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MEMORANDUM

Date: May 26, 2021

To: Maryland Department of Natural Resources (DNR) Forest Service

From: Greg O'Hare, LPF, PWS, CA

CC: Jim Ashe & David Arnone – WMATA
Sarah Falcone – RK&K
Tom Kirby and Sameer Shukla - AECOM

Re: Wilson Lane Trestle Bridge Demolition Project – Natural Resources Inventory/Forest Stand Delineation

EXECUTIVE SUMMARY

The Washington Metropolitan Area Transit Authority (WMATA) is proposing to demolish the deteriorated Wilson Lane trestle bridge structure on WMATA and National Park Service property in the Chesapeake and Ohio (C&O) Canal National Historic Park (NHP) and adjacent to U.S. Army Corps of Engineers (USACE) Washington Aqueduct property to address a significant public safety hazard. RK&K conducted a natural resources inventory/forest stand delineation (NRI/FSD) within the Wilson Lane Trestle Bridge Demolition project study area in September and October 2020 and February 2021. One perennial waters of the U.S., one forest stand, and 441 trees, including 20 specimen trees, were identified within the study area.

INTRODUCTION

RK&K conducted an NRI/FSD within the Wilson Lane Trestle Bridge Demolition project study area in September and October 2020 and February 2021. The study area is located adjacent to and within the C&O Canal NHP in Bethesda, Montgomery County, MD (**Appendix A, Figure 1**), just south of the Wilson Lane/MacArthur Boulevard intersection.

WMATA is proposing to demolish the Wilson Lane trestle bridge structure that was constructed in 1896 as part of the West Washington & Glen Echo Electric Railroad/Glen Echo Trolley Line. The trestle bridge spans a wooded stream valley on WMATA and NPS property within the C&O Canal NHP and USACE Washington Aqueduct property that is bordered by MacArthur Boulevard to the north, residential area to the east, NPS parkland to the south, and the Cabin John Aqueduct Bridge to the west. The trolley line was abandoned in 1960 and has fallen into disrepair including large patches of rust, wood rot, and concrete deterioration along the trestle bridge structure, posing a significant public safety hazard.

Supplemental information supporting the NRI is included in Appendices A through E, as follows:

Appendix A: Figures
Appendix B: Photographic Record

Appendix C: Data Sheets
Appendix D: Agency Correspondence
Appendix E: Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) Plans

BACKGROUND INFORMATION

RK&K environmental scientists conducted a desktop investigation of mapped information, prior to beginning the field investigation. The desktop investigation of the available mapped information identified site topography; hydric and highly erodible soils; non-tidal waters and wetlands and their associated buffers; and 100-year floodplain. Mapped resources reviewed for this project included:

- Montgomery County Topographic Geographic Information System (GIS) data (2-foot contours)
- The United States Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS) Web Soil Survey (WSS) for Montgomery County
- Maryland Department of Natural Resources (DNR) Wetlands and Waters GIS data
- National Wetlands Inventory (NWI) GIS data
- Federal Emergency Management Agency (FEMA) GIS data
- Montgomery County 100-year floodplain GIS data

Letters requesting database review for rare, threatened and endangered species, and cultural resources were sent to the following agencies:

- MDNR Wildlife and Heritage Section (MDNR-WH)
- MDNR Environmental Review Program (MDNR-ERP)
- U.S. Fish and Wildlife Service (USFWS)

Desktop investigation results are summarized below:

Geology and Topography

The project study area is located in the Eastern Mountains and Piedmont physiographic province which is comprised of hard, crystalline igneous and metamorphic rocks that extend from the inner edge of the Coastal Plain westward to the Blue Ridge Physiographic Province. Bedrock in the eastern part of the Piedmont consists of schist, gneiss, gabbro, and other highly metamorphosed sedimentary and igneous rocks. Elevations within the project study area range from approximately 92 to 156 feet above sea level (**Appendix A**, **Figure 1**).

Soils

The USDA-NRCS Web Soil Survey for Montgomery County identified six mapped soil units within the project study area, none of which are classified as hydric (**Appendix A, Figure 2 & Table 1**).

Table 1: Mapped Soils

Symbol	Soil Type	K-Factor*	Hydric Rating**	
2C	Glenelg silt loam, 8 to 15 percent slopes	0.37	0	Non-hydric
2UB	Glenelg-Urban land complex, 0 to 8 percent	0.28	0	Non-hydric

Symbol	Soil Type	K-Factor*	Hydric Rating**	
	slopes			
2UC	Glenelg-Urban land complex, 8 to 15 percent slopes	0.28	0	Non-hydric
6A	Baile silt loam, 0 to 3 percent slopes	0.37	85	Predominantly hydric
16D	Brinklow-Blocktown channery silt loams, 15 to 25 percent slopes	0.24	5	Predominantly non-hydric
116E	Blocktown channery silt loam, 25 to 45 percent slopes, very rocky	0.28	5	Predominantly non-hydric

**Erodibility Coefficient – Value assigned to soil types by NRCS. K > 0.35 are considered to be highly erodible soils*

***Hydric Rating – Value is based on the percentage of hydric soils within the soil type. Non-hydric soils have a value of 0, predominantly non-hydric soils have a value between 0 and 33, partially hydric soils have a value between 33 and 66, predominantly hydric soils have a value between 66 and 99, and hydric soils have a value of 100.*

Wetlands and Waters of the United States

The project is located within the Cabin John Creek Watershed (02140207). NWI mapping identified one permanently flooded unknown perennial riverine with an unconsolidated bottom (R5UBH) within the study area (**Appendix A, Figure 2**). No wetlands were identified by DNR or NWI mapping within the study area.

100-Year Floodplain

The study area falls outside of the Federal Emergency Management Agency (FEMA) and Montgomery County 100-year floodplains, according to FEMA and Montgomery County GIS data.

Rare, Threatened, and Endangered Species

Letters requesting information on the presence of rare, threatened, or endangered species (RTE), and fisheries resources were sent to MDNR-WH and MDNR-ERP on April 28, 2020. MDNR-WH responded in a letter dated May 20, 2020 that there are no official State or Federal records for listed plant or animal species within the study area. MDNR-ERP responded in a letter dated May 12, 2020 that the project will impact an unnamed tributary to the C&O Canal, a Use I-P stream, and that no in-stream work is allowed in Use I-P streams from March 1 through June 15 of any given year. In addition, the approved sediment and erosion control plan should be followed during all phases of work to lessen stream impacts. The USFWS preliminary online database was reviewed on June 15, 2020 and the query indicated that the Northern Long-eared Bat (*Myotis septentrionalis*) may reside within the study area; however, since tree clearing associated with project construction will be less than 15 acres, impacts to this species are not a concern. Agency correspondence can be found in **Appendix D**.

Cultural Resources

A letter requesting project review and comment was submitted to the Maryland Historic Trust on March 22, 2021 (**Appendix D**). Coordination with MHT is ongoing.

FIELD INVESTIGATIONS

WETLANDS AND WATERS OF THE U.S. INVESTIGATION - Methods

A team of two environmental scientists investigated waters of the U.S., including wetlands, within the study area and the applicable data forms are completed for each delineated feature. Each delineated feature is given a unique identifier and photographed. Boundary points are identified for each feature, marked with pink flagging, and numbered consecutively.

Wetlands were investigated in accordance with the following:

- USACE Wetlands Delineation Manual, Y-87-I (Environmental Laboratory, 1987); and
- USACE 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0 (USACE, 2012)

These manuals employ a three-parameter approach to wetland identification using hydrology, hydrophytic vegetation, and hydric soils. All three parameters must be present for an area to be considered a jurisdictional wetland under Section 404 of the Clean Water Act (CWA). Routine wetland determination methods, with onsite inspection, were used to determine the presence of wetlands in the project study area.

On National Park Service (NPS) property, any area that is classified as a wetland according to the U.S. Fish and Wildlife Service's (USFWS) "Classification of Wetlands and Deepwater Habitats of the United States" (Report FWS/OBS-79/31) (Cowardin et al. 1979) is subject to NPS Director's Order 77-1: Wetland Protection (NPS 2012a). (Deepwater habitats are not subject to Director's Order 77-1.) Under the Cowardin definition, a wetland must have one or more of the following three attributes:

- At least periodically, the land supports predominantly hydrophytes (wetland vegetation);
- The substrate is predominantly undrained hydric soil; or
- The substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

The Cowardin wetland definition encompasses more aquatic habitat types than those defined in the USACE Wetlands Delineation Manual and regional supplements that are used for identifying wetlands subject to Section 404 of the Clean Water Act. The USACE Wetlands Delineation Manual and regional supplements require that all three of the parameters listed above (hydrophytic vegetation, hydric soil, wetland hydrology) be present under normal conditions for an area to be considered a wetland. The Cowardin wetland definition includes those same three-parameter wetlands, with the addition of some areas that lack vegetation and/or soils due to natural physical or chemical factors such as wave action or high salinity but are still saturated or shallow inundated environments that support aquatic life (e.g., unvegetated stream shallows, mudflats, rocky shores).

Waters of the U.S., other than wetlands, were investigated using the limits defined in 33 C.F.R. § 328. The boundaries of non-tidal waters of the U.S. other than wetlands are set at the ordinary high-water mark (OHW). The OHW is determined in the field using physical characteristics established by the fluctuations of water (e.g., change in plant community, changes in the soil character, shelving), in accordance with USACE Regulatory Guidance Letter No. 05-05.

WETLANDS AND WATERS OF THE U.S. DELINEATION - Results

RK&K conducted a natural resources inventory within the project study area in September and October 2020 and February 2021. One perennial waters of the U.S. (Waters A) was delineated within the study area. Waters A is a use class I-P unnamed tributary that originates outside of the study area to the north, flows south into the study area through a culvert under MacArthur Boulevard, and ultimately discharges into the C&O Canal outside of the study area to the south.

The data sheet for Waters A can be found in **Appendix C** and photographs of Waters A can be found in **Appendix B**. The location of Waters A is displayed on the NRI/FSD plans in **Appendix E**.

