

# **NATURAL RESOURCES TECHNICAL REPORT UPDATE**

**Widening of US 25A (Sweeten Creek Road) from US 25 (Hendersonville Road) to  
SR 3801 (Rock Hill Road)**

**Buncombe County, North Carolina**

**STIP No. U-2801A  
WBS Element No. 34859.1.FR3**



**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
Environmental Coordination and Permitting Group**

**July 2025**

## 1.0 INTRODUCTION

The North Carolina Department of Transportation (NCDOT) proposes to widen US 25A (Sweeten Creek Road) from US 25 (Hendersonville Road) to SR 3801 (Rock Hill Road) (STIP No. U-2801A) in Asheville, Buncombe County, North Carolina. A Natural Resources Technical Report (NRTR) was completed for the project in 2016 and a NRTR Addendum was completed in 2019. Since that time, the project study area has been expanded again; additionally, the amount of time since the last document was completed warranted a re-assessment of features within the project study area. The following Natural Resources Technical Report (NRTR) Update replaces all previous iterations and has been prepared to assist in the preparation of the appropriate environmental documentation.

## 2.0 METHODOLOGY

All work was conducted in accordance with the NCDOT Environmental Coordination and Permitting Group's *Preparing Natural Resources Technical Reports* procedure and the latest *NRTR Guidance and Template*, dated May 2024.

The original field work for the project was completed in 2016. In 2018, the study area was expanded to the west of Sweeten Creek Road, near Givens Estates, so that a potential re-alignment of the Blue Ridge Southern Railroad tracks could be considered as part of the project's detailed design alternatives. An NRTR addendum was produced in 2020 that re-assessed the potential jurisdictional features already covered in the original NRTR, while also addressing the study area expansion. Water resources identified in the study area in the 2020 NRTR addendum were verified by the United States Army Corps of Engineers (USACE) during a site visit on July 11, 2019. Those water resources have not yet been verified by the North Carolina Division of Water Resources (NCDWR).

Three Oaks staff members conducted field visits to reassess previously identified features, and to identify new potential jurisdictional features within the most recent expanded study area sections, on March 10, 11, 12, and 25, 2025. The new water resources identified in this NRTR update have not yet been verified by the USACE or NCDWR. A list of the principal Three Oaks personnel contributing to the field work and document is provided in the appendix.

## 3.0 TERRESTRIAL COMMUNITIES

Terrestrial communities that have been identified in the study area are detailed in the table below. Terrestrial community data are presented in the context of total coverage of each type within the study area.



**Table 1. Coverage of terrestrial communities within the Study Area**

<b>Community</b>	<b>Dominant Species (<i>Scientific name</i>)</b>	<b>Coverage (ac.)</b>
Acidic Cove Forest	Tuliptree ( <i>Liriodendron tulipifera</i> ) Green Ash ( <i>Fraxinus pennsylvanica</i> ) American Sycamore ( <i>Platanus occidentalis</i> )	66.9
Chestnut Oak Forest (Mesic Subtype)	Mountain Chestnut Oak ( <i>Quercus montana</i> ) Southern Red Oak ( <i>Quercus falcata</i> ) Black Oak ( <i>Quercus velutina</i> )	51.5
Chestnut Oak Forest (White Pine Subtype)	Mountain Chestnut Oak ( <i>Quercus montana</i> ) Eastern White Pine ( <i>Pinus strobus</i> ) White Oak ( <i>Quercus alba</i> )	3.7
Maintained/Disturbed	Sweetgum ( <i>Liquidambar styraciflua</i> ) Red Maple ( <i>Acer rubrum</i> ) Blackberry ( <i>Rubus</i> sp.)	386.1
Montane-Oak Hickory Forest (Acidic Subtype)	White Oak ( <i>Quercus alba</i> ) Northern Red Oak ( <i>Quercus rubra</i> ) Pignut Hickory ( <i>Carya glabra</i> )	16.7
Montane-Oak Hickory Forest (White Pine Subtype)	White Oak ( <i>Quercus alba</i> ) Eastern White Pine ( <i>Pinus strobus</i> ) Mockernut Hickory ( <i>Carya tomentosa</i> )	10.0
<b>Total</b>		<b>534.9</b>

## 4.0 PROTECTED SPECIES

### 4.1 Endangered Species Act Protected Species

The United States Fish and Wildlife Service (USFWS) lists the following federally protected species, under the Endangered Species Act (ESA), as potentially occurring within the study area. For each species, a discussion of the presence or absence of suitable habitat is included along with a Biological Conclusion rendered based on the results of habitat assessments and surveys conducted within the study area.

**Table 2. ESA federally protected species within the Study Area (IPaC: July 9, 2025)**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal Status</b>	<b>Habitat Present</b>	<b>Biological Conclusion</b>
<i>Myotis grisescens</i>	Gray Bat	E	Yes	Unresolved
<i>Myotis septentrionalis</i>	Northern Long-eared Bat	E	Yes	Unresolved
<i>Perimyotis subflavus</i>	Tricolored Bat	PE	Yes	Unresolved

**Table 2. ESA federally protected species within the Study Area (IPaC: July 9, 2025)**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal Status</b>	<b>Habitat Present</b>	<b>Biological Conclusion</b>
<i>Glyptemys muhlenbergii</i>	Bog Turtle	SAT	No	Not Required
<i>Cryptobranchus alleganiensis alleganiensis</i>	Eastern Hellbender	PE	Unknown	Unresolved
<i>Danaus plexippus</i>	Monarch Butterfly	PT	Unknown	Unresolved
<i>Sisyrinchium dichotomum</i>	White Irisette	E	Yes	No Effect

IPaC - Information for Planning and Consultation

E – Endangered; PE – Proposed Endangered; PT – Proposed Threatened; SAT – Similarity of Appearance (Threatened)

### **Gray Bat**

USFWS Optimal Survey Window: May 1 – October 1 (bridge surveys), December 15 – February 15 (culvert surveys)

Biological Conclusion: Unresolved

As of May 28, 2025, this federally protected bat species is listed in IPaC as potentially occurring in the project study area. Construction activities for this project are unknown at this stage in project planning, NCDOT will resolve Section 7 prior to let, as appropriate. Until then, the Biological Conclusion will remain Unresolved.

### **Northern Long-eared Bat**

USFWS Optimal Survey Window: May 1 – October 1 (bridge surveys), December 15 – February 15 (culvert surveys)

Biological Conclusion: Unresolved

As of May 28, 2025, this federally protected bat species is listed in IPaC as potentially occurring in the project study area. Construction activities for this project are unknown at this stage in project planning, NCDOT will resolve Section 7 prior to let, as appropriate. Until then, the Biological Conclusion will remain Unresolved.

### **Tricolored Bat**

USFWS Optimal Survey Window: May 1 – October 1 (bridge surveys), December 15 – February 15 (culvert surveys)

Biological Conclusion: Unresolved

As of May 28, 2025, this federally protected bat species is listed in IPaC as potentially occurring in the project study area. Construction activities for this project are unknown at this stage in project planning, NCDOT will resolve Section 7 prior to let, as appropriate. Until then, the Biological Conclusion will remain Unresolved.

**Bog Turtle**

USFWS Optimal Survey Window: April 1 – October 1 (visual surveys)

**Biological Conclusion: Not Required**

This species is listed by the USFWS as having a Similarity of Appearance to a Threatened Taxon. As a result, surveys for this species are not required. Additionally, suitable habitat, in the form of open-canopy, herbaceous sedge bogs, fens, or wet meadows, is absent within the study area. A review of North Carolina Natural Heritage Program (NCNHP) records, updated Spring (April) 2025, indicates no known Bog Turtle Element Occurrences (EOs) within 1.0 mile of the study area. A Biological Conclusion is also Not Required.

**Eastern Hellbender**

USFWS Optimal Survey Window: To Be Determined

**Biological Conclusion: Unresolved**

The Eastern Hellbender was proposed for federal listing under the Endangered Species Act (ESA) in December 2024. However, no regulatory protections will take effect until the listing is finalized, which is anticipated in late 2025 or early 2026. Until that time, proposed species do not receive formal Endangered Species Act (ESA) protections. However, federal action agencies are still required to ensure that their actions do not jeopardize the continued existence of the species. Federal action agencies may initiate consultation with the U.S. Fish and Wildlife Service (USFWS) to obtain a conference opinion. If and when the listing is finalized, and at the agency's request, the Service may adopt the conference opinion as a biological opinion—provided no significant new information has emerged and no substantial changes to the proposed action have occurred.

NCDOT Construction or Division Environmental Offices may voluntarily coordinate with the North Carolina Wildlife Resources Commission (NCWRC) to assess and potentially relocate hellbenders from project sites in western North Carolina. It is recommended that they contact the NCWRC liaison at least two months before construction begins.

**Monarch Butterfly**

USFWS Optimal Survey Window: To Be Determined

**Biological Conclusion: Unresolved**

The Monarch Butterfly was proposed for federal listing under the Endangered Species Act (ESA) in December 2024. However, no regulatory protections will take

effect until the listing is finalized, which is anticipated in late 2025 or early 2026. Until that time, proposed species do not receive formal ESA protections. However, federal action agencies are still required to ensure that their actions do not jeopardize the continued existence of the species. Federal action agencies may initiate consultation with the U.S. Fish and Wildlife Service (USFWS) to obtain a conference opinion. If and when the listing is finalized, and at the agency's request, the Service may adopt the conference opinion as a biological opinion—provided no significant new information has emerged and no substantial changes to the proposed action have occurred.

**White Irisette**

USFWS Optimal Survey Window: late May-July

**Biological Conclusion: No Effect**

Suitable habitat for White Irisette, in the form of open, disturbed sites such as clearings, woodland edges, roadside embankments/rights-of-way, and power line rights-of-way is present in the study area. Plant-by-plant surveys of this species were performed on July 2-3, 2025. No White Irisette was observed. A review of NCNHP records, updated Spring (April) 2025, indicates no known White Irisette EOs within 1.0 mile of the study area. The Biological Conclusion for this species is No Effect.

**4.2 Bald and Golden Eagle Protection Act**

The Bald and Golden Eagle Protection Act is enforced by the USFWS. Golden Eagles do not nest in North Carolina. Habitat for the Bald Eagle primarily consists of mature forests in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within 1.0 mile of open water.

A desktop-GIS assessment of the study area, as well as the area within a 1.13-mile radius of the project limits, was performed on January 30, 2025, using the most recent color aerials. Water bodies large enough or sufficiently open to be considered potential feeding sources were identified. Since foraging habitat is present within the review area, a survey of the study area and the area within 660 feet of the project limits was conducted on December 10, 2024. No Bald Eagles or nests were identified during the survey. A review of NCNHP records, updated Spring (April) 2025, revealed one known Bald Eagle EO (EO ID No. 41452) approximately 0.8 mile west of the study area at Lake Julian. This EO is current and was last observed on May 20, 2023.

**5.0 WATER RESOURCES**

Water resources in the study area are part of the French Broad River Basin (United States Geological Survey [USGS] Hydrologic Unit Code [HUC] 06010105). Streams that have been identified in the study area are detailed in the table below.

**Table 3. Streams located in the Study Area**

<b>Stream Name</b>	<b>Map ID</b>	<b>NCDWR Index Number</b>	<b>Best Usage Classification</b>	<b>Bank Height (ft.)</b>	<b>Bankfull width (ft.)</b>	<b>Depth (in.)</b>
Sweeten Creek	Sweeten Creek	6-78-24	C	5-8	8-10	2-16
Four Mile Branch	Four Mile Branch	6-72	C	2-5	4-7	1-12
Dingle Creek	Dingle Creek	6-71	C	0.5-3	3-5	6-20
UT to Sweeten Creek	SA	6-78-24	C	1-4	5-8	2-12
UT to Sweeten Creek	SB	6-78-24	C	2-4	4-5	2-6
UT to Sweeten Creek	SC	6-78-24	C	1-2	2-4	0-8
UT to Sweeten Creek	SD	6-78-24	C	1	2	2
UT to Sweeten Creek	SE	6-78-24	C	1	2-3	2
UT to Four Mile Branch	SH	6-72	C	2-4	2-4	2-6
UT to Four Mile Branch	SI	6-72	C	2-4	2-4	0-6
UT to Four Mile Branch	SJ	6-72	C	1-2	2-5	2-10
UT to Dingle Creek	SK	6-71	C	1-2	1-3	0-8
UT to Powell Creek (Lake Julian)	SL-I	6-62	C	0-2	1-2	0-3
UT to Powell Creek (Lake Julian)	SL-P	6-62	C	2-4	1-4	0-8
UT to Powell Creek (Lake Julian)	SN	6-62	C	1-4	2-4	0-5
UT to Powell Creek (Lake Julian)	SO	6-62	C	2-5	3-6	4-40
UT to Powell Creek (Lake Julian)	SP	6-62	C	2-4	3-6	6-30
UT to Powell Creek (Lake Julian)	SQ	6-62	C	1-3	1-2	2-10

**Table 3. Streams located in the Study Area (continued)**

Stream Name	Map ID	NCDWR Index Number	Best Usage Classification	Bank Height (ft.)	Bankfull width (ft.)	Depth (in.)
UT to Powell Creek (Lake Julian)	SR	6-62	C	0.5-1	3-5	4-8
UT to Powell Creek (Lake Julian)	SS	6-62	C	1-2	2-3	2-10
UT to Dingle Creek	ST	6-71	C	0.5-2	2-3	6-12
UT to Dingle Creek	SU	6-71	C	2-4	2-3	10-20
UT to Dingle Creek	SV	6-71	C	3-6	3-6	6-40
UT to Dingle Creek	SW	6-71	C	0.5-1.5	3-4	6-12
UT to Dingle Creek	SX	6-71	C	1-4	4-6	6-36
UT to Dingle Creek	SY	6-71	C	2-3.5	3-5	6-20
UT to Dingle Creek	SZ	6-71	C	0.5-1	1-2.5	2-8
UT to Dingle Creek	SBB	6-71	C	3-5	3-4	6-12
UT to Sweeten Creek	SCC	6-78-24	C	0.5-2	2-4	0-4
UT to Dingle Creek	SDD	6-71	C	3-5	3-5	0-3
UT to Dingle Creek	SEE	6-71	C	5-7	2-4	2-6
UT to Pinner Creek	SFF	6-57-18	C;Tr	6-10	4-8	1-6
UT to Dingle Creek	SGG	6-71	C	3-4	3-5	4-8
UT to Dingle Creek	SHH	6-71	C	0.25-1	2-3	1-4
UT to Powell Creek (Lake Julian)	SII	6-62	C	2-3	3-4	1-4
UT to Sweeten Creek	SJJ	6-78-24	C	1-2	3-6	0-3

**Note 1:** There are no Streams SG, SM, or SAA.

**Note 2:** Stream SF was removed from the delineation since it was determined, after additional review, that its main channel was actually part of Stream SA. One of its branches (formerly SF-1) was determined to be its own feature and redesignated as Stream SJJ.

**Note 3:** Streams SCC, SDD, SEE, SFF, SGG, SHH, SII, and SJJ (formerly SF-1) are new to the delineation.

No streams present in, or located within 1.0 mile downstream of, the study area have been designated as an Outstanding Resource Water (ORW). There are no High-Quality Waters (HQW) or Water Supply I or II Watersheds (WS-I or WS-II) present in, or located within 1.0 mile downstream of, the study area. The North Carolina 2022 Final 303(d) list of impaired waters does not identify any impaired waters within, or 1.0 mile downstream of, the study area.

There is one NCDWR-designated trout water within the project study area (UT to Pinner Creek; Stream SFF). Pinner Creek and Weston Branch, located within 1.0 aerial mile of the project study area, are also listed as C;Tr waters. Additionally, the Cane Creek-French Broad River watershed (12-Digit Hydrologic Unit 060101050705) is located within a portion of the study area and is designated as a Trout Watershed by USACE.

Open surface waters that have been identified in the study area are detailed in the table below.

**Table 4. Potential surface waters in the Study Area**

Surface Water	Map ID of Connection	Area (ac.) in Study Area
Basin 1	Sweeten Creek	0.13
Basin 2	Sweeten Creek	0.04
Basin 3	WU/SK	0.08
Basin 4	SL	0.05
Basin 5 <sup>1</sup>	N/A	0.01
<sup>1</sup> Basin 5 is a newly identified basin.		<b>Total</b>
		<b>0.31</b>

## 6.0 REGULATORY CONSIDERATIONS

### 6.1 Clean Water Act Waters of the U.S.

The streams detailed in the table below were identified in the study area. North Carolina Stream Assessment Method (NCSAM) and NCDWR stream identification forms are included in separate Jurisdictional Determination (JD) Packages. All streams in the study area have been designated as cool water streams for the purposes of stream mitigation.

**Table 5. Status of streams in the Study Area**

Map ID <sup>1</sup>	Length (ft.)	Classification	NCSAM Rating <sup>2</sup>	River Basin Buffer
Sweeten Creek	2,457	Perennial	Low <sup>3</sup>	Not Subject
Four Mile Branch	582	Perennial	High	Not Subject
Dingle Creek	312	Perennial	High	Not Subject
SA	2,467	Perennial	Low <sup>3</sup>	Not Subject
SB	107	Perennial	*	Not Subject
SC	545	Perennial	Low	Not Subject
SD	70	Perennial	High	Not Subject

**Table 5. Status of streams in the Study Area (continued)**

<b>Map ID<sup>1</sup></b>	<b>Length (ft.)</b>	<b>Classification</b>	<b>NCSAM Rating<sup>2</sup></b>	<b>River Basin Buffer</b>
SE	52	Intermittent	High/High	Not Subject
SH	617	Perennial	*	Not Subject
SI	405	Perennial	*	Not Subject
SJ	228	Perennial	*	Not Subject
SK	126	Perennial	Medium	Not Subject
SL-I	194	Intermittent	Medium/High	Not Subject
SL-P	497	Perennial	*	Not Subject
SN	59	Intermittent	High/High	Not Subject
SO	547	Perennial	*	Not Subject
SP	608	Perennial	*	Not Subject
SQ	960	Intermittent	Low/Low	Not Subject
SR	154	Perennial	*	Not Subject
SS	355	Perennial	*	Not Subject
ST-I	131	Intermittent	Medium/ Medium	Not Subject
ST-P	38	Perennial	*	Not Subject
SU	115	Perennial	Medium	Not Subject
SV	196	Perennial	*	Not Subject
SW	161	Perennial	Low	Not Subject
SX	569	Perennial	Medium <sup>3</sup>	Not Subject
SY	1,047	Perennial	Low <sup>3</sup>	Not Subject
SZ	163	Intermittent	High/High	Not Subject
SBB	172	Intermittent	Low/Low	Not Subject
SCC	19	Perennial	*	Not Subject
SDD	55	Intermittent	Low/Low	Not Subject
SEE	137	Intermittent	Low/Medium	Not Subject
SFF	58	Intermittent	Low/Low	Not Subject
SGG	70	Intermittent	*	Not Subject
SHH	95	Intermittent	*	Not Subject
SII	106	Intermittent	Low/Low	Not Subject
SJJ	26	Perennial	*	Not Subject
<b>Total</b>	<b>14,500</b>			

<sup>1</sup>Stream ST, previously Intermittent in the 2020 NRTR Addendum, is now classified as Perennial downstream of its confluence with Stream SU. Streams SU and SW, previously Intermittent, are now classified as Perennial. Stream SF proper from the previous PJD documentation is now part of Stream SA, since they appear to be the same mapped blue line feature. The following streams are newly identified features not previously included in the documentation: SCC-SJJ.

<sup>2</sup>Some medium to high quality streams did not have a NCSAM form completed. These features are represented by an asterisk (\*).

<sup>3</sup>The NCSAM form for Sweeten Creek represents the downstream portion that runs parallel to Sweeten Creek Road. The NCSAM form for Stream SA represents the portion between its confluences with Streams SD and SC. The NCSAM form for Stream SX represents the portion downstream of the wet detention basin. The NCSAM form for Stream SY represents the upstream portion near the confluence with Stream SBB.



Twenty-seven wetlands were identified within the study area. All wetlands in the study area are located within the French Broad River Basin (USGS HUC 06010105). USACE wetland determination forms and North Carolina Wetland Assessment (NCWAM) forms for each site are included in separate JD Packages.

**Table 6. Status of wetlands in the Study Area**

<b>Map ID<sup>1</sup></b>	<b>NCWAM Classification</b>	<b>Forested</b>	<b>NCWAM Rating</b>	<b>Hydrologic Classification</b>	<b>Area (ac.) in Study Area</b>
WA	Bottomland Hardwood Forest	Yes	Medium	Riparian	0.16
WB	Bottomland Hardwood Forest	Yes	High	Riparian	0.02
WD	Bottomland Hardwood Forest	Yes	High	Riparian	0.57
WG	Bottomland Hardwood Forest	Yes	High	Riparian	0.5
WH	Headwater Forest	Yes	High	Riparian	0.05
WI	Headwater Forest	Yes	High	Riparian	0.13
WJ	Headwater Forest	Yes	High	Riparian	0.05
WK	Headwater Forest	Yes	High	Riparian	0.07
WM	Headwater Forest	Yes	High	Riparian	0.07
WN	Headwater Forest	Yes	Low	Riparian	0.07
WO	Headwater Forest	Yes	Low	Riparian	0.01
WP	Headwater Forest	Yes	High	Riparian	0.34
WQ	Headwater Forest	Yes	High	Riparian	0.1
WR	Headwater Forest	No	Low	Riparian	0.09
WS	Headwater Forest	Yes	Medium	Riparian	0.05
WT	Headwater Forest	Yes	Medium	Riparian	0.31
WU	Headwater Forest	Yes	High	Riparian	0.06
WV	Headwater Forest	No	Low	Riparian	0.1
WBB	Bottomland Hardwood Forest	Yes	Medium	Riparian	0.02
WCC	Bottomland Hardwood Forest	Yes	Medium	Riparian	0.3
WDD	Floodplain Pool	Yes	High	Riparian	0.07
WEE	Basin	Yes	Low	Non-riparian	0.01
WFF	Floodplain Pool	Yes	Medium	Riparian	0.05
WGG	Seep	Yes	High	Non-riparian	<0.01
WHH	Headwater Forest	Yes	Low	Riparian	0.02
WII	Floodplain Pool	Yes	Medium	Riparian	0.03
WJJ	Non-tidal Freshwater Marsh	No	Medium	Riparian	0.04
				<b>Total</b>	<b>3.29</b>

<sup>1</sup>Wetlands WC, WE, WF, WL, and WAA from the 2020 NRTR Addendum are no longer included in the updated documentation due to a lack of wetland hydrology, wetland plants and/or hydric soils. The following wetlands are newly identified features not previously included in the documentation: WDD-WJJ. There are no wetlands WW-WZ.

## **6.2 N.C. River Basin Buffer Rules**

Streamside riparian zones within the study area are not protected under the provisions of any riparian buffer rules administered by NCDWR.

## **6.3 Rivers and Harbors Act Section 10 Navigable Waters**

No streams within the study area have been designated by the USACE as Navigable Waters under Section 10 of the Rivers and Harbors Act.

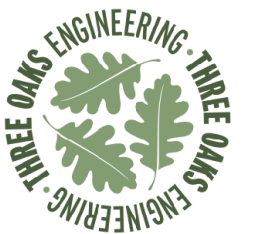
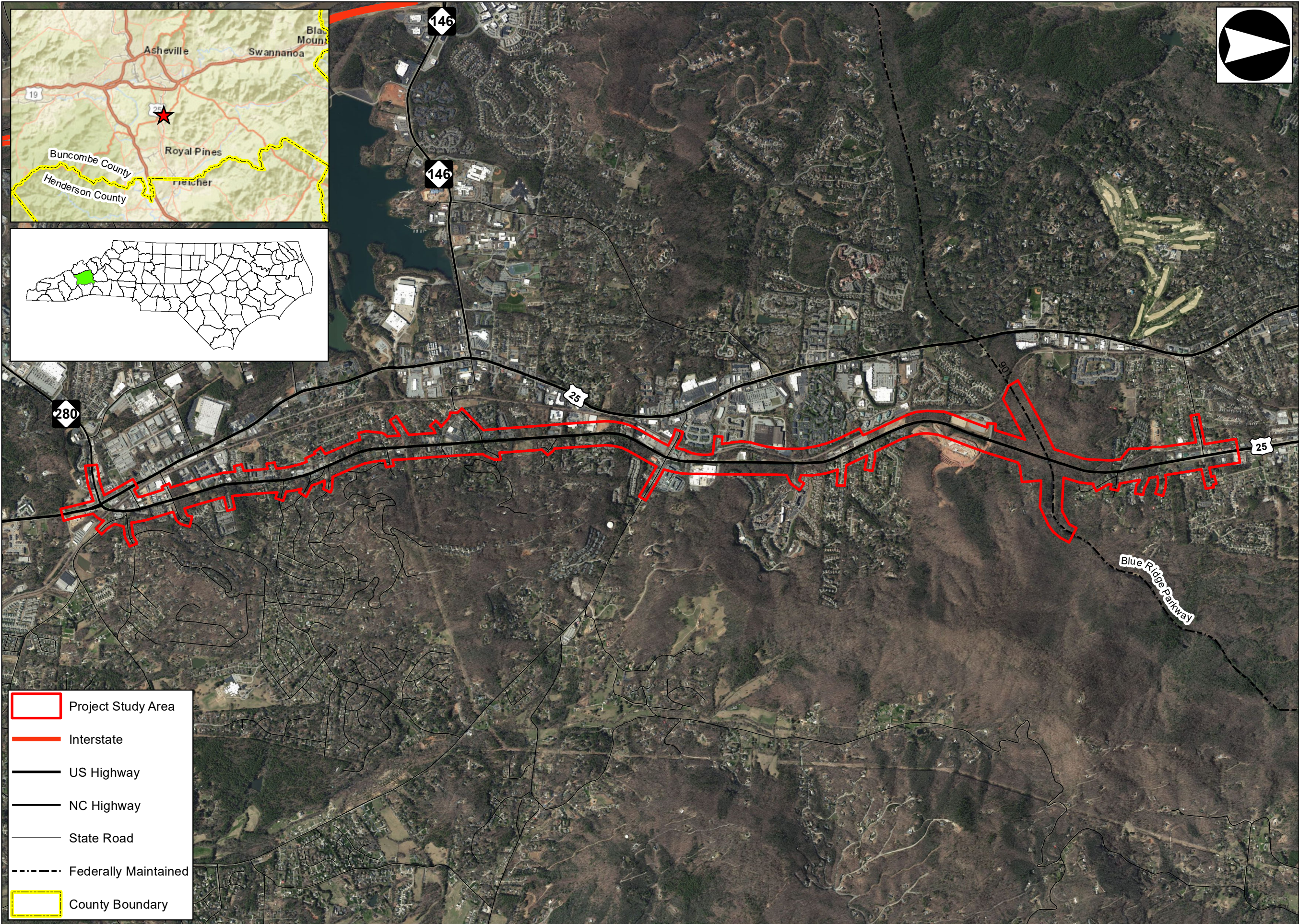
## 7.0 REFERENCES

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## Appendix





Prepared For:



U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Vicinity Map

Buncombe County,  
North Carolina

Date: May 2025

Scale: 0 1,000 2,000 Feet

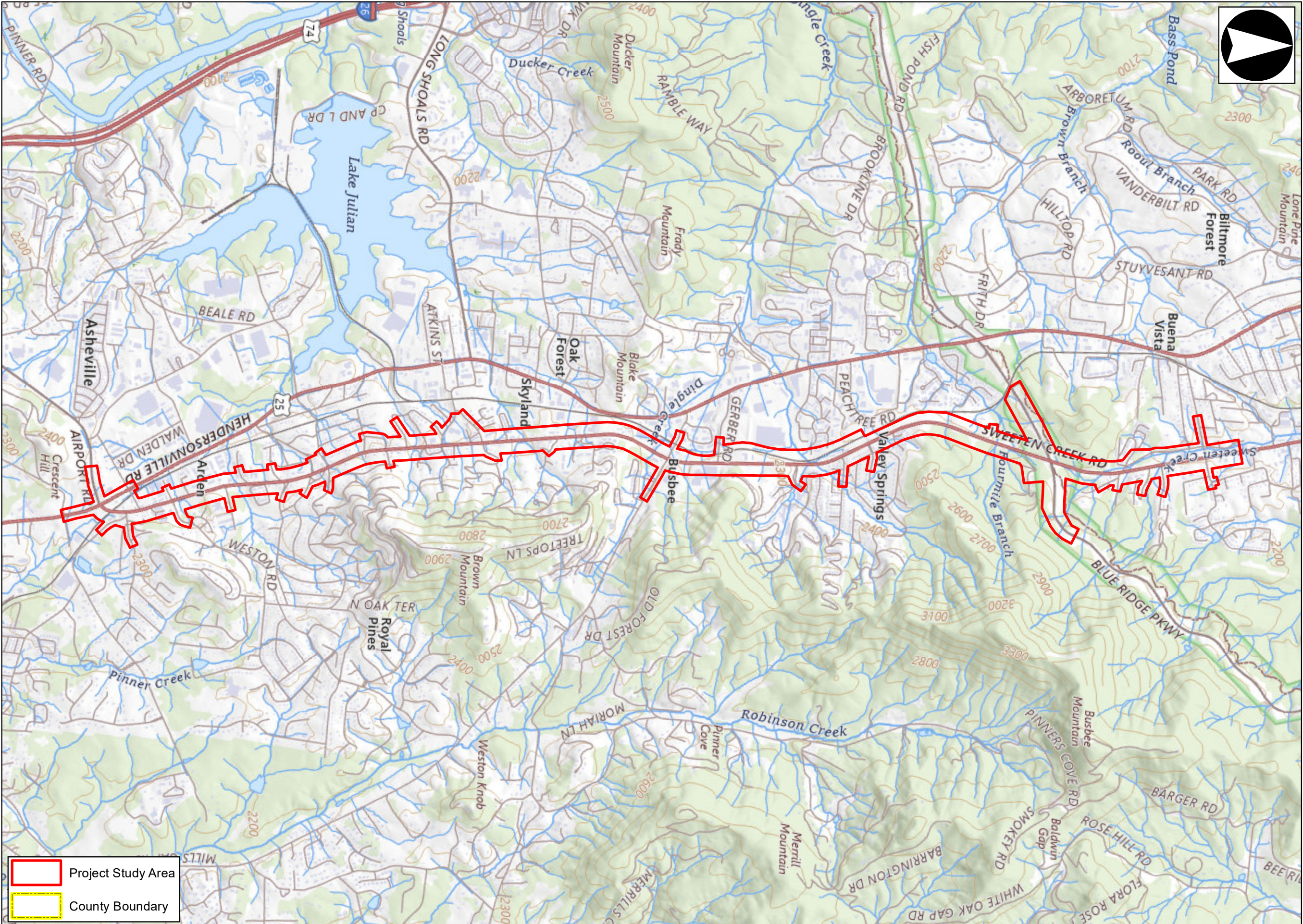
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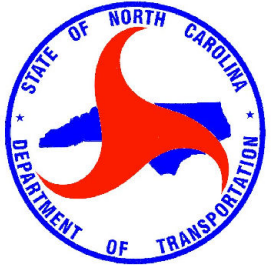
Figure

1





Prepared For:



U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Topographic Map

Buncombe County,  
North Carolina

Date: May 2025

Scale: 0 1,000 2,000 Feet

Job No.: 15-020

Drawn By:  
KEMS

Checked By:  
AD

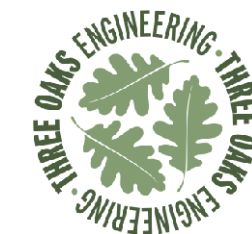
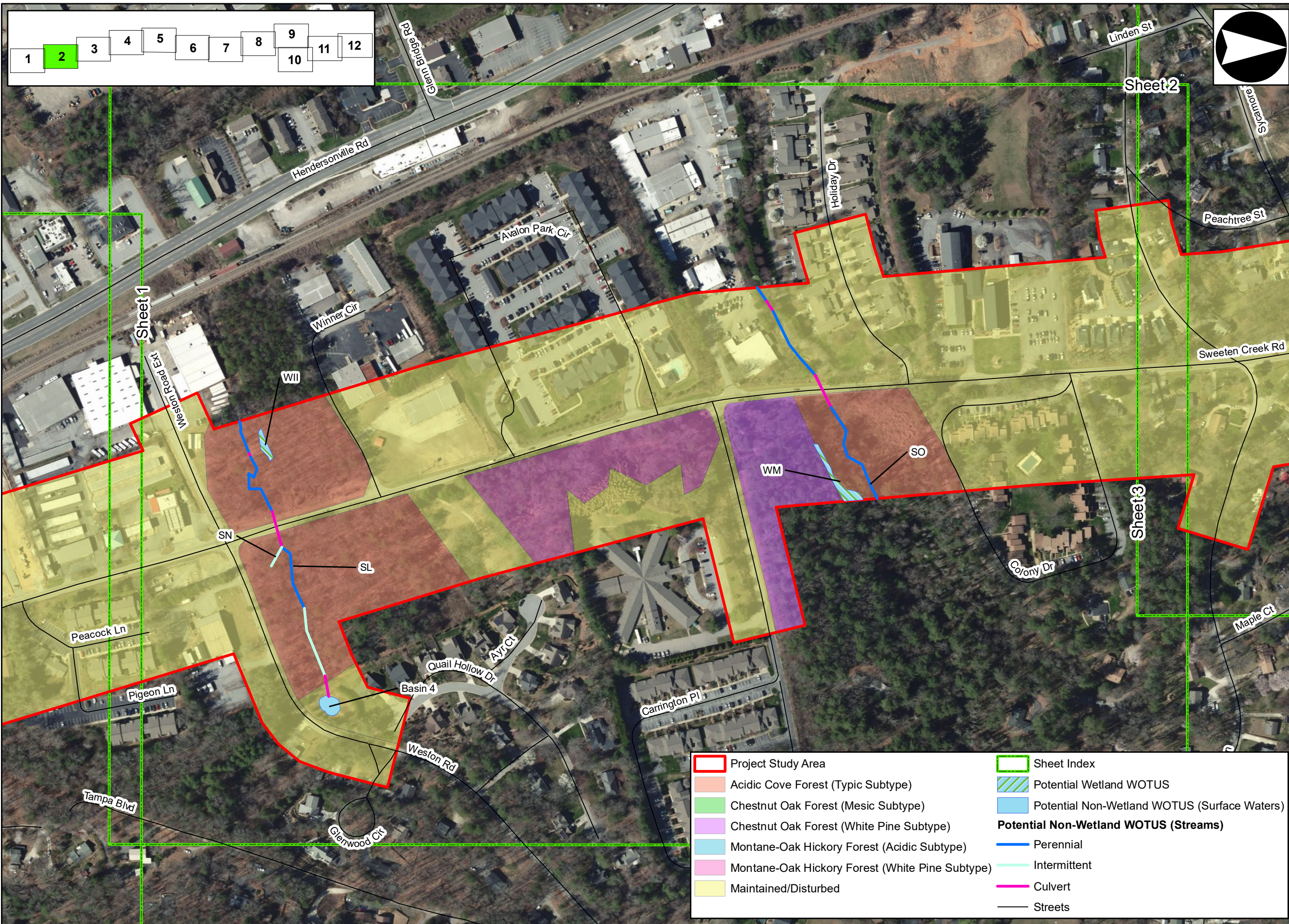
Figure

2









Prepared For:



U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Terrestrial  
Communities  
Map

Buncombe County,  
North Carolina

Date: July 2025

Scale: 0 100 200 Feet

Job No.: 15-020

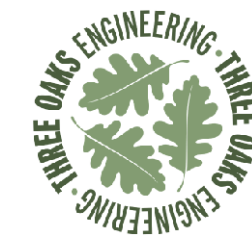
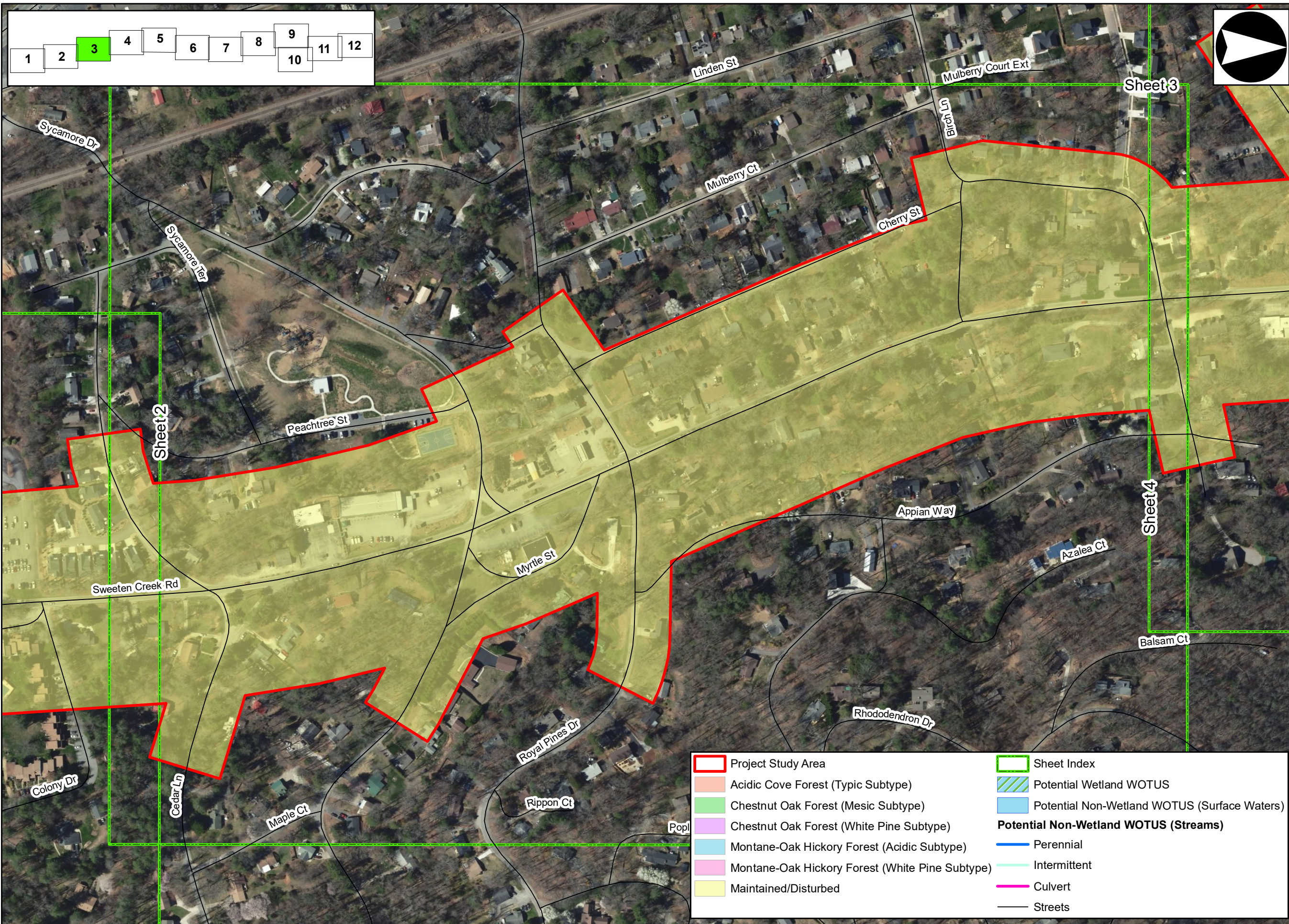
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Figure

3

Sheet 2





Prepared For:



U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Terrestrial  
Communities  
Map

Buncombe County,  
North Carolina

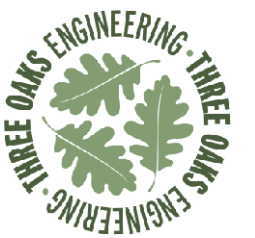
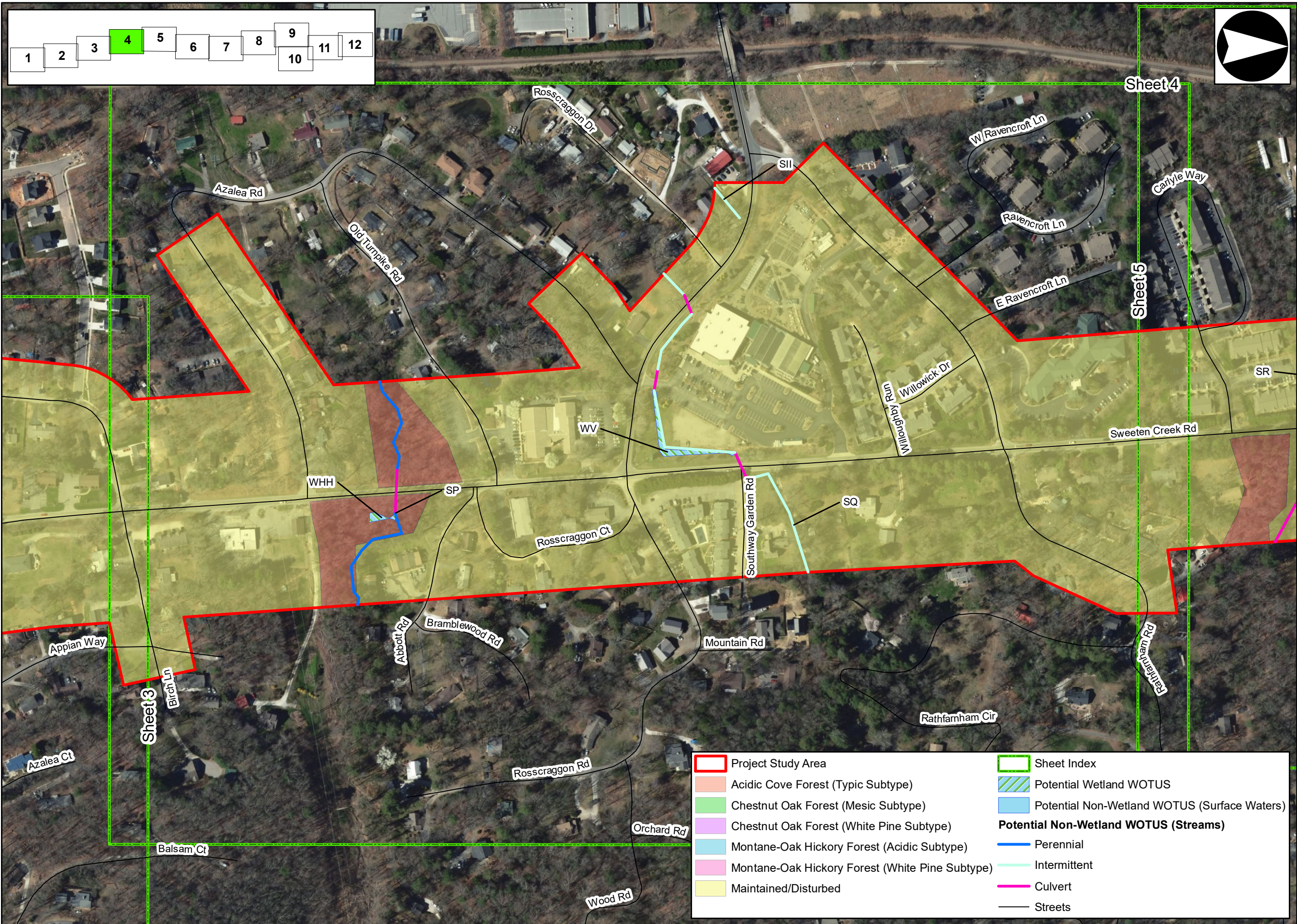
Date:	July 2025
Scale:	0 100 200 Feet
Job No.:	15-020
Drawn By:	Checked By:
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Figure

3

Sheet 3





Prepared For:



U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Terrestrial  
Communities  
Map

Buncombe County,  
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Date: July 2025

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Job No.: 15-020

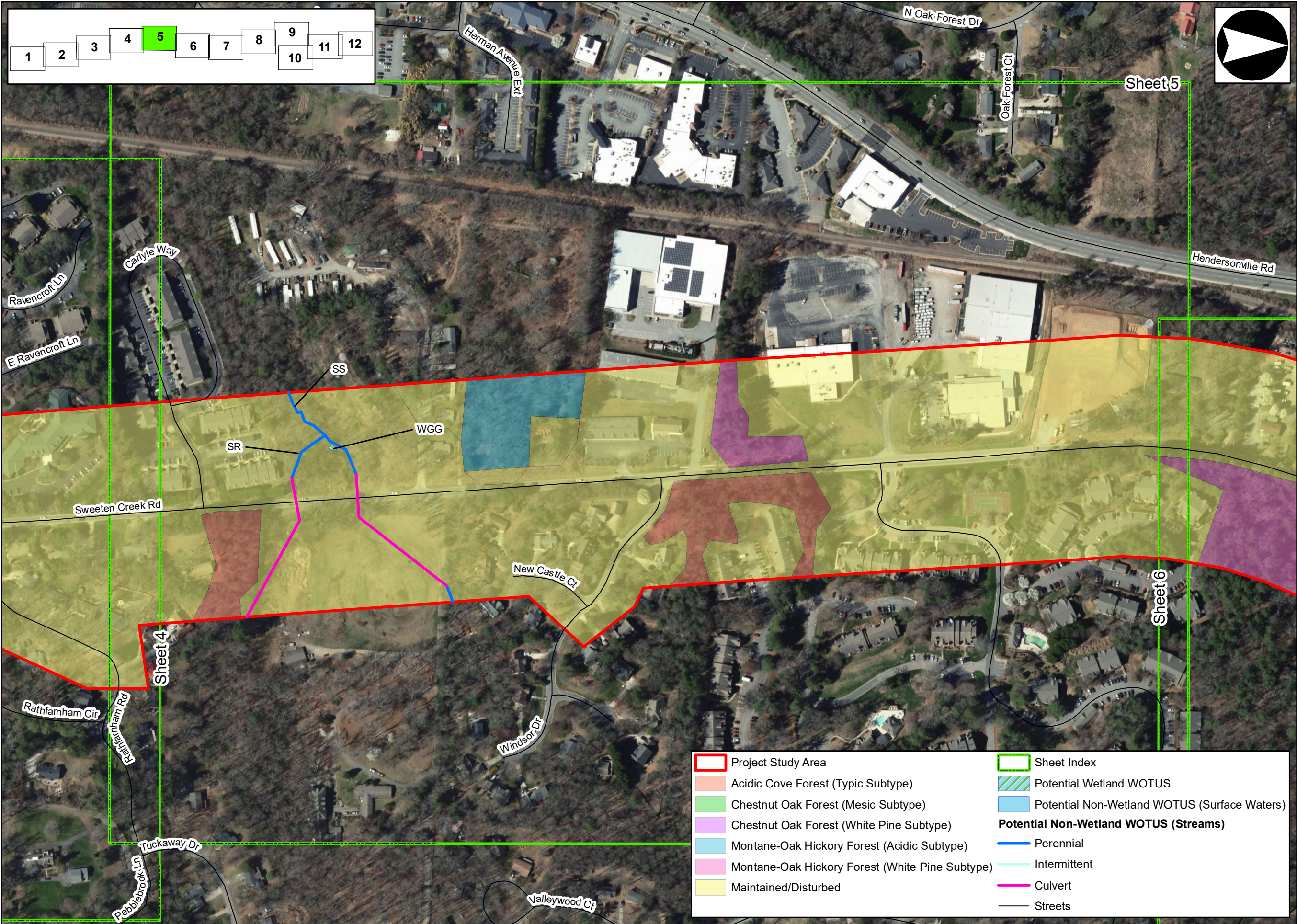
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Figure

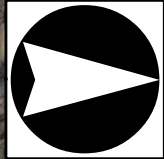
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Sheet 4





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Prepared For:



U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
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US 25 to  
SR 3801

Terrestrial  
Communities  
Map

Buncombe County,  
North Carolina

Date: July 2025

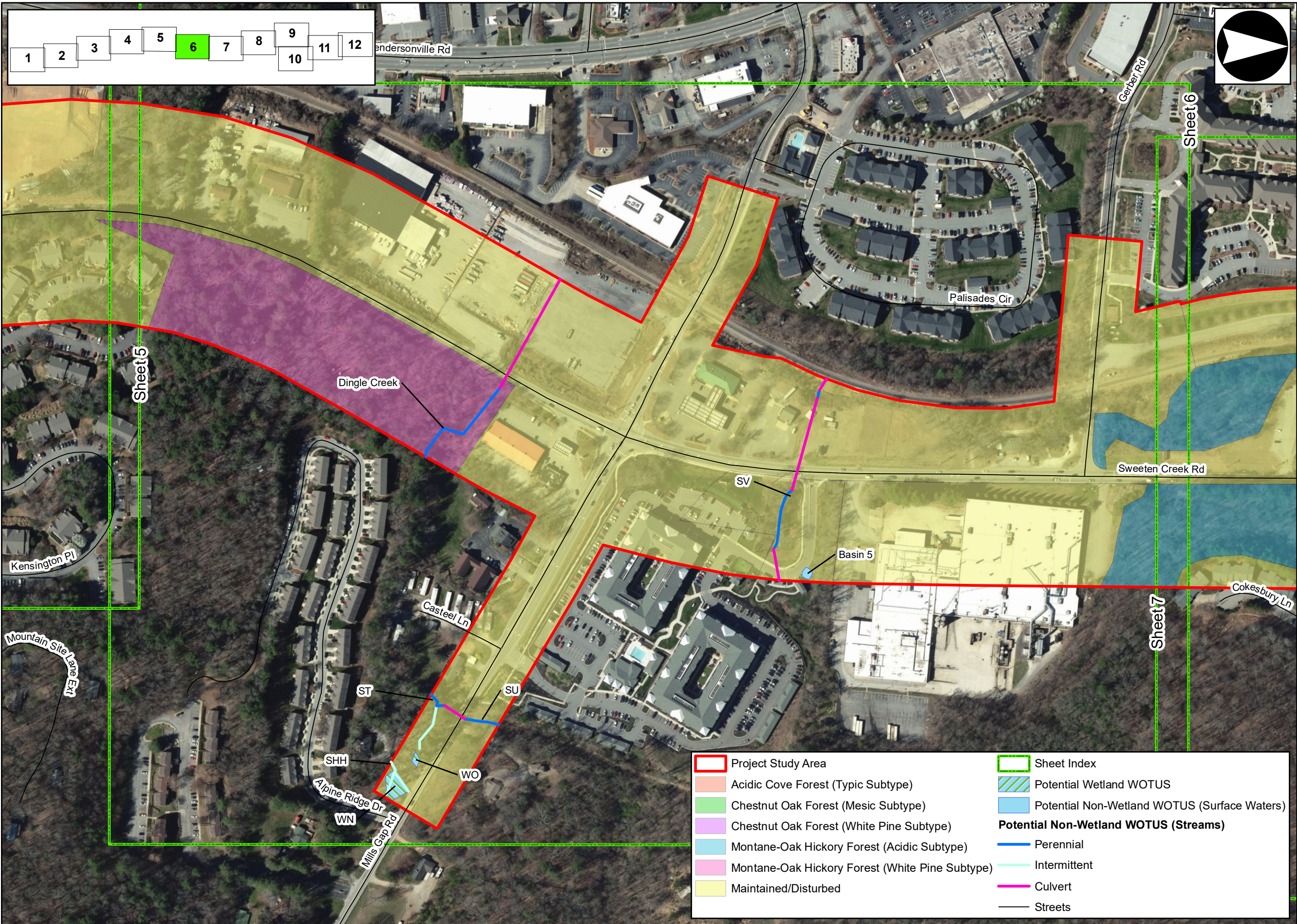
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Job No.: 15-020

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Figure  
3  
Sheet 5





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U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Terrestrial  
Communities  
Map

Buncombe County,  
North Carolina

Date: July 2025

Scale: 0 100 200 Feet

Job No.: 15-020

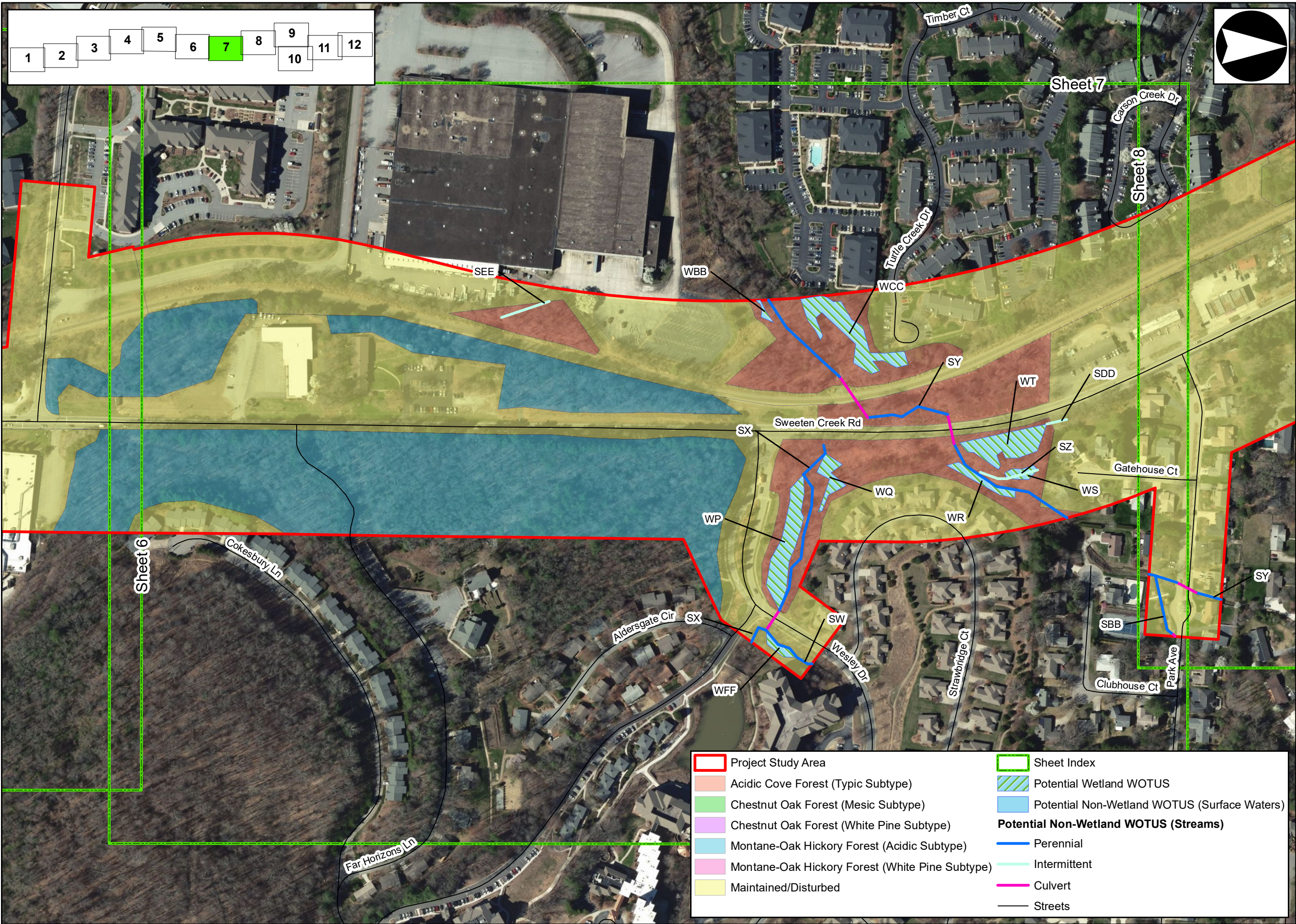
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Checked By: AD

Figure

3

Sheet 6





Prepared For:



U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Terrestrial  
Communities  
Map

Buncombe County,  
North Carolina

Date: July 2025

Scale: 0 100 200 Feet

Job No.: 15-020

Drawn By: KEMS  
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Figure

3

Sheet 7





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U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

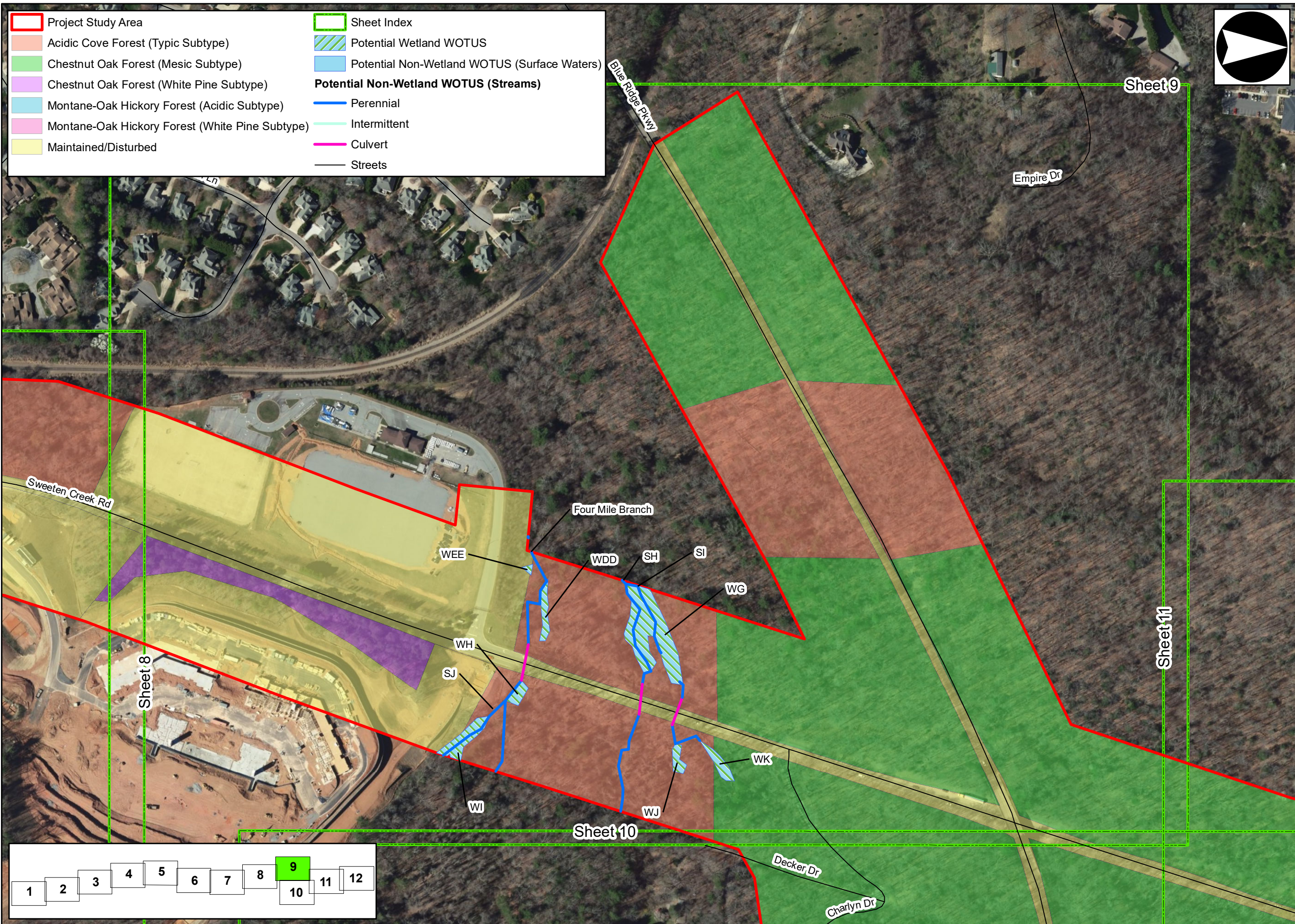
Terrestrial  
Communities  
Map

Buncombe County,  
North Carolina

Date:	July 2025	
Scale:	0 100 200 Feet	
Job No.:	15-020	
Drawn By:	KEMS	Checked By: AD

Figure  
3  
Sheet 8





Prepared For:



U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Terrestrial  
Communities  
Map

Buncombe County,  
North Carolina

Date: July 2025

Scale: 0 100 200 Feet

Job No.: 15-020

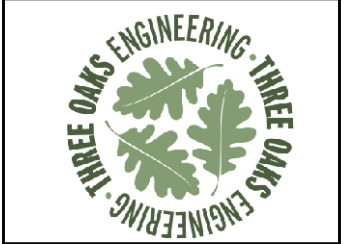
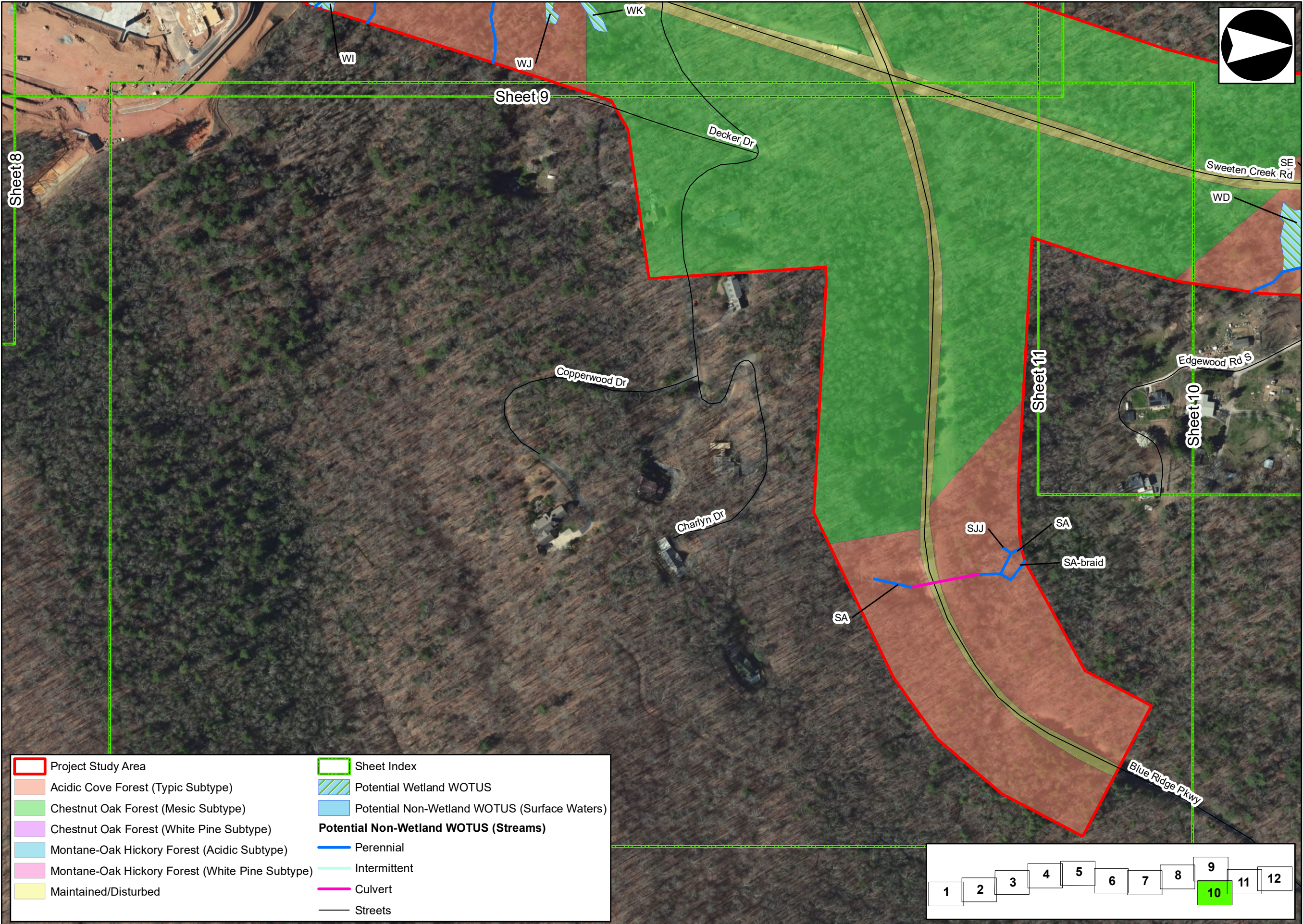
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Figure

3

Sheet 9





U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Terrestrial  
Communities  
Map

Buncombe County,  
North Carolina

Date:	July 2025
Scale:	0 100 200 Feet
Job No.:	15-020
Drawn By:	Checked By:
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Figure  
**3**  
Sheet 10



Project Study Area

Acidic Cove Forest (Typic Subtype)

Chestnut Oak Forest (Mesic Subtype)

Chestnut Oak Forest (White Pine Subtype)

Montane-Oak Hickory Forest (Acidic Subtype)

Montane-Oak Hickory Forest (White Pine Subtype)

Maintained/Disturbed

Sheet Index

Potential Wetland WOTUS

Potential Non-Wetland WOTUS (Surface Waters)


**Potential Non-Wetland WOTUS (Streams)**

Perennial


Intermittent

Culvert

Streets



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U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Terrestrial  
Communities  
Map

Buncombe County,  
North Carolina

Date: July 2025

Scale: 0 100 200 Feet

Job No.: 15-020

Drawn By: KEMS

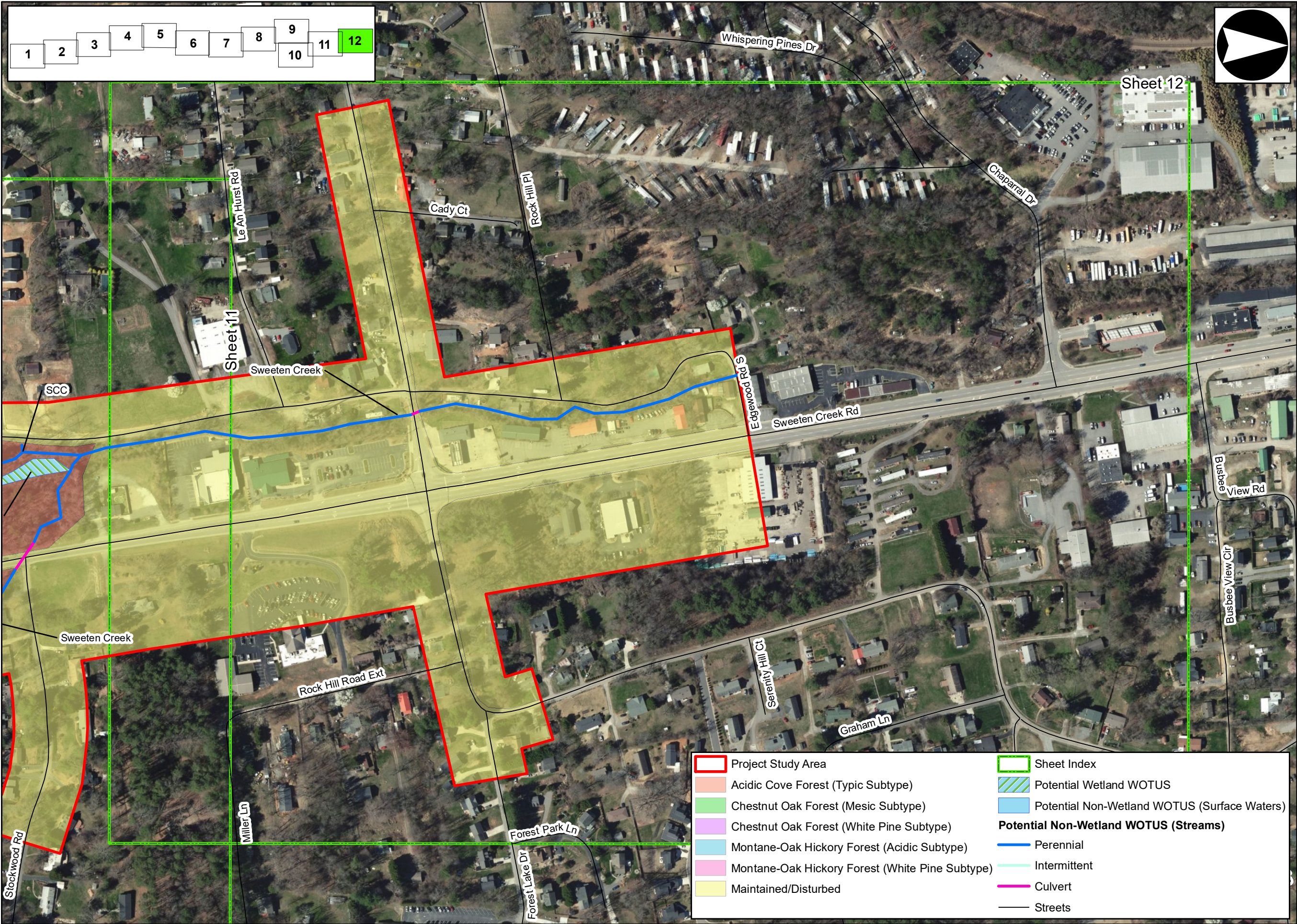
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Figure

3

Sheet 11





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Widening  
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Road) from  
US 25 to  
SR 3801

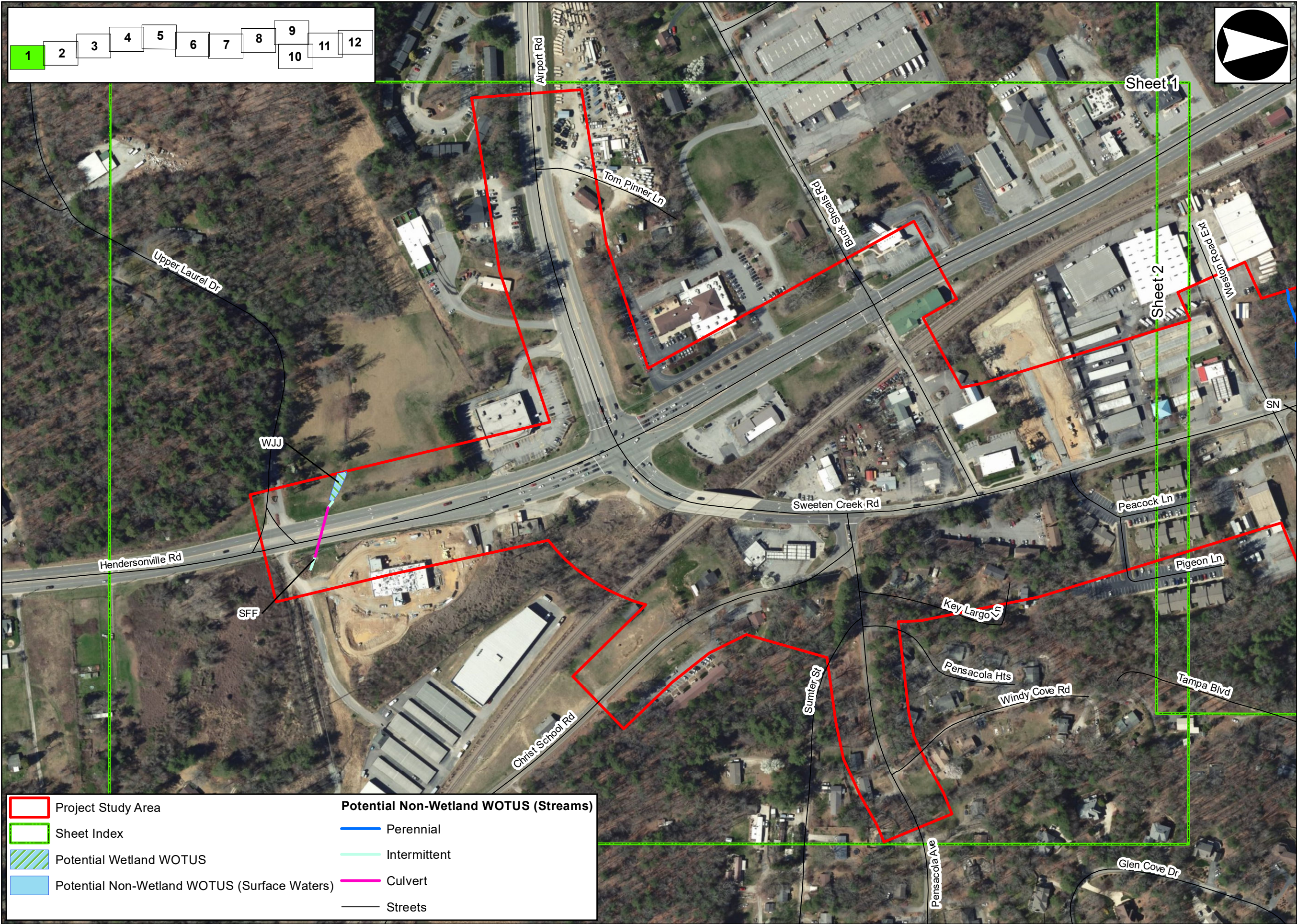
Terrestrial  
Communities  
Map

Buncombe County,  
North Carolina

Date:	July 2025
Scale:	0 100 200 Feet
Job No.:	15-020
Drawn By:	Checked By:
KEMS	AD

Figure  
3  
Sheet 12





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U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Jurisdictional  
Features  
Map

Buncombe County,  
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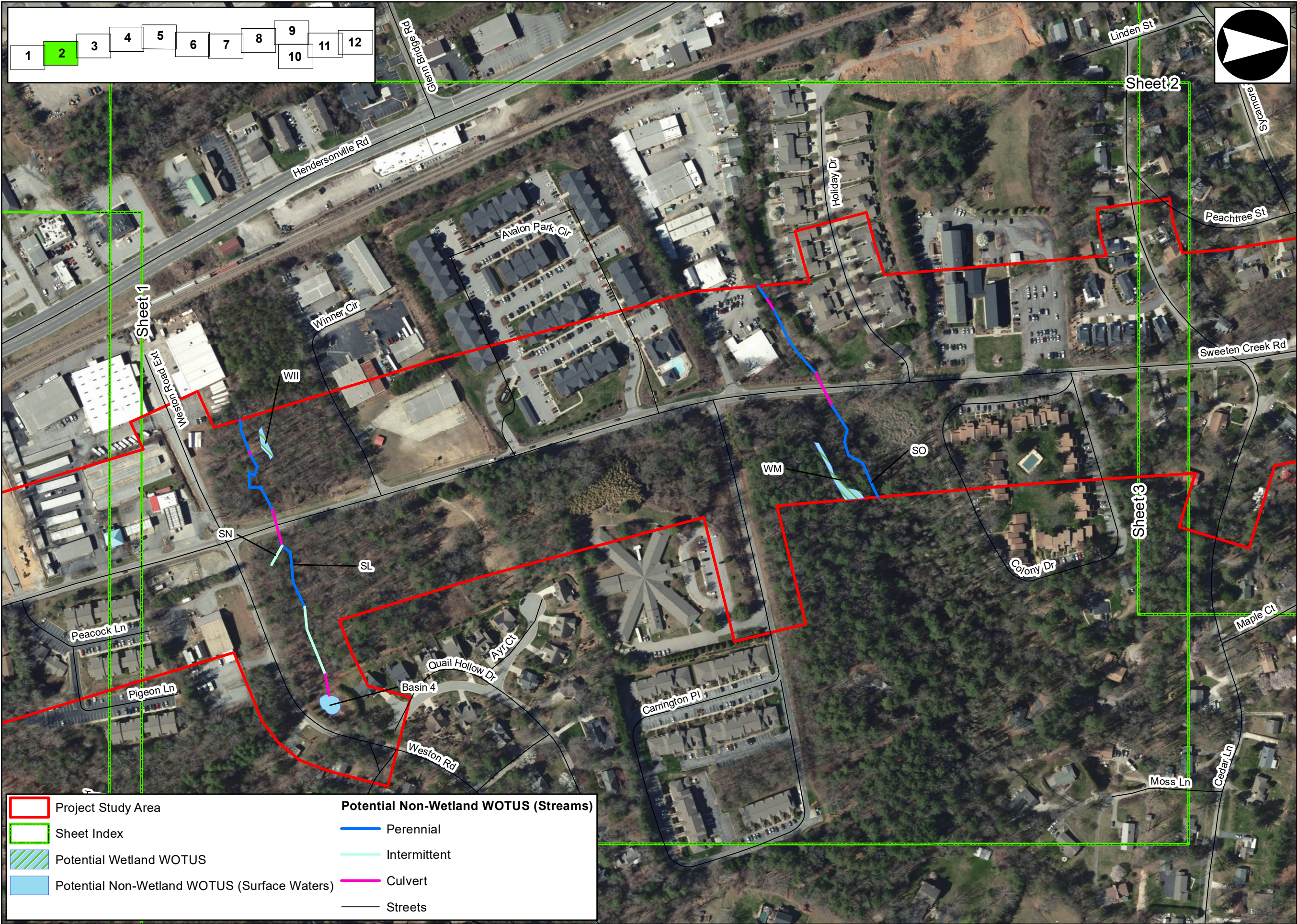
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Figure

4

Sheet 1





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U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Jurisdictional  
Features  
Map

Buncombe County,  
North Carolina

Date:	July 2025
Scale:	0 100 200 Feet
Job No.:	15-020
Drawn By:	Checked By:
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Figure  
4  
Sheet 2





Prepared For:



U-2801A:  
Widening  
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Jurisdictional  
Features  
Map

Buncombe County,  
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Date: July 2025

Scale: 0 100 200 Feet

Job No.: 15-020

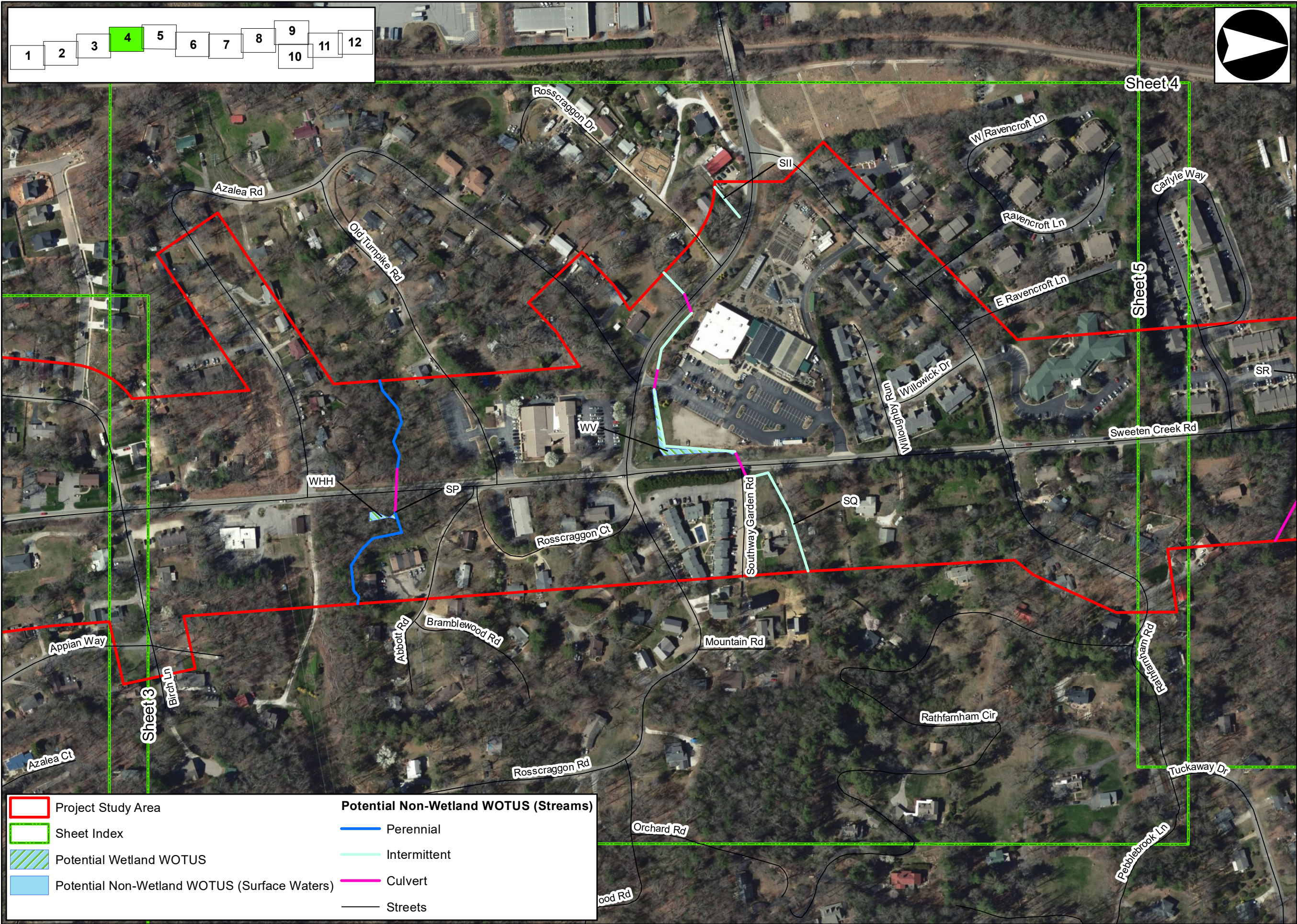
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Figure

4

Sheet 3





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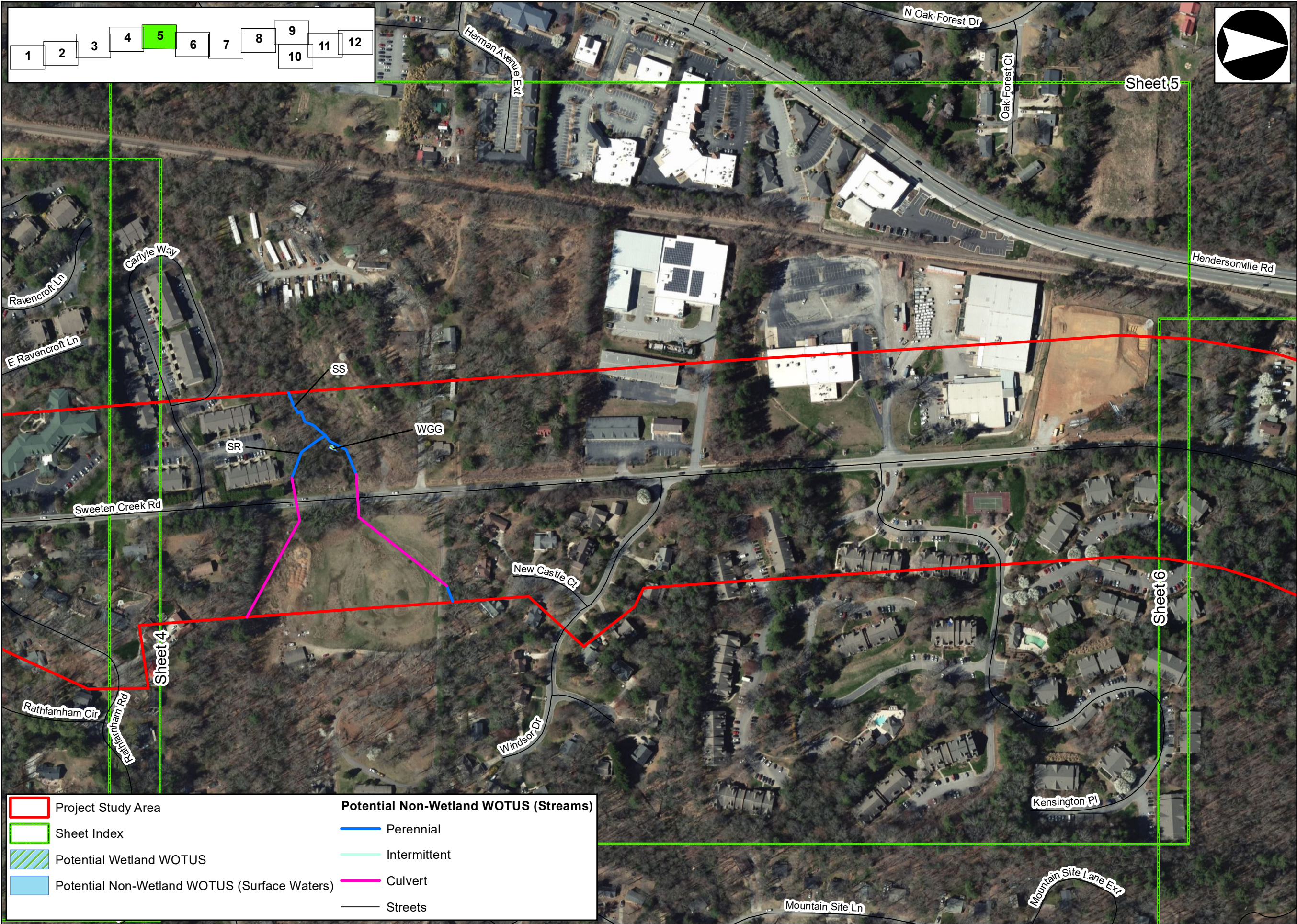
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Figure

4

Sheet 4





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Widening  
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US 25 to  
SR 3801

Jurisdictional  
Features  
Map

Buncombe County,  
North Carolina

Date: July 2025

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Job No.: 15-020

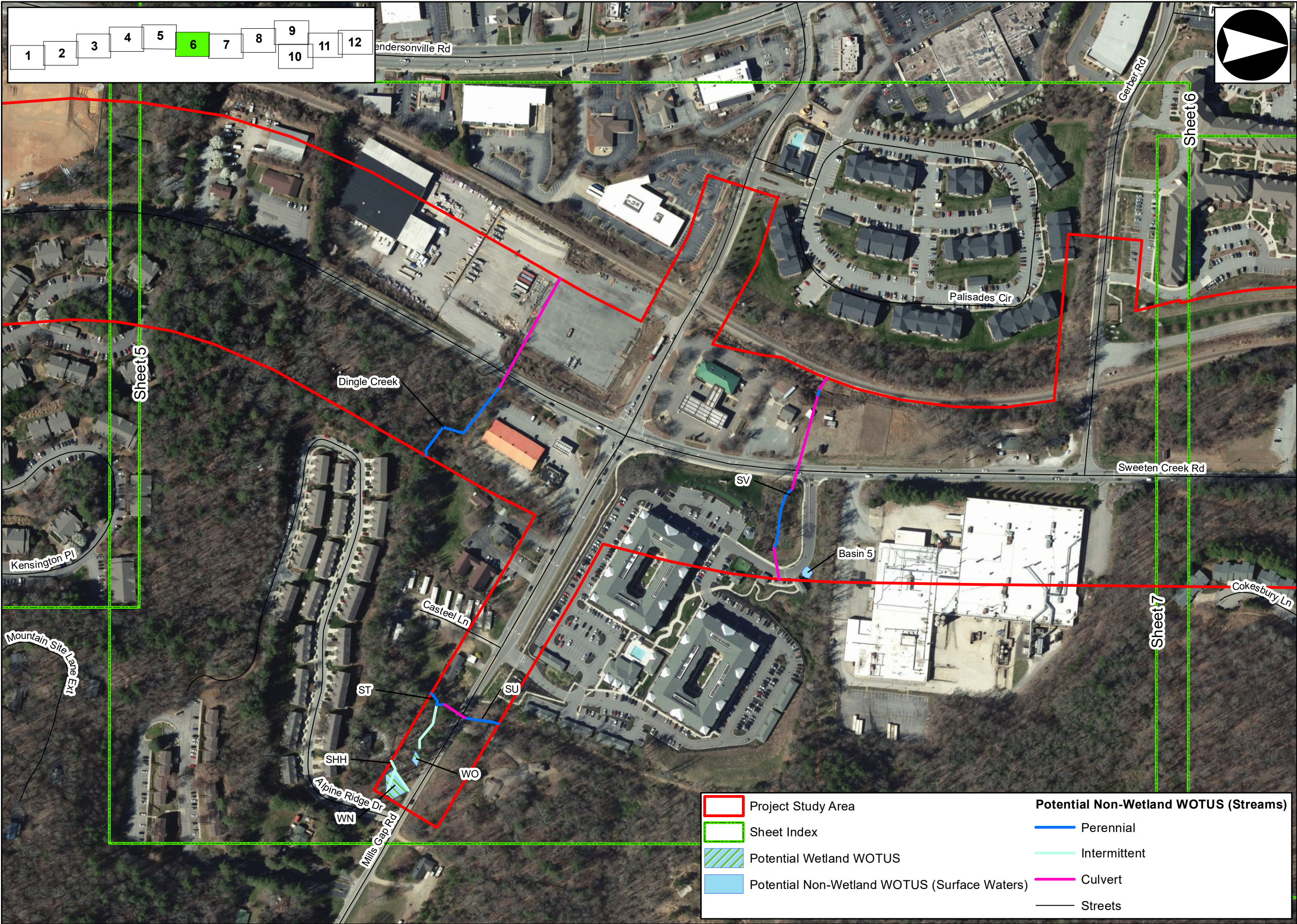
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Figure

4

Sheet 5





Prepared For:



U-2801A:  
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of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Jurisdictional  
Features  
Map

Buncombe County,  
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Date: July 2025

Scale: 0 100 200 Feet

Job No.: 15-020

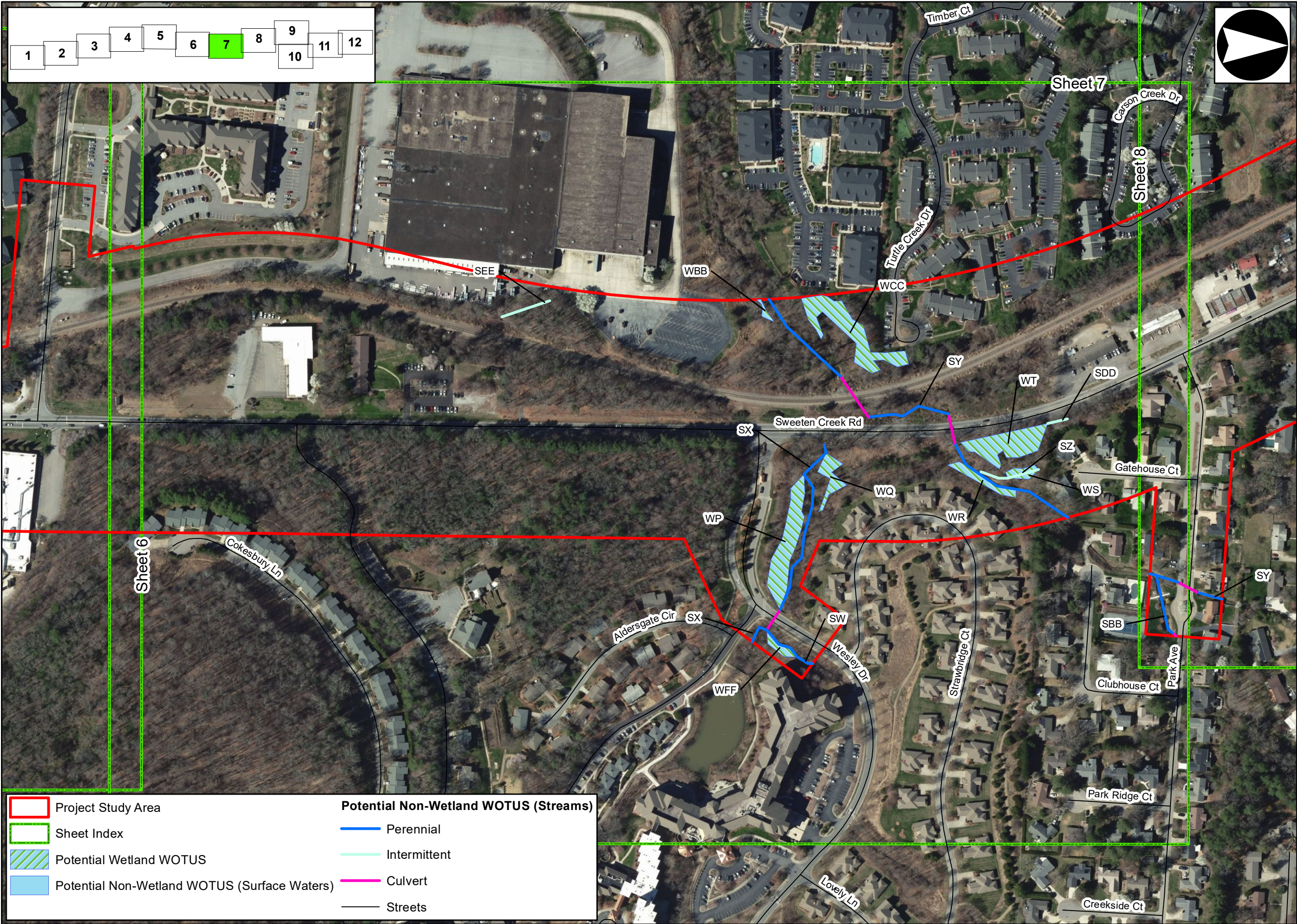
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Figure

4

Sheet 6





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U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Jurisdictional  
Features  
Map

Buncombe County,  
North Carolina

Date: July 2025

Scale: 0 100 200 Feet

Job No.: 15-020

Drawn By: KEMS  
Checked By: AD

Figure

4

Sheet 7





Prepared For:



U-2801A:  
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(Sweeten Creek  
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SR 3801

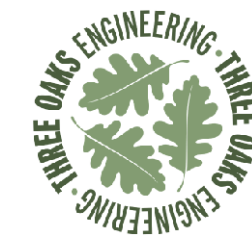
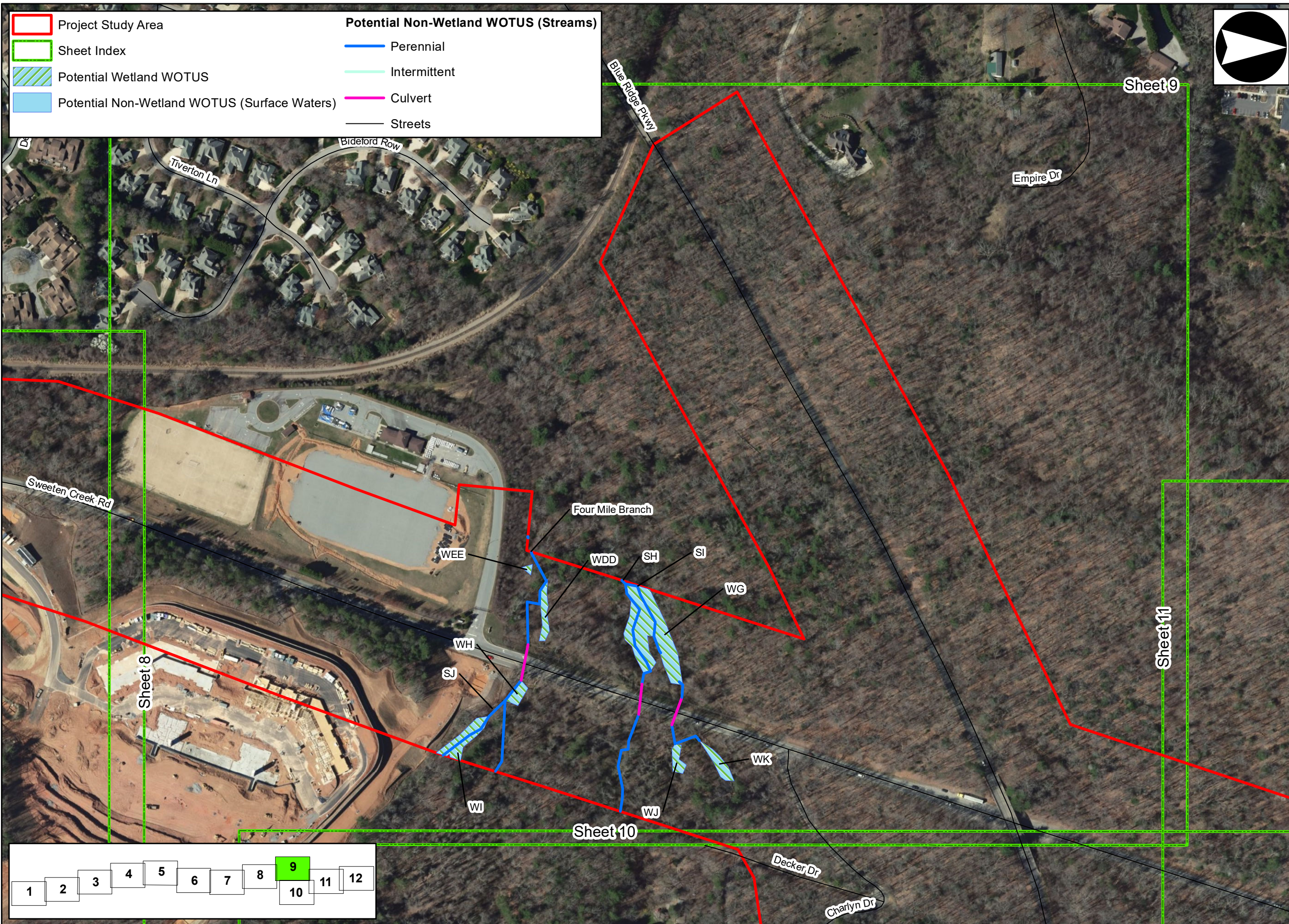
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Features  
Map

Buncombe County,  
North Carolina

Date:	July 2025
Scale:	0 100 200 Feet
Job No.:	15-020
Drawn By:	Checked By:
KEMS	AD

Figure  
4  
Sheet 8





Prepared For:



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SR 3801

Jurisdictional  
Features  
Map

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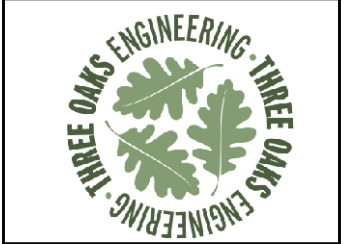
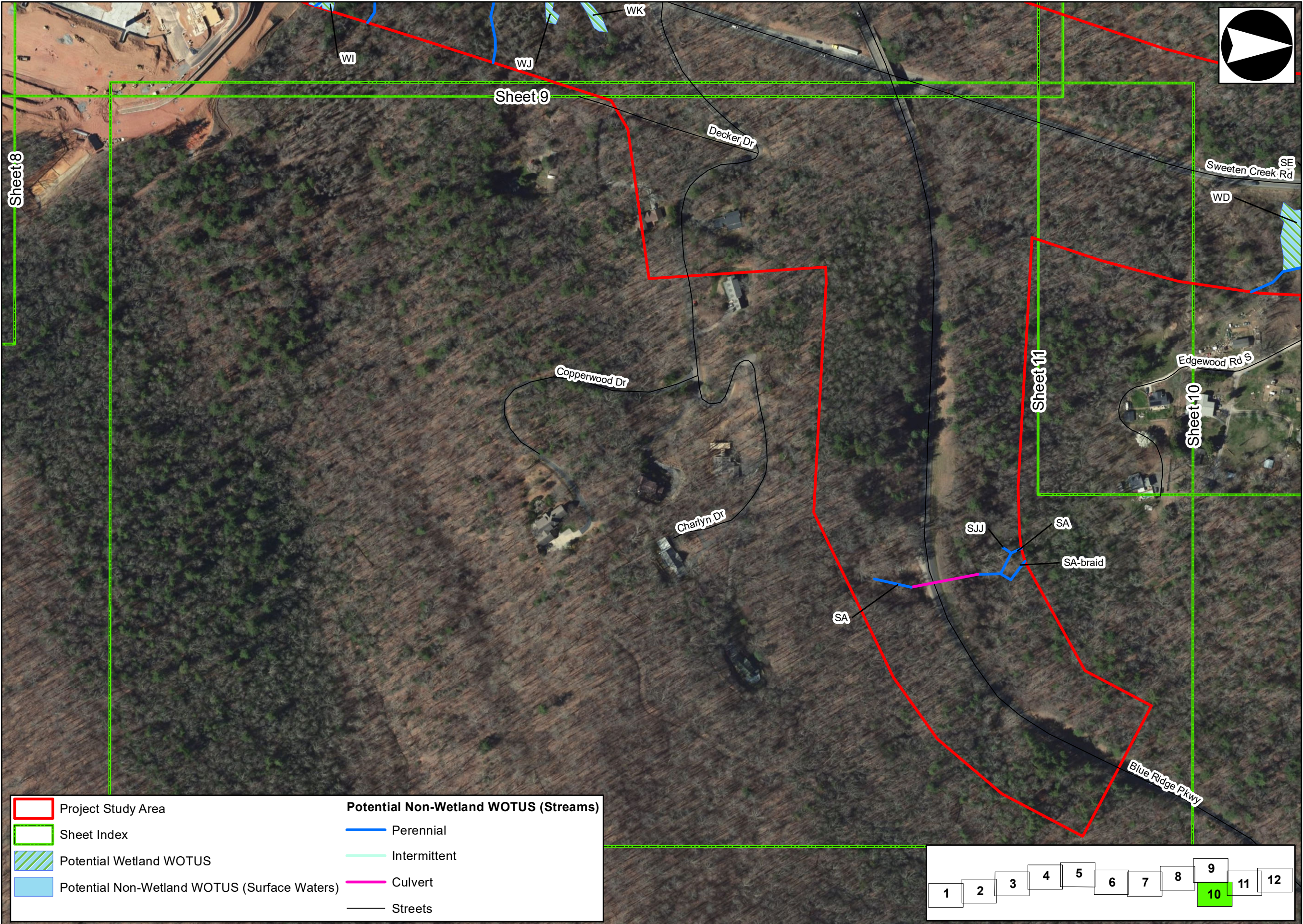
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Scale: 0 100 200 Feet	
Job No.: 15-020	
Drawn By: KEMS	Checked By: AD

Figure

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Sheet 9





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(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

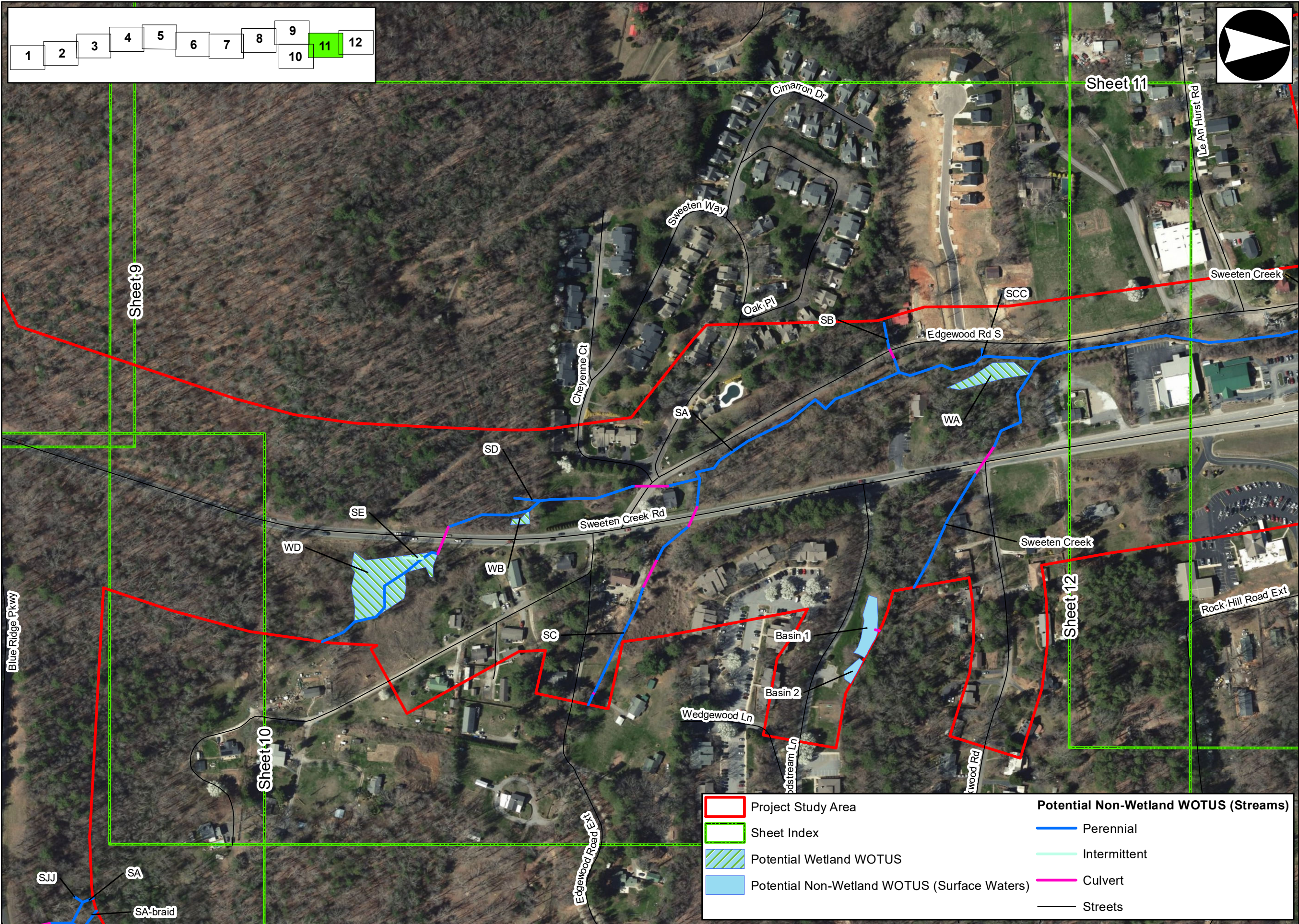
Jurisdictional  
Features  
Map

Buncombe County,  
North Carolina

Date:	July 2025
Scale:	0 100 200 Feet
Job No.:	15-020
Drawn By:	Checked By:
KEMS	AD

Figure  
**4**  
Sheet 10





Prepared For:



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(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

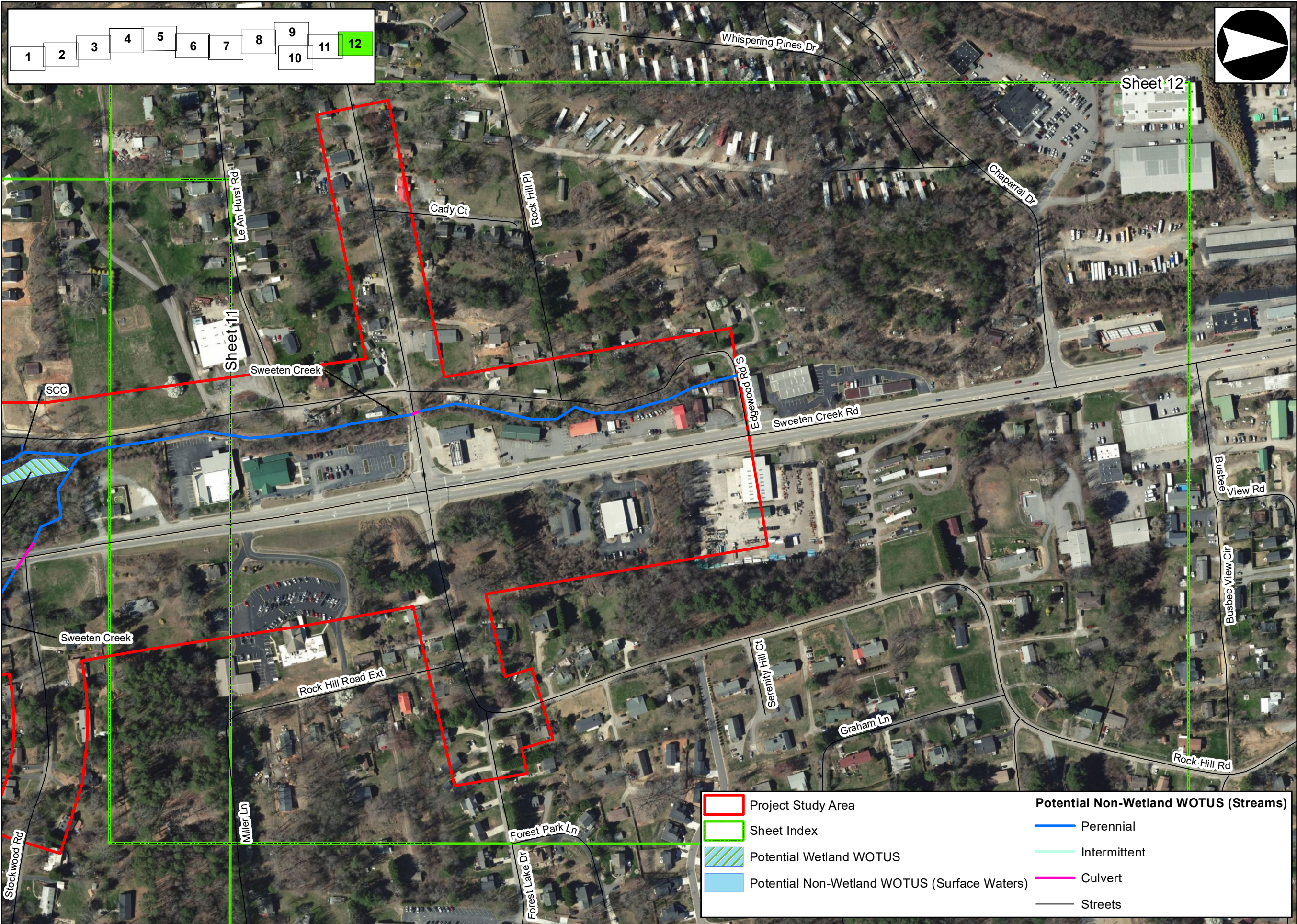
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Features  
Map

Buncombe County,  
North Carolina

Date:	July 2025
Scale:	0 100 200 Feet
Job No.:	15-020
Drawn By:	Checked By:
KEMS	AD

Figure  
4  
Sheet 11





Prepared For:



U-2801A:  
Widening  
of US 25A  
(Sweeten Creek  
Road) from  
US 25 to  
SR 3801

Jurisdictional  
Features  
Map

Buncombe County,  
North Carolina

Date: July 2025

Scale: 0 100 200 Feet

Job No.: 15-020

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Figure

4

Sheet 12



## Responsibilities of Contributors

Contributor	Responsibility						
	Stream Determinations	Wetland Delineations	Terrestrial Community ID	ESA Assessments	Document Preparation	QA/QC Review	Other
Mark Guerard	✓	✓	✓	✓			
Trevor Hall, PWS	✓	✓	✓	✓			
Annie Dahlem	✓	✓	✓	✓	✓		
Adam Efird, PWS	✓	✓	✓	✓			
Adrienne Lambert	✓	✓	✓	✓			
Kate Sevick							Mapping
Cary Rowells							CADD
Jim Mason, PWS						✓	
Hayley Wood						✓	
Nancy Oberle						✓	