APPENDIX F

Preliminary Wetland Delineation





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September 3, 2024

US Army Corps of Engineers Nashville District 3701 Bell Road Nashville, TN 37214 (615) 369-7500

TN Department of Environment & Conservation Division of Water Resources Columbia Environmental Field Office 1421 Hampshire Pike Columbia, TN 38401 (931) 380-3371

Re: Middle Tennessee State University (MTSU) Development

Shelbyville Municipal Airport, Bedford County, Tennessee

Wetland Delineation Report and PJD Request

To Whom It May Concern:

Middle Tennessee State University (MTSU) is proposing the construction of a new aviation facility at Shelbyville Municipal Airport in Shelbyville, TN (see Figure 1) to serve its Aerospace Department, flight training program, and aircraft maintenance program. The City of Shelbyville (City) is providing the property for the project and has retained Garver, LLC to complete an Environmental Assessment, wetland delineation, and other environmental research.

Regulatory Basis

Discharges of dredged or fill material into Waters of the United States are regulated under Section 404 of the Clean Water Act. Any such action proposed in wetlands or other Waters of the U.S. are subject to review by the U.S. Army Corps of Engineers (USACE) and other federal and state agencies and require authorization by USACE. For jurisdictional purposes, USACE and the U.S. Environmental Protection Agency (EPA) jointly define wetlands as follows: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (USACE 1987).

Summary

A site visit of the study area (19.3 acres) which is owned by the City of Shelbyville was conducted on November 29 and 30, 2023 and July 24 and 25, 2024. The general site conditions appeared normal for property historically farmed. The study area consisted of undulating pasture with some successional woodland. The pasture was dominated by false tall rye grass (Schedonorus arundinaceus), lesser poverty USACE September 3, 2024 Page 2 of 6

rush (*Juncus tenuis*), and broom-sedge (*Andropogon virginicus*) while the woodland was mostly eastern red cedar (*Juniperus virginiana*), post oak (*Quercus stellata*), and shag-bark hickory (*Carya ovata*). According to the Shelbyville Municipal Airport weather station (USC00408242), the area received 1.95 inches of rain eight days prior to the November 2023 site visit. During, and 48 hours prior to, the July 2024 site visit, the area received 1.75 inches of rain. According to the U.S. Army Corps of Engineers (USACE) Antecedent Precipitation Tool, precipitation conditions were normal during the November 2023 site visit. Conditions were drier than normal on July 24 and normal on July 25, 2024. According to the Natural Resources Conservation Service Web Soil Survey, five soil map units exist in the study area. Of the five, Eagleville silty clay loam, frequently flooded and Godwin silt loam, frequently flooded are considered hydric and make up 42% of the study area (see **Figure 2**). An inquiry of the U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) Mapper yielded one riverine wetland in the study area and a palustrine unconsolidated bottom (PUB) wetland adjacent to the study area (**Figure 3**). Federal Emergency Management (FEMA) Floodplains are absent according to FEMA Flood Maps.

Three emergent wetlands (W), one scrub-shrub wetland, and one pond were delineated within the study area (**Figure 4**). No other aquatic resources were observed. Below are details regarding each feature delineated at the site with summarized data in **Table 1**. Additionally, wetland data points (data forms attached) were recorded to characterize wetland and upland features.

Wetland 1 ▶

Wetland 1 is classified as PEM1E (Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated Wetland) and exists due to poor hydrologic relief, geomorphic position, and possibly a seasonally high water table. Observed hydrology included saturation in aerial imagery and geomorphic position. Dominant vegetation observed included vellow bristle grass (Setaria pumilla) and hairy buttercup (Ranunculus sardous). The inset photo (right) shows hydric soils (redox depressions) from Wetland 1. Approximately 0.05 ac



of Wetland 1 occurs within the study area. This borderline wetland was located in a closed depression and surrounded by uplands dominated by tall false rye grass and broom-sedge. This feature is unlikely subject to regulation by the USACE due to the lack of a continuous surface water connection to a jurisdictional water of the U.S.

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Wetland 2 ▶

Wetland 2 is classified as PEM1E and exists due to geomorphic position and possibly a seasonally high water table. A portion of the wetland appears to be located within a historically altered USGS mapped stream (see Figure 1). This feature did not have Ordinary Highwater Marks but did appear to drain to drainage ditches along the airport taxiway to the southeast. The top photo to the right shows W 2 at DP 4 and the bottom photo to the right shows W 2 at DP 6. Observed hydrology included saturation in aerial imagery, geomorphic position, and FAC-Neutral Test. Dominant vegetation observed included (Paspalum dilatum), Frank's sedge (Carex frankii), giant ironweed (Vernonia gigantea), and green ash (Fraxinus pennsylvanica) as an herb. The inset photos (right) show hydric soils (depleted matrix) from Wetland 2. Approximately 0.73 ac of Wetland 2 occurs within the study area. Although partially located in woodland, the majority of the wetland had no woody vegetation growing within it and was frequently surrounded by eastern red cedar (Juniperus virginiana) and winged elm (Ulmus alata). This feature may be subject to regulation by the USACE due to potential surface water connection to jurisdictional waters of the U.S.





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Wetland 3 ▶

Wetland 3 is classified as PSS1E (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated Wetland) and located within the lower part of Wetland 2 to the east. It consists of a small stand of green ash saplings (see photo to right). Approximately 0.01 acre of Wetland 3 is located in the study area. This feature may be subject to regulation by the USACE due to potential surface water connection to jurisdictional waters of the U.S.



Wetland 4 ▶

Wetland 4 is classified as PEM1E and is connected to Wetland 2 although geologically different. This mosaic wetland exists as several depressions with bedrock existing only inches deep or exposed in some instances. It exists due to poor hydrologic relief, geomorphic position, a shallow aquitard, and possibly a seasonally high water table. Observed hydrology included saturation in aerial imagery and geomorphic position. Dominant vegetation observed included golden crown grass and wand panic grass (Panicum virgatum). The inset photo (right) shows hydric soils (depleted matrix and redox depressions) from Wetland 4. This area exhibits approximately 80% depressional wetlands and 20% intermittent uplands. Wetland 4 is comprised of 0.21 acre. This feature may be subject to regulation by the USACE due to potential surface water connection to jurisdictional waters of the U.S.



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Pond 1 ▶

Pond 1 is a PUB wetland or farm pond that according to historic aerial imagery, was constructed between 1987 and 1992 in what appears to be uplands. No aquatic resources discharge to the pond and the pond does not have an outlet in which it discharges from. A data point was collected below the pond to determine potential connectivity to other aquatic resources; however, the data point was determined to be located in uplands. Approximately 0.21 ac of P1 occurs in the study area. This feature is unlikely subject to regulation by the USACE due to the lack of a continuous surface water connection to a jurisdictional water of the U.S.



Table 1: Wetlands

Wetland	Cowardin Classification	Acreage within Study Area	Latitude, Longitude			
W 1	PEM1E	0.05	35.555716°, -86.446578°			
W 2	PEM1E	0.73	35.554775°, -86.445874°			
W3	PSS1E	0.01	35.554815°, -86.445309°			
W4	PEM1E	0.21	35.554866°, -86.446519°			
P 1	PUB	0.21	35.556042°, -86.446110°			
	Total	1.21				

Conclusion

As described in this report, a total of 1.21 acres of wetlands were identified within the study area. No other aquatic features were located within the study area. We respectfully request concurrence with our findings and a preliminary jurisdictional determination as a Section 404 Permit application is forthcoming. We also invite you to express any concerns you may have regarding the proposed project.

Enclosed with this wetland report are several attachments to aid in your review, including site maps, data forms, and weather data. Please call me at 479-879-9746 or email me at JCMarshall@GarverUSA.com if you have any questions.

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Sincerely,

GARVER

Colby Marshall

Environmental Scientist TN-QHP In Training

Conflhal

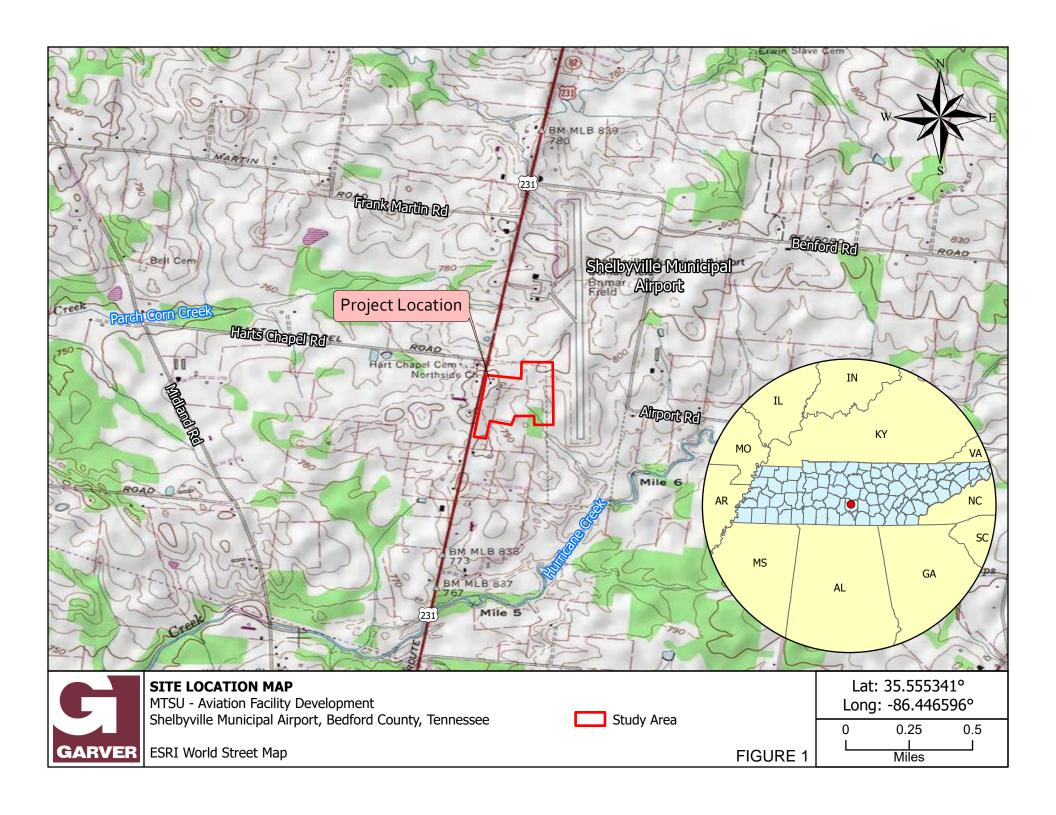
cc: Matthew Claerbout, PE - Garver

Ryan Mountain, PWS - Garver

Attachments: Figure 1 - Site Location Map

Figure 2 - NRCS Soils Map Figure 3 - NWI Wetland Map Figure 4 - Wetland Delineation Map

Wetland Data Forms Weather Data





MAP LEGEND

Area of Interest (AOI) Transportation Area of Interest (AOI) Rails Soils Interstate Highways **Soil Rating Polygons** US Routes Hydric (100%) Major Roads Hydric (66 to 99%) Local Roads Hydric (33 to 65%) **Background** Hydric (1 to 32%) Aerial Photography Not Hydric (0%) Not rated or not available Soil Rating Lines Hydric (100%) Hydric (66 to 99%) Hydric (33 to 65%) Hydric (1 to 32%) Not Hydric (0%) Not rated or not available **Soil Rating Points** Hydric (100%) Hydric (66 to 99%) Hydric (33 to 65%) Hydric (1 to 32%) Not Hydric (0%) Not rated or not available **Water Features** Streams and Canals

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bedford County, Tennessee Survey Area Data: Version 20, Sep 12, 2023

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

Date(s) aerial images were photographed: Mar 20, 2021—Apr 20, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BdB2	Bradyville silt loam, 2 to 5 percent slopes	0	17.6	56.7%
BnC	Bradyville-Urban land complex, 2 to 10 percent slopes	0	0.0	0.1%
Ea	Eagleville silty clay loam, frequently flooded	8	8.7	27.9%
Go	Godwin silt loam, frequently flooded	8	2.5	7.9%
NeB	Nesbitt silt loam, 2 to 5 percent slopes	0	1.8	5.9%
TaB2	Talbott silt loam, 2 to 5 percent slopes, eroded	0	0.4	1.4%
Totals for Area of Inter	rest	•	31.0	100.0%

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

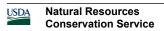
The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.



Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

U.S. Fish and Wildlife Service

National Wetlands Inventory

SYI-MTSU Aviation Facility Development FIGURE 3



January 24, 2024

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Pond

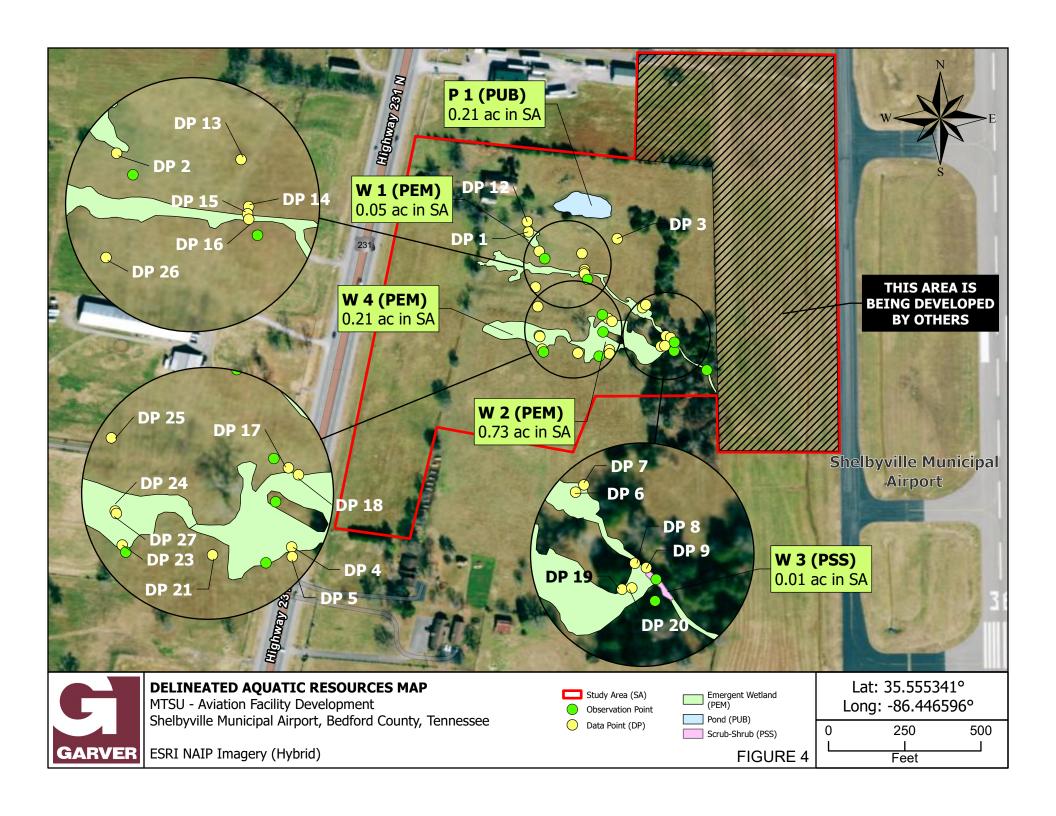
Freshwater Forested/Shrub Wetland

Lake

Other

Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Devel	opment	City/County: Shelbyvi	lle/Bedford	Sampling Date: 11/29/23			
Applicant/Owner: City of Shelbyville	City of Shelbyville Garver Section, Township, Range: N/A ace, etc.): depression Local relief (concave, convex, none): none Slop RA): LRR N, MLRA 123 Lat: 35.555807* Long: -86.446620* Date agleville sitly clay loam, frequently flooded Conditions on the site typical for this time of year? Section, Township, Range: N/A Are 'Normal Circumstances' present? Yes X No (ff no, explain in R Soil or Hydrology significantly disturbed? Are 'Normal Circumstances' present? Yes X No (ff needed, explain any answers in Remarks.) INDINGS – Attach site map showing sampling point locations, transects, important on Present? Yes X No (ff needed, explain any answers in Remarks.) INDINGS – Attach site map showing sampling point locations, transects, important on Present? Yes X No (freeded, explain any answers in Remarks.) Indicators: Indicat			Sampling Point: DP 1			
Investigator(s): JCM - Garver	Owner: City of Shelbyville Section, Township, Range: N/A Correct Section, Township, Range: N/A						
Landform (hillside, terrace, etc.): depression	n Lo	cal relief (concave, convex	, none): none	Slope (%): 1			
Subregion (LRR or MLRA): LRR N, MLRA 1	dform (hillside, terrace, etc.): depression						
				cation: N/A			
Are climatic / hydrologic conditions on the site	typical for this time of ver	ar? Yes X	No (If no	o. explain in Remarks.)			
, ,	,,						
Are Vegetation , Soil , or Hydro	logy naturally probl	ematic? (If needed, e	xplain any answers in F	Remarks.)			
			ions, transects, i	mportant features, etc.			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No	•	Yes X	No			
Site meets all three wetland criteria and is lo	cated in a wetland.						
			Socondary Indicator	rs (minimum of two required)			
1	red: check all that apply)		-	•			
Surface Water (A1)		(B14)		, ,			
High Water Table (A2)		` '					
Saturation (A3)							
Water Marks (B1)	Presence of Reduce	d Iron (C4)	 :				
Sediment Deposits (B2)	Recent Iron Reduction	on in Tilled Soils (C6)					
Drift Deposits (B3)	Thin Muck Surface (C7)	X Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Rer	marks)		'			
Iron Deposits (B5)							
I 	")			` '			
l ——							
		Т	FAC-Neutral Te	St (D5)			
Field Observations:	No. V. Donale Cook	>					
			Hydrology Present?	Yes X No			
(includes capillary fringe)	No X Depti (illent	Welland	Triyarology i resent:	163 <u>X</u> 110			
, , , ,	nitoring well, aerial photos	, previous inspections), if a	available:				
Remarks:							
Site meets wetland hydrology criteria.							

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 1 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover 50% of total cover: ____ 20% of total cover: ___ OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: ____) FACW species _ x 2 = 1. FAC species ____ x 3 = ___ 2. FACU species x 4 = ____ x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: 30') Problematic Hydrophytic Vegetation¹ (Explain) _____ 75 Setaria pumila FAC Yes ¹Indicators of hydric soil and wetland hydrology must be Ranunculus sardous 25 2. FAC present, unless disturbed or problematic. 3. **Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. height. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 100 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 50 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) Site meets hydrophytic vegetation criteria.

	ription: (Describe t	o the dep				tor or co	onfirm the absence of	of indicators.)
Depth	Matrix			Featur		. 2		
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-2	10YR 3/2	100					Loamy/Clayey	
2-4	10YR 4/3	94	10YR 5/8	6	C	PL	Loamy/Clayey	Prominent redox concentrations
4-16	10YR 5/3	94	10YR 5/8	6	<u>C</u>	PL	Loamy/Clayey	Prominent redox concentrations
¹ Type: C=Co	ncentration, D=Depl	etion, RM	=Reduced Matrix, M	IS=Mas	ked Sand	Grains.		: PL=Pore Lining, M=Matrix.
Hydric Soil I								ators for Problematic Hydric Soils ³ :
Histosol (Polyvalue Be		, ,	•	· · · —	2 cm Muck (A10) (MLRA 147)
Histic Ep	ipedon (A2)		Thin Dark Su					Coast Prairie Redox (A16)
Black His	stic (A3)		Loamy Muck	y Miner	al (F1) (N	ILRA 130	6)	(MLRA 147, 148)
Hydroger	n Sulfide (A4)		Loamy Gleye	ed Matri	x (F2)		F	Piedmont Floodplain Soils (F19)
Stratified	Layers (A5)		Depleted Ma	trix (F3)				(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface	(F6)		F	Red Parent Material (F21)
Depleted	Below Dark Surface	(A11)	Depleted Dar	rk Surfa	ce (F7)			(outside MLRA 127, 147, 148)
Thick Da	rk Surface (A12)		X Redox Depre	ssions	(F8)		\	/ery Shallow Dark Surface (F22)
Sandy M	ucky Mineral (S1)		Iron-Mangan	ese Ma	sses (F12	2) (LRR I	N,(Other (Explain in Remarks)
Sandy Gl	eyed Matrix (S4)		MLRA 136)				
Sandy Re	edox (S5)		Umbric Surfa	ice (F13	B) (MLRA	122, 136	3) ³ Indic	cators of hydrophytic vegetation and
Stripped	Matrix (S6)		Piedmont Flo	odplain	Soils (F	19) (MLR	A 148) v	vetland hydrology must be present,
Dark Sur	face (S7)		Red Parent N	/laterial	(F21) (M	LRA 127	, 147, 148) u	ınless disturbed or problematic.
Restrictive L	ayer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil Prese	nt? Yes X No
Remarks:								
Concretions f	rom 4-16 inches. Site	e meets h	ydric soil criteria.					

WETLAND DETERMINATION DATA SHEET - Eastern Mountains and Piedmont Region See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

City/County: Shelbyville/Bedford Sampling Date: 11/29/23 Project/Site: MTSU - Aviation Facility Development Applicant/Owner: City of Shelbyville State: TN Sampling Point: DP 2 Investigator(s): JCM - Garver Section, Township, Range: N/A Local relief (concave, convex, none): none Slope (%): 2 Datum: WGS84 NWI classification: N/A

Landform (hillside, terrace, etc.): flat pasture Subregion (LRR or MLRA): LRR N, MLRA 123 Lat: 35.555633° Long: -86.446525° Soil Map Unit Name: Eagleville silty clay loam, frequently flooded Are climatic / hydrologic conditions on the site typical for this time of year? No (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _ X _ No ___ Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. No X Hydrophytic Vegetation Present? Is the Sampled Area Hydric Soil Present? No within a Wetland? Yes No X Wetland Hydrology Present? Remarks: Site does not meet all three wetland criteria and is not located in a wetland. **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) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Water Marks (B1) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) X Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) X Geomorphic Position (D2) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Aquatic Fauna (B13) **Field Observations:** No X Depth (inches): Surface Water Present? No X Depth (inches): Water Table Present? No X Depth (inches): Wetland Hydrology Present? Saturation Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Site meets wetland hydrology criteria.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 2 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 50.0% (A/B) Prevalence Index worksheet: =Total Cover Total % Cover of: 50% of total cover: _____ 20% of total cover: ____ **OBL** species x 1 = Sapling/Shrub Stratum (Plot size: _____) **FACW** species x 2 =1. **FAC** species x 3 = 90 x 4 = 2. **FACU** species 360 0 x 5 = 0 3. UPL species Column Totals: 130 (A) 480 4 (B) 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Schedonorus arundinaceus 90 **FACU** Yes ¹Indicators of hydric soil and wetland hydrology must be Setaria pumila present, unless disturbed or problematic. 3. **Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 130 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 65 20% of total cover: Woody Vine Stratum (Plot size:) 3. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? Yes No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegeation criteria.

	ription: (Describe t Matrix	to the de		ument t x Featu		ator or co	onfirm the absence	e of indicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	% realu	Type ¹	Loc ²	Texture	Remarks	
0-3	10YR 3/2	100	Color (molet)		Турс		Loamy/Clayey	Tromano	
3-14	10YR 5/2	70	10YR 5/8	4		M	Loamy/Clayey	Prominent redox concentrat	tions
¹Type: C=Co	ncentration, D=Depl	etion, RM	=Reduced Matrix, N	 //S=Mas	ked Sand	Grains.	² Locatio	on: PL=Pore Lining, M=Matrix.	
Hydric Soil I		,	,					licators for Problematic Hydric S	Soils ³ :
Histosol (Polyvalue Be	elow Su	rface (S8) (MLRA		2 cm Muck (A10) (MLRA 147)	
— Histic Ep	ipedon (A2)		Thin Dark Su	urface (89) (MLR	A 147, 1	48)	Coast Prairie Redox (A16)	
Black His	stic (A3)		Loamy Muck	y Miner	al (F1) (N	ILRA 13	<u>—</u> 6)		
Hydroger	n Sulfide (A4)		Loamy Gleye	ed Matri	x (F2)			Piedmont Floodplain Soils (F19)	
Stratified	Layers (A5)		X Depleted Ma	trix (F3)			(MLRA 136, 147)	
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface	(F6)			_Red Parent Material (F21)	
Depleted	Below Dark Surface	(A11)	Depleted Da	rk Surfa	ice (F7)			(outside MLRA 127, 147, 148))
	rk Surface (A12)		Redox Depre					_Very Shallow Dark Surface (F22))
	ucky Mineral (S1)		Iron-Mangan		sses (F1	2) (LRR I	N,	Other (Explain in Remarks)	
	leyed Matrix (S4)		MLRA 136	•	a) /		. 3.		
	edox (S5)		Umbric Surfa					dicators of hydrophytic vegetation	
	Matrix (S6)		Piedmont Flo					wetland hydrology must be prese	
Dark Sur			Red Parent I	Material	(F21) (M	LRA 127	', 147, 148) I	unless disturbed or problematic.	
	ayer (if observed):								
Type:	ah a a \.						Libratuia Cail Dua	and Yas Y Na	
Depth (in	cnes):						Hydric Soil Pre	sent? Yes X No	
3-14 inches n	natrix color of 10YR	5/3 26%.	Concretions from 3-	-14 inch	es. Site r	neets hyd	dric soil criteria.		

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: MTSU - Aviation Facility Development City/County: Shelbyville/Bedford Sampling Date: 11/30/2023 Applicant/Owner: City of Shelbyville State: TN Sampling Point: DP 3

Investigator(s): JCM - Garver		Section, Township, Range	: <u>N/A</u>				
Landform (hillside, terrace, etc.): hillslope	Lo	cal relief (concave, convex,	none): concave	Slope (%):3			
Subregion (LRR or MLRA): LRR N, MLRA 12	23 Lat: 35.555751°	Long:	-86.445828°	Datum: WGS84			
Soil Map Unit Name: Eagleville silty clay loar	m, frequently flooded		NWI classificati	ion: N/A			
Are climatic / hydrologic conditions on the site	typical for this time of ye	ar? Yes X	No (If no, ex	xplain in Remarks.)			
Are Vegetation , Soil , or Hydrol			Circumstances" present?				
Are Vegetation , Soil , or Hydrol			plain any answers in Rer				
			-				
SUMMARY OF FINDINGS – Attach	site map showing s	sampling point locati	ons, transects, imp	portant features, etc.			
Hydrophytic Vegetation Present?	Yes No X	Is the Sampled Area					
	Yes No X	within a Wetland?	Yes	No X			
Wetland Hydrology Present?	Yes X No						
Remarks:							
Site does not meet all three wetland criteria a	and is not located in a wet	land.					
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is requir	ed; check all that apply)		Surface Soil Crack	s (B6)			
Surface Water (A1)	True Aquatic Plants	(B14)	Sparsely Vegetate	d Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Od	for (C1)	Drainage Patterns (B10)				
Saturation (A3)	Oxidized Rhizospher	res on Living Roots (C3)	Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduce	d Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrows (C8)				
Drift Deposits (B3)	Thin Muck Surface (·		on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Rei	marks)	Stunted or Stresse				
Iron Deposits (B5)			X Geomorphic Positi				
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (I	•			
— Water-Stained Leaves (B9) Aquatic Fauna (B13)			Microtopographic F FAC-Neutral Test (` '			
			IAO-Neuliai Testi	(00)			
Field Observations:	No V Donth (inch						
Surface Water Present? Yes Water Table Present? Yes	No X Depth (inch	′ 					
	No X Depth (inche		Hydrology Present?	Yes X No			
Saturation Present? Yes (includes capillary fringe)	No X Deptil (Illoli	es) vveilallu	nyurology Fresent:	162 <u>\</u> NO			
Describe Recorded Data (stream gauge, mor	nitoring well_aerial photos	nrevious inspections) if a	vailable·				
December Recorded Data (caream gauge, me	miorning won, donar priotoc	,, providuo mopodaono), n d	valiable.				
Remarks:							
Site meets wetland hydrology criteria.							

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 3 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 50.0% (A/B) Prevalence Index worksheet: Total % Cover of: ____ =Total Cover 50% of total cover: ____ 20% of total cover: ___ OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: ____) FACW species x 2 = 1. FAC species ____ x 3 = ___ 2. FACU species x 4 = _____ x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Setaria pumila 60 FAC Yes ¹Indicators of hydric soil and wetland hydrology must be Schedonorus arundinaceus 35 2. Yes **FACU** present, unless disturbed or problematic. 5 3. Andropogon virginicus No **FACU Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 100 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 50 20% of total cover: Woody Vine Stratum (Plot size:) 3. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? Yes No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria.

Profile Desci Depth	ription: (Describe t Matrix	to the de		ıment t x Featuı		ator or c	onfirm the absence	e of indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-7	10YR 5/3	96	10YR 5/6	4	C		Loamy/Clayey	Distinct redo	x concentrations
7-14	10YR 5/2	94	10YR 5/6	6		M	Loamy/Clayey	Prominent rec	lox concentrations
¹Type: C=Co	ncentration, D=Depl	etion, RM	=Reduced Matrix, M	 IS=Mas	ked Sand	Grains.	²Locatio	on: PL=Pore Lining,	M=Matrix.
Hydric Soil II			, , , , , , , , , , , , , , , , , , , ,						natic Hydric Soils ³ :
Histosol (Polyvalue Be	low Su	rface (S8	(MI RA		2 cm Muck (A10) (•
	ipedon (A2)		Thin Dark Su		-			Coast Prairie Redo	
Black His			Loamy Muck					(MLRA 147, 148	` '
	n Sulfide (A4)		Loamy Gleye			iLita io	0 ,	Piedmont Floodpla	
	Layers (A5)		Depleted Ma					(MLRA 136, 147	
	ck (A10) (LRR N)		Redox Dark					Red Parent Materia	
	Below Dark Surface	(A11)	Depleted Da					(outside MLRA	` '
	rk Surface (A12)	, (, (, , , ,	Redox Depre					Very Shallow Dark	
	ucky Mineral (S1)		Iron-Mangan			2) (I RR		Other (Explain in R	
	eyed Matrix (S4)		MLRA 136			-, (,
Sandy Re			Umbric Surfa	•	3) (MLRA	122. 13	6) ³ Inc	dicators of hydrophy	tic vegetation and
	Matrix (S6)		Piedmont Flo					wetland hydrology	
Dark Surl			Red Parent I					unless disturbed of	
	ayer (if observed):			viatoriai	(1 2 1) (111		<u> </u>		problemate.
Type:	,								
Depth (in	ches):						Hydric Soil Pres	sent? Yes	No X
Remarks:	<u> </u>								
	ese concretions pres	ent. Site	does not meet hydri	c soil cr	iteria.				

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R Project/Site: MTSU - Aviation Facility Development City/County: Shelbyville/Bedford

Project/Site: MTSU - Aviation Facility Develo	pment	City/County: Shelbyville	e/Bedford	Sampling Date: 11/30/23		
Applicant/Owner: City of Shelbyville			State: TN	Sampling Point: DP 4		
Investigator(s): JCM - Garver		Section, Township, Range:	N/A			
Landform (hillside, terrace, etc.): depression	Lo	cal relief (concave, convex,	none): concave	Slope (%): 1		
Subregion (LRR or MLRA): LRR N, MLRA 12	 23	Long: -	86.445899°	Datum: WGS84		
Soil Map Unit Name: Eagleville silty clay loan	n, frequently flooded		NWI classifica	tion: N/A		
Are climatic / hydrologic conditions on the site	typical for this time of year	ar? Yes X	No (If no, e	explain in Remarks.)		
Are Vegetation , Soil , or Hydrok	ogy significantly dis	sturbed? Are "Normal C	ircumstances" present?	•		
Are Vegetation , Soil , or Hydrok			olain any answers in Re			
SUMMARY OF FINDINGS – Attach			-	·		
Lludraphytic Veretation Present?	Vac. V. No.	le the Compled Avec				
, , , ,	Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes X	No		
	Yes X No	William a Wollana	<u> </u>			
Remarks:						
Site meets all three wetland criteria and is loc	ated in a wetland.					
HYDROLOGY						
Wetland Hydrology Indicators:			-	(minimum of two required)		
Primary Indicators (minimum of one is require			Surface Soil Crac	` ′		
Surface Water (A1)	True Aquatic Plants (ed Concave Surface (B8)		
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Patterns (B10)			
Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines (•		
Water Marks (B1)	Presence of Reduced	` '		Dry-Season Water Table (C2)		
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrows (C8)			
Drift Deposits (B3)	Thin Muck Surface (0	•	X Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Rer	marks)		Stunted or Stressed Plants (D1)		
Iron Deposits (B5)			X Geomorphic Posit			
Inundation Visible on Aerial Imagery (B7)	!		Shallow Aquitard			
Water-Stained Leaves (B9)			Microtopographic			
Aquatic Fauna (B13)			X FAC-Neutral Test	(D5)		
Field Observations:						
Surface Water Present? Yes	No X Depth (inche	· ·				
Water Table Present? Yes		es):				
	No X Depth (inche	es): Wetland	Hydrology Present?	Yes _ X _ No		
(includes capillary fringe)						
Describe Recorded Data (stream gauge, mor	litoring well, aerial photos	s, previous inspections), if a	/allable:			
Remarks:						
Site meets wetland hydrology criteria.						

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 4 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 66.7% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover 50% of total cover: ____ 20% of total cover: ___ OBL species x 1 = Sapling/Shrub Stratum (Plot size: ____) FACW species _ x 2 = 1. FAC species ____ x 3 = ____ 2. FACU species x 4 = x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Schedonorus arundinaceus 30 Yes **FACU** ¹Indicators of hydric soil and wetland hydrology must be 2 Fraxinus pennsylvanica 25 Yes **FACW** present, unless disturbed or problematic. 3. Carex frankii 25 Yes OBL **Definitions of Four Vegetation Strata:** 20 FAC 4 Setaria pumila No Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or 5 more in diameter at breast height (DBH), regardless of 5. Paspalum dilatatum No FAC 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft 8. (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 105 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 53 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) Site meets hydrophytic vegetation criteria.

		o the de				itor or co	onfirm the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%		x Featur %		Loc ²	Toyturo	Domarka
(inches) 0-1	Color (moist) 10YR 3/2	100	Color (moist)		Type ¹	Loc	Texture Learny/Clavey	Remarks
<u>U-1</u>	10113/2						Loamy/Clayey	
1-16	10YR 5/2	94	10YR 4/6	6	<u> </u>	<u>M</u>	Loamy/Clayey	Prominent redox concentrations
¹ Type: C=Co	ncentration, D=Depl	etion, RM	=Reduced Matrix, N	1S=Mas	ked Sand	l Grains.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indic	eators for Problematic Hydric Soils ³ :
Histosol (· · · · ·		Polyvalue Be				· · · · —	2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Thin Dark Su	•	, .		· —	Coast Prairie Redox (A16)
Black His			Loamy Muck	•	. , .	ILRA 13	•	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye				F	Piedmont Floodplain Soils (F19)
	Layers (A5)		X Depleted Ma	, ,			_	(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark				<u> </u> '	Red Parent Material (F21)
	Below Dark Surface	(A11)	Depleted Da				,	(outside MLRA 127, 147, 148)
	rk Surface (A12)		Redox Depre			o) // DD /		/ery Shallow Dark Surface (F22)
	ucky Mineral (S1) eyed Matrix (S4)		Iron-Mangan		5562 (F 12	2) (LKK I		Other (Explain in Remarks)
	edox (S5)		Umbric Surfa	•	3) (MI RA	122 13	S) ³ Indi	cators of hydrophytic vegetation and
	Matrix (S6)		Piedmont Flo					vetland hydrology must be present,
Dark Sur			Red Parent I		-			unless disturbed or problematic.
	ayer (if observed):				()			
Type:	, , , , , , , , , , , , , , , , , , , ,							
Depth (in	ches):						Hydric Soil Prese	ent? Yes X No
Remarks:							<u>. </u>	
	rom 6-16 inches. Site	e meets h	ydric soil criteria.					

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Deve	opment	City/County: Shelbyvill	e/Bedford	Sampling Date: 11/30/2023		
Applicant/Owner: City of Shelbyville			State: TN	Sampling Point:DP 5		
Investigator(s): JCM - Garver		Section, Township, Range	N/A			
Landform (hillside, terrace, etc.): hillslope	Lo	cal relief (concave, convex,	none): convex	Slope (%): 4		
Subregion (LRR or MLRA): LRR N, MLRA 1	Owner: City of Shelbyville Section, Township, Range: N/A (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex (LRR or MLRA): LRR N, MLRA 123 Lat: 35.554719° Long: -86.445898° N/M city of the convex of the conv			Datum: WGS84		
				ation: N/A		
Are climatic / hydrologic conditions on the sit	e typical for this time of ve	ar? Yes X	No (If no.	explain in Remarks.)		
. •	,,					
						
			-	•		
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No	•	Yes	No_X		
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)		
				, ,		
Surface Water (A1)		. ,		ted Concave Surface (B8)		
` ` ` `						
		` '				
Drift Deposits (B3)		` ,				
Algal Mat or Crust (B4)		·	Stunted or Stressed Plants (D1)			
Iron Deposits (B5)		,		, ,		
Inundation Visible on Aerial Imagery (B	7)					
Water-Stained Leaves (B9)			Microtopographic	Relief (D4)		
Aquatic Fauna (B13)			FAC-Neutral Tes	it (D5)		
Field Observations:						
Surface Water Present? Yes						
	No X Depth (inch	es): Wetland	Hydrology Present?	Yes No _X		
(includes capillary fringe)	enitoring well, corial photos	nrovious inspections) if s	voilable:			
Describe Recorded Data (Stream gauge, Inc	mitoring well, aerial priotos	s, previous irispections), ir a	valiable.			
Remarks: Site does not meet wetland hydrology criteri	a.					

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 5 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: ____ =Total Cover 50% of total cover: ____ 20% of total cover: ___ OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: ____) FACW species x 2 = 1. FAC species ____ x 3 = ___ 2. FACU species x 4 = _____ x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Andropogon virginicus **FACU** Yes ¹Indicators of hydric soil and wetland hydrology must be Schedonorus arundinaceus 40 2. Yes **FACU** present, unless disturbed or problematic. 5 3. Setaria pumila No FAC **Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 100 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 50 20% of total cover: Woody Vine Stratum (Plot size:) 3. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? Yes No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria.

		o the dep				tor or c	onfirm the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Featur %	res Type ¹	Loc ²	Texture	Remarks
0-4	10YR 4/3	96	10YR 4/6	4	С	M	Loamy/Clayey	Distinct redox concentrations
								Distilict redox concentrations
<u>4-14</u>	10YR 5/2	94	10YR 4/6		<u> </u>	M	Loamy/Clayey	Prominent redox concentrations
¹ Type: C=Co	ncentration, D=Deple	etion, RM	=Reduced Matrix, M	 IS=Mas	ked Sand	——— I Grains.		n: PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue Be	low Su	rface (S8)	(MLRA	147, 148)	2 cm Muck (A10) (MLRA 147)
Histic Epi	pedon (A2)		Thin Dark Su					Coast Prairie Redox (A16)
Black His			Loamy Muck	•	. , .	ILRA 13	•	(MLRA 147, 148)
	Sulfide (A4)		Loamy Gleye					Piedmont Floodplain Soils (F19)
	Layers (A5)		X Depleted Ma					(MLRA 136, 147)
	ck (A10) (LRR N)	(8.4.4)	Redox Dark					Red Parent Material (F21)
	Below Dark Surface k Surface (A12)	(A11)	Depleted Date					(outside MLRA 127, 147, 148)
	ucky Mineral (S1)		Redox Depre) /I DD I		Very Shallow Dark Surface (F22) Other (Explain in Remarks)
	eyed Matrix (S4)		MLRA 136		3363 (1 12	2) (L IXIX I		Other (Explain in Nemarks)
Sandy Re			Umbric Surfa	•	3) (MLRA	122, 13	3 Ind	cators of hydrophytic vegetation and
	Matrix (S6)		Piedmont Flo					wetland hydrology must be present,
Dark Surf			Red Parent N		-			unless disturbed or problematic.
	ayer (if observed):						· · ·	
Type:	,							
Depth (in	ches):						Hydric Soil Pres	ent? Yes X No
Remarks:							·	
Site meets hy	dric soil criteria.							

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

City/County: Shelbyville/Bedford Sampling Date: 11/30/23 Project/Site: MTSU - Aviation Facility Development Applicant/Owner: City of Shelbyville State: TN Sampling Point: DP 6 Investigator(s): JCM - Garver Section, Township, Range: N/A Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): Subregion (LRR or MLRA): LRR N, MLRA 123 Lat: 35.555133° Long: -86.445601° Datum: WGS84 Soil Map Unit Name: Eagleville silty clay loam, frequently flooded NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _ X _ No ___ Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X Nο Is the Sampled Area Hydric Soil Present? No within a Wetland? Yes X No ____ Wetland Hydrology Present? Remarks: Site meets all three wetland criteria and is located in a wetland. **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) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Water Marks (B1) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Sediment Deposits (B2) Drift Deposits (B3) Thin Muck Surface (C7) X Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) X Geomorphic Position (D2) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) X FAC-Neutral Test (D5) Aquatic Fauna (B13) **Field Observations:** No X Depth (inches): Surface Water Present? No X Depth (inches): Water Table Present? No X Depth (inches): Wetland Hydrology Present? Saturation Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Site meets wetland hydrology criteria.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 6 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover 50% of total cover: ____ 20% of total cover: ___ OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: ____) FACW species _ x 2 = 1. FAC species x 3 = ____ 2. FACU species x 4 = ____ x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Fraxinus pennsylvanica 60 **FACW** 1. Yes ¹Indicators of hydric soil and wetland hydrology must be 2. Setaria pumila 25 Yes FAC present, unless disturbed or problematic. 3. Schedonorus arundinaceus 15 No **FACU Definitions of Four Vegetation Strata:** 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 or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 100 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 50 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) Site meets hydrophytic vegetation criteria.

	ription: (Describe 1	to the de				ator or co	onfirm the abser	nce of indi	cators.)	
Depth (inches)	Color (moist)	%	Color (moist)	x Featu %	Type ¹	Loc ²	Texture		Remark	(e
· / /										
0-16	10YR 5/2	95	10YR 4/6	5	<u> </u>	PL/M	Loamy/Clayey	<u> Pr</u>	ominent redox co	oncentrations
	ncentration, D=Depl	etion, RM	1=Reduced Matrix, N	1S=Mas	sked San	d Grains.			Pore Lining, M=N	
Hydric Soil I			Polyvaluo Ro	olow Su	urfaco (SR	\			for Problematic	-
— Histosol	ipedon (A2)		Polyvalue Be Thin Dark Su		-		_		luck (A10) (MLR Prairie Bodov (A1	
Black His	. , ,		Loamy Muck				_		Prairie Redox (A1 RA 147, 148)	10)
	n Sulfide (A4)		Loamy Gleye	•	, , ,	ILKA 13	5)		ont Floodplain So	sile (F10)
	Layers (A5)		X Depleted Ma				_		RA 136, 147)	nis (i 1 <i>9)</i>
	ck (A10) (LRR N)		Redox Dark						rent Material (F2	21)
	Below Dark Surface	(A11)	Depleted Da				_		side MLRA 127,	•
	rk Surface (A12)	, (, (, , , ,	Redox Depre					•	hallow Dark Surfa	
	ucky Mineral (S1)		Iron-Mangan			2) (LRR I	- N.		Explain in Rema	
	leyed Matrix (S4)		MLRA 136			_, (-			,,
	edox (S5)		Umbric Surfa	•	3) (MLR	122, 130	3)	Indicators	of hydrophytic ve	getation and
	Matrix (S6)		Piedmont Flo						d hydrology must	
	face (S7)		Red Parent I						disturbed or prob	
Restrictive L	.ayer (if observed):									
Type:										
Depth (in	ches):						Hydric Soil P	resent?	Yes <u>X</u>	No
Remarks:										
Concretions.	Site meets hyric soil	criteria.								

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Deve	lopment	City/County: Shelbyvil	le/Bedford	Sampling Date: 11/30/2023		
Applicant/Owner: City of Shelbyville			State: TN	Sampling Point:DP 7		
Investigator(s): JCM - Garver		Section, Township, Range	e: N/A			
Landform (hillside, terrace, etc.): hillslope	Lo	ocal relief (concave, convex	, none): convex	Slope (%): 4		
Subregion (LRR or MLRA): LRR N, MLRA	123 Lat: 35.555154°	Lona:	-86.445575°	Datum: WGS84		
Soil Map Unit Name: Eagleville silty clay lo			NWI classifica			
Are climatic / hydrologic conditions on the si		ear? Yes X		explain in Remarks.)		
, ,	,,		 -			
Are Vegetation, Soil, or Hydro			Circumstances" present			
Are Vegetation, Soil, or Hydro			xplain any answers in R			
SUMMARY OF FINDINGS – Attack	າ site map showing ເ	sampling point locat	ions, transects, in	nportant features, etc.		
Hydrophytic Vegetation Present?	Yes No X	Is the Sampled Area				
Hydric Soil Present?	Yes X No	within a Wetland?	Yes	No X		
Wetland Hydrology Present?	Yes No X					
Remarks: Site does not meet all three wetland criteria	and is not in a wetland.					
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators	s (minimum of two required)		
Primary Indicators (minimum of one is requ	Surface Soil Cra	Surface Soil Cracks (B6)				
Surface Water (A1)	Sparsely Vegetated Concave Surface (B8)					
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Patterns (B10)			
Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines (B16)			
Water Marks (B1)	Presence of Reduce	` '	Dry-Season Water Table (C2)			
Sediment Deposits (B2)		tion in Tilled Soils (C6) Crayfish Burrows (C8)				
Drift Deposits (B3)	Thin Muck Surface (Other (Explain in Re	<u>—</u>				
Algal Mat or Crust (B4) Iron Deposits (B5)	Geomorphic Pos	, ,				
Inundation Visible on Aerial Imagery (B	7)		Shallow Aquitard			
Water-Stained Leaves (B9)	• /		Microtopographic			
Aquatic Fauna (B13)			FAC-Neutral Tes			
Field Observations:						
Surface Water Present? Yes	No X Depth (inch	nes):				
Water Table Present? Yes	No X Depth (inch					
Saturation Present? Yes	No X Depth (inch		Hydrology Present?	Yes No X		
(includes capillary fringe)						
Describe Recorded Data (stream gauge, m	onitoring well, aerial photo	s, previous inspections), if a	available:			
Remarks: Site does not meet wetland hydrology criter	ia					
one does not meet wedand hydrology enter	ia.					

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 7 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 33.3% (A/B) Prevalence Index worksheet: Total % Cover of: ____ =Total Cover 50% of total cover: ____ 20% of total cover: ___ OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: ____) FACW species x 2 = 1. FAC species ____ x 3 = ___ 2. FACU species x 4 = _____ x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Andropogon virginicus 30 **FACU** Yes ¹Indicators of hydric soil and wetland hydrology must be Yes 2. Schedonorus arundinaceus 30 **FACU** present, unless disturbed or problematic. 30 3. Setaria pumila Yes FAC **Definitions of Four Vegetation Strata:** Fraxinus pennsylvanica 10 __ _ 4 No **FACW** Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 100 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 50 20% of total cover: Woody Vine Stratum (Plot size:) 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	Matrix			Featu		. 2						
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture		Remarks			
0-14	10YR 5/2	98	10YR 4/6	2	C	M	Loamy/Clay	еу	Prominent redox concentrations			
¹ Type: C=Co	ncentration, D=Depl	etion RM=	Reduced Matrix M	 eeM=2l	ked Sand			cation: E	PL=Pore Lining, M=Matrix.			
Hydric Soil I		etion, itivi-	rteduced Matrix, IV	IO-IVIAS	ikeu Sand	Oranis.	LO		ors for Problematic Hydric Soils ³ :			
Histosol (Polyvalue Be	low Su	rface (S8	(MI RA	147 148)		m Muck (A10) (MLRA 147)			
	pedon (A2)		Thin Dark Su		•	, ,			ast Prairie Redox (A16)			
Black His			Loamy Muck						//LRA 147, 148)			
	Sulfide (A4)		Loamy Gleye	•	. , .		,		dmont Floodplain Soils (F19)			
	Layers (A5)		X Depleted Ma						/ILRA 136, 147)			
	ck (A10) (LRR N)		Redox Dark						l Parent Material (F21)			
 Depleted	Below Dark Surface	(A11)	Depleted Da	rk Surfa	ice (F7)			<u> </u>	outside MLRA 127, 147, 148)			
Thick Da	rk Surface (A12)		Redox Depre	ssions	(F8)			Ver	y Shallow Dark Surface (F22)			
Sandy M	ucky Mineral (S1)		Iron-Mangan	ese Ma	sses (F12	2) (LRR N	١,	Oth	er (Explain in Remarks)			
Sandy Gl	eyed Matrix (S4)		MLRA 136)								
Sandy Re	edox (S5)		Umbric Surfa	ice (F13	3) (MLRA	122, 136	6)	³ Indicate	ors of hydrophytic vegetation and			
Stripped	Matrix (S6)		Piedmont Flo		-			wetl	land hydrology must be present,			
Dark Sur	face (S7)		Red Parent N	/laterial	(F21) (M	LRA 127	, 147, 148)	unle	ess disturbed or problematic.			
Restrictive L	ayer (if observed):											
Type: _												
Depth (in	ches):						Hydric Soil	Present?	? Yes <u>X</u> No			
Remarks:												
Site meets hy	dric soil criteria.											

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Devel	opment	City/County: Shelby	ville/Bedford	Sampling Date: 11/30/23
Applicant/Owner: City of Shelbyville			State: TN	N Sampling Point: DP 8
Investigator(s): JCM - Garver	:	Section, Township, Ran	ge: N/A	
Landform (hillside, terrace, etc.): swale	Loc	cal relief (concave, conve	ex, none): concave	Slope (%): 2
Subregion (LRR or MLRA): LRR N, MLRA 12	 23	Lond	g: -86.445389°	Datum: WGS84
Soil Map Unit Name: Eagleville silty clay loar				fication: N/A
Are climatic / hydrologic conditions on the site	· · ·	r? Yes X	No (If n	no, explain in Remarks.)
Are Vegetation , Soil , or Hydrol	,,		al Circumstances" prese	
Are Vegetation , Soil , or Hydrol			explain any answers in	
SUMMARY OF FINDINGS – Attach				•
Hydric Soil Present?	Yes X No Yes X No No Yes X No	Is the Sampled Area within a Wetland?	Yes X	No
Remarks: Site meets all three wetland criteria and is lo	cated in a wetland.			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicato	ors (minimum of two required)
Primary Indicators (minimum of one is requir	ed; check all that apply)		Surface Soil C	
Surface Water (A1)	True Aquatic Plants (I	B14)		etated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odd	or (C1)	Drainage Patte	
Saturation (A3)	Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim Line	es (B16)
Water Marks (B1)	Presence of Reduced	l Iron (C4)	Dry-Season W	/ater Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Burro	ws (C8)
Drift Deposits (B3)	Thin Muck Surface (C	27)	X Saturation Vis	ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Ren	narks)	Stunted or Stre	essed Plants (D1)
Iron Deposits (B5)			X Geomorphic P	osition (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquita	ard (D3)
Water-Stained Leaves (B9)			Microtopograp	hic Relief (D4)
Aquatic Fauna (B13)			X FAC-Neutral T	est (D5)
Field Observations:				
Surface Water Present? Yes	No X Depth (inche	es):		
Water Table Present? Yes	No X Depth (inche	es):		
Saturation Present? Yes	No X Depth (inche	es): Wetlar	nd Hydrology Present	? Yes X No
(includes capillary fringe)				
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos,	, previous inspections), i	f available:	
Remarks:				
Site meets wetland hydrology criteria.				

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 8 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover 50% of total cover: ____ 20% of total cover: ___ OBL species x 1 = Sapling/Shrub Stratum (Plot size: ____) FACW species _ x 2 = 1. FAC species ____ x 3 = ____ 2. FACU species x 4 = x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: 5'x30') Problematic Hydrophytic Vegetation¹ (Explain) 1. Carex frankii 30 OBL Yes ¹Indicators of hydric soil and wetland hydrology must be 2. Setaria pumila present, unless disturbed or problematic. 3. **Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. height. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 50 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 25 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) Site meets hydrophytic vegetation criteria.

	ription: (Describe t	to the de				ator or co	onfirm the absen	ce of indi	cators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Featu %	res Type ¹	Loc ²	Texture		Remarks	
·										
0-14	10YR 5/2	98	10YR 4/6	2	<u> </u>	PL/M	Loamy/Clayey	<u>Pr</u>	ominent redox cor	ncentrations
							-	_		
¹ Type: C=Co	oncentration, D=Depl	etion, RM	1=Reduced Matrix, N	/IS=Mas	sked San	d Grains.	² Loca	ation: PL=	Pore Lining, M=Ma	atrix.
Hydric Soil I	ndicators:						lı	ndicators	for Problematic I	-lydric Soils ³ :
Histosol	(A1)		Polyvalue Be	elow Su	rface (S8) (MLRA	147, 148)	2 cm M	luck (A10) (MLRA	147)
Histic Ep	ipedon (A2)		Thin Dark Su	urface (S9) (MLF	RA 147, 1	48) _	Coast F	Prairie Redox (A16	i)
Black His			Loamy Muck	•	. , .	VILRA 13	6)		RA 147, 148)	
	n Sulfide (A4)		Loamy Gleye				_	Piedmo	ont Floodplain Soil	s (F19)
	Layers (A5)		X Depleted Ma						RA 136, 147)	
	ck (A10) (LRR N)		Redox Dark				_		arent Material (F21	•
	Below Dark Surface	e (A11)	Depleted Da					•	side MLRA 127, 14	
	rk Surface (A12)		Redox Depre			a) # == =	. –		hallow Dark Surfac	
	ucky Mineral (S1)		Iron-Mangan		sses (F1	2) (LRR I	N, _	Other (Explain in Remark	s)
	leyed Matrix (S4)		MLRA 136	•	2) (MI D (. 400 40	-> 3		-£	-4-4:
	edox (S5)		Umbric Surfa						of hydrophytic veg	
	Matrix (S6) face (S7)		Piedmont Florent I						d hydrology must b disturbed or proble	
			Red Falelit i	vialeriai	I (I Z I) (IV	ILNA 121	, 147, 140 <i>)</i>	uniess	disturbed or proble	omano.
Type:	.ayer (if observed):									
Depth (ir	iches).						Hydric Soil Pi	resent?	Yes X	No
• •							1 Tryunc Con T	0301111	<u> </u>	<u> </u>
Remarks:	Site meets hyric soil	l criteria								
Coriorctions.	Olic Micele Hyme son	ontona.								

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: MTSU - Aviation Facility Development City/County: Shelbyville/Bedford Sampling Date: 11/30/2023 Applicant/Owner: City of Shelbyville State: TN Sampling Point: DP 9 Investigator(s): JCM - Garver Section, Township, Range: N/A Local relief (concave, convex, none): convex Slope (%): 3 Landform (hillside, terrace, etc.): hillslope Subregion (LRR or MLRA): LRR N, MLRA 123 Lat: 35.554862° _____Long: -86.445349° Datum: WGS84 Soil Map Unit Name: Eagleville silty clay loam, frequently flooded NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year?

Yes X No (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___ Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. No X Hydrophytic Vegetation Present? Is the Sampled Area Yes X No ____ within a Wetland? Yes No X Hydric Soil Present? Wetland Hydrology Present? Remarks: Site does not meet all three wetland criteria and is not in a wetland. **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) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Water Marks (B1) Recent Iron Reduction in Tilled Soils (C6) Sediment Deposits (B2) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Aquatic Fauna (B13) Field Observations: No X Depth (inches): Surface Water Present? No X Depth (inches): Water Table Present? No X Depth (inches): Wetland Hydrology Present? Saturation Present? Yes No X (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Site does not meet wetland hydrology criteria.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 9 Absolute Dominant Indicator 5'x30') Tree Stratum (Plot size: % Cover Species? Status **Dominance Test worksheet:** FACU Juniperus virginiana 25 Yes **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: 4. 3 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: 25 =Total Cover 50% of total cover: 13 20% of total cover: OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: 5'x30' **FACW** species x 2 = x 3 = Rhus glabra **FAC** species 2. FACU species x 4 =x 5 = 3. UPL species Column Totals: (A) 4. 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 8. 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: 5'x30') Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) 1. Andropogon virginicus ¹Indicators of hydric soil and wetland hydrology must be 2. present, unless disturbed or problematic. 3. **Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 30 20% of total cover: Woody Vine Stratum (Plot size: 5'x30') 1. Lonicera japonica 2. 3. 4. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? No X Yes Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria.

Popph Matrix Reduced Water State Sta		ription: (Describe 1	to the de	•			ator or co	onfirm the absen	ce of indi	cators.)	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, M=Reduced Matrix, MS=Masked Sand Grains. Type: C=C	Depth (inches)	Matrix Color (moist)	0/2				Loc ²	Tevture		Remarks	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.	· / /	, ,									
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Redox (S5) MLRA 136) Sandy Redox (S5) MLRA 136) Sandy Redox (S5) MLRA 136) Sandy Redox (S5) Sandy Redox (S6) Sandy Redox (S6)	0-14	10YR 4/2	98	10YR 4/6	2	<u> </u>	<u>M</u>	Loamy/Clayey	Pr	ominent redox con	centrations
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (MLRA 147, 148) Histic Epipedon (A2) Thin Dark Surface (S9) (MLRA 147, 148) Black Histic (A3) Loamy Mucky Mineral (F1) (MLRA 136) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Zom Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Dark Surface (S7) Red Parent Material (F13) (MLRA 122, 136) Stripped Matrix (S6) Dark Surface (S7) Red Parent Material (F21) (MLRA 148) Wetland in Remarks) Sestrictive Layer (if observed): Type: Depth (inches): Remarks:											
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Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) (MLRA 136) Hydrogen Sulfide (A4) Stratified Layers (A5) Z Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Dark Surface (F13) (MLRA 122, 136) Stripped Matrix (S6) Dark Surface (S7) Red Parent Material (F21) MLRA 136) Stripped Matrix (S6) Dark Surface (F13) (MLRA 122, 136) Stripped Matrix (S6) Dark Surface (S7) Red Parent Material (F21) (outside MLRA 127, 147, 148) Very Shallow Dark Surface (F22) Other (Explain in Remarks) MLRA 136) Stripped Matrix (S6) Dark Surface (S7) Red Parent Material (F21) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No			,	,							
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Hydrogen Sulfide (A4) Stratified Layers (A5) Z Depleted Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (F13) (MLRA 122, 136) Stripped Matrix (S6) Dark Surface (S7) Red Parent Material (F21) (outside MLRA 127, 147, 148) Very Shallow Dark Surface (F22) Very Shallow Dark Surface (F22) MLRA 136) Sandy Redox (S5) Umbric Surface (F13) (MLRA 122, 136) Stripped Matrix (S6) Dark Surface (S7) Red Parent Material (F21) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147, 148) Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Remarks:	Histic Ep	ipedon (A2)		Thin Dark Su	urface (S9) (MLR	A 147, 1	48)	Coast F	Prairie Redox (A16)
Stratified Layers (A5)					•		ILRA 13	6)			
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Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Red Parent Material (F21) (MLRA 127, 147, 148) Restrictive Layer (if observed): Type: Depth (inches): Remarks: Redox Depressions (F8) Very Shallow Dark Surface (F22) Other (Explain in Remarks) Other (Explain in Remarks) MLRA 136) SIndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes X No								_		,	•
Sandy Mucky Mineral (S1)			e (A11)								
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Restrictive Layer (if observed): Type: Depth (inches): MLRA 136) Umbric Surface (F13) (MLRA 122, 136) Piedmont Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147, 148) Wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes X No								_			
Sandy Redox (S5)						sses (F1	2) (LRR I		Other (Explain in Remark	s)
Stripped Matrix (S6)					•	o) (141 5 4	400 40	a. 3.	P	61 1 1 "	
Dark Surface (S7) Red Parent Material (F21) (MLRA 127, 147, 148) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Remarks:											
Restrictive Layer (if observed): Type: Depth (inches): Remarks: Hydric Soil Present? Yes X No											
Type: Depth (inches):				Red Parent i	viateriai	(FZ1) (IV	ILKA 127	, 147, 148) T	uniess	disturbed or proble	emauc.
Depth (inches): Hydric Soil Present? Yes X No		.ayer (ii observed):									
Remarks:	_	ches).						Hydric Soil Pr	osont?	V os X	No
	. ,							1 Tryano Con Tr		<u> </u>	
and the carry and a solid vincina.		vdric soil criteria									
	One meets m	dire son criteria.									

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Develo	opment City/Count	ty: Shelbyville/Bedford	Sampling Date: 11/29/2023
Applicant/Owner: City of Shelbyville		State: TN	Sampling Point:DP 12
Investigator(s): JCM - Garver	Section, Town	ship, Range: N/A	
Landform (hillside, terrace, etc.): hillslope	Local relief (conca	ave, convex, none): flat	Slope (%): 3
Subregion (LRR or MLRA): LRR N, MLRA 12	 23	Long: -86.446642°	Datum: WGS84
Soil Map Unit Name: Eagleville silty clay loar		NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes X No (If no,	explain in Remarks.)
Are Vegetation , Soil , or Hydrol	ogy significantly disturbed? A	re "Normal Circumstances" present	? Yes X No
Are Vegetation , Soil , or Hydrol	ogy naturally problematic? (li	f needed, explain any answers in Re	emarks.)
SUMMARY OF FINDINGS – Attach	site map showing sampling po	oint locations, transects, im	nportant features, etc.
Hydric Soil Present?	Yes X No Is the Samp Yes No X Yes No X		No_X
Remarks: Site does not meet all three wetland criteria a	and is not located in a wetland.		
HYDROLOGY			
Wetland Hydrology Indicators:			(minimum of two required)
Primary Indicators (minimum of one is requir		Surface Soil Crac	, ,
Surface Water (A1)	True Aquatic Plants (B14)		ted Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Pattern	
Saturation (A3)	Oxidized Rhizospheres on Living Ro Presence of Reduced Iron (C4)		
—— Water Marks (B1) Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils	Dry-Season Water s (C6) Crayfish Burrows	
Drift Deposits (B3)	Thin Muck Surface (C7)		e on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stress	
Iron Deposits (B5)		Geomorphic Posi	()
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard	
Water-Stained Leaves (B9)	,	 Microtopographic	
Aquatic Fauna (B13)		FAC-Neutral Tes	t (D5)
Field Observations:			
Surface Water Present? Yes	No X Depth (inches):		
Water Table Present? Yes	No X Depth (inches):		
Saturation Present? Yes	No X Depth (inches):	Wetland Hydrology Present?	Yes No _X_
(includes capillary fringe)			
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos, previous insp	ections), if available:	
Remarks:			
Site does not meet wetland hydrology criteria	a.		

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 12 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover 50% of total cover: ____ 20% of total cover: ___ OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: ____) FACW species x 2 = 1. FAC species ____ x 3 = ___ 2. FACU species x 4 = _____ x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Setaria pumila 80 FAC 1. Yes ¹Indicators of hydric soil and wetland hydrology must be Schedonorus arundinaceus 2 10 Nο **FACU** present, unless disturbed or problematic. Ranunculus sardous 10 3. No FAC **Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. height. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 100 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 50 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) Site meets hydrophytic vegetation criteria.

	ription: (Describe t	o the dep				ator or co	onfirm the ab	sence of	indicators.)		
Depth	Matrix			K Featur		. 2	- .					
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture			Remarks	<u>s</u>	
0-12	10YR 5/3	98	10YR 5/6	2	C	M	Loamy/Cla	yey _	Distinct	redox con	centration	าร
¹ Type: C=Co	ncentration, D=Deple	etion. RM=	Reduced Matrix. M	 IS=Mas	ked Sand	Grains.		ocation:	PL=Pore Li	nina. M=M	atrix.	
Hydric Soil I		,	,			_			tors for Pro			oils³:
Histosol (Polyvalue Be	low Su	rface (S8	(MLRA	147, 148)		cm Muck (A		-	
	pedon (A2)		Thin Dark Su						ast Prairie F	, ,	•	
Black His			Loamy Muck						MLRA 147,		•	
Hydroger	Sulfide (A4)		Loamy Gleye	ed Matri	x (F2)			Pie	edmont Floo	dplain Soi	Is (F19)	
Stratified	Layers (A5)		Depleted Ma	trix (F3))			(MLRA 136,	147)		
2 cm Mud	ck (A10) (LRR N)		Redox Dark	Surface	(F6)			Re	d Parent Ma	aterial (F2	1)	
Depleted	Below Dark Surface	(A11)	Depleted Da	rk Surfa	ice (F7)				outside ML			
	rk Surface (A12)		Redox Depre						ry Shallow [, ,	
	ucky Mineral (S1)		Iron-Mangan		sses (F12	2) (LRR N	١,	Otl	her (Explain	in Remarl	ks)	
	eyed Matrix (S4)		MLRA 136	•				3				
	edox (S5)		Umbric Surfa						tors of hydro		_	
	Matrix (S6)		Piedmont Flo		-				tland hydrol			nt,
Dark Sur			Red Parent N	vlateriai	(F21) (M	LRA 127	, 14 <i>7</i> , 148)	un	less disturbe	ed or probl	ematic.	
	ayer (if observed):											
Type: _												
Depth (in	cnes):						Hydric Soi	Present	t? Ye	es	No X	
Remarks:	and the state of t											
Site does not	meet hydric soil crite	епа.										

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Develo	pment	City/County: Shelb	yville/Bedford	Sampling Date: 07/24/24
Applicant/Owner: City of Shelbyville			State: TN	Sampling Point: DP 13
Investigator(s): JCM - Garver		Section, Township, Ra	ınge: N/A	
Landform (hillside, terrace, etc.): hay pastur	eLo	cal relief (concave, con	vex, none): none	Slope (%):3
Subregion (LRR or MLRA): LRR N, MLRA 12	23 Lat: 35.555613°	Lo	ng: -86.446140°	Datum: WGS84
Soil Map Unit Name: Eagleville silty clay loar	n, frequently flooded		NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site		ar? Yes	X No (If no	, explain in Remarks.)
Are Vegetation, Soil, or Hydrol	,,		nal Circumstances" presen	
Are Vegetation , Soil , or Hydrol			d, explain any answers in F	Remarks.)
SUMMARY OF FINDINGS – Attach			cations, transects, ir	mportant features, etc.
Hydrophytic Vegetation Present?	Yes No X	Is the Sampled Area	a	
Hydric Soil Present?	Yes No X	within a Wetland?	Yes	No X
Wetland Hydrology Present?	Yes No X			
Site does not meet all three criteria and is no	a wonand.			
HYDROLOGY				
Wetland Hydrology Indicators:				s (minimum of two required)
Primary Indicators (minimum of one is require		(D.4.4)	Surface Soil Cra	
Surface Water (A1)	True Aquatic Plants			ated Concave Surface (B8)
High Water Table (A2) Saturation (A3)	— Hydrogen Sulfide Od	or (C1) res on Living Roots (C3	Drainage Patteri Moss Trim Lines	
Water Marks (B1)	Presence of Reduce	= :	Dry-Season Wa	
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrow	
Drift Deposits (B3)	Thin Muck Surface (le on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Re	marks)	Stunted or Stres	ssed Plants (D1)
Iron Deposits (B5)			Geomorphic Pos	sition (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitare	
Water-Stained Leaves (B9)			Microtopographi	
Aquatic Fauna (B13)			FAC-Neutral Te	st (D5)
Field Observations:		,		
Surface Water Present? Yes Water Table Present? Yes	No X Depth (inche			
Saturation Present? Yes	No X Depth (inche		and Hydrology Present?	Yes No X
(includes capillary fringe)	No X Bopar (mon	—— 116 111	and riyurology r resent.	165 160X
Describe Recorded Data (stream gauge, moi	 nitoring well, aerial photos	s, previous inspections)	, if available:	
Remarks: Site does not meet wetland hydrology criteria	,			
one does not meet welland hydrology officine	1-			

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 13 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 50.0% (A/B) Prevalence Index worksheet: Total % Cover of: ____ =Total Cover 50% of total cover: ____ 20% of total cover: ___ OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: ____) FACW species _ x 2 = 1. FAC species ____ x 3 = ___ FACU species 2. x 4 = _____ x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Schedonorus arundinaceus 60 **FACU** 1. Yes ¹Indicators of hydric soil and wetland hydrology must be 2. Juncus tenuis 40 Yes FAC present, unless disturbed or problematic. 3. Solanum carolinense 15 No **FACU Definitions of Four Vegetation Strata:** Panicum anceps 5 4 No FAC Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 120 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 60 20% of total cover: Woody Vine Stratum (Plot size: _____) 2. 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria. Paspalum dilatatum <5%.

Profile Desci	ription: (Describe t	o the der	th needed to docu	ıment ti	he indica	tor or c	onfirm the absence	e of indic	ators.)		
Depth	Matrix		Redox	x Featur	es						
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture		Rem	arks	
0-2	10YR 3/3	100					Loamy/Clayey				
2-9	2.5Y 5/3	96	5YR 4/6	4	<u>C</u>	_PL_	Loamy/Clayey	_			
9-12	2.5Y 5/3	97	7.5YR 5/6	2	<u> </u>	PL	Loamy/Clayey				
			10YR 2/1	1	<u>C</u>	M			ma	ng.	
								_			
¹ Type: C=Co	ncentration, D=Depl	etion, RM	=Reduced Matrix, M	IS=Mas	ked Sand	Grains.	² Locat	ion: PL=P	ore Lining, M	1=Matrix.	
Hydric Soil II	ndicators:						In	dicators fo	or Problema	itic Hydric	: Soils³:
Histosol ((A1)		Polyvalue Be	low Sur	face (S8)	(MLRA	147, 148)	_2 cm Mu	ick (A10) (M	LRA 147)	
Histic Epi	pedon (A2)		Thin Dark Su	ırface (S	9) (MLR	A 147, 1	48)	_Coast Pr	airie Redox	(A16)	
Black His	tic (A3)		Loamy Muck	y Minera	al (F1) (N	ILRA 13	6)	(MLRA	A 147, 148)		
Hydroger	Sulfide (A4)		Loamy Gleye	ed Matrix	x (F2)		_	_	nt Floodplain	Soils (F19	9)
	Layers (A5)		Depleted Mat					•	A 136, 147)		
	ck (A10) (LRR N)		Redox Dark \$		-		_	_	ent Material		
	Below Dark Surface	(A11)	Depleted Dar					•	de MLRA 12		-
	rk Surface (A12)		Redox Depre				. –	_	allow Dark S	•	2)
	ucky Mineral (S1)		Iron-Mangan		sses (F12	(LRK i	N,	_ Other (⊏	xplain in Rer	marks)	
	eyed Matrix (S4)		MLRA 136		·	100 40	a. 3 _{1m}	U stano of	والمراجعة والمحادث	··· ··· totio	الد ۵۰۰
Sandy Re			Umbric Surfa	-					f hydrophytic	-	
	Matrix (S6)		Piedmont Flo						hydrology m		
Dark Surf			Red Parent N	/lateriai	(F21) (IVI	LKA 121	', 14 <i>1</i> ', '148) T	uniess u	isturbed or p	roblemand).
	ayer (if observed):										
Type:	1 = - A						Livelinia Cail Dua		V	N.	.,
Depth (in	ches):						Hydric Soil Pre	esent?	Yes	No _	<u>x</u>
Remarks:											
Site does not	meet hydric soil crite	эпа.									

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: MTSU - Aviation Facility Deve	lopment	City/County: Shelbyvi	ille/Bedford	Sampling Date: 07/24/24
Applicant/Owner: City of Shelbyville			State: TN	Sampling Point: DP 14
Investigator(s): JCM - Garver		Section, Township, Range	e: N/A	
Landform (hillside, terrace, etc.): hay pastu	re Lo	cal relief (concave, convex		Slope (%): 2
Subregion (LRR or MLRA): LRR N, MLRA 1		•	-86.446117°	
Soil Map Unit Name: Eagleville silty clay loa			NWI classific	
	· · ·	0 V V		-
Are climatic / hydrologic conditions on the site	• • • • • • • • • • • • • • • • • • • •		<u> </u>	explain in Remarks.)
Are Vegetation, Soil, or Hydro			Circumstances" presen	
Are Vegetation, Soil, or Hydro	logynaturally probl	ematic? (If needed, ex	xplain any answers in R	emarks.)
SUMMARY OF FINDINGS – Attach	site map showing s	sampling point locat	ions, transects, in	nportant features, etc.
Hydrophytic Vegetation Present?	Yes No X	Is the Sampled Area		
Hydric Soil Present?	Yes X No	within a Wetland?	Yes	No X
Wetland Hydrology Present?	Yes No X			<u> </u>
Remarks:				
Site does not meet all three criteria and is no	ot within a wetland.			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators	s (minimum of two required)
Primary Indicators (minimum of one is requi			Surface Soil Cra	` '
Surface Water (A1)	True Aquatic Plants			ted Concave Surface (B8)
—— High Water Table (A2)	Hydrogen Sulfide Oc		Drainage Patterr	
Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines	
Water Marks (B1)	Presence of Reduce		Dry-Season Wat	
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrows	
Drift Deposits (B3) Algal Mat or Crust (B4)	Thin Muck Surface (Other (Explain in Re		Stunted or Stres	e on Aerial Imagery (C9)
Iron Deposits (B5)	Other (Explain in Ne	marks)	Geomorphic Pos	
Inundation Visible on Aerial Imagery (Bi	7)		Shallow Aquitare	
Water-Stained Leaves (B9)	,		Microtopographic	
Aquatic Fauna (B13)			FAC-Neutral Tes	
Field Observations:				. ,
Surface Water Present? Yes	No X Depth (inch	es):		
Water Table Present? Yes	No X Depth (inch			
Saturation Present? Yes	No X Depth (inch	es): Wetland	Hydrology Present?	Yes No _ X _
(includes capillary fringe)				
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos	s, previous inspections), if a	available:	
Remarks: Site does not meet wetland hydrology criteri	9			
Site does not meet wetland hydrology chien	a.			

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **DP 14** Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: 4. 2 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 50.0% (A/B) Prevalence Index worksheet: =Total Cover Total % Cover of: 50% of total cover: ____ 20% of total cover: ___ **OBL** species 0 ___ x 1 = Sapling/Shrub Stratum (Plot size: ____) **FACW** species x 2 =55 FAC species x 3 = 1. 90 x 4 = FACU species 360 2. 0 x 5 = 3. UPL species 0 Column Totals: 145 (A) 525 4 (B) 5. Prevalence Index = B/A = 3.62 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 9. 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 20% of total cover: 50% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) 55 **FACU** 1. Andropogon virginicus Yes ¹Indicators of hydric soil and wetland hydrology must be 2. Schedonorus arundinaceus 25 No **FACU** present, unless disturbed or problematic. 3. 40 Yes FAC **Definitions of Four Vegetation Strata:** Juncus tenuis 15 4 Panicum anceps No FAC Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5 FACU 5. Solanum carolinense Nο height. 6. 5 **FACU** Solidago canadensis No 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft 8. (1 m) tall. 9. 10. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 145 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 73 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria. Paspalum dilatatum, Juncus marginatus, and Setaria pumila <5%.

Profile Desc Depth	ription: (Describe t Matrix	to the de	•	ı ment t i ∢Featur		ator or c	onfirm the absend	e of indi	cators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0-9	10YR 4/1	100			1,700		Loamy/Clayey	_	rtemante
9-15	10YR 4/1	98	10YR 5/8	1			Loamy/Clayey	_	
			10YR 2/2	1					
								_	
	oncentration, D=Depl	etion, RM	=Reduced Matrix, M	IS=Mas	ked Sand	Grains.			Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						In	dicators	for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Be		-			_2 cm N	luck (A10) (MLRA 147)
Histic Ep	ipedon (A2)		Thin Dark Su	ırface (S	89) (MLR	A 147, 1	48)	Coast I	Prairie Redox (A16)
Black His	stic (A3)		Loamy Muck	y Miner	al (F1) (N	ILRA 13	6)	(MLF	RA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matri	x (F2)			Piedmo	ont Floodplain Soils (F19)
Stratified	Layers (A5)		X Depleted Ma	trix (F3))		_	(MLF	RA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface	(F6)			Red Pa	arent Material (F21)
 Depleted	Below Dark Surface	(A11)	Depleted Da	rk Surfa	ce (F7)		_	– (outs	side MLRA 127, 147, 148)
	rk Surface (A12)	, ,	Redox Depre					Very S	hallow Dark Surface (F22)
— Sandy M	ucky Mineral (S1)		Iron-Mangan			2) (LRR I			Explain in Remarks)
	leyed Matrix (S4)		MLRA 136		•	, ,		_ `	,
	edox (S5)		Umbric Surfa	•	3) (MLRA	122, 13	3) 3Ir	ndicators	of hydrophytic vegetation and
	Matrix (S6)		Piedmont Flo						d hydrology must be present,
	face (S7)		Red Parent N						disturbed or problematic.
	_ayer (if observed):		_ 		. , ,		<u> </u>		<u> </u>
Type:									
Depth (ir	nches):						Hydric Soil Pre	esent?	Yes X No
Remarks:									
	ganese concretions	present.	Site meets hydric so	ils criter	a.				

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: MTSU - Aviation Facility Deve	lopment	City/County: Shelbyv	rille/Bedford	Sampling Date: 07/24/24
Applicant/Owner: City of Shelbyville			State: TN	Sampling Point: DP 15
Investigator(s): JCM - Garver		Section, Township, Rang	 je: N/A	<u> </u>
Landform (hillside, terrace, etc.): hay pastu	re Lo	cal relief (concave, conve		Slope (%): 1
Subregion (LRR or MLRA): LRR N, MLRA 1		•	: -86.446120°	Datum: WGS84
Soil Map Unit Name: Eagleville silty clay loa			NWI classific	
	· · ·	0		•
Are climatic / hydrologic conditions on the site				, explain in Remarks.)
Are Vegetation, Soil, or Hydro			Circumstances" presen	
Are Vegetation, Soil, or Hydro	logynaturally probl	ematic? (If needed, e	explain any answers in R	Remarks.)
SUMMARY OF FINDINGS – Attach	site map showing s	sampling point loca	tions, transects, ir	nportant features, etc.
Hydrophytic Vegetation Present?	Yes No X	Is the Sampled Area		
Hydric Soil Present?	Yes X No	within a Wetland?	Yes	No X
Wetland Hydrology Present?	Yes No X	Within a Wottana		<u> </u>
Remarks:				
Site does not meet all three criteria and is n	ot within a wetland.			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators	s (minimum of two required)
Primary Indicators (minimum of one is requi			Surface Soil Cra	` '
Surface Water (A1)	True Aquatic Plants			ated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Oc		Drainage Patteri	
Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines	
Water Marks (B1)	Presence of Reduce		Dry-Season Wat	
Sediment Deposits (B2) Drift Deposits (B3)	Thin Muck Surface (on in Tilled Soils (C6)	Crayfish Burrows	s (Co) le on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Re	·	Stunted or Stres	• • • •
Iron Deposits (B5)	Other (Explain in Ne	marks)	Geomorphic Pos	
Inundation Visible on Aerial Imagery (B	7)		Shallow Aquitare	
Water-Stained Leaves (B9)	,		Microtopographi	
Aquatic Fauna (B13)			FAC-Neutral Tes	
Field Observations:				
Surface Water Present? Yes	No X Depth (inch	es):		
Water Table Present? Yes	No X Depth (inch			
Saturation Present? Yes	No X Depth (inch		d Hydrology Present?	Yes No _ X _
(includes capillary fringe)				
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos	s, previous inspections), if	available:	
Remarks: Site does not meet wetland hydrology criteri	a			
Site does not meet wettand hydrology enten	a.			

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 15 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: 3 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 33.3% (A/B) Prevalence Index worksheet: =Total Cover Total % Cover of: 50% of total cover: ____ 20% of total cover: ___ **OBL** species 0 ___ x 1 = Sapling/Shrub Stratum (Plot size: ____) **FACW** species x 2 = x 3 = 1. FAC species 95 x 4 = FACU species 2. 0 x 5 = 3. UPL species 0 160 (A) Column Totals: 570 4 (B) 5. Prevalence Index = B/A = 3.56 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 20% of total cover: 50% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Schedonorus arundinaceus 40 **FACU** 1. Yes ¹Indicators of hydric soil and wetland hydrology must be 2. Andropogon virginicus 50 Yes **FACU** present, unless disturbed or problematic. 3. Panicum anceps 15 No FAC **Definitions of Four Vegetation Strata:** 40 4 Juncus tenuis Yes FAC Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. Vernonia gigantea 5 Nο FAC 5 **FACW** 6. Fraxinus pennsylvanica No 7. Solanum carolinense 5 No **FACU** Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft 8. (1 m) tall. 9. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 160 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 80 20% of total cover: Woody Vine Stratum (Plot size:) 3. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? Yes No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria.

Profile Desc Depth	ription: (Describe) Matrix	to the dep		ıment tl x Featur		ator or co	onfirm the absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 5/2	100					Loamy/Clayey	
7-11	10YR 5/2	96	10YR 5/8	4		PL	Loamy/Clayey	
11-14	10YR 4/1	96	10YR 5/8	4		PL	Loamy/Clayey	
								-
¹Type: C=Co	oncentration, D=Dep	 letion RM	=Reduced Matrix M	——— IS=Mas	 ked Sand	 d Grains	2l ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil		iodon, ravi	reduced Matrix, N	io ivido	itou ourit	oranio.		cators for Problematic Hydric Soils ³ :
Histosol			Polyvalue Be	elow Sur	face (S8	(MLRA		2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Thin Dark Su		-			Coast Prairie Redox (A16)
Black Hi	. , ,		Loamy Muck	-				(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye	•	. , .		•	Piedmont Floodplain Soils (F19)
<u> </u>	Layers (A5)		X Depleted Ma				_	(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark					Red Parent Material (F21)
	Below Dark Surface	- (Δ11)	Depleted Da					(outside MLRA 127, 147, 148)
	rk Surface (A12)	<i>(</i> ((1))	Redox Depre		, ,			Very Shallow Dark Surface (F22)
	lucky Mineral (S1)		Iron-Mangan		-	2) (I RR N		Other (Explain in Remarks)
	leyed Matrix (S4)		MLRA 136		3000 (1 12	-) (= : (:	· —	Curior (Explain in Fromanio)
	edox (S5)		Umbric Surfa	•	(MIRA	122 136	3Indi	cators of hydrophytic vegetation and
	Matrix (S6)		Piedmont Flo		-			wetland hydrology must be present,
	face (S7)		Red Parent I		-			unless disturbed or problematic.
	_ayer (if observed):				· / ·			
Type:								
Depth (ir	nches):						Hydric Soil Pres	ent? Yes X No
Remarks:								
Concretions	from 7 to 14 inches.	Site meets	s hydric soil critera.					

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: MTSU - Aviation Facility Deve	lopment	City/County: Shelby	ville/Bedford	Sampling Date: (07/24/24
Applicant/Owner: City of Shelbyville			State:	TN Sampling Point:	DP 16
Investigator(s): JCM - Garver		Section, Township, Ran	ge: N/A		
Landform (hillside, terrace, etc.): drainage	wav Lo	cal relief (concave, conve	ex. none): concave	Slope (%):	2
Subregion (LRR or MLRA): LRR N, MLRA 1		•	;: -86.446116°		WGS84
Soil Map Unit Name: Eagleville silty clay loa				ussification: N/A	
	· · ·	2 V V			`
Are climatic / hydrologic conditions on the site	, ·			(If no, explain in Remarks.	
Are Vegetation, Soil, or Hydro			l Circumstances" pr		No X
Are Vegetation, Soil, or Hydro	ologynaturally probl	ematic? (If needed,	explain any answers	s in Remarks.)	
SUMMARY OF FINDINGS – Attach	site map showing s	sampling point loca	itions, transect	s, important feature	es, etc.
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area			
Hydric Soil Present?	Yes X No	within a Wetland?	Yes	X No	
Wetland Hydrology Present?	Yes X No		_		
Remarks: Site meets all three criteria and is within a w	vetland.				
HYDROLOGY					
Wetland Hydrology Indicators:			-	cators (minimum of two re	<u>equired)</u>
Primary Indicators (minimum of one is requi Surface Water (A1)	red; cneck all that apply) True Aquatic Plants	(R14)		il Cracks (B6) egetated Concave Surfac	o (B8)
High Water Table (A2)	Hydrogen Sulfide Oc		X Drainage P	-	e (DO)
Saturation (A3)		es on Living Roots (C3)		Lines (B16)	
Water Marks (B1)	Presence of Reduce	= : :		n Water Table (C2)	
Sediment Deposits (B2)		on in Tilled Soils (C6)	X Crayfish Bu		
Drift Deposits (B3)	Thin Muck Surface (Visible on Aerial Imagery	(C9)
Algal Mat or Crust (B4)	Other (Explain in Re	marks)	Stunted or	Stressed Plants (D1)	
Iron Deposits (B5)			X Geomorphi	c Position (D2)	
Inundation Visible on Aerial Imagery (B	7)		Shallow Aq	uitard (D3)	
Water-Stained Leaves (B9)				raphic Relief (D4)	
Aquatic Fauna (B13)			FAC-Neutra	al Test (D5)	
Field Observations:					
Surface Water Present? Yes	No X Depth (inch	· 			
Water Table Present? Yes	No X Depth (inch		d Hudralami Dras	ont? Voc V	Na
Saturation Present? Yes (includes capillary fringe)	No X Depth (inch	es) wetiar	nd Hydrology Prese	ent? Yes X	NO
Describe Recorded Data (stream gauge, mo	onitoring well aerial photos	previous inspections) i	f available [.]		
	g, aa. p	, p	. avanazioi		
Remarks:					
Site meets wetland hydrology criteria.					

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 16 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: 2 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 50.0% (A/B) Prevalence Index worksheet: =Total Cover Total % Cover of: 50% of total cover: ____ 20% of total cover: ___ **OBL** species x 1 = Sapling/Shrub Stratum (Plot size: _____) **FACW** species x 2 = 70 1. FAC species x 3 = 210 55 x 4 = FACU species 220 2. 0 x 5 = 3. UPL species 0 155 (A) Column Totals: 460 4 (B) 5. Prevalence Index = B/A = 2 97 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. X 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: 10'x30') Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Schedonorus arundinaceus 50 **FACU** 1. Yes ¹Indicators of hydric soil and wetland hydrology must be Carex frankii 2. 25 No OBL present, unless disturbed or problematic. 3. Panicum anceps 30 No FAC **Definitions of Four Vegetation Strata:** 40 4 Juncus tenuis Yes FAC Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or 5 more in diameter at breast height (DBH), regardless of 5. Carex vulpinoidea Nο OBL 6. 5 **FACU** Solanum carolinense No 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft 8. (1 m) tall. 9. 10. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 155 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 78 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) Site meets hydrophytic vegetation criteria.

Profile Desc	ription: (Describe to	o the dep	th needed to docu	ıment tl	ne indica	tor or c	onfirm the absence	of indica	ators.)	
Depth	Matrix		Redox	k Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remar	ks
0-1	10YR 4/2	100					Loamy/Clayey			
1-5	10YR 4/1	100					Loamy/Clayey			
5-9	10YR 4/1	96	10YR 4/6	4	<u> </u>	M	Loamy/Clayey			
9-16	10YR 5/1	94_	10YR 5/8	6	<u>C</u>	M	Loamy/Clayey			
¹ Type: C=Co	oncentration, D=Deple	etion, RM	=Reduced Matrix, M	1S=Mas	ked Sand	l Grains.			ore Lining, M=I	
Hydric Soil I	ndicators:						Ind	icators fo	or Problemation	Hydric Soils ³ :
Histosol	• •		Polyvalue Be	low Sur	face (S8)	(MLRA	147, 148)	-	ck (A10) (MLR	
Histic Ep	ipedon (A2)		Thin Dark Su					Coast Pr	airie Redox (A	16)
Black His			Loamy Muck	-		ILRA 13	6)		147, 148)	
	n Sulfide (A4)		Loamy Gleye		. ,			-	t Floodplain So	oils (F19)
	Layers (A5)		X Depleted Ma						(136, 147)	
	ck (A10) (LRR N)		Redox Dark		, ,			-	ent Material (F	<i>'</i>
	Below Dark Surface	(A11)	Depleted Da		, ,				de MLRA 127,	-
	rk Surface (A12)		Redox Depre		` '	» « 		•	allow Dark Surf	
	ucky Mineral (S1)		Iron-Mangan		sses (F12	2) (LRR I	N,	Other (E	xplain in Rema	irks)
	leyed Matrix (S4) edox (S5)		MLRA 136 Umbric Surfa	•) /MI DA	122 12	6) 3Inc	licatora of	hydrophytic ve	agatation and
			Piedmont Flo						hydrology mus	-
	Matrix (S6) face (S7)		Red Parent N		-				sturbed or pro	-
			Ned Faleliti	vialeriai	(1 Z 1) (14 1	LIVA 121	, 147, 140 <i>)</i>	uniess u	sturbed or pro	biemanc.
	ayer (if observed):									
Type: Depth (in	achoo):						Hydric Soil Pres	ont?	Yes X	No
							Hyunc 3011 Files	ent:		
Remarks:	ydric soil critiera.									
Site meets m	yunc son chilera.									

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Deve	lopment	City/County: Shelb	yville/Bedford	Sampling Date: 07/24/24			
Applicant/Owner: City of Shelbyville			State: TN	Sampling Point:DP 17			
Investigator(s): JCM - Garver		Section, Township, Rai	nge: N/A				
Landform (hillside, terrace, etc.): hay pastu	ire Lo	cal relief (concave, conv	ex, none): none	Slope (%): 3			
Subregion (LRR or MLRA): LRR N, MLRA 1		Lor	ng: -86.445906°	Datum: WGS84			
Soil Map Unit Name: Eagleville silty clay loa			NWI classifica				
Are climatic / hydrologic conditions on the sit		ar? Yes X		explain in Remarks.)			
Are Vegetation , Soil , or Hydro	,,		al Circumstances" present				
Are Vegetation, Soil, or Hydro			, explain any answers in Ro				
SUMMARY OF FINDINGS – Attach	site map showing s	sampling point loc	ations, transects, in	iportant features, etc.			
Hydrophytic Vegetation Present?	Yes No X	Is the Sampled Area					
Hydric Soil Present?	Yes X No	within a Wetland?	Yes	No X			
Wetland Hydrology Present?	Yes No X						
Remarks:							
Site does not meet all three criteria and is n	ot within a wetland.						
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)			
Primary Indicators (minimum of one is requi	red; check all that apply)		Surface Soil Crac				
Surface Water (A1)	True Aquatic Plants	(B14)	Sparsely Vegetat	ted Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Od	dor (C1)	Drainage Pattern	s (B10)			
Saturation (A3)		res on Living Roots (C3)	Moss Trim Lines	(B16)			
Water Marks (B1)	Presence of Reduce	ed Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction	on in Tilled Soils (C6)					
Drift Deposits (B3)	Thin Muck Surface (•	X Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Re	marks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)			Geomorphic Pos	` '			
Inundation Visible on Aerial Imagery (B	7)		Shallow Aquitard				
Water-Stained Leaves (B9)			Microtopographic	,			
Aquatic Fauna (B13)		<u> </u>	FAC-Neutral Tes	t (D5)			
Field Observations:							
Surface Water Present? Yes	No X Depth (inch						
Water Table Present? Yes	No X Depth (inch						
Saturation Present? Yes	No X Depth (inch	es): Wetla	nd Hydrology Present?	Yes No _X_			
(includes capillary fringe)							
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos	s, previous inspections),	if available:				
Remarks:							
Site does meet wetland hydrology criteria.							

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 17 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 50.0% (A/B) Prevalence Index worksheet: =Total Cover Total % Cover of: 20% of total cover: 50% of total cover: **OBL** species 0 ___ x 1 = Sapling/Shrub Stratum (Plot size: 30' **FACW** species x 2 =FAC species x 3 = 1. 65 x 4 = FACU species 260 2. 0 x 5 = 3. UPL species 0 Column Totals: 130 (A) 450 4 (B) 5. Prevalence Index = B/A = 3.46 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Schedonorus arundinaceus 60 **FACU** 1. Yes ¹Indicators of hydric soil and wetland hydrology must be 2 Juncus tenuis 60 Yes FAC present, unless disturbed or problematic. 5 3. Solanum carolinense No **FACU Definitions of Four Vegetation Strata:** 5 4 Fraxinus pennsylvanica No **FACW** Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 130 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 65 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria. Carex vulpinoidea and Juncus marginatus <5%.

	ription: (Describe t	o the de				tor or c	onfirm the absenc	e of indicators.)	
Depth (inches)	Matrix Color (moist)	%		k Featur %		Loc ²	Toyturo	-	Pomorko
(inches) 0-4	Color (moist) 10YR 4/1	100	Color (moist)		Type ¹	Loc	Texture		Remarks
							Loamy/Clayey		
4-12	10YR 4/1	96	10YR 4/4	4	<u> </u>	M	Loamy/Clayey	_	
								_	
								_	
								_	
¹ Type: C=Co	ncentration, D=Deple	etion, RM	=Reduced Matrix, N	 IS=Mas	ked Sand	Grains.	² Locati	on: PL=Pore Lining	g, M=Matrix.
Hydric Soil I	ndicators:						Inc	dicators for Proble	ematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue Be	low Su	rface (S8)	(MLRA	147, 148)	_2 cm Muck (A10)	
Histic Ep	pedon (A2)		Thin Dark Su	-				_Coast Prairie Red	lox (A16)
Black His	` '		Loamy Muck	•	. , .	ILRA 13	6)	(MLRA 147, 14	8)
	Sulfide (A4)		Loamy Gleye					_Piedmont Floodpl	ain Soils (F19)
	Layers (A5)		X Depleted Ma					(MLRA 136, 14	·
	ck (A10) (LRR N)		Redox Dark					_Red Parent Mater	
	Below Dark Surface	(A11)	Depleted Da					•	A 127, 147, 148)
	rk Surface (A12)		Redox Depre					_Very Shallow Dar	
	ucky Mineral (S1)		Iron-Mangan		sses (F12	2) (LRR I	N,	Other (Explain in	Remarks)
	eyed Matrix (S4)		MLRA 136	•			3.		
	edox (S5)		Umbric Surfa						ytic vegetation and
	Matrix (S6)		Piedmont Flo		-				y must be present,
Dark Sur			Red Parent N	Material	(F21) (M	LRA 127	', 147, 148) I	unless disturbed	or problematic.
	ayer (if observed):								
Type:	- l \·						Liveleia Cail Bua		V Na
Depth (in	cnes):						Hydric Soil Pre	sent? Yes_	X No
Remarks:									
Site meets ny	dric soil criteria.								

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Develo	pment	City/County: Shelbyv	Ile/Bedford	Sampling Date: 07/24/24				
Applicant/Owner: City of Shelbyville			State: TN	Sampling Point: DP 18				
Investigator(s): JCM - Garver		Section, Township, Rang	e: N/A					
Landform (hillside, terrace, etc.): hay pastur	e Loc	cal relief (concave, convex	c, none): concave	Slope (%): 2				
Subregion (LRR or MLRA): LRR N, MLRA 12	23 Lat: 35.555004°	Long	-86.445870°	Datum: WGS84				
Soil Map Unit Name: Eagleville silty clay loar			NWI classifi					
Are climatic / hydrologic conditions on the site	· · · · ·	ır? Yes X	No (If no	o, explain in Remarks.)				
Are Vegetation , Soil , or Hydrol	,,		Circumstances" preser					
Are Vegetation , Soil , or Hydrol			explain any answers in I					
SUMMARY OF FINDINGS – Attach				•				
Hydric Soil Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes X	No				
Remarks:								
Site meets all three criteria and is within a we	tland.							
HYDROLOGY								
Wetland Hydrology Indicators:	ad: aback all that apply)		-	rs (minimum of two required)				
Primary Indicators (minimum of one is require Surface Water (A1)	True Aquatic Plants (R14)	Sparsely Veget	acks (B0) tated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odd	•	Drainage Patter					
Saturation (A3)		es on Living Roots (C3)	Moss Trim Lines (B16)					
Water Marks (B1)	Presence of Reduced	= : :						
Sediment Deposits (B2)	Recent Iron Reductio		Crayfish Burrow					
Drift Deposits (B3)	Thin Muck Surface (C			ole on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Ren	·						
Iron Deposits (B5)			X Geomorphic Po	` '				
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitar					
Water-Stained Leaves (B9)	'		Microtopograph					
Aquatic Fauna (B13)			FAC-Neutral Te					
Field Observations:		Ī						
Surface Water Present? Yes	No X Depth (inche	es):						
Water Table Present? Yes	No X Depth (inche	· 						
Saturation Present? Yes	No X Depth (inche		d Hydrology Present?	Yes X No				
(includes capillary fringe)		′ 	, 0,					
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos	previous inspections), if	available:					
Remarks:								
Site meets wetland hydrology criteria.								

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **DP 18** Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: 4. (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 75.0% (A/B) Prevalence Index worksheet: =Total Cover Total % Cover of: 50% of total cover: ____ 20% of total cover: ___ **OBL** species 0 ___ x 1 = Sapling/Shrub Stratum (Plot size: ____) **FACW** species x 2 =95 1. FAC species x 3 = 285 30 x 4 = FACU species 120 2. 0 x 5 = 0 3. UPL species 130 (A) Column Totals: 415 4 (B) 5. Prevalence Index = B/A = 3.19 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 9. 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: 30') Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Panicum anceps 30 FAC 1. Yes ¹Indicators of hydric soil and wetland hydrology must be 2. Juncus tenuis 30 Yes FAC present, unless disturbed or problematic. 3. Panicum virgatum 30 Yes FAC **Definitions of Four Vegetation Strata:** 30 4 Andropogon virginicus Yes **FACU** Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or 5 more in diameter at breast height (DBH), regardless of 5. Fraxinus pennsylvanica Nο **FACW** height. 6. 5 Vernonia gigantea No FAC 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft 8. (1 m) tall. 9. 10. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 130 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 65 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) Site meets hydrophytic vegetation criteria.

	ription: (Describe t	to the de		iment t x Featui		ator or co	onfirm the absend	ce of indic	cators.)	
Depth (inches)	Color (moist)	%	Color (moist)	% %	Type ¹	Loc ²	Texture		Remarks	
0-2	10YR 5/2	100			<u>) </u>		Loamy/Clayey			
2-13	10YR 5/2	96	10YR 4/6	4	С	M	Loamy/Clayey			
								_		
		_			_					
¹Type: C=Co	ncentration, D=Depl	etion, RM	 /=Reduced Matrix, N	 IS=Mas	ked San	d Grains.	²Local	tion: PL=F	Pore Lining, M=Matr	ix.
Hydric Soil I								idicators f	for Problematic Hy	dric Soils ³ :
Histosol	(A1)		Polyvalue Be		•	, .	_	2 cm M	uck (A10) (MLRA 1	47)
Histic Ep	ipedon (A2)		Thin Dark Su	ırface (S	89) (MLR	RA 147, 1	48)	Coast P	Prairie Redox (A16)	
Black His			Loamy Muck			ILRA 13	6)		A 147, 148)	
	n Sulfide (A4)		Loamy Gleye	ed Matri	x (F2)			Piedmo	nt Floodplain Soils	(F19)
Stratified	Layers (A5)		X Depleted Ma	trix (F3))			(MLR	A 136, 147)	
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface	(F6)			Red Pa	rent Material (F21)	
Depleted	Below Dark Surface	(A11)	Depleted Da						ide MLRA 127, 147	
	rk Surface (A12)		Redox Depre				_		allow Dark Surface	
	ucky Mineral (S1)		Iron-Mangan		sses (F1	2) (LRR I	N,	Other (E	Explain in Remarks))
	leyed Matrix (S4)		MLRA 136	•			3			
	edox (S5)		Umbric Surfa						of hydrophytic veget	
	Matrix (S6)		Piedmont Flo						hydrology must be	
Dark Sur	face (S7)		Red Parent I	Material	(F21) (M	LRA 127	, 147, 148)	unless o	disturbed or problen	natic.
Restrictive L	.ayer (if observed):									
Type: _										
Depth (in	iches):						Hydric Soil Pro	esent?	Yes X N	° <u> </u>
Remarks:										
Site meets hy	ydric soil criteria.									

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Deve	elopment	City/County: Shelbyvil	le/Bedford	Sampling Date: 07/25/24				
Applicant/Owner: City of Shelbyville			State: TN	Sampling Point: DP 19				
Investigator(s): JCM - Garver		Section, Township, Range	: N/A					
Landform (hillside, terrace, etc.): microhig	h Lo	ocal relief (concave, convex	, none): convex	Slope (%): 1				
Subregion (LRR or MLRA): LRR N, MLRA		Lona:	-86.445431°	Datum: WGS84				
Soil Map Unit Name: Eagleville silty clay lo		°.	NWI classific					
Are climatic / hydrologic conditions on the si		ear? Yes X		explain in Remarks.)				
, ,	,							
Are Vegetation, Soil, or Hydr			Circumstances" present					
Are Vegetation, Soil, or Hydr			xplain any answers in R					
SUMMARY OF FINDINGS – Attacl	າ site map showing ເ	sampling point locat	ions, transects, in	nportant features, etc.				
Hydrophytic Vegetation Present?	Yes No X	Is the Sampled Area						
Hydric Soil Present?	Yes X No	within a Wetland?	Yes	No X				
Wetland Hydrology Present?	Yes No _X							
Site does not meet all three criteria and is r	iot within a welland.							
HYDROLOGY								
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)				
Primary Indicators (minimum of one is requ	ired; check all that apply)		Surface Soil Cra	cks (B6)				
Surface Water (A1)	True Aquatic Plants	• •		ted Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Patterr					
Saturation (A3)		res on Living Roots (C3)						
Water Marks (B1)	Presence of Reduce	<u> </u>						
Sediment Deposits (B2) Drift Deposits (B3)	Thin Muck Surface (ion in Tilled Soils (C6) Crayfish Burrows (C8) (C7) Saturation Visible on Aerial Imagery (C9)						
Algal Mat or Crust (B4)	Other (Explain in Re							
Iron Deposits (B5)	Out of (Explain III 110	mano)	Geomorphic Pos	` '				
Inundation Visible on Aerial Imagery (E	37)		Shallow Aquitard					
Water-Stained Leaves (B9)	,		Microtopographic					
Aquatic Fauna (B13)			FAC-Neutral Tes					
Field Observations:								
Surface Water Present? Yes	No X Depth (inch	nes):						
Water Table Present? Yes	No X Depth (inch	nes):						
Saturation Present? Yes	No X Depth (inch	nes): Wetland	Hydrology Present?	Yes No _X_				
(includes capillary fringe)								
Describe Recorded Data (stream gauge, m	onitoring well, aerial photos	s, previous inspections), if a	ıvailable:					
Remarks:								
Site does meet wetland hydrology criteria.								
,								

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **DP 19** Absolute Dominant Indicator Tree Stratum (Plot size: 30' % Cover Species? Status **Dominance Test worksheet:** 1. Juniperus virginiana 40 Yes FACU **Number of Dominant Species** 2. 10 **FACW** Celtis laevigata Yes That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: 6 4. (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 50.0% (A/B) Prevalence Index worksheet: Total % Cover of: 50 =Total Cover 50% of total cover: 25 20% of total cover: OBL species ____ x 1 = **FACW** species x 2 = Sapling/Shrub Stratum (Plot size: 30' x 3 = Fraxinus pennsylvanica **FACW FAC** species FACU 2. Ulmus alata Yes FACU species x 4 =x 5 = 3. UPL species Column Totals: (A) 4. (B) 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 9. 4 - Morphological Adaptations¹ (Provide supporting 10 =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 5 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Schedonorus arundinaceus 50 **FACU** 1. Yes ¹Indicators of hydric soil and wetland hydrology must be Panicum anceps 2. 10 No FAC present, unless disturbed or problematic. 3. Ulmus alata 20 No **FACU Definitions of Four Vegetation Strata:** Fraxinus pennsyl<u>vanica</u> 25 4 Yes **FACW** Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 20 **FACW** 5. Leersia virginica No height. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft 8. (1 m) tall. 9. 10. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 125 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 63 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? No X Yes Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation.

	ription: (Describe t	o the de				tor or co	onfirm the abs	ence of inc	dicators.)	
Depth	Matrix			Feature		1 2	- .			
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture		Remark	<u>(S</u>
0-7	10YR 4/2	100					Loamy/Clay	<u>ey</u>		
7-9	10YR 5/2	100					Loamy/Clay	ey	concretions	oresent
9-15	10YR 5/2	40	10YR 5/8	25	C	M	Loamy/Clay	ey	10YR 5/1 Mat	rix - 35%
	ncentration, D=Depl	etion, RM	=Reduced Matrix, M	IS=Masl	ked Sand	Grains.	² Lc		=Pore Lining, M=N	
Hydric Soil I									s for Problemation	-
— Histosol (•		Polyvalue Be		, ,	•			Muck (A10) (MLR	
	pedon (A2)		Thin Dark Su						Prairie Redox (A	16)
Black His			Loamy Muck			ILRA 136	5)		.RA 147, 148)	(= (0)
	Sulfide (A4)		Loamy Gleye						nont Floodplain So	oils (F19)
	Layers (A5)		X Depleted Ma					•	.RA 136, 147)	14)
	ck (A10) (LRR N)	(444)	Redox Dark		-				Parent Material (F2	·
	Below Dark Surface k Surface (A12)	(A11)	Depleted Date Redox Depre						tside MLRA 127, Shallow Dark Surf	
	ucky Mineral (S1)		Iron-Mangan) /I DD N	J		Explain in Rema	
	eyed Matrix (S4)		MLRA 136		5565 (1 12	-) (L IXIX I	٠,	Ouilei	(Explain in Rema	iks)
Sandy Re			Umbric Surfa	•) (MI RA	122 136	5)	3Indicators	s of hydrophytic ve	egetation and
	Matrix (S6)		Piedmont Flo						nd hydrology must	-
— Dark Sur			Red Parent N	•	•	, ,	•		s disturbed or prob	-
	ayer (if observed):				· / (, , _' ,		·	
Type:	., (
Depth (in	ches):						Hydric Soil	Present?	Yes X	No
Remarks:							<u> </u>			
	dric soil criteria.									

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Develo	pment City/C	County: Shelbyville/Bedford	_Sampling Date: 07/24/24				
Applicant/Owner: City of Shelbyville		State: TN	Sampling Point: DP 20				
Investigator(s): JCM - Garver	Section, 7	Гownship, Range: <u>N/A</u>					
Landform (hillside, terrace, etc.): microlow	Local relief (concave, convex, none): concave	Slope (%): 2				
Subregion (LRR or MLRA): LRR N, MLRA 12	 23	Long: -86.445396°	Datum: WGS84				
Soil Map Unit Name: Eagleville silty clay loar		NWI classifica	tion: N/A				
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes X No (If no, e	explain in Remarks.)				
Are Vegetation , Soil , or Hydrole	ogy significantly disturbed?	Are "Normal Circumstances" present?					
Are Vegetation, Soil, or Hydrole	ogy naturally problematic?	(If needed, explain any answers in Re	emarks.)				
SUMMARY OF FINDINGS – Attach		g point locations, transects, im	portant features, etc.				
Hydric Soil Present?		sampled Area a Wetland? Yes X	No				
Site meets all three criteria and is within a we	tland.						
HYDROLOGY							
Wetland Hydrology Indicators:			(minimum of two required)				
Primary Indicators (minimum of one is require		Surface Soil Crac	, ,				
Surface Water (A1)	True Aquatic Plants (B14)		ed Concave Surface (B8)				
High Water Table (A2)	— Hydrogen Sulfide Odor (C1)	X Drainage Patterns					
Saturation (A3)	Oxidized Rhizospheres on Livin						
Water Marks (B1)	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled	<u> </u>					
Sediment Deposits (B2) Drift Deposits (B3)	Thin Muck Surface (C7)	· ' '	on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)						
Iron Deposits (B5)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1) X Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7)	1	Shallow Aquitard					
Water-Stained Leaves (B9)	,	Microtopographic					
Aquatic Fauna (B13)		X FAC-Neutral Test					
Field Observations:		<u> </u>	. (50)				
Surface Water Present? Yes	No X Depth (inches):						
Water Table Present? Yes	No X Depth (inches):	—					
Saturation Present? Yes	No X Depth (inches):	Wetland Hydrology Present?	Yes X No				
(includes capillary fringe)		_	··· <u>··</u> ···				
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos, previous	inspections), if available:					
Pomorko							
Remarks: Site meets wetland hydrology criteria.							
Old mode welland hydrology official.							

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **DP 20** Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: 4. 2 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet: =Total Cover Total % Cover of: 50% of total cover: 20% of total cover: **OBL** species x 1 = Sapling/Shrub Stratum (Plot size: 20'x30' **FACW** species x 2 =5 Fraxinus pennsylvanica 15 **FAC** species x 3 = 5 x 4 = 2. **FACU** species 3. 0 0 UPL species x 5 = Column Totals: 95 (A) 205 4 (B) 5. Prevalence Index = B/A = 2.16 6. **Hydrophytic Vegetation Indicators:** 7. X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. X 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting 15 =Total Cover data in Remarks or on a separate sheet) 20% of total cover: 50% of total cover: Herb Stratum (Plot size: 20'x30') Problematic Hydrophytic Vegetation¹ (Explain) Leersia virginica 60 **FACW** 1. Yes ¹Indicators of hydric soil and wetland hydrology must be 2. Fraxinus pennsylvanica 10 No **FACW** present, unless disturbed or problematic. 3. Parthenocissus quinquefolia 5 No **FACU Definitions of Four Vegetation Strata:** 5 4 Toxicodendron radicans No FAC 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 or equal to 3.28 ft 8. (1 m) tall. 10. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 40 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) Site meets hydrophytic vegetation criteria.

		o the de				itor or co	onfirm the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%		x Featur %		Loc ²	Toyturo	Pomorko
(inches) 0-3	Color (moist) 10YR 3/2	100	Color (moist)		Type ¹	Loc	TextureLoamy/Clayey	Remarks
3-13	10YR 5/2	85	10YR 5/8	5	<u> </u>	<u>M</u>	Loamy/Clayey	10YR 4/1 Matrix - 10%
¹ Type: C=Co	ncentration, D=Depl	etion, RM	=Reduced Matrix, M	1S=Mas	ked Sand	l Grains.	² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil II	ndicators:							cators for Problematic Hydric Soils ³ :
— Histosol (•		Polyvalue Be				· · · —	2 cm Muck (A10) (MLRA 147)
	pedon (A2)		Thin Dark Su					Coast Prairie Redox (A16)
Black His			Loamy Muck	-		ILRA 13		(MLRA 147, 148)
	Sulfide (A4)		Loamy Gleye					Piedmont Floodplain Soils (F19)
	Layers (A5)		X Depleted Ma	٠,				(MLRA 136, 147)
	ck (A10) (LRR N)	(8.4.4)	Redox Dark					Red Parent Material (F21)
	Below Dark Surface	(A11)	Depleted Da					(outside MLRA 127, 147, 148)
	k Surface (A12) ucky Mineral (S1)		Redox Depre		-) /I DD I		Very Shallow Dark Surface (F22) Other (Explain in Remarks)
	eyed Matrix (S4)		MLRA 136		5565 (F 12	2) (LKK I		Other (Explain in Remarks)
Sandy Re			Umbric Surfa	•	R) (MI RA	122 13	3) 3Ind	icators of hydrophytic vegetation and
	Matrix (S6)		Piedmont Flo		-			wetland hydrology must be present,
Dark Surl			Red Parent I		-			unless disturbed or problematic.
	ayer (if observed):				(· = · / (
Type:	, , , , , , , , , , , , , , , , , , , ,							
Depth (in	ches):						Hydric Soil Pres	ent? Yes X No
Remarks:							<u> </u>	
	dric soil criteria.							

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: MTSU - Aviation Facility Development City/County: Shelbyville/Bedford Sampling Date: 07/25/24 Applicant/Owner: City of Shelbyville State: TN Sampling Point: DP 21 Investigator(s): JCM - Garver Section, Township, Range: N/A Landform (hillside, terrace, etc.): hay pasture Local relief (concave, convex, none): none Slope (%): 1 Subregion (LRR or MLRA): LRR N, MLRA 123 Lat: 35.554719° Long: -86.446176° Datum: WGS84 Soil Map Unit Name: Eagleville silty clay loam, frequently flooded NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year?

Yes X No (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ 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? Is the Sampled Area Yes No X Yes No X Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Remarks: Site does not meet all three criteria and is not within a wetland. **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) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Water Marks (B1) Recent Iron Reduction in Tilled Soils (C6) Sediment Deposits (B2) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Aquatic Fauna (B13) Field Observations: No X Depth (inches): Surface Water Present? No X Depth (inches): Water Table Present? No X Depth (inches): Wetland Hydrology Present? Saturation Present? Yes No X (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Site does meet wetland hydrology criteria.

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 21 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: 30') % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: ____ =Total Cover 20% of total cover: 50% of total cover: OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: 30') FACW species _ x 2 = 1. FAC species ____ x 3 = ___ 2. FACU species x 4 = _____ x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 8. 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Andropogon virginicus 75 **FACU** Yes ¹Indicators of hydric soil and wetland hydrology must be 2. Schedonorus arundinaceus 15 No **FACU** present, unless disturbed or problematic. Paspalum dilatatum 10 3. No FAC **Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 100 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 50 20% of total cover: Woody Vine Stratum (Plot size:) 3. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? Yes No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria.

	ription: (Describe t	o the de				ator or c	onfirm the abs	ence of indi	cators.)	
Depth (inches)	Color (moist)	%	Color (moist)	k Featur %	Type ¹	Loc ²	Texture		Ren	narks
0-2	10YR 4/3	100	Color (moist)	70	Турс		Loamy/Clay	ey	Tton	indiko
2-12	10YR 5/3	96	10YR 4/6	4			Loamy/Clay			
				<u> </u>						
	ncentration, D=Depl	etion, RM	I=Reduced Matrix, M	1S=Mas	ked Sand	d Grains.	² Lc	cation: PL=F		
Hydric Soil In Histosol (Polyvalue Be	alow Sun	rfaca (S8	\ (MI PA	147 148)		or Problema uck (A10) (M	atic Hydric Soils ³ :
	ipedon (A2)		Thin Dark Su			-			Prairie Redox	
Black His			Loamy Muck						A 147, 148)	(/110)
	n Sulfide (A4)		Loamy Gleye				-,		nt Floodplair	n Soils (F19)
	Layers (A5)		Depleted Ma		. ,				A 136, 147)	
	ck (A10) (LRR N)		Redox Dark						rent Material	(F21)
	Below Dark Surface	(A11)	Depleted Da		` '					27, 147, 148)
	rk Surface (A12)	, ,	Redox Depre							Surface (F22)
Sandy M	ucky Mineral (S1)		Iron-Mangan	ese Ma	sses (F12	2) (LRR l	N,	Other (F	Explain in Re	emarks)
Sandy Gl	eyed Matrix (S4)		MLRA 136	5)						
Sandy Re	edox (S5)		Umbric Surfa	ace (F13	3) (MLRA	122, 13	6)	³ Indicators of	of hydrophytic	c vegetation and
Stripped	Matrix (S6)		Piedmont Flo	oodplair	Soils (F	19) (MLF	RA 148)	wetland	l hydrology m	nust be present,
Dark Sur	face (S7)		Red Parent I	Material	(F21) (M	LRA 127	', 147, 148)	unless	disturbed or p	problematic.
Restrictive L	ayer (if observed):									
Type: _										
Depth (in	ches):						Hydric Soil	Present?	Yes	No <u>X</u>
Remarks:										
Site does not	meet hydric soil crite	eria.								

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Develo	pment	City/County: Shelbyville	e/Bedford	Sampling Date: 07/25/24
Applicant/Owner: City of Shelbyville			State: TN	Sampling Point: DP 23
Investigator(s): JCM - Garver		Section, Township, Range:	N/A	
Landform (hillside, terrace, etc.): depression	Loca	al relief (concave, convex,	none): none	Slope (%):
Subregion (LRR or MLRA): LRR N, MLRA 12	23 Lat: 35.554754°	Long: -	86.446498°	Datum: WGS84
Soil Map Unit Name: Eagleville silty clay loar	n, frequently flooded		NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site	typical for this time of year	r? Yes X	No (If no,	explain in Remarks.)
Are Vegetation , Soil , or Hydrole	,,		ircumstances" present	
Are Vegetation , Soil , or Hydrole			plain any answers in R	
SUMMARY OF FINDINGS – Attach			- -	
Hydric Soil Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes X	No
Remarks:				
Site meets all three criteria and is within a we	tland.			
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)
Primary Indicators (minimum of one is require			Surface Soil Crad	, ,
Surface Water (A1)	True Aquatic Plants (E	•		ted Concave Surface (B8)
—— High Water Table (A2)	Hydrogen Sulfide Odo		Drainage Pattern	
Saturation (A3)	Oxidized Rhizosphere	s on Living Roots (C3)	Moss Trim Lines	(B16)
Water Marks (B1)	Presence of Reduced	Iron (C4)	Dry-Season Wate	er Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction	ı in Tilled Soils (C6)	Crayfish Burrows	; (C8)
Drift Deposits (B3)	Thin Muck Surface (C	7)	X Saturation Visible	e on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rem	arks)	Stunted or Stress	sed Plants (D1)
Iron Deposits (B5)			X Geomorphic Pos	ition (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard	(D3)
Water-Stained Leaves (B9)			Microtopographic	Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral Tes	t (D5)
Field Observations:				
Surface Water Present? Yes	No X Depth (inches	s):		
Water Table Present? Yes	No X Depth (inches	s):		
Saturation Present? Yes	No X Depth (inches	s): Wetland	Hydrology Present?	Yes _ X _ No
(includes capillary fringe)				
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos,	previous inspections), if a	vailable:	
Remarks:				
Site meets wetland hydrology criteria.				
Cite incote tresaula rijarelegi enterial				

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **DP 23** Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: 30') % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover 20% of total cover: 50% of total cover: OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: 30') FACW species __ x 2 = 1. FAC species ____ x 3 = ____ 2. FACU species x 4 = ____ x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Panicum virgatum FAC 1. Yes ¹Indicators of hydric soil and wetland hydrology must be 2. Schedonorus arundinaceus 10 Nο **FACU** present, unless disturbed or problematic. Paspalum dilatatum 10 3. No FAC **Definitions of Four Vegetation Strata:** 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 or equal to 3.28 ft 8. (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 100 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 50 20% of total cover: Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) Site meets hydrophytic vegetation criteria.

	ription: (Describe t	o the de				itor or co	onfirm the abse	ence of indi	icators.)	
Depth	Matrix	0/		K Featur		1 - 2	T		Damand	
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture		Remark	_
0-4	10YR 5/3	92	10YR 4/6	8	<u> </u>	M	Loamy/Claye	<u> </u>	Distinct redox con	centrations
4-14	10YR 4/4	100					Loamy/Claye	<u></u>		
¹Type: C=Co	ncentration, D=Depl	etion, RM	=Reduced Matrix, M	 IS=Mas	ked Sand	Grains.	² Lo	cation: PL=	Pore Lining, M=N	Matrix.
Hydric Soil I			·						for Problematic	
Histosol ((A1)		Polyvalue Be	low Su	rface (S8	(MLRA	147, 148)	2 cm M	luck (A10) (MLR	A 147)
Histic Ep	ipedon (A2)		Thin Dark Su	ırface (S	89) (MLR	A 147, 1	48)	Coast I	Prairie Redox (A1	16)
Black His			Loamy Muck			ILRA 136	5)	(MLF	RA 147, 148)	
	n Sulfide (A4)		Loamy Gleye	ed Matri	x (F2)			Piedmo	ont Floodplain So	ils (F19)
	Layers (A5)		Depleted Ma						RA 136, 147)	
	ck (A10) (LRR N)		Redox Dark						arent Material (F2	•
	Below Dark Surface	(A11)	Depleted Da						side MLRA 127,	
	rk Surface (A12)		X Redox Depre						hallow Dark Surfa	` ′
	ucky Mineral (S1)		Iron-Mangan		sses (F12	2) (LRR I	ν,	Other (Explain in Remar	rks)
	eyed Matrix (S4)		MLRA 136	•	2) /MI D A	400 400	2)	3Indicators	of hydrophytic ve	actation and
	edox (S5) Matrix (S6)		Umbric Surfa Piedmont Flo						d hydrology must	-
Dark Sur			Red Parent N		-				disturbed or prob	-
	ayer (if observed):		Red i alenti	viateriai	(1 2 1) (141	LIVA 121	, 147, 140 <i>)</i>	unicss	uisturbed or prob	nemanc.
Type:	ayer (ii observeu).									
Depth (in	ches):						Hydric Soil	Present?	Yes X	No
Remarks:							1			
	dric soil criteria.									
,										

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

Project/Site: MTSU - Aviation Facility Development	City/Cou	nty: Shelbyville/Bedford	Sampling Date: 07/25/24				
Applicant/Owner: City of Shelbyville		State: TN	N Sampling Point: DP 24				
Investigator(s): JCM - Garver	Section, Tow	nship, Range: N/A					
Landform (hillside, terrace, etc.): microhigh	Local relief (con	cave, convex, none): convex	Slope (%): 2				
Subregion (LRR or MLRA): LRR N, MLRA 123 L	at: 35.554875°	Long: -86.446523°	Datum: WGS84				
Soil Map Unit Name: Bradyville silt loam, 2 to 5 pero			fication: N/A				
Are climatic / hydrologic conditions on the site typical	·	Yes X No (If n	no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology	•	Are "Normal Circumstances" prese					
Are Vegetation, Soil, or Hydrology		(If needed, explain any answers in					
SUMMARY OF FINDINGS – Attach site n			•				
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No X Is the Sam within a W No X	•	No_X_				
Remarks: Site does not meet all three criteria and is not within	a wetland. This point was taker	on a microhigh upland that is loca	ated within a mosaic wetland.				
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indicate	ors (minimum of two required)				
Primary Indicators (minimum of one is required; che	ck all that apply)	Surface Soil C	Cracks (B6)				
Surface Water (A1)Tr	ue Aquatic Plants (B14)	Sparsely Vege	etated Concave Surface (B8)				
	ydrogen Sulfide Odor (C1)	Drainage Patte					
	xidized Rhizospheres on Living F	· · · —					
	resence of Reduced Iron (C4)		/ater Table (C2)				
 -	ecent Iron Reduction in Tilled So						
 -	nin Muck Surface (C7) ther (Explain in Remarks)		ible on Aerial Imagery (C9) essed Plants (D1)				
Algal Mat or Crust (B4) Iron Deposits (B5)	ilei (Expiaiii ili Reiliaiks)	Geomorphic P	` '				
Inundation Visible on Aerial Imagery (B7)		Shallow Aquita					
Water-Stained Leaves (B9)			phic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral T					
Field Observations:							
Surface Water Present? Yes No	X Depth (inches):						
	X Depth (inches):						
	X Depth (inches):	Wetland Hydrology Present	? Yes No X				
(includes capillary fringe)	_ ' \	, ,					
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous ins	pections), if available:					
Remarks:							
Site does not meet wetland hydrology criteria.							

DP 24 **VEGETATION** (Four Strata) – Use scientific names of plants. Sampling Point: Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 50.0% (A/B) Prevalence Index worksheet: Total % Cover of: ____ =Total Cover 50% of total cover: ____ 20% of total cover: ___ OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: ____) FACW species __ x 2 = 1. FAC species ____ x 3 = ___ 2. FACU species x 4 = x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. Hydrophytic Vegetation Indicators: 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: ___ 20% of total cover: Herb Stratum (Plot size: 5'x15') Problematic Hydrophytic Vegetation¹ (Explain) Schedonorus arundinaceus 50 **FACU** 1. Yes ¹Indicators of hydric soil and wetland hydrology must be 40 2. Paspalum dilatatum Yes FAC present, unless disturbed or problematic. Panicum virgatum ______ 10 3. No FAC **Definitions of Four Vegetation Strata:** 10 No 4 Juncus tenuis FAC Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 110 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 55 20% of total cover: Woody Vine Stratum (Plot size:) 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria.

	ription: (Describe t	o the dep				tor or co	onfirm the abs	sence of indi	cators.)		
Depth	Matrix			Featur		1 2	- .		_		
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture		Ren	narks	
0-1	10YR 4/2	100					Loamy/Cla				
1-8	10YR 5/3	100					Loamy/Cla	<u>yey</u>			
8-14	10YR 5/3	94	10YR 5/8	6	<u> </u>	M	Loamy/Cla	yey			
¹ Type: C=Co	ncentration, D=Depl	etion, RM	=Reduced Matrix, M	S=Masl	ked Sand	Grains.		ocation: PL=F	Pore Lining, N	л=Matrix.	_
Hydric Soil I		· · · · · · · · · · · · · · · · · · ·	•							atic Hydric Soil	s³:
Histosol (A1)		Polyvalue Be	low Sur	face (S8)	(MLRA	147, 148)	2 cm M	uck (A10) (M	LRA 147)	
Histic Ep	pedon (A2)		Thin Dark Su	rface (S	9) (MLR	A 147, 1	48)	Coast F	Prairie Redox	(A16)	
Black His	tic (A3)		Loamy Muck	y Minera	al (F1) (M	ILRA 136	3)	(MLR	A 147, 148)		
Hydroger	Sulfide (A4)		Loamy Gleye	d Matrix	k (F2)			Piedmo	nt Floodplair	Soils (F19)	
	Layers (A5)		Depleted Ma					•	A 136, 147)		
	ck (A10) (LRR N)		Redox Dark		-				rent Material		
	Below Dark Surface	(A11)	Depleted Dar							27, 147, 148)	
	k Surface (A12)		Redox Depre							Surface (F22)	
	ucky Mineral (S1)		Iron-Mangan		sses (F12	2) (LRR N	١,	Other (I	Explain in Re	marks)	
	eyed Matrix (S4)		MLRA 136	•				3			.
Sandy Re			Umbric Surfa		-					vegetation and	1
	Matrix (S6)		Piedmont Flo		-					iust be present,	
Dark Sur			Red Parent N	nateriai	(FZ1) (IVI	LRA 127	, 147, 148) 	uniess	disturbed or p	orobiematic.	
Type:	ayer (if observed):										
Depth (in	ches).						Hydric Soi	l Present?	Yes	No X	
							Tryunc ooi	1110301111		<u></u>	
Remarks:	meet hydric soil crite	aria									
One does not	meet riyane son end	Jila.									

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

City/County: Shelbyville/Bedford Sampling Date: 07/25/24 Project/Site: MTSU - Aviation Facility Development Applicant/Owner: City of Shelbyville State: TN Sampling Point: DP 25 Investigator(s): JCM - Garver Section, Township, Range: N/A Slope (%): 3 Landform (hillside, terrace, etc.): undulating hay pasture Local relief (concave, convex, none): concave Subregion (LRR or MLRA): LRR N, MLRA 123 Lat: 35.555136° Long: -86.446537° Datum: WGS84 Soil Map Unit Name: Eagleville silty clay loam, frequently flooded NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year?

Yes X No ____ (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? 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. No X Hydrophytic Vegetation Present? Is the Sampled Area No ___ Yes No X Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Yes Remarks: Site does not meet all three criteria and is not within a wetland. **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) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Water Marks (B1) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Sediment Deposits (B2) Drift Deposits (B3) Thin Muck Surface (C7) X Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) X Geomorphic Position (D2) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Aquatic Fauna (B13) Field Observations: No X Depth (inches): Surface Water Present? No X Depth (inches): Water Table Present? No X Depth (inches): Wetland Hydrology Present? Saturation Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Site does meet wetland hydrology criteria.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 25 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: 30') % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 0.0% (A/B) Prevalence Index worksheet: Total % Cover of: ____ =Total Cover 20% of total cover: 50% of total cover: OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: 30') FACW species _ x 2 = 1. FAC species ____ x 3 = ___ 2. FACU species x 4 = _____ x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Schedonorus arundinaceus 80 **FACU** 1. Yes ¹Indicators of hydric soil and wetland hydrology must be 2. Juncus tenuis 20 Nο FAC present, unless disturbed or problematic. Solanum carolinense ______ 3. 10 No **FACU Definitions of Four Vegetation Strata:** 10 ____ 4 Carex frankii No OBL Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 120 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 60 20% of total cover: Woody Vine Stratum (Plot size:) 3. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? Yes No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria.

	ription: (Describe t	o the dep				ator or co	onfirm the abs	ence of	findicators.)
Depth	Matrix			K Featur		1 2	- .		5
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture		Remarks
0-12	10YR 5/2	96	10YR 5/6	4	C	M	Loamy/Clay	еу	Prominent redox concentrations
¹ Type: C=Co	ncentration, D=Depl	etion RM=	Reduced Matrix M	 eeM=2l	ked Sand			cation:	PL=Pore Lining, M=Matrix.
Hydric Soil I		etion, rawi-	-reduced Matrix, IV	IO-IVIAS	ikeu Jani	Oranis.			tors for Problematic Hydric Soils ³ :
Histosol (Polyvalue Be	low Su	rface (S8)	(MI RA	147 148)		cm Muck (A10) (MLRA 147)
	pedon (A2)		Thin Dark Su		, ,	, ,			past Prairie Redox (A16)
Black His			Loamy Muck						(MLRA 147, 148)
	Sulfide (A4)		Loamy Gleye	•	. , .		-,		edmont Floodplain Soils (F19)
	Layers (A5)		X Depleted Ma						(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark						ed Parent Material (F21)
 Depleted	Below Dark Surface	(A11)	Depleted Da	rk Surfa	ice (F7)				(outside MLRA 127, 147, 148)
Thick Da	rk Surface (A12)		Redox Depre	essions	(F8)			Ve	ery Shallow Dark Surface (F22)
Sandy M	ucky Mineral (S1)		Iron-Mangan	ese Ma	sses (F12	2) (LRR N	١,	Ot	ther (Explain in Remarks)
Sandy Gl	eyed Matrix (S4)		MLRA 136	i)					
Sandy Re	edox (S5)		Umbric Surfa						ators of hydrophytic vegetation and
	Matrix (S6)		Piedmont Flo		-				etland hydrology must be present,
Dark Sur	face (S7)		Red Parent N	<i>l</i> laterial	(F21) (M	LRA 127	, 147, 148) 	un	less disturbed or problematic.
Restrictive L	ayer (if observed):								
Type: _									
Depth (in	ches):						Hydric Soil	Presen	t? Yes X No
Remarks:									
Site meets hy	dic soil criteria.								

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: MTSU - Aviation Facility Development City/County: Shelbyville/Bedford Sampling Date: 07/24/24 Applicant/Owner: City of Shelbyville State: TN Sampling Point: DP 26 Investigator(s): JCM - Garver Section, Township, Range: N/A Landform (hillside, terrace, etc.): undulating hay pasture Local relief (concave, convex, none): concave Slope (%): 1 Subregion (LRR or MLRA): LRR N, MLRA 123 Lat: 35.555310° Long: -86.446557° Datum: WGS84 Soil Map Unit Name: Eagleville silty clay loam, frequently flooded NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year?

Yes X No ____ (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ 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. No X Hydrophytic Vegetation Present? Is the Sampled Area No ___ Yes No X Hydric Soil Present? within a Wetland? Wetland Hydrology Present? Yes Remarks: Site does not meet all three criteria and is not within a wetland. **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) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Water Marks (B1) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Sediment Deposits (B2) Drift Deposits (B3) Thin Muck Surface (C7) X Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) X Geomorphic Position (D2) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Aquatic Fauna (B13) Field Observations: No X Depth (inches): Surface Water Present? No X Depth (inches): Water Table Present? No X Depth (inches): Wetland Hydrology Present? Saturation Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Site meets wetland hydrology criteria.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **DP 26** Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 50.0% (A/B) Prevalence Index worksheet: =Total Cover Total % Cover of: 20% of total cover: 50% of total cover: **OBL** species 0 ___ x 1 = Sapling/Shrub Stratum (Plot size: 30' **FACW** species x 2 =65 1. FAC species x 3 = 70 x 4 = 2. FACU species x 5 = 0 0 3. UPL species Column Totals: 135 (A) 475 4 (B) 5. Prevalence Index = B/A = 3.52 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation¹ (Explain) Schedonorus arundinaceus 60 **FACU** 1. Yes ¹Indicators of hydric soil and wetland hydrology must be 2. Juncus tenuis 60 Yes FAC present, unless disturbed or problematic. 3. Solanum carolinense 10 No **FACU Definitions of Four Vegetation Strata:** 5 4 Paspalum dilatatum No FAC Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or 5. more in diameter at breast height (DBH), regardless of 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 135 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 68 20% of total cover: Woody Vine Stratum (Plot size:) 3. Hydrophytic =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? Yes No X Remarks: (Include photo numbers here or on a separate sheet.) Site does not meet hydrophytic vegetation criteria.

	ription: (Describe t	to the de				ator or c	onfirm the abso	ence of indi	cators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Featu %	res Type ¹	Loc ²	Texture		Remark	(e
· / /							•		Remair	(5
0-12	10YR 4/1	96	10YR 4/4	4	<u> </u>	M	Loamy/Clay	<u> </u>		
	-				· ——					
							-			
17			A. Danker and Marketin B	40. 14			21 -		Dana Linina M. N	A - A-di-
	ncentration, D=Depl	etion, Riv	i=Reduced Matrix, I	/IS=IVIAS	sked Sand	d Grains.	-L0		Pore Lining, M=N for Problematic	
Hydric Soil I Histosol			Polyvalue Be	olow Su	rfaco (S8	\ (MI DA	147 149)		uck (A10) (MLR	-
	ipedon (A2)		Thin Dark Su		-				Prairie Redox (A1	
Black His	. , ,		Loamy Muck	•	, ,		•		RA 147, 148)	10)
	n Sulfide (A4)		Loamy Gley				-,		ont Floodplain Sc	oils (F19)
	Layers (A5)		X Depleted Ma						RA 136, 147)	()
	ck (A10) (LRR N)		Redox Dark					•	rent Material (F2	21)
	Below Dark Surface	(A11)	Depleted Da					— (outs	ide MLRA 127,	147, 148)
Thick Da	rk Surface (A12)		Redox Depre	essions	(F8)			Very Sl	nallow Dark Surfa	ace (F22)
Sandy M	ucky Mineral (S1)		Iron-Mangan	iese Ma	sses (F1	2) (LRR I	N,	Other (Explain in Rema	rks)
Sandy G	leyed Matrix (S4)		MLRA 136	3)						
Sandy R	edox (S5)		Umbric Surfa	ace (F1	3) (MLRA	122, 13	6)	³ Indicators	of hydrophytic ve	egetation and
	Matrix (S6)		Piedmont Flo	oodplair	n Soils (F	19) (MLF	RA 148)	wetland	l hydrology must	be present,
Dark Sur	face (S7)		Red Parent I	Material	l (F21) (M	ILRA 127	', 147, 148)	unless	disturbed or prob	olematic.
Restrictive L	ayer (if observed):									
Type:										
Depth (ir	iches):						Hydric Soil	Present?	YesX	No
Remarks:										
Site meets hy	ydric soil criteria.									

WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region See ERDC/EL TR-12-9; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

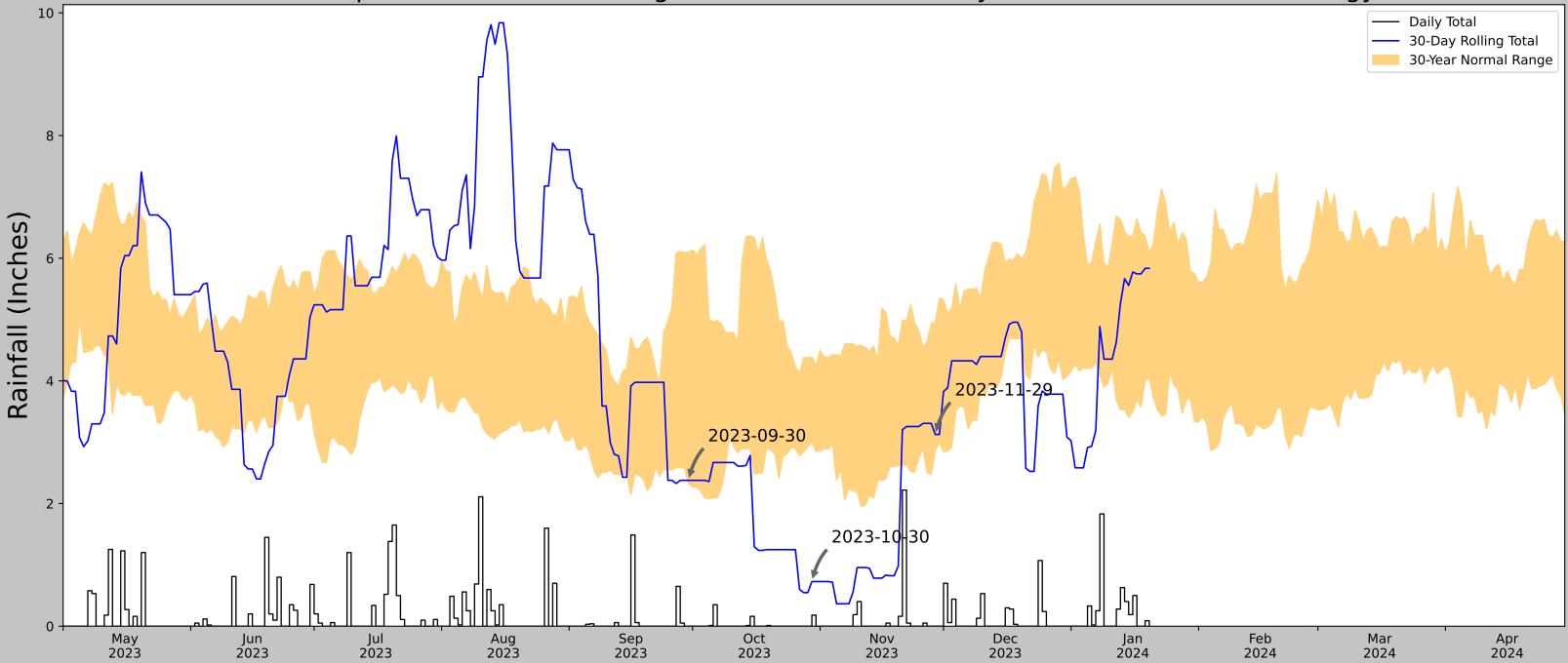
City/County: Shelbyville/Bedford Sampling Date: 07/25/24 Project/Site: MTSU - Aviation Facility Development Applicant/Owner: City of Shelbyville State: TN Sampling Point: DP 27 Investigator(s): JCM - Garver Section, Township, Range: N/A Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): none Subregion (LRR or MLRA): LRR N, MLRA 123 Lat: 35.554866° Long: -86.446519° Datum: WGS84 Soil Map Unit Name: Bradyville silt loam, 2 to 5 percent slopes NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year?

