ECS SOUTHEAST, LLP
Geotechnical • Construction Materials • Environmental
318 Seaboard Lane, Suite 208
Franklin, Tennessee 37067
Telephone 615-885-4983 Fax 6151-771-4134

LETTER OF TRANSMITTAL

Date:	06/10/2021	Project No.	49-9839-A
Welch Property			

To: Tennessee Department of Environment and Conservation
Nashville Environmental Field Office
711 R.S. Gass Boulevard
Nashville, TN

We are sending you the following items via:

COPIES	DATED	DESCRIPTION
1	6/10/2021	TDEC HD Submittal

These are transmitted as checked below:
X For your use
_____ As requested

REMARKS

COPY TO: **Justin Kelley, QHP-IT; JMKelley@ecslimited.com**

SIGNED: Justin Kelley

W. Brandon Fulton; BFulton@ecslimited.com

W. Brandon Fulton

June 10, 2021

Tennessee Department of Environment and Conservation
Nashville Environmental Field Office
711 R.S. Gass Boulevard
Nashville, Tennessee

RE: Request for Hydrologic Determination
Welch Property
3181 Madison Street
Clarksville, Montgomery County, Tennessee
ECS Project Number 49: 9839-A

To Whom it May Concern,

The Project Study Area (PSA) is identified as Montgomery County Parcel Identification Number 082 17400 000 and consists of approximately 8.5 acres of cleared, undeveloped land located at 3181 Madison Street in Clarksville, Montgomery County, Tennessee.

SITE RECONNAISSANCE

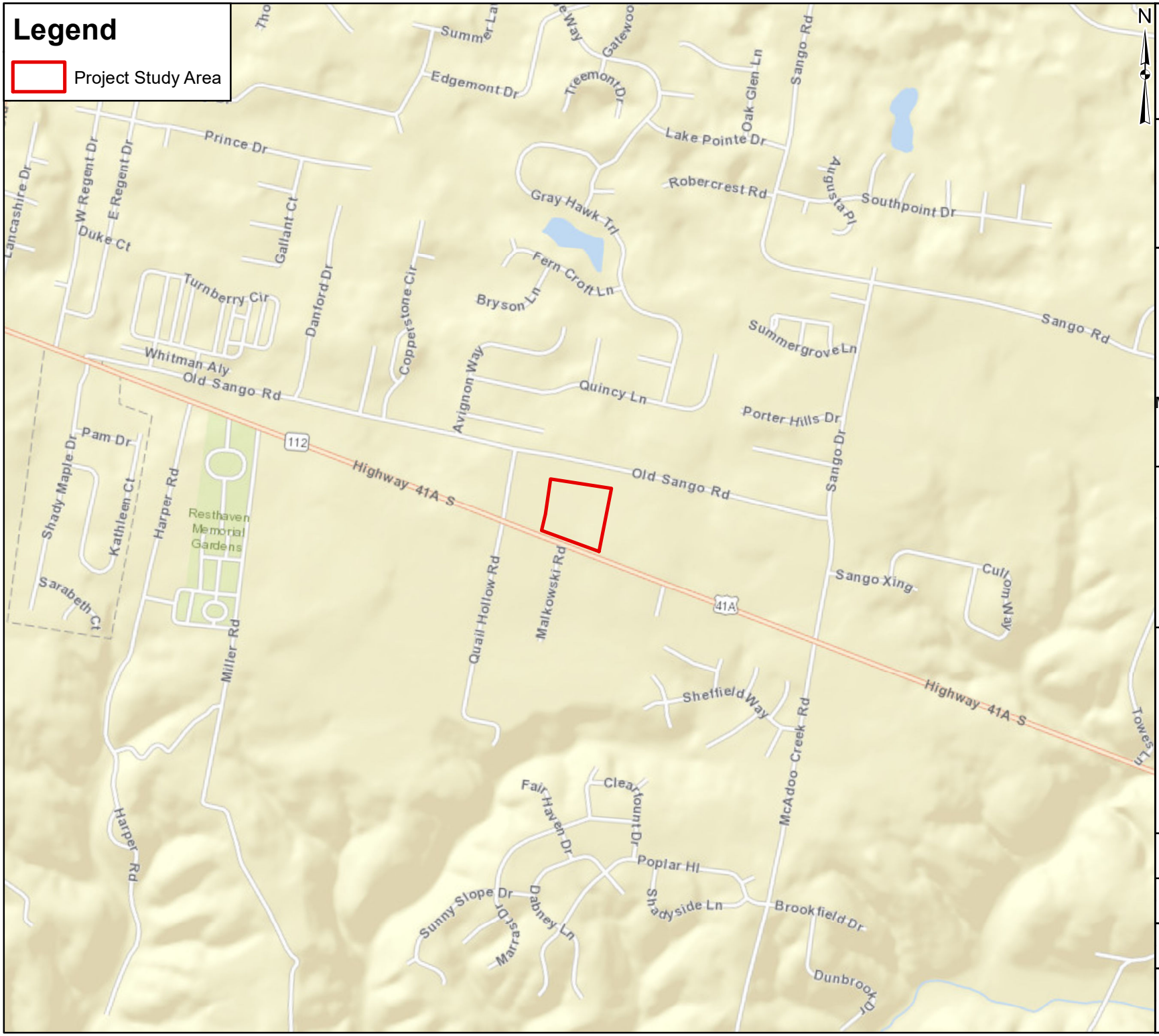
Mr. Justin Kelley of ECS conducted the site reconnaissance on August 6, 2019. During the site reconnaissance, the PSA was observed for evidence of streams, ponds and wetlands. Soils observed within upland areas of the PSA appeared bright and generally well-drained, consistent with upland soils or soils not considered to be hydric.