FOREST STAND DELINEATION AND TREE INVENTORY - Methods

The investigation methods employed for this forest stand delineation were based on the *State Forest Conservation Technical* Manual, Third Edition, 1997. The State defines a forest as "a biological community dominated by trees and other woody plants covering a land area of 10,000 square feet or greater. Forest includes (1) areas that have at least 100 trees per acre with at least 50% of those having a two-inch or greater diameter at 4.5 feet above the ground and larger; and (2) forest areas that have been cut but not cleared."

Topographic maps, soil surveys, and digital aerial photographs were reviewed to identify on-site soils and probable forest stand boundaries prior to field investigations. Forest stands were delineated based on community type, successional stage, and overall forest condition. An inventory of all trees $\geq$ 6 inches diameter at breast height (4.5 feet, DBH) was completed within the study area on NPS property and $\geq$ 12 inches DBH within the study area on WMATA and USACE property including the identification of all specimen trees ($\geq$ 30 inches DBH or 75% of the size of the state champion). Species, DBH, and condition were recorded for each of the inventoried trees. The condition of each tree was assessed by an ocular estimation of growth form, visible signs of decay, live crown ratio, and indications of disease or insect infestation. Each inventoried tree was tagged, numbered consecutively, and flagged with blue flagging. Data obtained from the field reconnaissance were collected with an iPad, and trees were located using GPS and traditional survey methods.

Forest stand total basal area per acre was measured, and 0.1-acre circular plots were used to quantify species diversity, size class, and density. At the center and four compass points of each plot, canopy, understory, and herbaceous cover were sampled to describe forest structure. Common and dominant species and the presence and abundance of invasive species were noted for each forest layer. The percent of downed woody material, overall forest condition, and successional stage were also noted.

FOREST STAND DELINEATION AND TREE INVENTORY – Results

RK&K environmental scientists conducted a forest stand delineation within the project study area in September and October 2020 and February 2021. The field investigation identified one forest stand (FS1) and 441 individual trees, including 20 specimen trees, within the study area. Photographs of the forest stands can be found in **Appendix B** and datasheets can be found in **Attachment C**. The NRI/FSD Plans in **Attachment E** depict the forest stands, and a tree inventory table is located on sheets **NR-05 and NR-06**.

FS1: Mid-Successional Tulip Poplar Association Forest

FS1 is a 3.10-acre mid-successional Tulip Poplar Association Forest with a basal area of 155 square feet per acre located south of the Wilson Lane/MacArthur Boulevard intersection. Three forest stand plot points were collected to characterize the forest. Dominant and co-dominant canopy tree species include tulip poplar (*Liriodendron tulipifera*), northern red oak (*Quercus rubra*), American beech (*Fagus grandifolia*), American sycamore (*Platanus occidentalis*), green ash (*Fraxinus pennsylvanica*), Virginia pine (*Pinus virginiana*), white oak (*Quercus alba*), black locust (*Robinia pseudoacacia*), willow oak (*Quercus phellos*), and southern red oak (*Quercus falcata*). Canopy closure is approximately 81%. The understory consists mainly of American beech, pawpaw (*Asimina triloba*), American holly (*Ilex opaca*), bitternut hickory (*Carya cordiformis*), and bush honeysuckle (*Diervilla* spp.). Invasive species composition is low and includes tree of heaven in the overstory; Japanese honeysuckle, Oriental bittersweet (*Celastrus orbiculatus*), Japanese barberry, bush honeysuckle in the understory; and Japanese honeysuckle, wineberry, multiflora rose, and bush honeysuckle in the herbaceous layer. Other common species found in the herbaceous layer include green ash, paw paw, and beech drops (*Epifagus virginiana*). Downed woody debris in the forest stand is moderate. The forest stand is in good condition overall due to low invasive species and vine cover and American beech dominated understory. FS1 is a priority 1 stand for retention due to the overall stand condition and presence of a perennial stream, stream buffer, and specimen trees within the stand.

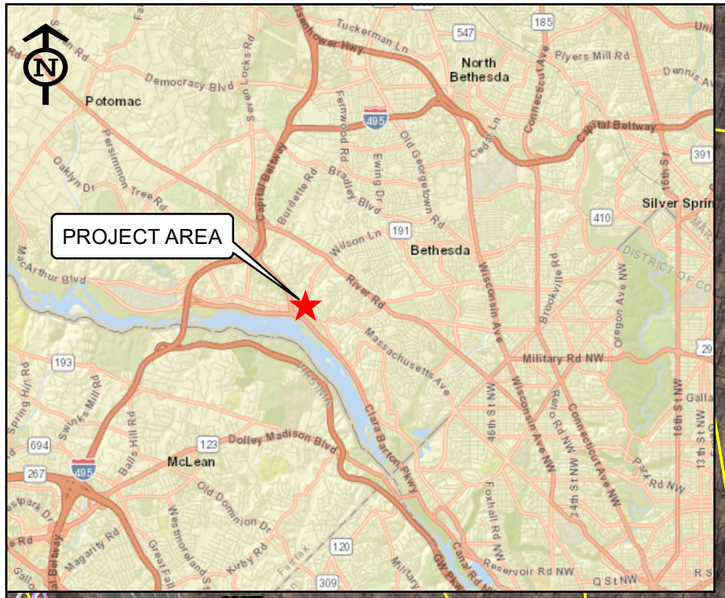
APPENDIX A
Figures

Study Area
2' Contours

WMATA WILSON LANE TRESTLE BRIDGE
FIGURE 1 - AERIAL MAP

April 30, 2021

0 75 150 300
1 inch = 150 feet



VICINITY MAP

DNR and NWI wetlands do not fall within the extent of this map.

DNR Waters
Mo. Co. 100-Year Floodplain
FEMA 100-Year Floodplain
SSURGO Soils
Study Area

metro

WMATA WILSON LANE TRESTLE BRIDGE
FIGURE 2 - BACKGROUND ENVIRONMENTAL FEATURES MAP
April 30, 2021

0 75 150 300
1 inch = 150 feet

APPENDIX B
Photographic Record

Waters of the U.S.

Waters A – Perennial tributary upstream

Waters A – Perennial tributary downstream

Forest Stands

FS1- Mixed Oak Association Forest

APPENDIX C
Data Sheets

RK&K Waters of the U.S. Data Sheet *Version 2.1 - August 2019*

Project: Wilson WMATA Trestle Bridge Demo	**Feature ID:** A	**Use Class:** I-P
Date: 9/24/20 **State:** MD	**Photos:** 2376-2377	
Crew: RL, SJF **County:** Montgomery	**Last Flag Number:** A-4a/b	

Feature Hydrologic Class (check one):

Tidal	Perennial	Intermittent	Ephemeral	Other
TNW	TNW	Tributary	Tributary	Impoundment
	[X] Tributary	Ditch	Ditch	POW

Describe rationale for hydrologic class, including flow: significant baseflow during field visit

Hydrologic Connectivity –	Upstream: culvert	Downstream: outside study area	Adjacent/Abutting: none

Ditch Information: N/A [X]	Roadside Ditch	Direct Flow to TNW	Abutting a Wetland	Within a Wetland	Relocated Tributary
	Yes / *No*	*Yes* / *No*	*Yes* / *No*	*Yes* / *No*	*Yes* / [X] *No*
	Toe of slope	Symmetrical	Const. Uplands	Between Wetlands	*Documentation:*
	Yes / *No*	*Yes* / *No*	*Yes* / *No*	*Yes* / *No*	

Feature Description: ***(check all that apply)***

Shape (with respect to OHW)		Substrate			Vegetation Cover Type (MBSS)
[ ] Natural Channel Shape	Width: 4-10'	[ ] Silts	[X] Sands	[ ] Muck	RB: forest
[ ] Artificial (man-made)	Depth: 1-18"	[X] Cobbles	[X] Gravel	[ ] Other:	LB: forest
[X] Manipulated (man-altered)	Bank Erosion/stability:	[X] Bedrock	[ ] Concrete		*Notes:*
[ ] Other:	minor erosion	[ ]	[ ]		
		Side slope: [X] ≥1:1 [ ] 2:1 [ ] 3:1 [ ] ≤4:1			

General Notes: Bed and banks largely lined with bedrock and large natural stones. Originates at a culvert and continues beyond the study area.

Weather/Precipitation Conditions:

Rain			Monthly Drought Condition NCDC Regional PDSI
During visit	Last 48hrs	Last week	http://www.ncdc.noaa.gov/temp-and-precip/climatological-rankings/index.php **Month:** Aug. **Year:** 2020
[X] No rain	[ ] 0-0.1	[ ] 0-0.5	
[ ] Light rain	[ ] 0.1-0.5	[ ] 0.5-1	
[ ] Heavy Rain	[X] > 0.5	[X] >1	

									[X]				
-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	
Severe Drought			Moderate Drought		Normal			Moderately Wet		Severely Wet			

Non-tidal tributary has: (*check all that apply)*

Ordinary High Water Mark							
[ ] Clear, natural line impressed on the bank	[X]	Sediment deposition	[X]	Water staining	[ ]	Abrupt change in plant community	
[ ] Changes in the character of soil	[ ]	Presence of wrack line	[ ]	Shelving	[ ]	Destruction of terrestrial veg.	
[ ] Presence of flood litter/debris	[ ]	Leaf litter disturbed	[ ]	Sediment sorting	[X]	(Observed)/predicted flow events	
[X] Vegetation matted down, bent, or absent	[X]	Scour	[ ]	Other:			

Tidal tributary has: (*check all that apply)*

High Tide Line	Mean High Water Mark indicated by:	Chemical Characteristics
[ ] Oil or scum line along shore objects	[ ] Survey to available datum	[ ] Water is clear
[ ] Fine shell or debris deposits (foreshore)	[ ] Physical markings	[ ] Water is discolored
[ ] Physical markings/characteristics	[ ] Vegetation lines/changes in types	[ ] Oily film
[ ] Tidal gauges		[ ] Other:

Forest Stand Summary Sheet

Property: WMATA - Wilson Trestle Bridge
Location: Bethesda, Montgomery County (Town, County ADC Map #, and Grid Coordinates)
Prepared By: RL, SJF Date: 10/1/20

Stand Variable	Stand # FS1	Stand #
1. Dominant species/ Co-dominant species	Tulip poplar, N. red oak, Am. beech, Am. sycamore, green ash, V. pine, red maple, white oak, black locust, willow oak, s. red oak	
2. Forest Association	Tulip Poplar Association	
3. Successional stage	Mid	
4. Basal Area in s.f. per acre	155	
5. Size class of dominant species	12-20" DBH	
6. Percent of canopy coverage	81%	
7. Number of tree species per acre	6	
8. Common understory species	American beech, pawpaw, American holly, bitternut hickory, bush honeysuckle	
9. Percent of understory cover 3' to 20' tall	39%	
10. Number of understory species 3' to 20' tall	6	
11. Common herbaceous species	Green ash, Japanese honeysuckle, pawpaw, wineberry, multiflora rose, bush honeysuckle, beech drops	
12. Percent of herbaceous & woody plant cover 0' to 3' tall	22%	
13. List of major invasive plant species and percent of cover	O - Tree of heaven: 1% U - Bush honeysuckle: 3% H - J. honeysuckle, wineberry, multiflora rose, b. honeysuckle: 7%	
14. Number of standing dead trees 6" dbh or greater	7	
15. Comments	Stand is in good condition, mixed oak forest dominated by Am. beech in the understory, canopy gaps due to dead green ash, low vines and invasive species	

Sheet 1 of 1 August 2010

Property: WMATA-Wilson **Prepared By:** RL, SJF

Stand#: FS1 **Plot#:** P1 **Plot size: 1/10 acre** **Date:** 10/1/20

Basal area (sf/acre) 170

Size class of trees > 20' height within sample plot

Tree species	2-6"			6-11"			12-20"			20-30"			>30"			Total
Crown position	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	
Tulip poplar							1	1		1						3
N. red oak										1			1			2
American beech			IIII			II		II								8
White oak						1										1
Red maple						1										1
American sycamore								1								1
mockernut hickory			1													1
S. red oak						1										1
Green ash							1									1
Virginia pine								II								2
Black cherry						1										1
Total number of trees per size class	5			6			8			2			1			22
Number and size of dead standing trees				1												1

List of common understory species 3-20'

American beech

Paw paw

% Canopy Closure

C	N	E	S	W	T
100	95	100	35	60	78

Percent of Invasive Cover per Plot (All Layers): 3

Plot successional stage: mature

List of Herbaceous species 0-3'

Green ash

Japanese honeysuckle

Paw paw

Wineberry

% Understory Cover 3-20'

C	N	E	S	W	T
10	10	40	50	75	37

% Herbaceous Cover 0-3'

C	N	E	S	W	T
5	5	0	20	20	10

Percent of woody debris: 15

Comments:

canopy gaps due to dying green ash

High quality forest in good condition, low vines, low invasive species, mixed oak forest with some specimens, American beech dominant in understory, minimal herbaceous layer

photos 2399-2400

Property: WMATA Wilson **Prepared By:** RL, STF

Stand#: FS1 **Plot#:** P2 **Plot size:** 1/10 acre **Date:** 10/1120

Basal area (sf/acre): 120

Size class of trees > 20' height within sample plot

Tree species	2-6"			6-11"			12-20"			20-30"			>30"			Total
Crown position	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	
American beech			II			I			I							4
Red maple						I		I								2
Sassafras			I													1
Willow oak						I										1
Tulip poplar										II						2
American elm			II													2
Tree of heaven			I													1
N. red oak					I											1
Hackberry			I													1
Total number of trees per size class	7			4			2			2						15
Number and size of dead standing trees	II															2

List of common understory species 3-20'

American beech
American holly
Bitternut hickory
Bush honeysuckle

% Canopy Closure

C	N	E	S	W	T
75	75	55	95	65	73

Percent of Invasive Cover per Plot (All Layers): 30

Plot successional stage: mid

List of Herbaceous species 0-3'

multiflora rose
paw paw
Spicebush
Bush honeysuckle

% Understory Cover 3-20'

C	N	E	S	W	T
80	55	80	35	50	60

% Herbaceous Cover 0-3'

C	N	E	S	W	T
40	25	60	10	30	33

Percent of woody debris: 15

Comments:

Fair condition, some canopy gaps, regeneration, plot point crosses over a trail where some maintenance occurs, close to trestle bridge

photos 2397-2398

WILSON-

Property: WMA **Prepared By:** Geo/BJT
Stand#: F5 **Plot#:** 3 **Plot size: 1/10 acre** **Date:** 2/3/21

Basal area (sf/acre): 115

Size class of trees > 20' height within sample plot

Tree species	2-6"			6-11"			12-20"			20-30"			>30"			Total
Crown position	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	
Tulip-poplar						•••	•••	••••								10
Beech			⊠ ☐			•		•								20
Red Maple			•••			••••		•••	•							11
White oak								•								1
Black Locust								•								1
Willow Oak						•				••						3
Serviceberry			•													1
Slippery Elm			•													1
S. Red Oak					••	••••										6

	2-6"	6-11"	12-20"	20-30"	>30"	Total
Total number of trees per size class	23	15	14	2		54
Number and size of dead standing trees		2	4			6

List of common understory species 3-20'
Beech

% Canopy Closure

C	N	E	S	W	T
90	90	100	80	100	92

Percent of Invasive Cover per Plot (All Layers): 0

Plot successional stage: MID

List of Herbaceous species 0-3'
Beech drops

% Understory Cover 3-20'

C	N	E	S	W	T
0	10	45	35	15	21

% Herbaceous Cover 0-3'

C	N	E	S	W	T
NA	NA	NA	NA	NA	NA

Percent of woody debris: 30%

Comments: Overall condition good, no vines, Scattered Va pine
Herbaceous layer covered in snow + outside growing season not recorded

Plots 3445 + 3446

APPENDIX D
Agency Correspondence

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary

May 12th, 2020 20-MIS-145

Greg O'Hare
RK&K
700 East Pratt Street, Suite 500
Baltimore, MD 21202

Subject: Fisheries Scoping Information for the Washington Metropolitan Area Transit Authority
Wilson Lane Trestle Bridge Demolition
Glen Echo, Maryland

Dear Mr. O'Hare;

The above referenced project site has been reviewed to determine fisheries species near the proposed project areas. The project proposes to demolish the Wilson Lane Trestle Bridge.

This project will impact an unnamed tributary to the C&O Canal which is classified as a Use I-P (serves as a public water supply) stream. In general, no in-stream work is allowed in Use I-P streams from March 1st through June 15th of any given year to protect spawning fish. The applicant is asked to adhere to the approved sediment and erosion control plan during all phases of work to lesson stream impacts.

Species documented by our Maryland Biological Stream Survey in this and other nearby streams can be accessed via the MDDNR web page at http://streamhealth.maryland.gov.

Please note that this fisheries review is for scoping purposes only and does not constitute a full environmental review by the Department of Natural Resources Environmental Review Program. Once a final permit application has been submitted to MDE with a full set of plans, a determination will be made if further review by the MDDNR Environmental Review Program is warranted.

If you have any further questions, please feel free to contact me at 410 260-8736.

Sincerely;

Christopher Aadland

Christopher Aadland
Environmental Review Program

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary

May 20, 2020

Mr. Greg O'Hare
Rummel, Klepper & Kahl, LLP
700 East Pratt Street
Suite 500
Baltimore, MD 21202

RE: Environmental Review for Washington Metropolitan Area Transit Authority WMATA, Wilson Lane Trestle Bridge Demolition, Glen Echo, Montgomery County, Maryland.

Dear Mr. O'Hare:

The Wildlife and Heritage Service has determined that there are no official State or Federal records for listed plant or animal species within the delineated area shown on the map provided. As a result, we have no specific concerns regarding potential impacts or recommendations for protection measures at this time. Please let us know however if the limits of proposed disturbance or overall site boundaries change and we will provide you with an updated evaluation.

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 (410) 260-8573.

Sincerely,

Lori A. Byrne

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER# 2020.0748.mo

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
http://www.fws.gov/chesapeakebay/
http://www.fws.gov/chesapeakebay/endsppweb/ProjectReview/Index.html

In Reply Refer To: June 15, 2020
Consultation Code: 05E2CB00-2020-SLI-1315
Event Code: 05E2CB00-2020-E-03641
Project Name: Wilson Lane Trestle Bridge Demolition

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

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. This 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 ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

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

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

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

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

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

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

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

Attachment(s):

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

Consultation Code: 05E2CB00-2020-SLI-1315

Event Code: 05E2CB00-2020-E-03641

Project Name: Wilson Lane Trestle Bridge Demolition

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: The project proposes to demolish the Wilson Lane Trestle Bridge in Glen Echo, MD.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.97247595506752N77.14639084676875W

Counties: Montgomery, MD

Endangered Species Act Species

There is a total of 1 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 Fisheries[1], 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.

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

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis*	Threatened

No critical habitat has been designated for this species.

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

- Projects with a federal nexus that have tree clearing = to or > 15 acres: 1. REQUEST A SPECIES LIST 2. NEXT STEP: EVALUATE DETERMINATION KEYS 3. SELECT EVALUATE under the Northern Long-Eared Bat (NLEB) Consultation and 4(d) Rule Consistency key

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

Critical habitats

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

USFWS National Wildlife Refuge Lands And Fish Hatcheries

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

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

Wetlands

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

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

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

RIVERINE

- R5UBH

March 22, 2021

Ms. Elizabeth Hughes
State Historic Preservation Officer
Maryland Historical Trust
100 Community Place, 3rd Floor
Crownsville, MD 21032-2023
Attn: Beth Cole

Project: Wilson Lane Trestle Bridge Demolition Project
Montgomery County, Maryland

Dear Ms. Hughes:

The Washington Metropolitan Area Transit Authority plans to demolish the Wilson Lane trestle bridge structure that was constructed in 1896 as part of the West Washington & Glen Echo Electric Railroad/Glen Echo Trolley Line. The trestle bridge is located near the intersection of MacArthur Boulevard and Wilson Lane in Bethesda, Montgomery County, Maryland and spans a wooded ravine containing a stream that runs through a culvert under MacArthur Boulevard. The trolley line was abandoned in 1960 and since then has fallen into disrepair, posing a significant public health hazard.

The trestle bridge is located primarily on a parcel owned by WMATA, and there is evidence to suggest that a portion of the bridge falls on National Park Service (NPS) property. The surrounding parcels are primarily wooded, with residential properties located to the southeast. The project will require an NPS Service Special Use Permit and a USACE access permit. Therefore, it is an undertaking per the Maryland Historical Trust Act §§ 5A-325 and 5A-326 of the State Finance and Procurement Article).

I request your project review and comment. A project review form, project area maps, photographs, MHT Maryland Inventory of Historic Properties Form, and MHT Determination of Eligibility Form are enclosed to aid in your review. If you have any questions concerning this project, please contact Jeff Winstel at jfwinstel@wmata.com or me at jashe@wmata.com or (202) 400-1550. Thank you for your assistance.

Sincerely,

James Ashe
E001713
WMATA

Digitally signed by James Ashe E001713
WMATA
Date: 2021.03.21 19:07:50 -04'00'

James Ashe
Senior Program Manager

cc: Peter McCallum – NPS
David Arnone – WMATA

Washington Metropolitan Area Transit Authority

600 Fifth Street, NW
Washington, DC 20001
202/962-1234

wmata.com

PROJECT REVIEW FORM

Request for Comments from the Maryland Historical Trust/ MDSHPO on State and Federal Undertakings

MHT USE ONLY
Date Received: Log Number:

Project Name	Wilson Lane Trestle Bridge Demolition	County	Montgomery

Primary Contact:

Contact Name	Jeff Winstel	Company/Agency	WMATA
Mailing Address	600 Fifth Street NW		
City	Washington	State / Zip	District of Columbia / 20001
Email	jfwinstel@wmata.com	Phone Number / Ext.	+1 (301) 785-7366 /

Project Location:

Address	MacArthur Boulevard and Wilson Lane	City/Vicinity	Bethesda
Coordinates (if known): Latitude		Longitude	Waterway

Project Description:

List federal and state sources of funding, permits, or other assistance (e.g. Bond Bill Loan of 2013, Chapter #; HUD/ CDBG; MDE/COE permit; etc.).	Agency Type	Agency/Program/Permit Name	Project/Permit/Tracking Number (if applicable)
	State	Washington Metropolitan Area Transit Authority	

This project includes (check all applicable): ☐ New Construction ☒ Demolition ☐ Remodeling/Rehabilitation
☐ State or Federal Rehabilitation Tax Credits ☒ Excavation/Ground Disturbance ☐ Shoreline/Waterways/Wetlands

Other\Additional Description: The 1896 metal and heavy timber trolley and rail-car line trestle has been unused since 1960 . A court ord

Known Historic Properties:

This project involves properties (check all applicable): ☐ Listed in the National Register ☐ Subject to an easement held by MHT
☒ Included in the Maryland Inventory of Historic Properties ☐ Designated historic by a local government
☐ Previously subject to archeological investigations

Property\District\Report Name: M: 35-31 Cabin John Right-of-Way (Brookmont Trolley Row)

Attachments:

All attachments are required. Incomplete submittals may result in delays or be returned without comment.

☒ Aerial photograph or USGS Quad Map section with location and boundaries of project clearly marked.
☒ Project Description, Scope of Work, Site Plan, and\or Construction Drawings.
☒ Photographs (print or digital) showing the project site including images of all buildings and structures.
☒ Description of past and present land uses in project area (wooded, mined, developed, agricultural uses, etc).

MHT Determination:

☐ There are **NO HISTORIC PROPERTIES** in the area of potential effect
☐ The project will have **NO EFFECT** on historic properties
☐ The project will have **NO ADVERSE EFFECT** on historic properties
☐ The project will have **NO ADVERSE EFFECT WITH CONDITIONS**
☐ The project will have **ADVERSE EFFECTS** on historic properties
☐ **MHT REQUESTS ADDITIONAL INFORMATION**

MHT Reviewer: Date:

Submit printed copy of form and all attachments by mail to: Beth Cole, MHT, 100 Community Place, Crownsville, MD 21032

Wilson Lane Trestle Bridge Demolition
Project Review Form Attachments

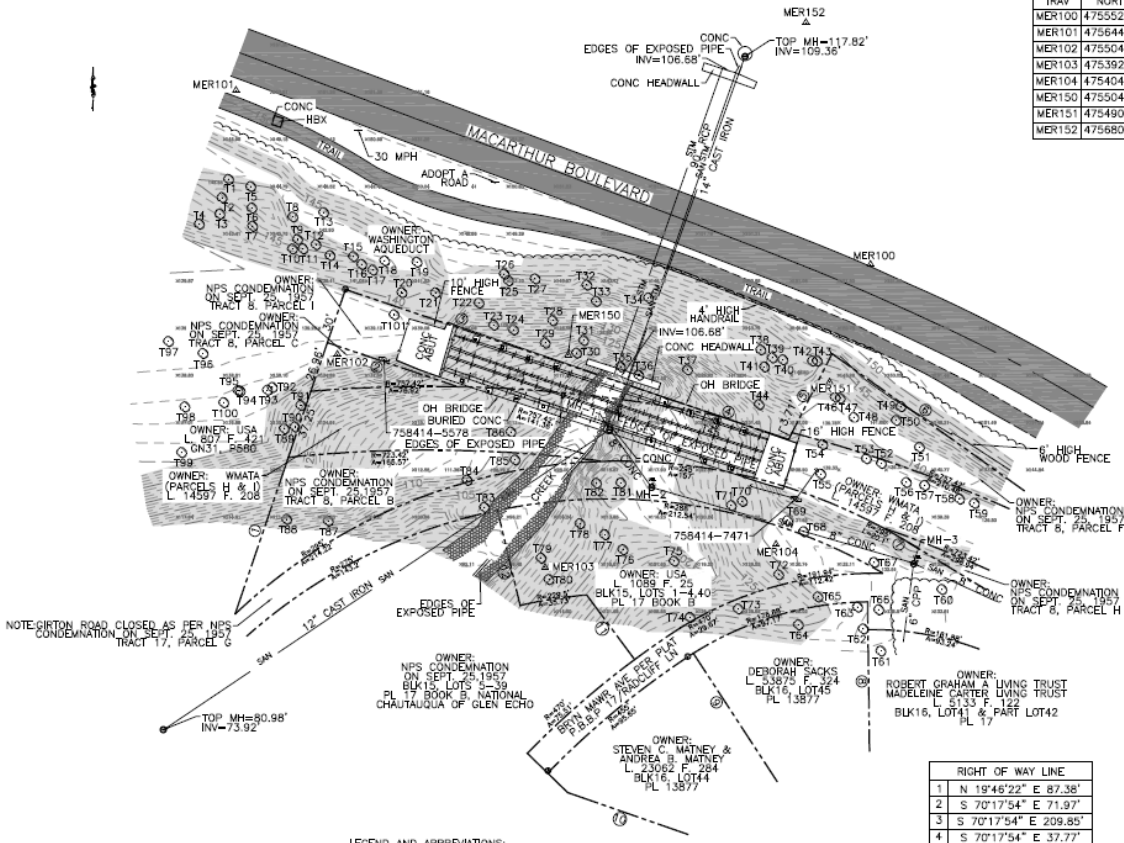
Attachment 1:
Aerial photograph or USGS Quad Map Section with Location and Boundaries Marked


PROJECT AREA
VICINITY MAP
Mohican Rd
Mohican Rd
Tuscarawas Rd
Clara Barton Pkwy
MacArthur Blvd
Walhonding Rd
Wyoming Rd
Winnebago Rd
Madawaska Rd
Wassioming Rd
Wyoming Ct
Waukesha Rd
Potomac River
Project Area
WMATA WALHONDING TRESTLE BRIDGE
AERIAL MAP
Scale
0 100 200
1" = 200'
FIGURE
1

Attachment 2:
Project Description, Scope of Work, Site Plan

Project Description

The 1896 metal and heavy timber trolley and rail-car line trestle has been unused since 1960. A court order resulted in WMATA gaining ownership of the abandoned trestle in the 1990s, despite WMATA having no interest in or use for the structure. The trestle is fenced off but is deteriorated and structurally unsound, representing a safety hazard. Removal of the approximately 350 ft. long and 42 ft. high double track trestle will include removal of battered concrete bases for the metal bents and large rectangular concrete abutments at the north and south ends. The area will be returned to the state of a natural wooded ravine consistent with the National Park Service Clara Barton Memorial Parkway, which surrounds the trestle.



CONTROL POINTS				
TRAV	NORTHING	EASTING	ELEV.	DESCRIPTION
MER100	475552.53694	1271314.45336	151.74	REBAR & CAP
MER101	475644.62429	1270978.69274	150.38	REBAR & CAP
MER102	475504.89617	1271032.33666	138.09	REBAR & CAP
MER103	475392.10469	1271142.22173	108.07	REBAR & CAP
MER104	475404.28454	1271264.41057	130.87	REBAR & CAP
MER150	475504.55610	1271154.43940	119.73	REBAR & CAP
MER151	475490.19687	1271292.79672	142.07	REBAR & CAP
MER152	475680.55785	1271280.25973	123.33	REBAR & CAP

TREES	
T1	18"POPLAR
T2	18"SYCAMORE
T3	24"MAPLE
T4	14"MAPLE
T5	20"POPLAR
T6	34"SYCAMORE
T7	12"SYCAMORE
T8	30"ASH
T9	24"BEECH
T10	16"SYCAMORE
T11	20"SYCAMORE
T12	20"SYCAMORE
T13	12"MAPLE
T14	18"SYCAMORE
T15	24"POPLAR
T16	20"SYCAMORE
T17	24"ASH
T18	18"POPLAR
T19	20"ASH
T20	12"POPLAR
T21	48"POPLAR
T22	24"POPLAR
T23	20"ASH
T24	20"BEECH
T25	12"MAPLE
T26	16"ASH
T27	16"ASH
T28	40"POPLAR
T29	20"POPLAR
T30	12"POPLAR
T31	12"POPLAR
T32	16"ASH
T33	20"POPLAR
T34	20"POPLAR
T35	30"POPLAR
T36	40"POPLAR 2IN1
T37	16"POPLAR
T38	30"MAPLE
T39	12"ASH
T40	40"ASH 2IN1
T41	12"M
T42	40"ASH 2IN1
T43	12"ASH
T44	16"MAPLE
T45	16"MAPLE
T46	13"ASH
T47	14"ASH
T48	12"ASH
T49	15"ASH
T50	12"MAPLE
T51	18"ASH
T52	24"MAPLE
T53	20"MAPLE
T54	20"MAPLE
T55	16"BEECH
T56	30"SYCAMORE
T57	12"MAPLE
T58	16"MAPLE
T59	18"MAPLE
T60	18"MAPLE
T61	13"MAPLE
T62	16"ASH
T63	12"ASH
T64	38"MAPLE
T65	15"MAPLE
T66	24"MAPLE
T67	15"MAPLE
T68	20"MAPLE
T69	16"MAPLE
T70	48"MAPLE
T71	18"ASH
T72	13"MAPLE
T73	60"MAPLE
T74	16"MAPLE
T75	26"POPLAR
T76	17"MAPLE
T77	17"MAPLE
T78	28"ASH
T79	16"MAPLE
T80	13"MAPLE
T81	36"SYCAMORE
T82	28"SYCAMORE
T83	38"SYCAMORE
T84	12"ASH
T85	12"ASH
T86	26"POPLAR
T87	20"MAPLE
T88	34"POPLAR
T89	16"POPLAR
T90	60"POPLAR
T91	55"POPLAR
T92	18"POPLAR
T93	18"POPLAR
T94	18"MAPLE
T95	18"BEECH
T96	24"POPLAR
T97	24"POPLAR
T98	30"POPLAR
T99	24"POPLAR
T100	16"MAPLE
T101	12"POPLAR

RIGHT OF WAY LINE	
1	N 19°46'22" E 87.38'
2	S 70°17'54" E 71.97'
3	S 70°17'54" E 209.85'
4	S 70°17'54" E 37.77'
5	N 27°48'40" E 47.20'
6	S 53°29'46" E 211.68'
7	N 57°38'22" W 280.86'
8	S 01°08'01.1" E 75.00'
9	N 33°33'19.3" W 164.96'
10	S 71°13'07.4" E 89.72'
11	S 36°58'24" E 42.34'
12	S 12°31'02.5" E 51.81'

VICINITY MAP:

SURVEY NOTES:

SURVEY COMPLETED IN THE FIELD 11/26/2018

THE BASIS FOR COORDINATE AND ELEVATIONS IS THE MARYLAND STATE PLANE HORIZONTAL COORDINATE SYSTEM (NAD83/91) AND NAVD88 VERTICAL DATUM AS PROJECTED BY RTK GPS SURVEY FROM THE FOLLOWING NGS CONTROL STATION:

STATION NAME HV9186
NORTHING 474274.6323
EASTING 1272812.9890
ELEVATION 152.36
DESCRIPTION BRASS DISC

CONVENTIONAL EDM USED FOR TRAVERSE AND LOCATIONS. NO WETLANDS FLAGS WERE FOUND ON SITE.

THE PROPERTY LINES SHOWN ARE APPROXIMATE ONLY. THE WMATA RIGHT OF WAY LINES SHOWN ARE BASED FROM THE WMATA DEED RECORDED IN LIBER 14597 FOLIO 208 PARCEL H & I OF THE MONTGOMERY COUNTY LAND RECORDS. THE ADJOINING PROPERTY LINES SHOWN ARE BASED ON THE DEEDS AND PLATS AS SHOWN ON EACH PARCEL. THE LINES HAVE BEEN PLACED IN REFERENCE TO SEVERAL IRON PIPES FOUND AND SHOWN ON THIS SURVEY.

CONTOUR INTERVALS: MINOR=1' MAJOR=5'

LEGEND AND ABBREVIATIONS:

- GUY
- SEWER MANHOLE
- SIGN
- TREE (DIAMETER IN INCHES)
- TRAVERSE POINT
- PEPCO UTILITY POLE
- UTILITY SEWER MARKER
- CONC WITH STEEL COLUMN
- IRON PIPE 1" OPEN

ABUT ABUTMENT
BLK BLOCK
CONC CONCRETE
CPP CORRUGATED PLASTIC PIPE
HBX HANDBOX
MH MANHOLE
NPS NATIONAL PARK SERVICE
OH OVERHEAD
PL PLAT
RCP REINFORCED CONC PIPE
USA UNITED STATES OF AMERICA

- CHAIN LINK FENCE
- TREELINE
- HANDRAIL
- MAJOR CONTOUR
- MINOR CONTOUR
- RIGHT OF WAY
- ABANDONED OH RAILROAD TRACK
- SEWER PIPE
- STORM PIPE
- ASPHALT
- >25%
- RIPRAP

MERCADO CONSULTANTS, INC.

GFP A Gannett Fleming/Parsons JOINT VENTURE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21844, EXPIRATION DATE: 5/31/2020

JOSEPH DELFIN, LS

DESIGNED N/A N/A DATE
DRAWN MERCADO 12/28/18 DATE
CHECKED JRC 12/31/18 DATE

REFERENCE DRAWINGS		REVISIONS		
NUMBER	TITLE	DATE	NUM	DESCRIPTION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

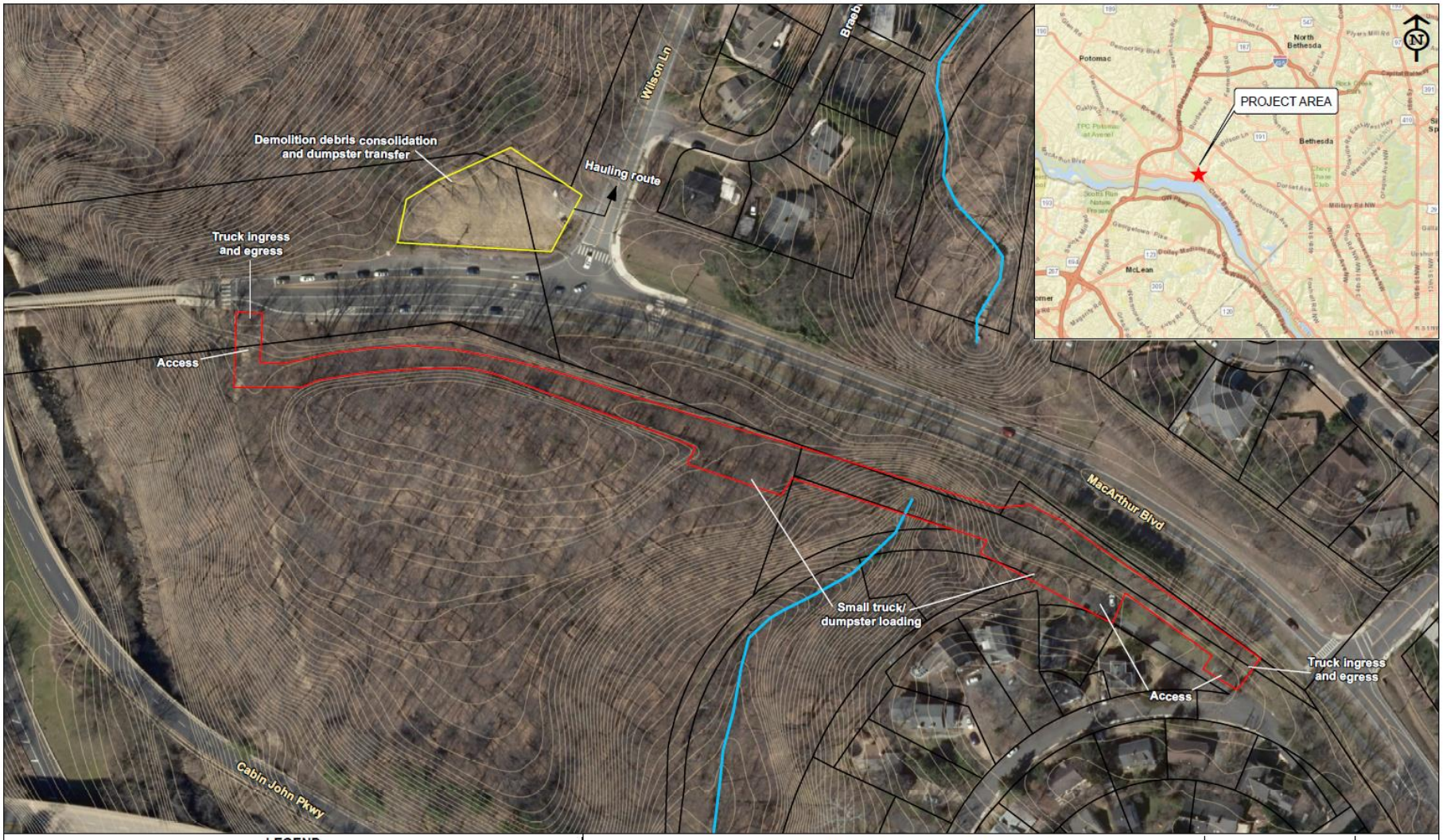
DEPARTMENT OF DESIGN AND CONSTRUCTION (DECO)
OFFICE OF ENGINEERING AND ARCHITECTURE (ENGA)

12/31/2018 DATE
C. FALKEN
WMATA PROJECT MANAGER

12/31/2018 DATE
G.SPILLER
GFP DEPUTY PROGRAM MANAGER

A/E SERVICES FOR: TOPOGRAPHIC SURVEYS FOR TWO (2) PROPERTIES LOCATED IN MONTGOMERY COUNTY, MD
CABIN JOHN CREEK TRESTLE
TOPOGRAPHIC SURVEY

M NO.	CONTRACT NO.	SCALE	DRAWING NO.	SHEET NO.
	FTA-19-FQ15191	1" = 30'	TSFA-017	1 of 1


Demolition debris consolidation and dumpster transfer
Hauling route
Wilson Ln
Truck ingress and egress
Access
MacArthur Blvd
Small truck/ dumpster loading
Truck ingress and egress
Access
Cabin John Pkwy
PROJECT AREA
Potomac
North Bethesda
Bethesda
McLean
LEGEND
Concept LOD
Stream
GIS Parcels
Staging Area
2' Contours
WMATA WILSON LANE TRESTLE BRIDGE
CONCEPT DEMOLITION PLAN
January 2020
Scale
0 100 200
1" = 100'

Attachment 3:
MIHP Form in lieu of
Photographs of project site and structure and
Description of past and present land uses in project area (wooded, mined, developed, agricultural uses, etc.)

Maryland Historical Trust
Maryland Inventory of
Historic Properties Form

Inventory No.

1. Name of Property (indicate preferred name)

historic	Wilson Lane Trestle Bridge
other	West Washington & Glen Echo Electric Railroad/ Glen Echo Trolley Line Trestle

2. Location

street and number	MacArthur Boulevard and Wilson Lane	__	not for publication
city, town	Bethesda	__	vicinity
county	Montgomery County		

3. Owner of Property (give names and mailing addresses of all owners)

name	WMATA				
street and number	600 Fifth Street NW			telephone	202 962 5038
city, town	Washington	state	DC	zip code	20001

4. Location of Legal Description

courthouse, registry of deeds, etc.	Montgomery County Courthouse	liber	4032	folio	887
city, town	Rockville	tax map	tax parcel	tax ID number	

5. Primary Location of Additional Data

_____ Contributing Resource in National Register District
_____ Contributing Resource in Local Historic District
_____ Determined Eligible for the National Register/Maryland Register
_____ Determined Ineligible for the National Register/Maryland Register
_____ Recorded by HABS/HAER
_____ Historic Structure Report or Research Report at MHT
__X__ Other: M: 35-31 Cabin John Right-of-Way (Brookmont Trolley Row)

6. Classification

Category	Ownership	Current Function		Resource Count	
				Contributing	Noncontributing
_____district	__X__public	_____agriculture	_____landscape		___buildings
_____building(s)	_____private	_____commerce/trade	_____recreation/culture	_____	_____ sites
__X__structure	_____both	_____defense	_____religion	_____	_____ structures
_____site		_____domestic	_____social	__1__	_____ objects
_____object		_____education	_____transportation	_____	_____ Total
		_____funerary	_____work in progress	__1__	
		_____government	_____unknown		
		_____health care	__X__vacant/not in use		
		_____industry	_____other:		

Number of Contributing Resources previously listed in the Inventory _____0_____

7. Description

Inventory No.

Condition

___ excellent	_____ deteriorated
___ good	_X_____ ruins
___ fair	_____ altered

Prepare both a one paragraph summary and a comprehensive description of the resource and its various elements as it exists today.

Summary

The Wilson Lane Street Trestle bridge structure was constructed as part of the West Washington & Glen Echo Electric Railroad/Glen Echo Trolley Line. The trestle bridge is located near the intersection of MacArthur Boulevard and Wilson Lane in Bethesda, Montgomery County, Maryland. The two-track trestle spans a wooded ravine containing a creek that runs through a culvert under MacArthur Boulevard. The trestle is approximately 350 ft. in length and 42 ft. high from the stream bed. The trestle deck is supported by 14 bents created by spaced steel beam and chord towers of varying height. Trolleys ran on the West Washington & Glen Echo Electric Railroad or trolley line from its construction in 1896 until 1960. Since the line closed the woods have grown up around and through the trestle structure. The current trestle is entirely rusted and evidences substantial wood rot and concrete deterioration.

Description

The Wilson trestle bridge is oriented northwest to southeast and parallels MacArthur Boulevard in Montgomery County, Maryland (Figure 1). The immediate area surrounding the trestle is a steep wooded ravine with the northern grade steeper than the southern slope. An unnamed drainage stream culverted under MacArthur Boulevard is daylighted under the trestle. The Cabin John Viaduct is located north of the trestle and MacArthur Avenue continues on the top of the aqueduct. The overgrown tree coverage and brush makes the trestle barely visible from MacArthur Boulevard, but residential development is visible south of the ravine on the west side along the ridge.

The Wilson trestle bridge has fourteen steel bents, with four full length bents extending from the deck to the slope on the north side (Figure 2). The south side has only two full length bents from the deck to the slope (Figure 3). Between these full-length bents, the middle of the bridge consists of 8 under deck support trusses (Figure 4). This rectangular box-like under truss consists of four center diagonal cross braced trusses, and two trusses on each side which contain only one diagonal chord. The northern two have a diagonal chord that extends from north to south, and the southern two trusses contain single diagonal chords extending south to north. Large rectangular concrete abutments are located at the north and south ends of the bridge. The trestle towers rest on concrete battered pedestals. Some of the concrete pedestals are still visible and some of them are buried in soil and debris. The steel members present are a combination of I beams, channels, angles, and WT's, with riveted connections.

Rail tracks and ties at the far ends of the concrete abutments have been removed; the trestle bridge contains rail tie beams, but no tracks. The two rows of ties are separated by approximately 2 ft. and rest on longitudinal I-beams resting on cross I-beam girders (Figure 5). Atop the far end of the concrete abutments are recently installed chain link fences to prevent access to the trestle. The abutments are rectangular shaped massive concrete blocks with taller inner sides due to the start of the ravine sloping downward. The northern abutment appears taller and longer than the southern abutment, responding to the steeper grade on the northern side of the ravine (Figure 6).

The trestle towers at the north and south ends are one, two, or three stories (approximately 8-10 ft.) in height with each story marked by cross bracing or diagonal, horizontal and vertical steel members riveted to a variously sized central and outer gusset plates connecting beams and girders to columns. The overall visual effect of the trestle from underneath is a canyon of webbed trusses and towers fabricated by connected slanted and tangled steel beams. The outside framing of the towers is cross braced chords dividing the rectangular spaces into four triangles. These chords are riveted to the vertical post beams with rectangular gusset plates. The inside framing of the towers has five to six diagonal and horizontal chords and one center vertical post typically all connected by heavily riveted, irregular, five-sided gusset plates (Figure 7).

Battered pyramidal cement bases support the towers' vertical steel posts. Four concrete bases are located on both the east and west sides of the trestle north of the stream and only 2 bases are located on both sides south of the stream. Some of the bases are buried and some bases have been exposed by erosion, making them unstable and dangerous.

Integrity

The Wilson Lane Trestle bridge was documented as part of the Cabin John Right-of-Way (Brookmont Trolley Row) (M: 35/31) in 1976. According to the inventory form, originally there were 10 bridges along the cabin John Right-of-Way. (Jones 1979). Two of the bridges are identified as demolished. The Wilson Lane trestle is noted as accessible and in fair condition (Jones, 1979).

A 2018 inspection report of the structure (DECO/ENGA/CVST, 2018) states that the structure evidences imminent structural failure conditions. The report notes the widespread evidence of deterioration noting that "every trestle tower and bent has failed cross bracing, failed gusset plates, failed cap or floor beams and stringers supporting the deck, [and] failed steel rods (DECO/ENGA/CVST, 2018).

The seven aspects of historic integrity are evidenced by the structure despite its unused and deteriorated condition. The trestle bridge is in its original location, although the setting has been compromised by the abandonment approximately eighty years ago. As stated previously, the area is an overgrown wooded ravine and no rail tracks connect to the abutments. The original setting, like the current condition, would have been wooded, as cited in previous MIHP documentation. "In interviews with persons who rode this streetcar to and from Glen Echo, this researcher was impressed by the frequency of comments about the real excitement of the ride, perhaps in an open car, as the train zipped along through a tunnel of greenery, allowing the rider occasional glimpses of the river below" (Jones 1979, 7-1). Although the rail tracks linking the trestles and extending from Georgetown to Cabin John Aqueduct have been removed, the right-of-way is still intact and the ties remain on the bridge deck. The structure itself is clearly a metal steel train trestle from the late 19th early 20th century, a bridge type commonly found on the rail lines of the country during this period of railroad dominated transportation. The structure maintains sufficient integrity of feeling and association.

Integrity of design, materials and workmanship is also intact. Despite the corrosion, and clear signs of deterioration and destabilization, the design characteristics of the metal truss bridge type are apparent. The I-beams, steel chords, gusset plates, and rivets are predominately apparent conveying the structural technology of the time. These structural elements also evidence the workmanship and, although corroded and worn, an overall integrity of materials.

8. Significance

Inventory No.

Period and justify below	Areas of Significance				Check
__ 1600-1699	__ agriculture	__ economics	__ health/medicine	__ performing arts	
__ 1700-1799	__ archeology	__ education	__ industry	__ philosophy	
X 1800-1899	__ architecture	X engineering	__ invention	__ politics/government	
__ 1900-1999	__ art	__ entertainment/ recreation	__ landscape architecture	__ religion	
__ 2000-	__ commerce		__ law	__ science	
	__ communications	__ ethnic heritage	__ literature	__ social history	
	__ community planning	__ exploration/ settlement	__ maritime history	X transportation	
	__ conservation		__ military	__ other: ____	

Specific dates 1896 -- 1960 **Architect/Builder**

Construction dates 1896

Evaluation for:

__X__ National Register _____Maryland Register _____not evaluated

Prepare a one-paragraph summary statement of significance addressing applicable criteria, followed by a narrative discussion of the history of the resource and its context. (For compliance projects, complete evaluation on a DOE Form – see manual.)

Summary Statement

Wilson Lane Trestle Bridge is one of the few remaining trestle bridges of the Washington Railway and Electric Co.'s line and Cabin John Street Railway between Georgetown in Washington, D.C. and the Cabin John Aqueduct. The trolley tracks took visitors to Glen Echo Amusement park and commuters from early 20th century suburbs in the Potomac Palisades to downtown Washington, D.C. The double track bridge spans a ravine cutting through the wooded palisades and is supported by steel trestle towers resting on concrete bases and concrete abutments all separated by a center row of under deck box trusses. A widely used type of railroad bridge in the late 19th century, the steel metal trestle bridge was fabricated as modules in east coast factories and sent out west by rail to expand the railroads. Constructed in 1896, the trestle is one of formerly 10 trestle bridges that linked the rails from Georgetown to Glen Echo Park, and later to Cabin John (Jones 1979).