Yes X No (If no, explain in Remarks.) Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ 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 X Nο Is the Sampled Area Yes X No ____ Hydric Soil Present? within a Wetland? Yes X No ____ Wetland Hydrology Present? No Remarks: Site meets all three criteria and is within a wetland. **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) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Water Marks (B1) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Sediment Deposits (B2) Drift Deposits (B3) Thin Muck Surface (C7) X Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) X Geomorphic Position (D2) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) X Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Aquatic Fauna (B13) Field Observations: No X Depth (inches): Surface Water Present? No X Depth (inches): Water Table Present? No X Depth (inches): Wetland Hydrology Present? Saturation Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Site meets wetland hydrology criteria.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP 27 Absolute Dominant Indicator <u>Tree Stratum</u> (Plot size: % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover 50% of total cover: ____ 20% of total cover: ___ OBL species ____ x 1 = Sapling/Shrub Stratum (Plot size: ____) FACW species x 2 = 1. FAC species ____ x 3 = ___ 2. FACU species x 4 = x 5 = 3. UPL species Column Totals: (A) 4 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 20% of total cover: Herb Stratum (Plot size: 10') Problematic Hydrophytic Vegetation¹ (Explain) Paspalum dilatatum _____10 FAC Yes ¹Indicators of hydric soil and wetland hydrology must be Panicum virgatum 5 2. FAC present, unless disturbed or problematic. 3. **Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. height. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 15 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 8 20% of total cover: 3 Woody Vine Stratum (Plot size:) 2. 3. Hydrophytic =Total Cover Vegetation 20% of total cover: 50% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) Site meets hydrophytic vegetation.

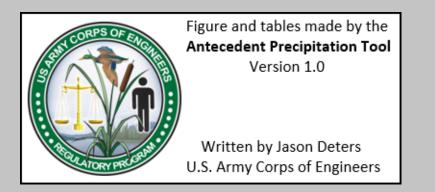
	iption: (Describe t	o the dep				tor or c	onfirm the absence	e of indic	cators.)	
Depth (inches)	Matrix Color (moist)	%		K Featur		Loc ²	Toyturo		Bomorl	40
(inches)	Color (moist)		Color (moist)		Type ¹	Loc	Texture Learny/Clausy		Remark	(S
0-4	10YR 5/2	100					Loamy/Clayey			
4-8	10YR 5/2	92	10YR 5/6	8	<u> </u>	M	Loamy/Clayey			
¹Type: C=Co	ncentration, D=Deple	etion, RM	=Reduced Matrix, M	 IS=Mas	ked Sand	Grains.	² Locat	on: PL=F	Pore Lining, M=N	Matrix.
Hydric Soil In	ndicators:						In	dicators f	or Problematic	Hydric Soils ³ :
Histosol (A1)		Polyvalue Be	low Su	rface (S8)	(MLRA	147, 148)	_ 2 cm Mı	uck (A10) (MLR	A 147)
Histic Epi	pedon (A2)		Thin Dark Su	ırface (S	59) (MLR	A 147, 1	48)	_Coast P	rairie Redox (A	16)
Black His	tic (A3)		Loamy Muck	y Miner	al (F1) (N	ILRA 13	6)	(MLR	A 147, 148)	
Hydroger	Sulfide (A4)		Loamy Gleye	ed Matri	x (F2)			_ Piedmoi	nt Floodplain Sc	oils (F19)
Stratified	Layers (A5)		X Depleted Ma	trix (F3))			(MLR	A 136, 147)	
2 cm Mud	k (A10) (LRR N)		Redox Dark	Surface	(F6)		_	_	rent Material (F2	·
	Below Dark Surface	(A11)	Depleted Da					•	ide MLRA 127,	
	k Surface (A12)		Redox Depre						allow Dark Surf	
	ucky Mineral (S1)		Iron-Mangan		sses (F12	2) (LRR I	N,	Other (E	Explain in Rema	rks)
	eyed Matrix (S4)		MLRA 136	•			3			
Sandy Re			Umbric Surfa						of hydrophytic ve	-
	Matrix (S6)		Piedmont Flo		-				hydrology must	-
Dark Surf			Red Parent I	Material	(F21) (M	LRA 127	, 147, 148)	unless o	disturbed or prob	olematic.
	ayer (if observed):									
Type: _	bedro								.	
Depth (in	ches):	8					Hydric Soil Pre	esent?	Yes X	No
Remarks:										
Site meets ny	dric soil criteria.									

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



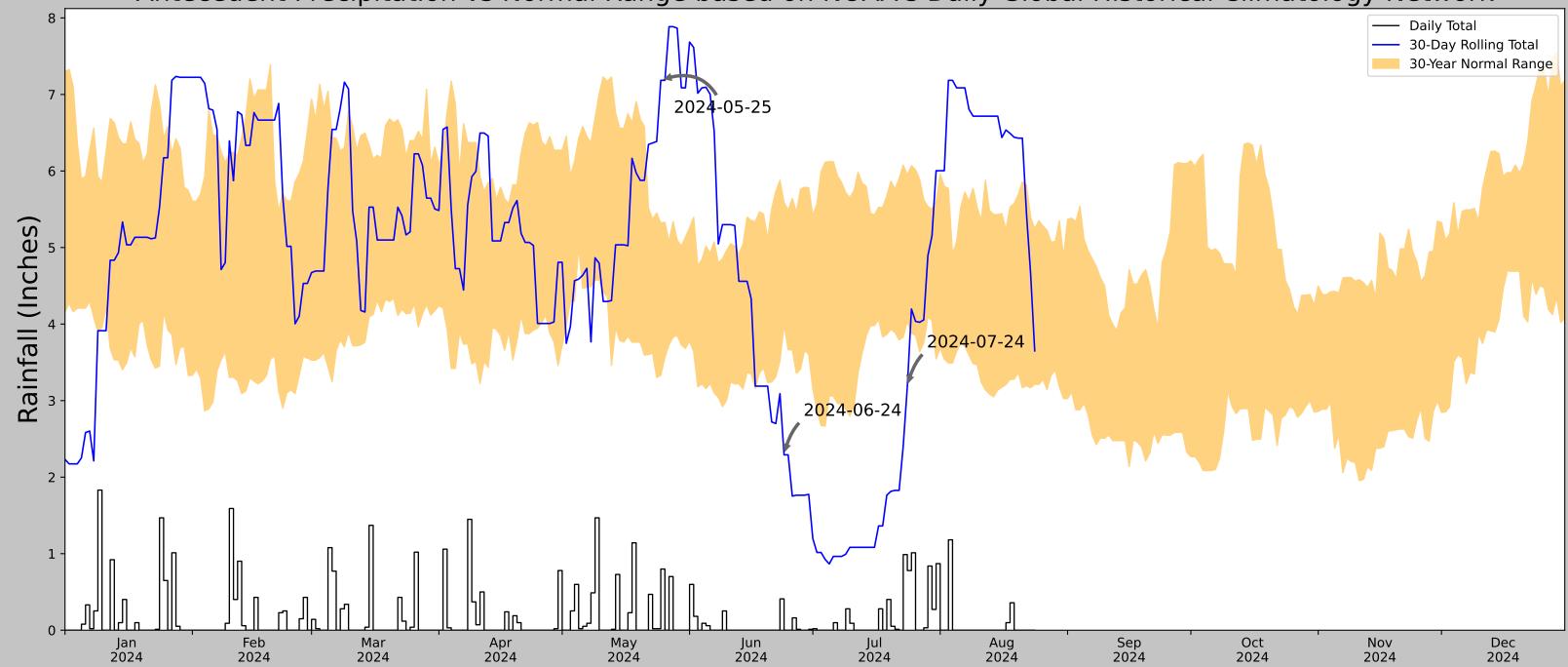
Coordinates	35.555633, -86.446525
Observation Date	2023-11-29
Elevation (ft)	791.253
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-11-29	2.858268	4.953937	3.125984	Normal	2	3	6
2023-10-30	2.999606	4.386221	0.728346	Dry	1	2	2
2023-09-30	2.325591	6.097244	2.377953	Normal	2	1	2
Result							Normal Conditions - 10



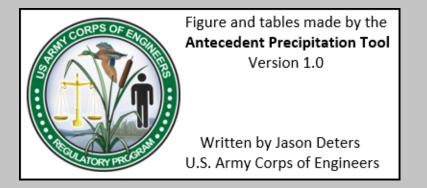
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
SHELBYVILLE WATER DEPT	35.4922, -86.4775	759.843	4.716	31.41	2.27	10584	90
SHELBYVILLE 0.7 SSW	35.48, -86.45	784.121	1.762	24.278	0.836	17	0
SHELBYVILLE 3.1 ESE	35.4663, -86.4003	750.984	4.698	8.859	2.156	308	0
SHELBYVILLE 6.5 WSW	35.4455, -86.5475	799.869	5.092	40.026	2.495	1	0
SHELBYVILLE MUNI AP	35.5611, -86.4458	803.15	5.083	43.307	2.507	1	0
SHELBYVILLE 7.5 NW	35.5515, -86.5558	717.848	6.015	41.995	2.959	1	0
CHRISTIANA 5W	35.7047, -86.4869	750.0	14.692	9.843	6.756	4	0
LYNCHBURG	35.2983, -86.3631	810.039	14.866	50.196	7.436	9	0
LEWISBURG EXP STN	35.4139, -86.8086	787.074	19.405	27.231	9.261	427	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



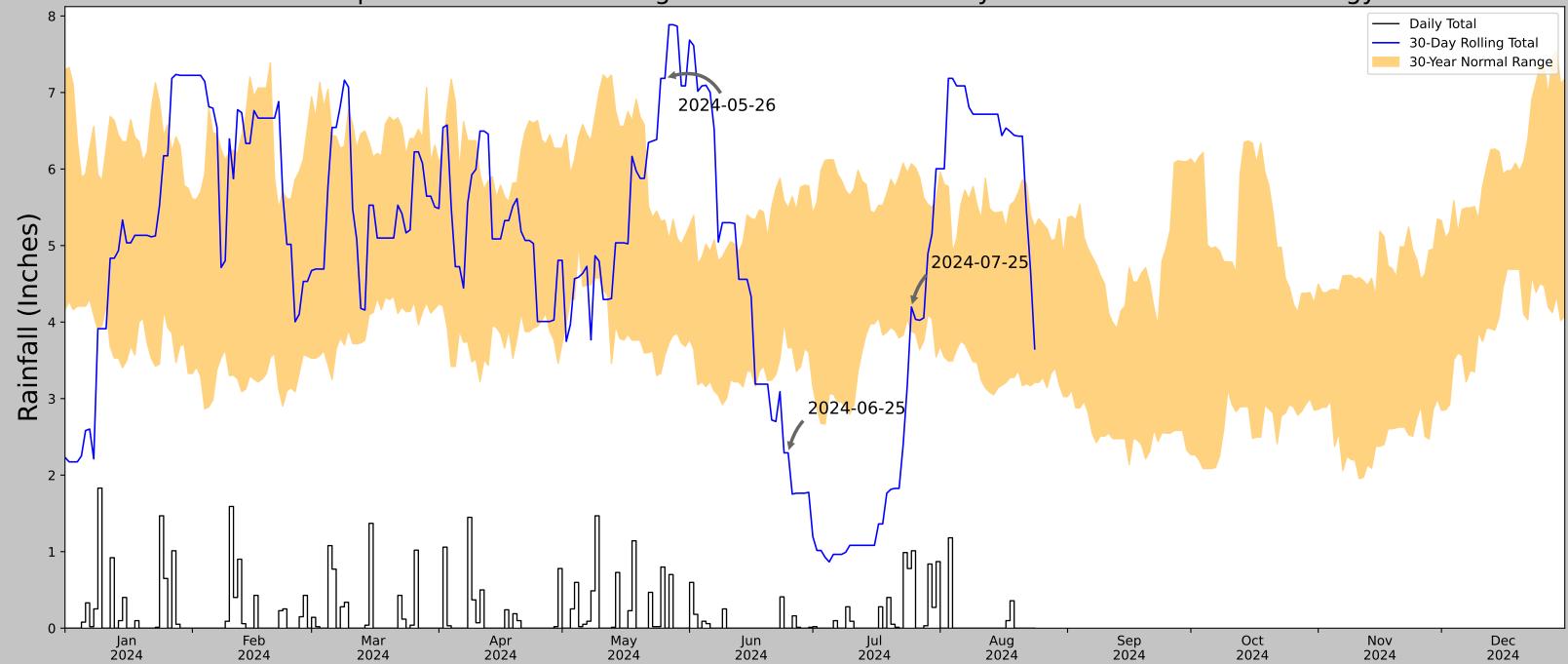
Coordinates	35.555317, -86.446560
Observation Date	2024-07-24
Elevation (ft)	790.948
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-07-24	4.03937	5.948425	3.185039	Dry	1	3	3
2024-06-24	3.994882	5.588189	2.291339	Dry	1	2	2
2024-05-25	3.330709	5.320866	7.18504	Wet	3	1	3
Result							Drier than Normal - 8



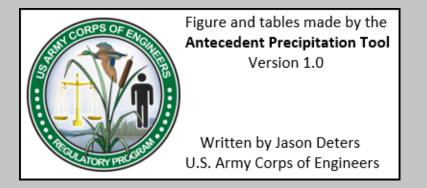
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted ∆	Days Normal	Days Antecedent
SHELBYVILLE WATER DEPT	35.4922, -86.4775	759.843	4.695	31.105	2.259	10584	80
SHELBYVILLE 0.7 SSW	35.48, -86.45	784.121	1.762	24.278	0.836	17	0
SHELBYVILLE 3.1 ESE	35.4663, -86.4003	750.984	4.698	8.859	2.156	308	10
SHELBYVILLE 6.5 WSW	35.4455, -86.5475	799.869	5.092	40.026	2.495	1	0
SHELBYVILLE MUNI AP	35.5611, -86.4458	803.15	5.083	43.307	2.507	1	0
SHELBYVILLE 7.5 NW	35.5515, -86.5558	717.848	6.015	41.995	2.959	1	0
CHRISTIANA 5W	35.7047, -86.4869	750.0	14.692	9.843	6.756	4	0
LYNCHBURG	35.2983, -86.3631	810.039	14.866	50.196	7.436	9	0
LEWISBURG EXP STN	35.4139, -86.8086	787.074	19.405	27.231	9.261	427	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	35.555317, -86.446560
Observation Date	2024-07-25
Elevation (ft)	790.948
Drought Index (PDSI)	Mild drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-07-25	3.879921	6.069292	4.196851	Normal	2	3	6
2024-06-25	3.66378	5.487795	2.291339	Dry	1	2	2
2024-05-26	3.566536	5.330315	7.18504	Wet	3	1	3
Result							Normal Conditions - 11



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
SHELBYVILLE WATER DEPT	35.4922, -86.4775	759.843	4.695	31.105	2.259	10584	79
SHELBYVILLE 0.7 SSW	35.48, -86.45	784.121	1.762	24.278	0.836	17	0
SHELBYVILLE 3.1 ESE	35.4663, -86.4003	750.984	4.698	8.859	2.156	308	11
SHELBYVILLE 6.5 WSW	35.4455, -86.5475	799.869	5.092	40.026	2.495	1	0
SHELBYVILLE MUNI AP	35.5611, -86.4458	803.15	5.083	43.307	2.507	1	0
SHELBYVILLE 7.5 NW	35.5515, -86.5558	717.848	6.015	41.995	2.959	1	0
CHRISTIANA 5W	35.7047, -86.4869	750.0	14.692	9.843	6.756	4	0
LYNCHBURG	35.2983, -86.3631	810.039	14.866	50.196	7.436	9	0
LEWISBURG EXP STN	35.4139, -86.8086	787.074	19.405	27.231	9.261	427	0

Current Location: Elev: 803 ft. Lat: 35.5605° N Lon: 86.4447° W

Record of Climatological Observations

These data are quality controlled and may not be identical to the original observations.

Generated on 01/24/2024

National Centers for Environmental Information 151 Patton Avenue Asheville, North Carolina 28801

Station: SHE	LBYVILLE	E MUNICIPA	AL AIRPOR	T, TN US US	C00408242	2		Ger	nerated (on 01/24/2024	•	Obs	servation Tim	ne Temperati	ure: Unknow	n Observation	Time Precip	oitation: 0700	
			Те	mperature (l	F)		Precipitation Evaporation						"Soil Temperature (F)"						
Y	м		"24 Hrs. I Observat	Ending at ion Time"		24 Ho	ur Amou Observa	ints Ending a	at	At Obs. Time				4 in. Depth			8 in. Depth		
e a r	o n t h	D - a y	Max.	Min.	At Obs.	Rain, Melted Snow, Etc. (in)	F I a g	Snow, Ice Pellets, Hail (in)	F I a g	Snow, Ice Pellets, Hail, Ice on Ground (in)	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.	
2023	11	01				0.00		0.0		0.0									
2023	11	02				0.00		0.0		0.0									
2023	11	03				0.00		0.0		0.0									
2023	11	04				0.00		0.0		0.0									
2023	11	05				0.00		0.0		0.0									
2023	11	06				0.00		0.0		0.0									
2023	11	07				0.00		0.0		0.0									
2023	11	08				0.00		0.0		0.0									
2023	11	09				0.00		0.0		0.0									
2023	11	10				0.66		0.0		0.0									
2023	11	11				0.01		0.0		0.0									
2023	11	12				0.00		0.0		0.0									
2023	11	13				0.00		0.0		0.0									
2023	11	14				0.00		0.0		0.0									
2023	11	15				0.00		0.0		0.0									
2023	11	16				0.00		0.0		0.0									
2023	11	17				0.00		0.0		0.0									
2023	11	18				0.00		0.0		0.0									
2023	11	19				0.00		0.0		0.0									
2023	11	20				0.00		0.0		0.0									
2023	11	21				1.50		0.0		0.0									
2023	11	22				0.45		0.0		0.0									
2023	11	23				0.00		0.0		0.0									
2023	11	24				0.00		0.0		0.0									
2023	11	25				0.00		0.0		0.0									
2023	11	26				0.00		0.0		0.0									
2023	11	27				0.00		0.0		0.0									
2023	11	28				0.00		0.0		0.0									
2023	11	29				0.00		0.0		0.0									
2023	11	30				0.00		0.0		0.0									
		Summary	0	0		2.62		0.0											

Empty, or blank, cells indicate that a data observation was not reported.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

^{*}Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

[&]quot;s" This data value failed one of NCEI's quality control tests. "At Obs." = Temperature at time of observation

[&]quot;T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

[&]quot;A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Current Location: Elev: 803 ft. Lat: 35.5605° N Lon: 86.4447° W

Record of Climatological Observations

National Centers for Environmental Information 151 Patton Avenue Asheville, North Carolina 28801

These data are quality controlled and may not be identical to the original observations.

			Temperature (F) Precipitation Evaporation				"Soil Temp	erature (F)"										
Υ	М	_	"24 Hrs. Ending at Observation Time"	24 Ho	24 Hour Amounts Ending at Obs. Observation Time At Obs.							4 in. Depth		8 in. Depth				
e a r	o n t h	D a y	Max.	Min.	At Obs.	Rain, Melted Snow, Etc. (in)	F I a g	Snow, Ice Pellets, Hail (in)	F I a g	Snow, Ice Pellets, Hail, Ice on Ground (in)	24 Hour Wind Movement (mi)	Amount of Evap. (in)	Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.
2024	07	01				0.00												
2024	07	02				0.00												
2024	07	03																
2024	07	04																
2024	07	05																
2024	07	06																
2024	07	07				0.00												
2024	07	08				0.00												
2024	07	09				0.00												
2024	07	10				0.35												
2024	07	11				0.00												
2024	07	12				0.00												
2024	07	13				0.00												
2024	07	14				0.00												
2024	07	15				1.50												
2024	07	16				0.10												
2024	07	17				0.20												
2024	07	18				0.06												
2024	07	19				0.00												
2024	07	20				5.00												
2024	07	21				0.00												
2024	07	22				0.03												
2024	07	23				0.50												
2024	07	24				0.53												
2024	07	25				0.69												
2024	07	26				0.03												
2024	07	27				0.06												
2024	07	28																
2024	07	29				0.00												
2024	07	30				0.72												
2024	07	31				1.36												
		Summary	0	0		11.13						•		1		1		

Empty, or blank, cells indicate that a data observation was not reported.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

^{*}Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

[&]quot;s" This data value failed one of NCEI's quality control tests. "At Obs." = Temperature at time of observation

[&]quot;T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

[&]quot;A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.