A large potential wetland feature was identified as covering the majority of the subject property. The wetland area exhibited hydric soils, wetland hydrology, and hydrophytic vegetation. The potential wetland area identified was generally consistent with the area mapped on the NRCS Soil Survey Map as Guthrie silt loam.

Sincerely,

Justin Kelley, QHP-IT
Environmental Staff Project Manager
jmkelley@ecslimited.com
615.885.4983

W. Brandon Fulton, LSS, PSC, PWS
Environmental Principal
bfulton@ecslimited.com
704.409.7744



ECS

Client:

McKAY-BURCHETT & COMPANY ENGINEERS

Project:

WELCH PROPERTY

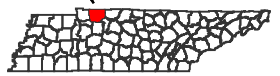
3181 US-41 ALT
CLARKSVILLE
MONTGOMERY COUNTY
TENNESSEE

Title:

SITE LOCATION MAP

1 inch = 0.25 miles

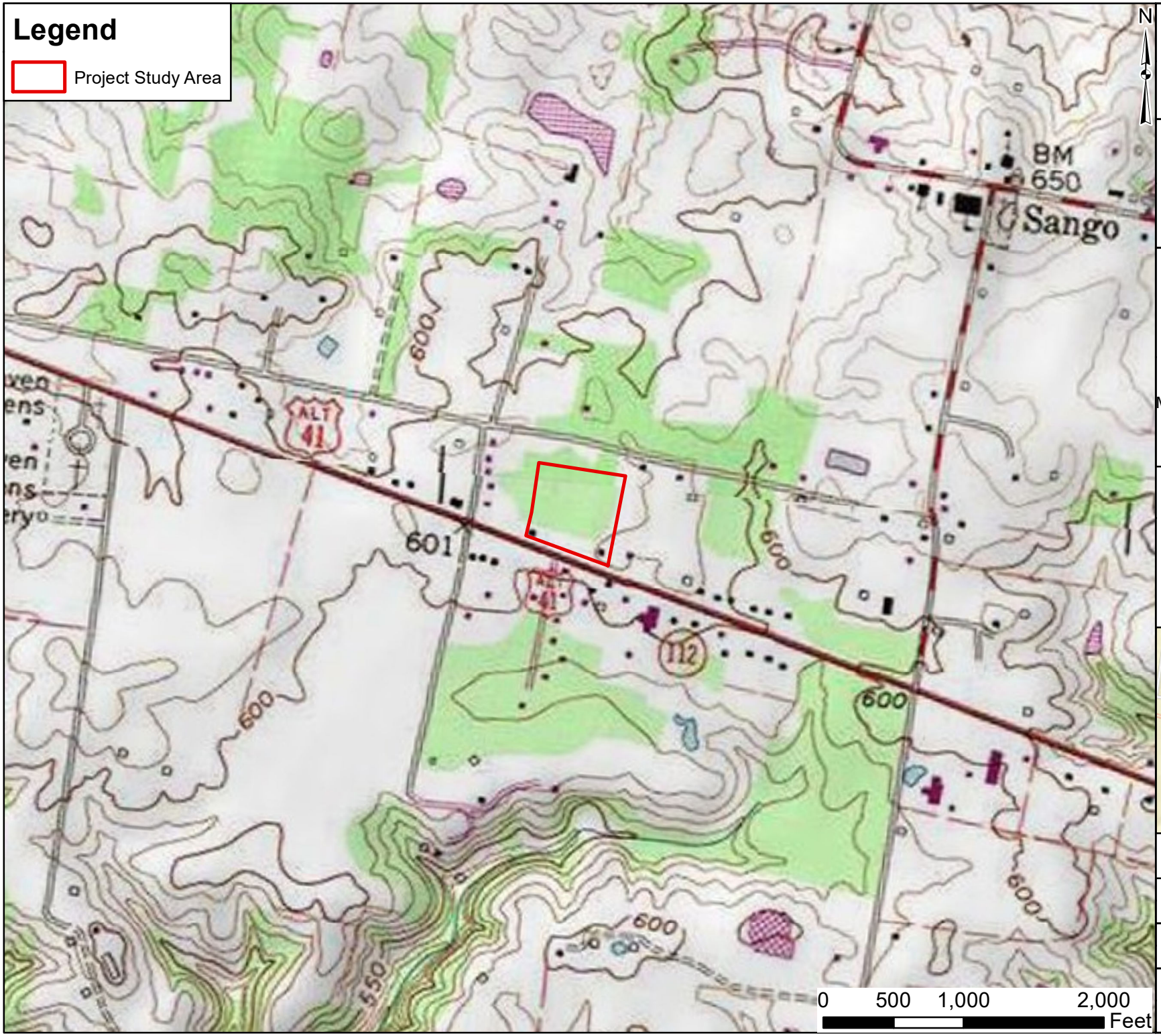
MONTGOMERY COUNTY



Drawn By:	Checked By:
JMK	MVA
Approved By:	**Date:**
WBF	08/12/2019

ECS Project No.
49:9839

FIGURE 1



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3181 US-41 ALT
CLARKSVILLE
MONTGOMERY COUNTY
TENNESSEE

Title:

USGS TOPOGRAPHIC MAP

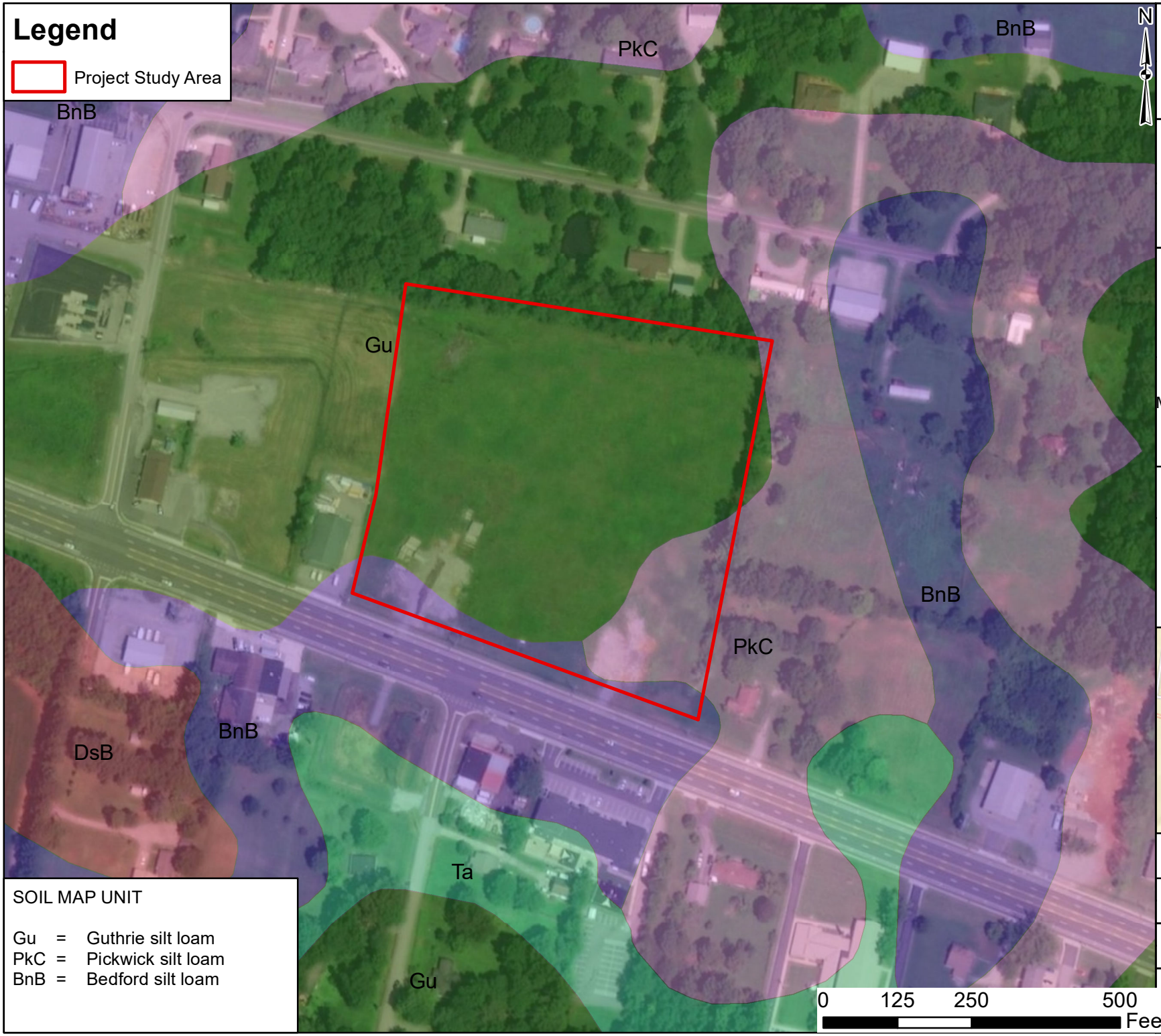
DATED: 1983
HENRIETTA, TN
7.5 X 7.5 MINUTE

PROJECT STUDY AREA

Drawn By:	Checked By:
JMK	MVA
Approved By:	**Date:**
WBF	08/12/2019

ECS Project No.
49:9839

FIGURE 2



SOIL MAP UNIT

Gu = Guthrie silt loam
PkC = Pickwick silt loam
BnB = Bedford silt loam

Client:

McKAY-BURCHETT & COMPANY ENGINEERS

Project:

WELCH PROPERTY

3181 US-41 ALT
CLARKSVILLE
MONTGOMERY COUNTY
TENNESSEE

Title: **USDA - NRCS SOIL SURVEY MAP**

DATED: 2013
WEB SOIL SURVEY VERSION 5

Drawn By:	Checked By:
JMK	MVA
Approved By:	**Date:**
WBF	08/12/2019

ECS Project No.
49:9839

FIGURE 3

Client:

McKAY-BURCHETT & COMPANY ENGINEERS

Project:

WELCH PROPERTY

3181 US-41 ALT
CLARKSVILLE
MONTGOMERY COUNTY
TENNESSEE

Title: **FEMA - NFHL FLOOD ZONE MAP**

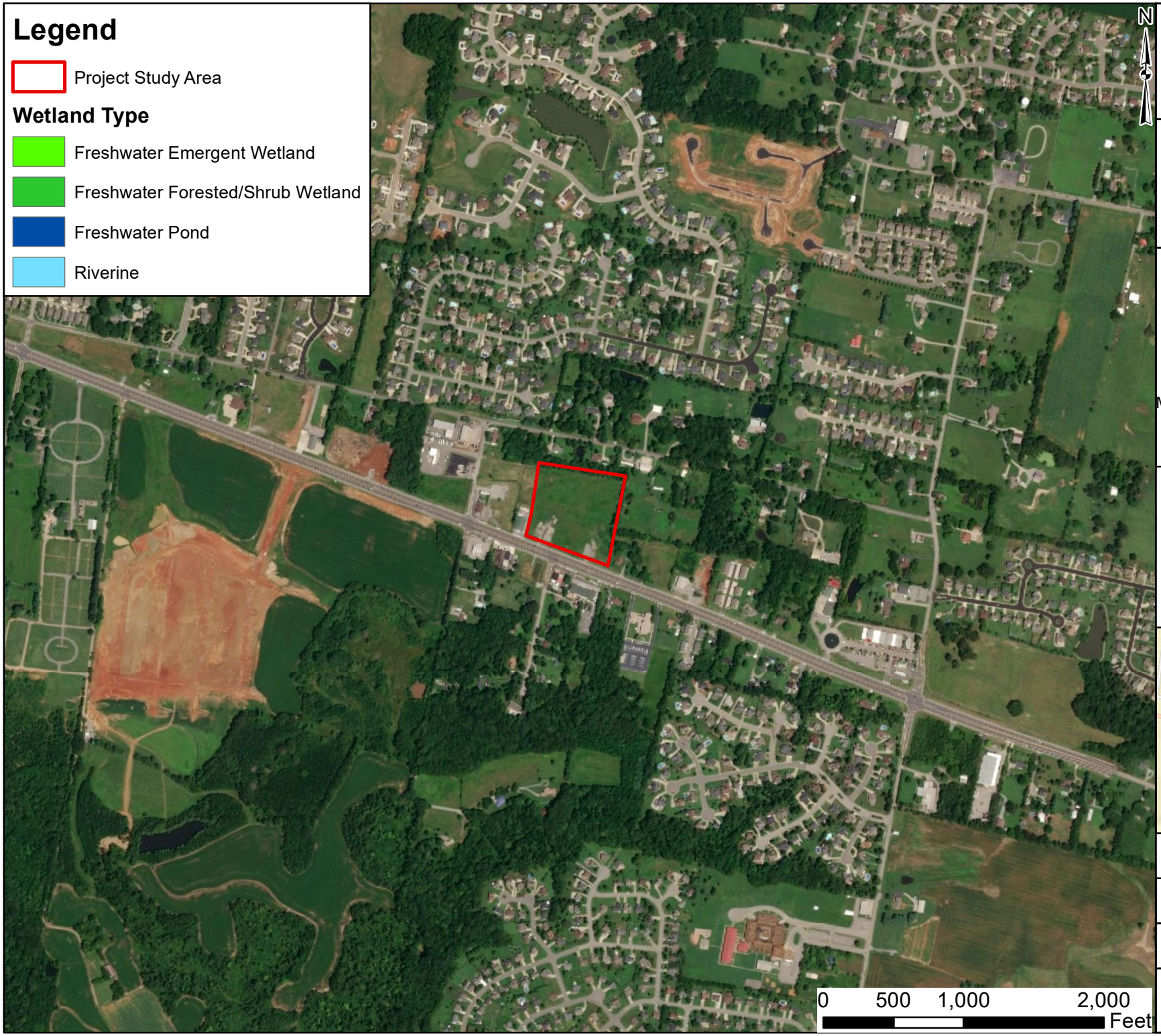
DATED: 3/17/2008
ID: 47125C0380D
MONTGOMERY COUNTY