Background

Originally, the Washington and Glen Echo Railway consisted of two branches -- the Tenallytown and Chevy Chase streetcar lines both chartered in 1889 (NRHP MPD #645-948, E-41). These two lines began operation in 1891 and extended from Georgetown to the Sycamore store at Conduit Road (now MacArthur Boulevard) and Walhonding Road. The route followed the Washington Aqueduct which connects the Delecarlia Reservoir to the Georgetown Reservoir. The U.S. Army Corps of Engineers built the Washington Aqueduct along Conduit Road and simultaneously supervised construction of the Glen Echo Railroad line near the aqueduct.

The Maryland section of the Washington & Great Falls Electric Railway Company was constructed in 1895. The company was chartered to construct and operate an electric railway "along the south side of the Conduit Road in Montgomery County, Maryland, with one terminus at the boundary line between District of Columbia and the said Montgomery County, at the point to connect with and form a continuous line with the Washington & Great Falls Electric Railway Company,…running from the City of Washington in the District of Columbia aforesaid to said point, and the other terminus thereof at or near the Great Falls of the Potomac…" (Jones 1979).

Mr. Stilson Hutchins, the founder of the *Washington Post*, was the force behind the development of the Washington & Great Falls Electric Railway line from Cabin John in Maryland to the District of Columbia. Hutchins, a very successful entrepreneur and real estate developer, owned a summer estate in the Potomac Palisades near the current location of the Dalecarlia Reservoir. Like many real estate developers in the late 19th and early 20th century, he financed street railways to provide inexpensive and reliable transportation to spur sales and development of residential neighborhoods on his land. With Hutchins's acquisition of the right-of-way through the Baltzley Brothers' failing Chautauqua at Glen Echo, he was able to connect the end of the line at Cabin John to the line leading to Georgetown (Jones 1979, Attachment Sheet A). Hutchins was soon able to completely buy out Glen Echo from the Baltzeys and in 1911 hired Leonard P. Schloss to construct an amusement park at the Chautauqua site.

The line advanced residential development in the Potomac Palisades and provided access to recreational venues such as the Glen Echo Amusement Park and the International Athletic Park, located at the present-day Sibley Hospital and featuring a bicycle racetrack (NRHP #0060120 2006, 8-5). An early advertisement stated that cars ran every 10 minutes and that "The Country intersected has appropriately been termed the American Rhine and is of surpassing beauty and grandeur" (NRHP #0060120 2006, 8-5). The trolley line right-of-way consists of deep clefts or trenches along the way. Interviews with persons who rode this streetcar frequently included comments about the excitement of the ride, as the view from the train rapidly changed from that of a tunnel of greenery to more expansive but quick views of the river below (Jones 1979, 7-1).

Schloss remained the general manager of the Glen Echo Amusement Park until 1948. The advent of the automobile provided more individual access to a variety of recreation destinations, which shut down many trolley parks. While other trolley parks were closing, Schloss added features to Glen Echo such as the carousel, roller coaster, swimming pool, and the Spanish Ballroom. The trolley park was transformed into an amusement park, which were becoming increasing popular throughout the country (Jones 1979, Attachment Sheet B). Streetcar usage for commuting in the area began declining in the 1920s however, due to the automobile.

Glen Echo made accommodations for the automobile – the park deliberately burnt down the aging Chautauqua amphitheater to make space for parking lot (NRHP #84001850, 8-4). Glen Echo park started to decline in the 1950s, and the defunct park was acquired by the Federal government in 1971 in a land exchange intended to preserve the Potomac Palisades (NRHP #84001850, 8-4). The Capital Traction Company acquired the Washington Railway and Electric Company in 1933 and operated it until 1960 when they abandoned the line. Various sections of the right-of-way were acquired by the U.S. Army Corps of Engineers for the Dalecarlia Water Treatment facilities and the 1960s construction of segments of the George Washington Memorial Parkway (Jones 1979, Attachment Sheet B).

Steel Truss Railroad Bridges

Steel Truss Bridges became an important structural type associated with the growth of railroads during the late 19th and early 20th centuries. The Wilson trestle bridge is a Warren Truss type, with longitudinal members joined by angled cross members which form triangle shapes. The design combines strength with economy of materials and was used to construct prefabricated modular bridges (P.A.C. Spero & company and Louis Berger & Associates 1995, 78).

The early use of metal truss bridges in Maryland is associated with Maryland being in the forefront of railroad development due to the Baltimore and Ohio Railroad Co. The development of heavy locomotives soon made evident that existing timer bridges on roadways would be insufficient to carry the loads of new heavier vehicles. Early metal truss iron bridges proved unsuccessful, the use of cast iron and wrought iron having different compression and tension strengths. In 1850 the Baltimore and Ohio Railroad built a successful metal truss bridge. The Bollman Truss was a revolutionary design based on science and math rather than speculation.

Each panel of the bridge is supported by inclined tension members and is counteracted by the compression from the top stretcher and end post, which transfer the vertical force to the abutments (Calvert).

Baltimore was an important railroad nexus in the 19th century and became a center of metal truss bridge building. Appalachian plateau counties took notice of the Bollman truss bridges and how they didn't wash away with seasonal flooding, which was the fate of many timber truss bridges. Numerous bridge building companies flourished at that time, chief among them the W. Bollman and Company, the first business in the nation to design, fabricate and erect bridges (Calvert).

After the Civil War, metal truss technology improved. Bessemer furnace and open-hearth metal production processes resulted in low carbon structural steel available for truss bridge construction during the 1890s (Maryland Bridges 84). Steel was preferred to cast or wrought iron because it is lighter and less likely to bend, or warp while maintaining great strength. East Coast bridge fabricators shipped steel truss components and modules westward to bridge sites. New pneumatic riveters allowed for assembly in the field, and steel trusses provided a low-cost expedient bridge type for the expanding the nation's rail network. The early 20th century saw a new bridge type -- reinforced concrete. Eventually, concrete bridges replaced metal truss bridges. Concrete rigid frame bridges are monoliths from the abutments into the superstructure, eliminating the bearings characteristic of slab and beam bridges (P.A.C. Spero & Company and Louis Berger & Associates 1995, 164).

The metal truss railroad bridge played an important role in Maryland's transportation history and is underrepresented among the historic properties of Montgomery County. Of the 44 bridges inventoried in the Montgomery County's Maryland Inventory of Historic Places (MIHP) over one-half are concrete. The remaining 17 bridges are predominately metal rolled girder. The oldest non-concrete bridge in Montgomery County, Maryland was constructed in 1911, (excluding the metal truss bridges of the Glen Echo line) but was altered in 1976 and 1992. The four bridges in this group that are recommended for NRHP eligibility date from the 1920s and are metal rolled girder or concrete encased metal rolled girder. An outlier in this grouping of potentially historic bridges in Montgomery County is the below deck truss bridge in Glen Echo Park over Minnehaha Creek. This bridge was rehabilitated in 2014, a cooperative project between the National Park Service and the Montgomery County Department of Transportation and links to the MacArthur Avenue Trail (Washcycle 2014). This bridge was part of the Washington and Glen Echo Railway.

The Wilson Lane Trestle is one of the few remaining metal truss bridges left in Montgomery County, Maryland. This bridge type is important to the expansion of railroads during the late 19th century and is associated with the Baltimore & Ohio Railroad Company, the first steam operated railroad in the United States to be chartered as a common carrier of freight and passengers. The railroad was organized to compete with the Erie Canal for trans-Appalachian trade. The metal truss bridge type played a significant role in the railroad traversing the Appalachian Mountains and reaching the Ohio River at Wheeling, Virginia (now West Virginia) in 1852. The Wilson Lane Trestle has an important association with the history of transportation (criteria A) and is a significant example of an important metal truss railroad bridge (criteria C engineering).

9. Major Bibliographical References

Inventory No.

Calvert, J. B., The Bollman Truss, Available at https://mysite.du.edu/~jcalvert/tech/bolltrus.htm. Accessed November 2, 2020.

DECO/ENGA/CVST. *Wilson Lane Trestle Bridge: Findings and Recommendations Based on Visual Inspection of 04-12-2018*, WMATA, Washington, D.C., 2018

Jones, Frances "Brookmont Trolley Row" M:35/31 Maryland Inventory of Historic Properties, 1979.

Maryland Historical Trust, Maryland Inventory of Historic Properties, Available at https://mht.maryland.gov/mihp/MIHP.aspx?Search=County&County=Montgomery. Accessed on October 29, 2020.

10. Geographical Data

Acreage of surveyed property	Less than one		
Acreage of historical setting	Less than one		
Quadrangle name	Falls Church	Quadrangle scale:	1:24,000

Verbal boundary description and justification

The boundary for the Wilson Lane Trestle Bridge is defined by the top of the trestles from the northern end of the north abutment to the southern end of the southern abutment. The east and west boundaries of the property are defined lines created by connecting the eastern sides of the eastern concrete base piers and the western sides of the western concrete base piers.

11. Form Prepared by

name/title	Jeff Winstel, Architectural Historian		
organization	WMATA	date	11/12/2020
street & number	600 Fifth Street NW	telephone	202 962 5038
city or town	Washington	state	D.C.

The Maryland Inventory of Historic Properties was officially created by an Act of the Maryland Legislature to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 supplement.

The survey and inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

return to: Maryland Historical Trust

Maryland Department of Planning
100 Community Place
Crownsville, MD 21032-2023
410-697-9591

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Figure 5: North abutment west face, facing northeast
Figure 6: Rail ties from below decking
Figure 7: Interior trestle tower bracing with diagonal, horizontal, and vertical beams and chords and polygonal shaped gusset plate

Bibliography (Continued)

(NRHP) National Register of Historic Places, Glover-Archbold Historic District #0060120.

(NRHP) National Register of Historic Places, Glen Echo Park Historic District #84001850.

(NRHP MPD) National Register of Historic Places, Multiple Property Document, Streetcar and Bus Resources of Washington D C 1862-1962 #645-948

P.A.C. Spero & company and Louis Berger & Associates, *Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report*, Maryland State Highway Administration, Maryland State Department of Transportation, July 1995.

Washcycle "Work under way on the Minnehaha creek trolley bridge". Available at https://www.thewashcycle.com/2014/07/work-underway-on-the-minnehaha-creek-trolley-bridge.htmlWashcycle, Accessed November 6, 2020.

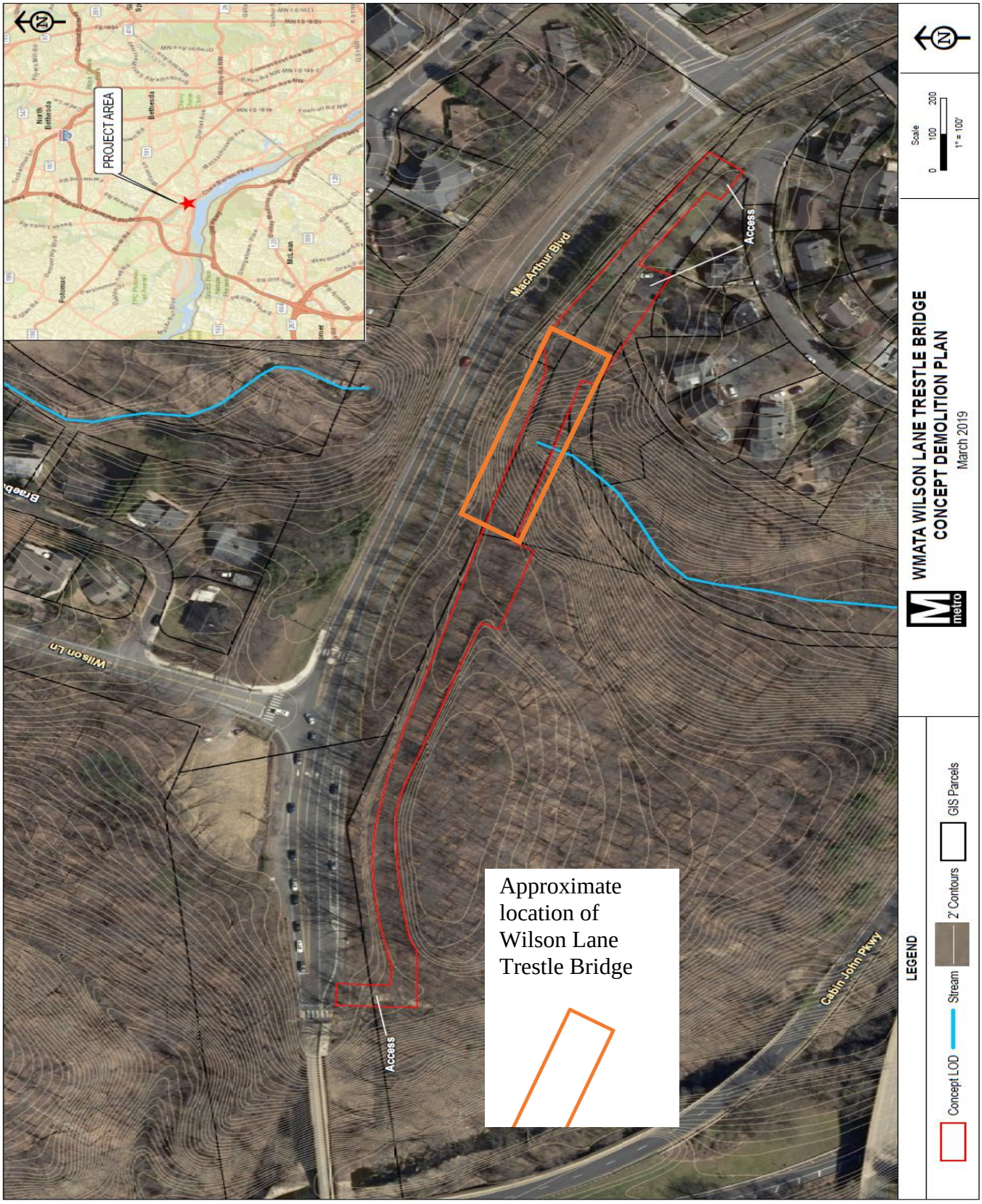

Figure 1: Wilson Lane Trestle Bridge Location Map

Figure 2: South side trestle tower bents, facing south

Figure 3: North side trestle tower bents, facing north

Figure 4: Central under deck trestles, facing southeast

Figure 5: North abutment west face, facing northeast

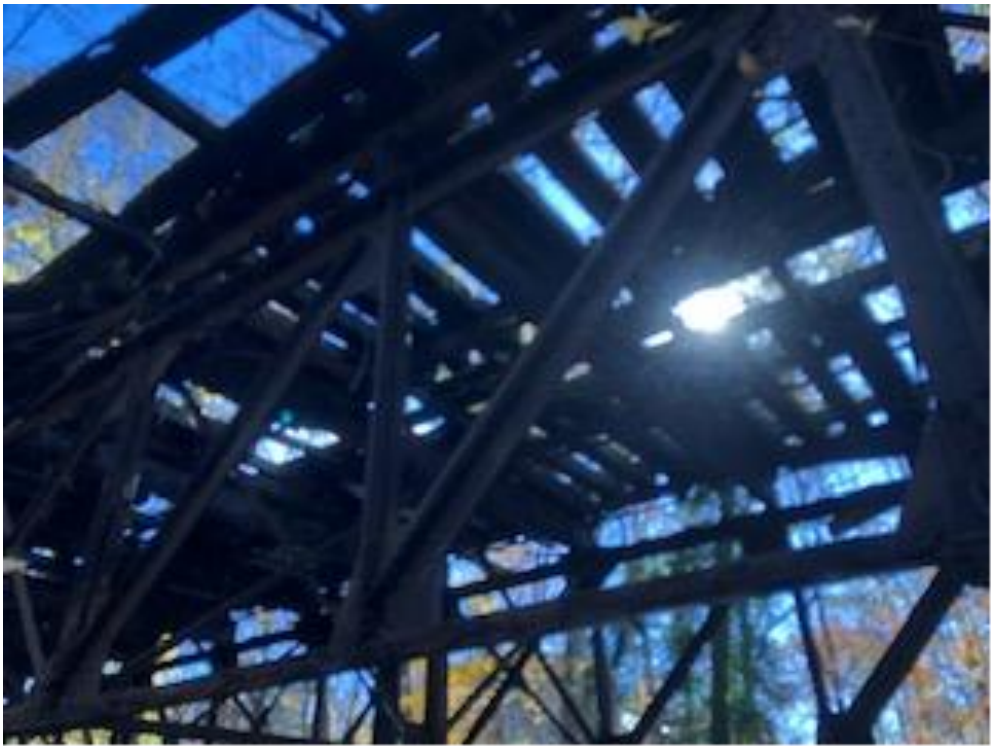

Figure 6: Rail ties from below decking

Figure 7: Interior trestle tower bracing with diagonal, horizontal, and vertical beams and chords and polygonal shaped gusset plate

MARYLAND HISTORICAL TRUST **NR Eligible: yes ___**
DETERMINATION OF ELIGIBILITY FORM **no ___**

Property Name: Wilson Lane Trestle Bridge Inventory Number: _____

Address: MacArthur Boulevard and Walhonding Street City: Glen Echo Zip Code: 20812

County: Montgomery USGS Topographic Map: Falls Church Quadrangle

Owner: WMATA Is the property being evaluated a district? ____yes

Tax Parcel Number: N 606 Tax Map Number: GM 53 Tax Account ID Number: 00436618

Project: _____ Agency: _____

Site visit by MHT Staff: ____no ___yes Name: _____ Date: _____

Is the property located within a historic district? ____yes X___no

If the property is within a district District Inventory Number: _____

NR-listed district ____yes Eligible district ____yes District Name: _____

Preparer's Recommendation: Contributing resource ___yes ___no Non-contributing but eligible in another context ____

If the property is not within a district (or the property is a district)

Preparer's Recommendation: Eligible X___yes ____no

Criteria: _X_A____B_X_C ____D Considerations: _____A ___B ___C ___D ___E ___F ___G ____None

Documentation on the property/district is presented in:

Description of Property and Eligibility Determination: *(Use continuation sheet if necessary and attach map and photo)*

The Walhonding Street trestle bridge structure was constructed as part of the West Washington & Glen Echo Electric Railroad/Glen Echo Trolley Line. The trestle bridge is located near the intersection of MacArthur Boulevard and Walhonding Street in Bethesda, Montgomery County, Maryland. The two-track trestle spans a wooded ravine containing a creek that runs through a culvert under MacArthur Boulevard and Clara Barton Parkway. The trestle is approximately 255

MARYLAND HISTORICAL TRUST REVIEW
Eligibility recommended ____ **Eligibility not recommended** _____
Criteria: ___**A** ____**B** ___**C** ____**D** **Considerations:** ___**A** ___**B** ___**C** ___**D** ___**E** ___**F** ___**G** ___**None**
Comments: _____

Reviewer, Office of Preservation Services	**Date**
Reviewer, NR Program	**Date**

MARYLAND HISTORICAL TRUST
NR-ELIGIBILITY REVIEW FORM

Continuation Sheet No. 1 MIHP No.

ft. in length and 35 ft. high from the stream bed. The trestle spans a creek in a steep wooded ravine and is supported by sixteen bents created by spaced steel beam and chord towers of varying height. Trolleys ran on the West Washington & Glen Echo Electric Railroad or trolley line from its construction in 1896 until 1960. Since the line closed the woods have grown up around and through the trestle structure. The current condition is entirely rusted and evidences substantial wood rot and concrete deterioration.

Walhonding Street Trestle Bridge is one of the few remaining trestle bridges of the Washington Railway and Electric Co.'s line and Cabin John Street Railway between Georgetown in Washington, D.C. and the Glen Echo Amusement Park. The trolley tracks took visitors to Glen Echo Amusement park and commuters from early 20th century suburbs in the Potomac Palisades to downtown Washington, D.C. The double track bridge spans a ravine cutting through the wooded palisades and is supported by steel trestle towers resting on concrete bases and concrete abutments. A widely used type of railroad bridge in the late 19th century, the steel metal trestle bridge was fabricated as modules in east coast factories and sent out west by rail to expand the railroad west. Constructed in 1896, the trestle is one of formerly 7 trestle bridges that linked the rails from Georgetown to Glen Echo Park, and later to Cabin John.

Prepared by: Jeff Winstel, WMATA Date Prepared: November 17, 2020