are listed below, and links to these documents are found in Attachment 2. Additionally, it is the intention of the Signatories to interpret this PA to incorporate any subsequent standards, revisions of standards, or applicable guidance issued by the Secretary of the Interior, ACHP, or MD SHPO as then in force during this PA.
 - 1. 36 C.F.R. Part 800: Protection of Historic Properties, as amended (2004);
 - 2. Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (1983);
 - 3. Secretary of the Interior's Professional Qualifications Standards (48 Fed. Reg. 44738-39, September 29, 1983)
 - 4. Standards and Guidelines for Archeological Investigations in Maryland (Shaffer and Cole 1994), including Technical Update No. 1 of the Standards and

- Guidelines for Archaeological Investigations in Maryland: Collections and Conservation Standards (2018);
- 5. Standards and Guidelines for Architectural and Historical Investigations in Maryland (Maryland Historical Trust, 2023);
- 6. Program Comment for Actions Affecting Post-1945 Concrete Steel Bridges (77 FR 68790);
- 7. Exemption Regarding Historic Preservation Review Process for Effects to the Interstate Highway System (ACHP Program Comment, 2005)
- 8. Section 106 Archaeology Guidance (ACHP, 2009)
- 9. National Register of Historic Places Bulletin 15, *How to Apply the National Register Criteria for Evaluation* (National Park Service revised 1997), National Register of Historic Places Bulletin 16A, *How to Complete the National Register Registration Form* (National Park Service revised 1997), and other National Register Bulletins as applicable
- 10. Secretary of the Interior's Standards for the Treatment of Historic Properties (1995, Revised 2017); and accompanying guidelines for Treatment of Historic Properties (1995, Revised 2017) and Cultural Landscapes (1996)

III. Historic Properties Identification and Effects Assessment

- **A.** Historic Properties Identification. SHA and MDTA commit to evaluating the following properties within the APE for eligibility for the NRHP, in accordance with 36 C.F.R. 800.4(c), including providing eligibility determinations to consulting parties and seeking concurrence from MD SHPO:
 - 6001 Dock Road
 - 3901 Fort Armistead Road
 - 3925 Fort Armistead Road
 - Fort Armistead Park
 - BG&E parcels (Tax Map 110, Parcels 3, 26, 27, and 58)
 - Francis Scott Key Bridge Administrative Building

- **B.** Effect Determination. Following the evaluation of the properties specified in Stipulation III.A., and at such time as the following information is available: the limits of approach work, bridge type, bridge height, anchorage locations, and locations of any proposed ancillary staging areas, SHA, on behalf of FHWA, will make a finding of effect in accordance with 36 C.F.R. 800.4(d), and 36 C.F.R. 800.5.
 - 1. Finding of No Properties Affected or No Adverse Effect to Historic Properties. Should SHA, on behalf of FHWA, find that no historic properties are affected by the Project or No Adverse Effect to historic properties will result from the Project, and MD SHPO concurs with the finding, in consideration of the views of any consulting parties, SHA and FHWA will proceed with the project, and follow Stipulations IV-XI.
 - 2. Finding of Adverse Effect. If potential adverse effects to historic properties are identified, SHA, MDTA and FHWA will seek to avoid or minimize adverse effects. If adverse effects cannot be completely avoided, and SHA determines there is an adverse effect to historic properties, SHA, MDTA, and FHWA will develop a mitigation plan in consultation with MD SHPO and appropriate consulting parties, identifying mitigation that is reasonable, feasible, and commensurate with the effects to historic properties. SHA will seek concurrence from MD SHPO on the mitigation plan, and, upon MD SHPO concurrence, will implement the provisions of the plan. FHWA, SHA, and MDTA will amend this PA to incorporate its provisions.
 - 3. If SHPO does not concur with the mitigation plan, FHWA, SHA, and MDTA will consult with MD SHPO and appropriate consulting parties to revise the mitigation plan. If the Signatories cannot reach concurrence on the plan, the parties will follow Stipulation X regarding dispute resolution.

IV. Consultation Regarding Project Development

- **A.** As project design advances or ancillary activities not currently known are identified, SHA will initiate consultation with MD SHPO and other consulting parties, and the public per Stipulation I.E. using the following process:
 - 1. On an ongoing basis, SHA cultural resources staff will review proposed changes that affect project location, design, or limits of disturbance, for potential new effects to historic properties.
 - 2. If SHA determines there is potential for new or changed effects, SHA will notify FHWA and consult as described in Stipulation IV.B below.
- **B.** SHA, on behalf of FHWA, consistent with the principles described in 36 C.F.R. $\S\S 800.3 6$, will consult with MD SHPO and other Signatories to this PA, and consulting parties identified for this undertaking as appropriate on:

- 1. Amendments to the APE, consistent with 36 C.F.R. § 800.16(d), including identification and documentation of any new historic properties within the amended APE consistent with 36 C.F.R § 800.4(a) and (b).
- 2. Changes to the LOD within the existing APE where any additional archaeological investigation would be recommended, including newly identified staging or stockpile areas outside MDTA right-of-way within the APE.
- 3. New or revised determinations of eligibility for historic properties within the APE as described above, consistent with 36 C.F.R § 800.4(c).
- 4. New or revised assessment of effects to historic properties within the APE as described above, consistent with 36 C.F.R § 800.5.
- C. SHA will provide consultation materials in written or electronic form, and follow timelines for comment opportunity as specified in Stipulation I.C.1.

V. Monitoring of Performance

- **A.** Specific points for continued consultation are defined in Stipulations III and IV.
- **B.** Should Adverse Effects be identified, and a mitigation plan be developed in accordance with Stipulation III.B.2, the mitigation plan will include a schedule for periodic regular reporting and/or meetings until the commitments of any mitigation plan are completed, or another point in time identified in the plan.
- C. SHA and MDTA will convene consulting party meetings as necessitated by project advancement described in Stipulation IV or when requested by any Signatory.

VI. Post-Review Discovery of Human Remains

SHA will follow the attached Inadvertent Discovery Plan (Attachment 1) should human remains be identified in any areas of the project.

VII. Other Post-Review Discoveries

SHA will follow the procedures in Attachment 1 of this PA for any inadvertent archaeological discoveries or inadvertent effects to historic properties during construction.

VIII. Confidentiality

The Signatories agree to provide by the provisions of Section 304 of the NHPA, and other applicable requirements, to withhold information concerning the location, character, or ownership of resources where release of such information may endanger the integrity of the resource.

IX. Amendment

Any Signatory to this PA may request that it be amended, whereupon the Signatories will consult in accordance with 36 C.F.R. § 800.14 to consider such an amendment. Amendments will be effective upon the date of the last signature from the Signatories.

X. Dispute Resolution

- A. Should any Signatory or consulting party object at any time to the manner in which the terms of this PA are implemented, within 30 days of information being provided relating to the issue forming the basis of the objection, or within 30 days where the objector can otherwise be reasonably assumed to be aware of the issue forming the basis of objection, FHWA shall consult with such party to resolve the objection. If FHWA determines that such objection cannot be resolved, FHWA will take the following steps:
 - 1. Forward all documentation relevant to the dispute, including FHWA's proposed resolution, to ACHP. FHWA will request ACHP provide comment on the resolution of the objection within 30 days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FHWA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from ACHP, Signatories and consulting parties and provide them with a copy of this written response. FHWA will then proceed according to its final decision.
 - 2. If ACHP does not provide its advice regarding the dispute within the 30-day period, FHWA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, FHWA shall prepare a written response that takes into account any timely comments regarding the dispute from the Signatories and consulting parties to the PA and provide them with a copy of such written response.
 - 3. In the case of objections related to NRHP eligibility, any Signatory may object in writing within 30 days to an SHA or FHWA determination of eligibility. If SHA and FHWA are unwilling to revise the determination in response to the objection or other relevant information, FHWA (or SHA on its behalf) will submit the determination to the Keeper of the National Register of Historic Places for a determination pursuant to 36 C.F.R. Part 63.
- **B.** Objections from the Public: Should a member of the public object to an action taken under this PA, or compliance with the PA, within 30 days of information being provided relating to the issue forming the basis of the objection, or within 30 days where the objector can otherwise be reasonably assumed to be aware of the issue forming the basis of objection, FHWA will ensure that SHA consults with the objecting party to respond to the objection in coordination with FHWA where relevant, provided the

objection is made in writing to FHWA or SHA contacts identified in Attachment 3 or any subsequent updates to Attachment 3. SHA and FHWA will inform other Signatories of the objection and proposed resolution. Should a Signatory disagree with the proposed resolution, the Signatories will follow Stipulation X.

C. FHWA's responsibility to carry out all other actions subject to the terms of this PA that are not the subject of the dispute remain unchanged.

XI. Termination

- **A.** Any Signatory to this PA may terminate it by providing 30 days' notice in writing to the other Signatories, provided that the Signatories will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination.
- **B.** If any Signatory to this PA determines that a term will not or cannot be carried out, that party shall immediately consult with the other Signatories to attempt to develop an amendment per Stipulation IX, above. If within 30 days (or another time period agreed to by all Signatories) an amendment cannot be reached, any signatory may terminate the PA upon written notification to the other Signatories.
- C. In the event of termination, FHWA will comply with 36 C.F.R. § 800 for all remaining actions, or until a new agreement is reached fulfilling such requirements.

This PA will continue in full force and effect until 10 years from the date of execution of the PA, or such time of final acceptance of the Project and when all terms of this PA have been met, should the terms be met prior to the 10-year expiration. The PA will be invalid if the Project is terminated or authorization for the Project is rescinded. At any time in the six-month period prior to its expiration, the Signatories will consult to consider an extension or amendment of the PA. At such time, the Signatories may consider an amendment to extend the PA unmodified for an additional specified duration or consult to amend the PA in accordance with Stipulation IX. No extension or amendment will be effective until all Signatories have signed the amendment or amendment to extend.

PROGRAMMATIC AGREEMENT Among the FEDERAL HIGHWAY ADMINISTRATION, MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION, MARYLAND TRANSPORTATION AUTHORITY, AND MARYLAND STATE HISTORIC PRESERVATION OFFICER

Implementing Section 106 of the National Historic Preservation Act for the

I-695 Over the Patapsco River Francis Scott Key Bridge Replacement Project Anne Arundel and Baltimore Counties, and Baltimore City, Maryland

FEDERAL HIGHWAY ADMINISTRATION

VALERIYA

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REMEZOVA

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By: REIVIEZOVA

Date: 7/1/2024

Valeriya Remezova, Division Administrator

PROGRAMMATIC AGREEMENT Among the FEDERAL HIGHWAY ADMINISTRATION, MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION, MARYLAND TRANSPORTATION AUTHORITY, AND

MARYLAND STATE HISTORIC PRESERVATION OFFICER

Implementing Section 106 of the National Historic Preservation Act for the I-695 Over the Patapsco River Francis Scott Key Bridge Replacement Project Anne Arundel and Baltimore Counties, and Baltimore City, Maryland

MARYLAND STATE PRESERVATION OFFICER

By: Etiwhth Myelin Date: 6-13-2024

Elizabeth Hughes, State Historic Preservation Officer

PROGRAMMATIC AGREEMENT Among the FEDERAL HIGHWAY ADMINISTRATION,

MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION,

MARYLAND TRANSPORTATION AUTHORITY, AND

MARYLAND STATE HISTORIC PRESERVATION OFFICER

Implementing Section 106 of the National Historic Preservation Act for the I-695 Over the Patapsco River Francis Scott Key Bridge Replacement Project Anne Arundel and Baltimore Counties, and Baltimore City, Maryland

MARYLAND TRANSPORTATION AUTHORITY

By:

Bruce Gartner, Executive Director

Data

PROGRAMMATIC AGREEMENT Among the FEDERAL HIGHWAY ADMINISTRATION, MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION, MARYLAND TRANSPORTATION AUTHORITY, **AND** MARYLAND STATE HISTORIC PRESERVATION OFFICER

Implementing Section 106 of the National Historic Preservation Act for the I-695 Over the Patapsco River Francis Scott Key Bridge Replacement Project Anne Arundel and Baltimore Counties, and Baltimore City, Maryland

Date: 6/18/2024

MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY **ADMINISTRATION**

By:

William Pines, P.E., Administrator

CONCURRING PARTY PAGE

PROGRAMMATIC AGREEMENT Among the FEDERAL HIGHWAY ADMINISTRATION, MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION, MARYLAND TRANSPORTATION AUTHORITY, AND MARYLAND STATE HISTORIC PRESERVATION OFFICER

Implementing Section 106 of the National Historic Preservation Act for the I-695 Over the Patapsco River Francis Scott Key Bridge Replacement Project Anne Arundel and Baltimore Counties, and Baltimore City, Maryland

By:		Date:	
	Print Name:		
Orga	nization:		

Attachments

- 1. Inadvertent Discovery Plan
- 2. Links to Documentation Referenced
- 3. Contact Information for FHWA, MDTA and SHA staff (to be updated as necessary)
- 4. Section 106 Initiation Letter

Attachment 1 **Inadvertent Discovery Plan**

- A. Unanticipated Impacts to Architectural Historic Properties: if the Project causes unanticipated impacts to any National Register of Historic Places (NRHP) eligible, listed, or contributing buildings, sites, structures, or objects of the built environment, the contractor must notify the engineer and immediately cease any activity causing ongoing damage until consultation occurs. SHA shall, in consultation MD SHPO, determine if adverse effects have occurred to the property/properties and develop a plan for the protection of the historic property, and minimization or mitigation of impacts. If mitigation is identified, FHWA, SHA, MD SHPO, and other Signatories as necessary will execute a Memorandum of Agreement or amend this PA to record the identified mitigation. SHA or MDTA may hold the contractor(s) liable for any or all costs resulting from this process following appropriate processes identified in its contract instruments.
- В. Unanticipated Damage to Known Archaeological Resources: if unauthorized excavation occurs outside the approved limits of disturbance (LOD) or other approved boundaries designed to protect archaeological resources or cemeteries and thereby causes impacts to known, NRHP-eligible properties, SHA and/or MDTA will ensure any activity causing ongoing damage is stopped until consultation occurs. SHA will conduct a damage assessment consistent with the model used for such assessments under the Archaeological Resources Protection Act (https://www.nps.gov/archeology/pubs/techbr/tchBrf20.pdf). SHA will use the results of the assessment in consultation with the MD SHPO to determine if the resource has been adversely affected and determine appropriate mitigation. If the resource is of known or suspected Native American affiliation, FHWA, with assistance from SHA shall consult with federally recognized Indian Tribes as appropriate. If the resource is affiliated with other known descendant groups or consulting parties, SHA will consult with such parties as well. If mitigation is identified, FHWA, SHA, MD SHPO, and other Signatories as necessary will execute a Memorandum of Agreement or amend this PA to record the identified mitigation. SHA or MDTA may hold the contractor(s) liable for any or all costs resulting from this process following appropriate processes identified in its contract instruments.

C. Unanticipated Discovery of Human Remains: Should any burials, interments, or human remains (hereafter, "remains") be encountered during construction, SHA and/or MDTA will ensure all applicable construction work in the vicinity of the remains is immediately stopped to prevent damage to the remains, or to any additional remains that might be present in the vicinity. A minimum 100-foot buffer around identified remains will be established by SHA and/or MDTA free of disturbance, to be adjusted as appropriate for the site conditions. Construction may occur outside the buffer unless evidence of additional remains is found. If remains are suspected to be human but not confirmed, SHA will ensure that such confirmation is made by a qualified professional. Human remains will at all times be treated respectfully and access and visibility limited to the site of discovery to authorized personnel only. Within Maryland, pursuant to State of Maryland Criminal Code § 10-402, the State's Attorney must authorize movement or removal of any remains until determined to be archaeological. If the remains are determined to be archaeological, SHA and the MD SHPO will consult to determine treatment of the remains and any other necessary treatment such as work needed to define extent of remains in the most expeditious manner feasible.

If the remains are determined archaeological and suspected to be of Native American origin, SHA, in coordination with FHWA, shall provide notification to tribal governments in accordance with any expressed tribal consultation preferences within 24 hours or as soon as practicable. SHA and/or FHWA will consult with affected federally recognized Indian Tribes, the Maryland Commission on Indian Affairs and appropriate Maryland Indian groups as appropriate regarding treatment of the remains. SHA and/or MDTA will accommodate tribal cultural preferences to the extent practicable during such an event. If remains can be associated with other known descendant communities or organizations, such parties shall also be consulted.

In consultation with the MD SHPO, Federally Recognized Indian Tribes, and FHWA as appropriate, and other identified descendant/affiliated consulting parties, the SHA shall develop a plan for the treatment or disposition of the remains or follow provisions of an existing Treatment Plan developed per this PA. SHA and/or MDTA shall implement the provisions of the agreed Treatment Plan.

Should the remains be associated with, or constitute an intact archaeological resource, provision **D** below is also applicable.

D. Unanticipated Discovery of Archaeological Resources: If previously unidentified archaeological features, artifacts, or other materials (hereafter, "resource") are discovered during construction, all ground-disturbing work in the vicinity of the resource shall be temporarily suspended or modified to prevent further damage to the resource, and SHA will provide a reasonable buffer where ground disturbance is prohibited to cover the extent of the resource that may not be exposed.

The SHA archaeologist shall perform a preliminary inspection to identify the resource and evaluate its likelihood of NRHP eligibility. Following this inspection, construction may resume in the vicinity of but outside the boundary of the archaeological resource as defined by the SHA archaeologist. If the resource is potentially eligible for the NRHP, SHA will consult with the MD SHPO on an eligibility determination and, if determined eligible for the NRHP, every effort shall be made to minimize impacts through redesign or modification of construction methods. If the resource is of known or suspected Native American affiliation, FHWA, with assistance from SHA shall consult

with federally recognized Indian Tribes as appropriate. If the resource can be reasonably identified with other descendant or affiliated communities, SHA shall also attempt to consult with such parties.

In consultation with the MD SHPO, SHA shall develop a plan for the treatment of any resource determined eligible. SHA shall describe actions proposed to avoid, minimize, or mitigate adverse effects, and request MD SHPO, tribal, and any other consulting party comments within 5 working days, unless there is a life or safety hazard requiring immediate interim action. SHA will disclose any interim action affecting the eligible resource taken in the event of a life or safety hazard. SHA, at its discretion, may establish a longer comment period if practicable in consideration of potential safety, cost, public travel disruption, and other factors.

SHA shall then implement the provisions of the agreed-upon plan and/or amend this PA to document the resolution, should the resource be determined eligible and should the Project adversely affect the resource.

Attachment 2

Links to Documentation Referenced In the I-695 Over the Patapsco River PA

Federal Codes and Regulations

36 C.F.R. Part 14 and 54 U.S.C. § 100902

Rights-of-Way

https://www.ecfr.gov/current/title-36/chapter-I/part-14

https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title54-

section100902&num=0&edition=prelim

36 C.F.R. Part 63

Dispute Resolution of Determinations of Eligibility for Inclusion in the NRHP https://www.ecfr.gov/current/title-36/chapter-I/part-63

36 C.F.R. Part 79

Curation of Federally Owned and Administered Archaeological Collections https://www.ecfr.gov/current/title-36/chapter-I/part-79

36 C.F.R. Part 800

Implementing Regulations of Section 106 of the National Historic Preservation Act https://www.ecfr.gov/current/title-36/chapter-VIII/part-800?toc=1

40 C.F.R. 1506.6(a)

Public involvement – National Environmental Policy Act https://www.ecfr.gov/current/title-40/chapter-V/subchapter-A/part-1506#1506.6

54 U.S.C.

- National Historic Preservation Act
 - § 306108 Effect of Undertaking on Historic Property
 - o https://uscode.house.gov/view.xhtml?req=(title:54%20section:306108%20edition:pre-lim)
 - § 307103 Access to Information (Section 304)
 - o https://www.achp.gov/digital-library-section-106-landing/frequently-asked-questions-protecting-sensitive-information

State Codes and Regulations

Maryland Criminal Code \S 0-402

Courts and Judicial Proceedings

https://law.justia.com/codes/maryland/2013/article-gcr/section-10-402

I-695 Over the Patapsco River Francis Scott Key Bridge Replacement Section 106 Programmatic Agreement June 2024

Guidelines and Standards

Advisory Council on Historic Preservation

- Exemption Regarding Historic Preservation Review Process for Effects to the Interstate Highway System (ACHP Program Comment, 2005)
 https://www.achp.gov/sites/default/files/exemptions/2017-01/final_interstate_exemption_notice.pdf
- Policy Statement Regarding Treatment of Burial Sites, Human Remains, and Funerary Objects (ACHP March 2023)
 https://www.achp.gov/sites/default/files/policies/2023-07/PolicyStatementonBurialSitesHumanRemainsandFuneraryObjects30June2023.pdf
- Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges (77 FR 68790)
 https://www.federalregister.gov/documents/2012/11/16/2012-27866/program-comment-issued-for-streamlining-section-106-review-for-actions-affecting-post-1945-concrete
- Section 106 Archaeology Guidance (ACHP, 2009)
 https://www.achp.gov/sites/default/files/guidance/2017-02/ACHP%20ARCHAEOLOGY%20GUIDANCE.pdf

The Maryland Historical Trust

- Standards and Guidelines for Archaeological Investigations in Maryland (Shaffer and Cole 1994)
 https://mht.maryland.gov/documents/PDF/archeology/Archeology_standards_investigations.pdf
- Technical Update No. 1 of the Standards and Guidelines for Archaeological Investigations in Maryland: Collections and Conservation Standards (2018)
 https://mht.maryland.gov/documents/PDF/archeology/Archeology_standards_curation.pdf
- Standards and Guidelines for Architectural and Historical Investigations in Maryland (Maryland Historical Trust, Revised 2019)
 https://mht.maryland.gov/documents/PDF/research/Survey_standards_architecture_web.pdf
- NRHP Bulletin 15 How to Apply the National Register Criteria for Evaluation (National Park Service revised 1997)
 https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf
- Other NRHP Bulletins

https://www.nps.gov/subjects/nationalregister/publications.htm#:~:text=national%20register %20of%20historic%20places%20bulletins

- The Secretary of the Interior's Guidelines for the Treatment of Cultural Landscapes (1996) https://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/index.htm
- The Secretary of the Interior's Guidelines for the Treatment of Historic Properties (1995, Revised 2017)

https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf

The Secretary of the Interior's Professional Qualifications Standards
 https://www.nps.gov/articles/sec-standards-prof-quals.htm
 https://www.nps.gov/subjects/historicpreservation/upload/standards-guidelines-archeology-historic-preservation.pdf

- The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (1983)
 https://www.nps.gov/subjects/historicpreservation/upload/standards-guidelines-archeology-historic-preservation.pdf
- The Secretary of the Interior's Standards for the Treatment of Historic Properties (1995, Revised 2017)
 https://www.nps.gov/tps/standards/four-treatments.htm
 OR https://www.ecfr.gov/current/title-36/chapter-I/part-68

Other Referenced Information

 SHA and MDTA Statewide PA: https://www.roads.maryland.gov/OPPEN/2021 PA Amendment.pdf

Attachment 3 FHWA, SHA and MDTA Staff Contact Information:

For FHWA:

Mr. Alexander Bienko Environmental Specialist FHWA - Maryland Division George H. Fallon Federal Building 31 Hopkins Plaza, Suite 1520 Baltimore, MD 21201 phone (410) 779-7148

For SHA:

Mr. Steve Archer Assistant Division Chief Maryland Department of Transportation State Highway Administration 707 N. Calvert Street Baltimore, MD 21202 phone (410) 545-8508

For MDTA:

Ms. Melissa Williams Director Maryland Transportation Authority Planning & Program Development 2310 Broening Highway Baltimore, MD 21224 phone (410) 802-9684 (direct)

Attachment 4 <u>Section 106 Consultation Initiation Letter</u>



Wes Moore Governor Aruna Miller Lieutenant Governor Paul J. Wiedefeld Secretary William Pines, P.E. Administrator

May 16, 2024

Ms. Elizabeth Hughes State Historic Preservation Officer Maryland Historical Trust 100 Community Place Crownsville MD 21032-2023

Dear Ms. Hughes:

Introduction and Project Description

On behalf of the Federal Highway Administration (FHWA) and in accordance with the Programmatic Agreement (PA) Implementing Section 106 of the National Historic Preservation Act for FHWA Undertakings in Maryland (Section 106 PA), this letter serves to inform the Maryland Historical Trust (MHT) of the Maryland Department of Transportation State Highway Administration's (SHA) proposed Project to rebuild the Maryland Transportation Authority's Francis Scott Key Bridge carrying I-695 over the Patapsco River. SHA seeks to establish the Area of Potential Effects (APE) and to provide information about historic properties identification within the APE.

On March 26, 2024, the MDTA Francis Scott Key Bridge (Key Bridge), which carries I-695 over the Patapsco River, was struck by a cargo ship leaving the Port of Baltimore, resulting in the collapse of the bridge. The collapse prompted the immediate closure of I-695 between MD 173 (exit 1) and MD 157/Peninsula Expressway (exit 43) and halted vehicle traffic across the Patapsco River as well as marine shipping to and from the Port of Baltimore. Following the incident, Executive Order 01.01.2024.09 was released by the State of Maryland, declaring a State of Emergency as a result of the Key Bridge collapse. Immediate recovery and debris removal actions were conducted.

MDTA and SHA are now proposing to replace the collapsed Francis Scott Key Bridge in the same location as the original structure. The Project is in portions of Baltimore City, Baltimore County, and Anne Arundel County, Maryland. The project limits extend along I-695 from Quarantine Road in Curtis Bay to Broening Highway in Dundalk and is entirely within MDTA's existing right-of-way (ROW). The remaining portions of the old structure will be removed to clear the on-alignment location of the new structure. This would likely involve fully removing the on-land piers and removing the remaining inwater piers to near or below the river bottom (mud line).

The Project includes construction of a replacement bridge that would restore transportation connectivity; incorporate design upgrades that meet current standards and conditions that have changed since construction of the original bridge in 1977; and accommodate existing and future ship navigation on the Patapsco River and into the Port of Baltimore. As the proposed Project is a replacement of the collapsed bridge, the location of the Project would be the same as the old structure and remain within the existing ROW, following the existing centerline across the Patapsco River and the approaches along I-695. The new bridge would have four travel lanes, maintaining the capacity of the former bridge.

The Project proposes several design changes to be incorporated into the replacement bridge to account for advancements in design standards and changes in existing conditions since the original bridge was constructed. A bridge type will be developed that could support a longer main span and higher air draft clearance; and this will likely involve support towers which could be taller than the old bridge to as much as 500-550 feet above the water. The replacement bridge would have a 230-foot minimum air draft and a clear span of 1,200 feet at full air draft along the main span to provide additional overhead clearance for large vessels traveling under the bridge. Considering a change in air draft and clear span, the Project also proposes an increased length to 1,400 feet along the main span with additional piers, increasing the bridge to 2.4 miles in total length with a 4% profile to match the existing alignment and approaches. The new typical section for the Project would meet the design specifications for lanes and shoulders outlined in the American Association of Highway and Transportation Officials (AASHTO) *A Policy on Design Standards – Interstate System* (May 2016) and would include two 12-foot-wide lanes and 10-foot/4-foot-wide shoulders.

The project includes obtaining federal permits from United States Coast Guard (USCG) US Army Corps of Engineers (USACE). On May 2, 2024, FHWA sent an email to the USCG and the USACE, proposing to assume the role of Lead Federal Agency, in accordance with 36 CFR 800.2(a)(2), to fulfill collective federal agency responsibilities under Section 106. USCG and USACE responded on May 13 and 14, 2024, respectively, concurring with FHWA taking this role.

A location map is included as Attachment 1.

Funding

Federal funds are anticipated for this project.

Area of Potential Effects

In determining the Area of Potential Effects (APE) for this project, SHA considered possible visual, audible, atmospheric and/or physical impacts to historic properties, both archaeological sites and architectural resources, which would diminish the integrity of any characteristics that would qualify a property for the National Register of Historic Places (NRHP). The area along the Patapsco River is characterized as an industrial shipping port. The previous steel arch continuous through truss bridge was visually prominent along the Patapsco River to the north and south of the bridge. While the bridge was also visible farther inland, it was less prominent amidst other dominant commercial and industrial buildings and structures comprising the Baltimore skyline. The proposed new bridge will be taller and likely a different bridge type, but will not substantially alter the viewshed along the Patapsco River and does not have the potential to affect historic properties beyond the Patapsco River shoreline. The APE, therefore, is confined to parcels along the Patapsco River shoreline, west to Fort McHenry and east to Fort Smallwood Park, as well parcels directly adjacent to MDTA ROW along I-695 (Attachment 2a-d). The archaeological survey area is defined as the limits of construction disturbance within MDTA ROW from its intersection with Broening Highway to the north and the Quarantine Road intersection to the south.

Proposed Identification Methods and Results

Architecture: There are eight architectural historic properties in the APE.

Resource Name	MIHP No.	NRHP Status
Fort McHenry National Monument	B-8	Listed, October 15, 1966
& Historic Shrine		
Baltimore Harbor Tunnel	B-5333	Eligible, 2021
Canton Grain Elevator	B-985	Eligible, 2019
Baltimore Municipal Airport,	B-3603	Eligible, 1992
Harbor Field		
Baltimore Municipal Airport Air	B-2094	Eligible, 1994
Station		
Turner's Station African American	BA-3056	Eligible, 2019
Survey District		
Sparrow's Point Shipyard District	BA-3208	Eligible, 2006
Fort Carroll	BA-451	Eligible, 2006
Fort Smallwood Park	AA-898	Eligible, 2013

Additional MIHP resources are associated with these historic properties as contributing/non-contributing resources. A-897 and A-897A, as well as A-898A through A-898I, are associated with Fort Smallwood Park. Likewise, BA-3208-1 through BA-328-5 are associated with Sparrow's Point Shipyard District.

Center Street, 114 (DOE-BA-0042); Avondale Road, 202 (DOE-BA-0015); Carver Road, 105 (DOE-BA-0040); and Fleming Community Center (DOE-BA-0083) were individually evaluated and determined not eligible for the NRHP in the 1990s, before Turner's Station African American Historic District was determined NRHP eligible. All resources except 114 Center Street are contributing resources in the district.

As outlined above, notable effects would be confined to those properties immediately adjacent to the work and/or within limits of disturbance for construction of the new bridge. SHA has determined there is limited potential for other types of effects, in consideration of the prior modern bridge structure. The new structure will be on the same alignment as the prior bridge, but is anticipated to be of increased height, and will likely be a different bridge type than the prior bridge. The prior bridge was visible in whole or in part from a great number of locations in dense, urban Baltimore City and surrounding areas. The replacement bridge will have slightly increased visibility. However, historic properties effects resulting from these changes would be limited to those properties where the differences between the prior bridge and the replacement bridge would be integral to the character, experience or integrity of the historic property.

Given this narrow potential for effects, SHA proposes architectural inventory and evaluation efforts under 36 CFR 800.4(a) consisting of NHRP evaluation of: 1) parcels immediately adjacent to MDTA ROW and project limits and 2) MIHP resources within the APE. Since all MIHP resources within the APE have an NRHP evaluation, resources requiring evaluation include the following:

Unrecorded Architectural Resources		
6001 Dock Road		
3901 Fort Armistead Road		
3925 Fort Armistead Road		
Fort Armistead Park		
BG&E parcels (Tax Map 110, Parcels 3, 26, 27, and 58)		
Francis Scott Key Bridge Administrative Building		

The APE also includes four metal girder bridges along I-695: BCZ496061 (1975); BCZ496051 (1975); BCZ492061 (1972); and BCZ492051 (1979). Metal girder bridges are not eligible for the NRHP under the Advisory Council on Historic Preservation Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges (Federal Register Vol. 77, No. 222) and do not require NRHP evaluation.

Archaeology: There are no recorded archaeological historic properties within the archaeology survey area.

There is minimal potential for terrestrial archaeological historic properties within the archaeological survey area. The terrestrial portion of the archaeological survey area has not been subjected to Phase I archaeological survey. A review of soil data, historic topographic maps, and twentieth-century aerial photographs demonstrates that the entirety of the terrestrial archaeological survey area is located on made land and fill with minimal potential to contain archaeological historic properties (USDA-NRCS 2024; USGS 1894, 1946, 1975; HistoricAerials.com 2024). No further terrestrial archaeological work is recommended.

There is also minimal potential for underwater archaeological historic properties. Several prior underwater archaeological surveys have occurred in the archaeological survey area (Koski-Karell, 1979; U.S. Army Corps of Engineers 1992; Pelletier, Williams, and Randolph 2005). There is one archaeological quad file within the archaeology survey area, CURTIS-QF10, the approximate location of a pier at the mouth of Bear Creek, that was recorded based on historical mapping as part of a Phase IA underwater archaeological project ca. 1990. Subsequent underwater archaeological survey in the vicinity of CURTIS-QF10 by Pelletier, William, and Randolph (2005) did not identify evidence of the pier. Additionally, the presence of a dredged channel under the collapsed truss span of the Francis Scott Key Bridge, where recovery efforts are currently focused, suggests no intact, unrecorded resources are likely to be present or affected by the undertaking. No further underwater archaeological work is recommended.

Review Request

FHWA has requested a PA for this project, the scope of which would be commitments to this identification effort, an effects determination following completion of historic properties identification and evaluation, and a process for managing change under the progressive design build project. We request any comments you may have by May 27, 2024 on the APE, that no further archaeological work is necessary, and the scope of identification efforts. Based on the project schedule, SHA will need to execute the PA by July 8, 2024; pending any comments you may have to provide on the content of this letter, we will work with FHWA to provide a draft PA.

We invite, by copy of this letter, the organizations listed in Attachment 3 to provide comments and participate in the Section 106 process. Pursuant to the requirements of the implementing regulations found at 36 CFR Part 800, SHA seeks their assistance in identifying historic preservation issues as they relate to this specific project (see 36 CFR §800.2(c)(3) and (5), and §800.3(f) for information regarding the identification and participation of consulting parties, and §800.4, and §800.5 regarding the identification of historic properties and assessment of effects). For additional information regarding the Section 106 regulations, see the Advisory Council on Historic Preservation's website,

Ms. Elizabeth Hughes Page Six

www.achp.gov, or contact SHA or MHT. If no response is received by May 27, 2024, we will assume that these offices decline to participate. Please call Sarah Groesbeck at 410-545-0038 (or email sgroesbeck@mdot.maryland.gov) or myself with questions regarding this project.

Sincerely,

Digitally signed by

Adobe Acrobat version: Steve Archer

Steve Archer

Assistant Division Chief

Environmental Planning Division

Attachments

Mr. Alex Bienko, Environmental Specialist, MD Division, FHWA cc:

Mr. David Clarke, Federal Preservation Officer, FHWA

Ms. Donna Buscemi, Deputy Director, OPPE, SHA

Ms. Sarah Groesbeck, Architectural Historian, OPPE-EPLD, SHA

Ms. Heather Lowe, Planning and Community Relations Manager, MDTA

Mr. Ray Moravec, Director, OPPE, SHA

Ms. Sushmita Sarkar, Environmental Manager, OPPE-EPLD, SHA

Ms. Melissa Williams, Director, Planning & Program Development, MDTA







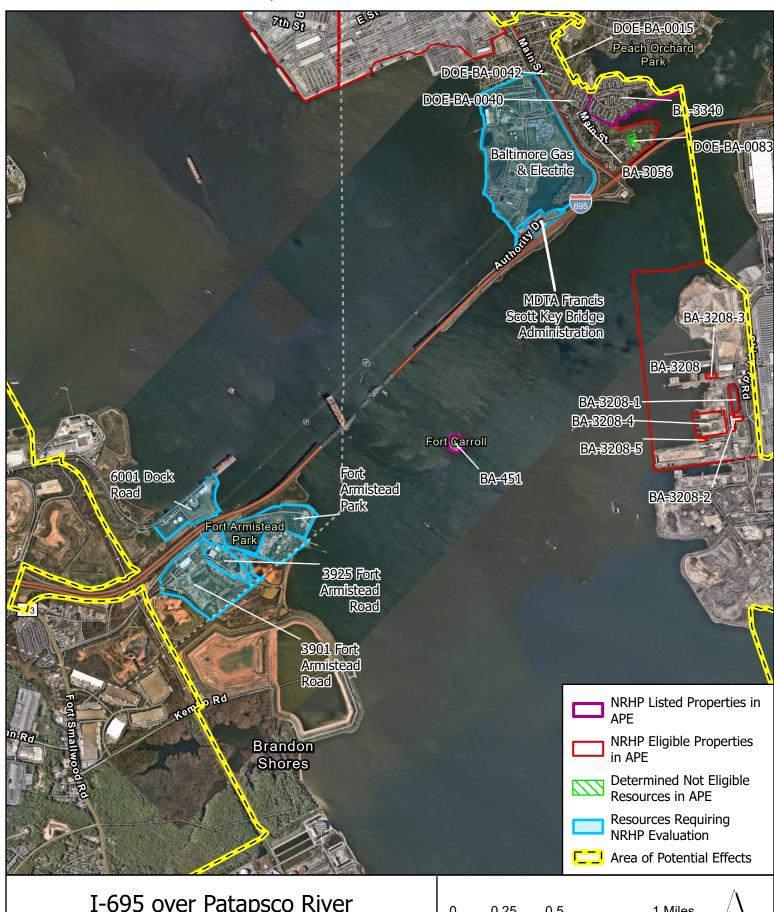
I-695 over Patapsco River Rebuilding the Francis Scott Key Bridge

Baltimore City, Baltimore County, Anne Arundel County

0 0.25 0.5 1 Miles

Scale: 1:30,000 May 15, 2024





I-695 over Patapsco River Rebuilding the Francis Scott Key Bridge

Baltimore City, Baltimore County, Anne Arundel County



Rebuilding the Francis Scott Key Bridge

Baltimore City, Baltimore County, Anne Arundel County

Scale: 1:30,000 May 15, 2024



Attachment 3

Francis Scott Key Bridge Rebuild

Consulting Parties

Organization	Contact Person	Email
Advisory Council on Historic	Mandy Ranslow	mranslow@achp.gov
Preservation		
Anne Arundel County Department	Erica Matthews	rpjack50@aacounty.org
of Recreation and Parks		
Anne Arundel Co. Office of	Darian Beverungen	PZBeve19@aacounty.org
Environmental & Cultural		
Resources		
Anne Arundel County Office of	Samuel Snead	trsnea19@aacounty.org
Transportation		
Anne Arundel County Trust for	Patricia Melville	actforpreservation@gmail.com
Preservation		
Baltimore City Commission for	Eric Holcomb	eric.holcomb@baltimorecity.gov
Historical and Architectural		
Preservation		
Baltimore City Department of	Chris Ryer	Chris.Ryer@baltimorecity.gov
Planning		
Baltimore City Department of	Corren Johnson	Corren.Johnson@baltimorecity.gov;
Transportation		
Baltimore Heritage	Johns Hopkins	hopkins@baltimoreheritage.org
Baltimore National Heritage Area	Shauntee Daniels	sdaniels@baltimoreheritagearea.org
Baltimore County Landmarks	Caitlin Merritt	cmerritt@baltimorecountymd.gov
Preservation Commission		
Baltimore County Traffic	Angelica Daniel	adaniel@baltimorecountymd.gov
Engineering and Transportation		
Planning	D 1	
Fort McHenry National Monument	Robert Stewart	robert_stewart@nps.gov
and Historic Shrine)	
Friends of Fort McHenry	Melanie Santiago-	info@friendsoffortmchenry.org
M 1 10 ' ' I I'	Mosier	
Maryland Commission on Indian	Keith Colston	keith.colston@maryland.gov
Affairs	A 1 D ~ C 1	C 10 1 1
Maryland Port Authority	Amanda Pañafiel	apenafiel@marylandports.com
National Park Service Northeast	Mark Eberle	mark_eberle@nps.gov
Region CD 1:	A C	D: 4 OD 4: ADC
Preservation Alliance of Baltimore	Anne Gryczon	Director@PreservationABC.org
County, Inc.	NI:-11 D 11'	11:
Preservation Maryland	Nicholas Redding	nredding@presmd.org
Turner Station Conservation Team	Gloria Nelson	glorianelson8@verizon.net
United States Army Corps of	Joseph DaVia	joseph.davia@usace.army.mil
Engineers	II 1D D'	, , , , , , , , , , , , , , , , , , ,
United States Coast Guard	Hal R. Pitts	hal.r.pitts@uscg.mil

Attachment 3

MD State Recognized Tribes

Cedarville Band of Piscataway	Natalie Standing-on-the-	piscatawayindians@gmail.com
	Rock Proctor	

Federally Recognized Tribes

Absentee-Shawnee Tribe of Oklahoma	Devon Frazier	dfrazier@astribe.com
Delaware Nation	Katelyn Lucas	klucas@delawarenation-nsn.gov
Delaware Tribe of Indians	Susan Bachor	sbachor@delawaretribe.org
Eastern Shawnee	Lora Nuckolls	thpo@estoo.net
Oneida Indian Nation	Jesse Bergevin	jbergevin@oneida-nation.org
Onondaga Nation	Anthony Gonyea	ononcomm@gmail.com
Pamunkey Indian Tribe	Shaleigh Howells	Shaleigh.howells@pamunkey.org
St. Regis Mohawk	Darren Bonaparte	darren.bonaparte@srmt-nsn.gov
Seneca-Cayuga	William Tarrant	wtarrant@sctribe.com
Shawnee Tribe	Tonya Tipton	tonya@shawnee-tribe.com
Tuscarora Nation	Bryan Printup	bprintup@hetf.org

Maryland DEPARTMENT OF PLANNING MARYLAND HISTORICAL TRUST

May 16, 2024

Steve Archer Assistant Division Chief, Environmental Planning Division Maryland Department of Transportation State Highway Administration 707 N. Calvert Street Baltimore, MD 21202

Re: MDTA Francis Scott Key Bridge
I-695 over the Patapsco River
Initiation of Section 106 Review
Baltimore City, Anne Arundel County and Baltimore County, Maryland

Dear Mr. Archer,

Thank you contacting the Maryland Historical Trust (MHT), a division of the Maryland Department of Planning, on behalf of the Federal Highway Administration (FHWA) to initiate the Section 106 review process for the above-referenced project. We look forward to working with your agency and other involved parties to successfully complete the preservation requirements for the proposed undertaking.

Based on our review of your letter and the information presented at recent Interagency Review Meetings, we understand that Maryland Department of Transportation State Highway Administration (SHA) proposes to replace the Maryland Transportation Authority's (MDTA) Francis Scott Key Bridge in the same location as the original structure. The project limits extend along I-695 from Quarantine Road in Curtis Bay to Broening Highway in Dundalk and is entirely within MDTA's existing right-of-way (ROW). The remaining portions of the collapsed structure will be removed to clear the on-alignment location of the new structure.

Your letter seeks to initiate the Section 106 process for this undertaking, establish an Area of Potential Effects (APE) for the project, and determine the scope of cultural resources identification efforts. MHT concurs with MDTA/SHA's defined APE for cultural resources, as illustrated in Attachment 2 of your submittal. We recognize that MDTA/SHA may make further refinements to its APE as planning proceeds - based on the addition of ancillary actions or other design modifications.

As you are aware, considerable information already exists regarding identified historic and archaeological resources within this large study area. The table provided with your letter includes most of the known historic properties within the APE, however, we request that you add the National Register-listed Day Village Historic District (MIHP No. BA-3340) to your inventory of existing cultural resources. MHT agrees with MDTA/SHA's historic property investigation methodology for unrecorded architectural resources that consists of the National Register evaluation of parcels immediately adjacent to MDTA ROW and project limits. These resources include: 6001 Dock Road, 3901 Fort Armistead Road, 3925 Fort Armistead Road, Fort Armistead Park, BG&E property (Tax Map 110, Parcels 3, 26, 27, and 58), and the Francis Scott Key Bridge Administrative Building.

Previous studies and current recovery efforts suggest that there is minimal potential for terrestrial and underwater archaeological historic properties within the archaeological study area. Therefore, MHT agrees with MDTA/SHA's recommendation for no further archaeological work at this stage in project planning. Once MDTA/SHA has developed more detailed design and construction plans, it will need to reassess whether further cultural resources investigations are warranted, in consultation with MHT, particularly for any staging areas, anchorages, and other related ancillary actions.

We agree with the list of potential consulting parties for this undertaking, presented in Attachment 3 of your letter. As the Section 106 coordination and public outreach efforts progress, additional relevant parties may be identified and invited to participate in the consultation.

Finally, MHT acknowledges the need to execute a Programmatic Agreement (PA) for this undertaking that will memorialize MDTA/SHA's commitments to 1) complete the identification of historic properties, 2) make an effects determination following the evaluation of historic properties within the APE, and 3) create a process for ongoing consultation and managing changes under this progressive design build project. MHT is committed to working with MDTA/SHA, FHWA, and other involved parties to successfully execute and implement the PA to meet the project's schedule deadlines.

Thank you for initiating consultation with MHT early in project planning for this undertaking. If you have questions or require any assistance, please contact Beth Cole (for archaeology) at beth.cole@maryland.gov or Tim Tamburrino (for the historic built environment) at tim.tamburrino@maryland.gov.

Sincerely,

Elizabeth Hughes

Director/State Historic Preservation Officer

Eliabth Hoglin

EH/BC/TJT/202402473

From: Schiszik, Lauren (DOP)
To: Sarah Groesbeck (Consultant)

Cc: Ryer, Chris (DOP); Holcomb, Eric (DOP)

Subject: RE: Section 106 Consultation: Francis Scott Key Bridge Rebuild in Baltimore City, Baltimore County, and Anne Arundel County

Maryland

Date: Thursday, May 16, 2024 10:12:23 AM

Good morning Sarah,

Thank you for inviting CHAP to serve as a consulting party for this Section 106 process. I am accepting this invitation on Eric's behalf while he is out of the office.

Best.

Lauren

Lauren Schiszik (she, her)

Historic Preservation Planner Supervisor and Acting Executive Director, CHAP

City of Baltimore | Department of Planning

417 E. Fayette St., 8th Floor ¦Baltimore, MD 21202

410-396-5796

http://chap.baltimorecity.gov



OUR MISSION: To build Baltimore as a diverse, sustainable and thriving city of neighborhoods and as the economic and cultural driver for the region.

OUR EQUITY STATEMENT: An equitable Baltimore addresses the needs and aspirations of its diverse population and meaningfully engages residents through inclusive and collaborative processes to expand access to power and resources.

From: Sarah Groesbeck (Consultant) <SGroesbeck.consultant@mdot.maryland.gov>

Sent: Thursday, May 16, 2024 9:57 AM

To: Schiszik, Lauren (DOP) <Lauren.Schiszik@baltimorecity.gov>

Subject: FW: Section 106 Consultation: Francis Scott Key Bridge Rebuild in Baltimore City, Baltimore County,

and Anne Arundel County Maryland

CAUTION: This email originated from outside of Baltimore City IT Network Systems. **Reminder:** <u>DO NOT</u> click links or open attachments unless you recognize the sender and know that the content is safe. Report any suspicious activities using the Report Phishing Email Button, or by emailing to Phishing@baltimorecity.gov

Hi Lauren,

This originally went to Eric Holcomb but I got his out of office message. I'm forwarding this to you because of the abbreviated comment period.

Thanks, Sarah

From: Sarah Groesbeck (Consultant)
Sent: Thursday, May 16, 2024 9:44 AM

To: Sarah Groesbeck (Consultant) < SGroesbeck.consultant@mdot.maryland.gov>

Cc: Steve Archer <<u>SArcher@mdot.maryland.gov</u>>

Subject: Section 106 Consultation: Francis Scott Key Bridge Rebuild in Baltimore City, Baltimore County, and

Anne Arundel County Maryland



Environmental Planning Division

Good Afternoon,

On behalf of the Federal Highway Administration, the Maryland Department of Transportation State Highway Administration (SHA) is transmitting the attached Section 106 consultation initiation letter for Project No. AB490M83, Francis Scott Key Bridge Rebuild in Baltimore City, Baltimore County, and Anne Arundel County. We request any comments to SHA Cultural Resources by May 27, 2024. No hard copies will follow.

If you have questions or comments, please contact me or Steve Archer.

Thank you, Sarah



Sarah Groesbeck

Consultant Architectural Historian Cultural Resources Section Environmental Planning Division (EPLD)

410.545.0038 office sgroesbeck@mdot.maryland.gov Maryland State Highway Administration 707 North Calvert Street, Baltimore, MD 21202-3601



2664 Riva Road, P.O. Box 6675 Annapolis, MD 21401 410-222-7450

Jenny B. Dempsey Planning and Zoning Officer

May 17, 2024

Sarah Groesbeck Environmental Planning Division Maryland State Highway Administration 707 N. Calvert Street Baltimore, MD 21202

Re: Section 106 Consultation: Francis Scott Key Bridge Rebuild – Project No. AB490M83

Dear Ms. Groesbeck,

Thank you for providing Anne Arundel County's Cultural Resources Section in the Office of Planning & Zoning the opportunity to comment on the above referenced project as part of the Section 106 consultation process. Based on the information provided, it is our understanding that the Francis Scott Key Bridge is to be replaced by a new bridge in the same original location as the Key Bridge. The only historic resource within the APE that is located in Anne Arundel County is Ft. Smallwood Park (AA-898) and associated contributing and non-contributing buildings within the park. As noted in the information your office provided, Ft. Smallwood Park is eligible for listing in the National Register of Historic Places; and therefore, would need an evaluation of effects.

In addition, our office concurs on the Maryland Historical Trust's recommendation of no adverse effect for archaeological resources at this stage, but that further archaeological review may be warranted as the planning continues.

Our office looks forward to continuing to participate in the consultation process as this project moves forward.

Sincerely,

Acion Deveningen

Ms. Darian Beverungen

Senior Planner, Cultural Resources Section

Office of Planning & Zoning

ATTACHMENT E: RARE THREATENED AND ENDANGERED SPECIES (RTE) COORDINATION



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Chesapeake Bay Ecological Services Field Office 177 Admiral Cochrane Drive Annapolis, MD 21401-7307 Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 05/01/2024 16:21:08 UTC

Project Code: 2024-0079302

Project Name: Francis Scott Key Bridge Rebuild

Subject: List of threatened and endangered species that may occur in your proposed project

location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

Project code: 2024-0079302

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

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

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

Attachment(s):

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

OFFICIAL SPECIES LIST

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

This species list is provided by:

Chesapeake Bay Ecological Services Field Office 177 Admiral Cochrane Drive Annapolis, MD 21401-7307 (410) 573-4599

PROJECT SUMMARY

Project code: 2024-0079302

Project Code: 2024-0079302

Project Name: Francis Scott Key Bridge Rebuild

Project Type: Bridge - Replacement

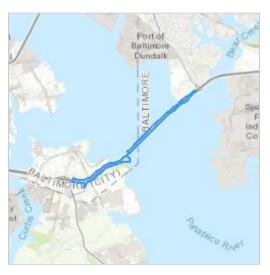
Project Description: Reconstruction of the Francis Scott Key Bridge following the collapse.

The bridge will be reconstructed on alignment and the approach roadways

adjusted as needed to accommodate the new bridge structure.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.2174299,-76.5278891271044,14z



Counties: Anne Arundel, Baltimore, and Baltimore counties, Maryland

ENDANGERED SPECIES ACT SPECIES

Project code: 2024-0079302

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Project code: 2024-0079302 05/01/2024 16:21:08 UTC

MAMMALS

NAME STATUS

Northern Long-eared Bat *Myotis septentrionalis*

Endangered

No critical habitat has been designated for this species.

This species only needs to be considered under the following conditions:

• This species only needs to be considered if the project includes wind turbine operations.

Species profile: https://ecos.fws.gov/ecp/species/9045

Tricolored Bat Perimyotis subflavus

Proposed

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515

Endangered

INSECTS

NAME STATUS

Monarch Butterfly Danaus plexippus

Candidate

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

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

WETLANDS

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers District</u>.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

Project code: 2024-0079302 05/01/2024 16:21:08 UTC

FRESHWATER POND

PUBHx

FRESHWATER EMERGENT WETLAND

- PEM1Cd
- PEM1C

ESTUARINE AND MARINE DEEPWATER

• E1UBL

ESTUARINE AND MARINE WETLAND

■ E2USP

Project code: 2024-0079302 05/01/2024 16:21:08 UTC

IPAC USER CONTACT INFORMATION

Agency: Maryland State Highway Administration

Name: Justin Reel

Address: 700 East Pratt Street, Suite 500

City: Baltimore

State: MD Zip: 21202

Email jreel@rkk.com Phone: 7033384139

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Chesapeake Bay Ecological Services Field Office 177 Admiral Cochrane Drive Annapolis, MD 21401-7307 Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To: 05/09/2024 14:28:59 UTC

Project code: 2024-0079302

Project Name: Francis Scott Key Bridge Rebuild

Federal Nexus: yes

Federal Action Agency (if applicable): Federal Highway Administration

Subject: Federal agency coordination under the Endangered Species Act, Section 7 for

'Francis Scott Key Bridge Rebuild'

Dear Sushmita Sarkar:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on May 09, 2024, for 'Francis Scott Key Bridge Rebuild' (here forward, Project). This project has been assigned Project Code 2024-0079302 and all future correspondence should clearly reference this number. Please carefully review this letter. Your Endangered Species Act (Act) requirements may not be complete.

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (DKey), invalidates this letter. *Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.*

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis completed by the Service, your project has reached the determination of "May Affect, Not Likely to Adversely Affect" the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your

IPaC-assisted determination was incorrect, this letter verifies that consultation on the Action is <u>complete</u> and no further action is necessary unless either of the following occurs:

- new information reveals effects of the action that may affect the northern long-eared bat in a manner or to an extent not previously considered; or,
- the identified action is subsequently modified in a manner that causes an effect to the northern long-eared bat that was not considered when completing the determination key.

15-Day Review Period

As indicated above, the Service will notify you within 15 calendar days if we determine that this proposed Action does not meet the criteria for a "may affect, not likely to adversely affect" (NLAA) determination for the northern long-eared bat. If we do not notify you within that timeframe, you may proceed with the Action under the terms of the NLAA concurrence provided here. This verification period allows the identified Ecological Services Field Office to apply local knowledge to evaluation of the Action, as we may identify a small subset of actions having impacts that we did not anticipate when developing the key. In such cases, the identified Ecological Services Field Office may request additional information to verify the effects determination reached through the Northern Long-eared Bat DKey.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly Danaus plexippus Candidate
- Tricolored Bat Perimyotis subflavus Proposed Endangered

You may coordinate with our Office to determine whether the Action may affect the species and/ or critical habitat listed above. Note that reinitiation of consultation would be necessary if a new species is listed or critical habitat designated that may be affected by the identified action before it is complete.

If you have any questions regarding this letter or need further assistance, please contact the Chesapeake Bay Ecological Services Field Office and reference Project Code 2024-0079302 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

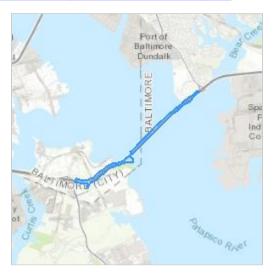
Francis Scott Key Bridge Rebuild

2. Description

The following description was provided for the project 'Francis Scott Key Bridge Rebuild':

Reconstruction of the Francis Scott Key Bridge following the collapse. The bridge will be reconstructed on alignment and the approach roadways adjusted as needed to accommodate the new bridge structure.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.2174299,-76.5278891271044,14z



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of "may affect, but not likely to adversely affect" for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when whitenose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

Yes

6. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat and northern long-eared bat.

Does your proposed action fall within the scope of this programmatic consultation?

Note: If you have **previously consulted** on your proposed action with the Service under the NLEB 4dRule, answer 'no' to this question and proceed with using this key. If you have **not yet consulted** with the Service on your proposed action and are unsure whether your proposed action falls within the scope of the FHWA, FRA, FTA range-wide programmatic consultation, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer 'no' to this question if it is not.

No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

Yes

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)? *No*

10. Have you determined that your proposed action will have no effect on the northern longeared bat? Remember to consider the <u>effects of any activities</u> that would not occur but for the proposed action.

If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer "No" below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project's action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a "no effect" determination for the northern long-eared bat.

Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer "No" and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of Effects of the Action can be found here: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

No

11. [Semantic] Is the action area located within 0.5 miles of a known northern long-eared bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

12. Does the action area contain any caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating northern long-eared bats?

No

13. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?

(If unsure, answer "Yes.")

Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats (i.e., live trees and/or snags ≥3 inches (12.7 centimeter) dbh), answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat can be found at: https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions

Yes

14. Will the action cause effects to a bridge?

Yes

Project code: 2024-0079302 05/09/2024 14:28:59 UTC

15. Has a site-specific bridge assessment following <u>USFWS guidelines</u> been completed?

Note: For information on conducting a bridge/structure assessment, see Appendix D of the User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat and the associated Bridge/ Structure Bat Assessment Form. Additional resources can be found at: https://www.fws.gov/media/bats-and-transportation-structures-references-and-additional-resources and a training video is located at: https://www.youtube.com/watch?v=iuFwkT7q8Ws.

No

16. Will the proposed action result in the cutting or other means of knocking down, bringing down, or trimming of any trees suitable for northern long-eared bat roosting?

Note: Suitable northern long-eared bat roost trees are live trees and/or snags ≥ 3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities.

Yes

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

19.8

In what extent of the area (in acres) will trees be cut, knocked down, or trimmed during the <u>inactive</u> (hibernation) season for northern long-eared bat? **Note:** Inactive Season dates for spring staging/fall swarming areas can be found here: https://www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas

0

In what extent of the area (in acres) will trees be cut, knocked down, or trimmed during the <u>active</u> (non-hibernation) season for northern long-eared bat? **Note:** Inactive Season dates for spring staging/fall swarming areas can be found here: https://www.fws.gov/media/inactive-season-dates-swarming-and-staging-areas

19.8

Will all potential northern long-eared bat (NLEB) roost trees (trees ≥3 inches diameter at breast height, dbh) be cut, knocked, or brought down from any portion of the action area greater than or equal to 0.1 acre? If all NLEB roost trees will be removed from multiple areas, select 'Yes' if the cumulative extent of those areas meets or exceeds 0.1 acre.

Yes

Enter the extent of the action area (in acres) from which all potential NLEB roost trees will be removed. If all NLEB roost trees will be removed from multiple areas, entire the total extent of those areas. Round up to the nearest tenth of an acre.

19.8

For the area from which all potential northern long-eared bat (NLEB) roost trees will be removed, on how many acres (round to the nearest tenth of an acre) will trees be allowed to regrow? Enter '0' if the entire area from which all potential NLEB roost trees are removed will be developed or otherwise converted to non-forest for the foreseeable future.

0

Will any snags (standing dead trees) ≥3 inches dbh be left standing in the area(s) in which all northern long-eared bat roost trees will be cut, knocked down, or otherwise brought down?

No

Will all project activities by completed by April 1, 2024?

No

Project code: 2024-0079302 05/09/2024 14:28:59 UTC

IPAC USER CONTACT INFORMATION

Agency: Maryland Department of Transportation

Name: Sushmita Sarkar

Address: 707 North Calvert Street

City: Baltimore State: MD

Zip: 21202

Email ssarkar@mdot.maryland.gov

Phone: 4105450392

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration



Wes Moore, Governor
Aruna Miller, Lt. Governor
Josh Kurtz, Secretary
David Goshorn, Deputy Secretary

Coordination Sheet for MD DNR Environmental Review Related to Project Locations

June 3, 2024

Jeff Gring
Team Manager/Senior Environmental Scientist
Coastal Resources, Inc.
25 Old Solomons Island Road,
Annapolis, MD 21401

Re: Environmental Review Request: Rare, Threatened, and/or Endangered Species - Key Bridge Rebuild Project, Baltimore City, Baltimore County, and Anne Arundel County, Maryland

The Maryland Department of Natural Resources (MDNR) completed the environmental review request from Coastal Resources, Inc on behalf of the Maryland Transportation Authority (MDTA) for the Francis Scott Key Bridge Rebuild Project in Baltimore City, Baltimore County, and Anne Arundel County Maryland.

To ensure that impacts to natural and living resources on the project site and vicinity are first avoided and then if unavoidable, minimized to the maximum extent possible, the Department requests that the following concerns and recommendations be fully incorporated into the review of the proposed activities:

Waterways

The prominent waterway in the project area is the tidal portion of the Patapsco River (Use Class II) which flows directly into the Chesapeake Bay. Adjacent to the project site, the Patapsco River forms confluences with Bear Creek (Use II) and Curtis Creek (Use II) and tributaries.

Avifauna

Historic Waterfowl Concentration Areas protected under Critical Area Law are present along the shorelines and in the open water of the Patapsco River around the Francis Scott Key Bridge. Generally, to minimize disturbance to wintering and staging waterfowl, no water dependent work should be conducted from November 15 through March 1 of any year. However, this time of year restriction may be waived when time of year restrictions related to other resource concerns are present and if threats to human health and safety exist.

There is potential presence of a multitude of migratory birds in the project area. The Patapsco River harbors various colonial nesting waterbirds including herons, cormorants, and gulls. These species can be seen nesting on the piers and other structures of the bridge.

Submerged Aquatic Vegetation (SAV)

In 2022, 176.8 acres of SAV were mapped in the Patapsco River (VIMS annual aerial SAV survey). This represents 45% of the 389-acre SAV restoration target for the Patapsco River. SAV in the Patapsco has been trending upward in acreage in the past decade, as seen in Fig. 1 below. SAV is located primarily in Old Road Bay and Bear, Swan, Cox, Stony, Nabbs, Rock, Back, Main, Bodkin, and Wharf Creeks and Boyd Pond (Fig. 2). SAV species composition is composed of several freshwater to mesohaline species, including *Zannichellia palustris* (Horned pondweed), *Elodea canadensis* (Common waterweed), *Ceratophylum demersum* (Coontail), *Vallisneria americana* (Wild celery), *Potamogeton perfoliatus* (Redhead grass), *Ruppia maritima* (Widgeongrass), *Potamogeton crispus* (Curly pondweed), *Myriophyllum spicatum* (Eurasian watermilfoil), *and Hydrilla verticillata* (Hydrilla) (https://www.vims.edu/research/units/programs/sav/access/maps/).

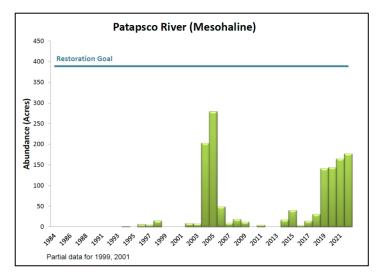


Figure 1. SAV Acres over

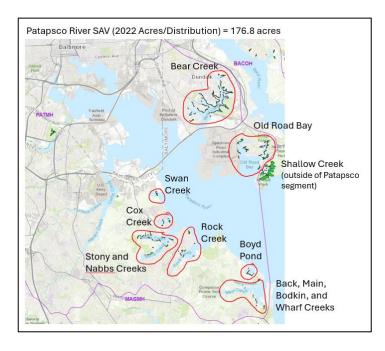


Figure 2. SAV Distribution

Key Bridge demolition, removal, and reconstruction has the potential to resuspend the thick layer of sediment on the bottom of the Patapsco River. This resuspension of sediments will create turbidity that reduces the light and conditions necessary for SAV survival, recruitment, and expansion and will limit our ability to progress toward the segment SAV restoration target of 389 acres.

To avoid impacts to SAV, all reasonable efforts should be made to reduce the resuspension of sediments during reconstruction and block the inevitable turbidity plumes from entering the creeks and bays where SAV is abundant. Time of year restrictions to ensure the majority of construction occurs outside of the SAV growing period from April 15 through October 15 will reduce impacts. Recognizing that this is an emergency situation where impacts to SAV will be inevitable, we recommend proactively planning to directly restore SAV (at a 3:1 ratio for acreage) when bridge reconstruction is complete in areas where distribution, density, or diversity is lost. The recommended species for restoration at this location would be Vallisneria americana (Wild celery).

Rare, Threated, and Endangered Species

Two Sensitive Species Project Review Areas (SSPRAs) have been documented in the project vicinity. At Fort Carroll there's a nesting colony of the State Rare (S3B) Black-crowned Night Herons (*Nycticorax nycticorax*). Additionally, there are nest records of the American Peregrine Falcon (*Falco peregrinus anatum*), a species with In Need of Conservation status in Maryland, documented on this site. The DNR Wildlife and Heritage Service will provide additional information on these RT&E species under separate cover.

Diadromous Fish

Anadromous fish species, including yellow perch, herring species, and white perch have been documented near this project site. The Patapsco River supports various resident warmwater species typical of the region as well. Where presence of yellow perch has been documented in the vicinity of an instream project area, generally no instream work is permitted in Use I and certain Use II waters during the period of February 15 through June 15, inclusive, during any year.

Important fisheries resources in this area include American Eel presence. American Eels migrate upstream through this region to smaller streams where they grow to adult stages. Some eels may reside within the project study area long term. Their spawning runs then take them back through this area as they migrate downstream as adults to a specific region of the Atlantic Ocean to spawn. Special attention has been given to American Eel management in recent years, due to their ecological and economic importance, and their declining numbers.

The project should be designed to maintain or enhance fish passage through the project area, particularly during low flow periods. Agencies will likely request a zone of safe passage for anadromous fish species be maintained for the project duration to ensure fish may travel to their preferred spawning areas further upstream in the Patapsco River and adjacent tributaries.

Recreational and Commercial Fisheries

DNR anticipates potential impacts to recreational and commercial fisheries and boating. Please coordinate with DNR Recreational and Commercial Fisheries to minimize any potential impacts from the removal and reconstruction of the Francis Scott Key Bridge.

The Patapsco River in recent years has harbored large schools of striped bass. It may be assumed most fishing activity is going to avoid the work area and will by default establish enough of a buffer for the bridge work. Lack of access to the Patapsco River near the project site for recreational fishing of striped bass and other recreationally important fish species could potentially impact the recreational sector.

DNR anticipates there could be impacts to the various organizations based on the Patapsco River that either fish from their property or take individuals out fishing. There are reef balls placed around Fort Carroll and it is common for companies to take trips out to fish in these areas. There are three designated license free fishing areas in Baltimore City located at Canton Recreation Pier, Broening Park, and Canton Waterfront Park. Retailers (i.e. Tochterman's) and fishing clubs are also present in this area. It is possible these groups could be impacted by this project.

Recreational crabbers use trotlines and traps around the Francis Scott Key Bridge, particularly on the north side near Sollers Point where there is an oyster bar. There are also concerns regarding the timing of boat passage for crabbers transiting in and out of the harbor.

.

Oysters

A designated oyster sanctuary surrounds Fort Carroll. This oyster bar was utilized to provide stability for Fort Carroll when it was first built and is the most upstream bar in the Patapsco River. The viable bottom in this oyster sanctuary is focused on the northwestern side of Fort Carroll facing the bridge. This area contains shell habitat and a minimal amount of natural oyster from spatset that only occurs during extreme droughts when salinity offers the possibility of reproduction. This bar has been planted with hatchery spat for many years by local participants in the Marylanders Grow Oysters Program and others. Additionally, the oysters are sampled by environmental education groups during their field trips.

Additional Comments on BMPs:

The project area may be within or adjacent to mapped wetland areas, impacts from the use of heavy equipment, disposal of excavated material, or other construction activities should be avoided to the extent possible. When there is no reasonable alternative to the adverse effects on wetlands or other aquatic or terrestrial habitat, the applicant shall be required to provide measures to mitigate, replace, or minimize the loss of habitat.

This project is located in the Chesapeake Bay Critical Area and will need to conform to Critical Area laws and policies.

Best Management Practices should be stringently managed and maintained during bridge construction and demolition to prevent runoff and debris from entering surface waters and protect stream resources, given the presence of numerous sensitive species in the watershed.

The fisheries resources in the above area should be adequately protected by the instream work restrictions referenced above, stringent sediment and erosion control methods, and other Best Management Practices typically used for protection of stream resources.

Thank you for the opportunity to review and comment on this project. Please continue to coordinate with MDNR as this project progresses. If you have any questions concerning these comments, please feel free to contact Ms. Gwen Gibson of my staff at gwendolyn.gibson@maryland.gov.

Sincerely,

Tony Redman, Director

Environmental Review Program
Department of Natural Resources

Tawes State Office Building, B-3

Annapolis, MD 21401



Wes Moore, Governor Aruna Miller, Lt. Governor Josh Kurtz, Secretary David Goshorn, Deputy Secretary

June 3, 2024

Mr. Jeff Gring Coastal Resources, Inc. 25 Old Solomons Island Road Annapolis, MD 21401

RE: Environmental Review for Key Bridge Rebuild Project, Maryland Transportation Authority, I-695 over Patapsco River, Baltimore County, Anne Arundel County and Baltimore City, Maryland.

Dear Mr. Gring:

The Wildlife and Heritage Service has the following areas of potential concern for impacts to rare, threatened or endangered species and protected habitats in regard to this project:

The former Key Bridge supported a nesting structure used by a pair of American Peregrine Falcons (*Falco peregrinus anatum*), a species with In Need of Conservation status in Maryland. It is possible that individuals of this species could return to nest on structures here in the future. We generally recommend protecting any active nest sites for the American Peregrine Falcon by limiting work with a ¼-mile buffer around the nest site during the breeding season which is generally considered to be March 1 through June 30 of any given year.

The open waters of the Patapsco River shoreline that are adjacent to or part of the site are known historic waterfowl concentration and staging areas. Waterfowl concentration and staging areas are recognized areas of open water and wetlands adjacent to land that are utilized by significant numbers of ducks, geese, and swans for feeding and resting during the winter months. These areas in close proximity to the shore are vital, as they provide submerged aquatic vegetation (SAV), clams and other invertebrates that serve as primary food sources for many of these birds. A variety of waterfowl species can be found in such areas, building energy reserves for their upcoming migrations. If there is to be any construction of water-dependent facilities please contact Josh Homyack of the Wildlife and Heritage Service at (410) 827-8612 x100 or josh.homyack@maryland.gov for further technical assistance regarding waterfowl.

While it does not appear to fall within the study area as shown on your map, Fort Carroll Island is in close proximity to the proposed site and is known to support a colony of waterbirds of mixed species. Waterbird colonies are a rare resource that should be protected. Conservation of waterbird colonies that are located in the Chesapeake Bay Critical Area is required by state law. Significant mortality of chicks or eggs resulting from disturbance of the colony during the breeding season is a violation of the U.S. Migratory Bird Treaty Act. Disturbance includes actions such as cutting nest trees, cutting nearby trees or nearby construction that causes abandonment of chicks by the adults. Whenever possible, waterbird colony sites should be conserved as part of responsible land stewardship.

To protect waterbird colonies we use the following guidelines:

- 1. Establish a protection area of ¼ mile radius from the colony's outer boundary, and within that establish a 300' foot boundary (Zone 1).
- 2. During the breeding season, all human entry into the colony and Zone 1 should be restricted to only that essential for protection of the colony. Human disturbance of colony sites that results in significant mortality of eggs and/or chicks is considered a prohibited taking under various state and federal regulations.
- 3. No land use changes, including development or tree removal, should occur in Zone 1.
- 4. Construction activities, including clearing, grading, building, etc., should not occur within Zone 1.
- 5. No construction or similar disturbance should occur within the ¼ mile protection area during the breeding season. The breeding season varies for each different waterbird species, but for the species known to nest at Fort Carroll Island, it is cumulatively from February 15 through 15 August of any given year.

The Wildlife and Heritage Service provides assistance to those interested in protecting these resources. The above guidelines are usually suitable for protection in most cases. Specific protection measures depend upon many factors. We look forward to continued coordination with you as this project moves forward.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at lori.byrne@maryland.gov or at (410) 260-8573.

Sincerely,

Lori A. Byrne,

Environmental Review Coordinator

Wildlife and Heritage Service

Louia. Bym

MD Dept. of Natural Resources

ER# 2024.0810.ba/aa/bc

Cc:

D. Brinker, DNR J. Homyack, DNR

K. Harvey, DNR

G. Gibson, MES/SHA

L. Sestak, DNR

C. Jones, CAC

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

<u>Greater Atlantic Regional Office</u>
<u>Atlantic Highly Migratory Species Management Division</u>

*** **WARNING** ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
<u></u>	•	Atlantic Butterfish	Adult, Eggs, Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
1	•	Atlantic Herring	Adult, Juvenile	New England	Amendment 3 to the Atlantic Herring FMP
J.	•	Black Sea Bass	Adult, Juvenile	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
1	•	Bluefish	Adult, Juvenile	Mid-Atlantic	Bluefish
<u></u>	•	Clearnose Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
<u></u>	•	Red Hake	Adult, Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
J.	•	Scup	Adult, Juvenile	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
J.	•	Summer Flounder	Adult, Juvenile, Larvae	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
<u>"</u>	•	Windowpane Flounder	Adult, Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP

Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

Atlantic Salmon

No Atlantic Salmon were identified at the report location.

HAPCs

Linl	Data Caveats	HAPC Name	Management Council
	②	Summer Flounder SAV	Mid-Atlantic Fishery Management Council

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.

**For links to all EFH text descriptions see the complete data inventory: open data inventory -->

All EFH species have been mapped for the Greater Atlantic region,

Atlantic Highly Migratory Species EFH,

Bigeye Sand Tiger Shark,

Bigeye Sixgill Shark,

Caribbean Sharpnose Shark,

Galapagos Shark,

Narrowtooth Shark,

Sevengill Shark,

Sixgill Shark,

Smooth Hammerhead Shark,

Smalltail Shark

ATTACHMENT F: PUBLIC NOTICE BILLING APPROVAL FORM

Department of the Environment Water and Science Administration Tidal Wetlands Division 1800 Washington Boulevard Baltimore, Maryland 21230 (410) 537-3837

Protecting Maryland wetlands and waterways from loss and degradation

PUBLIC NOTICE BILLING APPROVAL FORM

I agree to pay all ex	spenses associated with the publishing of a public notice for the wetland application of
MDTA	which is dated $\frac{7/17/2024}{}$
(Riparian Prope	rty Applicant's Name)
	Qulis McCarthy Riparian Property Applicant's Signature
	Julie McCarthy Printed Name of Riparian Property Owner
	invoiced by MDE for the publication fee. As a convenience, MDE now accepts electronic . The invoice will include instructions for online payment.
Riparian Property	Owner's Billing Address:
	Maryland Transportation Authority - Julie McCarthy
	300 Authority Drive, Baltimore MD 21222
Telephone No.:	(410) 537-7861
and/or subject to a	names and mailing addresses of the adjacent riparian property owners. If my property is part of an HOA (Homeowners Association), please provide the HOA representative and mailing address adjacent riparian property owners:
A list of adjacer	t property owners will be provided separately.

ATTACHMENT G: NAB STATEMENT OF CREDIT AVAILABILITY FORM

NAB STATEMENT OF CREDIT AVAILABILITY

APPLICATION INFORMATION	CREDITS NEEDED			
Permit Type: IP	Number of Wetland Credits: 2,032 SF			
USACE Permit #: NAB- TBD	Wetland Credit Type: Impact PEM, Credit PFO			
State Permit #:TBD				
Project Name: MDTA Francis Scott Key Bridge Rebuild	Number of Stream Credits: N/A			
Applicant: MDTA	Stream Credit Type: N/A			
Latitude/Longitude of Impact (centroid): 39.2286/-76.5117				
County: Baltimore and Anne Arundel				
Watershed of Impact (HUC8): 02060003				

MITIGATION BANK/IN-LIEU FEE (ILF) PROGRAM NAMED

Bank/ILF Name: Peige Wetland Mitigation Bank Bank/ILF Permit Number: NAB-2016-01568 Number of Wetland Credits Reserved:2,032 SF

Wetland Credit Type Reserved: PFO Number of Stream Credits Reserved: N/A

Stream Credit Type Reserved: N/A					
Project within Primary Geographic Service Area (Yes or No)? Yes					
Project within Secondary Geographic Service Area (Yes or No)? No					
The Sponsor hereby authorizes the Applicant to name the mitigation bank/ILF program listed above as a source of compensatory mitigation in its U.S. Army Corps of Engineers (USACE) and/or State permit application for the above-referenced project. The credits listed from the mitigation bank/ILF program are currently available for purchase and have been reserved by the Sponsor for use by the Applicant.					
Mitigation Sponsor Name: ECOTONE, LLC					
Name of Sponsor's Authorized Representative: James M. Eisenhardt					
Signature of Sponsor's Authorized Representative Date					
As the Applicant, I understand that failure to purchase mitigation credits as required by the USACE and/or State permit(s) may result in a suspension or revocation of the permit and/or civil or criminal enforcement actions. I will ensure that the USACE and/or State Project Manager(s) are in receipt of a signed copy of this statement of credit availability for review and approval.					
Applicant Name: MDTA					
Name of Applicant's Authorized Representative: Julie McCarthy					
Signature of Applicant's Authorized Representative Date					

Note: If the above agreement cannot be finalized by either party (Sponsor or Applicant), coordination with the Corps and State is required to ensure that an alternative compensatory mitigation plan is proposed to offset project impacts.

Note: If credits are being reserved from multiple mitigation banks/ILF programs, then a Statement of Credit Availability is required from each mitigation bank/ILF program.

ATTACHMENT H: NATURAL RESOURCES INVENTORY / FOREST STAND DELINEATION (NRI/FSD)

NATURAL RESOURCES INVENTORY REPORT

FRANCIS SCOTT KEY BRIDGE REBUILD PROJECT

BALTIMORE CITY AND BALTIMORE COUNTY, MARYLAND



JUNE 2024







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1.0 Introduction, Study Area, and Project Description

On March 26, 2024, the Maryland Transportation Authority (MDTA) Francis Scott Key Bridge (Key Bridge), which carries I-695 over the Patapsco River, was struck by a cargo ship leaving the Port of Baltimore, resulting in the collapse of the bridge. The collapse prompted the immediate closure of I-695 between MD 173 (exit 1) and MD 157/Peninsula Expressway (exit 43) and halted vehicle traffic across the Patapsco River as well as marine shipping to and from the Port of Baltimore. Following the incident, Executive Order 01.01.2024.09 was released by the State of Maryland, declaring a State of Emergency as a result of the Key Bridge collapse. Immediate recovery and debris removal actions were conducted.

MDTA and Maryland State Highway Administration (SHA) are proposing to replace the collapsed Francis Scott Key Bridge in the same location as the original structure, which will help alleviate the high traffic demands and restore the connectivity of the transportation network between Curtis Bay and Dundalk. As a result, Rummel, Klepper, & Kahl (RK&K) and Coastal Resources, Inc. (CRI), under contract by the MDTA, has completed a natural resources inventory, in support of the Francis Scott Key Bridge Rebuild Project (FSK Rebuild) located in Baltimore City and Baltimore County, Maryland. RK&K and CRI completed a water of the U.S. (WOTUS), including wetlands, delineation, forest stand delineation, and tree survey within the project study area (see Appendix A). The study area is approximately 117 acres within the Patapsco River MDE 8-digit watershed (02130903). Land use classifications within and adjacent to the study area include forest and industrial. The project area is in the Northern Coastal Plain physiographic province. The project limits extend along I-695 from Quarantine Road in Curtis Bay to Broening Highway in Dundalk and are entirely within MDTA's existing right-of-way (ROW). CRI completed the natural resources inventory in the segment between Quarantine Road and the Patapsco River. RK&K completed the natural resources inventory between the Patapsco River and Broening Highway. A wetland delineation was conducted for a separate MDTA project in February 2024 and field verified as part of the FSK Rebuild project in May of 2024.

2.0 Methodology

Prior to the field investigation, the RK&K and CRI field teams reviewed existing potential forest and wetland data within the project area, including but not limited to the United States Fish & Wildlife Service (USFWS) National Wetland Inventory, the Maryland Department of Natural Resources (MDNR) Wetlands, the Natural Resource Conservation Service (NRCS) Soil Survey Data and National Hydrography Dataset (NHD) Streams.

During the field investigation, wetlands were assessed in accordance with the Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0 (USACE 2010). This methodology requires interpretation of a three-parameter approach representing hydrology, vegetation, and soils, which are known indicators of a wetland. Soils were sampled using three-inch diameter Dutch augers and Munsell Color charts were used to identify color (Munsell 1975). The wetland indicator status of the observed vegetation was identified using the National Wetland Plant List (NWPL) (USACE 2020). Wetland data were collected on Wetland Determination Data Forms (USACE 2010, 2012). A Wetland Functions and Value Evaluation form was completed for all delineated wetlands greater than 0.5 acres (USACE 1999). Matching upland test plots were also established adjacent to the wetland boundary in conjunction with wetland plots. Delineated WOTUS were flagged and surveyed using a Global Navigation Satellite System (GNSS) unit. Nontidal WOTUS, other than wetlands, were set at the ordinary

high-water mark (OHW) which was determined in the field using physical characteristics established by the fluctuations of water. Tidal WOTUS were defined by mean high water (MHW) elevation from the nearest tidal gauge and by in-situ water observations. Stream characteristics were recorded for each identified watercourse on a WOTUS datasheet. Identified WOTUS, including wetlands, were classified according to a *Classification of Wetland and Deep-Water Habitats in the United States* (USFWS 1979). Each wetland and watercourse were photographed, and a photo log was compiled.

Forest stands, hedgerows, and woody vegetation clusters were delineated and characterized with the study area in accordance with the State Forest Conservation Technical Manual and MDNR Critical Area requirements. A walk-through forest stand analysis was conducted to obtain a general overview of the species present, successional stage, and stand condition. Forest stand and hedgerow boundaries were delineated on project mapping and all forest stand characteristics were recorded on stand datasheets. Stand-alone trees (1.5" DBH or greater) and specimen trees (> 30' DBH) were measured using a diameter at breast height (DBH) tape at 4.5 feet above the ground. The species, size, and condition of stand-alone and specimen trees were recorded, and their locations were surveyed using a GNSS unit. Within the Chesapeake Bay Critical Area (CBCA), woody vegetation clusters were mapped and characterized. Additionally, stand-alone trees and shrubs of any size were identified and GPS-located.

3.0 Results

3.1 Waters of the U.S., including Wetlands

During the field investigations, ten non-tidal wetlands, four tidal wetlands, and three watercourses were identified within the study area. Wetland classifications included ten palustrine emergent wetlands (PEM), two estuarine intertidal emergent wetlands (E2EM), and two estuarine intertidal scrub shrub wetlands (E2SS). Data were collected at a total of ten representative wetland test plots that characterize the identified wetland types and Cowardin classifications. Test plots 1WETA, 1WETB, 1WETC, 1WETD, 1WETE, 1WETF, 1WETG, 1WETH, 1WETI and 2WETD characterize the PEM portion of these systems. Test plots 1WETJ and 2WETB characterize the E2EM portion of these systems. Test plot 2WETA and 2WETC characterize the E2SS portions of these systems. Delineated watercourses include one perennial, two intermittent systems, as well as the Patapsco River.

The locations of these resources and test plot locations are shown on the detailed maps provided in **Appendix B**. Details regarding wetland cover type and delineated size can be found in the WOTUS Summary Table located in **Appendix C**. Detailed wetland characteristics including cover type, indicators of hydrology, dominant vegetation, and soils are included on the datasheets provided in **Appendix D**. Characteristics of each watercourse can also be found in **Appendix C** and **Appendix D**. Photographs of all delineated resources are included in **Appendix E**.

3.2 Forest Stand Characterization

A total of thirteen forest stands, 15 hedgerows, and 24 woody vegetation clusters were identified within the study area. The locations of the forest stands, hedgerows, and woody vegetation clusters are displayed on the Natural Resources Inventory Map in **Appendix B**. The identified forest stands are described below, and a hedgerow summary table is included in **Appendix F**.

Stand 1FS1 (NRI Map Sheets 2 and 3)

Stand 1FS1 is a disturbed early successional black locust forest. Canopy closure is approximately 30 percent. The canopy is dominated by Callery pear (*Pyrus calleryana*), Siberian elm (*Ulmus pumila*), and black locust (*Robinia pseudoacacia*). Dominant size class is 2 to 6" DBH with a few 6 to11" DBH trees scattered throughout this layer and ash-leaf maple (*Acer negundo*) is present at the bottom of the slope. Dominant species in the understory include groundseltree (*Baccharis halimifolia*), amur honeysuckle (*Lonicera maackii*), and smooth sumac (*Rhus glabra*). Dominant species in the herbaceous layer include a broomsedge (*Andropogon* sp.), Japanese honeysuckle (*Lonicera japonica*), common reed (*Phragmites australis*), and wand panic grass (*Panicum virgatum*). Overall, the forest stand is in poor condition with high invasive species cover and moderate vine cover.

Stand 1FS2 (NRI Map Sheets 1 and 2)

Stand 1FS2 is a disturbed early successional black locust forest. Canopy closure is approximately 40 percent with dominant size class between 6 and 20" DBH. The canopy is dominated by black locust, white mulberry (*Morus alba*), tree-of-heaven (*Ailanthus altissima*), and Siberian elm. Dominant species in the understory include groundseltree, amur honeysuckle, tree-of-heaven (*Ailanthus altissima*), eastern poison ivy (*Toxicodendron radicans*), black locust, Asian bittersweet (*Celastrus orbiculatus*), and Japanese honeysuckle. Dominant species in the herbaceous layer include Japanese honeysuckle, English ivy (*Hedera helix*), grape species (*Vitis* sp.) and great mullein (*Verbascum thapsus*). The understory and herbaceous layers are sparse in some areas with little herbaceous growth. Overall, the forest stand is in poor condition with high invasive species cover, moderate downed woody debris and high vine cover.

Stand 1FS3 (NRI Map Sheets 2 and 3)

Stand 1FS3 is a disturbed early successional black locust forest. Canopy closure is approximately 40 percent with a dominant size class of 2-6" DBH. The canopy is dominated by Callery pear and black locust. There is also one 18" DBH pin oak (*Quercus palustris*) within the stand. Dominant species in the understory include amur honeysuckle and rambler rose (*Rosa multiflora*). Smooth sumac is also present on the edge of the forest stand. Dominant species in the herbaceous layer include Japanese honeysuckle and common reed. Overall, the forest stand is in poor condition with high invasive species cover, low downed woody debris, and moderate vine cover.

Stand 1FS4 (NRI Map Sheets 3 and 4)

Stand 1FS4 is an early successional black locust and tree-of-heaven forest. Canopy closure is approximately 75 percent with a dominant size class of 6-11" DBH. The canopy is dominated by black locust, tree-of-heaven, white mulberry, and sweetgum (*Liquidambar styraciflua*) with climbing vines present in this layer. Dominant species in the understory include amur honeysuckle, blackberry species (*Rubus* sp.), Japanese honeysuckle, eastern poison ivy, Asian bittersweet, and English ivy. Herbaceous species are lacking due to vines being dominant as ground cover. Overall, the forest stand is in fair condition with high invasive species cover, moderate downed woody debris, and high vine cover.

Stand 1FS5 (NRI Map Sheet 2)

Stand 1FS5 is an early successional sweetgum and common persimmon forest. Canopy closure is approximately 25 percent with a dominant size class of 2-6" DBH. The canopy is dominated by sweetgum,

common persimmon (*Diospyros virginiana*), black locust, and Callery pear with inclusion of white mulberry. Dominant species in the understory include groundseltree, amur honeysuckle, Callery pear, white mulberry, Asian bittersweet, eastern poison ivy, and common persimmon. Autumn olive (*Elaeagnus umbellata*), grape species, blackberry species, and Virginia creeper (*Parthenocissus quinquefolia*) are also common in this layer. Dominant species in the herbaceous layer include Japanese honeysuckle, Callery pear, Asian bittersweet, and eastern poison ivy. Common reed and Virginia creeper are also present throughout this layer. Overall, the forest stand is in poor condition with high invasive species cover, moderate downed woody debris, and heavy vine coverage.

Stand 1FS6 (NRI Map Sheet 2)

Stand 1FS6 is an early successional black locust and sweetgum forest. Canopy closure is approximately 25 percent with dominant size class of 6-11" DBH. The canopy is dominated by sweetgum and black locust. Common persimmon, Callery pear, and tree-of-heaven are also common in this layer. Dominant species in the understory include Callery pear, black locust, amur honeysuckle, groundseltree, grape species, Asian bittersweet, and amur peppervine (*Ampelopsis brevipedunculata*). Dominant species in the herbaceous layer include Asian bittersweet, Japanese honeysuckle, an unknown blackberry, Virginia creeper, and amur peppervine. Common reed, rambler rose, and common wormwood (*Artemisia vulgaris*) are also scattered throughout. Vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. Overall, this forest stand is in poor condition as invasive species are dominant throughout and trees are stressed and damaged from heavy vine coverage.

Stand 1FS7 (NRI Map Sheets 1 and 2)

Stand 1FS7 is a mid-successional black locust and sweetgum forest. Canopy closure is approximately 60 percent with a dominant size class of 6-11" DBH. The canopy is dominated by black locust, sweetgum, and willow oak (*Quercus phellos*). Callery pear and common hackberry (*Celtis occidentalis*) are also common in this layer. A few larger trees are scattered throughout the stand. Dominant species in the understory include Callery pear, black locust, Japanese honeysuckle, rambler rose, grape species, Asian bittersweet, and Virginia creeper. Dominant species in the herbaceous layer include common reed, rambler rose, grape species, Japanese honeysuckle, Asian bittersweet, and amur peppervine. Common wormwood is present along the stand edges and vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. Overall, this stand is in poor condition as invasive species are dominant throughout and trees are stressed and damaged from heavy vine coverage.

Stand 1FS8 (NRI Map Sheet 1)

Stand 1FS8 is a mid-successional sweet gum and white pine forest. Canopy closure is approximately 50 percent with a dominant size class of 6-11" DBH. The canopy is dominated by black locust, sweetgum, eastern white pine (*Pinus strobus*), Callery pear, and common persimmon. White mulberry and a few larger eastern white pine are present in this layer. Dominant species in the understory include amur peppervine, groundseltree, amur honeysuckle, Japanese honeysuckle, grape species, Asian bittersweet, eastern poison ivy, blackberry species, and rambler rose. Autumn olive, staghorn sumac (*Rhus typhina*), and tree-of-heaven are also present in this stand. Dominant species in the herbaceous layer include common reed, eastern poison ivy, Japanese honeysuckle, Virginia creeper, grape species, and amur peppervine. Vines are dominant as ground cover in this layer. Overall, this stand is in poor condition with high invasive species cover and trees are stressed/damaged from heavy vine coverage.

Stand 1FS9 (NRI Map Sheet 1)

Stand 1FS9 is a mid-successional black cherry and black locust forest. Canopy closure is approximately 75 percent with a dominant size class of 6-11" DBH. The canopy is dominated by black cherry (*Prunus serotina*), black locust, and Callery pear. Northern white oak (*Quercus alba*) and mockernut hickory (*Carya tomentosa*) are also common in this layer. Tree-of-heaven and princesstree (*Paulownia tomentosa*) are scattered along the forest stand edges. Dominant species in the understory include amur peppervine, Callery pear, black cherry, grape species, American holly (*Ilex opaca*), eastern poison ivy, rambler rose, Japanese honeysuckle, Asian bittersweet, Virginia creeper, and groundseltree. Dominant species in the herbaceous layer include Asian bittersweet, eastern poison ivy, Japanese honeysuckle, Virginia creeper, and rambler rose. Common reed is scattered along the stand edges. Vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. The eastern portion of the stand has slightly younger but similar species and condition. Overall, this stand is in fair condition as invasive species are dominant throughout and trees have climbing vines, but moderate species diversity is present.

Stand 1FS10 (NRI Map Sheet 1)

Stand 1FS10 is a mid-successional tuliptree and tree-of-heaven forest. Canopy closure is approximately 80 percent with a dominant size class of 12-20" DBH. The canopy is dominated by tuliptree (*Liriodendron tulipifera*), tree-of-heaven, sweetgum, and black cherry. princesstree (*Paulownia tomentosa*), common persimmon, white mulberry, and eastern red cedar (*Juniperus virginiana*) are also common in this layer. Dominant species in the understory include white mulberry, amur honeysuckle, Japanese honeysuckle, autumn olive, eastern poison ivy, Asian bittersweet, trumpet-creeper (*Campsis radicans*), rambler rose, an unknown blackberry, English ivy, and tree-of-heaven. Dominant species in the herbaceous layer include Asian bittersweet, eastern poison ivy, Japanese honeysuckle, garlic-mustard (*Alliaria petiolata*), and English ivy. Vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. Overall, this stand is in poor condition as invasive species are dominant throughout and trees are stressed and damaged from heavy vine coverage.

Stand 1FS11 (NRI Map Sheets 1 and 2)

Stand 1FS11 is a mid-successional black locust and Callery pear forest. Canopy closure is approximately 50 percent with a dominant size class of 2-6" DBH. The canopy is dominated by black locust, Callery pear, sweetgum, and common persimmon. Tree-of-heaven, princesstree, and eastern red cedar are also common, and willow oak is scattered throughout the stand. Dominant species in the understory include groundseltree, amur honeysuckle, Callery pear, grape species, sweetgum, amur peppervine, and eastern poison ivy. Autumn olive is also common in this layer. Dominant species in the herbaceous layer include Asian bittersweet, eastern poison ivy, Japanese honeysuckle, rambler rose, blackberry species, and common wormwood. Common reed is scattered throughout and along the forest stand edge. Vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. Overall, this stand is in poor condition as invasive species are dominant throughout and trees are stressed and damaged from heavy vine coverage.

Stand 1FS12 (NRI Map Sheet 2)

Stand 1FS12 is a mid-successional willow oak and black locust forest. Canopy closure is approximately 75 percent with a dominant size class of 20-30" DBH. The canopy is dominated by willow oak, black locust,

and sweetgum. Southern red oak (*Quercus falcata*), black cherry, Callery pear, northern red oak (*Quercus rubra*), white mulberry, and red maple (*Acer rubrum*) are also common in this layer. Dominant species in the understory include eastern poison ivy, Japanese honeysuckle, rambler rose, groundseltree, horsebrier (*Smilax rotundifolia*), American holly, Virginia creeper, Asian bittersweet, and blackberry species. Dominant species in the herbaceous layer include Japanese honeysuckle, English ivy, eastern poison ivy, Asian bittersweet, and goldenrod species (*Solidago* sp.). Common reed is scattered and along the forest stand edge. Vines are dominant as ground cover in this layer. Invasive species cover is high throughout this stand. Overall, this stand is in fair condition. Canopy trees are in good health, however, invasives species are prevalent throughout the stand with some climbing vines.

Stand 1FS13 (NRI Map Sheet 2)

Stand 1FS13 is a mid-successional willow oak and southern red oak forest. Canopy closure is approximately 90 percent and a dominant size class of 12-20" DBH. The canopy is dominated by willow oak, southern red oak, northern white oak, and sweetgum. Red maple and black cherry are also common in this layer. Dominant species in the understory include horsebrier, Virginia creeper, eastern poison ivy, trumpet-creeper, rambler rose, blackberry species, and highbush blueberry (*Vaccinium corymbosum*). The forest interior has a more open understory. Dominant species in the herbaceous layer include eastern poison ivy, Japanese honeysuckle, and Virginia creeper. Common reed is dominant along the forest stand edge. Invasive species cover is medium throughout this stand. Overall, this stand is in fair condition as the forest interior is diverse with an open understory, but the forest stand edge is more disturbed with heavier vine and invasive cover.

Tree Survey

A total of 120 trees were identified within the study area. This includes 112 stand-alone trees and 8 specimen trees located within forest stands. An additional 16 trees or shrubs with a DBH of less than 1.5" were identified within the CBCA. The locations of these trees are included on the maps in **Appendix B**. Information regarding the species, size, and condition of each identified tree is included on the table in **Appendix G**.

4.0 Conclusions

A total of 10 WOTUS features were identified within the study area. Impacts to these resources may require authorization from the United States Army Corps of Engineers (USACE) and/or the Maryland Department of the Environment (MDE). Thirteen forest stands, 15 hedgerows, 24 woody vegetation clusters, 112 stand-alone trees, 8 specimen trees, and 16 small trees or shrubs were identified within the study area. Impacts to trees and/or forest may require authorization from Maryland Department of Natural Resources (DNR).

5.0 Literature Cited

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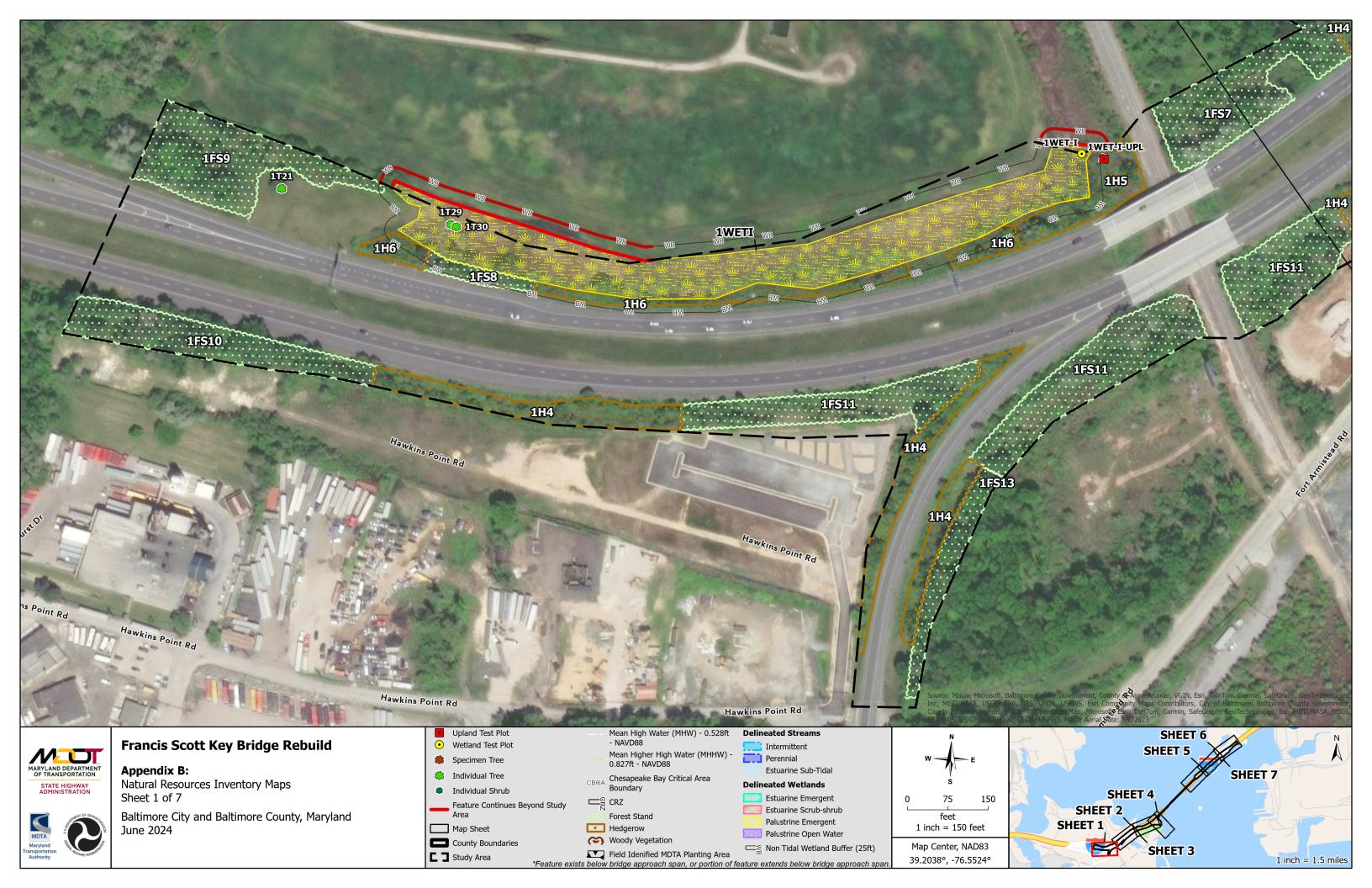
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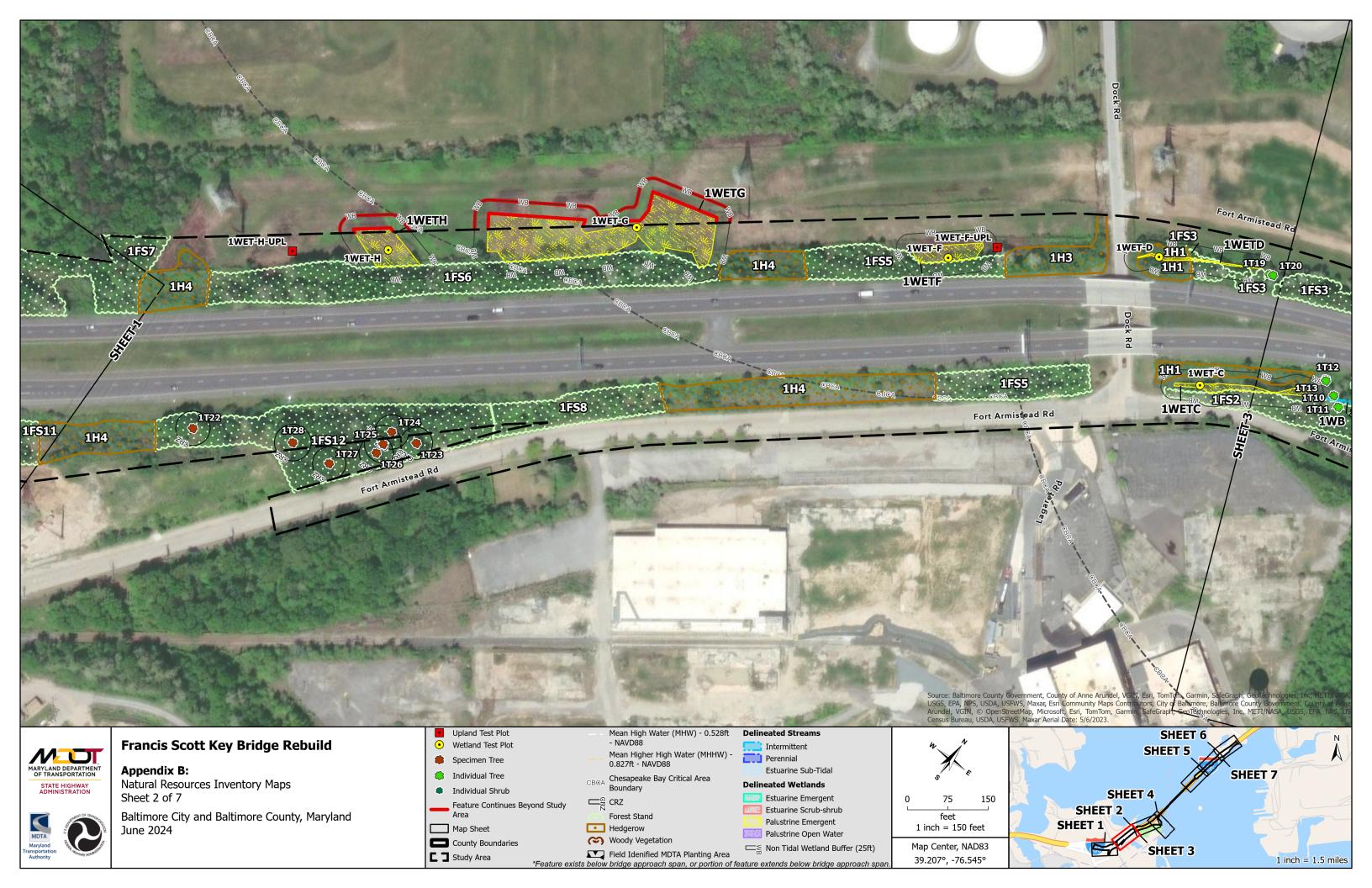
APPENDIX A: VICINITY MAP

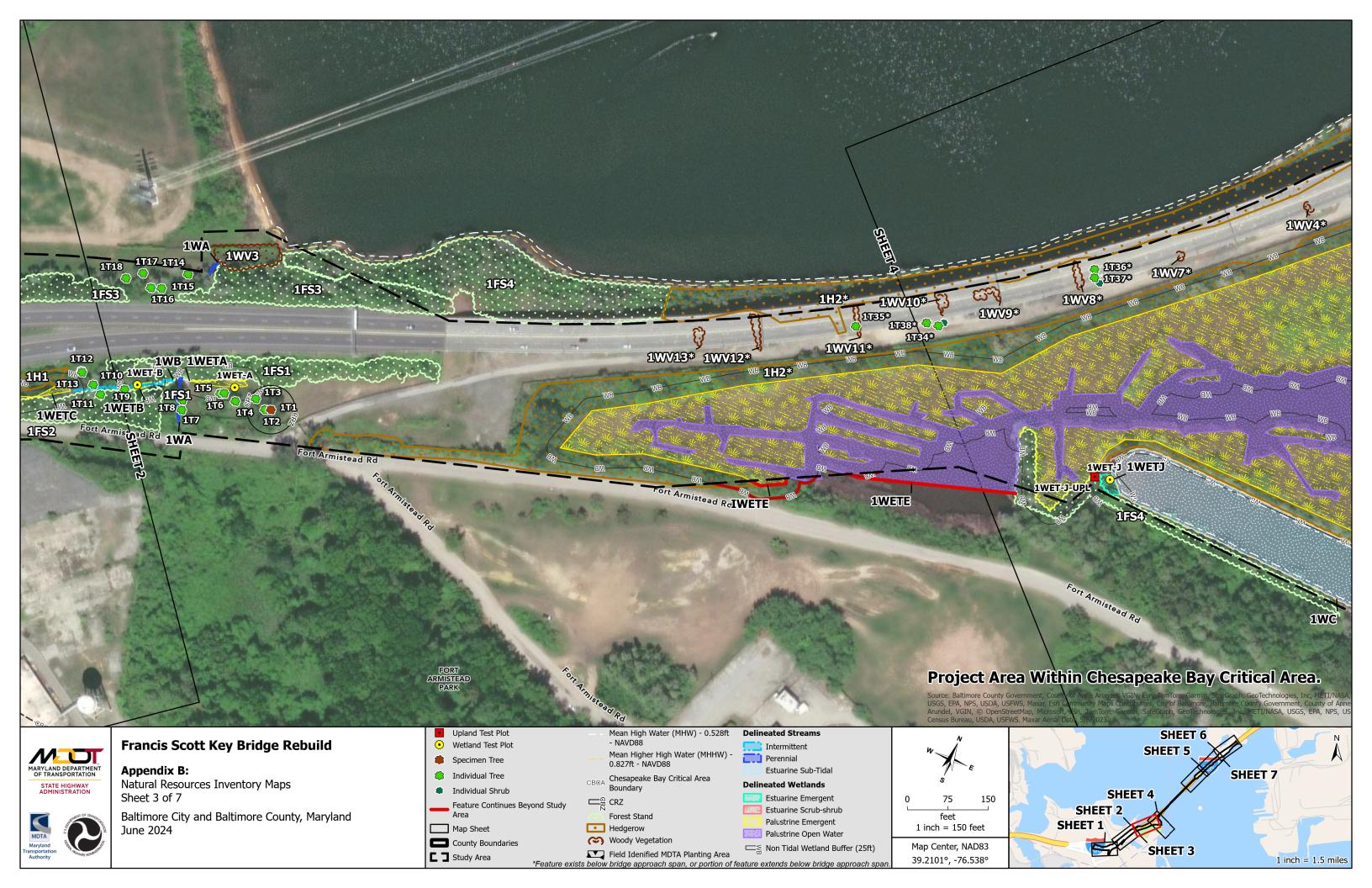


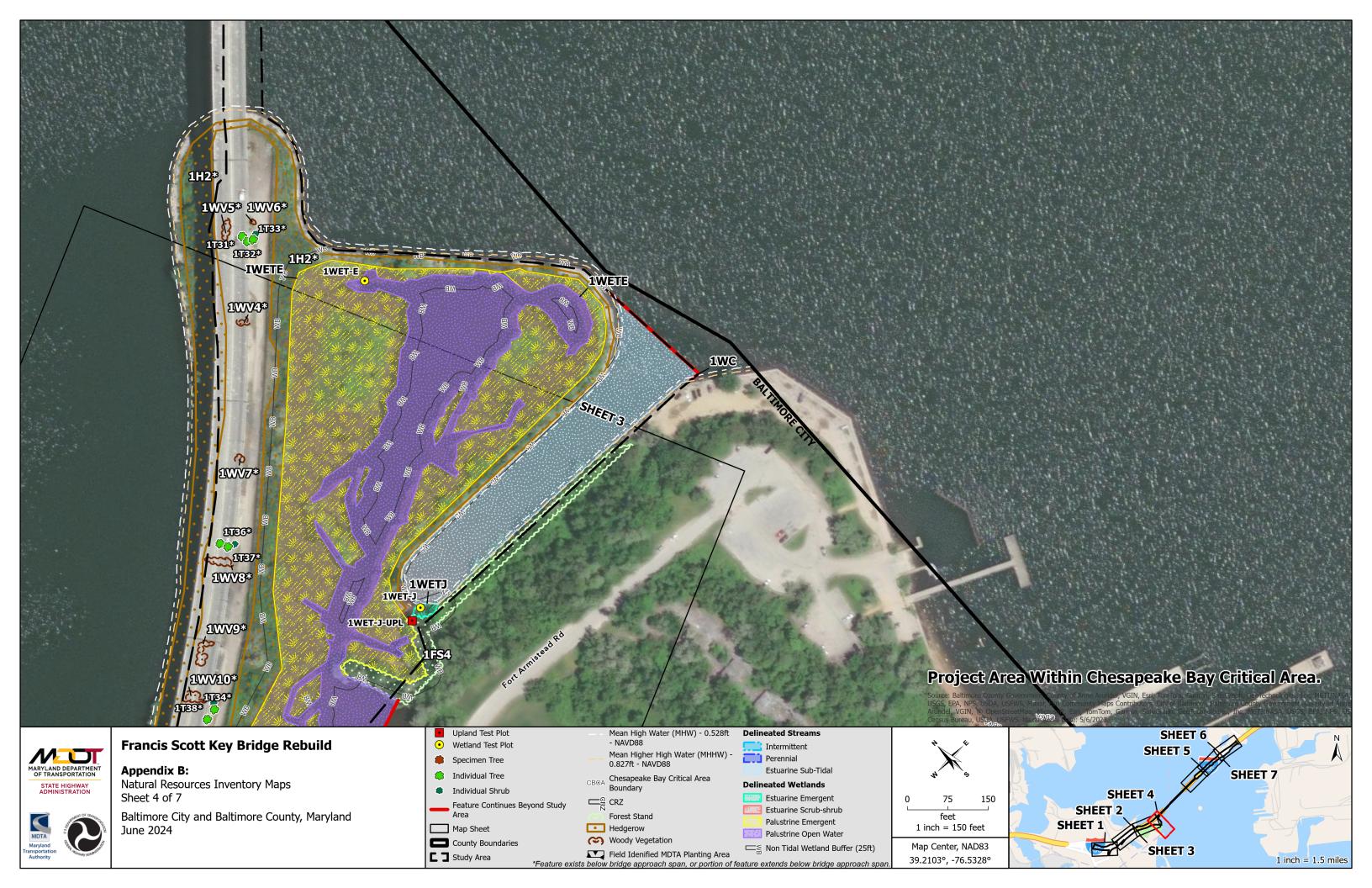
APPENDIX B:	NATURAL	RESOUCES	INVENTORY	' MAP

Appendix B Francis Scott Key Bridge Rebuild Project-Natural Resource Inventory Report



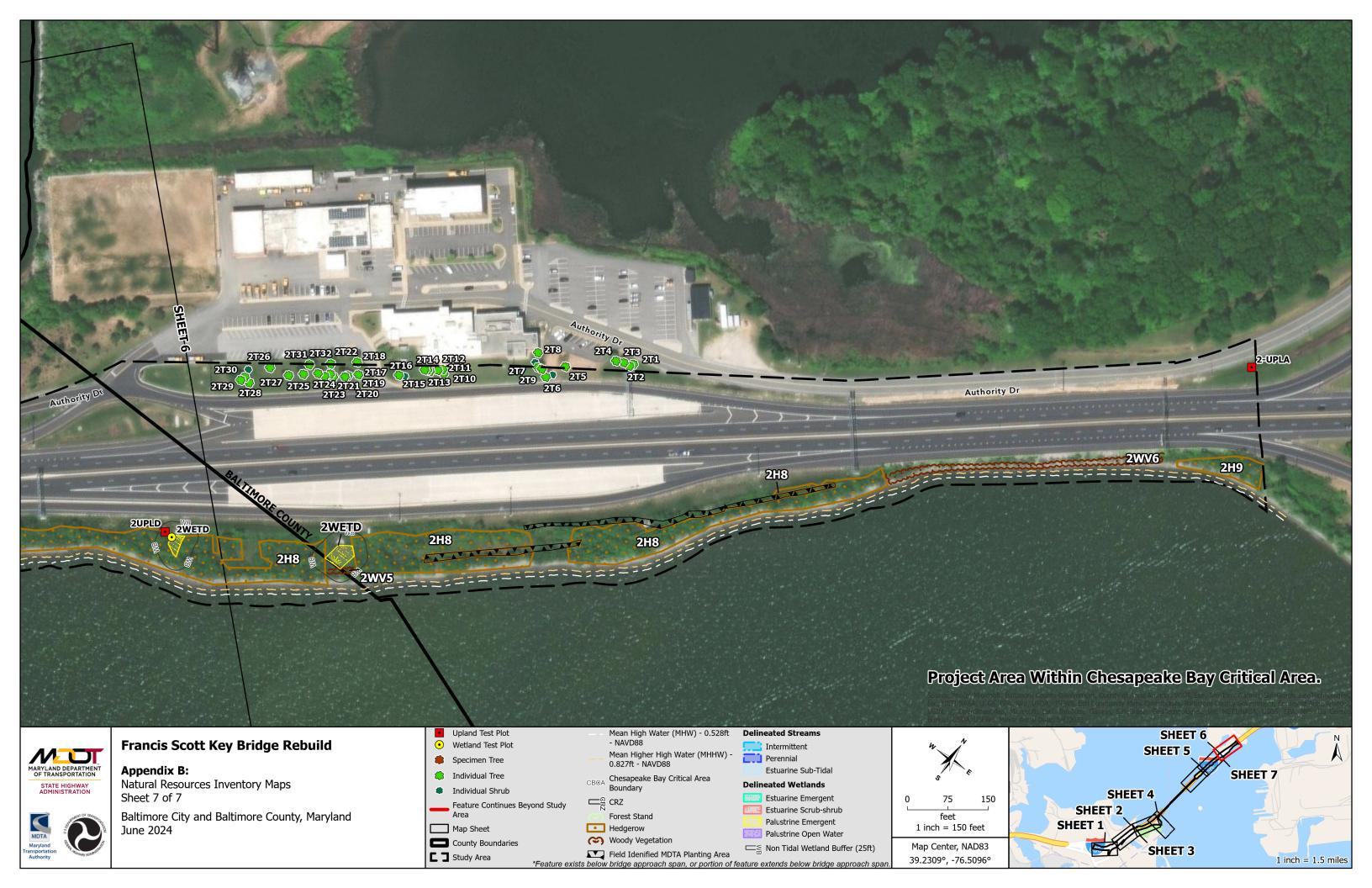












Francis Scott Key	v Bridge Rebuild Pro	ject-Natural Resource	Inventory Report

APPENDIX C: WOTUS SUMMARY TABLE

Appendix C: Francis Scott Key Bridge Rebuild Project Wetland Summary Table

				Dom	inant Vegetation		
Wetland Number	Delineated Area (AC)	Cowardin Classification/Wetland Type	Hydrology	Scientific Name	Common Name	Indicator Status	Soils
1WETA (NRI Map Sheet 3)	0.02	PEM1C (Depression/Toe-of-Slope)	Surface Water, High Water Table, Saturation, Drainage Patterns, Geomorphic Position, FAC-Neutral Test	Phragmites australis	Common Reed	FACW	Udorthents, loamy, very deep, 0 to 8% slopes Depleted Below Dark Surface (A11) and Depleted Matrix (F3) 0-3 inches of 7.5YR3/2, clay, and 3-12 inches of 7.5YR 4/1, with 7.5YR5/8 redox concentrations, clay
1WETB (NRI Map Sheet 3)	0.003	PEM1C (Toe-of-Slope)	Surface Water, High Water Table, Saturation, Sediment Deposits, Geomorphic Position, FAC-Neutral Test	Phragmites australis	Common Reed	FACW	Udorthents, loamy, very deep, 0 to 8% slopes Depleted Below Dark Surface (A11), Depleted Matrix (F3), and Redox Dark Surface (F6) 0-6 inches of 2.5YR3/2 with 2.5YR4/8 redox concentrations, clay, and 6-12 inches of 2.5YR4/1 with 2.5YR4/8 redox concentrations, clay loam
1WETC (NRI Map Sheet 2 and 3)	0.05	PEM1C (Toe-of-Slope)	Surface Water, High Water Table, Saturation, Drainage Patterns, Geomorphic Position, FAC-Neutral Test	Phragmites australis	Common Reed	FACW	Udorthents, loamy, very deep, 0 to 8% slopes Redox Dark Surface (F6) 0-9 inches of 10Y 3/2 with 10Y 5/8 redox concentrations, clay loam
1WETD (NRI Map Sheet 2)	0.02	PEM1C (Toe-of-slope/Ditch)	Surface Water, High Water Table, Saturation, Sediment Deposits, Algal Mat or Crust, Geomorphic Position, FAC-Neutral Test	Phragmites australis	Common Reed	FACW	Urban Land, 0 to 15% slopes Depleted Matrix (F3) 0-6 inches of 10YR 4/2 with 2.5 YR5/6 redox concentrations, clay
1WETE (NRI Map Sheets 3, 4 and 5)	6.21	PEM1F (Impoundment)	Surface Water, Water Marks, Inundation Visible on Aerial Imagery, Aquatic Fauna, Geomorphic Position, FAC-Neutral Test	Phragmites australis	Common Reed	FACW	Udorthents, smoothed, 0-35% slopes. Sandy Mucky Mineral (S1) 0-12 inches of 10YR3/2, loamy sand with organics
1WETF (NRI Map Sheet 2)	0.08	PEM1A/B (Depression)	High Water Table, Saturation, Saturation Visible on Aerial Imagery, Geomorphic Position, FAC- Neutral Test	Diospyros virginiana Baccharis halimifolia Phragmites australis	Common Persimmon Groundseltree Common Reed	FAC FAC FACW	Udorthents, clayey, very deep, 0-15% slopes. Redox Dark Surface (F6) 0-8 inches of 10YR 3/2 with 5YR 4/4 redox concentrations, fine sandy loam
1WETG (NRI Map Sheet 2)	0.70	PEM1A/B (Depression)	Surface Water, High Water Table, Saturation, Saturation Visible on Aerial Imagery, Geomorphic Position	Baccharis halimifolia Phragmites australis Holcus lanatus Toxicodendron radicans Smilax rotundifolia	Groundseltree Common Reed Common Velvet Grass Eastern Poison Ivy Horsebrier	FAC FACW FACU FAC FAC	Udorthents, clayey, very deep, 0-15% slopes Redox Dark Surface (F6) 0-4 inches of 10YR 3/2 with 5YR4/6 redox concentrations, silt loam
1WETH (NRI Map Sheet 2)	0.13	PEM1A/B (Depression)	Surface Water, High Water Table, Saturation, Saturation Visible on Aerial Imagery, FAC-Neutral Test	Baccharis halimifolia Liquidambar styraciflua Phragmites australis	Groundseltree Sweet-Gum Common Reed	FAC FAC FACW	Udorthents, clayey, very deep, 0-15% slopes Depleted Matrix (F3) 0-8 inches of 7.5YR4/2 with 5YR4/6 redox concentrations, sandy clay loam

				Dom	inant Vegetation		
Wetland Number	Delineated Area (AC)	Cowardin Classification/Wetland Type	Hydrology	Scientific Name	Common Name	Indicator Status	Soils
1WETI (NRI Map Sheet 1)	2.55	PEM1A/B (Depression/Swale)	High Water Table, Saturation, Water-Stained Leaves, Saturation Visible on Aerial Imagery	Populus alba Baccharis halimifolia Phragmites australis	White poplar Groudseltree Common Reed	N/A FAC FACW	Udorthents, clayey, very deep, 0-15% slopes Redox Dark Surface (F6) 0-4 inches of 10YR2/2 with 7.5YR4/4 redox concentrations, sandy clay loam
1WETJ (NRI Map Sheets 3 and 4)	0.01	E2EM1 (Intertidal)	Surface Water, High Water Table, Saturation, Water Marks, Sediment Deposits, Drift Deposits, Geomorphic Position, FAC-Neutral Test	Phragmites australis	Common Reed	FACW	Udorthents, smoothed, 0-35% slopes Histosol (A1) 0-18+ inches of 10YR2/1, silt loam with organics, tidal muck
2WETA (NRI Map Sheet 6)	0.05	E2SS1 (Depression)	Surface Water, High Water Table, Saturation, Water Marks, Sediment Deposits, Drift Deposits, Algal Mat or Crust	Baccharis halimifolia Phragmites australis	Groundseltree Common Reed	FAC FACW	Udorthents, highway, 0 to 65% slopes Sandy Redox (S5) 3-16 inches of 2.5Y6/2 with 7.5YR4/6 redox concentrations, loamy sand
2WETB (NRI Map Sheet 6)	0.12	E2EM5 (Depression)	Surface Water, High Water Table, Saturation, Drift Deposits, FAC-Neutral Test	Phragmites australis	Common Reed	FACW	Udorthents, highway, 0 to 65% slopes Sandy Redox (S5) 3-12 inches of 10YR5/2 with 5YR4/6 redox concentrations, loamy sand
2WETC (NRI Map Sheet 6)	0.14	E2SS1 (Shoreline)	Surface Water, High Water Table, Saturation, Water Marks, Sediment Deposits, Drift Deposits, Algal Mat or Crust, FAC-Neutral	Baccharis halimifolia Spartina alternifolia	Groundseltree Saltwater cord grass	FAC OBL	Udorthents, highway, 0 to 65% slopes Sandy Redox (S5) 0-4 inches of 2.5Y7/2 with 7.5YR4/6 redox concentrations, loamy sand
2WETD (NRI Map Sheet 7)	0.05	PEM5 (Toe-of-slope)	Oxidized Rhizospheres along Living Roots, FAC- Neutral Test	Phragmites australis	Common Reed	FACW	Udorthents, highway, 0 to 65% slopes Depleted Matrix (F3) 0-6 inches of 10YR4/1 with 2.5YR3/4 redox concentrations,

Francis Scott Key Bridge Rebuild Project Watercourse Summary Table

Watercourse Number	Delineated	Cowardin	Nearest Downstream Named	Use Class	Channel Ch	aracteristics	Comments
watercourse number	Size (LF/AC)	Classification	Stream	Ose Class	Average Channel Width	Average Channel Depth	Comments
1WA (NRI Map Sheet 3)	112 LF	R4UB1	Patapsco River	I	3′	1" - 8"	Intermittent stream that flows from a culvert to 1WC and abuts 1WETA and 1WB.
1WB (NRI Map Sheets 2 and 3)	187 LF	R4UB1	Patapsco River	I	1' – 4'	1' – 4'	Intermittent stream that flows from 1WETC to 1WA and abuts 1WETB
1WC (NRI Map Sheets 3 – 7)	1.66 AC	E1UB	Chesapeake Bay	ı	5,500′	50′	Patapsco River, begins and ends outside the study area.

APPENDIX D: DATASHEETS

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: MATH INNEY LOOP RIMS City/C	County: Ratt City Sampling Date: alaolay
Applicant/Owner: UDTA	State: 10 Sampling Point: 1-WETA
and the state of t	on, Township, Range:
Landform (hillslope, terrace, etc.): to e of \$1000 Local	
The state of the s	77 Long: -76.5469 Datum: NAD1983
Soil Map Unit Name: 408 Idon the sty Loanny vender ,0	married to the second of the s
7 77 11 1	The state of the s
Are climatic / hydrologic conditions on the site typical for this time of year? Y	
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	ıpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? YesNo
Remarks:	· Comma - col and Ima of c) hora
Runs west to WB Dr. L.	a constant seed seem for of a che.
Photos 8	084-89
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15) (LRI	The state of the s
Saturation (A3) Hydrogen Sulfide Odor (C	
☐ Water Marks (B1) ☐ Oxidized Rhizospheres a☐ ☐ Sediment Deposits (B2) ☐ Presence of Reduced Iro	
Drift Deposits (B3) Recent Iron Reduction in	· · · · · · · · · · · · · · · · · · ·
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in Remark	
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
☐ Water-Stained Leaves (B9)	☐ Sphagnum moss (D8) (LRR T, U)
Field Observations:	7 11
	· · · · / / / / / / / / / / / / / / / /
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	
	,
	x_{i}
1	

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

Sampling Point: 1WET-A

Tree Stratum (Plot size: NA)	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:) 1	% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2. 3.		Total Number of Dominant Species Across All Strata: (B)
4	· —— —— ——	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6		
7		Prevalence Index worksheet:
8		Total % Cover of: Multiply by:
	= Total Cover	OBL species x 1 =
	20% of total cover:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: NA)		FAC species x 3 =
1. NA		FACU species x 4 =
2		UPL species x 5 =
3		Column Totals: (A) (B)
4		Prevalence Index = B/A =
5		Hydrophytic Vegetation Indicators:
6		1- Rapid Test for Hydrophytic Vegetation
7		2 - Dominance Test is >50%
8		3 - Prevalence Index is ≤3.0¹
	= Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:	20% of total cover:	Li Problematic Hydrophytic vegetation (Explain)
Herb Stratum (Plot size: 5 x 1.6')		Dodlarkan ashanka - 20 - 20 - 20 - 20 - 20 - 20 - 20 - 2
1. Pragmies dustrais	65 Y FACIN	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2.		Definitions of Four Vegetation Strata:
3.		
4		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
		more in diameter at breast height (DBH), regardless of height.
5		-
6		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7		
8		Herb – All herbaceous (non-woody) plants, regardless
9		of size, and woody plants less than 3.28 ft tall.
10		Woody vine - All woody vines greater than 3.28 ft in
		height.
12.	/ Juny	
<u></u>	= Total Cover	
50% of total cover: Addi	20% of total cover: 13	
Woody Vine Stratum (Plot size: NA)	•	
1		
2		
3		
4		
5		Hydrophytic
•	= Total Cover	Vegetation Present? Yes No
50% of total cover:	20% of total cover:	res No
Remarks: (If observed, list morphological adaptations belo	w).	
.,		
	•	
•	<u> </u>	i e

Sampling Point:	1 W	ETA

SOIL

Profile Des	cription: (Describe t	to the dep	th needed to docur	nent the	indicator	or confirm	n the absence	of indicator	s.)	
Depth	Matrix		Redo	x Feature	s					
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	_Loc ²	<u>Texture</u>		Remarks	
0-3	J54R312	166					Clan	fine no	ts in Uppe	d inch
		•					0		[1	
2-17	7.5424/1	QV.	75 VA 5/0	10		\overline{M}	clan		11 11 11	
3-1%	TENECT	<u> </u>	1.214.711	10	(1.4	<u>(ray</u>	grave	<u>l'Irese</u>	XT
ļ ,								<i>U</i>	, , , , , , , , , , , , , , , , , , ,	
				Δ.						
ļ 										
					·					
	oncentration, D=Depl					ains.			ing, M=Matrix	
Hydric Soil	Indicators: (Applica	able to all	LRRs, unless other	wise not	ed.)		indicators	for Problem	atic Hydric S	iolis³:
. Histosol	(A1)		Polyvalue Be				U) 📙 1 cm N	/luck (A9) (LF	RR O)	
. Histic E	pipedon (A2)		Thin Dark Su	rface (S9) (LRR S,	T, U)	2 cm N	/luck (A10) (L	.RR S)	
│ . ☐ Black Hi	istic (A3)		Loamy Mucky	/ Mineral	(F1) (LRF	l O)				ILRA 150A,B)
1 =	en Sulfide (A4)		Loamy Gleye		(F2)					(LRR P, S, T)
	d Layers (A5)		Depleted Mat	, ,					oamy Solls (F	² 20)
_	Bodies (A6) (LRR P,		. ☐ Redox Dark 8		-		1 1 7	RA 153B)		
	ucky Mineral (A7) (LR							arent Materia		
. =	resence (A8) (LRR U)	ı	Redox Depre	•	8)				Surface (TF12	2)
	ick (A9) (LRR P, T)		Mari (F10) (L				Other	(Explain in R	əmarks)	
1 = ·	d Below Dark Surface	(A11)	Depleted Och				3ı ıı			
. =	ark Surface (A12)	U DA 4501	Iron-Mangane					•	ophytic veget	
	rairie Redox (A16) (M					, 0)			gy must be pr	•
	/lucky Mineral (S1) (L Bleyed Matrix (S4)	KK 0, 3)	Delta Ochric		-	0 4 4 E 0 E 1		ess disturbed	or problemat	ic.
	Redox (S5)		Reduced Ver Piedmont Flo		-	-				
	Matrix (S6)						13A) RA 149A, 153C	453D)		
	rface (S7) (LRR P, S ,	T. UI	Anomalous D	ngin Loai	ny oona (20) (MEN	IA 173A, 1330	, 1000)		
	Layer (If observed):	., .,								
Type:	, (
1							11	D	v. V	
Depth (in	cnes):						Hydric Soil	Present?	Yes	No
Remarks:										
]										
Ì										
]										
Ì										
!										
ı										

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region Project/Site: MDT/4 City/County: Baltimore Applicant/Owner: MOTA Sampling Point: SLY Investigator(s): Section, Township, Range: Landform (hillslope, terrace, etc.): bottomofhillslopes Local relief (concave, convex, none): Slope (%): Lat. 39.208499 Long: -76.541285 Datum: NAIS 19 Subregion (LRR or MLRA): Soil Map Unit Name: 408 Udor theart's lorgan very dela 0 to 8 percent states NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.) ___, Soil _____, or Hydrology _ significantly disturbed? Are "Normal Circumstances" present? Yes 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? Is the Sampled Area Hydric Soil Present? Yes within a Wetland? Wetland Hydrology Present? Yes Remarks: 1018 - 0018 **HYDROLOGY** Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8) ☑ _High Water Table (A2) Marl Deposits (B15) (LRR U) Drainage Patterns (B10) Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16) Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Drift Deposits (B3) Recent Iron Reduction in Titled Soils (C6) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2) iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Sphagnum moss (D8) (LRR T, U) Field Observations: Depth (inches): Surface Water Present? Depth (inches): Water Table Present? Saturation Present? Depth (inches): Wetland Hydrology Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

VEGETATION ((Four Strata) _	Llea eciantific	names of plants.
* LOLIMITON (i vui siiala)	Oge Scientilic	Hairies Of Plants.

Sampling Point: <u>1WETB</u>

	Absolute Dominant Indicator	
Tree Stratum (Plot size: NA)	% Cover Species? Status	- Number of Dominant Species
1 <i>N</i> _A		That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3		Species Across All Strata: (B)
4		Jaa C
		Percent of Dominant Species
5.		That Are OBL, FACW, or FAC: (A/B)
6		Prevalence Index worksheet:
7		Total % Cover of: Multiply by:
8		OBL species x1 =
	= Total Cover	
50% of total cover:	20% of total cover:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: NA)		FAC species x 3 =
1. NA		FACU species x 4 =
		UPL species x 5 =
2		Column Totals: (A) (B)
3		(7)
4		Prevalence Index = B/A =
5		Hydrophytic Vegetation Indicators:
6		
7		2 - Dominance Test is >50%
8		3 - Prevalence Index is ≤3.0¹
	= Total Cover	
ECO/ of total covery		Problematic Hydrophytic Vegetation¹ (Explain)
50% of total cover: Herb Stratum (Plot size: 5 × 6 ?)	20% or total cover:	
Herb Stratum (Plot size: 3 700)	70 V EACH	¹ Indicators of hydric soil and wetland hydrology must
1. Phragmites australis	70 Y FACW	• • • •
2. Lovicera japanica	10 N FACU	Definitions of Four Vegetation Strata:
3		Ware Marked and a such all and the such as
4		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
5		height.
		•
6		Sapling/Shrub – Woody plants, excluding vines, less
7		than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8		Herb – All herbaceous (non-woody) plants, regardless
9		of size, and woody plants less than 3.28 ft tall.
10		Woody vine - All woody vines greater than 3.28 ft in
11		height,
12		.
	Total Cover	
50% of total cover:	4.	
. P.A	20% of total cover: / 🕼	
Woody Vine Stratum (Plot size: NA)		
1		
2		
3		
4		
5		/
v	T-1-1-0	Hydrophytic
	= Total Cover	Vegetation Present? Yes No
50% of total cover:		
Remarks: (If observed, list morphological adaptations below	v).	
		i

	•						m the absence of indicators.)
Depth	Matrix			x Features	3		
<u>(inches)</u>	Color (moist)	<u></u> %	Color (moist)	_%_	_Type ¹	Loc2	Texture Remarks
0-6	2518312	<u>. 28 .</u>	2.5 YR 418	20	\mathcal{C}	Μ	Cladban
			11 11				7
7 10	25401111	3	VI CL GC/ 2 ~	50		<u> </u>	
6-12	2.54R4/1	<u>-tb</u> _	<u>2,278910</u>	<u> </u>		<u>M</u>	clay bon
							O
	-						
1							2.
	oncentration, D=Depl					ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soll	Indicators: (Applica	able to all L			•		Indicators for Problematic Hydric Solis ³ ;
. ☐ Histosol			Polyvalue Be	low Surfac	ce (S8) (Ll	RR S, T, I	U) 1 cm Muck (A9) (LRR O)
. ☐ Histic E	oipedon (A2)		Thin Dark Su	rface (S9)	(LRR S,	T, U)	2 cm Muck (A10) (LRR S)
☐ Black Hi	stic (A3)		Loamy Mucky	/ Mineral ((F1) (LRR	O)	<u> </u>
	en Sulfide (A4)		Loamy Gleye	d Matrix (I	F2)		Piedmont Floodplain Soils (F19) (LRR P, S, 7
☐ Stratified	d Layers (A5)		Depleted Mat	rix (F3)			
☐ Organic	Bodies (A6) (LRR P,	T, U)	Redox Dark S	Surface (F	6)		(MLRA 153B)
☐ 5 cm Mu	icky Mineral (A7) (LR	R P, T, U)	Depleted Dar				Red Parent Material (TF2)
	esence (A8) (LRR U)		Redox Depre				Very Shallow Dark Surface (TF12)
	ick (A9) (LRR P, T)		Marl (F10) (LI	-			Other (Explain in Remarks)
Depleted	d Below Dark Surface	(A11)	Depleted Och	ric (F11) (MLRA 15	i1)	
Thick Da	ark Surface (A12)	•	Iron-Mangane	ese Masse	es (F12) (L	RR O, P,	, T) ³ Indicators of hydrophytic vegetation and
	rairie Redox (A16) (M	ILRA 150A)	Umbric Surfac	ce (F13) (LRR P. T.	. U)	wetland hydrology must be present,
Sandy N	lucky Mineral (S1) (L	RR O, S)	Delta Ochric (•	unless disturbed or problematic.
	leyed Matrix (S4)	, .	Reduced Vert			0A, 150B)	
	ledox (S5)		Piedmont Flo				
	Matrix (S6)						RA 149A, 153C, 153D)
=	rface (S7) (LRR P, S,	. T. U)			., (-	, ,	
	ayer (if observed):	· · · · · · · · · · · · · · · · · · ·					
Туре:	, (
			_				Hydric Soil Present? Yes No
Depth (inc							Hydric Soil Present? Yes V No
	ches):						Tiyano com resenti 105 No
Remarks:	ches):		.,				No.
Remarks:	ches):					,	riyano son riosenti. Tos Ro
Remarks:	ches):						riyano son riosenti. Tos Ro
Remarks:	:hes):						No.
Remarks:	:hes):						No.
Remarks:	:hes):						i i julio dall'i justici della constituciona d
Remarks:	:hes):						·
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Remarks:							Typeno della recommenda
Remarks:							

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

• •	City/County: Bath Move City Sampling Date: 2/20/24
Applicant/Owner: MOT A	State: MD Sampling Point: 1WETC
Investigator(s): SLY SECH	Section, Township, Range:
	Local relief (concave, convex, none): Local relief (concave, convex, none):
	208546 Long: -76.542296 Datum: NAD1983
1	
Soil Map Unit Name: 400 Vaorthents, barry, very de	1 1
Are climatic / hydrologic conditions on the site typical for this time of ye	
Are Vegetation, Soll, or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pro-	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No
phragnites ditch at the o	fslope,
phragmites ditch at the o	*
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Priphary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	3) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15) (LRR U) Drainage Patterns (B10)
Saturation (A3)	Odor (C1) Moss Trim Lines (B16)
	eres along Living Roots (C3)
Sediment Deposits (B2)	reconstruction of the second o
	tion in Tilled Soils (C6)
Algal Mat or Crust (B4) Thin Muck Surface	` ' '
│	emarks)Shallow Aquitard (D3) FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	opnagram moss (bb) (Errix 1, d)
Surface Water Present? Yes No Depth (Inches)	
Water Table Present? Yes V No Depth (inches)	
Saturation Present? Yes V No Depth (inches)	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:
Remarks:	

/EGETATION	(Eaur Strata) _	Llea eciantific	names of plants.
COLIMITOR	II vui Siraia) ~	・ ひるは るいはけいけん	Hailles of Dialits.

Sampling Point: 1-WETC

Α ι Δ	Absolute Dominant Indicator	
Tree Stratum (Plot size: NA)	% Cover Species? Status	Number of Dominant Species
1NA		That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3		Species Across All Strata: (B)
4		Percent of Dominant Species
5		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6		Prevalence Index worksheet:
7		Total % Cover of: Multiply by:
8		OBL species x1 =
	= Total Cover	FACW species x 2 =
50% of total cover;	20% of total cover:	FAC species x 3 =
Sapling/Shrub Stratum (Plot size: NA)	•	FACU species x 4 =
		UPL species x5 =
2		Column Totals: (A) (B)
3,		Column rotals (A) (B)
4		Prevalence Index = B/A =
5		Hydrophytic Vegetation Indicators:
6		1 Rapid Test for Hydrophytic Vegetation
7		2 - Dominance Test Is >50%
8		3 - Prevalence Index is ≤3.0¹
	= Total Cover	Problematic Hydrophytic Vegetation¹ (Explain)
50% of total cover:	20% of total cover:	T Problematic Hydrophytic vegetation (Explain)
Herb Stratum (Piot size: 5' × (0')	1.	11
1. Moragantes australis	85 Y FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 Lonicerajaponica		Definitions of Four Vegetation Strata:
3. Bacchan's Kalimifolia	5 N FAC	
4. Ruber Sphoenicolasius	5 N FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4. 100 1 - Prince II Color II Col	TA TITLY	more in diameter at breast height (DBH), regardless of height.
5		
6		Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7		
8		Herb – All herbaceous (non-woody) plants, regardless
9		of size, and woody plants less than 3.28 ft tall.
10		Woody vine - All woody vines greater than 3.28 ft in
11		height.
12	Tre.	
E) E	105 = Total Cover	-
50% of total cover:	20% of total cover:	
Woody Vine Stratum (Plot size: NA)		
1. <u>NA</u>		
2		
3		
4		
5.		Hydrophytic
•	= Total Cover	Vegetation
50% of total cover:		Present? Yes No
Remarks: (if observed, list morphological adaptations belo		
(, ====, +=, , ===, ====, =====	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	

Profile Description: (Describe to the de	oth needed to document th	e Indicator or confirm	n the absence of indicat	ors.)
Depth <u>Matrix</u>	Redox Featu			
(inches) Color (moist) %	Color (moist) %	Type ¹ Loc ²	<u>Texture</u>	Remarks
0-9 WYR31290	WK518 10		<u>Clayloan</u>	
	*			
9-13 INVR 3/2 100			May Loam	
				· .
¹ Type: C=Concentration, D=Depletion, RM			² Location: PL=Pore	
Hydric Soil Indicators: (Applicable to all	LRRs, unless otherwise ne	oted.)	Indicators for Proble	ematic Hydrlc Soils³:
Histosol (A1)		face (S8) (LRR S, T, U		· -
Histic Epipedon (A2)	Thin Dark Surface (S		2 cm Muck (A10)	•
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Mucky Minera Loamy Gleyed Matrix			F18) (outside MLRA 150A,B) lain Soils (F19) (LRR P, S, T)
Stratified Layers (A5)	Depleted Matrix (F3)			t Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U)	X Redox Dark Surface		(MLRA 153B)	. 2001119 00110 (1 20)
5 cm Mucky Mineral (A7) (LRR P, T, U) 🔲 Depleted Dark Surfa	ce (F7)	Red Parent Mate	rial (TF2)
Muck Presence (A8) (LRR U)	Redox Depressions	(F8)	Very Shallow Da	rk Surface (TF12)
1 cm Muck (A9) (LRR P, T)	Marl (F10) (LRR U)		U Other (Explain in	Remarks)
Depleted Below Dark Surface (A11)	Depleted Ochric (F1		31 II 6 61	
☐ Thick Dark Surface (A12) ☐ Coast Prairie Redox (A16) (MLRA 150)		sses (F12) (LRR O, P,		drophytic vegetation and logy must be present,
Sandy Mucky Mineral (S1) (LRR O, S)	Delta Ochric (F17) (N		•	ed or problematic.
Sandy Gleyed Matrix (S4)	· / ·) (MLRA 150A, 150B)		ou or proviouration
Sandy Redox (S5)	Piedmont Floodplain	Soils (F19) (MLRA 14	9A)	
Stripped Matrix (S6)	Anomalous Bright Lo	amy Soils (F20) (MLR	A 149A, 153C, 153D)	
Dark Surface (S7) (LRR P, S, T, U)			1	·····
Restrictive Layer (if observed):				
Type:				· 1/
Depth (inches):			Hydric Soil Present?	Yes No
Remarks:				
2001 beaution	landida coll	c 1 .	0.	•
maran y vivs	MXM 5 2011	s but av	eas with	\
ead bandhow their own slice	,0,		7	•
1 20118 WG 91211	w _b (a			
				;
				•
1				

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Landform (hillslope, terrace, etc.): +iii of stope, ditch Local Subregion (LRR or MLRA): MLRA 149 A Lat: 39, 2090 Soll Map Unit Name: Urbay Card 0 to 15 percent 510 Are climatic / hydrologic conditions on the site typical for this time of year? Are Vegetation, Soil, or Hydrology significantly disturbed Vegetation, Soil, or Hydrology naturally problem	State: MD Sampling Point: 1NET D con, Township, Range: Slope (%): 2% Property of the state of
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Photos: 6560 - 6561	Is the Sampled Area within a Wetland? Yes No
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	C1)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, presents; Standing water west end of westland occurrences of the context of the	Wetland Hydrology Present? Yes No evious inspections), if available:

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

Sampling Point: <u>1WETD</u>

Tree Stratum (Plot size: N/A)	Absolute Dominant Indicator	Dominance Test worksheet:
1	% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2		Total Number of Dominant
3		Species Across All Strata: (B)
4		Percent of Dominant Species
5		That Are OBL, FACW, or FAC: 100% (A/B)
6		Prevalence Index worksheet:
7 8		Total % Cover of: Multiply by:
	= Total Cover	OBL species x 1 =
50% of total cover:	20% of total cover:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: N/A)		FAC species x 3 =
1		FACU species x 4 =
2		UPL species x 5 =
3		Column Totals: (A) (B)
4		Prevalence Index = B/A =
5		Hydrophytic Vegetation Indicators:
6		
7		
8		☐ 3 - Prevalence Index is ≤3.01
50% -51-11	= Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum (Plot size: 5 ' × 10 ')	20% of total cover:	1.
1. Phragmites australis	902 Y FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2 Lonicera japonica	5% N FACU	Definitions of Four Vegetation Strata:
3		-
4.		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
5.		height.
6		Sapling/Shrub – Woody plants, excluding vines, less
7		than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8		Herb – All herbaceous (non-woody) plants, regardless
9	· · · · · · · · · · · · · · · · · · ·	of size, and woody plants less than 3.28 ft tall.
10		Woody vine - All woody vines greater than 3.28 ft in
11		height.
12	<u> </u>	
500/ -1.1-1 47.5	<u>4</u> 20% of total cover: 19 %	
Woody Vine Stratum (Plot size:)	<u>/6</u> 20% of total cover: 1 1 /0	
1. Let a G G		
2		
3.		
4		
5		Hydrophytic
	= Total Cover	Vegetation /
50% of total cover:	20% of total cover:	Present? Yes V No No
Remarks: (If observed, list morphological adaptations belo	w).	

)epth	Matrix		Redo	x Features			n the absence	
inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
)-6"	10 YR 4/2	90%	2.64R\$/6	10%	<u> </u>	<u>M</u>	clay	
?-(4) <u>,</u>	104×6/8	<u>70%</u>	57R5/8	<u> 30 °</u> _	<u>C</u> _	<u>M</u>	clay	fill Sails
	oncentration, D=Dep					ains.		PL=Pore Lining, M=Matrix.
/dric Soil] Histosol	Indicators: (Applic	able to all [_	rwise noted. slow Surface	-	DD C T I		for Problematic Hydric Soils ³ : Muck (A9) (LRR O)
	pipedon (A2)			ırface (S9) (L			- 11	Muck (A9) (LRR S)
_	Istic (A3)			y Mineral (F1				ed Vertic (F18) (outside MLRA 150A
	en Sulfide (A4)			ed Matrix (F2))		71	ont Floodplain Soils (F19) (LRR P, S,
•	d Layers (A5) Bodies (A6) (LRR P	* 11	Depleted Ma	, ,				alous Bright Loamy Soils (F20)
	icky Mineral (A7) (LF		=	rk Surface (F6)	7)			RA 153B) arent Material (TF2)
	esence (A8) (LRR U		Redox Depre	•	- /			Shallow Dark Surface (TF12)
1 cm Mu	ıck (A9) (LRR P, T)		☐ Marl (F10) (L	-			Other	(Explain in Remarks)
	d Below Dark Surface	e (A11)		hric (F11) (M			2	
	ark Surface (A12)	A1 DA 450A	-	ese Masses				cators of hydrophytic vegetation and
	rairie Redox (A16) (N lucky Mineral (S1) (L			ісе (F13) (LR (F17) (MLR 4		, U)		tland hydrology must be present, ess disturbed or problematic.
	Bleyed Matrix (S4)	o, o,		rtic (F18) (M L		0A, 150B)		odo distarbod or propiernano.
	Redox (S5)		Piedmont Fid			-		
	Matrix (S6)		Anomalous E	Bright Loamy	Solls (F	720) (ML R	RA 149A, 153C	, 153D)
Davis D.	efono (97) // DD D @	TIN						
	rface (S7) (LRR P, S						T	
strictive l	_ayer (if observed):							
	_ayer (if observed):						Hydric Soil	Present? Yes No
strictive I Type: Depth (inc marks:	Layer (If observed):						Hydric Soil	Present? Yes No
strictive I Type: Depth (incomarks:	cc of fill n						Hydric Soil	Present? Yes V No
strictive I Type: Depth (inc marks: N (() () () ()	cc of fill n						Hydric Soil	Present? Yes V No
strictive I Type: Depth (inc marks: N ((((Y)	cc of fill n						Hydric Soil	Present? Yes V No
strictive I Type: Depth (inc marks: NIORY)	cc of fill n						Hydric Soil	Present? Yes V No
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strictive I Type: Depth (inc marks: NIORY)	cc of fill n		<u> </u>				Hydric Soil	Present? Yes V No
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strictive I Type: Depth (inc marks: N ((((Y)	cc of fill n						Hydric Soil	Present? Yes V No
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strictive I Type: Depth (inc marks: N (() () () ()	cc of fill n						Hydric Soil	Present? Yes No No
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strictive I Type: Depth (inc marks: N ((((Y)	cc of fill n						Hydric Soil	Present? Yes No No

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region
Project/Site: FS K Re 60'i) City/County: Baltamore Cuty Sampling Date: 5/9/24
Applicant/Owner: Math State: MB Sampling Point: 1WEJE-
Investigator(s): D. Sen. H. K. Mathwy Section, Township, Range:
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Concave Slope (%):
Subregion (LRR or MLRA): MURA 149A Lat: 39.21/814 Long: -74.53388 Datum: NAD 83
Soil Map Unit Name: Udor theuts, smoothed, 0-35% slopes NWI classification: PEMICA
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 V/ No Is the Samuel of Assay
Hydrophytic Vegetation Present? Yes V No Is the Sampled Area Hydric Soil Present? Yes No Vegetation Present? Yes V No Vegetation Present? Yes V No Vegetation Present? Yes V No Vegetation Present?
Wetland Hydrology Present? Yes V No Within a Wetland? Yes No
Remarks:
Proto INETE-1 Upl. plot is game as for INETE
PEMIF
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
High Water Table (A2) Marl Deposits (B15) (LRR U) Drainage Patterns (B10) Seturation (A2)
Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16) Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2)
Iron Deposits (B5)
Water-Stained Leaves (B9) Sphagnum moss (D8) (LRR T, U) Field Observations:
Surface Water Present? Yes Vo Depth (inches): 6-12+
Water Table Present? Yes No Depth (inches):
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No lincludes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Appears to be palustrine impoundment, with seasonal tidal
Appears to be palustrine impoundment, and
influence
U Bantone C
항상 보통 이 바람들이 되는 이번 나는 사람들은 사람들이 되었다면 하는 사람들이 되었다면 하는 것이 되었다면 하는데 되었다면 하는데 없다면 하는데 되었다면 하는데 되었다면 하는데 되었다면 하는데

	Abaduta Desirant Indiantes	D
- ~	Absolute Dominant Indicator	Dominan
Tree Stratum (Plot size: 30)	% Cover Species? Status	Number of
1. None		Mailiber
1. 140/00		That Are C
2		
**		Total Nur

EGETATION (Four Strata) – Use scientific na		Sampling Point:
ee Stratum (Plot size: 30)	% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
		Total Number of Dominant Species Across All Strata: (B)
		Species Across Air Strata.
		Percent of Dominant Species
		That Are OBL, FACW, or FAC:(A/B)
		Prevalence Index worksheet:
		Total % Cover of: Multiply by:
	= Total Cover	OBL species x 1 =
	20% of total cover:	FACW species x 2 =
pling/Shrub Stratum (Plot size: 50)		FAC species x 3 =
None		FACU species x 4 =
		UPL species x 5 =
		Column Totals: (A) (B)
		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
		2 - Dominance Test is >50%
	= Total Cover	3 - Prevalence Index is ≤3.01
50% of total cover		Problematic Hydrophytic Vegetation ¹ (Explain)
rb Stratum (Plot size:	20% of total cover:	1
Phragmites Australis	100 Y FACH	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		Definitions of Four Vegetation Strata:
TOTAL AND LOST ACTOR		
		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
(SCLUMOTE AT LOUIS CO.		height.
TO AN ARROW THE COMMON TO THE PARTY OF THE P		Sapling/Shrub - Woody plants, excluding vines, less
		than 3 in. DBH and greater than 3.28 ft (1 m) tall.
		Herb - All herbaceous (non-woody) plants, regardless
		of size, and woody plants less than 3.28 ft tall.
		Woody vine - All woody vines greater than 3.28 ft in
		height.
	100 = Total Cover	
50% of total cover: 27	20% of total cover:	
27	20 % of total cover	
ody Vine Stratum (Plot size: 00)		
Hone		
		Hydrophytic
	= Total Cover	Vegetation
50% of total cover:		Present? Yes V No
50% of total cover: emarks: (If observed, list morphological adaptations bel		
marks. (If observed, list morphological adaptations beli	OW).	

Sampling Point: WETE-

Depth	Matrix		Redo	x Features		-		
(inches)	Color (moist)	%			Type ¹ Lo		Texture	Remarks
0.10	111 115 11 2	100					10	W/ Wrganic
						-		
							*	
	oncentration, D=De							PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histoso	Indicators: (Appli	cable to all L	Polyvalue Be			R T III		Muck (A9) (LRR O)
	pipedon (A2)		Thin Dark Su					Muck (A10) (LRR S)
	istic (A3)		Loamy Muck					ced Vertic (F18) (outside MLRA 150A, B
	en Sulfide (A4)		Loamy Gleye		F2)			nont Floodplain Soils (F19) (LRR P, S, T)
	d Layers (A5)	D T 11)	Depleted Mai		(1)			alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR Jcky Mineral (A7) (L		Redox Dark					RA 153B) Parent Material (TF2)
	resence (A8) (LRR		Redox Depre					Shallow Dark Surface (TF12)
	uck (A9) (LRR P, T)		Marl (F10) (L	RR U)			Other	(Explain in Remarks)
	d Below Dark Surfa	ce (A11)	Depleted Oct				31	
	ark Surface (A12) rairie Redox (A16)	(MLRA 150A)	Iron-Mangan			O, P, 1		cators of hydrophytic vegetation and tland hydrology must be present,
	Aucky Mineral (S1)		Delta Ochric					less disturbed or problematic.
	Sleyed Matrix (S4)		Reduced Ver					
	Redox (S5)		Piedmont Flo					4520)
	Matrix (S6) rface (S7) (LRR P,	STIII	Anomalous B	right Loan	ny Solls (F20)	(MLKA	149A, 153C	2, 1530)
	Layer (if observed							
Туре:								
Depth (in	ches):						Hydric Soil	Present? Yes V No
Remarks:								
		,	1.		1 .			little soil sidesable
	7 - 1	f in	11.1)-4	on 1	1-1	, 1	1651	111/1 50,1
	winn	il In	O NOON (1	11/	okely		12,1	2
	1- 1) -		1	1-11	.)/	ran .	sidesulate
6	2XHarct	4111	avge	1,	10,1	n	1011 -	
	MUCK.							

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region Project/Site: FSK Bridge Applicant/Owner: _ M DTA Investigator(s): EB, 65 Section, Township, Range: Landform (hillslope, terrace, etc.): The ress () Local relief (concave, convex, none): LM Cave Subregion (LRR or MLRA): MLR NWI classification: \ Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.) _ significantly disturbed? Are "Normal Circumstances" present? Yes Are Vegetation ____ . Soil _, or Hydrology __ , or Hydrology ____ __ naturally problematic? N (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: **HYDROLOGY** Secondary Indicators (minimum of two required) Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Surface Water (A1) Aquatic Fauna (B13) Drainage Patterns (B10) High Water Table (A2) Marl Deposits (B15) (LRR U) Moss Trim Lines (B16) Hydrogen Sulfide Odor (C1) Saturation (A3) Dry-Season Water Table (C2) Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Cravfish Burrows (C8) Sediment Deposits (B2) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Recent Iron Reduction in Tilled Soils (C6) Drift Deposits (B3) Geomorphic Position (D2) Algal Mat or Crust (B4) Thin Muck Surface (C7) Shallow Aguitard (D3) Iron Deposits (B5) Other (Explain in Remarks) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Sphagnum moss (D8) (LRR T, U) Water-Stained Leaves (B9) Field Observations: Depth (inches): Surface Water Present? Water Table Present? Depth (inches): Wetland Hydrology Present? Yes Saturation Present? Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Rain in past 24

1. Now That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species	ree Stratum (Plot size: 20 × 50)		Dominant		Dominance Test workshee	et:	
Species Across All Strate: Species Across	NMI						(A)
Species Across All Strates Species Across All Strates Species Across All Strates Species That Are OBL, FACW, or FAC. LOO (All FACW, or FACW, or FAC. LOO (All FACW, or		er Lu V	T wiles:		T. (1)		r' elle
Percent of Dominant Species That Are OBL, FACW, or FAC: Total X Cover of. Sapling/Shrub Stratum (Plot size: 20 × 50) Backlar's Notice of total cover: Backlar's Notice of t						3	(B)
Ference of the property of the						L. Sanda	_ (-/
Prevalence Index worksheet: Total % Cover Total % Cover Multiply by: OBL species x1 = FACW species x2 = FACW species x2 = FACW species x3 = FACW species x4 = UPL species x5 = Column Totals: UPL species x5 = Column Totals: UPL species x5 = UPL species x4 = UPL species x5 = UPL species x5 = UPL species x4 = UPL species x5 = UPL species x5 = UPL species x4 = UPL species x5 = UPL species x4 = UPL species x4 = UPL species x4 = UPL species x4 = UPL species x5 =							_ (A/B
Total % Cover of Multiply by: Total % Cover of Multiply by: OBL species					Prevalence Index workshe	et:	
Sapiling/Shrub Stratum (Plot size: 20 × 50 20% of total cover.			Le Paulifia	VIN IN IN	Total % Cover of:	Multiply by:	
50% of total cover: 20% of total cover: 20% of total cover: 30% of total cover: 20% of total cover: 30% of					OBL species	x 1 =	
Sapling/Shrub Stratum (Plot size; 20 × 50) Backlans Naturable							
FACU species X 4 =		20% 01	r total cover	-	The second control of the control of		
UPL species	(Plot size; 2045 0)	3	/	EAT			
Column Totals:		- Comme	-/-	CAP			
Prevalence Index = B/A =		0		HTC			
Hydrophytic Vegetation Indicators: 1_Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is \$<.00 3 - Prevalence Index is \$<.00 4 - Problematic Hydrophytic Vegetation (Explain) 50% of total cover: 50% of total cover: 2 4 - Problematic Hydrophytic Vegetation (Explain) 50% of total cover: 50% of total cover: 2 50% of total cover: 50% o					Column Fotalo.	_ (/ //	(5,
1_Rapid Test for Hydrophytic Vegetation 2_Dominance Test is >50% 3_Prevalence Index is \$3.0" Problematic Hydrophytic Vegetation 1_Problematic Hydrophytic Hydrophytic Vegetation 1_Problematic Hydrophytic Hydrophyti					Prevalence Index = B	/A =	M- de
2 - Dominance Test is >50% 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1 Indicators of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) more in diameter at breast height (DBH), regardless of height. 2 Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardles of size, and woody vines greater than 3.28 ft in height. Woody Vine Stratum (Plot size: 20 × 50) 1	i.				Hydrophytic Vegetation In	dicators:	
3 - Prevalence Index is \$3.0¹					1 - Rapid Test for Hydro	phytic Vegetation	
Problematic Hydrophytic Vegetation (Explain)	· <u></u>				2 - Dominance Test is >	50%	
Troublemant Hydrophytic Vegetation (Explain)	3. <u></u>				3 - Prevalence Index is	≤3.0 ¹	
Solve of total cover: Solv		-10	= Total Co	ver	Problematic Hydrophyti	c Vegetation ¹ (Exp	lain)
1. Phragmits australis 3 2. Lini dra japonica 3 3. A. Bepresent, unless disturbed or problematic. 2. Lini dra japonica 3 3. Bepresent, unless disturbed or problematic. 3. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 3. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. 4. Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. 4. Solved Vine Stratum (Plot size: 20 × 50) 1. Note 1	50% of total cover:	20% of	f total cover	2		daithi ye dada i	
be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft in height. Woody vine – All woody vines greater than 3.28 ft in height. Total Cover Woody Vine Stratum (Plot size: 20 x 50)	Herb Stratum (Plot size: 10×25)	^ ~	/		1Indicators of hydric soil and	wetland hydrology	must
Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Woody vine Stratum (Plot size: 20 × 50) Noody Vine Stratum (Plot size: 20 × 50) Hydrophytic Vegetation Yes No	Phragmites australis	90		FACE			muot
Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Woody Vine Stratum (Plot size: 20 × 50) Noody Vine Stratum (Plot size: 20 × 50) Hydrophytic Vegetation Property As No	Imidera janenica	3		CALLA	Definitions of Four Vegeta	tion Strata:	
more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, send that a sin. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Woody Vine Stratum (Plot size: 20 × 50) Noody Vine Stratum (Plot size: 20 × 50) Hydrophytic Vegetation	Love to the total the terms of			YTTOU	Deminitions of Four Vegeta		
Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Solvent – Solvent – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation – Wespendig – Presenting – Presen				YHOU			
than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. 50% of total cover: 40.5 20% of total cover: 18.0 Voody Vine Stratum (Plot size: 20 × 50) Hydrophytic Vegentian Presenta	0.1	ليت الماكر على	3 million to	KHI III	Tree – Woody plants, exclude more in diameter at breast h	ding vines, 3 in. (7.	
Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Solved vine Stratum (Plot size: 20 × 50) Hydrophytic Vegetation Hydrophytic Vegetation Present?	0.1	ليت الماكر على	3 million to	KHI III	Tree – Woody plants, exclude more in diameter at breast h	ding vines, 3 in. (7.	
of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Solve of total cover: 40.5 20% of total cover: 18.0 Voody Vine Stratum (Plot size: 20×50) Hydrophytic Vegetation Freent? Ves No	0.1	Jan A	Smill Into	16.7	Tree – Woody plants, exclude more in diameter at breast height. Sapling/Shrub – Woody pla	ding vines, 3 in. (7. neight (DBH), regar ants, excluding vine	dless o
of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. 10. 11. 12. 13. 14. 15. 16. 17. 18. 18. 19. 19. 19. 19. 19. 19	3.		and reco		Tree – Woody plants, exclude more in diameter at breast height. Sapling/Shrub – Woody pla	ding vines, 3 in. (7. neight (DBH), regar ants, excluding vine	dless o
Woody vine – All woody vines greater than 3.28 ft in height. 1			and the same	111111111111111111111111111111111111111	Tree – Woody plants, exclude more in diameter at breast height. Sapling/Shrub – Woody plathan 3 in. DBH and greater to	ding vines, 3 in. (7. eight (DBH), regar ants, excluding vines than 3.28 ft (1 m) to	dless o es, less all.
height. 12. 93 = Total Cover 50% of total cover: 40.5 20% of total cover: 18.0 Noody Vine Stratum (Plot size: 20×50) 1.	3.		Section section Section Expression Section Section Section Section Section Section Section Section Section Section Section Section	11-11-11-11-11-11-11-11-11-11-11-11-11-	Tree – Woody plants, exclude more in diameter at breast height. Sapling/Shrub – Woody plathan 3 in. DBH and greater the Herb – All herbaceous (non	ding vines, 3 in. (7. leight (DBH), regar ants, excluding vines than 3.28 ft (1 m) to the woody) plants, reg	dless o es, less all. gardless
22	3.		Section section Section Expression Section Section Section Section Section Section Section Section Section Section Section Section	11-11-11-11-11-11-11-11-11-11-11-11-11-	Tree – Woody plants, exclude more in diameter at breast height. Sapling/Shrub – Woody plathan 3 in. DBH and greater the Herb – All herbaceous (non of size, and woody plants le	ding vines, 3 in. (7. leight (DBH), regarents, excluding vines than 3.28 ft (1 m) to the except than 3.28 ft tall.	dless o es, less all. gardless
Moody Vine Stratum (Plot size: 20 × 50) Noody Vine Stratum (Plot size: 20 × 50) Hydrophytic Vegetation Present? Yes No.	3.		Section section Section Expression Section Section Section Section Section Section Section Section Section Section Section Section	11-11-11-11-11-11-11-11-11-11-11-11-11-	Tree – Woody plants, exclude more in diameter at breast in height. Sapling/Shrub – Woody platthan 3 in. DBH and greater in the break of the break o	ding vines, 3 in. (7. leight (DBH), regarents, excluding vines than 3.28 ft (1 m) to the except than 3.28 ft tall.	dless o es, less all. gardless
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1. MWe 2	3	93	= Total Cov	/er	Tree – Woody plants, exclude more in diameter at breast in height. Sapling/Shrub – Woody platthan 3 in. DBH and greater in the break of the break o	ding vines, 3 in. (7. leight (DBH), regarents, excluding vines than 3.28 ft (1 m) to the except than 3.28 ft tall.	dless o es, less all. gardless
2	3	93	= Total Cov	/er	Tree – Woody plants, exclude more in diameter at breast in height. Sapling/Shrub – Woody platthan 3 in. DBH and greater in the break of the break o	ding vines, 3 in. (7. leight (DBH), regarents, excluding vines than 3.28 ft (1 m) to the except than 3.28 ft tall.	dless o es, less all. gardless
3	8	93	= Total Cov	/er	Tree – Woody plants, exclude more in diameter at breast in height. Sapling/Shrub – Woody platthan 3 in. DBH and greater in the break of the break o	ding vines, 3 in. (7. leight (DBH), regarents, excluding vines than 3.28 ft (1 m) to the except than 3.28 ft tall.	dless o es, less all. gardless
4 Hydrophytic 5 = Total Cover Vegetation Present? Yes No.	5	93 2.5 20% of	= Total Cover	/er	Tree – Woody plants, exclude more in diameter at breast in height. Sapling/Shrub – Woody platthan 3 in. DBH and greater in the break of the break o	ding vines, 3 in. (7. leight (DBH), regarents, excluding vines than 3.28 ft (1 m) to the except than 3.28 ft tall.	dless o es, less all. gardless
5 = Total Cover Vegetation Present? Yes No.	8.	93 2.5 20% of	= Total Cover	/er	Tree – Woody plants, exclude more in diameter at breast in height. Sapling/Shrub – Woody platthan 3 in. DBH and greater in the break of the break o	ding vines, 3 in. (7. leight (DBH), regarents, excluding vines than 3.28 ft (1 m) to the except than 3.28 ft tall.	dless o es, less all. gardless
= Total Cover Vegetation	8	93 2.5 20% of	= Total Cover	/er	Tree – Woody plants, exclude more in diameter at breast in height. Sapling/Shrub – Woody platthan 3 in. DBH and greater in the break of the break o	ding vines, 3 in. (7. leight (DBH), regarents, excluding vines than 3.28 ft (1 m) to the except than 3.28 ft tall.	diess o es, less all. gardiess
Prosent? Yes No	8	93 2.5 20% of	= Total Cover	/er	Tree – Woody plants, exclude more in diameter at breast in height. Sapling/Shrub – Woody platthan 3 in. DBH and greater in the break of the break o	ding vines, 3 in. (7. leight (DBH), regarents, excluding vines than 3.28 ft (1 m) to the except than 3.28 ft tall.	dless o es, less all. gardless
50% of total cover: 20% of total cover: Present? Tes NO	8	93 2.5 20% of	= Total Cover	/er	Tree – Woody plants, exclude more in diameter at breast in height. Sapling/Shrub – Woody plathan 3 in. DBH and greater in the properties of the properties	ding vines, 3 in. (7. leight (DBH), regarents, excluding vines than 3.28 ft (1 m) to the except than 3.28 ft tall.	diess o es, less all. gardiess
30 % of total cover 20 % of total cover	8	93 2,5 20% of	= Total Cover	ver 18.6	Tree – Woody plants, exclude more in diameter at breast in height. Sapling/Shrub – Woody plathan 3 in. DBH and greater in the properties of the properties	ding vines, 3 in. (7. leight (DBH), regardants, excluding vines than 3.28 ft (1 m) to a session of the session	diess o es, less all. gardiess

Profile Des	cription: (Describe	e to the dep	th needed to docum	nent the i	ndicato	or confin	m the absence of in	dicators.)
Depth	Matrix			x Features				
(inches)	Color (moist)	- %	Color (moist)	%	Type ¹	Loc ²	/	Remarks
0-2	1048312	95	JYK 4/4	5		M	Fire Sal	
2-8	104/312	80	54R414	20		M	Fine Sal	
8-12+	10 YB712	95	2.54R 516	5	C	M	Sal	
1000					- 6/- 1			
-								
¹Type: C=C	oncentration, D=De	pletion, RM=	Reduced Matrix, MS	S=Masked	Sand G	rains.	² Location: PL=F	Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless other	wise note	ed.)		Indicators for P	roblematic Hydric Soils ³ :
. Histosol	I (A1)		Polyvalue Be					(A9) (LRR O)
	pipedon (A2)		Thin Dark Su					(A10) (LRR S)
	istic (A3)		Loamy Mucky			R 0)		ertic (F18) (outside MLRA 150A,B)
	en Sulfide (A4)		Loamy Gleye Depleted Mat		F2)			oodplain Soils (F19) (LRR P, S, T) Bright Loamy Soils (F20)
	d Layers (A5) Bodies (A6) (LRR I	P T II)	Redox Dark		6)		(MLRA 15	
	ucky Mineral (A7) (L		Depleted Dar				,	Material (TF2)
	resence (A8) (LRR		Redox Depre					w Dark Surface (TF12)
1 cm Mu	uck (A9) (LRR P, T)		Marl (F10) (L				Other (Expla	ain in Remarks)
Deplete	d Below Dark Surfa	ce (A11)	Depleted Och					
	ark Surface (A12)		Iron-Mangane					of hydrophytic vegetation and
	rairie Redox (A16) (, , ,				nydrology must be present, sturbed or problematic.
= .	Mucky Mineral (S1) (Gleyed Matrix (S4)	LKK 0, 3)	Delta Ochric					sturbed of problematic.
	Redox (S5)		Piedmont Flo					
	Matrix (S6)						RA 149A, 153C, 153I	D)
	rface (S7) (LRR P,				Fra.			
Restrictive	Layer (if observed)):	7.1. 27.1.					
Type:								
Depth (in	ches):						Hydric Soil Pres	ent? Yes No
Remarks:								
h. 1900 in								
								- 1

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region City/County: AA Project/Site: Sampling Point: Applicant/Owner: Investigator(s): Section, Township, Range Local relief (concave, convex, none): Landform (hillslope, terrace, etc.): Subregion (LRR or MLRA): (1) LK Lat: Soil Map Unit Name: NWI classification: (If no, explain in Remarks.) Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ ___, or Hydrology _ significantly disturbed? Are "Normal Circumstances" present? Yes naturally problematic? (If needed, explain any answers in Remarks.) Are Vegetation , or Hydrology _ SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? No Remarks: HYDROLOGY Secondary Indicators (minimum of two required) Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Surface Water (A1) Aquatic Fauna (B13) Drainage Patterns (B10) High Water Table (A2) Marl Deposits (B15) (LRR U) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16) Saturation (A3) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Water Marks (B1) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Sediment Deposits (B2) Saturation Visible on Aerial Imagery (C9) Recent Iron Reduction in Tilled Soils (C6) Drift Deposits (B3) Geomorphic Position (D2) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) Shallow Aquitard (D3) Iron Deposits (B5) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Sphagnum moss (D8) (LRR T, U) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Depth (inches) Depth (inches): Water Table Present? Saturation Present? epth (inches): Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Rain within past 24 hrs

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WETF-WL

20×50	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size: 20,450)	% Cover	Species?	- 6%	Number of Dominant Species
1. Robinia Oscudo acacia		-	WPL	That Are OBL, FACW, or FAC: (A)
2. Liquidambar styracylus		-	FAC	Total Number of Dominant
3.	a with the second	A Late types		Species Across All Strata: (B)
4.				
5.				Percent of Dominant Species
				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7.		Classic de la	PRO ALE AND	Total % Cover of: Multiply by:
8.			1000	OBL species x 1 =
the state of the s		= Total Cov		
50% of total cover: 3	5 20% of	f total cover	1.4	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 20 × 50)		/		FAC species x 3 =
1. Baccharis haminifolia	15		FAC	FACU species x 4 =
2. Liquidambar styraciflua	7	711	FAC.	UPL species x 5 =
3. Rubus argutus		- Delta -	FAC	Column Totals: (A) (B)
			7110	
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7.				2 - Dominance Test is >50%
8				3 - Prevalence Index is ≤3.01
	18	= Total Cov	er	Problematic Hydrophytic Vegetation¹ (Explain)
50% of total cover:	20% of	total cover	3.60	1 Toblematic Hydrophytic Vegetation (Explain)
Herb Stratum (Plot size: 10 × 25,)		10101		
1. Phragmites alistralis	65	/	DAPW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
			11101	
2				Definitions of Four Vegetation Strata:
3.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4.			Chinapa - 1	more in diameter at breast height (DBH), regardless of
5		ryl ^{et} de Syn	De Florida	height.
6.				Sapling/Shrub - Woody plants, excluding vines, less
7. Indulated to a smooth and				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8.				Hart All hart account (non-used) A plants according
9				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
10				Woody vine – All woody vines greater than 3.28 ft in
11.			-	height.
12.	1.5		- Table 190	Grand Annual Control of the Control
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		= Total Cov	10	OLIVER DE LA COMPANIE
50% of total cover: <u>32</u>	20% of	total cover	13	e la la companya de l
Woody Vine Stratum (Plot size: 20×50)		let regard	50011	few participation and a state of both and account
1. Lonicera japonica	30	V	HHU	4 7 13 - 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2. Parthenocissus quinquetolia	20		MACY	
3.				
4			14	and the state of t
5				
v	50	- Total O		Hydrophytic Vegetation
7		= Total Cov	10	Present? Yes No
50% of total cover:		total cover	10	
Remarks: (If observed, list morphological adaptations be	low).			
76				

Depth	Matrix			x Feature			m the absence of ind		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	S
0-1	104/03/3	98	7.5 VR 4/4	2	C	W	Fire Sall		
1-4	10YR 313	93	7.54844	7	6	M	Ene Soll		
1117+	5VD 5 1/1	99	1 5VD 5/1-	- i	0	M	Sal	Maria de la compansión de	
4-19	DIN 019	-17	d.J14016			100	Jal		
		All the said of the		12 46				Hilling of the	THE WILLIAM
				tintta.					
				Total F					
1							2		
	Concentration, D=Dep					rains.	² Location: PL=Po		
	I Indicators: (Applic	able to all							C SOIIS :
Histose			Polyvalue Be						
	Epipedon (A2)		Thin Dark Su				2 cm Muck (A		MI DA 450A D
=	Histic (A3)		Loamy Muck			R O)			e MLRA 150A,B)
	gen Sulfide (A4)		Loamy Gleye		(F2)				9) (LRR P, S, T)
Towns of the last	ed Layers (A5)		Depleted Ma		-0)			right Loamy Soils	S (F2U)
	c Bodies (A6) (LRR F		Redox Dark Depleted Da				(MLRA 153		
	fucky Mineral (A7) (L Presence (A8) (LRR (Redox Depre					Dark Surface (TI	F12)
=	fuck (A9) (LRR P, T)	"	Marl (F10) (L		0)			n in Remarks)	
=	ed Below Dark Surface	e (A11)	Depleted Oc		(MLRA	151)	Other (Explain	· iii · toiliaitto)	
	Dark Surface (A12)	(, , , , ,	☐ Iron-Mangan				. T) ³ Indicators o	f hydrophytic veg	getation and
=	Prairie Redox (A16) (MLRA 150A						drology must be	
_	Mucky Mineral (S1) (Delta Ochric				unless dis	turbed or problen	natic.
	Gleyed Matrix (S4)		Reduced Ve	rtic (F18)	(MLRA 1	50A, 150B))		
Sandy	Redox (S5)		Piedmont Flo	odplain S	Soils (F19	(MLRA 14	49A)		
☐ Strippe	d Matrix (S6)		Anomalous E	Bright Loa	my Soils	(F20) (MLF	RA 149A, 153C, 153D		
	urface (S7) (LRR P,				Part 1				
Restrictive	Layer (if observed)								
Type:									
Depth (i	nches):						Hydric Soil Prese	nt? Yes	_ No _
Remarks:									
									1

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region Project/Site: FS Sampling Date: 5 Sampling Point: W Applicant/Owner: Investigator(s): 16 Section, Township, Range: Local relief (concave, convex, none): _ \(\) \ Landform (hillslope, terrace, etc.): Subregion (LRR or MLRA): Y NWI classification: Soil Map Unit Name: (If no, explain in Remarks.) Are climatic / hydrologic conditions on the site typical for this time of year? Yes _ Are "Normal Circumstances" present? Yes , Soil or Hydrology _ significantly disturbed? Are Vegetation ____ or Hydrology ___ _ naturally problematic? N (If needed, explain any answers in Remarks.) Are Vegetation _ SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? 695 + BGF. ROW **HYDROLOGY** Secondary Indicators (minimum of two required) Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Surface Water (A1) Aquatic Fauna (B13) Drainage Patterns (B10) High Water Table (A2) Marl Deposits (B15) (LRR U) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16) Saturation (A3) Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Sediment Deposits (B2) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Algal Mat or Crust (B4) Thin Muck Surface (C7) Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) FAC-Neutral Test (D5) Water-Stained Leaves (B9) Sphagnum moss (D8) (LRR T, U) Field Observations: Depth (inches): Surface Water Present? Water Table Present? Depth (inches): Wetland Hydrology Present? Yes Saturation Present? Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

		Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size: 30)		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:	(A)
2.				Total Number of Dominant	
				Species Across All Strata:	(B)
. <u>1884 - La la</u>			10427	Percent of Dominant Species	
5.				That Are OBL, FACW, or FAC:	(A/E
i				Prevalence Index worksheet:	
AND THE RESIDENCE OF THE PROPERTY OF THE PROPE				Total % Cover of: Multiply by:	
Charles and Charles and Street		- Total Car		OBL species x 1 =	
50% of total cover:		= Total Cov		FACW species x 2 =	
sapling/Shrub Stratum (Plot size:)	20 % 01	i total cover.		FAC species x 3 =	Maria
Bacchan's haminifolia	10		FAC	FACU species x 4 =	
Sambucus nigra	-	This is	FACW	UPL species x 5 =	
3.				Column Totals: (A)	_ (B
				Prevalence Index = B/A =	
				Hydrophytic Vegetation Indicators:	
				Rapid Test for Hydrophytic Vegetation	
	7	2 4		2 - Dominance Test is >50%	
	10			3 - Prevalence Index is ≤3.0 ¹	
		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explai	in)
50% of total cover:	20% of	f total cover:	2.4	dusconitor you longer in	
Phragmites australis	40	//	FACW	¹ Indicators of hydric soil and wetland hydrology n be present, unless disturbed or problematic.	nust
Holcus lanatus,	30		FACU	Definitions of Four Vegetation Strata:	
Todicadondono madicano	10	16 16	FAC		34
Toxicodendron radicans			111		
Junais effisies	5	The trib	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 more in diameter at breast height (DBH), regardle height.	
Dichanthellium clandestinum				more in diameter at breast height (DBH), regardle height. Sapling/Shrub – Woody plants, excluding vines.	ess o
Juneus effisus Dichanthelleum clandestinum			J. Pleas	more in diameter at breast height (DBH), regardle height.	ess o
Lineus effisus Dichanthellium clandestinum		To Pour St	a nagal	more in diameter at breast height (DBH), regardle height. Sapling/Shrub – Woody plants, excluding vines.	ess o
Tuncus effisus Dicharthellium clandestinum		To Pour St	a nagal	more in diameter at breast height (DBH), regards height. Sapling/Shrub – Woody plants, excluding vines than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall.	ess of the second secon
Junais effisies Dicharthellium clandestinum		To Pour St	a nagal	more in diameter at breast height (DBH), regards height. Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regards	ess (
Junais effisis. Dicharthellium clandestinum 0. 1.		G Paints	a rest or	more in diameter at breast height (DBH), regards height. Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28	ess (
Dicharthelium Clandestinum 0. 1. 2.	87	= Total Cov	er	more in diameter at breast height (DBH), regards height. Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28	ess , less
Juncus effisus Dicharthellium Clandestinum 0. 1. 2. 50% of total cover: 43	87	= Total Cov	er	more in diameter at breast height (DBH), regards height. Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28	ess (
Ochanthelium Clandestryum 1. Juneus effisus 1. Clandestryum 1. Clandest	87	= Total Cov	er	more in diameter at breast height (DBH), regards height. Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28	ess (
Suncus efficients Clandestinum Control of total cover: 43 Voody Vine Stratum (Plot size: 30) Smilax roundifolia	87	= Total Cov	er	more in diameter at breast height (DBH), regards height. Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28	ess (
Ochanthelium Clandestryum 1. Juneus effisus 1. Clandestryum 1. Clandest	87	= Total Cov	er	more in diameter at breast height (DBH), regards height. Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28	ess o
Noody Vine Stratum (Plot size: 30) Smilax ritundifolia Toxicodendrin radicans	87	= Total Cov	er	more in diameter at breast height (DBH), regards height. Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28	ess o
Noody Vine Stratum (Plot size: 30) Smilax ritundifolia Toxicodendrin adicans 1.	87	= Total Cov	er	more in diameter at breast height (DBH), regards height. Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28	ess o
Moody Vine Stratum (Plot size: 30) Smilax roundifolia	87 .5 20% of 5	= Total Covers	FAC FAC	more in diameter at breast height (DBH), regardineight. Sapling/Shrub – Woody plants, excluding vines than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regard size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 height.	ess o
Noody Vine Stratum (Plot size: 30) Smilax ritundifolia Toxicodendrin adicans 1.	87 .5 20% of 5	= Total Cov	FAC FAC	more in diameter at breast height (DBH), regardineight. Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regard f size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 height.	ess of the second secon

Profile Descr	iption: (Describe t	o the dept	h needed to docum	nent the i	ndicator	or confirm	the absence of	f indicators.)
Depth	Matrix			x Features		. 2		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10/R3/2	95	54R 416	2	<u>C</u>	m/pr	DIL -	
4-8	10/25/3	80	7.5425/6	20		m	<u>C</u>	
8-12+	2-5424/6	95	7-51/25/8	5			Sach	
	11 11		71					
							-	
¹ Type: C=Cor	ncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil In	dicators: (Applica	ble to all L	RRs, unless other	wise note	ed.)		Indicators fo	or Problematic Hydric Soils ³ :
Histosol (A	A1)		☐ Polyvalue Be	low Surfac	ce (S8) (L	RR S, T, U	1) 1 cm Mu	ck (A9) (LRR O)
the same of the sa	pedon (A2)		☐ Thin Dark Su					ck (A10) (LRR S)
Black Hist	tic (A3)		Loamy Mucky	y Mineral	(F1) (LRF	(0)	Reduced	Vertic (F18) (outside MLRA 150A,B)
Hydrogen	Sulfide (A4)		Loamy Gleye	d Matrix (F2)		Piedmon	t Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)		Depleted Mat	trix (F3)				ous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P,		Redox Dark S					A 153B)
The state of the s	ky Mineral (A7) (LR		Depleted Dar		. ,			ent Material (TF2)
	sence (A8) (LRR U)		Redox Depre		3)			allow Dark Surface (TF12)
	k (A9) (LRR P, T)		Marl (F10) (L			-43	Other (Ex	xplain in Remarks)
	Below Dark Surface	(A11)	Depleted Och				T) 3Indicat	are of hydrophytic vagotation and
=	k Surface (A12)	I DA 450A	Iron-Mangane Umbric Surfa					ors of hydrophytic vegetation and nd hydrology must be present,
	iirie Redox (A16) (M ıcky Mineral (S1) (L		Delta Ochric			, 0)		s disturbed or problematic.
	eyed Matrix (S4)	KK 0, 3)	Reduced Ver			0A 150B)		s distarbed of problematic.
Sandy Re			Piedmont Flo					
	Matrix (S6)		The state of the s				A 149A, 153C, 1	(53D)
	ace (S7) (LRR P, S,	T, U)			,	, (
	yer (if observed):			ing in	- 419			
Type:								
	nes):						Hydric Soil Pi	resent? Yes No No
Remarks:								
remarks.								

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region Project/Site: FSK Rebuild City/County: AA Co Applicant/Owner: MDTA Investigator(s): EB, T Section, Township, Range Landform (hillslope, terrace, etc.): Deprusium Local relief (concave, convex, none): _ Lat: 39.2065919 Long: -76.547079 Subregion (LRR or MLRA): MLRA 149 Soil Map Unit Name: Udor Hent NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes Soil _____, or Hydrology _____ significantly disturbed? , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) Are Vegetation SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: **HYDROLOGY** Secondary Indicators (minimum of two required) Wetland Hydrology Indicators: Surface Soil Cracks (B6) Primapy Indicators (minimum of one is required; check all that apply) Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Marl Deposits (B15) (LRR U) Drainage Patterns (B10) Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16) Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Sediment Deposits (B2) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Algal Mat or Crust (B4) Thin Muck Surface (C7) Shallow Aquitard (D3) Other (Explain in Remarks) Iron Deposits (B5) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Sphagnum moss (D8) (LRR T, U) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): Wetland Hydrology Present? Yes Saturation Present? Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Free Stratum (Plot size: 30)	% Cover		Status	Dominance Test worksheet: Number of Dominant Species	2	
				That Are OBL, FACW, or FAC		_ (A)
2.				Total Number of Dominant	2	
3.				Species Across All Strata:		_ (B)
1.				Percent of Dominant Species	100	
5				That Are OBL, FACW, or FAC	: 100	_ (A/B
5				Prevalence Index worksheet	o single by the	. Propin
7.		The state of the s		Total % Cover of:	Multiply by:	
3.				OBL species		
		= Total Co		FACW species		
50% of total cover:	20% of	total cove		FAC species		
Sapling/Shrub Stratum (Plot size:	0	/	CAL	FACU species		
Baccharis haminifolia		-/	THE		x 5 =	
Liquidambar styraciflua			tal.			
Sambueus myre			FACW	Column Totals:	(A)	(D
ł				Prevalence Index = B/A	- 144	
5				Hydrophytic Vegetation Indi		
				1 - Rapid Test for Hydroph		
				2 - Dominance Test is >50		
3.				3 - Prevalence Index is ≤3		
	15	= Total Co	ver	Problematic Hydrophytic		ain)
50% of total cover:			4000	Froblematic Hydrophytic V	regetation (Expi	all I)
Herb Stratum (Plot size: 15				1		
Phragmites australis	80	/	FACW	¹ Indicators of hydric soil and w be present, unless disturbed o		must
Onoclea sensibilis.	10		FACEN	Definitions of Four Vegetation		
3. Toxicodendom radicans	- 5		FAC	Deminitions of Four Vegetation	ni Strata.	
1. Lonicera ja ponica	5		EARL	Tree - Woody plants, excluding		
Smilay Athnelifolia	3	AT INTERIOR	FAC	more in diameter at breast height.	ght (DBH), regar	dless c
7.				Sapling/Shrub – Woody plant than 3 in. DBH and greater tha		
3.				Herb – All herbaceous (non-work size, and woody plants less		ardles
0						
1.				Woody vine – All woody vines height.	s greater than 3.2	28 ft in
			deminated the	Tiolgrit.		
2.	103	= Total Co	vor	Guardian and Series	- 12 year, 1 319c	1.150
50% of total cover: 51	5 20% of					
Noody Vine Stratum (Plot size:)	20% 01	total cove	70.0			
I. Nime Stratum (Plot size:)				story Thank and Car. Sudo all lateral of		
2.						
3.				Decide to		
5				Hydrophytic	/	
		= Total Co	ver	Vegetation		
	000/ -/	total cove		Present? Yes	No	
50% of total cover:	20% 01	total cove				

rofile Description: (Describe to t		dox Features			
nches) Color (moist)	% Color (moist)	%Type		Texture	Remarks
5-8 7.54R4/2 9	98 54R46	2 C	M	Such	MEAN AND AND AND AND AND AND AND AND AND A
8-12+ SYR 4/4	95 2.54244	5 C	m	Secl_	
Type: C=Concentration, D=Depletic ydric Soil Indicators: (Applicable) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, 5 cm Mucky Mineral (A7) (LRR F, Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A1) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLR Sandy Mucky Mineral (S1) (LRR Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR P, S, T,	U) Popleted D Redox Depleted D Redox D Redox Depleted D R	Below Surface (S8) Surface (S9) (LRR Cky Mineral (F1) (L yed Matrix (F2) Matrix (F3) k Surface (F6) Park Surface (F7) Paressions (F8) (LRR U) Chric (F11) (MLRA anese Masses (F12 face (F13) (LRR P ic (F17) (MLRA 15 ertic (F18) (MLRA Floodplain Soils (F7	(LRR S, T, S, T, U) RR O) 151)) (LRR O, P, T, U) I) 150A, 150B, 9) (MLRA 1	Indicators for I Indicators for I I cm Muck	Material (TF2) ow Dark Surface (TF12) lain in Remarks) s of hydrophytic vegetation and hydrology must be present, listurbed or problematic.
estrictive Layer (if observed): Type:					
Depth (inches):emarks:				Hydric Soil Pres	sent? Yes No No

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region Applicant/Owner: Investigator(s): EB Section, Township, Range: Landform (hillslope, terrace, etc.): 1)00114111 Local relief (concave, convex, none): Subregion (LRR or MLRA): MIRA Long: -76.54 Soil Map Unit Name: (Idorthent NWI classification: Are climatic / hydrologic conditions on the site typical for this time of year? Yes (If no, explain in Remarks.) , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes , Soil _, or Hydrology ____ _ naturally problematic? N (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? BEE ROW **HYDROLOGY** Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Sparsely Vegetated Concave Surface (B8) Aquatic Fauna (B13) High Water Table (A Marl Deposits (B15) (LRR U) Drainage Patterns (B10) Moss Trim Lines (B16) Saturation (A3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Crayfish Burrows (C8) Sediment Deposits (B2) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C9) Recent Iron Reduction in Tilled Soils (C6) Drift Deposits (B3) Geomorphic Position (D2) Algal Mat or Crust (B4) Thin Muck Surface (C7) Shallow Aguitard (D3) Iron Deposits (B5) Other (Explain in Remarks) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Sphagnum moss (D8) (LRR T, U) Field Observations: Depth (inches): Surface Water Present? Depth (inches): Water Table Present? Depth (inches): ______ Wetland Hydrology Present? Yes __ Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: ace water in ~ 570 of plot

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WETH-WL

30	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30) 1. 1.	% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2	manifer all and	Total Number of Dominant Species Across All Strata: (B)
4 5		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6.		Prevalence Index worksheet:
7. H 100 No 965121 Reconstruction 1		Total % Cover of: Multiply by:
3.		OBL species x 1 =
		FACW species x 2 =
	20% of total cover:	FAC species x 3 =
sapling/Shrub Stratum (Plot size: 30)		FACU species x 4 =
	The second secon	UPL species x 5 =
		Column Totals: (A) (B)
•		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
		Rapid Test for Hydrophytic Vegetation
•		2 - Dominance Test is >50%
		3 - Prevalence Index is ≤3.0 ¹
	= Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover:		and the same of transmit of the land out of
erb Stratum (Plot size: 13) Ph-agmites australis	50 / FACIN	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Holand landers		Definitions of Four Vegetation Strata:
Juncus esfusus	8 OBL	
	20 FAL	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) o
Parthenecissus quinquefolia		more in diameter at breast height (DBH), regardless of height.
	D I HU	
Supering of succession	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
0.		Woody vine - All woody vines greater than 3.28 ft in
1.		height.
2.		
1, 1	88 = Total Cover	Company of the compan
50% of total cover:	20% of total cover: 17. Ψ	tion it works to refuge
/oody Vine Stratum (Plot size: 30)		the property of the spine of the party of the same of the same of
None		
	= Total Cover	Hydrophytic Vegetation
F00/ -64-4-1		Present? Yes No
50% of total cover:		A TOTAL OF THE STATE OF THE STA
Remarks: (If observed, list morphological adaptations below	w).	

Sampling Point: WETH-UPL

Profile Description: (Describe to the dep	in needed to document the marcator or commi	if the absence of maleaterer,
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0-1-11-11-1		Sal
7-12 2.5/24/6 93	1-01/2-19 + C	C
12+30+ 7.54R5/8 7		<u>C</u>
12-20+ WHITEPAGEN 8.5 W		C
2.54× 2.5/4 40		C
2-5/12 /7-70		
		· · ·
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all		Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Below Surface (S8) (LRR S, T, L	U) 1 cm Muck (A9) (LRR 0) 2 cm Muck (A10) (LRR S)
Histic Epipedon (A2) Black Histic (A3)	Thin Dark Surface (S9) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O)	Reduced Vertic (F18) (outside MLRA 150A,B)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, T)
Stratified Layers (A5)	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	(MLRA 153B)
5 cm Mucky Mineral (A7) (LRR P, T, U)	Depleted Dark Surface (F7)	Red Parent Material (TF2)
Muck Presence (A8) (LRR U)	Redox Depressions (F8)	Very Shallow Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T)	Marl (F10) (LRR U)	Uther (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	31 11 4 4 5 1 4 4 5
Thick Dark Surface (A12)	Iron-Manganese Masses (F12) (LRR O, P,	T) 3Indicators of hydrophytic vegetation and wetland hydrology must be present,
Coast Prairie Redox (A16) (MLRA 150A Sandy Mucky Mineral (S1) (LRR O, S)	Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151)	unless disturbed or problematic.
Sandy Gleyed Matrix (S4)	Reduced Vertic (F18) (MLRA 150A, 150B)	그리고 있다면 하는 이 사람들이 되었다면서 하지만 하는 그리고 하는 사람들이 되었다면 하는데 그리고
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 14	
Stripped Matrix (S6)	Anomalous Bright Loamy Soils (F20) (MLR	
Dark Surface (S7) (LRR P, S, T, U)		
Restrictive Layer (if observed):		
Restrictive Layer (if observed): Type:		
		Hydric Soil Present? Yes No
Type:		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No No
Type: Depth (inches):		Hydric Soil Present? Yes No No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No
Type: Depth (inches):		Hydric Soil Present? Yes No

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region Project/Site: Applicant/Owner: Investigator(s): Local relief (concave, convex, none): Landform (hillslope, terrace, etc.): Subregion (LRR or MLRA): Soil Map Unit Name: Udor thents Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? N Are "Normal Circumstances" present? Yes __, Soil ____ Are Vegetation ____ __, or Hydrology ____ naturally problematic? N (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? is the Sampled Area Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: **HYDROLOGY** Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Surface Water (A1) Aquatic Fauna (B13) High Water Table (A2) Marl Deposits (B15) (LRR U) Drainage Patterns (B10) Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16) Dry-Season Water Table (C2) Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Geomorphic Position (D2) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) Shallow Aquitard (D3) Iron Deposits (B5) FAC-Neutral Test (D5) Igundation Visible on Aerial Imagery (B7) Sphagnum moss (D8) (LRR T, U) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Saturation Present? Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

30		Dominant		Dominance Test worksheet:
ree Stratum (Plot size: 30)		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
				Total Number of Dominant Species Across All Strata: (B)
				Percent of Dominant Species That Are OBL, FACW, or FAC: 4/B
				Prevalence Index worksheet:
en jakorik en majakkan yan makana bura		= Total Cov	/er	OBL species x 1 =
50% of total cover:				FACW species x 2 =
apling/Shrub Stratum (Pløt size: 30)				FAC species x 3 =
Populus alba	5			FACU species x 4 =
Bacharis hammifolia	10		FAC	UPL species x 5 =
				Column Totals: (A) (B)
• - 1				Prevalence Index = B/A =
·				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
•				2 - Dominance Test is >50%
*b	12			3 - Prevalence Index is ≤3.0 ¹
50% of total cover:		= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Phragmites australis	90	/	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Toxicodendron nadicans	15		FAC	Definitions of Four Vegetation Strata:
Secretary of the secondary of the Lie		d the	200	
	STEEL SALVE		110 117 1	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height.
The state of the s	Company to		a feet to y	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
		The second	Tu yn E	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
0				1256 2 mar 1 minut recently
1			9030 T	Woody vine – All woody vines greater than 3.28 ft in height.
2	105	= Total Co	/er	Company of the second second
50% of total cover: 54	15 20% of	total cover	21	The second secon
Voody Vine Stratum (Plot size: SO)				the first term of the second property and the second
•				
•				
•				
•				Hydrophytic
50% (4.4.4.		= Total Co		Vegetation Present? Yes No No
50% of total cover: temarks: (If observed, list morphological adaptations bel		total cover	:	
^	eur a	nin	dicat	or status but prefers
			/	/ // /

COIL				
	~	~	80	

Sampling Point: WETT

Depth	Matrix			Feature		. 2		
(inches)	Color (moist)	92 -	Color (moist)		Type ¹	Loc ²		Remarks
0-3	10/1	95 _	1.5/24/4			m	SaCL	
4-10	7.5/25/3	75_	24/27/4	2		m	Dack	
10-16	CLAY FILL		//				- 44	
						- 11111		
T			adveral Matrix MC	-Maalaa		ala s	21 4	DI -Dana Lining Mahariy
	ncentration, D=Deple					airis.		PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol		510 10 411 21	Polyvalue Bel			RR S. T. I		Muck (A9) (LRR O)
	ipedon (A2)		Thin Dark Sur					Muck (A10) (LRR S)
Black His			Loamy Mucky					ed Vertic (F18) (outside MLRA 150A,B
Hydroge	n Sulfide (A4)		Loamy Gleyed	d Matrix (F2)		Piedm	ont Floodplain Soils (F19) (LRR P, S, T)
	Layers (A5)		Depleted Mati	, ,				alous Bright Loamy Soils (F20)
	Bodies (A6) (LRR P,		Redox Dark S				,	RA 153B)
=	cky Mineral (A7) (LRI		Depleted Dark		, ,			arent Material (TF2)
=	esence (A8) (LRR U)		Redox Depres		8)			hallow Dark Surface (TF12) (Explain in Remarks)
	ck (A9) (LRR P, T) Below Dark Surface	(Δ11)	Marl (F10) (LF Depleted Och		(MI DA 4	51)	Utner	Explain in Remarks)
	rk Surface (A12)	(A11)	Iron-Mangane				T) ³ Indic	ators of hydrophytic vegetation and
	airie Redox (A16) (M	LRA 150A)	Umbric Surface					land hydrology must be present,
	ucky Mineral (S1) (LI		Delta Ochric (, , ,		, -,		ess disturbed or problematic.
	leyed Matrix (S4)		Reduced Vert			0A, 150B)		
	edox (S5)		Piedmont Floo					
Stripped	Matrix (S6)		Anomalous Br	ight Loai	my Soils (I	-20) (MLF	RA 149A, 153C	, 153D)
Dark Sur	face (S7) (LRR P, S,	T. III						
		., 0/						
Restrictive L	ayer (if observed):	., 0/				wa a land		
Restrictive L	ayer (if observed):	., 0,				in a		
Type: Depth (inc	ayer (if observed):	., 0,	-				Hydric Soil	Present? Yes No
Restrictive L	ayer (if observed):	., 0/	-				Hydric Soil	Present? Yes No No
Type: Depth (inc	ayer (if observed):	., .,	_				Hydric Soil	Present? Yes No
Type: Depth (inc	ayer (if observed):	., .,	- 100				Hydric Soil	Present? Yes No
estrictive L Type: Depth (inc	ayer (if observed):	., 0/	_				Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., 0/	_				Hydric Soil	Present? Yes No No
Type: Depth (inc	ayer (if observed):	., 0/					Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., 07					Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., 07					Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., 0/	_				Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., 0,					Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., 0,					Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., .,					Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., .,					Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., .,					Hydric Soil	Present? Yes No
estrictive L Type: Depth (inc	ayer (if observed):	., .,					Hydric Soil	Present? Yes No No
Type: Depth (inc	ayer (if observed):	., , ,					Hydric Soil	Present? Yes No No
Type: Depth (inc	ayer (if observed):	., .,					Hydric Soil	Present? Yes No No
Type: Depth (inc	ayer (if observed):	., 0,					Hydric Soil	Present? Yes No No
Type: Depth (inc	ayer (if observed):	., .,					Hydric Soil	Present? Yes No No
Type: Depth (inc	ayer (if observed):	., .,					Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., .,					Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., .,					Hydric Soil	Present? Yes No No
estrictive L Type: Depth (inc	ayer (if observed):	., .,					Hydric Soil	Present? Yes No No

Project/Site: FSK Rebuild	City/County: AA Co		_ Sampling Date: 5/8/24		
Applicant/Owner: MDTA		State: MD	Sampling Point: WETI-UF		
En II			_ Sampling Fount		
Investigator(s): UD 1	Section, Township, Range	CDOC	0114 01 00 7		
Landform (hillslope, terrace, etc.): Depression	Local relief (concave, conv	vex, none):	WC Slope (%): 2		
Subregion (LRR or MLRA): MLRA149A Lat:	Lon	g:	Datum: NADS		
Soil Map Unit Name: Udorthents, cleryey, very o	lep. 0-15%. 810pes	NWI classi	fication: Nove		
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 signifi	cantly disturbed? Are "No	rmal Circumstances	" present? Yes No		
Are Vegetation, Soil, or Hydrology natura	lly problematic? № (If need	ed, explain any ansv	vers in Remarks.)		
SUMMARY OF FINDINGS - Attach site map sho	wing sampling point loc	ations, transec	ts, important features, etc.		
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Ar within a Wetland?		No		
			10.		
HYDROLOGY	Barrier Editor				
Wetland Hydrology Indicators:		Secondary Indi	cators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that a	oply)	_ Surface So	oil Cracks (B6)		
Surface Water (A1) Aquatic Faun	a (B13)	Sparsely V	egetated Concave Surface (B8)		
High Water Table (A2) Marl Deposits	(B15) (LRR U)	Drainage F	Patterns (B10)		
Saturation (A3) Hydrogen Su	fide Odor (C1)	Moss Trim	Moss Trim Lines (B16)		
	ospheres along Living Roots (C		n Water Table (C2)		
	Reduced Iron (C4)	- Inner	urrows (C8)		
	eduction in Tilled Soils (C6)		Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4) Thin Muck Su			ic Position (D2)		
☐ Iron Deposits (B5) ☐ Other (Explain Inundation Visible on Aerial Imagery (B7)	n in Remarks)		quitard (D3) al Test (D5)		
Water-Stained Leaves (B9)		=	moss (D8) (LRR T, U)		
Field Observations:		<u> </u>			
Surface Water Present? Yes No Depth (in	ches):				
Water Table Present? Yes No Depth (in	ches): 12 ¹¹				
Saturation Present? Yes No Depth (in		nd Hydrology Pres	ent? Yes No		
(includes capillary fringe)		7-11-			
Describe Recorded Data (stream gauge, monitoring well, aerial	pnotos, previous inspections), if	avallable:			
		<u> </u>	A CARLESTON OF THE STATE OF THE		
Remarks:					



		Dominant		Dominance Test worksheet:
Populus alba	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
Populus deltoides	_5_		FAC	Total Number of Dominant Species Across All Strata: (B)
				Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)
			A DALLEY	Prevalence Index worksheet:
A Company of the Comp			affile was districted	Total % Cover of: Multiply by:
	15	= Total Cov	er	OBL species x 1 =
50% of total cover: 7.5	20% of	total cover	3	FACW species x 2 =
pling/Shrub Stratum (Plot size: 30)	-			FAC species x 3 =
Populus alba.	50			FACU species x 4 =
Baccharis hapunifolia	20	/	FAC	UPL species x 5 =
Diospyros virginiana	5		FAC	Column Totals: (A) (B)
U U				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
	12			3 - Prevalence Index is ≤3.0 ¹
0-7		= Total Cov		Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: 37	20% of	total cover	15	Majorithe of the differentially
b Stratum (Plot size: /)	10			¹Indicators of hydric soil and wetland hydrology must
Toxicodendam tadicano	75		CAP	be present, unless disturbed or problematic.
Am Delposis previpedunculato	- 15		1101	Definitions of Four Vegetation Strata:
Phragnites australis	-13		CA CLA	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
	7	A SECTION A	FACIN	more in diameter at breast height (DBH), regardless of
Lonitera japonica	10		HACU	height.
Panicuro Virgatum	5		FAC	Sapling/Shrub - Woody plants, excluding vines, less
Solidago Al.	2			than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Poacaela sp.	40			Herb – All herbaceous (non-woody) plants, regardless
	9			of size, and woody plants less than 3.28 ft tall.
A STATE OF THE PARTY OF THE PAR				Woody vine – All woody vines greater than 3.28 ft in
				height.
				The state of the s
	120	= Total Cov	er ,	English State of the State of t
50%-of total cover: 60	20% of	total cover:	24	The second secon
ody Vine Stratum (Plot size: 50)			Teleplas	the grant the at the property and the most of the property of
None				
		7		
		7-1-1		
		= Total Cov	er	Hydrophytic Vegetation
50% of total cover		= Total Cov		Hydrophytic Vegetation Present? Yes No
50% of total cover:	20% of			Vegetation
marks: (If observed, list morphological adaptations below	20% of	total cover:		Vegetation Present? Yes No
marks: (If observed, list morphological adaptations below	20% of	total cover:		Vegetation Present? Yes No
marks: (If observed, list morphological adaptations below	20% of w). his, or u	assun LSP	red l	vegetation Present? Yes No LO due to location.

	eptil needed to docum	ent the i	ndicator	or confirr	m the absence of	indicators.)
Depth Matrix		Feature				
(inches) Color (moist) %	Color (moist)		Type ¹	Loc ²		Remarks
0-4 1.5/2 1/3 98	Syp 4/4	1		m	Sacl_	
4-12 Syz414 95	2:512:5/6	5	C	M	Sec	
12-16+ 10424/2 95	7.5425/10	5	C	m	Sac	
	// /	W 1	Type 4			
		FF 34.			A STATE OF THE STA	
			100		They be you	
¹Type: C=Concentration, D=Depletion, R				ains.		_=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to			All the second			r Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2)	Polyvalue Bel					ck (A9) (LRR O) ck (A10) (LRR S)
Black Histic (A3)	Loamy Mucky					Vertic (F18) (outside MLRA 150A,B)
Hydrogen Sulfide (A4)	Loamy Gleyed					Floodplain Soils (F19) (LRR P, S, T)
Stratified Layers (A5)	Depleted Matr	ix (F3)			Anomalou	us Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U)	Redox Dark S	,	,		(MLRA	
5 cm Mucky Mineral (A7) (LRR P, T,						nt Material (TF2)
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T)	Redox Depres Marl (F10) (LF		5)			llow Dark Surface (TF12) plain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Och		MLRA 15	(1)	Oulei (Ex	plant in Nemarks)
Thick Dark Surface (A12)	Iron-Mangane				, T) ³ Indicate	ors of hydrophytic vegetation and
Coast Prairie Redox (A16) (MLRA 15	(0A) Umbric Surfac	e (F13) (LRR P, T	U)		d hydrology must be present,
Sandy Mucky Mineral (S1) (LRR O, S						disturbed or problematic.
Sandy Gleyed Matrix (S4)	Reduced Verti					
Sandy Redox (S5) Stripped Matrix (S6)	Piedmont Floo				49A) RA 149A, 153C, 1	53D)
Dark Surface (S7) (LRR P, S, T, U)	/ Wiemandad Br	ight Louis	19 00110 (1	20) (11121	04 14074, 1000, 14	
Restrictive Layer (if observed):				B 1737		
Туре:						
Type: Depth (inches):					Hydric Soil Pro	esent? Yes No
					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pr	esent? Yes No
Depth (inches):					Hydric Soil Pro	esent? Yes No
Depth (inches):					Hydric Soil Pro	esent? Yes No
Depth (inches):					Hydric Soil Pro	esent? Yes No

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region						
Project/Site: F3K RUDUI G City/County: Baltimore Cety Sampling Date: 5/3/24						
Applicant/Owner: Main Sampling Point: Define						
Investigator(s): D. South K. Mathews Section, Township, Range:						
Landform (hillstope, terrace, etc.): Interfidal Local relief (concave, convex, none): Langful Stope (%): 5						
Subregion (LRR or MLRA): MLRA 149 A Lat: 39.210446 Long: -76.535154 Datum: NADB3						
Soil Map Unit Name: Udorthents, smoothed, 0-3570 Slopes NWI classification: ELUBL						
Soil Map Unit Name: <u>Ugo rinents</u> , <u>SIMD8 INEA</u> , <u>U - 58 / 2 IOPES</u> NWI classification: <u>CIW5 L</u>						
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? No No						
Are Vegetation, Soil, or Hydrology naturally problematic?						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No Is the Sampled Area within a Wetland? Yes No						
Proto INEIJ-1. Wetland is small patch of Phragmites between						
socky shore areas. EZEMU						
HYDROLOGY						
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)						
Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8)						
Image Patterns (B10) Marl Deposits (B15) (LRR U) Drainage Patterns (B10)						
Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16)						
Water Marks (B1) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2)						
Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8)						
✓ Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)						
Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2)						
Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3)						
Inundation Visible on Aerial Imagery (B7)						
Water-Stained Leaves (B9) Sphagnum moss (D8) (LRR T, U)						
Field Observations:						
Surface Water Present? Yes No Depth (inches):						
Water Table Present? Yes No Depth (inches): 5						
Saturation Present? Yes V No Depth (inches): Wetland Hydrology Present? Yes V No (includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
Remarks: * 40% of plot on incoming tide. No recent sain, but wetland is hydrologically in fluenced by twice daily tidal flowing.						

20	Absolute Dominant Indicator	Dominance Test worksheet:
ree Stratum (Plot size: 30)		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
		Total Number of Dominant
		Species Across All Strata: (B)
		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B
		Prevalence Index worksheet:
		Total % Cover of: Multiply by:
Landani el heste vermiga de la	= Total Cover	OBL species x 1 =
50% of total cover:	20% of total cover:	FACW species x 2 =
apling/Shrub Stratum (Plot size: 30)		FAC species x 3 =
Nune		FACU species x 4 =
		UPL species x 5 =
		Column Totals: (A) (B
		Prevalence Index = B/A =
		Hydrophytic Vegetation Indicators:
•		1 - Rapid Test for Hydrophytic Vegetation
		2 - Dominance Test is >50%
		3 - Prevalence Index is ≤3.01
500/ -51-1-1	= Total Cover	Problematic Hydrophytic Vegetation¹ (Explain)
erb Stratum (Plot size:)	20% of total cover:	
Pragnity 20stralis	100 / TAKW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		Definitions of Four Vegetation Strata:
		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) of
		more in diameter at breast height (DBH), regardless of
		height.
		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
		Herb - All herbaceous (non-woody) plants, regardless
		of size, and woody plants less than 3.28 ft tall.
).		Woody vine - All woody vines greater than 3.28 ft in
		height.
	= Total Cover	
50% of total cover:	20% of total cover:	
oody Vine Stratum (Plot size: 30)		For the Miles of Manager of the Control of the Cont
None		
		Hydrophytic
	= Total Cover	Vegetation
50% of total cover:	20% of total cover:	Present? Yes _ No
emarks: (If observed, list morphological adaptations be	low).	

	epth needed to document the Indicator or confirm	
Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % Type Loc²	Texture Remarks
20 18 10 YR 2/1 100		Silveren Fide Muck
75 100 101000		zingerp. s. a muer
		2
	M=Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Hydric Soil Indicators: (Applicable to		
Histosol (A1)	Polyvalue Below Surface (S8) (LRR S, T, L	
Histic Epipedon (A2)	Thin Dark Surface (S9) (LRR S, T, U)	2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150A,
Black Histic (A3) Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2)	Piedmont Floodplain Soils (F19) (LRR P, S, 1
Stratified Layers (A5)	Depleted Matrix (F3)	Anomalous Bright Loamy Soils (F20)
Organic Bodies (A6) (LRR P, T, U)	Redox Dark Surface (F6)	(MLRA 153B)
5 cm Mucky Mineral (A7) (LRR P, T,		Red Parent Material (TF2)
Muck Presence (A8) (LRR U)	Redox Depressions (F8)	Very Shallow Dark Surface (TF12)
1 cm Muck (A9) (LRR P, T)	Mari (F10) (LRR U)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Ochric (F11) (MLRA 151)	
Thick Dark Surface (A12)	Iron-Manganese Masses (F12) (LRR O, P,	
Coast Prairie Redox (A16) (MLRA 1: Sandy Mucky Mineral (S1) (LRR 0, 5		wetland hydrology must be present, unless disturbed or problematic.
Sandy Gleyed Matrix (S4)	Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B)	
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 14	
Stripped Matrix (S6)	Anomalous Bright Loamy Soils (F20) (MLR	
Dark Surface (S7) (LRR P, S, T, U)		
Restrictive Layer (if observed):		
Type:		
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes No
		Hydric Soil Present? Yes No
Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes No No
Remarks:		Hydric Soil Present? Yes No No
Remarks:		Hydric Soil Present? Yes No No
Remarks:		Hydric Soil Present? Yes No No
Remarks:		Hydric Soil Present? Yes No No
Remarks:		Hydric Soil Present? Yes No No
Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes No No
Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes NoNo
Remarks:		Hydric Soil Present? Yes No No
Remarks:		Hydric Soil Present? Yes No No

WETLAND DETERMINATION DATA FORM	I – Atlantic and Gulf Coastal Plain Region
Project/Site: F5K Re Duild City/Co	punty: Bultimore City Sampling Date: 5/3/14
Applicant/Owner: Ma TA	State: MAD Sampling Point: [NETJ-D]
Deriver of their	
The state of the s	n, Township, Range:
Landform (hillslope, terrace, etc.): 74 Tale Local r	relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): MLRA 149A Lat: 39.210	043 Long: -76,535253 Datum: NAD83
Soil Map Unit Name: Udor Theuts, Smoothed, 0-357	Suppls NWI classification: N A
Are climatic / hydrologic conditions on the site typical for this time of year? Ye	No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturb	ed? // Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problemat	tic? N (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing samp	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes V No	Is the Sampled Area
Hydric Soil Present? Yes NoV	within a Wetland? Yes No
Wetland Hydrology Present? Yes No	
Uplan	d plot for 1-WET-J+1-WET
Photo INETJ-UP-1	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Surface Soli Cracks (Bb) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15) (LRR	[2] (12) [2] [2] [2] [3] [3] [3] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4
Saturation (A3) Hydrogen Sulfide Odor (C	그러는 그는 이번 이번 나는 그는 내가 모르는데 이번 전에 가는 사람이 되었다. 그리고 내가 있는데 얼마나 없는데 없었다.
Water Marks (B1) Oxidized Rhizospheres alo	
Sediment Deposits (B2) Presence of Reduced Iron	
Drift Deposits (B3) Recent Iron Reduction in 1	
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks	
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No/_ Depth (inches):	
Water Table Present? Yes No/ Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previ	ious inspections) if available:
December 1992 Bata (broadin gauge, monitoring well, decign protes, provi	out inspections), if available.
Remarks:	
Mari MIII) (a last ist a st	5CM 5.1500 7000
ASOVE MAN line but who sto	Min July 2010.

VEGETATION	/Four Strata	Lisa scientifia	names of plants.
A COE IN HOLA	Four Strata	I – Ose scientilic	names of plants.

Sampling Point: 1455-07L

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet: Number of Dominant Species
1. Umus remericand	65	7	TAL	That Are OBL, FACW, or FAC: (A)
2. Koefsevtasia pagicolata 3. Revinia Pseudoacasa	18		CIPL	Total Number of Dominant Species Across All Strata: (B)
1. Prunis Seratina	5		FAGU	Percent of Dominant Species
5. Trunda Seratina			PACU	That Are OBL, FACW, or FAC: 35/3 (A/B)
7.		E877 (21)	-1 - 24/3/24	Prevalence Index worksheet:
8.			THE STATE OF	Total % Cover of: Multiply by:
	103	= Total Cov	/er	OBL species x 1 =
50% of total cover: 20,0	2 20% of	total cover	: 51,5	FACW species x 2 =
Sapling/Shrub Stratum (Plot size:)	7	1	11.	FACULTURE X 3 =
1. Daccharis nationifolia	7	1	1-46	FACU species x 4 =
2. Lonicia maaghi	3	-1	Thou	UPL species x 5 = Column Totals: (A) (B)
3. Rofinia Psaldoacacia	5	7	TIPL	Column Totals. (A)
4. KCK negvoda			THE	Prevalence Index = B/A =
5.				Hydrophytic Vegetation Indicators:
6				Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
	16	= Total Cov	/or	3 - Prevalence Index is ≤3.01
,50% of total cover: 3 //				Problematic Hydrophytic Vegetation¹ (Explain)
Herb Stratum (Plot size: 15")		,		11- attaches at lander and the state of the
1. Insagnith aphrais	15	Y	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. Clematis translara	12	У	PACU	Definitions of Four Vegetation Strata:
3. Thalasis as una mater	7		FALW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
4. Toxicodendson sadicans	12	Y	FAC,	more in diameter at breast height (DBH), regardless of
5. Bobinia Previoacacia	5		UPL	height.
6. Castymocissus quinquetolia	3		MA.	Sapling/Shrub - Woody plants, excluding vines, less
7. Lonicasa je fornica	2		FACU	than 3 in. DBH and greater than 3.28 ft (1 m) tall.
				Herb - All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10				Woody vine - All woody vines greater than 3.28 ft in
12.				height.
	56	= Total Cov	/er	
50% of total cover: 11.2				
Woody Vine Stratum (Plot size:)	Hedger !		1,	
1. To vice bundson Kad calls	10	<u>Y</u>	PAL	
2. Parthendershys aungiletolia	5		RALU	
3. Clematis TUR, HOTA	15	<u> </u>	PACI	
4. Lonjuna ja polica	15	У	I-AGU	
5. VI + 13 Sp.	5			Hydrophytic
10		= Total Cov	71	Vegetation Present? Yes No
50% of total cover: 10		total cover	40	103RO
Remarks: (If observed, list morphological adaptations belo	ow).			

Sampling Point: MEIJ-OPL

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains Location: PL=Pore Lining, M=Matrix.	Profile Description: (Describe to the depti Depth Matrix	h needed to document the Indicator or confirm Redox Features	the absence	of indicators.)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Coamy Mucky Mineral (F1) (LRR O) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Reduced Matrix (F3) Reduced F2 Anomalous Bright Loamy Soils (F20) (MLRA 153B)			Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix. Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Reduced Matrix (F3) Reduced Sand Grains PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: Location: PL=Pore Lining Hydric Soils* Location: PL	0-5 7.5 yr 2.42 100		FSL	
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) Redox Dark Surface (F6) Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR O) 2 cm Muck (A10) (LRR S) Reduced Vertic (F18) (outside MLRA 150A, Piedmont Floodplain Soils (F19) (LRR P, S, S) Anomalous Bright Loamy Soils (F20) (MLRA 153B)	5-12+ 10R 5/6 100		0	Rejects by gas bage
Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Redox (S5) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, T) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Iron-Manganese Masses (F12) (LRR O, P, T) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Province (F12) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	ydric Soil Indicators: (Applicable to all L Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Organic Bodies (A6) (LRR P, T, U) 5 cm Mucky Mineral (A7) (LRR P, T, U) Muck Presence (A8) (LRR U) 1 cm Muck (A9) (LRR P, T) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Coast Prairie Redox (A16) (MLRA 150A) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4)	RRs, unless otherwise noted.) Polyvalue Below Surface (S8) (LRR S, T, U) Loamy Mucky Mineral (F1) (LRR O) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Marl (F10) (LRR U) Depleted Ochric (F11) (MLRA 151) Iron-Manganese Masses (F12) (LRR O, P, Umbric Surface (F13) (LRR P, T, U) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A, 150B)	Indicators Indicators Indicators Indicators Indicators Indicators Red North Indicators Indicat	PL=Pore Lining, M=Matrix. for Problematic Hydric Soils³: Muck (A9) (LRR O) Muck (A10) (LRR S) ed Vertic (F18) (outside MLRA 150A,B ont Floodplain Soils (F19) (LRR P, S, T) alous Bright Loamy Soils (F20) RA 153B) arent Material (TF2) challow Dark Surface (TF12) (Explain in Remarks) cators of hydrophytic vegetation and cland hydrology must be present,
	Type:			
	Depth (inches):		Hydric Soil	Present? Yes No
Depth (inches): Hydric Soll Present? Yes No emarks:	Considerable	Hash in boring		
Depth (inches): No No				
Depth (inches): No				

Tidal

Project/Site: ESK Rebuild	City/County: Baltimore Sampling Date: 5/7/24
Applicant/Owner: MDTA	State: MD Sampling Point: 2 VETA
Investigator(s): LAP, ET	Section, Township, Range:
Landform (hillslope, terrace, etc.): depression	Local relief (concave, convex, none)(ONCOVC Slope (%): _%
Subregion (LRR or MLRA): LRRS, MLRA 149ALat: 39.2:	26665°N Long: -76.5148400°W Datum: NAD 83
Soil Map Unit Name: Udorthents, highway, () to	65 percent Slapes (Ile Fanal close) For SS 1
Are climatic / hydrologic conditions on the site typical for this time of year	
Are Vegetation Soil or Hydrology significantly	disturbed? No (if no, explain in Remarks.)
Are Vegetation Sell and trideless significantly	disturbed? Are "Normal Circumstances" present? Yes No No
Are Vegetation, Soil, or Hydrology naturally pro SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, important features, etc.
/	p way p and the state of the st
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Wetland Hydrology Present? Yes No	within a Wetland? Yes No
Remarks: Wetland VISITED at mid-tid	المراجع المراج
boundary in lieu of tidal - indicators include: physical r	e, asta visual marcators of ridal
- indicators include: physical r	narkings. Wrack line
HYDROLOGY	
Total Control of the	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
Surface Water (A1) Aquatic Fauna (B13	
High Water Table (A2) Aquatic Fauria (B13) Mari Deposits (B15)	, , , , , , , , , , , , , , , , , , , ,
Saturation (A3) With Deposits (B19) Hydrogen Sulfide O	
	eres along Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduce	
	ion in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	——————————————————————————————————————
Iron Deposits (B5)	emarks)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
☐ Water-Stained Leaves (B9)	Sphagnum moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	Advice
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos	, previous inspections), if available:
Remarks:	
tidal scrub-shrub welland, abuthing	of emergent tidal wetland to west
917	of hourse links
Fide nearly one foot above normal eve	water on this day
The state of the s	, was a second
	·

Tree Stratum (Plot size: \(\(\)\(\)\(\)\(\)\(\)\(\)			t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: (() X / ()	% Cover	Species	? Status	Number of Dominant Species
1. N/A				That Are OBL, FACW, or FAC: (A)
2,				
				Total Number of Dominant
3				Species Across All Strata: 3 (B)
				(b)
4				Percent of Dominant Species 310
5				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6				(AID)
				Prevalence Index worksheet:
7				
8.				Total % Cover of: Multiply by:
***				OBL species x 1 =
		= Total Co	ver	· · · · · · · · · · · · · · · · · · ·
50% of total cover:	20% of	total cove	r·	FACW species x 2 =
		10101 0010	''	FAC species x 3 =
Sapling/Shrub Stratum (Plot size: 10 × 20 ')		C.		
1. Bachan's halimitalla	807	Y	FAC	FACU species x 4 =
· ·				UPL species x 5 =
2				
3				Column Totals: (A) (B)
4				Prevalence Index = B/A =
5				
6				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
			· 	
8.				3 - Prevalence Index is ≤3.01
	<u>. 807</u> :	= Total Co	ver	Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: 40	7 200/ 05	total saus	4	E Problematic Hydrophytic Vegetation (Explain)
	20% 01	total cove	(1) (a	
Herb Stratum (Plot size: 10 x 201)				¹ Indicators of hydric soil and wetland hydrology must
1. Phragmites austrais	4M &	V	FACW	be present, unless disturbed or problematic.
Donat of the bigging				
2. Baccharis halimifolia	501	- N	EAC	Definitions of Four Vegetation Strata:
3 1				
3.				
				Tree – Woody plants, excluding vines, 3 in. (7,6 cm) or
4.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
4.				Tree – Woody plants, excluding vines, 3 in. (7,6 cm) or
4.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless
4.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
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4.	50%	- Total Co	ver	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
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4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum (Plot size: 1() × 2.0')	50%	- Total Co	ver	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
4.	50% of	- Total Co	ver	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
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4	50% = 20% of	- Total Co	ver	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
4.	50% = 20% of	- Total Co	ver	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
4	50% of	= Total Co	ver 10°C	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
4.	50% of	Total Co	ver 10°C	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
4	50% of	Total Co	ver 10°C	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
4.	50% of 20% of 20% of	Total Co	ver 10°C	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
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4.	50% of 20% of 20% of	= Total Co total cover	ver 10°C	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
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Sampling Point: 2WETA

Profile Desc	ription: (Describe	to the depth	needed to docum	ent the i	ndicator	or confirn	n the absence	of indicat	ors.)	
Depth	Matrix	 -	Redox Color (moist)	Features		12				
(inches) 0-3"	Color (moist)	302	Color (moist)		Type ¹	Loc2	<u>Texture</u>		Remarks	
	104R413	<u> </u>					sandylo	<u>arrj</u>		
2 14 8	_	20%	7 = 4041.	 9						
3-16"	2.546/2	437	7.54846	<u> </u>	$\overline{}$	<u>M</u>	LOOMY	Sand	·	
	2									
<u> </u>									·····	

¹ Type: C=Ce	oncentration, D=Depl	etion, RM=F	teduced Matrix, MS	=Masked	Sand Gra	ains.	² Location:	PL=Pore I	Lining, M=Matri	х,
l	ndicators: (Applica	able to all Li			-		Indicators	for Proble	matic Hydric	Soils³:
Histosol			Polyvalue Belo					luck (A9) (
Black Hi	oipedon (A2) stic (A3)		☐ Thin Dark Suri ☐ Loamy Mucky					luck (A10) ed Vertic (I	(LRR S) F18) (outside N	ALDA 150A DI
	n Sulfide (A4)		Loamy Gleyed			Ο,			lain Soils (F19)	
	l Layers (A5)		Depleted Matr	ix (F3)	•				t Loamy Soils (
	Bodies (A6) (LRR P,		Redox Dark S	•	•			RA 153B)		
	cky Mineral (A7) (LR esence (A8) (LRR U)		Depleted Dark Redox Depres		. ,			arent Mate	rial (TF2) 'k Surface (TF1	0)
	ck (A9) (LRR P, T)	,	Marl (F10) (LF	•	"			Explain in		2)
☐ Depleted	l Below Dark Surface	(A11)	Depleted Ochr	ic (F11) (,	
· =	rk Surface (A12)		Iron-Mangane						drophytic veget	
	airie Redox (A16) (M lucky Mineral (S1) (L		Umbric Surfac Delta Ochric (I			U)			logy must be pr ed or problemat	
_	leyed Matrix (S4)	ran 0, 0,	Reduced Verti			0A, 150B)		saa ulatutbi	eu or problema	uG.
	edox (S5)		Piedmont Floo	dplain Sc	ils (F19)	(MLRA 14	9A)			
	Matrix (S6) face (S7) (LRR P, S,	77 113	☐ Anomalous Bri	ight Loan	ny Soils (F	(MLR.	A 149A, 153C,	, 153D)		
	ayer (if observed):	, 1, 0)	· · · · · · · · · · · · · · · · · · ·				1		<u></u>	
Type:			_						/	
Depth (inc	hes):		<u> </u>				Hydrlc Soil	Present?	Yes	No
Remarks:							-I			

Project/Site: FSK Rcbuild	Clty/County:	Banimore	Sampling Date: 5/1/24
Applicant/Owner: MDTA		State: <u>M</u> 0	Sampling Point: 2WETB
Investigator(s): LP, ET	Section, Tow	nship, Range:	
Landform (hillslope, terrace, etc.): dcorcssion	Local relief (oncave, convex, none); (01	nave Slope (%): 17
Subregion (LRR or MLRA): LRRS, MLRA 149A			
Soil Map Unit Name: 11darrhents, highway, ot			
Are climatic / hydrologic conditions on the site typical for th			
Are Vegetation, Soil, or Hydrology			
Are Vegetation, Soil, or Hydrology			
SUMMARY OF FINDINGS – Attach site map			·
Hydric Soll Present? Wetland Hydrology Present? Remarks: photos 9346-47 Comergent tidal wetland at mid-tide of fidal elevation data; indicators are tide difficult to determine determi	e; use visual is include physice to heavy li		Il boundary in lieu ack line precise limit deposition
HYDROLOGY	hizomes	*	
Wetland Hydrology Indicators:	, , , , , , , , , , , , , , , , , , , 	Secondan	/ Indicators (minimum of two required)
High Water Table (A2)	that apply) Fauna (B13) Pposits (B15) (LRR U) Pen Sulfide Odor (C1) Public Reduced Iron (C4) Pron Reduced Iron (C4)	Spars	ce Soil Cracks (B6) ely Vegetated Concave Surface (B8) age Patterns (B10) Trim Lines (B16) eason Water Table (C2) sh Burrows (C8) atton Visible on Aerial Imagery (C9) forphic Position (D2) ow Aquitard (D3) Neutral Test (D5) gnum moss (D8) (LRR T, U)
	pth (inches): <u>VOYTES (</u>	tidal)	
	pth (inches):		/
	pth (inches):O"	Wetland Hydrology I	Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous in	spections), if available:	
Remarks: * tide hearly one foot above n	ormal elevatio	n on this day	

Sampling	Point	21	NETR
Sampinio	POINT:	/ 1	ALI EDY

- a	Absolute Dominant Indicato	
Tree Stratum (Plot size: 20' radiu)	% Cover Species? Status	Number of Dominant Species
1,		_ That Are OBL, FACW, or FAC: (A)
2		Total Number of Deminant
3		
4		
		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
5		That Are OBL, FACW, or FAC: // (A/B)
6		Prevalence Index worksheet:
7		_
8		
	= Total Cover	OBL species x 1 =
50% of total cover:	20% of total cover:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 20' Yadius)		FAC species x 3 =
1		FACU species x 4 =
		UPL species x 5 =
2		Column Totals: (A) (B)
3		(A)(B)
4		Prevalence Index = B/A =
5		Hydrophytic Vegetation Indicators:
6		
7.		_ , , , , , , , , , , , , , , , , , , ,
8.		
		-
5004 - 54 - 4	= Total Cover	Problematic Hydrophytic Vegetation ¹ (Explain)
	20% of total cover:	- '
Herb Stratum (Plot size: 20' (adius)		¹ Indicators of hydric soil and wetland hydrology must
1. Phragmites australis	100% Y FACH	be present, unless disturbed or problematic.
2		Definitions of Four Vegetation Strata:
3		. 7
4.		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
		more in diameter at breast height (DBH), regardless of height.
5		- -
6		Sapling/Shrub - Woody plants, excluding vines, less
7		than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8		Herb – All herbaceous (non-woody) plants, regardless
9		
10		
11.		Woody vine – All woody vines greater than 3.28 ft in height.
12.		_ i noight.
14.	(())% = Total Cover	-
50°	= Total Cover	
	う	2
Woody Vine Stratum (Plot size: 20' radius)		
1		.
2		
3.		
4.		-
		,
5		Hydrophytic
	= Total Cover	Vegetation Present? Yes No
50% of total cover:	20% of total cover:	Present TesNO
Remarks: (If observed, list morphological adaptations belo	ow).	
		·

Profile Des	cription: (Describe	to the dept	h needed to docu	ment the i	ndicator	or confirm	n the absence	of indicate	ors.)	
Depth (inches)	Matrix Color (moist)	- %	Color (moist)	ox Feature %		Loc²	Texture		Remarks	
0-3"	7.54R3/2	3001	Color (moist)		_ Type		muck		Nemants	
3-12"	10YR 5/2		54R416	- 	\overline{C}	M	Man	cand		
<u> </u>	10011	. <u> </u>		<u> </u>	—	'''	loarny	200114	 -	
	<u> </u>	· — –								
		·							_	
#L#L				-						
¹ Type: C=C	oncentration, D=Dep	lotion DM-I	Podugod Matrix Mi	C=Maakad	Cand Ca		21	DI Dava I	ining, M=Matri	
	Indicators: (Applic			rwise not	∍d.)		Indicators		matic Hydric	
_	oipedon (A2)		Thin Dark S					Muck (A9) (i Muck (A10)	•	
☐ Black H	stic (A3)		Loamy Muck	ky Mineral ((F1) (LRR		Reduc	ed Vertic (F	18) (outside l	/ILRA 150A,B)
	on Sulfide (A4)		Loamy Gley		F2)				ain Solls (F19)	
	i Layers (A5) Bodies (A6) (LRR P ,	T (4)	Depleted Ma		(e)				Loamy Soils (F20)
	icky Mineral (A7) (LF		Depleted Da	-	-		1 1 -	RA 153B) arent Mater	ial (TF2)	
_	esence (A8) (LRR U		Redox Depre						k Surface (TF1	2)
	ick (A9) (LRR P, T)		Marl (F10) (I				Other	(Explain in	Remarks)	<i>'</i>
	d Below Dark Surface ark Surface (A12)	∍ (A11)	Depleted Oc	, ,	•	•	- > 3 ₁₋₁₉			
	rairie Redox (A16) (N	ILRA 150A)	Iron-Mangan Umbric Surfa						drophytic veget ogy must be pr	
	lucky Mineral (S1) (L	-	Delta Ochric			-,			ed or problema	
	Bleyed Matrix (S4)		Reduced Ve						·	
_	Redox (S5)		Piedmont Flo					4555		
	Matrix (S6) rface (S7) (LRR P, S	. T IN	Anomalous i	Bright Loan	ny Solis (F	·20) (MLR	A 149A, 1530	i, 153D)		
	ayer (if observed):						1		·	
Type:										.
Depth (inc	ches):						Hydric Soil	Present?	Yes	No
Remarks:	,,,									
rout n	nasses									
		-								
						•				

Project/Site: FSK Pscbuild City/C	County: Baltimore. Sampling Date: 5/3/24
Applicant/Owner: MDTA	State: MD Sampling Point: 2-UPLA
Investigator(s): FT, LP Section	
	I relief (concave, convex, none): CONCOVE. Slope (%): 17
Subregion (LRR or MLRA): LRRS, MLRA 1494 Lat: 39. 2325	1554° N Long: -76, 5065 712 Detum 114082
Soil Map Unit Name: Udortnents, highway, O told percent	
•	
Are climatic / hydrologic conditions on the site typical for this time of year? Y	
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problems	atic? No (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	In the Country of Augustin
Hydric Soil Present?	Is the Sampled Area within a Wetland? Yes No X
Wetland Hydrology Present? Yes X No	within a wetland? Yes No _/\
Remarks: photos - 9329, 9330	
1	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of the required)
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15) (LRi	
Saturation (A3) Hydrogen Sulfide Odor (C	
Water Marks (B1)	along Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduced Iro	
☐ Drift Deposits (B3) ☐ Recent Iron Reduction in	
Algal Mat or Crust (B4) Thin Muck Surface (C7) Cotton (Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Under (Explain in Remark	
Water-Stained Leaves (B9)	☐ FAC-Neutral Test (D5)☐ Sphagnum moss (D8) (LRR T, U)
Field Observations:	opragrammess (bs) (true (, b)
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No X Depth (inches):	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	
Describe Necorded Data (stream gauge, monitoring well, aeriai priotos, pre	vious inspections), ii available:
Remarks:	
Remarks: Roadside ditch constituted in dense fill mater No hydric soils observed.	1191 allowing water to pond.
No hydric soils observed.	,
	· ·

	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover Species? Status	Number of Dominant Species
1		That Are OBL, FACW, or FAC: (A)
2	- <u>- </u>	Total Number of Dominant
3		Species Across All Strata: (B)
4		
5		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6		That Are OBL, FACW, or FAC: // (A/B)
7		Prevalence Index worksheet:
8		Total % Cover of: Multiply by:
	= Total Cover	OBL species x 1 =
50% of total cover:	20% of total cover:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size:)	20 % Of total cover:	FAC species x 3 =
		FACU species x 4 =
1		UPL species x 5 =
2	·	Column Totals: (A) (B)
3	· — — — — —	(A)(B)
4		Prevalence Index = B/A =
5		Hydrophytic Vegetation Indicators:
0		1 - Rapid Test for Hydrophytic Vegetation
7		2 - Dominance Test is >50%
8		3 - Prevalence Index is ≤3.0¹
	= Total Cover	Problematic Hydrophytic Vegetation¹ (Explain)
50% of total cover:	20% of total cover:	(Explain)
<u>Herb Stratum</u> (Plot size: 5×5)		1 Indicators of hydric call and wallend hydrol
1. Ranunculus sceleratus	-80% Y OBL	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2		Definitions of Four Vegetation Strata:
3		
4.		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5		more in diameter at breast height (DBH), regardless of height.
6		Sapling/Shrub – Woody plants, excluding vines, less
7		than 3 in. DBH and greater than 3.28 ft (1 m) tall.
8		Herb – All herbaceous (non-woody) plants, regardless
9		of size, and woody plants less than 3.28 ft tall.
10		Woody vine - All woody vines greater than 3.28 ft in
11.		height.
12.		
110	80%= Total Cover	
50% of total cover: <u>90</u>	620% of total cover: 166	
Woody Vine Stratum (Plot size:)		į
1		
2		
3		
4		
5		
	= Total Cover	Hydrophytic Vegetation
50% of total cover:		Present? Yes No
Remarks: (If observed, list morphological adaptations below		
remarks. (ii observed, list morphological adaptations belove	v).	

		to the depth				or confirm	the absence of indica	tors.)	
Depth (inches)	<u>Matrix</u> Color (molst)	 _	Redo Color (moist)	ox Features%		_Loc ²	Texture	Remarks	
0-10"	10 YR 6/3	75%			Type		الإنكامة بيصلح المنا		
<u> </u>	7.54B416	25%						refusal natorial	Q+ 10
	1.016 10	_ <i></i>							·
		· —— -							
								,	
				<u> </u>					
	oncentration, D=Dep					ains.	² Location: PL=Pore	Lining, M=Ma	trix.
_	Indicators: (Applic	able to all Li			•		Indicators for Proble	=	c Solls³:
Histosol			Polyvalue Be					•	
	oipedon (A2) stic (A3)		Thin Dark St				2 cm Muck (A10)		MLRA 150A,B)
The same of	en Sulfide (A4)		Loamy Gleye			. 0,	Piedmont Floodp		
	l Layers (A5)		Depleted Ma	•	_,		Anomalous Brigh		
	Bodies (A6) (LRR P		Redox Dark				(MLRA 153B)		
	icky Mineral (A7) (LF esence (A8) (LRR U		Depleted Da				Red Parent Mate		-40)
==	ick (A9) (LRR D ick (A9) (LRR P, T)	,	Redox Depre	•	5)		☐ Very Shallow Da☐ Other (Explain in	•	-12)
	Below Dark Surfac	e (A11)	Depleted Oc		MLRA 1	51)	outor (Explain in	rtomantoj	
_	ark Surface (A12)		Iron-Mangan						
_	rairie Redox (A16) (M					, U)	wetland hydro		•
_	lucky Mineral (S1) (L Beyed Matrix (S4)	.KK U, S)	Delta Ochric Reduced Ve			BA 150R)	unless disturb	ed or problem	natic.
_	ledox (S5)		Piedmont Fk				9A)		
	Matrix (S6)						A 149A, 153C, 153D)		
_	rface (S7) (LRR P, S .ayer (if observed):	-					1		
Type: 🖺	CXVCI CXVCI				*				
Depth (inc	16.1		_ _				Hydric Soil Present?	Yes	_ No <u>X</u>
Remarks:									
								-	

Project/Site: FSK Rebuild	City/County: Baltima	re	Sampling Date: 5/7/24 Sampling Point: 2WETA/B-UPL
Applicant/Owner: HOTA	- •	State: MD	Sampling Point 2WETA/B-UPL
	Section, Township, Range		
Landform (hillslope, terrace, etc.): berm	,		8X Sinn (9/), \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\
Subregion (LRR or MLRA): LRR9, MLR1149A Lat: 39.2	21.2 2 1 9 °N/	76 51515	IA = 1 100 82
Soll Map Unit Name Udorthents, highway, 0 to 65 perc	• . •		·
Are climatic / hydrologic conditions on the site typical for this time of ye			· /
Are Vegetation, Soil, or Hydrology significantly			· ————————————————————————————————————
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? NO (If need	ed, explain any ansv	vers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	sampling point loc	ations, transec	ts, important features, etc.
Hydrophytic Vegetation Present? Yes No		***	
Hydric Soil Present? Yes No. V	Is the Sampled A		
Wetland Hydrology Present? Yes No	within a Wetland?	Yes	No
Remarks: pylotos: 9348-50		7. <u></u>	
berm between 2 WETA + 2 WETB + Pataps a kner	•	4	
Detting the state of the state			
		7.70	
HYDROLOGY			- 19-
Wetland Hydrology Indicators:	una	Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		_ 🔲 Surface So	oil Cracks (B6)
Surface Water (A1)	3)	☐ Sparsely V	egetated Concave Surface (B8)
High Water Table (A2)) (LRR U)	Drainage F	Patterns (B10)
Saturation (A3) Hydrogen Sulfide C	Odor (C1)	Moss Trim	Lines (B16)
Water Marks (B1) — Oxidized Rhizospho	eres along Living Roots (C	3) 🔲 Dry-Seaso	n Water Table (C2)
Sediment Deposits (B2) Presence of Reduc	ed Iron (C4)	Crayfish B	urrows (C8)
☐ Drift Deposits (B3) ☐ Recent Iron Reduct	tion in Tilled Soils (C6)	☐ Saturation	Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	(C7)	 1	ic Position (D2)
☐ Iron Deposits (B5) ☐ Other (Explain in R	emarks)	☐ Shallow Ad	juitard (D3)
Inundation Visible on Aerial Imagery (B7)		_	al Test (D5)
☐ Water-Stained Leaves (B9)		_	moss (D8) (LRR T, U)
Field Observations:			
Surface Water Present? Yes No Depth (inches)			
l	:		
Saturation Present? Yes No Depth (inches)	: Wetla	nd Hydrology Pres	ent? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), it	avallable:	
Remarks:			
·			

Sampling	Point: 2WE	ABTUR.
oai ii biii iu	CUBIL.	1771

Tree Stratum (Plot size: 10 × 201	Absolute		nt Indicator <u>? Status</u>	Dominance Test worksheet:
1. Horus giba	20%	y Y	FACU	Number of Dominant Species That Are ORL FACW or FAC:
		' V	FACU	That Are OBL, FACW, or FAC: (A)
	30%			Total Number of Dominant
3. <u>Robinia pseudoacacia</u>			UPL	Species Across All Strata: (B)
4			-	Percent of Dominant Species 2/
5				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6				, ,
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
•	308	= Total Co	over	OBL species x 1 =
50% of total cover: <u>५</u> (FACW species x 2 =
Sapling/Shrub Stratum (Plot size: (() x 201)	<u>/ W</u> 20/001	total cove	//· <u> 14/ 14</u>	FAC species x 3 =
1. Amorpha fruticosa	E 0).	N	FACU	FACU species x 4 =
2. Rosa multiflora) /0			UPL species x 5 =
			FRCU	Column Totals: (A) (B)
3. Ligustrum sinense			FAC	(1)
4.				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				3 - Prevalence Index is ≤3.0¹
	35%	= Total Co	ver	l = -
50% of total cover: 17.5	7 20% of	total cove	7%	Problematic Hydrophytic Vegetation¹ (Explain)
Herb Stratum (Plot size: 10 x 2.01			<u></u>	4
1. Toxicoden dron radicans	10%	N	FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. Prumex crispus	10 %	- N		· ·
2. Rumex crispus	(C) '6		FAC ,	Definitions of Four Vegetation Strata:
3. Cinna grundinacca			FACW	Tree – Woody plants, excluding vines, 3 ln. (7.6 cm) or
4				more in diameter at breast height (DBH), regardless of
5				height.
6				Sapling/Shrub - Woody plants, excluding vines, less
7				than 3 in. DBH and greater than 3,28 ft (1 m) tall.
8				Herb – All herbaceous (non-woody) plants, regardless
9			,	of size, and woody plants less than 3.28 ft tall.
10				
11.				Woody vine – All woody vines greater than 3.28 ft in
12.				height.
14.	1006	T-4-1 O-		
50% of total cover: 150	9 000 P	= Total Co	ver	
	<u>‱</u> 20% of	total cove	r: <u>20 6</u>	
Woody Vine Stratum (Plot size: 1() x 2() (
1.				
2			·	
3.				
4				
5				Hydrophytic
		Total Co	ver	Vegetation
50% of total cover:			I	Present? Yes No X
Remarks: (If observed, list morphological adaptations below		LOCAL GOVE	<u>'`</u>	
Tremains. (ii observed, list morphological adaptations beto	w).			

Profile Desc	ription: (Describe	to the depth	needed to docur	nent the indicato	r or confirm	the absence of indicato	ors.)	
Depth	Matrix			x Features				
(inches)	Color (moist)	_ <u>%</u> _	Color (moist)		Loc ²	Texture	Remarks	
0-12"	10 YR 3/3	<u> 100%</u> _		·		sandy loom		
						·		
					- '			
								
								
				·				
	ncentration, D=De				rains.	² Location: PL=Pore L	ining, M=Ma	trix.
Hydric Soll I	ndicators: (Applic	cable to all Li	RRs, unless other	wise noted.)		Indicators for Proble		
Histosol			Polyvalue Be	low Surface (S8)	LRR S, T, U			
	ipedon (A2)			rface (S9) (LRR S		2 cm Muck (A10)	(LRR S)	
Black His	• •			y Mineral (F1) (LR	R O)	Reduced Vertic (F		
-	n Sulfide (A4)		Loamy Gleye	• •		Piedmont Floodpl	•	
	Layers (A5) Bodies (A6) (LRR F	. T (1)	Depleted Mat			Anomalous Bright	Loamy Solls	(F20)
= -	cky Mineral (A7) (L		Redox Dark S	k Surface (F7)		(MLRA 153B) Red Parent Mater	ial /TEO)	
	esence (A8) (LRR U		Redox Depre			Very Shallow Dark		:12)
==	ck (A9) (LRR P, T)	-,	Mari (F10) (L			Other (Explain in I		12)
	Below Dark Surface	e (A11)	_	nric (F11) (MLRA	151)	out /	tomanto	
Thick Da	rk Surface (A12)	• •	Iron-Mangane	ese Masses (F12)	(LRR O, P,	T) ³ Indicators of hyd	drophytic veg	etation and
	airie Redox (A16) (l			ce (F13) (LRR P,		wetland hydrol	ogy must be	present,
_	ucky Mineral (S1) (LRR O, S)		(F17) (MLRA 15 1)		unless disturbe	ed or problem	natic.
	leyed Matrix (S4)			tic (F18) (MLRA 1				
	edox (S5)			odplain Soils (F19		•		
	Matrix (S6) face (S7) (LRR P, \$	2 T II\	Anomalous B	right Loamy Soils	(F20) (MLR	A 149A, 153C, 153D)		
	ayer (if observed)							
Type:	ayo: (ii oxoo: 10a)	•						
	hes);					Hydric Soil Present?	Yes	_ No_ <u>×</u>
Remarks:						Tryano con i resents	163	
romano.								
			·					
							- 5	

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

	•
Project/Site: FSK Rebuild City/C	County: Baltimore Sampling Date: 5/7/24
Applicant/Owner: MDTA	State: MD Sampling Point: 2WETC
Investigator(s): LP, ET Section	on, Township, Range:
Landform (hillslope, terrace, etc.): Shoreline Local	
Subregion (LDB or MLDA) L RRS MLRA 1994 Lat. 39, 22781	169 ° N Long: -76.5139756° W Datum: NAD 83
Call Man Unit Name A MART + Merch A lair house A to 1.5 agreement	character (14 F) Long: 10 10 10 10 10 10 10 10 10 10 10 10 10
Soil Map Unit Name: Warth cress, highway, 10 65 percent	The state of the s
Are climatic / hydrologic conditions on the site typical for this time of year? Y	
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problems	atic? N() (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing san	apling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	Is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes No
Remarks: photos = 9353 - 56	
ewettand visited at low tide	
-arras surrounding wetlands include more	shoveline with no veaetation or soils:
no upland point was	contected
HYDROLOGY Method Underland address	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
	Surface Soil Cracks (B6)
Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Mari Deposits (B15) (LRF	Sparsely Vegetated Concave Surface (B8)
Saturation (A3) Hydrogen Sulfide Odor (C	
Water Marks (B1) Oxidized Rhizospheres a	· · · · · · · · · · · · · · · · · · ·
Sediment Deposits (B2) Presence of Reduced Iron	
Drift Deposits (B3) Recent Iron Reduction in	· · · · · · · · · · · · · · · · · · ·
Algal Mat or Crust (B4)	Geomorphic Position (D2)
Iron Deposits (B5)	ss)/Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	☐ Sphagnum moss (D8) (LRR T, U)
Field Observations:	vies (cides)
Surface Water Present? Yes No Depth (inches): VQ	itts (naar)
Water Table Present? Yes No Depth (inches): (Saturation Present? Yes No Depth (inches): (Wetland Hydrology Present? Yes No
(Includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre-	vious inspections), if available:
Remarks:	
* Tide nearly one foot above normal ele	union on this day
A source inditions out	woner, at the work
	·

10 10 0	Absolute	Domina	nt Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: I() X2() 1)	% Cover	_Species	? Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3			<u> </u>	Total Number of Dominant Species Across Ali Strata: (B)
4				\ /
5				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6				(A/B)
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
				OBL species x 1 =
50% of total cover:				FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 10 × 20 1	20/8 01	total cove	۶۱، <u> </u>	FAC species x 3 =
1. Baccharis hamlimitolia	FAY	٧	EAC	FACU species x 4 =
				UPL species x 5 =
2				
3				Column Totals: (A) (B)
4				Prevalence Index = B/A =
5				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8				
	507	Total Ca	Wor	☐ 3 - Prevalence Index is ≤3.0¹
50% of total cover: <u>25</u>	7 2006 at	- 10tal 00	i 🛆 🦻	Problematic Hydrophytic Vegetation¹ (Explain)
Herb Stratum (Plot size: 1() × 2())	<u>w</u> 20% 01	total cove	r: TO F	
4 Sparting Oldarni Clara	100	N	GD I	¹ Indicators of hydric soil and wetland hydrology must
1. Sparting alterniflord	<u> 106</u> .		OBL	be present, unless disturbed or problematic.
2. Bachans hamifolia			FAC_	Definitions of Four Vegetation Strata:
3. Phragmites austrais			FACW	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
4				more in diameter at breast height (DBH), regardless of
5				height.
6				Senting/Sharp Mandaget 1
				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7				
Q				Herb - All herbaceous (non-woody) plants, regardless
9				of size, and woody plants less than 3.28 ft tall.
10.				Woody vine - All woody vines greater than 3.28 ft in
11.				height.
12.				
44-	<u> </u>	Total Co	ver	
50% of total cover: <u>എ გ</u>	_ 20% of t	otal cover	16%	
Woody Vine Stratum (Plot size: 10 X20)				
1				
2				
3.				
4				
5.				
9				Hydrophytic
		Total Cov		Vegetation Present? Yes No
50% of total cover:		otal cover	:	riesentr res No No
Remarks: (If observed, list morphological adaptations below	/).			
				ì
				İ

		to the dept				or confir	m the absence of ind	licators.)	
Depth (inches)	Matrix Color (moist)	%	Red Color (moist)	ox Features %	Type ¹	_Loc ²	Texture	Remarks	
0-411	2.547/2		7.5YR46	20%	C	M	loamy sand	Stone ref	ua l
			, , , , , , , , , , , , , , , , , , , ,	_ 			1001001 13001	<u> </u>	<u> </u>
								 <u>-</u>	
						-			
									
				-					
1Type: C=C	oncentration, D=Depl	otion DM=	Podupod Matrix M		Pand Ca		21		
Hydric Soil	Indicators: (Applica	ble to all L	RRs, unless othe	erwise note	d.)	1118.		ore Lining, M=Mat	
Histoso	(A1)		. Polyvalue B	elow Surface	∋ (S8) (L		اسما	-	
=	pipedon (A2)		Thin Dark S				2 cm Muck (A		
=	istic (A3) en Sulfide (A4)		Loamy Mucl			0)		tic (F18) (outside odplain Soils (F19	
	d Layers (A5)		Depleted Ma	•	~ ;			iright Loamy Soils	
	Bodies (A6) (LRR P,		Redox Dark				(MLRA 153	B)	V/
	ıcky Mineral (A7) (LR esence (A8) (LRR U)		Depleted Da				Red Parent N		
	ick (A9) (LRR P, T)		Redox Depr					Dark Surface (TF n in Remarks)	12)
Deplete	d Below Dark Surface	(A11)	Depleted Oc		ILRA 15	i1)			
=	ark Surface (A12)	I D 4 4504)	Iron-Mangar					of hydrophytic vege	
	rairie Redox (A16) (M ľucky Mineral (S1) (Ll		Umbric Surfa Delta Ochric			U)		ydrology must be p turbed or problema	
_	Bleyed Matrix (S4)	, 0,	Reduced Ve			DA, 150B)		turbed of problems	auc.
	Redox (S5)		Piedmont Flo	oodplain Soi	ls (F19)	MLRA 1	49A)		
	Matrix (S6) rface (S7) (L RR P, S,	TIN	Anomalous I	Bright Loamy	/ Soils (F	20) (MLF	RA 149A, 153C, 153D)	
	_ayer (if observed):	1, 0,					<u> </u>		
Туре: <u>\$</u>	tone								
Depth (in	ches): 41						Hydric Soll Prese	nt? Yes	. No
Remarks:		7						·	<u>. </u>
deposite	d sediment o	atop of	rocky sho	oreline					
•									
	•								

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Applicant/Owner:	6799°N Long:76.5117316°W Datum:NAD_83 # Stopes (UCF) NWI classification:FEM5 YesX No (If no, explain in Remarks.) rbed? NO Are "Normal Circumstances" present? YesX No
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: PNOTOS: 9358-59 TOC of Slope Wetland at Storm drain out Perched above clay fill	Is the Sampled Area within a Wetland? Yes No Tall - likely provides primary hydrology;
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations:	C1)
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, present)	Wetland Hydrology Present? Yes No vious inspections), if available:
Remarks:	

VEGETATION (Four Strata) – Use scientific	Absolute	Dominant Indicator	Sampling Point: ANET Dominance Test worksheet:
Tree Stratum (Plot size: 5' radius)	<u>% Cover</u>	Species? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2.	 .		Total Number of Dominant
			Species Across All Strata: (B)
4			Percent of Dominant Species
5 6			Percent of Dominant Species That Are OBL, FACW, or FAC: (A
7			Prevalence Index worksheet:
8			Total % Cover of: Multiply by:
		Total Cover	OBL species x 1 =
50% of total cover:			FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 5 (1dius)			FAC species x 3 =
1			FACU species x 4 =
2.			UPL species x 5 =
3			Column Totals: (A) (B
1			
5			Prevalence Index = B/A =
3.			1 - y major and a superior
			1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
3.			☐ 3 - Prevalence Index is ≤3.0 ¹
		Total Cover	J
50% of total cover:			Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum (Plot size: 5 Y d dlu5)			¹ Indicators of hydric soil and wetland hydrology must
Phragmiles australis	<u>857</u>	Y FACH	be present, unless disturbed or problematic.
Toxicogendion radicons	<i>2</i> () v	N FAC	Definitions of Four Vegetation Strata:
Lecersia oryzoides	20%	NARI	_
Lonicera japonica		N FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of height.
			
•			Sapling/Shrub - Woody plants, excluding vines, less
			than 3 in. DBH and greater than 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
0			Woody vine – All woody vines greater than 3.28 ft in
1			height.
2	70 == -		
		otal Cover	
50% of total cover:(22) <u>oody Vine Stratum</u> (Plot size: 5 ' <u>(adiU 1</u>)	20% of tot	al cover: <u>206</u>	
			
			Hydrophytic
	-	otal Cover	Vegetation Present? Yes No
50% of total cover:		al cover:	Present? Yes X No No
emarks: (If observed, list morphological adaptations belo	w).		

COIL				
	_	$\overline{}$		
	•	rı	11	

Sampling Point: 2WETD

Profile Desc	cription: (Describe	to the depti	h needed to docum	ent the i	ndlcator	or confirm	the absence	of indicator	s.)	<u>`</u>
Depth	Matrix			Features					•	
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>		Remarks	
0-6"	107841	_ 95%	2.548 3/4	5%	\mathcal{D}	PLIM	sandy c	ldv laar	1	
6-12"	2.546/4	90%	104R 5/8	0%		M	lamy	sand	·	
1 7 11			10 11				TOWNY	JOHNA		
\										·
									'	
					_					
	•		1905							
	oncentration, D=Dep					ains.		PL=Pore Lin		
	Indicators: (Applic	able to all L			•			for Problem	atic Hydric S	Soils³:
Histosol			. Polyvalue Bel) ∐ 1 cm N	luck (A9) (LF	RR 0)	
The same of the sa	oipedon (A2)		Thin Dark Sur					/luck (A10) (L		
Black Hi			Loamy Mucky			(O)				/ILRA 150A,B)
	n Sulfide (A4)		Loamy Gleyed		F2)					(LRR P, S, T)
	Layers (A5)		Depleted Matr					lous Bright L	oamy Soils (I	F20)
	Bodies (A6) (LRR P cky Mineral (A7) (LF		Redox Dark S	•	•			RA 153B)		
	esence (A8) (LRR U		Depleted Dark Redox Depres					arent Material		0)
	ck (A9) (LRR P, T)	')	Marl (F10) (LF		"			hallow Dark 9 Explain in Re		2)
	Below Dark Surfac	e (A11)	Depleted Ochi		MIRA 15	51)	Onler (Explain in Re	emarks)	
-	rk Surface (A12)	• (,	Iron-Mangane				T) ³ indic	ators of hydro	onhytic veget	ation and
	airie Redox (A16) (N	ILRA 150A)	Umbric Surfac	e (F13) (L	_RR P. T.	. U)		and hydrolog		
	ucky Mineral (S1) (L		Delta Ochric (I			,		ess disturbed		
	leyed Matrix (S4)		Reduced Verti	c (F18) (N	/ILRA 150	0A, 150B)			•	
	edox (S5)		Piedmont Floo							
· — · · ·	Matrix (S6)		Anomalous Bri	ight Loam	ny Soils (F	720) (MLRA	A 149A, 153C,	153D)		
	face (S7) (LRR P, S									
Restrictive L	ayer (if observed):									
Туре:										
Depth (inc	:hes):						Hydric Soil	Present?	Yes <u>X</u>	No
Remarks:	•		*-				L—	**-		٠.
										1
										ĺ

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: FSK Rehuild	_ City/County: <u>Baltimore</u> Sampling Date: <u>517124</u>
Applicant/Owner: MDTA	State: MD Sampling Point: 2UETD-UPL
Investigator(s): LP, ET	Section, Township, Range:
Landform (hillslope, terrace, etc.): †OC OF SIOPC	Local relief (concave, convex, none): Concave Slope (%): 17.
Subregion (LRR or MLRA): LARS, MURA 149 A Lat: 37.	2286829 Long: -76.5117875°W Datum: NAD 83
Soil Map Unit Name: Udorthents, highway, a to	65 percent Slopes (UCF) NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of	
	tly disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally i	problematic? 10 (If needed, explain any answers in Remarks.)
	ng sampling point locations, transects, important features, etc.
Hydric Soil Present? Yes No	- Is the Sampled Area
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No X No X No X	within a Wetland? Yes No
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply	
Surface Water (A1)	
High Water Table (A2) Saturation (A3) Marl Deposits (B: Hydrogen Sulfide	— • • • • • • • • • • • • • • • • • • •
	Odor (C1)
Sediment Deposits (B2)	
1 m	uction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	
☐ Iron Deposits (B5) ☐ Other (Explain in	= ' '''\'''
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9) Field Observations:	Sphagnum moss (D8) (LRR T, U)
	g)·
Surface Water Present? Yes No Depth (inche Water Table Present? Yes No Depth (inche	s):
Saturation Present? Yes No X Depth (inche	s): Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial pho	
besome Necorded Data (stream gauge, monitoring well, aeriai pho	tos, previous inspections), if available:
Remarks:	
	·

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: <u>ZWETD</u>-UPL

Tree Stratum (Plot size: 5'rad(us)	Absolute Dominant Indicator	Dominance Test worksheet:
1	% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2		
3		Total Number of Dominant Species Across All Strata: (B)
5		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6		Prevalence Index worksheet:
7		
8		OBL species x 1 =
500/ -41/ 1	= Total Cover	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 51 rodius)	20% of total cover:	
,		FACUl procion
1		FACU species x 4 =
2	· —— —— ——	UPL species x 5 =
3		Column Totals: (A) (B)
4		Prevalence Index = B/A.=
5	· —— —— ——	Hydrophytic Vegetation Indicators:
6		1 - Rapid Test for Hydrophytic Vegetation
7	·	2 - Dominance Test is >50%
8		3 - Prevalence Index is ≤3.0¹
	= Total Cover	Problematic Hydrophytic Vegetation¹ (Explain)
Γ _ι 50% of total cover:	20% of total cover:	En Prosidination (explain)
Herb Stratum (Plot size: <u>3 YadiUI)</u>		Indicators of hydric poil and watered bushes a
1. phragmites australis	752 Y FACW	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. Toxico dendron radicans	5% N FAC	Definitions of Four Vegetation Strata:
3. Parthenocissus quinquelotia	2°C N FACI)	
4		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5		more in diameter at breast height (DBH), regardless of height.
6.		
7.		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
7		_ ,
8		Herb – All herbaceous (non-woody) plants, regardless
9		of size, and woody plants less than 3.28 ft tall.
10		Woody vine - All woody vines greater than 3.28 ft in
11 12.		height.
12.	909	
man av v	82% = Total Cover	
Woody Vine Stratum (Plot size: 5' (QQ) (VS)	20% of total cover: 16.46	
1		
2		
3		
4		
5		Hydrophytic
	= Total Cover	Vegetation
50% of total cover:		Present? Yes No No
Remarks: (If observed, list morphological adaptations below	v).	
		J

_	2 LUETES	
Sampling Point:	-AWE III	-VIC

Profile Des	cription: (Describe	to the depti	needed to docu	ment the ir	ndicator	or confirm	the absence of in	dicators.)
Depth (inches)	Matrix Color (moist)	%	Redo	x Features		12	Tandona	D
Orla II	104R 5/6	<u> </u>	Color (moist)	%	Type ¹	Loc²	Texture	Remarks
1211	5/8/1	-	1048518	7009			sandyloan	
0 12	01 %	108	10 120	<u> 20 b</u>			siltyciay	fill material
		· -			 ,			
								
						•		
¹ Type: C=C	oncentration, D=Depl	letion, RM=F	Reduced Matrix, Ma	S=Masked	Sand Gra	ains.	² Location: PL=I	Pore Lining, M=Matrix.
	indicators: (Applica					. ,,,	Indicators for P	Problematic Hydric Soils ³ :
Histosol			Polyvalue Be					(A9) (LRR O)
· ·	pipedon (A2)		Thin Dark St					(A10) (LRR S)
Black Hi			Loamy Muck			(O)	Reduced Ve	ertic (F18) (outside MLRA 150A,B)
	n Sulfide (A4) I Layers (A5)		☐ Loamy Gleye ☐ Depleted Ma	•	·2)			loodplain Soils (F19) (LRR P, S, T)
	Bodies (A6) (LRR P,	T. U)	Redox Dark	, ,	3)		(MLRA 15	Bright Loamy Soils (F20)
5 cm Mu	icky Mineral (A7) (LR	R P, T, U)	Depleted Dai	•	•			Material (TF2)
	esence (A8) (LRR U))	Redox Depre)			w Dark Surface (TF12)
	ick (A9) (LRR P, T)	76445	☐ Marl (F10) (L	-			∐ Other (Expl	ain in Remarks)
	I Below Dark Surface ark Surface (A12)	e (A11)	Depleted Oct				T) 3Indicators	of hydrombydia versity
	airie Redox (A16) (M	ILRA 150A)						of hydrophytic vegetation and hydrology must be present,
_	lucky Mineral (S1) (L	•	Delta Ochric			, •,		sturbed or problematic.
_	leyed Matrix (S4)		Reduced Ver	tic (F18) (N	ILRA 15			•
	edox (S5)		Piedmont Flo			-	•	
	Matrix (S6) face (S7) (LRR P, S,	TIN	Anomalous B	Bright Loam	y Solls (F	F20) (MLR.	A 149A, 153C, 153I	D)
	.ayer (if observed):	, 1, 0)						
Type:	,,.							
	:hes):						Hydric Soil Pres	ent? Yes No X
Remarks:								100
→ Matrix	color assu	med to	be a resu	trof (lay	fill vo	aterial rath	C. Than
. , fore	reducing co	andition	75			11:0	XICHOR I O	or to coe his
	J		Gr.					

Waters of the U.S. Data Sheet

Project: MDT	MOTALINEY /	1000 CM		Feature	Feature ID: 1-WC		Parasses V. W.	, W.	100	گ	vardin Cls	Cowardin Class. E1UB	80
Date: 3 12-012				State:	3		Last	Last Flag Number:	A . C	Stre	am Order	Stream Order: N/A	î
Crew: SUM/L	しみや			County:	3 ai 4	1	Photo	Photos: 65 68	2	Use	Use Class:		
Feature Hydrologic Class and Jurisdiction:	Class and Juri	sdiction:											
Hydrologic Class	USACE Jurisdiction	sdiction					Jurisd	Jurisdictional Rationale	ionale				
V Tidal	TNW		TNW	M.	P	Impoundment of:	t of:		Tributary		Öţ	Other Waters	
Perennial	Ampoundment	ent	Tidal		WNI			Re	Relatively Permanent	manent	Relati	Relatively Permanent	nent
Intermittent	V Tributary		Interstate	state	Tributary	ary		Relati	Relatively Permanent Notes:	ent Notes:			
Ephemeral	Other Waters	ers	V Navigable	gable					•				•
Other													•
Hydrologic Connectivity	vity Upstream:		3utsial	Š	Downstream:	-	DUTSILE	54	Adjacent/Abutting:	outting:	· {	: : 1	
Feature Desc	Feature Description: (check all that apply)	k all that a	(Apda										
Sh	Shape (with respect to OHW	ect to OHN	W)		_		Substrate	ite		Vegetai	tion Cover	Vegetation Cover Type (MBSS)	(888)
✓ Natural Channel Shape	Shape	Width:	504		V Silts	£5	1//Sands	1ds	Muck	RB:	-		
Artificial (man-made)	nade)	Depth:	05-0	ئد	<u>></u>	Cobbles		Gravel	Other	-	Shab alwin	<u>ر</u> چ	
Manipulated (man-altered)	n-altered)	Bank Ero	Bank Erosion/stabil	lity:	Be	Bedrock	Š	Concrete		้ง 1	} ~~~) :-	
Other:		(r)	stable		Side slope:	ope:			\ <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>	LB:			• •
Notes:									D	ン	0 0 0	3	
Weather/Pre	Weather/Precipitation Conditions:	ditions:											
	Inches of	weather s	Hation Tan)	yard sping	weather station Tanydrd Springs - KMDGLENB25		onthly Dr	Monthly Drought Condition		1.3	State: MD	9	
	Rain Within	·					NCDC D	NCDC Divisional PDSI			ivision: 쎠	Division: Upper Sachmen	E
During Field Visit	Last Week	https://x	https://www.ncer		v/access/r	nonitoring	/climate-	noaa gov/access/monitoring/climate-at-a-glance/divisional/mapping Month: Try	divisional/	mapping	Month: F	14 Year: 2024	201r
No rain	V 0-0.5								X			i	
Light rain	0.5-1	9-	-5	4	23	-2	7	0 1	2	33	4	5	9
Heavy Rain	>1	Sev	Severe Drought	zht	Moderate Drought	Drought		Normal	Moder	Moderately Wet	Se	Severely Wet	
Non-tidal trik	Non-tidal tributary has: (check all that apply)	eck all tha	t apply)										
Bed and Banks						Ordinary High Water Mark	High Wat	ter Mark	 			į	
Yes	Clear, n	Clear, natural line impressed	mpressed	on the bank		Sedimer	nt depositi	on	Sed	Sediment sorting	ing		
No	Change	Changes in the character of soil	racter of s	oil		Water st	Water staining		Scour	II.			
	Shelving	ъn				Presence	of flood	Presence of flood litter/debris	Obs	Observed/predicted flow events	licted flow	r events	
	Vegetat	Vegetation matted down, bent, or absent	down, ber	it, or abse	nt	Destruct	ion of ten	Destruction of terrestrial veg.	Abr	upt change	e in plant c	Abrupt change in plant community	
	Leaf litt	Leaf litter disturbed	 1			Presence	Presence of wrack line	line	Other:	er:			
Tidal tributa	Tidal tributary has: (check all that apply)	all that app	(th										
Section Sectio	High Tide Line			Mean H	igh Water	Mean High Water Mark indicated by:	cated by:	\ -	C	Chemical Characteristics	aracteristi	ics	
Oil or scum line along shore objects	along shore obje	ects	<i>></i>	Survey	Survey to available datum	e datum		W // W	Water is clear				
(Fine shell or debris deposits (foreshore)	is deposits (for	eshore)	-	Physica	Physical markings				Water is discolored	lored			
/Physical markings/characteristics	s/characteristic	Š	1] Vegetat	ion lines/cl	Vegetation lines/changes in types	/pes	Ö	Oily film				
V Tidal gauges								Ğ	Other:				
Notes:													
					ļ								

Waters of the U.S. Data Sheet

				***	aters of the U.S. Dat			<u> 7</u>				
Project: MOTA		p Kills	9/35/25		<u>Boriya a sehikuwa 1975</u>		D: <u>1</u> WA		Stre	am Orde	<u>r: 841</u>	JBI .
Date: 2120/2				State:	MD		Number:		USC	Class: {		
Crew: SW/		ar jehr filifiger •• I•		County:	Best ein	Photos:	8092	-93;	on 3/	20/24 6	<u> 566-6</u>	7
Feature Hydrologic (U							
Hydrologic Class	Jurisdicti		,			R	eason					
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✓ Perennial	Impoundmen		Tida		TNW (a)(1)			ively Perm		Relat	ively Pen	manent
Intermittent	/ Tributary (a)		Inter		Impoundment (a))(2)		ficant Nex			ficant Ne	
Ephemeral	Other Water	rs (a)(5)	Navi	gable	Tributary (a)(3)		Similarly	Situated V	Waters:	Similarly	Situated	Waters:
Other					Adj. Wetland (a)	(4)	, -					
Hydrologic Connecti	vity Upstrean	n: Pur	ノシャ		Downstream	LWC .	> Ad	jacent/Abu	utting: <u>1</u>	VETA	,41	NB
Feature Desc	ription: (check	all that a	pply)								·	
	ape (with respe	ct to OH	W)	TI TI I		Substrate			Vegetat	ion Cove	r Type (I	MBSS)
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Artificial (man-n		Depth:	1-1		Cobbles		C	ther:	011	a there	21 a	عمر الأز
Manipulated (ma	n-altered)	Bank Ero			Bedrock	Concre	te					
Other:		MOd	1 uns	1 del	Side slope: □ ≥	I 24 L	/311 □ ⊴	g I	ĹВ: [- ₁],	edger	ow	
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Weather/Treespitation Conditions.												
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HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME WA	LOCATION OUST OF DOCK HLQ 1695
STATION # RIVERMILE	STREAM CLASS \
LAT 39.20900 LONG-76.541035	RIVER BASIN Pataps (0) batti more trapor
STORET #	AGENCY
INVESTIGATORS HT TT	
FORM COMPLETED BY	DATE SIL 24 TIME AM PSK REDVILL

	Habitat		Condition	Category	
	Parameter	Optimal	Suboptimal	Marginal	Poor
	1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking. Substrate Clay Sund w Fine Sudment, lacking cooks
eacu	SCORE O	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 (2) 1 0
ı ın sampung r	2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation. To the her in the same and th	Hard-pan clay or bedrock no root mat or vegetation
Parameters to be evaluated in sampling reach	SCORE 7	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
	3. Pool Variability	Even mix of large- shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large- deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small- shallow or pools absent. Small pool at
mere	SCORE O	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 (2) 1 0
rara	4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; poo almost absent due to substantial sediment deposition.
4	SCORE 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 (2)1 0
	5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
	SCORE &	20 19 18 17 16	15 14 13 (12) 11	10 9 8 7 6	5 4 3 2 1 0

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Habitat		Condition	Category	
Parameter	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabior or cement; over 80% of the stream reach channelized and disrupted Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods. Stabilized where graves,	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 5 (LB)	Left Bank 10 9	8 7 6	3 4 3	2 1 0
SCORE $\int (RB)$	Right Bank 10 9	8 7 6	5) 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 (3)	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12- 18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6- 12 meters; human activities have impacted zone a great deal.	Width of riparian zone of meters: little or no riparian vegetation due to human activities.
SCORE 2 (LB)	Left Bank 10 9	8 7 6	5 4 3	Q 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	(2) 1 0

Total Score 5

Waters of the U.S. Data Sheet

Project: UOTA Inner Loop Rills Feature ID: IWB Stream Order: RAUBI																
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Du V	No rain Light rain Heavy Rain	In Rai La	ches of n Within st Week 0-0.5 0.5-1 >1	https:// -6	www.nco -5 /ere Drou	ei.noaa.gov	r/access/mo	Monitoring V -2 Prought	onthly Drou NCDC Divis g/climate-at- -1 (siona -a-gla)	I PDSI ance/di	visional/i	mapping	ivision: \ Month: \ 4	opper Swift Jan Yea 5	r: 2024
	ring Field Visit No rain Light rain	In Rai La	ches of n Within st Week 0-0.5 0.5-1 >1	https:// -6	www.nco -5 /ere Drou	ei.noaa.gov	r/access/mo -3 Moderate D	Monitoring -2 Prought	onthly Drou NCDC Divis g/climate-at- -1 (siona -a-gla) mal	l PDSI ance/di	visional/i	mapping	ivision: \ Month: \ 4	opper Swift Jan Yea 5	r: 2024 6
	No rain Light rain Heavy Rain Non-tidal trik Bed and Banks	In Rai La	ches of n Within st Week 0-0.5 0.5-1 >1 y has: (che	https:// -6 Sev	-5 vere Drou t apply; i	ei.noaa.gov	/access/mo -3 Moderate D	onitoring -2 Prought & list pl	onthly Drou NCDC Divis y/climate-at -1 (Nor hoto #)	siona -a-gla) mal	l PDSI ance/di	visional/i	mapping 3 tely Wet	ivision: \ Month: 7 4 S	opper Swift Jan Yea 5	r: 2024 6
	rzing Field Visit No rain Light rain Heavy Rain Non-tidal trik Bed and Banks	In Rai La	ches of n Within st Week 0-0.5 0.5-1 >1 y has: (che	https:// -6 Sev	-5 vere Drou t apply; i	ei.noaa.gov	/access/mo -3 Moderate D	onitoring -2 Prought & list pl	onthly Drou NCDC Divis //climate-at1 (Nor noto #) High Water at deposition	siona -a-gla) mal	l PDSI ance/di	visional/i	mapping 3 tely Wet	ivision: \ Month: 7 4 S	opper Swift Jan Yea 5	r: 2024 6
	No rain Light rain Heavy Rain Non-tidal trik Bed and Banks	In Rai La	ches of n Within st Week 0-0.5 0.5-1 >1 y has: (che Clear, na Changes Shelving	https:// -6 Sev eck all that tural line in the cha	-5 /ere Drou t apply; i	ei.noaa.gov	//access/mo	onitoring -2 Prought & list pl rdinary Sedimer Water st	onthly Drou NCDC Divis //climate-at1 (Nor noto #) High Water at deposition	siona -a-gla) mal	1 PDSI ance/di 1	visional/i 2 Modera Sedi	mapping 3 tely Wet	ivision: \ Month: \ 4 \ S	Jeen Swift Jan Yea 5 Severely V	r: 2024 6
	No rain Light rain Heavy Rain Non-tidal trik Bed and Banks	In Rai La	ches of n Within st Week 0-0.5 0.5-1 >1 y has: (che Clear, na Changes Shelving Vegetation	https://6 Seveck all that tural line in the cha	-5 vere Drou t apply; i impressed racter of down, be	ei.noaa.gov	/access/mo	onitoring -2 Prought & list pl rdinary Sedimer Water st Presence	onthly Drou NCDC Divis //climate-at1 (Nor noto #) High Water at deposition aining	mal Mar	1 PDSI ance/di 1	visional/i 2 Modera Sedir Scou	mapping 3 tely Wet	ivision: \ Month: \ 4 \ S ing	Jepen Swiften Yea 5 Severely V w events	6 Wet
	No rain Light rain Heavy Rain Non-tidal trik Bed and Banks Yes No	In Rai La	ches of n Within st Week 0-0.5 0.5-1 >1 y has: (che Clear, na Changes Shelving Vegetatic Leaf litte	https://6 Seveck all than tural line in the cha	-5 /ere Drou t apply; i. impressed racter of down, be	ei.noaa.gov	//access/mc -3 Moderate D tos for each 0: k	onitoring -2 -2 -2 -2 -2 -2 -2 -2 -3 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4	onthly Drou NCDC Divise/climate-at- -1 (Normaton #) High Water at deposition taining e of flood litterion of terresses of wrack line	Mar er/de	1 PDSI ance/di 1	visional/i 2 Modera Sedir Scou	mapping 3 tely Wet ment sortiur erved/precupt change	ivision: \ Month: \ 4 \ S ing	Jepen Swiften Yea 5 Severely V w events	6 Wet
	No rain Light rain Heavy Rain Non-tidal trib Bed and Banks Yes No	In Rai La	ches of n Within st Week 0-0.5 0.5-1 >1 y has: (che Clear, na Changes Shelving Vegetation Leaf little s: (check a	https://6 Seveck all than tural line in the cha	-5 /ere Drou t apply; i. impressed racter of down, be	ei.noaa.gov	//access/mo -3 Moderate D tos for each 0 k t	onitoring -2 Prought & list pl rdinary Sedimer Water st Presence Destruct Presence ist photo	northly Drou NCDC Divis //climate-at1 (North #) High Water at deposition caining of flood litt ition of terrest of wrack lin #)	Mar er/de	1 PDSI ance/di 1	visional/i 2 Modera Sedi Scou Obse Abru Othe	mapping 3 tely Wet ment sortiur erved/precupt change	ivision: \ Month: \ 4	Jeen Swife Jean Yea 5 Severely V w events communi	6 Wet
	No rain Light rain Heavy Rain Non-tidal trib Bed and Banks Yes No Tidal tributar	In Rai La	ches of n Within st Week 0-0.5 0.5-1 >1 y has: (che Clear, na Changes Shelving Vegetatic Leaf litte s: (check adde Line	https:// -6 Seveck all that tural line in the cha	-5 /ere Drou t apply; i. impressed racter of down, be	ei.noaa.gov -4 ght nclude phon d on the ban soil nt, or absen de photos for Mean Hig	/access/mo -3 Moderate D tos for each O k t or each & li th Water M	onitoring -2 orought & list pl rdinary Sedimer Water st Presence Destruct Presence Ist photo	northly Drou NCDC Divis //climate-at1 (North #) High Water at deposition caining of flood litt ition of terrest of wrack lin #)	Mar er/de	1 PDSI ance/di 1	visional/i 2 Modera Sedi Scou Obse Abru Othe	mapping 3 tely Wet ment sortiur erved/precupt change	ivision: \ Month: \ 4	Jeen Swife Jean Yea 5 Severely V w events communi	6 Wet
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	No rain Light rain Heavy Rain Non-tidal trib Bed and Banks Yes No Tidal tributar His Oil or scum line a Fine shell or debr	outary y has gh Tie along is der	ches of n Within st Week 0-0.5 0.5-1 >1 y has: (che Clear, na Changes Shelving Vegetation Leaf litte s: (check and the Line shore objectorits (fore	https://6 Seveck all that tural line in the char on matted or disturbed all that applicates shore)	-5 /ere Drou t apply; i. impressed racter of down, be	ei.noaa.gov -4 ght nclude phon don the ban soil nt, or absen de photos fo Mean Hig Survey to Physical	/access/mo -3 Moderate D tos for each Or k t t or each & li th Water M o available d	onitoring -2 Prought & list pl rdinary Sedimer Water st Presence Presence ist photo lark indi-	nonthly Drou NCDC Divis //climate-at1 (Non noto #) High Water nt deposition aining of flood litt cion of terress of wrack lin #) lecated by:	Mar er/de	1 k bris reg. Water Water Oily f	Sedin Scoul Obse Abru Other is clear r is discoloring	mapping 3 tely Wet ment sortiur erved/precupt change er:	ivision: \ Month: \ 4	Jeen Swife Jean Yea 5 Severely V w events communi	6 Wet
	No rain Light rain Heavy Rain Non-tidal trib Bed and Banks Yes No Tidal tributar His Oil or scum line a Fine shell or debr Physical marking Tidal gauges	outary y has gh Tie along is der	ches of n Within st Week 0-0.5 0.5-1 >1 y has: (che Clear, na Changes Shelving Vegetation Leaf litte s: (check and the Line shore objectorits (fore	https://6 Seveck all that tural line in the char on matted or disturbed all that applicates shore)	-5 /ere Drou t apply; i. impressed racter of down, be	ei.noaa.gov -4 ght nclude phon don the ban soil nt, or absen de photos fo Mean Hig Survey to Physical	/access/mo -3 Moderate D tos for each to for each & li th Water M o available of markings	onitoring -2 Prought & list pl rdinary Sedimer Water st Presence Presence ist photo lark indi-	nonthly Drou NCDC Divis //climate-at1 (Non noto #) High Water nt deposition aining of flood litt cion of terress of wrack lin #) lecated by:	Mar er/de	l PDSI ance/di 1 bris reg. Water	Sedin Scoul Obse Abru Other is clear r is discoloring	mapping 3 tely Wet ment sortiur erved/precupt change er:	ivision: \ Month: \ 4	Jeen Swife Jean Yea 5 Severely V w events communi	6 Wet

Modified Environmental Protection Agency Rapid Bioassessment Protocol (EPA RBP) Habitat Assessment Field Data Sheet (Low Gradient Ephemeral/Intermittent Streams)

Station ID/	IWB		LAT (DD) 39.2080	274
Stream Name Reach Length (m)	57	Date 5/10/24	LONG (DD) -76.541	
HABITAT		CATEGOR	RY	
PARAMETER	Optimal	Sub-optimal	Marginal	Poor
1. SUBSTRATE/ DIVERSITY AVAILBLE COVER FOR AMPHIBIANS CRAYFISH	Greater than 50% of substrate consisting of mix of snags, tree roots or other stable habitat providing cover for amphibians and aquatic or terrestrial invertebrates. LWD in moderate to advanced stage of decay and within- active channel; Substrate roughness capable of trapping lots of organic matter. If moss covered, rate high.	30 to 50% cover and mix of diverse stable habitat; well suited for full cover potential; adequate habitat for maintenance of populations; presence of additional LWD in the form of new fall. Substrate roughness still capable of trapping organic matter.	10 to 30% mix of stable cover; habitat availability less than desirable; substrate frequently disturbed or removed. LWD low in density and/or may be new fall or in early decay stage. Some areas suitable for trapping organic matter. If Ig. wood is absent, score low.	organic matter.
score:	Rate in Cl	nannel and Toe	of Banks	
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. POOL SUBSTRATE CHARACTER- IZATION In dry channels, pool areas should still be observable	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged (or remnant) aquatic vegetation are common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged (or remnant) vegetation are present.	All mud or clay or sand bottom; little or no root mat; no submerged (or remnant) vegetation.	Hard-pan clay or bedroc no root mat or vegetation
SCORE:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. CHANNEL ALTERATION SCORE:	Channelization or dredging absent of minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging (>than past 20 years) may be present, but no evidence of recent channelization.	Channelization may be extensive; embankments or shoring structures present on both banks; 40 to 80% o the stream reach channelized and disrupted.	
	20 19 18 17 16	15 14 13 12 (11)	10 9 8 7 6	5 4 3 2 1 0
4. SEDIMENT DEPOSITION SCORE:	Little or no enlargement of "islands" or point bars and less than 20% of the bottom affected by fine sediment deposition. Leaf packs and woody debris with minimal silt covering.	Some new increase in bar formation mostly from sand, or fine sediment; 20 to 50% of the bottom is affected; slight deposition in pools. Leaf packs with moderate silt covering.	Moderate deposition of new sand, or fine sediment on old and new bars; 50 to 80% of the bottom affected; sediment deposits at obstructions, constructions, and bends; moderate deposition of pools prevalent. Leaf packs with heavier silt covering.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. CHANNEL SINUOSITY SCORE:	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line.	The bends in the stream increase the stream length 2 to 3 times longer than if it was in a straight line.	the bends in the stream increase the stream length up to 2 times longer than if it was in a straight line.	Channel is straight; waterway has been channelized for a long distance.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Appendix 1: Modified Environmental Protection Agency Rapid Bioassessment Protocol (EPA RBP)
Habitat Assessment Field Data Sheet (Low Gradient Ephemeral/Intermittent Streams)

	Optin	nal		Su	b-opti	mal	Ma	rginal			Poor	
6. BANK STABILITY (score each bank) *determine left/ right by facing downstream	Banks stable; erosion or ban or minimal; litt future problem affected).	nk failure abs le potential t	sent a	areas of ero	sion mos	nfrequent, small stly healed over; ach has areas of	Moderately to bank in reach high potential	h has are	eas of erosion;	areas; frequer section obvious 60-100	le; many "raw" are nt along s s and be s bank sl % of bar nal scars.	eas straight ends; loughing; nk has
LEFT: 4	10	9		8	7	6	5	4	3	2	1	0
RIGHT: 6	10	9		8	7	(6)	5	4	3	2	1	0
7. BANK VEGETATIVE PROTECTION SCORE:	More than 90% bank surfaces riparian zones vegetation includerstory shi woody plants of ferns, mosses disruption thro mowing minim almost all planto grow natura	and immed covered by luding trees rubs, and no (herbs, gras); vegetative rugh grazing al or not evints allowed	iate	are covered class of plan represented not affecting extent; more potential pla remaining.	by vege its is not disrupti plant greathan or than or nt stubb	ion evident, but rowth potential to ne-half of the	are covered obvious; pat closely cropi less that one plant stubble	by veget ches of b ped vege e-half of t e height r	etation common; he potential emaining.	stream are cov vegetat stream very hig been re or less height	bank veg gh; veget emoved t in averag	faces uption of getation tation has to 2 inches ge stubble
LEFT:	10	9		8	(7)	6	5	4	3	2	1	0
RIGHT:	10	9		8	(7)	6	5	4	3	2	1	0
8. WIDTH OF UNDISTURBED VEG. ZONE (undisturbed veg. Is trees, shrubs, and non- woody macro- phytes)	Width of undis tative zone is human activiti roadbeds, clea crops) have no zone.	>18 meters es (parking l arcuts, lawns	; r lots, r s, or		an activ	en 12 and 18 ities have only his zone.	Zone width i meters; hum impacted the	ties have	Width of zone is less than 6 meters; little or no undisturbed vegetation due to man-induced activities.			
LEFT: 3	10	9		8	7	6	5	4	3	2	1	0
RIGHT: 3	10	9		8	7	6	5	4	(3)	2	1	0
TOTAL: (max=160)	Max Pool De Average Cha					A") <u>15</u> cm _m	HIS PLA		29 + Total ge= Total Sco			
Average Width	Intact Rip Ve	getative Z	one (m	n) Left		m	71.405	Right	NIL / PARE	m		
→ What is the	dominant veç Coniferous (pin	jetation ty e/cypress)	pe in t □ Mixe	he reach?		A STATE OF THE STA			rs25-50 ye canopy, shrub,	•		<5 yrs
Deciduous U	01 11 (0()		la al	icate % ha	sed or	cloudless da	v in summer	at noo	n. Fill in squa	are that	applies	
Stream Surface			n) Indi	icate /6 Da		. 010 441000 44		•				•
Stream Surface	er, middle, u		1/1	Partly shad			Partly ex					: d (75-100

Wetland Function-Value Evaluation Form Is wetland part of a wildlife corridor? Total area of wetland 6.2 at Human made? Latitude 39. 211814 Longitude - 76. 53388 Adjacent land use Distance to nearest roadway or other development 5 Wetland Impact: Dominant wetland systems present Contiguous undeveloped buffer zone present Is the wetland a separate hydraulic system? If not, where does the wetland lie in the drainage basin? Evaluation based on: How many tributaries contribute to the wetland? Wildlife & vegetation diversity/abundance (see attached list) Corps manual wetland delineation completed? Y Suitability Principal Rationale Function(s)/Value(s) Function/Value (Reference #)* Comments Groundwater Recharge/Discharge Floodflow Alteration Impoundment adjacent, but unable to determine if connected, to Patapsio River Fish and Shellfish Habitat See note above about water course connection Reciues runoff from access roads + holds water year round Sediment/Toxicant Retention Nutrient Removal **Production Export** Sediment/Shoreline Stabilization large phragmarsh surrounded by forest & shrubs 7,9,10,11,12,13,17 Wildlife Habitat A Recreation Educational/Scientific Value ★ Uniqueness/Heritage Wisual Quality/Aesthetics ES Endangered Species Habitat

Other Notes:

^{*} Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland O , PacHuman made?	S Is wetlan	d part of a wildlife corrido	or? No or a "habitat isla	Wetland I.D. 1WET-G
Adjacent land use Utility ROW, Trans				Latitude 1 Longitude 14. 5 150 G
	1			Watland Immedia
Dominant wetland systems present PEM		Contiguous undev	eloped buffer zone present 5	Type Area
Is the wetland a separate hydraulic system?	25 If no	t, where does the wetland	lie in the drainage basin?	Evaluation based on:
How many tributaries contribute to the wetland?_			rsity/abundance (see attached lis	Office Field
Function/Value	Suitability Y N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge		(Reference #)	Tunetion(s)/ Varue(s)	Comments
Floodflow Alteration				
Fish and Shellfish Habitat				
Sediment/Toxicant Retention		1,2,4,5,7,9		
Nutrient Removal				
→ Production Export				
Sediment/Shoreline Stabilization				
₩ Wildlife Habitat				
Recreation				
Educational/Scientific Value				
★ Uniqueness/Heritage				
Visual Quality/Aesthetics		/		
ES Endangered Species Habitat				
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

						Wetland I.D. WET-I
Total area of wetland 2. Steat Human made?	25 Is w	etland	part of a wildlife corrido	r? No	or a "habitat island"?	Latitude 39.265025 Longitude 76.5498
Adjacent land use Transportation, Rail	sad, li	rdust	nic Distance to nearest	roadway o	r other development 50	Prepared by: 58 Date 578/24
Dominant wetland systems present PEM			Contiguous undeve	eloped buff	er zone present 50'	Wetland Impact: Type Area
Is the wetland a separate hydraulic system? How many tributaries contribute to the wetland?	0	Wi	Idlife & vegetation diver	sity/abund		Evaluation based on: Office Field Corps manual wetland delineation completed? Y N
Function/Value	Suitab Y	ility N	Rationale (Reference #)*	Princi Funct	pal ion(s)/Value(s)	Comments
₹ Groundwater Recharge/Discharge						
Floodflow Alteration	4	/				
Fish and Shellfish Habitat						
Sediment/Toxicant Retention		11	2,4,5,7,9			
Nutrient Removal						
→ Production Export						
Sediment/Shoreline Stabilization						
₩ Wildlife Habitat						
Recreation						
Educational/Scientific Value						
★ Uniqueness/Heritage						
Visual Quality/Aesthetics						
ES Endangered Species Habitat						
Other						

Notes:

* Refer to backup list of numbered considerations.

Forest Stand ID: 1FS1			Project:	1DTA Inner La	op Rijls
Owner/Applicant: MDT			~ .		Bart. City
Date: 2120124 Pr	epared by: 5V	YIEH	Photos:	8081-84	
Type of Community:				Forest Stand Are	
Stand Successional Stage:	Early	Mid	Mature	Percent Canopy	Closure: 30%
		Existing	Vegetation		
Dominant Species in Canopy:	:	Size Class:	ł		
Bradford pear		2-6"	Few	Scattered 6	-11" thees
sheri or elm		6-11'	inu	usion of bo	ox elder of the
Den loust	,	20-30 >30")" 120-t	usion of bo	e near wc
			NT .		
Dominant Species in Understa Backharis Amus honeysuelde smooth sumac Dominant Species in Herbace Broom grass Sapana Phragnutes	ous Layer:	rolete	Notes:	·	,
Switchgrass		C			
Downed Woody Debris: High Medium Low	High Medium Low	Cover: I	nvasive Speci	es Present:	. •
General Stand Conditions:	•		· · · · · · · · · · · · · · · · · · ·		
Di Sturbed Voxdstall	c Nedgers	us on s	slope to	1-695.	
Overall Condition:	V	v	ines: Mod	evate	

Forest Stand ID: 1F52	Project: MDTA Inner Loop Rills
Owner/Applicant: MDTA-	State: MD County: Back City
Date: Alaolay Prepared by: 8W JEH	Photos: 8094-95 8105-06
	1 00:42.8
Type of Community:	Forest Stand Area:
Stand Successional Stage:	Mature Percent Canopy Closure: 40'/
Existing	Vegetation
Dominant Species in Canopy: Size Class:	: Notes:
Black lowst 2-6"	
(rec-15-heaven) 12-20	
20-30	0"
Si bevious elles	
Dominant Species in Understory:	Notes:
Amur honaysudue orientaloiters.	
The - of - heaven Poisoning	
I 7	lel e
Japanese none	
Dominant Species in Herbaceous Layer: Englishing common multin Japanese hungshelde	Notes:
English of honorshelds	very sporse understay in some are
JAPONASK	little herbaceous growth
grape sp.	
Downed Woody Debris: Invasive Species Cover: I	nvasive Species Present:
High High	•
Medium Medium	·
Low Low	
General Stand Conditions:	116 2 36 0 07
Disturbed forest on so	who side of MC. High Jewel
of invasive species	
₩	
poor condition forest between	tence two
1	
	*
Overall Condition: PO B	ines: HIN

Forest Stand ID: 1	FS3		Project: N	IDTA Inner Loop Rills Project
Owner/Applicant: MDTA			State: MD	
Date: 3/20/34	Prepared by:	SHI, SLY	Photos:	0554-55
		i		
Type of Community:				Forest Stand Area:
Stand Successional Stage:	∠ Early	Mid	Mature	Percent Canopy Closure: 401
		Existir	ng Vegetation	
Dominant Species in Cano		Size Cla		
Bradford pear Black locust	•		-20" -30"	huston of 1 18" pin oalc.
Dominant Species in Unde	rstory:		Notes:	
Amur honeysue Multitlora rox	•	.•	sur	nac on edge
Phrasm. tes Tapanese honey	•		Notes:	
Downed Woody Debris: High Medium Low	Invasive Speci High Mediur Low		Invasive Spec	ies Present:
General Stand Conditions:		0	1.0 pm	and I man belling &
Dedurbed New	durom 10	rth of	675 +	south of powerlines.
High invasive	species	scove	1	
. Poor cond				
1/1, m/5 = 1400	<i>Levate</i>			

Forest Stand ID: FS4	Project: FSK Rebuild		
Owner/Applicant: MDTA	State: MD County: Bathmore City		
Date: 5/6/24 Prepared by: EB 65	Photos: East		
Type of Community: FOREST BLACK LOWST / TRE	Forest Stand Area: 70731.39		
Stand Successional Stage: Early Mid	Mature Percent Canopy Closure: 75 7.		
Existing V	vegetation vegetation		
Dominant Species in Canopy: Robinia pseudoacacia Atlanthue altissima, Monus alba, Liquidambar styraciflua 2-6" 6-11" 12-20" 20-30" >30"			
Dominant Species in Understory: Lonicera maackii, Rubus sp. Lonicera japanica, Toxi codendron radicans, Celastrus orbiculatus, Hedera helix Amorpha fruti cosa			
Dominant Species in Herbaceous Layer:	Notes:		
Vines acting as ground cover			
High High	vasive Species Present: IAL, MOAL, LOMA, LOVA, CEOR EHE		
General Stand Conditions: Many invasives in the underston diversity.	y, trees in fair health, low		

Forest Stand ID: 1755	Project: FSK Rebuild		
Owner/Applicant: MDTA	State: MD County: Baltimore City		
Date: 5/10/24 Prepared by: HT, HH	Photos: Northwest		
Type of Community: frest Sweet- wum/ce	mmon personnel Forest Stand Area: 32372.61 ft2		
	Mature Percent Canopy Closure: 25%,		
Existing V	egetation		
Dominant Species in Canopy: Liquidumbar Styracifloa \$\frac{1}{2-6"}\$ Diopyrus Missiniana \$\frac{12-20"}{6-11"}\$ Robinia psuedo acacrus \$\frac{12-20"}{20-30"}\$ Pyrus caller yana, \$\frac{12-20"}{20-30"}\$ Dominant Species in Understory: Baccharis halimifolia, Lonicera maackii pyrus calleryana, morus aba Celastros orbiculatis, Toxicodendon radica Diospyrus visiniana. Dominant Species in Herbaceous Layer: Lanicera japoni ca, fyrus calleyana, Celastros orbiculatis, Toxicodendon	Notes: Elaeagnos umbellata, Vita zp, Pobus sp, Parthenoccizsus quinqefolia — also common Notes: Phraymiles australis scatted		
radicans	Parthenoussus quenquefolia also		
vines dominant as gounda	ver lanmon.		
Downed Woody Debris: Invasive Species Cover: High Medium Low Invasive Species Present: PYCH, MOAL, BAHA, LOMA, CEOR, ELUM, LOTH, PHAU			
General Stand Conditions:			
General Stand Conditions: Poor invasive species dominant throughout, heavy vine coverage, trees stressed damaged by vines			

Forest Stand ID: \FS6	Project: FSK Rebuild			
Owner/Applicant: MDTA	State: MD County: Baltimore City			
Date: 51024 Prepared by: HT, HH	Photos:			
Type of Community: FOREST BLACKLOWST /SW	Forest Stand Area: 54610.27 ft 2			
Stand Successional Stage: Early Mid	Mature Percent Canopy Closure: 25%			
- Existing V	egetation			
Dominant Species in Canopy: Size Class:	Notes: DIOSPYN S VITZINIAGA			
Robinia Pseudoacacia 2-6"	Notes: Diospyros Virginiana. Pyros caneryana - also Ailathus altissima - also			
Diquidambar styraciflus 20.30"	Ailathus altissima - also			
20-30	common			
Unaparative Canidae >30"				
Dominant Species in Understory:	Notes:			
Pyrus calleryana Robinia Pseudoacacia Lonicra maackii, Baccheris halimitolia				
Loniora maackii, Baccheris halimitalie				
Vitis Sp. Celastrus orbiculatis				
Dominant Species in Herbaceous Layer:	Notes:			
Celastrus orbiculatis, Lonicara japonica, - Scattered Phragmites australis				
Rubis 20. Padhemoisus aunquetolia + Rosa multitiona trienista				
Rubis of, Pathenosissus gunquetolia + Rosa multitiona, trienusia Ampelopsis brevipadunes lata -vines dominate groundioner				
1,1,1,0,0,0,0,0	The state of the s			
Downed Woody Debris: Invasive Species Cover: Inv	rasive Species Present:			
High Medium Low PYCA, AIAL LOMA, BAHA, CEOR, LUJA, ROMU, PTEAU				
Medium Low Low	FOR LUTA ROMU PHEAU			
Low				
General Stand Conditions:				
PODC-invasive species dominant throughout				
I was vine coverage trees stressed				
near of the second seco				
Poor-invasive species dominant throughout, heavy vine coverage, trees stressed/ Lamaged by vines				

Forest Stand ID: 1757	Project: #SK Rebuild			
Owner/Applicant: MDTA	State: MD County: Battimore City			
Date: 5/10/24 Prepared by: HT, HH	Photos:	orth m	110.	
		or the pr	108	
Type of Community: for of Black Lows Syl Sugar	-60M	Forest Sta	and Area: 44252.41 ft2	
	Mature	Percent C	Canopy Closure: 6040	
Existing Vo	egetation			
Dominant Species in Canopy: Size Class:	Notes:			
Robinia pseudoacacia Liquidamburstyracifloa 2-6" 6-11"			idntalis	
Overus philos 12-20"	Pyn:	scalle	ryana.	
20-30"			1	
Tyros Allarya a			trees scattered	
Dominant Species in Understory:	Notes:	J Show	/ T	
Pyros culteryana, Robinia pseudoaca via,				
Lonicera japonica, Lonicera mackii, Rosa multiflora, Vitis sp. Calastros orbico	146			
Parthenocissos quinquetalia.	1990			
Dominant Species in Herbaceous Layer:	Notes:			
Thousanites australis Rosa multitlara	Arte	misia V	ulgaris-common along	
vitis sp. Lonicera japonina, Celastrus	Stand	edges	5.	
vtis so, Loniera japonina, Celatros orbico latis, Ampelopsis brecipedonas	lar.	es don	ninate ground cares	
			0	
	asive Specie			
High High	1CA, L	UJA, R	LOMU, PHAU, CFOR,	
Medium Low Low	211/1/	+MB6	2, LOMI	
General Stand Conditions:				
Poor-invisive exercies deminant				
Poor-invasive expecies deminant throughout understory + herb layer.				
Mine alvantara tonor (A)				
Vines dimbing trees + 8habs				

Forest Stand ID: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Project:	FSK Rebuild	
Owner/Applicant: MDTA		State: MD County: Baltimore City		
Date: 510 24 Prepared by:		Photos:	Nest South	
3 . 10 1				
Type of Community: 1000	Sweet GOM/ WHITE	PINE	Forest Stand Area: 23 292,82 ff2	
Stand Successional Stage:	Carly Mid	Mature	Percent Canopy Closure: 50%	
	Existing V	egetation		
Dominant Species in Canopy: Liquidambar styracit Pinos strobos, Diospylos Robinia psudoacaci Pyros carlegana	6-11"	500	s larger white pines attered throughout s albus	
Dominant Species in Understory: A Baccharis halimitalia Laniara japonica Celastros orbitolatis radicans, Robus es	Toxico dendron	Kila	ignos umballata, Rhustyphina, nthos altissima	
Dominant Species in Herbaceous L. Phragmites australis, radicars coniura japor quique to ha, vito sp. bren pedunculata	ayer: Toxicode nation iva, Parthenacissi		gmites austraulis es dominant as ground	
	High	rasive Species ACA M OMA, C	es Present: NOAL, GAHA WJA, AMBR, CEOR, ROMU, PHAU	
General Stand Conditions: Page - invasives dominant throughout, heavy Vine coverage				

Forest Stand ID: 1759	Project: ESK Rebuild			
Owner/Applicant: MDTA	State: my County: Baltmore City			
Date: 5/10/24 Prepared by: HT, HH	Photos:			
3/10/1/2				
Type of Community: Pores - Black chepay (Black Locust Forest Stand Area: 42097, 70			
Stand Successional Stage: Early Mid / [Mature Percent Canopy Closure: 75%			
Existing	Vegetation			
Dominant Species in Canopy: Size Class				
Pronos sentina 2-6"				
Rubinia Decudoacacia Pyrus Calleryana 6-11 12-2 20-3	ALCA COMMINAL HILANTINA AMSSIMA			
20-30"	o" scattered along stand edges			
	Pawloma tomentou Scattered			
Dominant Species in Understory: Am pelopsis brownpe Pyrus callegana, Pronus Scrotha, Vitis	dong Notes:			
tyrus callergana, pronus seroima, vins	Puchars hallmintoliù			
Itex opaca, Toxico dendron radicans Rosa multifrom, Lonice rajuponica,				
Celastrus orbitulatis Parthenoussus quih	gveldia:			
Dominant Species in Herbaceous Laver:				
Loniara japonica, Rosumultitlora	Notes: scattered phras mites au stralis, along			
Toxicodendron Vadicalis fortherous	sus stand edges.			
quiquetolia, Celastos orbicolatis				
	Superior Description			
	nvasive Species Present: DUCA DATA AMBR BAHA			
High High Medium	PYCA, PATO, AMBR, BAHA,			
Low	ROMU, LOTA, CEUR, PHAU			
4	Sopotted lanton fly			
Fair - invasive species dominant, vines dimbing				
trees, moderate spicies diversity				
eastern portion of Stand shightly younger but. similar species & condition.				
lasten por 1100				
similar species & condition				
4				

Forest Stand ID: 17515		Project: FSK Rebuild		
Owner/Applicant: MDTA		State: MD County: Baltimore City		
Date: 5/10/24 Prepared b	y: HT, HH	Photos: East		
) ()			
Type of Community: forest	TUUDTREE/TRE	For Hands Forest Stand Area: 34196 . 53 ff		
Stand Successional Stage: Earl	y Mid	Mature Percent Canopy Closure: 504		
	Existing V	egetation		
Dominant Species in Canopy:	Size Class:	Notes:		
Liriodendion trlipitera	2-6"	Pauloma tomentosa, DIOSPYNS		
At anthus attissima	12-20"	Virginiana, Juniprus virginian		
Liquidambar styraciffs	20-30"	mores alba		
Prohos serotina	>30"			
Dominant Species in Understory:	advahelix	Notes:		
Morus albus, Lonicram	aackii, Lonicer	a Frenchistany Notes		
Japonica, Ellagnis umbe	itala loxicodena			
radicans, Celustrus orbiculo radicans, Rosu multit	lova Rubin of			
Dominant Species in Herbaceous Laye	r:	Notes:		
Iniceca iconica Toxic	odendon	vines dominant ground over		
vadicans celasions or	1010 looks			
Allarra petiolata, He	dra helix			
Downed Woody Debris: Invasive S		asive Species Present:		
High	gh A	JA, ELUM, CEOR, ROMO, ALPE		
Medium Me	edium w	JA, Elum, CEOK, ROMO, ALPE		
		potted lanter ty		
	S and a second	The fact of the		
General Stand Conditions:				
Stand dominated by invasive species, vines growing over most trees causing stress damage				
growing over most trees causing stress damail				
) ()		O		

Forest Stand ID: \ \FS \	Project: FSK Rebuild			
Owner/Applicant: MDTA	State: MD County: Baltimore City			
Date: 5 10 24 Prepared by: +17, +1+	Photos: East			
Type of Community: Forest BLACK LOCUST / CALL	ERY PEAR Forest Stand Area: 101908.71 ft2			
Stand Successional Stage: Early Mid	Mature Percent Canopy Closure: 5%			
Existing V	/egetation			
Dominant Species in Canopy: Size Class:	Notes:			
Robinia pserdoacaca 2-6"	Ailanthus altissima &			
Dyrus calleryana 6-11"	, Pawlonia tomentosa, Jonipers			
Liquidanbar styraditha 20-30	, virgini aciti			
Diospyrus VIrpianaca >30"	Quertus phellos - suffered.			
Dominant Species in Understory:	Notes:			
Dominant Species in Understory: Baccharis halimitalia, loriura	Eleagnus umbellata			
maackii, pyros calleryana vitos so Liquidanbar styracitoa, Amplopsis				
Light danbas styracition, Amplopsis				
Dominant Species in Herbaceous Layer:				
Color has orbitulatis, Lantera	Obrasmites australis-scatteres			
Celastros crbitulatis Lanitura phrugmites australis-scatterel juponica, Rusa moltiflora, Toxico dendi dalong standedge				
Robus of Arteonesia volgare	vines dominant as ground care			
	vasive Species Present:			
High PYCA, ATAL, PATO, BAHA, EWM,				
Medium Medium LOMA AMBR CEIR LOTA ROMO.				
	8 N)			
General Stand Conditions:				
General Stand Conditions: Poor - invasive species dominant throughout, vines climbing & greany I danuging trees				
TODY - The state of the state o				
climbing of greating danugraf 1000.				
V	그 그렇게 하는 사람들이 가는 그 사람이 들어 먹는 다음			

Forest Stand ID: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Project:	PSK Rebuild	
		State: MD County: baltimore City	
Date: 5/10/24 Prepared by: HT, HH	Photos:	so th weat	
Type of Community: Force WILLOW OAK BLA	Ch LOWST	Forest Stand Area: 57918.32 A2	
Stand Successional Stage: Early Mid	Mature	Percent Canopy Closure: 75%	
Existing V	egetation		
Dominant Species in Canopy: Querus phullos Robinia paradoacacia 4 yidanbar styracitua 2-6" 6-11" 12-20" 20-30" >30"	Notes: Que Pyn rubri alsi Notes:	cus falcata, Pronus serotina, is callery and a overos y Morus Isabla, Accordona o common - few recinum trees gmites asstralis - scattered long Stand edge	
Downed Woody Debris: Invasive Species Cover: Invasive Species Present: High Medium Low General Stand Conditions: Fair - mod species deversity, canapy trees generally in specied health invasive & fecies are prevelent throughout, vines dimbing some trues.			

Forest Stand ID: 17513	Project: PSK Rebuild			
Owner/Applicant: MDTA	State: MD County: Baltimore City			
Date: 5/16/24 Prepared by: HTTT	Photos: 5W			
Type of Community: forest WILLOW OAK SOOTHE	FEN REPONL Forest Stand Area: 15412, 85 A2			
Stand Successional Stage: Early Mid	Mature Percent Canopy Closure: 90			
Existing V	egetation			
Dominant Species in Canopy: Size Class:	Notes:			
Quercus Phillos 2-6"	Acer robrom also common			
Que cos talcata 6-11" (2-20"	Punos serotna,			
20-30"	그는 선생님이 없는 사람들은 사람들은 사람들이 되었다. 그리고 하고 있다면 다른 기를 받는다.			
>30"	some larger thees throughout			
Dominant Species in Understory:	Notes:			
Smilax notondifoha, Partheno & issu)	open understory in the			
gunquital a Toxioodedon runiques,				
Campsys radicas, Rosa multitura				
Dominant Species in Herbaceous Layer:	Notes:			
Lanua iadon (a) Parth mooisson	Phrosmiter auxtrelia daminant			
lanura japonica, Parthenoussus quinquetidia, Toxico dondon radicans	Phragmiter austrelis dominant dong stand edge			
	arts of states to be			
Downed Woody Debris: Invasive Species Cover: Inv	vasive Species Present:			
High Romu, LOJA, PHAV				
Medium Medium				
Low Low				
	<u> </u>			
General Stand Conditions:				
General Stand Conditions: Fair Interior forest is diverse with an open understory				
Stand adge is more distorted with heaver vine				
l'avanve coner				

Forest Stand ID: 1H1		Project: MDTAInner Loop Rills		
		State: MD County: Bart City		
Date: 2120 24 Prepared by: 5W E	f]	Photos:	8102	
Type of Community:			Forest Stand Area:	
Stand Successional Stage:	N	Iature	Percent Canopy Closure: 351.	
Ex	isting Veg	getation		
	Class:	Notes:		
Bradford Pear	2-6" 6-11" 12-20" 20-30" >30"			
Dominant Species in Understory:		Notes:		
Baceharis				
Dominant Species in Herbaceous Layer:		Notes:		
Japanischintysuelde				
Japanischintysuelde Pringmits on edge				
Downed Woody Debris: Invasiye Species Cover	r: Inva	sive Speci	ies Present:	
High High Medium Low				
General Stand Conditions:				
small heage row on highway sto	t e			
Overall Conditions (Ving	l 1	1 ,	
Overall Condition:	vine	s: Moa	elembe	

Forest Stand ID: H2		Project:	TSK Rebuild	
Owner/Applicant: MDTA		State: /	State: MD County: Bathimore City	
Date: 5/6/24 Prepared by: EB, 65 Photos: West				
			Francis Stand American 1761 297 212	
Type of Community: Legerow		110,008,000/66/	Forest Stand Area: 206,766.28 ft ²	
Stand Successional Stage: Early Mid		Mature	Mature Percent Canopy Closure: 207	
Existing Vegetation				
Pominant Species in Cano Robinio psaudoacacia Acer negundo, Ailanth Pynis calleryana, Ul Quireus phales, Quer	mus americana 2-6°	does fores so" sume	scattered trees throughout, not meet definition of a t. Trees are in fair health, are being overtaken by	
Dominant Species in Understory: Army pho frotices a Ropa multiflora, Koelrewten a paniculata, Lonicera maackii, Baccharis halimifolia, Viburhum Ap., Texicodendron radicans, Lonicera yapanica, tedera helix, Parthenocissus quinquefolia, Celastrum orbiculatus Dominant Species in Herbaceous Layer: Notes: Notes:				
Downed Woody Debris: High Medium Low	High	Invasive Spec MOAL, AIA LOJA, HE	ies Present: AL, PYCA, ROMU, LOMA, HE, CEOR	
General Stand Conditions: Meny invasive A health with ma	pecies in canoping li	des.	erstory. There in fair	

Forest Stand ID: \H3	Project:	Project: FSK Rebuild			
Owner/Applicant: MDTA		State: MD County: Battimore City			
Date: 5 10 21 Prepared by: HT, HH	Photos:	North			
S1414 101 101 1					
Type of Community: Lesserow Forest Stand Area: 10755.92 ft ²					
Stand Successional Stage: Early Mid	Mature				
Existing Vegetation					
Dominant Species in Canopy: Size Class: Notes:					
Boblog Osuda Cacio	niari	Also common throughout			
Robinia Pseudoacacia 6-11" also common throughout 12-20"					
Liquidambac styraction 12-20 20-30	" Rhus	typhena-clusters			
>30"					
Dominant Species in Understory:		Notes:			
Baccharis halimitolla, Lonicera muelli, Toxico dendon radicans a Robos so Ailanthus altissima, Lonicera japonica, also common + vitis of.					
Atlanthus altissima, Lonicera japonica, also common + vitis p. Celastros orbiculatis Toxicodendon					
radians					
Lanicra japonica, Celastros orbiculatis Phrasmites australis scattered toxicodendan radicans, Parthenocissus along edges & throughout					
quinquetolia					
Joney Charles	vines	vines are dominant ground cover			
Downed Woody Debris: Invasive Species Cover: Invasive Species Present:					
High PYCA, ATAL, MOAL, BAHA, LOMA,					
Medium LOJA, CEOR, PHAV					
Low					
General Stand Conditions:					
Poor - heavy invasive cover; vines covering most wordy veg + stressing lamaging native tree					
wordy ves + stressing damaging native tree					
Gleries					
Officies					

prest Stand ID: 1 H H Project: FSK Rebuild			
Owner/Applicant: MDTA	State: MD County: Baltimore City		
Date: 5/16/24 Prepared by: HT, HH Photos: North Work			
Type of Community: Nogeraw		Forest Stand Area:	09097.44 ft2
Stand Successional Stage: Early Mid	Mature	Percent Canopy Closu	ure: 15%
Existing \	/egetation		
Dominant Species in Canopy: Size Class:	Notes:		
Robinia pseudoacacia \(\sigma^2-6"\)	1 tre	s are scatt	terd in some
Liquidambar Styraciflua 6-11" 12-20	, area	-5	
Pyros culogana 20-30		chlas Pa	lonia toneatosa
>30"	615	0.11.4	
Dominant Species in Understory: Am Relupsis brevocan Bucharis halimitolia, Ligurdam but Styraciflua, Pyros calleryana, Lonice	(GN otos	STORES STORES	
Bucharis halimitalia, Liguidam bat	Elaci	gnus umbelat	ra Vitis of,
Stream Flor Pros calloryana lonice	ra Rubus	no - also co	mon
mackii, Celastruz orbiculatis, Toxico dendro			
radicans, lacthonocissus avinquetolia			
Dominant Species in Herbaceous Layer:	Notes:		
Celastrus orbiculatis, toxicodinano	Phras	nites australi.	s along
indicans, ParthenoEissus quinquet olice	4 Strac	nife australi, edges a so	cathered
Bacharis halimifolia, lonico a juponi	a through	alt	
Harape (Reflection of the following a second of the second	0		
	vasive Specie		
High High	VCA, B	HA, LOMA,	CEOK,
Medium Medium Low	LUM, 1	OJA	
Low	4		
General Stand Conditions:			
DON - invasilles species	dam	and by	
POOT - invasives species dominant, heavy vine			
coverage stressing damaging trees			
and the second second	0 (- 1 1 1 1 1 1 1

Forest Stand ID: 145 Project: FSK Rebuild				
Owner/Applicant: MDTA	State: MD County: Baltimore City			
Date: 5 10 24 Prepared by: HT, HH	Photos: Southeast			
Type of Community: Nedgema	Forest Stand Area: 17775.93 Ft2			
Stand Successional Stage: Early Mid	Mature Percent Canopy Closure: 25%			
Existing V	Existing Vegetation			
Dominant Species in Canopy: Size Class:	Notes:			
Pyrus callesyana Populus alba Robinia pseudoacacia: Ligudambar 87 yraciflua 2-6" 6-11" 12-20" 20-30" >30"				
Dominant Species in Understory: Rusa multiflora Notes: Baccharis halimitalia Lenicea maackii, relativis Toxicode nd von radicans Lanicera, orbiculatis ja ponica Partheno cizsos yunquefolia Eleagnus umbellata Ampelopsis brevipedunculata				
Dominant Species in Herbaceous Layer: Phraymites australis, Ampelopas brevipsind vurlety conica japonica. Toxicode notwn radians				
Downed Woody Debris: Invasive Species Cover: Inv	asive Species Present:			
High Medium Low PYCA, BAHLA ROMO, LOMA, CEOR LOJA, ELUM, AMBR, PHAU				
General Stand Conditions: lacking density of trees to bot border line invasive species dominant,	vines climbing			

Forest Stand ID: 1 Hb Project: FSK Rebuild			Rebuild	
		tate: MD County: Baltimore C		
		Photos: northeast		
		1.00	. 14.66	
Type of Community: leagerow		Forest S	Stand Area: 23315,56	
Stand Successional Stage: Early Mid	Mature Mature	Percent	t Canopy Closure: 15%	
Exist	Existing Vegetation			
Dominant Species in Canopy: Size C				
1 gros carce quite,	-6" Jo	niperu	Surfahlance Acer , Quercus phellos	
DIDSPYNS VIO STARAN	2-20" 0-30"	utterd	throughout promision	
Prunus senting	-11		L'inguarie et	
Dominant Species in Understory:	Notes:	V.		
Bacchan's halimi Clia, Rosamult	itlora, Ele	agnos	umbellata, also common	
Lonicera japonica, Vitistap artice	Modis			
Lonicera maackii Rubus SP.				
Dominant Species in Herbaceous Layer:	Notes:			
VITIS SD Rosa multiflora Lonicer				
japonica Clastrus rbiculation		ov ado	cover	
phragmites australis, Ampelopsis				
brevi peduculata				
Downed Woody Debris: Invasive Species Cover:	Invasive Spec	ies Presen	nt:	
High High	PYCA	PAT	D, BAHA, LOMA,	
Medium Low Low	LOJA.	Romi	, CEOR	
)			
General Stand Conditions:				
Poor - invasive species dominant, vines covering				
most trees				
trees scattered with thee suplings and shrubs				
	P	0		
dense throughout				
		The second second		

Forest Stand ID.		I 10			
Forest Stand ID: 2H1			Project: FSK Rebuild		
Owner/Applicant: MDTA Sta		State: MD	County: Baltimore		
Date: 5/3/24 P	repared by: LP, ET	Photos:	9335		
Type of Community: Hedg			Forest Stand Area: 3, 119 ft2		
Stand Successional Stage:			Percent Canopy Closure: 30 %.		
Existing Vegetation					
Dominant Species in Canopy	y: Size Class	: Notes:			
Tree of Heaven	× 2-6"				
- White mulberry 6-11" 12-20" 20-30" >30"					
Dominant Species in Unders	tory:	Notes:			
-paison ivy -tree of heaven					
-baccharis hamiifolia -false indigo					
Dominant Species in Herbaceous Layer: · Poison iny · Japanese honeysuckee · -lescuesp.					
Downed Woody Debris:	Invasive Species Cover: I	nvasive Speci	es Present:		
·	[·	Trec of he	aven		
Medium	I I	white mulb	oeny no neysuckie		
Low	Low	OAPANESO	to the All troops of		
General Stand Conditions: h	ilgh invasive sp. cover, t	poor quarity	, narrow hedgerow between		
	road + river	()	,		
·					

Forest Stand ID: 2H2	Project: "	724 0 142	
		zsk Rebuild	
Owner/Applicant:	State: MD County: Ba Himorc		
Date: 5/3/24 Prepared by: 4, ET	Photos: 9339		
Type of Community: Hedgerow		Forest Stand Area: 1,574 f+2	
Stand Successional Stage:			
Existing V	egetation		
Size Class: Notes:			
Dominant Species in Understory: *tree of heaven • poison ivy	Notes:		
Dominant Species in Herbaceous Layer: - Polson lyy - Virginia Crecper - Japanese honeysuckie	Notes:		
 	vasive Specie ret of hea apanese h	s Present: IVEN oneysockie	
General Stand Conditions: high invasive cover, p	oor gluan	ty	

Forest Stand ID: 2H3		Project:	SK Rebuild	
Owner/Applicant: pa p T A State:			County	
	y: LP, ET	Photos: 0	240	Daminor
010104			<i>y</i>	
Type of Community: Hedgerow			Forest Stand Ar	ea: 1,159f+2
Stand Successional Stage: X Early	y Mid	Mature	Percent Canopy	Closure: 50%
	Existing V	egetation		
Size Class: Notes:			·	
Dominant Species in Understory: Golden Raintree Black cherry	1	Notes:		
Dominant Species in Herbaceous Layer of Golden Raintree ofescue sp. japanese honeysuckee	:	Notes:		
High Hig	th dium v	<u> </u>	aintrec oncysuckic	

Forest Stand ID: 244	Project: p	FSK Rebuild
		County: Barrimore
Date: 5/3/24 Prepared by: UP, ET	State: M	2hoto - 9369
orated	, , , , , , , , , , , , , , , , , , ,	200 () () () () () () () () () (
Type of Community: Hedgerow		Forest Stand Area: 10,600 ft2
	Mature	Percent Canopy Closure: 50%
	*	
Dominant Species in Canopy: Size Class:		
Dominant Species in Canopy: White Mulberry Size Class: X 2-6" 6-11" 12-20" 20-30" >30"		
Dominant Species in Understory:	Notes:	
-poison ivy -bacchars halimifolia -white mulberry		
Dominant Species in Herbaceous Layer: - poison ivy - virginia creeper - fescue op. - japanese hancysackie	Notes:	
	vasive Specie	
High Medium Low High Medium Low	paviese h	noneysuckic
General Stand Conditions: high invasive cover, poor of	ytirous	

The state of the s	7				
Forest Stand ID: 245		. / /	<u> </u>	roject: _[FSK Robuild
Owner/Applicant: MDTA State: MD County: Baltimora					
Date: 5/3/24	Prepared by:	U,ET	Ī	Photos:	pnoto - 9370,
Type of Community: Hed	gerow				Forest Stand Area: 2,100-ft2
Stand Successional Stage: X Early Mid Mature Percent Canopy Closure: L () %					
		Existin	ng Veg	etation	
Dominant Species in Cano	oy:	Size Cla		Notes:	
-siberian eim		12	11" -20" -30"	i	
Dominant Species in Under boscharis hamilmit siberlan elm paison ivy	story: Wid			Notes:	
Dominant Species in Herba Common mugwo: poison ivy japanese honeysuc virginia decper	Y+-			Notes:	
Downed Woody Debris:	Invasive Spec	ies Cover:			ies Present:
High Medium Low	High Medium Low		- jory - con	nmoh	: honeysuckie mugwon
General Stand Conditions:	high inv	asive cov	rer,	poor c	quality

Forest Stand ID: 2H6	Project: FSK Rebuild				
Owner/Applicant: MDTA	State: MD County: Baltimore				
Date: 5/7/24 Prepared by: LP, ET	Photos: 9351 - 52				
	4001- 27				
Type of Community: Hedgerow	Forest Stand Area: 5,037 ft-2				
	Mature Percent Canopy Closure: 40%				
Existing V	Existing Vegetation				
Dominant Species in Canopy: white mulberry, chinese am, black locust 2-6" × 6-11" 12-20" 20-30" >30"	Notes:				
Dominant Species in Understory: chinese privet multiflora rose, faise indigo,	Notes:				
Dominant Species in Herbaceous Layer: cunydock, wood reed, polson wy	Notes:				
High Medium Low High Medium Chi Non	rasive Species Present: nosc elm nite mulbeny ninese privet nutifiora vose.				
General Stand Conditions: Poor Condition hedgerow on berm between	river 3 wetland.				

Forest Stand ID: [21]				11010	
1 0 7 1			Ject: FSK Rebuild		
Owner/Applicant: MD7		State: MD County: Baltin		County: Baltimore	
Date: 5/7/24	Prepared by: UP, ET	Photos:	935	7	
			;		
Type of Community: Hec	"		Forest	Stand Area: 3, 894 ft 2	
Stand Successional Stage:	Early Mid	Mature	Percer	nt Canopy Closure: リウモ	
	Existing	y Vegetation			
Dominant Species in Canabiack locust, tree of Chinese esm,	Size Class F heaven, 2-6' 6-11 12-2 20-3 >30'	" "0" 60"			
Dominant Species in Understory: Tree of heaven, black cherry, baccharis halimitalia Chinese Privet					
Dominant Species in Herb virginia creeper, \$	aceous Layer: 1015 on 144, japanese honeysu	Notes:			
Downed Woody Debris:	Invasive Species Cover:	nvasive Speci	es Prese	ent:	
High Medium Low	High Medium	Tree of hea Chinese en Chinese priv Tapanese	veri n ct	-	
General Stand Conditions:					
poor quality, his	n vasives				

Forest Stand ID: 248	Project: FSK Rebuild		
Owner/Applicant: MITA	State: MD County: Bartimore		
Date: 5/7/24 Prepared by: LP, ET	Photos: 9363 - 64		
Type of Community: Hedgerow	Forest Stand Area: 91, 902 ft2		
Stand Successional Stage: X Early Mid	Mature Percent Canopy Closure: 50%		
Existing V	'egetation		
Dominant Species in Canopy: Size Class:	Notes:		
tree of heaven, white mulberry, brad ford pear, sweet gum, black locust, cottonwood 2-6" 6-11" 12-20" 20-30"			
Dominant Species in Understory: tree of heaven, fanse in digo, baccharis, halmitolia, black locust, sweet gum			
Dominant Species in Herbaceous Layer: Poison ivy, virginia creeper, japanese honeys phragmites australis, rice cut grass	Notes:		
Downed Woody Debris: Invasive Species Cover: Inv	vasive Species Present:		
High High	et of heaven inite mulbery		
Medium Low Medium Low	radfont pear apancie noneysuelle. Phragmites australis		
. p	hragmines australes		
General Stand Conditions: poor quanty, high invo	mive, some MOTA planting areas		
excluded from hedgere Tree density does not meet definition o	3W		

APPENDIX E: PHOTOGRAPH LOG

WETLAND DELINEATION PHOTOGRAPHS



Photo 1 – Looking southwest at 1WETB



Photo 2 – Looking northeast at 1WETC



Photo 3 – Looking southwest at 1WETD



Photo 4 – Looking west at 1WETE



Photo 5 – Looking northeast at 1WETF



Photo 6 – Looking southwest at 1WETG



Photo 7 – Looking east at 1WETH



Photo 8 – Looking northwest at 1WETI



Photo 9 – Looking south at 1WETJ



Photo 10 – Looking southwest at 2WETA



Photo 11 – Looking southwest at 2WETB



Photo 12 – Looking northeast at Photo 2WETC



Photo 13 – Looking northeast at 2WETD

FOREST STAND PHOTOGRAPHS



Photo 1: Looking west at 1FS1



Photo 2: Looking southwest at 1FS2



Photo 3: Looking northeast at 1FS3



Photo 4: Looking east at 1FS4



Photo 5: Looking northwest at 1FS5



Photo 6: Looking northwest at 1FS6



Photo 7: Looking west at 1FS7



Photo 8: Looking south at 1FS8

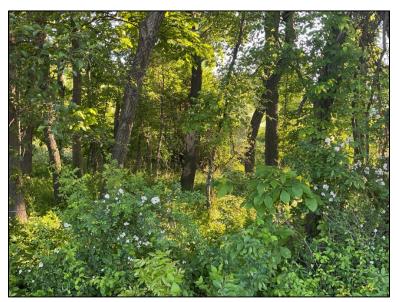


Photo 9: Looking north at 1FS9



Photo 10: Looking east at 1FS10



Photo 11: Looking east at 1FS11



Photo 12: Looking southwest at 1FS12



Photo 13: Looking southwest 1FS13

HEDGEROW PHOTOGRAPHS



Photo 1: Looking north at 1H1



Photo 2: Looking west at 1H2



Photo 3: Looking north at 1H3



Photo 4: Looking northwest at 1H4



Photo 5: Looking southwest at 1H5



Photo 6: Looking west at 1H6



Photo 7: Looking at 2H1



Photo 8: Looking at 2H2



Photo 9: Looking at 2H3



Photo 10: Looking at 2H4



Photo 11: Looking at 2H5



Photo 12: Looking at 2H6



Photo 13: Looking at 2H7



Photo 14: Looking at 2H8



Photo 15: Looking at 2H9

Francis Scott Key Bridge Rebuild Project-Natural Resource Inventory Repor	Francis Scott Ke	v Bridge Rebuild Pro	iect-Natural Resource I	Inventory Report
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APPENDIX F: HEDGEROW SUMMARY TABLE

Appendix F: Francis Scott Key Bridge Rebuild Project Hedgerow Summary Table

Hedgerow ID	Dominant Species in Canopy	Size Class	Dominant Species in Understory	Dominant Species in Herbaceous Layer	Comments Small hedgerow on highway slope.	
1H1 (NRI Map Sheets 2 and 3)	Pyrus calleryana	2-6"	Baccharis halimifolia	Lonicera japonica Phragmites australis		
1H2 (NRI Map Sheets 3 and 4)	Robinia pseudoacacia Morus alba Acer negundo Ailanthus altissima Pyrus calleryana Ulmus americana Quercus phellos Quercus palustris	2-6"	Baccharis halimifolia Rosa multiflora Amorpha fruticosa Koelreuteria paniculata Lonicera maackii Viburnum sp. Toxicodendron radicans Lonicera japonica Hedera helix Parthenocissus quinquefolia Celastrus orbiculatus	Toxicodendron radicans Lonicera japonica Hedera helix Parthenocissus quinquefolia Celastrus orbiculatus	High invasive species cover in canopy and understory. Trees in fair health with many climbing vines.	
1H3 (NRI Map Sheet 2)	Robinia pseudoacacia Liquidambar styraciflua	2-6"	Baccharis halimifolia Lonicera maackii Ailanthus altissima Lonicera japonica Celastrus orbiculatus Toxicodendron radicans	Lonicera japonica Celastrus orbiculatus Toxicodendron radicans Parthenocissus quinquefolia	Poor condition with high invasive cover; vines covering most of the woody vegetation and damaging native tree species	
1H4 (NRI Map Sheets 1 and 2)	Robinia pseudoacacia Liquidambar styraciflua Pyrus calleryana	2-6"	Rosa multiflora Baccharis halimifolia Ampelopsis brevipedunculata Liquidambar styraciflua Pyrus calleryana Lonicera maackii Elaeagnus umbellata Celastrus orbiculatus Toxicodendron radicans Lonicera japonica Parthenocissus quinquefolia	Phragmites australis Ampelopsis brevipedunculata Toxicodendron radicans Lonicera japonica	Poor condition with high invasive species and vine coverage which are causing damage to trees.	
1H5 (NRI Map Sheet 1)	Pyrus calleryana Populus alba Robinia pseudoacacia Liquidambar styraciflua	2-6"	Rosa multiflora Baccahris halimifolia Lonicera maackii Toxicodendron radicans Lonicera japonica Parthenocissus quinquefolia Eleagnus umbellata Ampelopsis brevipedunculata Celastrus orbiculatus	Phragmites australis Ampelopsis brevipedunculata Lonicera japonica Toxicodendron radicans	Did not qualify as a forest due to tree density. High invasive species and heavy vine coverage.	
1H6 (NRI Map Sheet 1)	Pyrus calleryana Liquidambar styraciflua Diospyros virginiana Prunus serotina	2-6"	Baccharis halimifolia Rosa multiflora Lonicera japonica Lonicera maackii Ampelopsis brevipedunculata Vitis sp. Rubus sp.	Vitis sp. Rosa multiflora Lonicera japonica Celastrus orbiculatus Phragmites australis Ampelopsis brevipedunculata	Poor condition with high invasive species and vines covering most trees. Trees are scattered with saplings and shrubs throughout.	
2H1 (NRI Map Sheet 6)	Ailanthus altissima Morus alba	2-6"	Toxicodendron radicans Ailanthus altissima Baccharis halimifolia Amorpha fruticosa	Toxicodendron radicans Lonicera japonica Festuca sp.	High invasive cover, poor quality, narrow hedgerow between road and the river	
2H2 (NRI Map Sheet 5)	Ailanthus altissima	2-6"	Ailanthus altissima Toxicodendron radicans	Toxicodendron radicans Parthenocissus quinquefolia Lonicera japonica	High invasive cover, poor quality	

Hedgerow ID	Dominant Species in Canopy	Size Class	Dominant Species in Understory	Dominant Species in Herbaceous Layer	Comments
2H3 (NRI Map Sheet 5)	Koelreuteria paniculata	2-6"	Koelreuteria paniculata Prunus serotina	Koelreuteria paniculata Festuca sp. Lonicera japonica	High invasive cover, poor quality
2H4 (NRI Map Sheets 5 and 6)	Morus alba	2-6"	Toxicodendron radicans Baccharis halimifolia Morus alba	Toxicodendron radicans Parthenocissus quinquefolia Festuca sp. Lonicera japonica	High invasive cover, poor quality
2H5 (NRI Map Sheet 6)	Ulmus pumila	6-11"	Baccharis halimifolia Ulmus pumila Toxicodendron radicans	Artemisia vulgaris Toxicodendron radicans Lonicera japonica Parthenocissus quinquefolia	High invasive cover, poor quality
2H6 (NRI Map Sheet 6)	Morus alba Robinia pseudoacacia Ulmus parvifolia	6-11"	Ligustrum sinense Rosa multiflora Amorpha fruticosa	Cinna arundinacea Toxicodendron radicans Rumex crispus	Poor condition hedgerow on berm between Patapsco River and wetland
2H7 (NRI Map Sheet 6)	Robinia pseudoacacia Ailanthus altissima Ulmus parvifolia	2-6"	Ailanthus altissima Prunus serotina Baccharis halimifolia Ligustrum sinense	Parthenocissus quinquefolia Toxicodendron radicans Lonicera japonica	High invasive cover, poor quality
2H8 (NRI Map Sheets 6 and 7)	Ailanthus altissima Morus alba Pyrus calleryana Liquidambar styraciflua Robinia pseudoacacia Populus deltoides	6-11"	Ailanthus altissima Amorpha fruticosa Baccharis halimifolia Liquidambar styraciflua Robinia pseudoacacia	Toxicodendron radicans Parthenocissus quinquefolia Lonicera japonica Phragmites australis Leersia oryzoides	High invasive cover, poor quality. MDTA planting areas were excluded from hedgerow. Tree density does not meet definition of a forest
2H9 (NRI Map Sheet 7)	Ailanthus altissima Robinia pseudoacacia Diospyros virginiana	2-6"	Koelreuteria paniculata Ailanthus altissima Rosa multiflora Amorpha fruticosa Baccharis halimifolia	Toxicodendron radicans Parthenocissus quinquefolia Lonicera japonica Galium aparine	High invasive cover, poor quality

APPENDIX G: TREE TABLE

APPENDIX G: FRANCIS SCOTT KEY BRIDGE REBUILD PROJECT TREE AND SHRUB TABLE

Tree ID*	Common Name	Scientific Name	DBH	Condition	Comment
1T1	Eastern cottonwood	Populus deltoides	30	Fair	Broken branches, heavy vines, twin trunks 30" & 29"
1T2	White mulberry	Morus alba	14	Poor	Significant lean, growing partially horizontal, heavy vine load, dead branches
1T3	Tree of heaven	Ailanthus altissima	4	Fair	Lean, vines on lower trunk
1T4	Black cherry	Prunus serotina	11	Fair/Poor	Vines in lower crown, broken branches
1T5	Black cherry	Prunus serotina	6	Fair/Poor	Minor trunk decay, vines on trunk
1T6	Black cherry	Prunus serotina	8	Fair/Poor	Minor trunk decay, vines on trunk
1T7	Bradford pear	Pyrus calleryana	10	Fair/Poor	overtopped by vines, exposed roots on slope, twin trunks 10" & 7"
1T8	Common hackberry	Celtis occidentalis	16	Fair/Poor	Heavy vines in lower canopy, slight lean, exposed roots on slope
1T9	Siberian elm	Ulmus pumila	28	Fair/Poor	High vine load in lower crown, some broken branches, exposed roots on slope
		•			
1T10	White mulberry	Morus alba	8	Fair	Healed trunk wounds, dead branches
1T11	Black locust	Robinia pseudoacacia	23	Poor	Heavy vines on trunk and crown, significant broken branches, exposed roots on slope, dead secondary leader
1T12	Black locust	Robinia pseudoacacia	8	Fair/Poor	Heavy vines on trunk, broken branches, some bark damage
1T13	Black locust	Robinia pseudoacacia	2	Fair	Lean overtopped by adjacent vegetation
1T14	Black locust	Robinia pseudoacacia	8	Poor	Heavy vine load into crown, main tree tipped over
1T15	Black locust	Robinia pseudoacacia	14	Poor	Extensive vines into crown of tree, dead secondary trunk
1T16	Bradford pear	Pyrus calleryana	6	Fair	Vines in lower canopy, broken branches, growing on slope
1T17	Eastern cottonwood	Populus deltoides	12	Fair	Minor dead branches, minor vines on trunk
1T18	Common persimmon	Diospyros virginiana	2	Fair	Irregular trunk
1T19	Black cherry	Prunus serotina	4	Fair	Lean, broken branches
1T20	Black cherry	Prunus serotina	5	Poor	Overtopped by vines, trunk dammage
1T21	Callery pear	Pyrus calleryana	9	Fair	With vines, secondary leaders 7.5" & 2"
1T22	Willow oak	Quercus phellos	32	Good	
1T23	Willow oak	Quercus phellos	30	Good/Fair	Fused with a sweetgum
1T24	Willow oak	Quercus phellos	32	Good	
1T25	Willow oak	Quercus phellos	35	Good	
1T26	Willow oak	Quercus phellos	32	Good	
1T27	Willow oak	Quercus phellos	31	Fair	Reduced canopy
1T28 1T29	Willow oak American elm	Quercus phellos Ulmus americana	34	Good Good	
1T30	Persimmon	Diospyros virginiana	2	Good	
1T31	Siberian elm	Ulmus pumila	1	Good	
1T32	Siberian elm	Ulmus pumila	1	Fair	
1T33	Siberian elm	Ulmus pumila	1	Poor	Trunk rot
1T34	Siberian elm	Ulmus pumila	6	Fair	Trunk rot
1T35	Siberian elm	Ulmus pumila	6	Good	
1T36	Staghorn sumac	Rhus typhina	1	Fair	
1T37	Staghorn sumac	Rhus typhina	1	Fair	
1T38	Staghorn sumac	Rhus typhina	1	Fair	
2T1	Hawthorn sp.	Crataegus sp.	3	Good/Fair	deadwood
2T2	Hawthorn sp.	Crataegus sp.	3	Poor	half dead
2T3	Hawthorn sp.	Crataegus sp.	3	Good/Fair	deadwood
2T4	Willow Oak	Quercus phellos	10	Good/Fair	deadwood
2T5	Black Willow	Salix nigra	7	Fair	deadwood, vines, 6" and 5" secondary leaders
2T6	White Mulberry	Morus alba	3	Good	
2T7	Eastern Red Cedar	Juniperus virginiana	9	Good	
2T8 2T9	White Mulberry White Mulberry	Morus alba Morus alba	6 3	Good Good	
219 2T10	Common Yew	Taxus baccata	4	Good	pruned
2T10 2T11	Common Yew	Taxus baccata	4	Good	pruned
2T12	Common Yew	Taxus baccata	4	Good	pruned
2T13	Common Yew	Taxus baccata	4	Good	pruned
2T14	Common Yew	Taxus baccata	4	Good	pruned
2T15	Common Yew	Taxus baccata	4	Good	pruned
2T16	Small-Leaved Lime	Tilia cordata	15	Good	
2T17	Smokebush	Cotinus coggygria	2	Fair	deadwood
2T18	Bradford Pear	Pyrus calleryana	11	Good	
2T19	Red Pine	Pinus resinosa	10	Good	
2T20	Red Pine	Pinus resinosa	10	Good	
2T21	Red Pine	Pinus resinosa	8	Good	
2T22	Red Pine	Pinus resinosa	8	Good	
2T23	Red Pine	Pinus resinosa	8	Good	
2T24	Red Pine	Pinus resinosa	10	Good	
2T25	Red Pine	Pinus resinosa	12	Good	
2T26	Red Pine	Pinus resinosa	10	Good	
2T27	Red Pine	Pinus resinosa	6	Good	
2T28	Red Pine	Pinus resinosa	7	Good	
2T29 2T30	Small-Leaf Lime	Tilia cordata Styphnolobium japonicum	14 17	Good Fair/Poor	houbeah arizantya
2T31	Japanese Pagoda Japanese Pagoda	Styphnolobium japonicum Styphnolobium japonicum	11	Fair/Poor Fair	extensive deadwood deadwood
2T32	Japanese Pagoda	Styphnolobium japonicum	15	Fair	deadwood
2T32	Red Pine	Pinus resinosa	11	Fair	heavy vines
2T34	Red Pine	Pinus resinosa	13	Fair	10" secondary leader, heavy vines
					== ===================================

Tree ID*	Common Name	Scientific Name	DBH	Condition	Comment
2T35	Tree of Heaven	Ailanthus altissima	6	Fair	heavy vines
2T36	Common Persimmon	Diospyros virginiana	7	Good	
2T37	Hackberry	Celtis occidentalis	6	Poor	extensive deadwood
2T38	Tree of Heaven	Ailanthus altissima	8	Fair	broken leader
2T39	Tree of Heaven	Ailanthus altissima	6	Fair	vines
2T40	Common Persimmon	Diospyros virginiana	2	Good	
2T41	Hackberry	Celtis occidentalis	3	Fair	heavy vines
2T42	Common Persimmon	Diospyros virginiana	6	Good	
2T43	Common Persimmon	Diospyros virginiana	3	Good	
2T44	Common Persimmon	Diospyros virginiana	3	Good	
2T45	Siberian Elm	Umus pumilla	24	Fair	heavy vines
2T46	Tree of Heaven	Ailanthus altissima	12	Fair	deadwood
2T47	Tree of Heaven	Ailanthus altissima	5	Good	
2T48	Tree of Heaven	Ailanthus altissima	8	Good/Fair	deadwood
2T49	Tree of Heaven	Ailanthus altissima	4	Good/Fair	deadwood
2T50	Tree of Heaven	Ailanthus altissima	3	Good/Fair	deadwood
2T51	Tree of Heaven	Ailanthus altissima	14	Good/Fair	deadwood
2T52	Tree of Heaven	Ailanthus altissima	4	Good	
2T53	Tree of Heaven	Ailanthus altissima	2	Good	
2T54	Black Locust	Robinia pseudoacacia	14	Fair/Poor	extensive trunk damage
2T55	Tree of Heaven	Ailanthus altissima	6	Fair	deadwood
2T56	Tree of Heaven	Ailanthus altissima	5	Fair	deadwood
2T57	Tree of Heaven	Ailanthus altissima	5	Fair	deadwood
2T58	Tree of Heaven	Ailanthus altissima	8	Fair/Poor	extensive deadwood
2T59	Tree of Heaven	Ailanthus altissima	13	Poor	extensive deadwood, broken leader
2T60	Willow Oak	Quercus phellos	2	Fair	deadwood, sprouting
2T61	Willow Oak	Quercus phellos	2	Poor	mostly dead
2T62	Willow Oak	Quercus phellos	2	Fair/Poor	deadwood, sprouting
2T63	Red Maple	Acer rubrum	2	Poor	mostly dead
2T64	Bradford Pear	Pyrus calleryana	2	Good	
2T65	Red Maple	Acer rubrum	2	Fair/Poor	extensive deadwood
2T66	Red Maple	Acer rubrum	2	Fair/Poor	extensive deadwood
					extensive deadwood
2T67	Kentucky Yellowwood	Cladrastris kentukea	2	Good	extensive deadwood
2T67 2T68	Kentucky Yellowwood Kentucky Yellowwood	Cladrastris kentukea Cladrastris kentukea			deadwood, trunk damage
-	•		2	Good	
2T68	Kentucky Yellowwood	Cladrastris kentukea	2	Good Fair	deadwood, trunk damage
2T68 2T69 2T70 2T71	Kentucky Yellowwood Kentucky Yellowwood	Cladrastris kentukea Cladrastris kentukea	2 2 2	Good Fair Fair	deadwood, trunk damage
2T68 2T69 2T70	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus	2 2 2 2	Good Fair Fair Good	deadwood, trunk damage
2T68 2T69 2T70 2T71	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Kentucky Coffee Tree	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus	2 2 2 2 2 2 2 2	Good Fair Fair Good Good Good Fair/Poor	deadwood, trunk damage
2T68 2T69 2T70 2T71 2T72	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Kentucky Coffee Tree Kentucky Coffee Tree	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus	2 2 2 2 2 2	Good Fair Fair Good Good	deadwood, trunk damage deadwood, trunk damage
2T68 2T69 2T70 2T71 2T72 2T73	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Kentucky Coffee Tree Kentucky Coffee Tree Kentucky Coffee Tree	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus	2 2 2 2 2 2 2 2	Good Fair Fair Good Good Good Fair/Poor	deadwood, trunk damage deadwood, trunk damage extensive deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Kentucky Coffee Tree Kentucky Coffee Tree Kentucky Coffee Tree Kentucky Coffee Tree	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus	2 2 2 2 2 2 2 2 2	Good Fair Fair Good Good Good Fair/Poor Fair/Poor	deadwood, trunk damage deadwood, trunk damage extensive deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Kentucky Coffee Tree Kentucky Coffee Tree Kentucky Coffee Tree Kentucky Coffee Tree Siberian Elm	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila	2 2 2 2 2 2 2 2 2 2 7	Good Fair Fair Good Good Good Fair/Poor Fair/Poor Good	deadwood, trunk damage deadwood, trunk damage extensive deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima	2 2 2 2 2 2 2 2 2 7 3	Good Fair Fair Good Good Good Fair/Poor Fair/Poor Good Good	deadwood, trunk damage deadwood, trunk damage extensive deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima	2 2 2 2 2 2 2 2 2 7 3 3	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good	deadwood, trunk damage deadwood, trunk damage extensive deadwood
2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ulmus americana	2 2 2 2 2 2 2 2 7 3 3 4 8 6	Good Fair Fair Good Good Good Fair/Poor Fair/Poor Good Good Good Good Good Good	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood
2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2778 2779 2780 2781	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima	2 2 2 2 2 2 2 2 7 3 3 4 8 6	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood
2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Robina pseudoacacia	2 2 2 2 2 2 2 2 7 3 3 4 8 6	Good Fair Fair Good Good Good Fair/Poor Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T79 2T80 2T81 2T82	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Climus americana Ailonthus altissima Robina pseudoacacia Baccharis halimifolia	2 2 2 2 2 2 2 2 7 3 3 4 8 6	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T79 2T80 2T81 2T81	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven Black Locust	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Robina pseudoacacia	2 2 2 2 2 2 2 7 3 3 4 8 6 3 4 <1.5 <1.5	Good Fair Fair Good Good Fair/Poor Fair/Poor Good Good Good Good Good Good Fair/Poor Good Good Fair/Poor Good Good Fair/Poor	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T79 2T80 2T81 2T82	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven Black Locust Grounseltree	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Climus americana Ailonthus altissima Robina pseudoacacia Baccharis halimifolia	2 2 2 2 2 2 2 7 3 3 4 8 6 3 4 <1.5	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T79 2T80 2T81 2T82 1S1 1S2 1S3	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven American Elm Tree of Heaven Groundseltree Groundseltree	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bilanthus altissima Ulmus americana Ailanthus altissima Robina pseudoacacia Baccharis halimifolia	2 2 2 2 2 2 2 7 3 3 4 8 6 3 4 <1.5 <1.5	Good Fair Fair Good Good Good Fair/Poor Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
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2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T78 2T80 2T81 2T82 151 152 153 154 155	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven Groundseltree Groundseltree Groundseltree White Mulberry Unknown Boxwood	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bilanthus altissima Ailanthus altissima Ulmus americana Ailanthus altissima Robina pseudoacacia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia	2 2 2 2 2 2 2 7 3 3 4 8 6 6 3 4,<1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T79 2T80 2T81 2T82 1S1 1S2 1S3	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven American Elm Tree of Heaven Groundseltree Groundseltree Groundseltree Groundseltree Groundseltree White Mulberry Unknown Boxwood Japanese Pagoda	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailonthus altissima Ailonthus altissima Ailonthus altissima Ailonthus altissima Ailonthus altissima Ailonthus altissima Bailonthus altissima Ailonthus altissima Ailonthus altissima Ulmus americana Ailonthus altissima Robina pseudoacacia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia	2 2 2 2 2 2 2 7 3 3 4 8 6 6 3 4 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T78 2T80 2T81 2T82 151 152 153 154 155	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven Groundseltree Groundseltree Groundseltree White Mulberry Unknown Boxwood	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bacharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis pseudocacla Baccharis halimifolia	2 2 2 2 2 2 2 7 3 3 4 8 6 6 3 4,<1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T79 2T80 2T81 2T82 151 152 153 154 155 156 157 158	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven American Elm Tree of Heaven Groundseltree Groundseltree Groundseltree Groundseltree Groundseltree White Mulberry Unknown Boxwood Japanese Pagoda	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bainthus altissima Ailanthus altissima Ailanthus altissima Ulmus americana Ailanthus altissima Robina pseudoacacia Baccharis halimifolia	2 2 2 2 2 2 2 7 3 3 4 8 6 3 4 4.1.5 <1.5 <1.5 <1.5 <1.5 1.5<br <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T78 2T80 2T81 2T82 151 152 153 154 155 156 157 158	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven Grounseltree Groundseltree Groundseltree Groundseltree White Mulberry Unknown Boxwood Japanese Pagoda False Indigo False Indigo False Indigo	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bacharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis pseudocacla Baccharis halimifolia	2 2 2 2 2 2 2 2 7 3 3 4 8 6 6 3 4 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T79 2T80 2T81 2T82 151 152 153 154 155 156 157 158	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven Grounseltree Groundseltree Groundseltree Groundseltree White Mulberry Unknown Boxwood Japanese Pagoda False Indigo False Indigo	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bailanthus altissima Ailanthus altissima Ulmus americana Ailanthus altissima Robina pseudoacacia Baccharis halimifolia	2 2 2 2 2 2 2 7 3 3 4 8 6 3 4 4.1.5 <1.5 <1.5 <1.5 <1.5 1.5<br <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T78 2T80 2T81 2T82 151 152 153 154 155 156 157 158	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven Grounseltree Groundseltree Groundseltree Groundseltree White Mulberry Unknown Boxwood Japanese Pagoda False Indigo False Indigo False Indigo	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bailanthus altissima Ailanthus altissima Ailanthus altissima Bainthus altissima Robina pseudoacacia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Amorus alba Buxus sp. Styphnolobium japonicum Amorpha fruticosa Amorpha fruticosa	2 2 2 2 2 2 2 7 3 3 4 8 6 3 4 4.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2T68 2T69 2T70 2T71 2T72 2T73 2T74 2T75 2T76 2T77 2T78 2T78 2T78 2T80 2T81 2T82 1S1 1S2 1S3 1S4 1S5 1S6 1S7 1S8 1S9	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven Black Locust Grounseltree Groundseltree Groundseltree White Mulberry Unknown Boxwood Japanese Pagoda False Indigo False Indigo Tree of Heaven	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bailanthus altissima Ailanthus altissima Ailanthus altissima Bainthus altissima Robina pseudoacacia Baccharis halimifolia Amorus alba Buxus sp. Styphnolobium japonicum Amorpha fruticosa Amorpha fruticosa Ailanthus altissima	2 2 2 2 2 2 2 7 3 3 4 8 6 6 3 4 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5 <1.5	Good Fair Fair Good Good Good Good Good Good Good Goo	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 151 152 153 154 155 156 157 158 159 1510 1511 1512	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven Black Locust Groundseltree White Mulberry Unknown Boxwood Japanese Pagoda False Indigo False Indigo Tree of Heaven Tree of Heaven	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Robina pseudoacacia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Amorus alba Buxus sp. Styphnolobium japonicum Amorpha fruticosa Amorpha fruticosa Amorpha fruticosa Ailanthus altissima Ailanthus altissima	2 2 2 2 2 2 2 7 3 3 4 8 6 6 3 4 4 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 151 152 153 154 155 156 157 158 159 1511 1512 1511	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven Groundseltree Hitelandseltree Groundseltree Hitelandseltree Groundseltree	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bacharis halimifolia Baccharis halimifolia Amorus alba Buxus sp. Styphnolobium japonicum Amorpha fruticosa Amorpha fruticosa Alianthus altissima Ailanthus altissima Cercis canadensis	2 2 2 2 2 2 2 7 3 3 4 8 6 6 3 4 4 (1.5 (1.5 (1.5 (1.5 (1.5 (1.5 (1.5 (1.5	Good Fair Fair Good Good Good Good Good Good Good Goo	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood
2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 151 152 153 154 155 156 157 158 159 1510 1511 1512	Kentucky Yellowwood Kentucky Yellowwood Kentucky Coffee Tree Siberian Elm Tree of Heaven Tree of Heaven Tree of Heaven American Elm Tree of Heaven Black Locust Grounseltree Groundseltree Groundseltree Groundseltree White Mulberry Unknown Boxwood Japanese Pagoda False Indigo False Indigo Tree of Heaven Tree of Heaven Fastern Redbud Eastern Redbud	Cladrastris kentukea Cladrastris kentukea Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Gymnocladus dioicus Ulmus pumila Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Ailanthus altissima Bacinatis altissima Robina pseudoacacia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Baccharis halimifolia Amorus alba Buxus sp. Styphnolobium japonicum Amorpha fruticosa Amorpha fruticosa Ailanthus altissima Ailanthus altissima Cercis canadensis	2 2 2 2 2 2 2 7 3 3 4 8 6 3 4 4 4.1.5 4.1.	Good Fair Fair Good Good Good Fair/Poor Good Good Good Good Good Good Good G	deadwood, trunk damage deadwood, trunk damage extensive deadwood extensive deadwood deadwood