PROJECT STUDY AREA

Drawn By:	Checked By:
JMK	MVA
Approved By:	**Date:**
WBF	08/12/2019

ECS Project No.
49:9839

FIGURE 4



ECS

Client:

McKAY-BURCHETT & COMPANY ENGINEERS

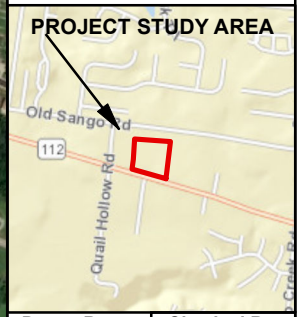
Project:

WELCH PROPERTY

3181 US-41 ALT
CLARKSVILLE
MONTGOMERY COUNTY
TENNESSEE

Title:

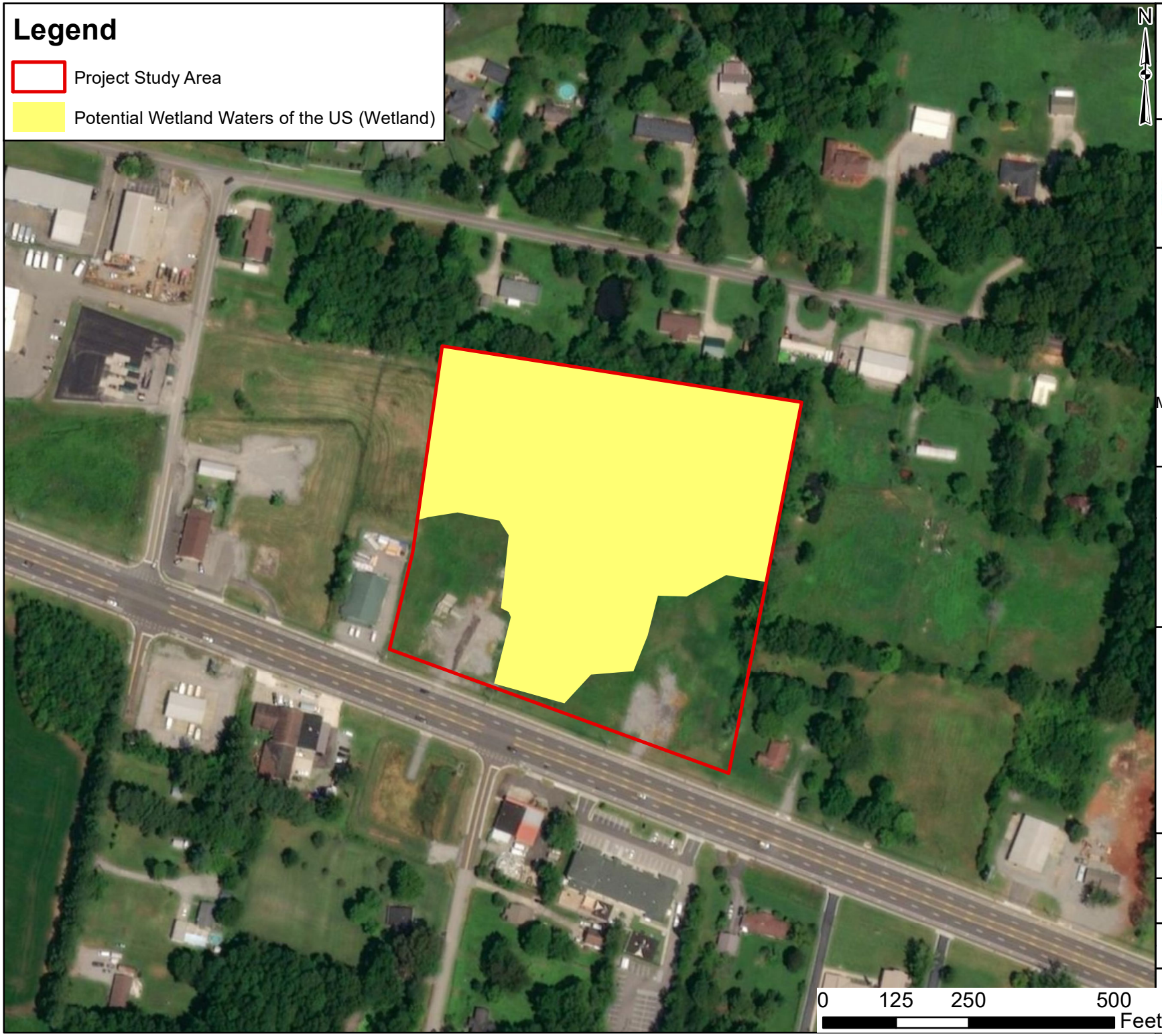
USFWS NATIONAL WETLANDS INVENTORY MAP



Drawn By:	Checked By:
JMK	MVA
Approved By:	**Date:**
WBF	08/12/2019

ECS Project No.
49:9839

FIGURE 5



Client:

McKAY-BURCHETT & COMPANY ENGINEERS

Project:

WELCH PROPERTY

3181 US-41 ALT
CLARKSVILLE
MONTGOMERY COUNTY
TENNESSEE

Title:

FEATURE LOCATION MAP

NOTES:

1. JURISDICTIONAL WATERS OF THE US WERE IDENTIFIED DURING RECONNAISSANCE BY ECS ON AUGUST 6, 2019.

2. FINDINGS ON THIS MAP HAVE NOT BEEN VERIFIED BY THE USACE AND TDEC AND ARE SUBJECT TO CHANGE.

3. THIS MAP SHOULD BE USED FOR PRELIMINARY PLANNING PURPOSES.

Drawn By:	Checked By:
JMK	MVA
Approved By:	**Date:**
WBF	08/12/2019

ECS Project No.
49:9839

FIGURE 6

Photo 1: Typical view of subject property, facing northwest.

Photo 2: Typical view of the wetland area. Facing southwest.

Photo 3: Typical view of the wetland area, facing northwest.

Photo 4: View of the hydric soil found within the wetland area.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Eastern Mountains and Piedmont Region
See ERDC/EL TR-07-24; the proponent agency is CECW-CO-R

OMB Control #: 0710-xxxx, Exp: Pending
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Welch Property+AP2 City/County: Clarksville/Montgomery Sampling Date: 08/6/2019
Applicant/Owner: McKay Burchett & Co Engineers State: TN Sampling Point: DP-01
Investigator(s): Justin Kelley Section, Township, Range:
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): <10
Subregion (LRR or MLRA): LRR N, MLRA 122 Lat: 36.499860 Long: -87.230862 Datum: NAD83
Soil Map Unit Name: Gu: Guthrie silt loam NWI classification: Upland
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	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 4
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks:
Wetland A and B

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-01

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	=Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 20x20)			
1. *Typha latifolia*	40	Yes	OBL
2. *Cyperus esculentus*	30	Yes	FACW
3. *Juncus effusus*	30	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 =Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	60	x 2 =	120
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		160 (B)

Prevalence Index = B/A = 1.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 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.

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Agricultural field formerly planted in soybeans.

SOIL

Sampling Point: DP-01

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	90	10YR 6/8	10	D	PL/M	Loamy/Clayey	

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

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10) **(LRR N)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
___ Thin Dark Surface (S9) **(MLRA 147, 148)**
___ Loamy Mucky Mineral (F1) **(MLRA 136)**
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
___ Umbric Surface (F13) **(MLRA 122, 136)**
___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
___ Red Parent Material (F21) **(MLRA 127, 147, 148)**

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) **(MLRA 147)**
___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
___ Red Parent Material (F21) **(outside MLRA 127, 147, 148)**
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks: