



South Carolina Department of Transportation
On Behalf of the Federal Highway Administration - South Carolina Division Office



PROCESSING FORM FOR PROGRAMMATIC CATEGORICAL EXCLUSIONS
NON MAJOR FEDERAL ACTIONS

Project ID P041239

Route SC 114 (Bobby Faucette Road)

County Union

Part 1 - Project Description

Include the Project Name/Description

SC 114 (Bobby Faucette Road) Bridge Replacement over Sandy Run Creek

SCDOT proposes to replace the SC 114 (Bobby Faucette Road) Bridge over Sandy Run Creek in Union County. The purpose of this project is to replace the bridge to correct the load restriction placed on it as well as restore all bridge components to good condition. The existing bridge is posted for load restrictions and has one or more components in poor condition. The bridge is currently open to traffic and will be replaced on existing alignment. The bridge will be closed to traffic and detoured until construction is complete.

NEPA studies revealed no significant impacts or effects to resources within the project study area.

It is anticipated that minor amounts of right of way will be required for the replacement of this structure. The minor amount of right of way needed will include temporary and/or permanent strips. Existing right of way is approximately 66' along the roadway and 150' in the area of the bridge. Given the rural location, new acquisitions are not anticipated to have negative effects to resources or landowners and will be within the existing project study area.

Part 2 - PCE Type

Select the appropriate Categorical Exclusion from 23 CFR Part 771.117 that best fits the entire project from the drop-down menu. **Reference Appendix A of the PCE Agreement for a more detailed description of each CE contained in 23 CFR 771.117.**

23 CFR 771.117(c) Bridge rehabilitation, reconstruction, or replacement or railroad crossing improvements

23 CFR 771.117(d)

Part 3 - Thresholds

To be processed as a Programmatic Categorical Exclusion (PCE) the following conditions must be met in addition to the General Criteria (as outlined in the PCE Agreement between FHWA-SC and SCDOT). Place a "X" in the appropriate box below. If the answer is "Yes" to any of the below criteria, SCDOT will consult with FHWA-SC to determine the appropriate level of NEPA documentation required and forward to FHWA-SC for approval. ***Reference Part 4 of the Processing form or Section IV of the PCE Agreement for more details and definitions regarding each threshold.**

1.	Involves any unusual circumstances as described in <u>*23 CFR Part 771.117(b)</u>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
2.	The acquisition of more than <u>*minor amounts</u> of temporary or permanent strips of right-of-way	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
3.	Involves acquisitions that result in residential or non-residential displacements	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
4.	Involves any adverse impacts to EJ populations	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Part 3 - Thresholds Continued

5.	Results in capacity expansion of a roadway by adding through lanes	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6.	Involves construction that would result in <u>*major traffic disruptions</u>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
7.	Involves <u>*changes in access control</u> requiring FHWA approval	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
8.	An adverse effect determination under Section 106 of the National Historic Preservation Act.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
9.	Use of Section 4(f) property that cannot be documented with a FHWA <i>de minimis</i> determination or a programmatic Section 4(f) other than the programmatic evaluation for the use of historic bridges	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
10.	Any use of a Section 6(f) property	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
11.	Requires an Individual USACE 404 Permit	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
12.	Requires an Individual U.S. Coast Guard Permit.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
13.	Work encroaching in a regulatory floodway, adversely affecting the base floodplain (100 yr.) pursuant to E.O. 11988 and 23 CFR Part 650 Subpart A	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
14.	Construction in, across, or adjacent to a river designated as a National Wild and Scenic River	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
15.	Involves an increase of 15 dBA or greater on any noise receptor or abatement measures are found to be feasible and reasonable due to noise impacts	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
16.	May affect and is likely to adversely affect a Federally listed species or designated critical habitat or projects with impacts subject to the BGEPA	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
17.	Involves acquisition of land for hardship, protective purposes, or early acquisition	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
18.	Does not meet the latest Conformity Determination for air quality non-attainment areas (if applicable).	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
19.	Any known or potential <u>major</u> hazardous waste sites within the right-of-way.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
20.	Is not included in or is inconsistent with the STIP and/or TIP	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Part 3 Continued - Additional criteria to be completed for disposal of excess right-of-way PCE

1. Is the parcel part of a SCDOT environmental mitigation effort or could it be used for environmental mitigation?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Is there a formal plan to use this parcel for a future transportation project (is it part of an approved LRTP)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Part 4 - Threshold Definitions

Unusual Circumstances (23 CFR Part 771.117) - Unusual circumstances are defined as:

- a. Significant environmental impacts;
- b. Substantial controversy on environmental grounds;
- c. Significant impact on properties protected by Section 4(f) of the DOT ACT or Section 106 of the National Historic Preservation Act; or
- d. Inconsistencies with any Federal, State, or local law, requirement, or administrative determination relating to the environmental aspects of the action.

Minor Amount of Right-of-Way (ROW):

A minor amount of ROW is defined as less than 3 acres per linear mile for linear projects or less than 10 acres of impacts for non-linear projects (eg: intersections, bridges), and no removal of major property improvements. Examples of major improvements include residential and business structures, or the removal of other features which would change the functional utility of the property. Removal of minor improvements, such as fencing, landscaping, sprinkler systems, and mailboxes would be allowed.

Major Traffic Disruptions:

A major traffic disruption is defined as an action that would result in: a) adverse effects to through-traffic businesses or schools, b) substantial change in environmental impacts, or c) public controversy associated with the use of the temporary road, detour, or ramp closure.

Changes in Access Control:

Requires approval from FHWA for changes in access control on the Interstate system (eg: Interchange Modification Reports or Interchange Justification Reports).

Environmental Commitments: (Check all that apply)

- | | | |
|---|--|--|
| <input type="checkbox"/> USTs/Hazardous Materials | <input checked="" type="checkbox"/> General Permit | <input type="checkbox"/> Right of Way |
| <input checked="" type="checkbox"/> Water Quality | <input type="checkbox"/> Individual Permit | <input checked="" type="checkbox"/> Floodplains |
| <input checked="" type="checkbox"/> Migratory Bird Treaty Act | <input type="checkbox"/> Essential Fish Habitat | <input type="checkbox"/> Lead Based Paint |
| <input checked="" type="checkbox"/> Stormwater | <input checked="" type="checkbox"/> Cultural Resources | |
| <input type="checkbox"/> Coast Guard Permit Exclusion | <input type="checkbox"/> Noise | <input type="checkbox"/> Non-Standard Commitment (see below) |

Part of CLRB 2022-1 Package 17

Impacts to jurisdictional waters will be less than thresholds outlined in the USACE approved GP for SCDOT projects.

Relevant field studies and environmental reviews have been completed to determine that the project meets the criteria set forth in the Programmatic Categorical Exclusion Agreement signed by FHWA-SC and SCDOT. It is understood that any additions/deletions to the project may void environmentally processing the project as presently classified; consequently, any engineering changes must be brought to the attention of SCDOT Environmental Services Office immediately. A copy of this form is included in the project file and one (1) copy has been provided to FHWA.

Approved By:

Will McGoldrick

Digitally signed by Will McGoldrick
Date: 2023.05.08 08:27:26 -04'00'

Date

5/8/23

Primavera:

☒ Yes

☐ No

NEPA Start Date:

Jan 17, 2023

Does the project contain additional commitments?: (if Yes attach to form)

☒ Yes

☐ No

Date: 04/17/2023

SCDOT
NEPA ENVIRONMENTAL COMMITMENTS FORM



Project ID : P041239 County : Union District : District 4 Doc Type: PCE Total # of Commitments: 6

Project Name: SC 114 (Bobby Faucette Road) Bridge Replacement over Sandy Run Creek

The Environmental Commitment **Contractor Responsible** measures listed below **are to be included in the contract and must be implemented**. It is the responsibility of the Program Manager to make sure the Environmental Commitment **SCDOT Responsible** measures are adhered to. If there are questions regarding the commitments listed please contact:

CONTACT NAME: Michael Pitts

PHONE #: (803)-737-2566

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Water Quality

NEPA Doc Ref:

Responsibility:

CONTRACTOR

The contractor will be required to minimize possible water quality impacts through implementation of BMPs, reflecting policies contained in 23 CFR 650B and the Department's Supplemental Specification on Erosion Control Measures (latest edition) and Supplemental Technical Specifications on Seeding (latest edition). Other measures including seeding, silt fences, sediment basins, etc. as appropriate will be implemented during construction to minimize impacts to water quality.

☐ Special Provision

Migratory Bird Treaty Act

NEPA Doc Ref:

Responsibility:

CONTRACTOR

The federal Migratory Bird Treaty Act, 16 USC § 703-711, states that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. The South Carolina Department of Transportation (SCDOT) will comply with the Migratory Bird Treaty Act of 1918 in regard to the avoidance of taking of individual migratory birds and the destruction of their active nests.

The contractor shall notify the Resident Construction Engineer (RCE) at least four (4) weeks prior to construction/demolition/maintenance of bridges and box culverts. The RCE will coordinate with SCDOT Environmental Services Office (ESO), Compliance Division, to determine if there are any active birds using the structure. After this coordination, it will be determined when construction/demolition/maintenance can begin. If a nest is observed that was not discovered after construction/demolition/maintenance has begun, the contractor will cease work and immediately notify the RCE, who will notify the ESO Compliance Division. The ESO Compliance Division will determine the next course of action.

The use of any deterrents by the contractor designed to prevent birds from nesting, shall be approved by the RCE with coordination from the ESO Compliance Division. The cost for any contractor provided deterrents will be provided at no additional cost to SCDOT.

☐ Special Provision

Stormwater


NEPA Doc Ref:

Responsibility:

CONTRACTOR

Stormwater control measures, both during construction and post-construction, are required for SCDOT projects with land disturbance and/or constructed in the vicinity of 303(d), TMDL, ORW, tidal, and other sensitive waters in accordance with the SCDOT's MS4 Permit. The selected contractor would be required to minimize potential stormwater impacts through implementation of construction best management practices, reflecting policies contained in 23 CFR 650 B and SCDOT's Supplemental Specifications on Seed and Erosion Control Measures (latest edition).

☐ Special Provision

Project ID : <input type="text" value="P041239"/>	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	
ENVIRONMENTAL COMMITMENTS FOR THE PROJECT		

Cultural Resources	NEPA Doc Ref: <input type="text"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<p>The contractor and subcontractors must notify their workers to watch for the presence of any prehistoric or historic remains, including but not limited to arrowheads, pottery, ceramics, flakes, bones, graves, gravestones, or brick concentrations during the construction phase of the project, if any such remains are encountered, the Resident Construction Engineer (RCE) will be immediately notified and all work in the vicinity of the discovered materials and site work shall cease until the SCDOT Archaeologist directs otherwise.</p>		
<input type="checkbox"/> Special Provision		

Floodplains	NEPA Doc Ref: <input type="text"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<p>The Engineer of Record will send a set of final plans and request for floodplain management compliance to the local County Floodplain Administrator.</p>		
<input type="checkbox"/> Special Provision		

General Permit	NEPA Doc Ref: <input type="text"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<p>Impacts to jurisdictional waters will be permitted under a Department of the Army Section 404 permit from the U.S. Army Corps of Engineers. Based on preliminary design, it is anticipated that the proposed project would be permitted under SCDOT's General Permit (GP). The required mitigation for this project will be determined through consultation with the USACE and other resource agencies.</p>		
<input type="checkbox"/> Special Provision		

Attachment A – Cultural Resources Screening Form

Attachment B – Natural Resources Tech Memo

Attachment C – Bridge Replacement Scoping Risk Assessment Form

Attachment D – Floodplain Checklist

Attachment A – Cultural Resources Screening Form



Cultural Resources Project Screening Form

File Number: PIN: Route: County:

Project Name:

Type 1: Resurfacing, installation of fencing, signs, pavement markings, traffic signals, passenger shelters, railroad warning devices, installation of rumble strips, and landscaping

Project Type

Type 2: Bridge replacements on alignment, construction of bicycle/pedestrian facilities, and intersection improvements

Type 3: Projects that do not fall into Type 1 and Type 2 categories (e.g. road widening)

Comments

This project replaces the bridge carrying SC 114 (Bobby Faucette Rd) over Sandy Run Creek. The archaeological area of potential effect (APE) is 100 feet from the road centerline (200 feet total) and 1,500 feet from either end of the bridge. The architectural APE extends 300 feet outside of the archaeological APE. HDR conducted background research and a cultural resources field survey in February 2023 and created a short form report detailing the project (attached). The survey consisted of a pedestrian reconnaissance of the entire archaeological APE augmented by the excavation of shovel test pits (STPs). A total of 34 STP locations were excavated. Twenty-five STPs were not excavated due to slope, wetlands, manicured lawn, or ground disturbance. Two archaeological sites were identified within the archaeological APE. Site 38UN1860 contains a portion of the old alignment of SC 215 and former bridge over Sandy Run Creek. It is not eligible for the NRHP. Site 38UN1861 is a subsurface scatter of non-diagnostic pre-contact ceramic and lithic artifacts. The site could not be fully delineated beyond the project boundaries and its overall eligibility remains unknown. However, the portion of the site within the APE lacks integrity and research potential and does not contribute to the eligibility of the overall site, therefore the site will not be affected by this project. No above ground historic properties were recorded. The SC 114 Bridge was built in 1953 and qualifies for streamlined review under FHWA's Post-1945 Bridges Program Comment. No historic properties will be affected by this project. No additional cultural resources investigations are recommended.

Effect Determination:

*SHPO consultation is required for all Type 3 projects and any project with a No Adverse or Adverse Effect Determination.

This screening form was developed to satisfy documentation requirements for Type I and Type II projects under a Programmatic Agreement between the Federal Highway Administration, the South Carolina State Historic Preservation Office, the US Army Corps of Engineers, and the South Carolina Department of Transportation. For Type I and Type II projects that have no effect on historic properties, the completion of this screening form with supporting documentation (e.g. ArchSite Map) provides evidence of FHWA and SCDOT's compliance with Section 106 of the National Historic Preservation Act.

Prepared by:

Review Date:

18ARCHAEOLOGICAL FIELD REPORT
SCDOT ENVIRONMENTAL SECTION



TITLE: Cultural Resources Survey of the SC 114 (Bobby Faucette Road) over Sandy Run Creek Bridge Replacement Project, Union County, South Carolina

CONSULTANT: HDR

DATE OF RESEARCH: 2023

ARCHAEOLOGISTS: Joshua N. Fletcher and Michael Inman

ARCHITECTURAL HISTORIAN: Jessica Forbes

COUNTY: Union

PROJECT: SC 114 (Bobby Faucette Road) over Sandy Run Creek Bridge Replacement Project

SCDOT PIN: P041239

DESCRIPTION: The South Carolina Department of Transportation (SCDOT) proposes to replace the South Carolina Highway (SC) 114 (Bobby Faucette Road) Bridge over Sandy Run Creek in Union County, South Carolina. The purpose of this project is to replace the bridge to correct the load restriction placed on it as well as restore all bridge components to good condition. The existing bridge is posted for load restrictions and has one or more components in poor condition. The bridge is currently open to traffic and would remain open during construction. It is anticipated that minor amounts of right-of-way (ROW) will be required for the replacement of this structure. The minor amount of ROW needed will include temporary and/or permanent strips. Existing ROW is approximately 66 feet along the roadway and 150 feet within the bridge area. The archaeological area of potential effect (APE) is 100 feet from either side of the road centerline (200 feet wide total) and 1,500 feet from either end of the bridge. The architectural APE extends 300 feet outside the archaeological APE. Figure 1 presents the project location on the U.S. Geological Survey (USGS) 1969 *Pacolet Mills, SC*; 1969 *Jonesville, SC*; 1969 *Kelton, SC*; and 1968 *Wilkinsville, SC* quadrangles.

LOCATION: The project is located on SC 114, northeast of Jonesville, South Carolina.

USGS QUADRANGLE: *Jonesville, SC*

DATE: 1969 **SCALE:** 7.5' **UTM:** **ZONE:** 17 **DATUM:** NAD27

PROJECT CENTERPOINT: **EASTING:** 442235 **NORTHING:** 3858762

ENVIRONMENTAL SETTING: The project is located to the east and west of SC 114. This road passes through fairly moderately to steeply sloping topography, with lands sloping down toward Sandy Run Creek within the center of the project area. Land use within the project vicinity includes residential, agricultural, and forested upland areas with a bottomland hardwood forest riparian corridor.

NEAREST RIVER/STREAM AND DISTANCE: Sandy Run Creek is at the center of the study area.

SOIL TYPES: Cartecay-Toccoa complex, Cecil sandy loam (6 to 10 percent slopes, moderately eroded), Madison sandy loam (6 to 10 percent slopes), Madison sandy clay loam (10 to 15 percent slopes, eroded), and Madison and Pacolet soils (15 to 40 percent slopes)

REFERENCE FOR SOILS INFORMATION: Natural Resources Conservation Service (NRCS). 2023. Soils Surveys for Union County, SC. (<https://websoilsurvey.nrcs.usda.gov/app/>). Accessed February 2023.

GROUND SURFACE VISIBILITY: 0% ☐ 1-25% ☒ 26-50% ☐ 51-75% ☐ 76-100% ☐

CURRENT VEGETATION: Habitat types within the project corridor consist of bottomland forested wetlands dominated by large canopy tree species, such as water oak and sycamore, with an understory dominated by herbaceous species, such as switchcane. The forested upland areas consist primarily of a dense mixed pine forest dominated by loblolly pine and sweetgum. In addition to the roadway embankment, a maintained powerline parallels SC 114 to the northeast.

INVESTIGATION: On January 18, 2023, the project archaeologist (Josh Fletcher) consulted the ArchSite program to determine if previously identified archaeological sites are located in the project vicinity. No archaeological sites are located near the project area. Also on January 1, 2023, Mr. Fletcher searched the National Register of Historic Places (NRHP) files of the South Carolina Department of Archives and History (SCDAH), using the ArchSite program to identify previous investigations and previously identified resources. No historic architectural resources are located near the project area. No NRHP-eligible archaeological sites or architectural resources are located within 0.5 mile of the project area.

ARCHAEOLOGICAL SURVEY: Investigators conducted an intensive archaeological survey on February 8, 2023. The archaeological survey consisted of intensive shovel testing within upland areas. No shovel tests were excavated within areas with steep slopes (15 percent or greater), wetland areas, manicured yards, or obviously heavily disturbed areas. All shovel test locations were visited, and visual inspection was conducted within areas that displayed good ground surface visibility. Figure 2 presents the locations of the project, identified cultural resources in the APE, and shovel tests on a modern aerial photograph. Figures 3 and 4 present typical views of the project area.

Investigators traversed a total of four shovel test transects, one in each of the four quadrants surrounding the bridge. The transects were placed approximately 75 feet from the road centerline. Shovel tests were excavated at 100-foot intervals along each transect, where possible. Investigators excavated a total of 34 shovel tests. The shovel tests were excavated to an average depth of 15 centimeters below surface (cmbs) and ranged from 15 to 25 cmbs in depth. In nearly all shovel tests, compact subsoil was encountered by approximately 5 cmbs, if not at the ground surface. Shovel tests generally exposed a 2.5YR4/4 reddish brown clay loam from 0 to 10 cmbs, over a compact 2.5YR4/8 red clay subsoil at 10 to 20-plus cmbs. The fill from these tests was sifted through 0.25-inch (0.635-cm) mesh hardware cloth. Investigators identified two archaeological sites (Sites 38UN1860 and 38UN1861) during the survey.

Site 38UN1860

Site 38UN1860 contains a portion of the old alignment of SC 215 and support components from the former bridge across Sandy Run Creek. An approximately 1,200-foot-long portion of the former roadbed is present within the northwestern and southwestern quadrants of the archaeological APE. Figure 5 presents a plan of Site 38UN1860.

The old roadbed, which is approximately 22 feet wide, is raised approximately 4 feet above the surrounding floodplain within the southwestern quadrant of the APE. Outside the floodplain, it is relatively at-grade with the surrounding area within the northwestern quadrant of the APE. No pavement remnants were visible within the area of old roadbed.

Two concrete bridge endwalls (one to each side of the creek) and 12 circular wooden posts/former bridge piers are located approximately 180 feet southwest of the current bridge. The concrete endwalls both extend into the water, and measure approximately 20 feet wide, 2 feet thick, and 6 feet tall from the water surface. The western endwall is located west of a small branch/relic channel of the creek. The small branch/relic channel and main creek channel encircle a small sandy “island” within the creek. Four sets of three circular wooden posts (total of 12 posts) are located between the two concrete endwalls. Figures 6 through 8 present views of former bridge supports at Site 38UN1860.

The former road alignment is shown on the 1953 State of South Carolina State Highway Department plans for the construction of the modern-day bridge/approach (Figure 9). It is unclear when the previous bridge and former alignment were originally constructed, though they obviously predate 1953.

Site 38UN1860 was considered for NRHP eligibility under Criterion C. It reflects a common road and bridge type within South Carolina. The only remaining materials of the road and bridge are the two concrete bridge endwalls and 12 circular wooden posts. Site 38UN1860 was not found to embody the distinctive characteristics of a type, period, or method of construction, and does not possess significance for its engineering or materials; therefore, it is not significant under Criterion C. Site 38UN1860 was also considered for NRHP eligibility under Criterion A due to its association with patterns of transportation. The former road alignment, like modern-day SC 114, passes through rural areas interspersed with water crossings and is not unique; therefore, it is not significant under Criterion A. Site

38UN1860 is not known to be associated with any significant person; therefore, it is not significant under Criterion B. Site 38UN1860 is unlikely to yield new information or answer important research questions about local, state, or national history; therefore, it does not have significance under Criterion D. Because Site 38UN1860 is not found to have significance under Criteria A through D, it is recommended not eligible for listing in the NRHP.

Site 38UN1861

Site 38UN1861 is a subsurface scatter of nondiagnostic pre-contact ceramic and lithic artifacts located within the northwestern and northeastern quadrants of the archaeological APE. The site is located on a ridge side slope to the northwest of Sandy Run Creek. It measures approximately 120 meters northwest/southeast by 60 meters northeast/southwest and is located to the west and east of SC 114 (see Figures 1 and 2). The western portion of the site is within a grassy pasture/field. The eastern portion of the site is wooded in mixed pines and hardwoods. Figure 10 presents a plan of Site 38UN1861. Figures 11 and 12 present views of Site 38UN1861.

Investigators excavated 21 shovel tests at 15-meter intervals within and around Site 38UN1861; 12 (57 percent) of these shovel tests produced artifacts. Investigations were limited to the archaeological APE; the site likely extends to the east and west of the currently defined boundaries. Soils at the site generally consist of a 10R3/4 dusky red clay loam at 0 to 25 cmbs over a 10R4/3 red clay subsoil at 25 to 35-plus cmbs. Artifacts were recovered from 0 to 25 cmbs. Figure 13 presents a view of a typical shovel test soil profile.

Investigators recovered 98 artifacts from Site 38UN1861. Table 1 provides a summary of artifacts from Site 38UN1861; for a complete artifact inventory, see Attachment 1. Three lithic raw materials (quartzite, quartz, and slate) are represented in the assemblage. The lithic artifacts include 1 biface fragment, 10 flakes, and 6 pieces of shatter. The ceramic assemblage is represented by three different types of temper: grit/sand, grit/sand/shell, and shell. Only one sherd had an unidentifiable stamp design; the remainder were undecorated. The majority (80 percent) of the ceramic sherds are plain body with grit/sand temper. Figures 14 through 18 present views of representative artifacts.

Table 1. Artifacts Recovered from Site 38UN1861

Artifact Type	Total
Lithics	—
Quartzite biface fragment (expanding stem)	1
Quartzite flake	2
Quartz flake	7
Slate flake	1
Quartzite shatter	6
Lithics Subtotal	17
Ceramics	—
Plain body with grit/sand temper	65
Plain rim with grit/sand temper	2
Plain body with grit/sand/shell temper	11
Plain rim with grit/sand/shell temper	1
Plain body with shell temper	1
Unidentifiable stamped body with grit/sand/shell temper	1
Ceramics Subtotal	81
Artifacts Total	98

While the presence of pottery suggests an occupational component dating to the Ceramic Late Archaic or later, the lack of other temporally diagnostic material precludes the confident assignment of components to any particular period. This site most likely represents the remnants of one or more short-term campsites associated with the exploitation of upland resources overlooking Sandy Run Creek. The artifact assemblage suggests the site's inhabitants were engaged in cooking and/or storing food in pottery vessels, as well as stone tool manufacture and maintenance.

Site 38UN1861 was fully delineated to the north and south, but the project area's boundary prevented full delineation to the east and west. The site is not known to be associated with events that have made a significant contribution to the broad pattern of history, nor is it known to be associated with the lives of persons significant in

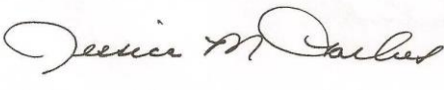
the past. In addition, it does not embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. Therefore, the site is recommended not eligible for the NRHP under Criteria A, B, and C. Investigators also assessed the NRHP eligibility of Site 38UN1861 with respect to Criterion D, its ability to add significantly to the understanding of the region's history. None of the artifacts are diagnostic. Nearly all the artifacts are very small, likely as a result of past farming and timbering activities within the area. Seventy-four of the 81 ceramic artifacts (91 percent) are 1 inch or smaller. Investigators recovered all artifacts from the former plow zone. Due to past farming and timbering activities, the potential for intact subsurface features to be present at the site is low. Additional investigation of the portion of Site 38UN1861 within the current project's archaeological APE is unlikely to generate information beyond the period of use (unknown pre-contact) and the presumed function (camp for procuring resources). Site 38UN1861 cannot generate additional important information concerning the past settlement patterns nor land-use practices within Union County. Because the site was not fully investigated, its NRHP eligibility under Criterion D is unknown. Since the site extends outside the project area, it was not fully assessed. However, the examined portion of Site 38UN1861 within the project area lacks integrity or research potential and does not appear to contribute to the eligibility of the overall site.

ARCHITECTURAL SURVEY: The SC 114 bridge (SCDOT Structure Number #0004440011400100) was built in 1954. The six-span concrete slab beam bridge is 84 feet long, with a width between the curbs of 24.2 feet. The bridge has a precast concrete panel deck. This bridge qualifies for streamlined review under the Federal Highway Administration's Post-1945 Bridges Program Comment; therefore, as a common concrete bridge type, it was not recorded nor evaluated for inclusion in the NRHP as part of this survey. Under the Program Comment, the bridge is not eligible for NRHP listing. No additional historic-age buildings or structures are within the architectural APE.

REMARKS AND RECOMMENDATIONS: HDR identified two archaeological resources (Sites 38UN1860 and 38UN1861) and no historic-age architectural resources during the survey. Site 38UN1860 is recommended not eligible for listing in the NRHP. Because Site 38UN1861 was not fully investigated, its NRHP eligibility under Criterion D is unknown. Since the site extends outside the project area, it was not fully assessed. However, the examined portion of Site 38UN1861 within the project area lacks integrity or research potential and does not appear to contribute to the eligibility of the overall site. No previously recorded historic properties are within the project area. Therefore, the project as currently planned will not affect any historic properties. If current proposed plans change, additional survey may be necessary.

SIGNATURE: 

DATE: March 21, 2023

SIGNATURE: 

DATE: March 21, 2023

REFERENCE CITED

Natural Resources Conservation Service (NRCS). 2023. *Soils Surveys for Union County, SC*. <https://websoilsurvey.nrcs.usda.gov/app/>, accessed February 2023.

LIST OF FIGURES

- Figure 1. Location of the SC 114 (Bobby Faucette Road) over Sandy Run Creek Bridge Replacement Project.
- Figure 2. Aerial photograph showing shovel test locations and newly recorded cultural resources.
- Figure 3. Severe erosion within the southwestern quadrant of the APE, looking northwest.
- Figure 4. View of the northeastern quadrant of the APE, looking southeast.
- Figure 5. Plan of Site 38UN1860.
- Figure 6. View of the eastern concrete endwall and wooden posts at Site 38UN1860, looking southeast.
- Figure 7. View from the eastern endwall/roadbed at Site 38UN1860, looking northwest.
- Figure 8. View of the western concrete endwall and wooden posts at Site 38UN1860, looking northwest.
- Figure 9. Portion of the 1953 construction plans showing the old road alignment.
- Figure 10. Plan of Site 38UN1861.
- Figure 11. View of the western portion of Site 38UN1861, looking southeast toward Sandy Run Creek.
- Figure 12. View of the eastern portion of Site 38UN1861, looking southeast toward Sandy Run Creek.
- Figure 13. Typical shovel test soil profile at Site 38UN1861.
- Figure 14. View of quartzite expanding stem biface fragment from Site 38UN1861.
- Figure 15. View of quartz tertiary flake from Site 38UN1861.
- Figure 16. View of undecorated sherds from Site 38UN1861.
- Figure 17. View of undecorated sherds from Site 38UN1861.
- Figure 18. View of stamped sherd from Site 38UN1861.

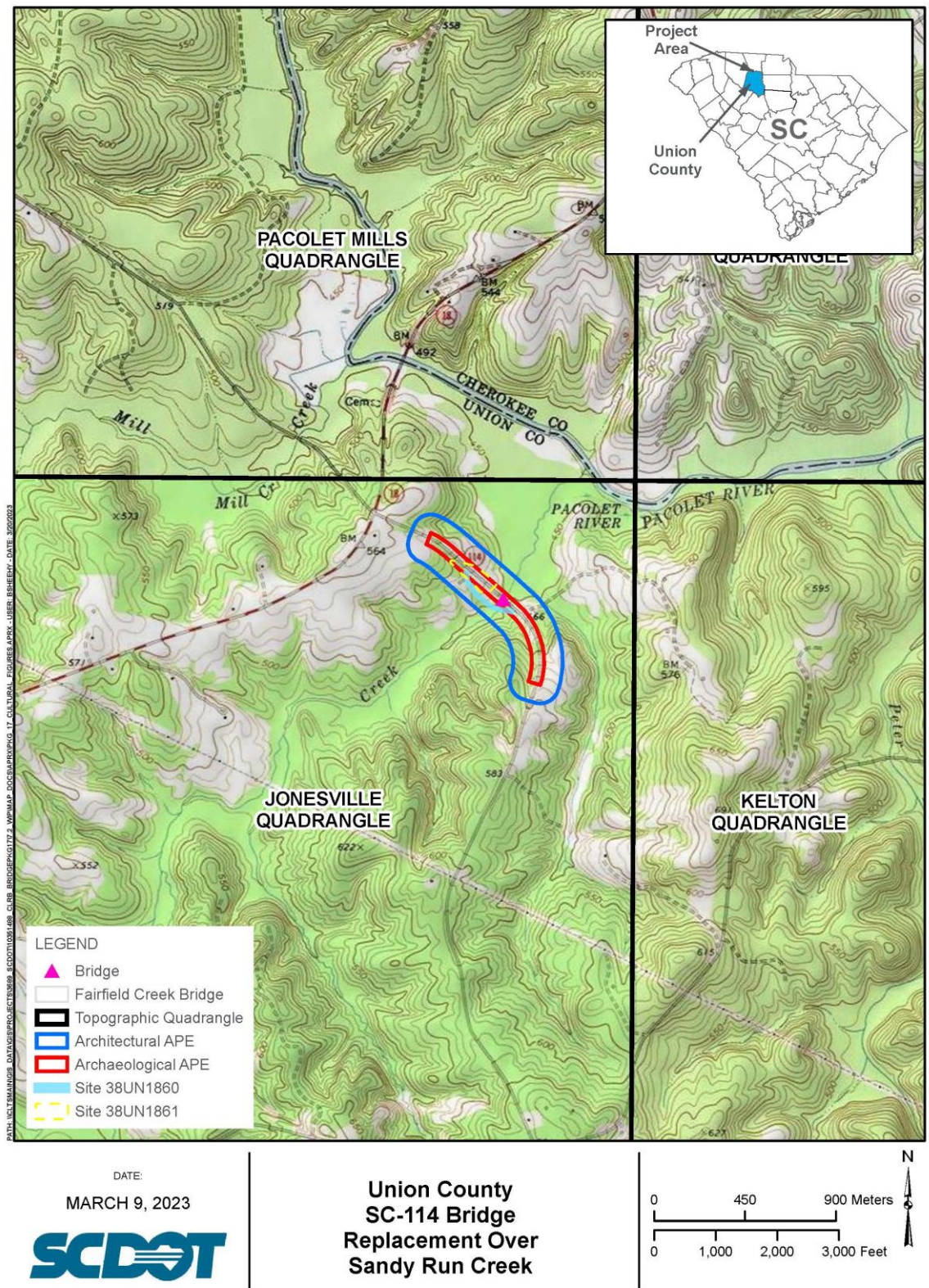


Figure 1. Location of the SC 114 (Bobby Faucette Road) over Sandy Run Creek Bridge Replacement Project.

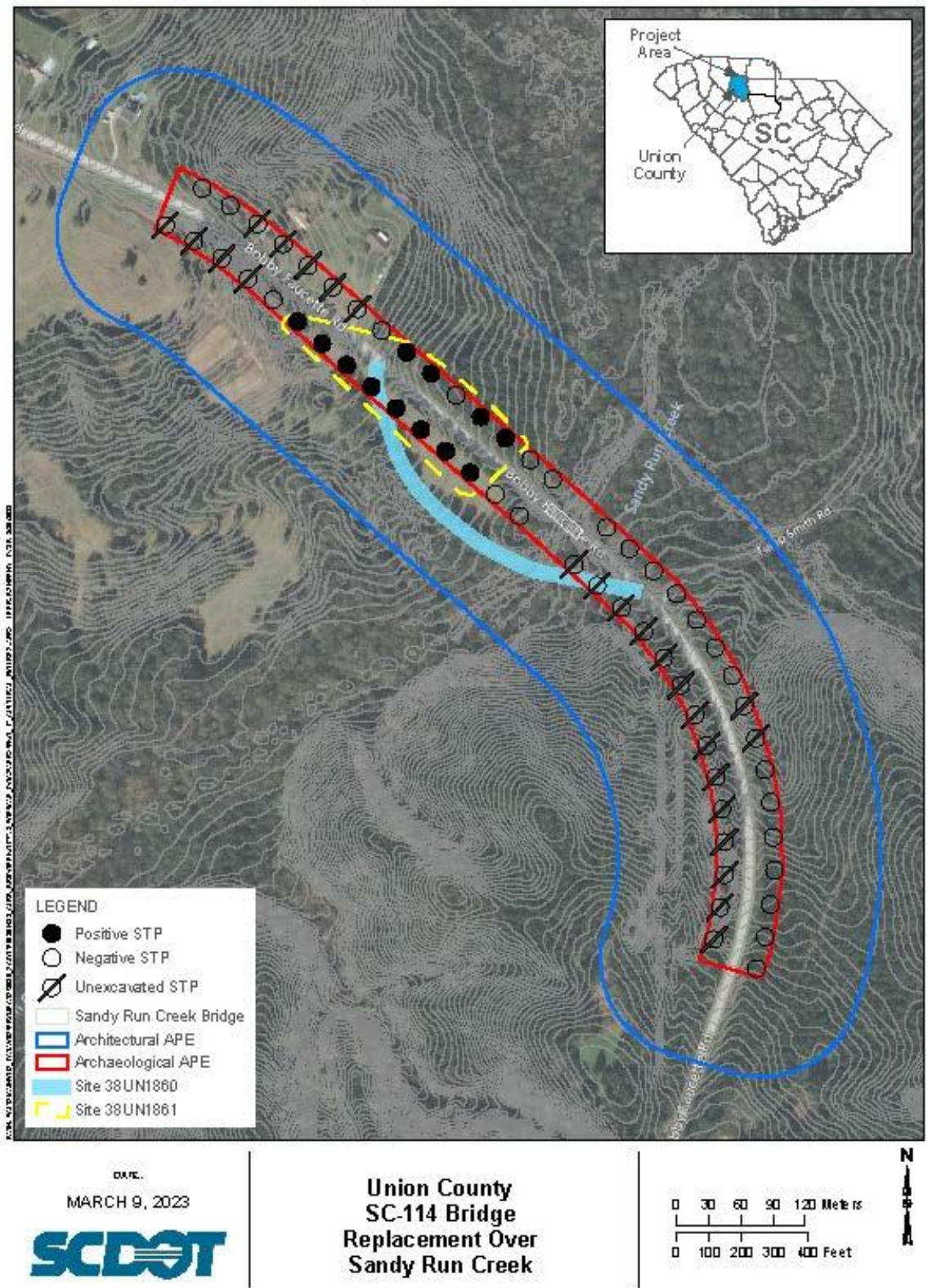


Figure 2. Aerial photograph showing shovel test locations and newly recorded cultural resources.



Figure 3. Severe erosion within the southwestern quadrant of the APE, looking northwest.



Figure 4. View of the northeastern quadrant of the APE, looking southeast.

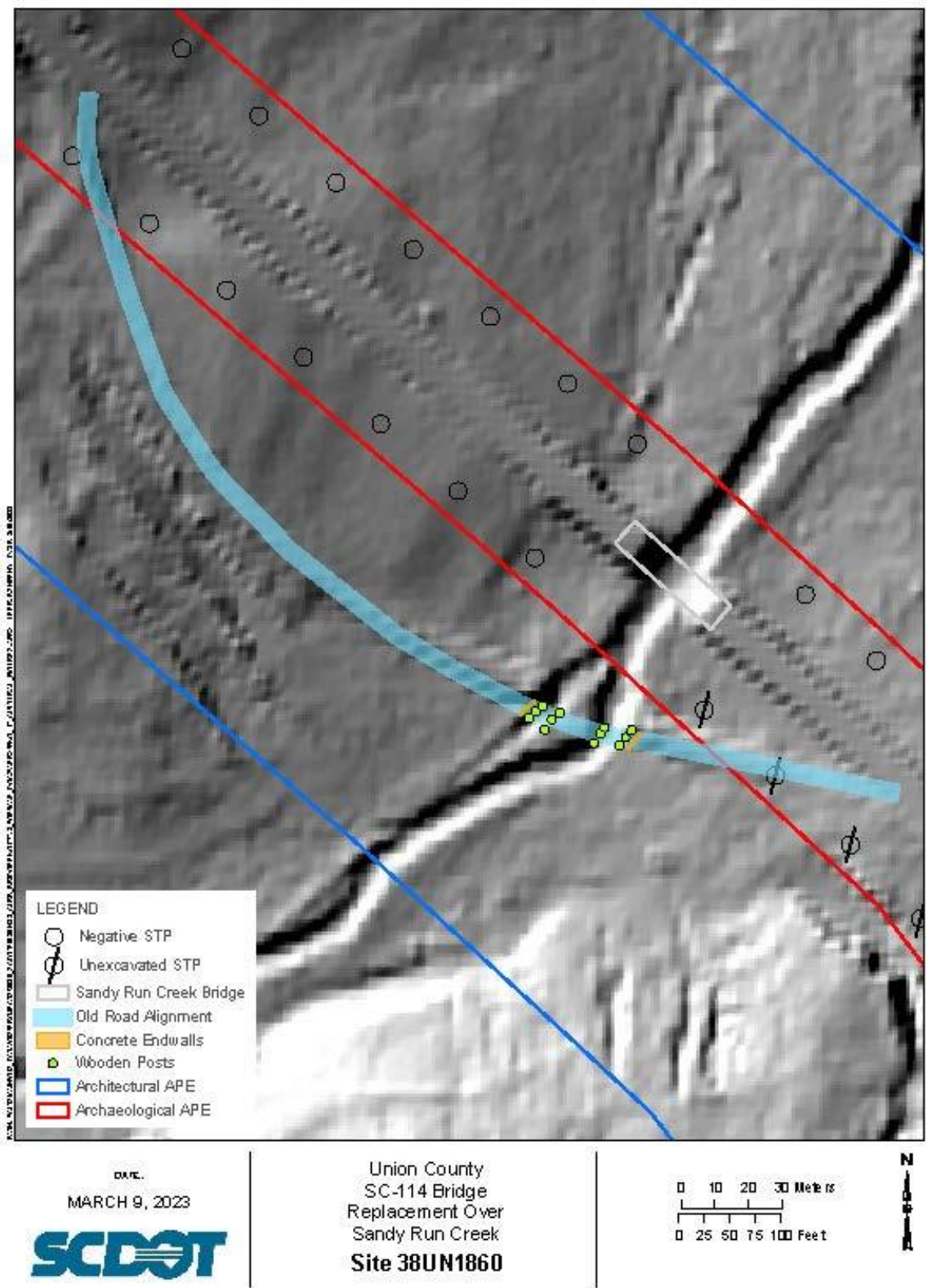


Figure 5. Plan of Site 38UN1860.



Figure 6. View of the eastern concrete endwall and wooden posts at Site 38UN1860, looking southeast.



Figure 7. View from the eastern endwall/roadbed at Site 38UN1860, looking northwest.



Figure 8. View of the western concrete endwall and wooden posts at Site 38UN1860, looking northwest.

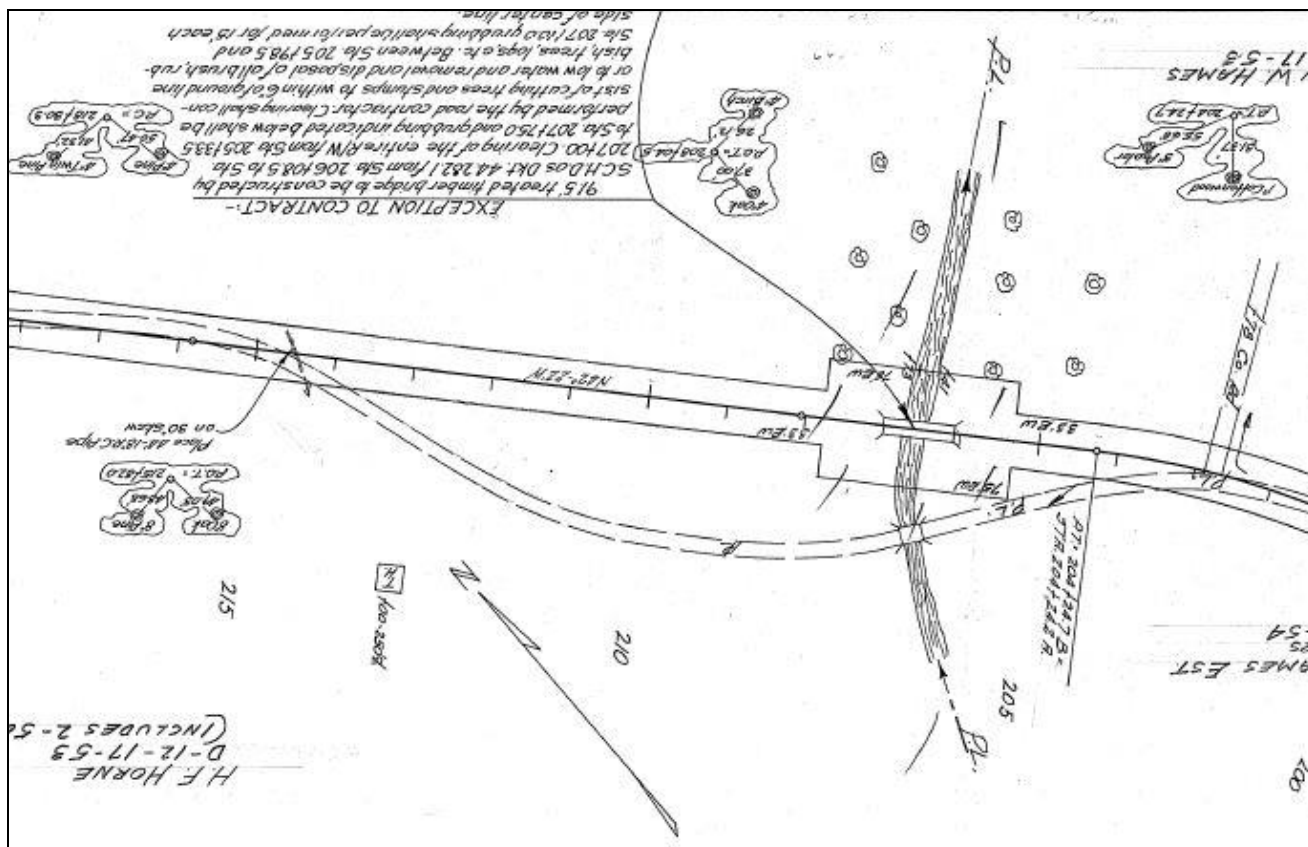


Figure 9. Portion of the 1953 construction plans showing the old road alignment.

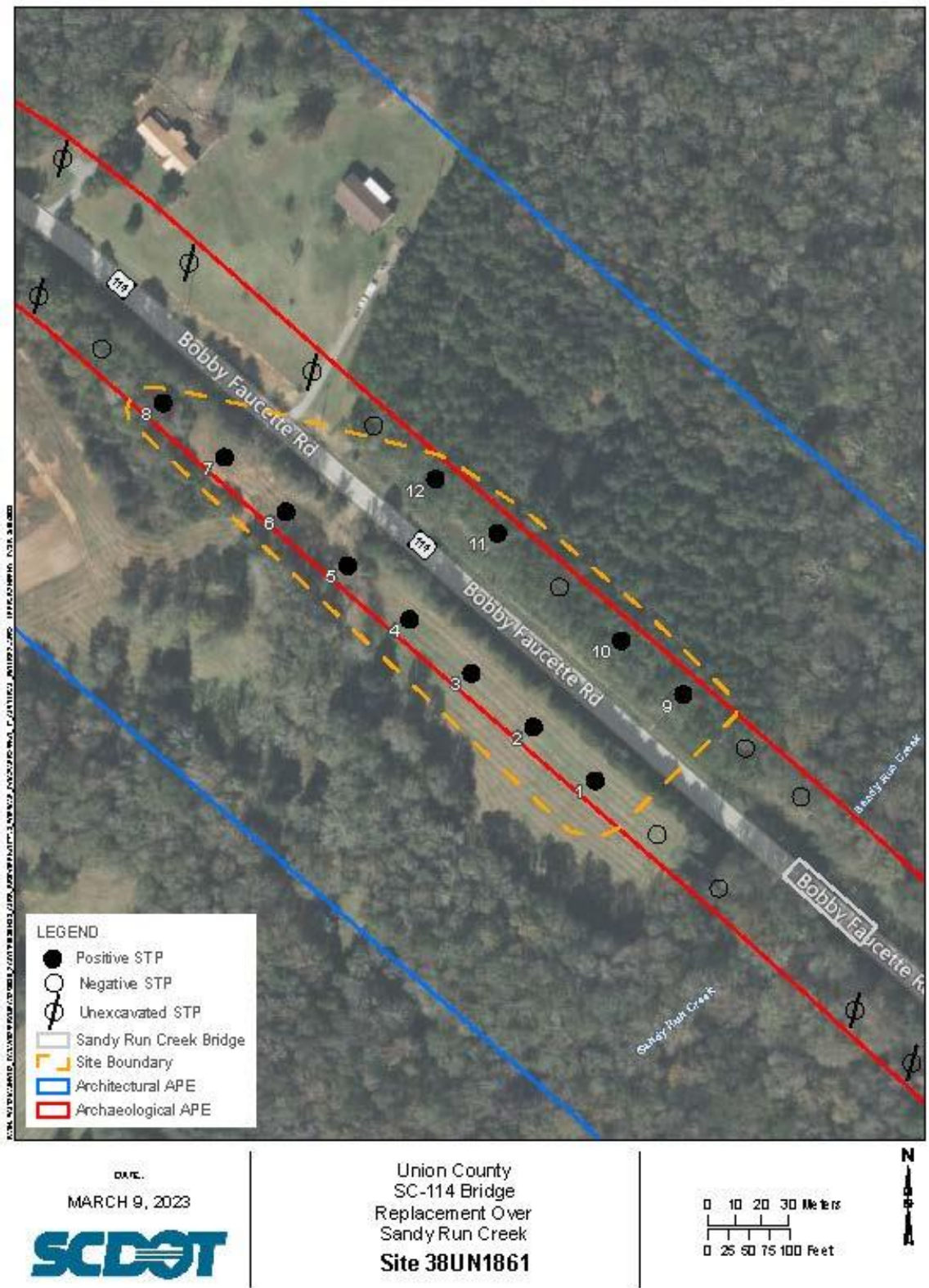


Figure 10. Plan of Site 38UN1861.



Figure 11. View of the western portion of Site 38UN1861, looking southeast toward Sandy Run Creek.



Figure 12. View of the eastern portion of Site 38UN1861, looking southeast toward Sandy Run Creek.



Figure 13. Typical shovel test soil profile at Site 38UN1861.



Figure 14. View of quartzite expanding stem biface fragment from Site 38UN1861.



Figure 15. View of quartz tertiary flake from Site 38UN1861.



Figure 16. View of undecorated sherds from Site 38UN1861.



Figure 17. View of undecorated sherds from Site 38UN1861.



Figure 18. View of stamped sherd from Site 38UN1861.

Attachment 1

Artifact Catalog

Site number	Provenience number	Specimen number	Count	Class	Type	Transect - Shovel Test	Level	Depth (cmbs)	Recovery Date	Notes	Bag Number	Cataloger Name	Catalog Date
38UN1861 1		1	1	Lithic Debitage	Shatter	TR 3 - ST 2 + 15m S	1	0-20	2/8/2023	Quartzite, white with pink veining, size: 1 - 2 in	1	Laura Short	2/17/2023
38UN1861 1		2	1	Lithic Debitage	Tertiary Flake	TR 3 - ST 2 + 15m S	1	0-20	2/8/2023	Quartz, size: 0.25 - 0.5 in	1	Laura Short	2/17/2023
38UN1861 1		3	2	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 2 + 15m S	1	0-20	2/8/2023	Body sherd, size: 0.5 - 1 in	1	Laura Short	2/17/2023
38UN1861 1		4	1	Precontact Ceramic	Plainware, Grit/Sand and shell temper	TR 3 - ST 2 + 15m S	1	0-20	2/8/2023	Body sherd, size: 0.5 - 1 in	1	Laura Short	2/17/2023
38UN1861 1		5	1	Precontact Ceramic	Plainware, Shell temper	TR 3 - ST 2 + 15m S	1	0-20	2/8/2023	Body sherd, size: 0.5 - 1 in	1	Laura Short	2/17/2023
38UN1861 2		1	6	Precontact Ceramic	Plainware, Grit/Sand Temper	TR 3 - ST 2	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	2	Laura Short	2/17/2023
38UN1861 3		1	1	Biface	Expanding stem, fragment	TR 3 - ST 3 + 15m S	1	0-20	2/8/2023	Quartzite, white with pink veining, size: 0.5 - 1 in	3	Laura Short	2/17/2023
38UN1861 3		2	1	Lithic debitage	Shatter	TR 3 - ST 3 + 15m S	1	0-20	2/8/2023	Quartzite, white, size: 0.5 - 1 in	3	Laura Short	2/17/2023
38UN1861 3		3	2	Lithic debitage	Tertiary Flake	TR 3 - ST 3 + 15m S	1	0-20	2/8/2023	Quartz, size: 0.25 - 0.5 in	3	Laura Short	2/17/2023
38UN1861 3		4	2	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 3 + 15m S	1	0-20	2/8/2023	Body sherd, size: 0.25 - 0.5 in	3	Laura Short	2/17/2023
38UN1861 3		5	5	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 3 + 15m S	1	0-20	2/8/2023	Body sherd, size: 0.5 - 1 in	3	Laura Short	2/17/2023
38UN1861 3		6	2	Precontact Ceramic	Plainware, Grit/Sand and shell temper	TR 3 - ST 3 + 15m S	1	0-20	2/8/2023	Body sherd, size: 0.5 - 1 in	3	Laura Short	2/17/2023
38UN1861 3		7	1	Precontact Ceramic	Plainware, Grit/Sand and shell temper	TR 3 - ST 3 + 15m S	1	0-20	2/8/2023	Rim sherd, size: 0.5 - 1 in	3	Laura Short	2/17/2023
38UN1861 4		1	1	Precontact Ceramic	Plainware, Grit/Sand and shell temper	TR 3 - ST 3	1	0-15	2/8/2023	Body sherd, size: 1 - 2 in	4	Laura Short	2/17/2023
38UN1861 4		2	1	Precontact Ceramic	Plainware, Grit/Sand and shell temper	TR 3 - ST 3	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	4	Laura Short	2/17/2023
38UN1861 4		3	1	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 3	1	0-15	2/8/2023	Body sherd, size: 1 - 2 in	4	Laura Short	2/17/2023
38UN1861 4		4	1	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 3	1	0-15	2/8/2023	Body sherd, size: 0.25 - 0.5 in	4	Laura Short	2/17/2023
38UN1861 4		5	8	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 3	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	4	Laura Short	2/17/2023
38UN1861 4		6	2	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 3	1	0-15	2/8/2023	Rim sherd, size: 0.5 - 1 in	4	Laura Short	2/17/2023
38UN1861 5		1	1	Lithic debitage	Tertiary Flake	TR 3 - ST 3 + 15m N	1	0-15	2/8/2023	Quartzite, white with tan veining, size: 0.5 - 1 in	5	Laura Short	2/17/2023
38UN1861 5		2	1	Lithic debitage	Tertiary Flake	TR 3 - ST 3 + 15m N	1	0-15	2/8/2023	Quartz, size: 0.5 - 1 in	5	Laura Short	2/17/2023
38UN1861 5		3	3	Lithic debitage	Tertiary Flake	TR 3 - ST 3 + 15m N	1	0-15	2/8/2023	Quartz, size: 0.25 - 0.5 in	5	Laura Short	2/17/2023
38UN1861 5		4	1	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 3 + 15m N	1	0-15	2/8/2023	Body sherd, size: 0.25 - 0.5 in	5	Laura Short	2/17/2023
38UN1861 5		5	9	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 3 + 15m N	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	5	Laura Short	2/17/2023
38UN1861 5		6	1	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 3 + 15m N	1	0-15	2/8/2023	Body sherd, size: 0.25 - 0.5 in	5	Laura Short	2/17/2023
38UN1861 5		7	1	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 3 + 15m N	1	0-15	2/8/2023	Body sherd, size: 1 - 2 in	5	Laura Short	2/17/2023
38UN1861 5		8	10	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 3 + 15m N	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	5	Laura Short	2/17/2023
38UN1861 6		1	1	Lithic debitage	Shatter	TR 3 - ST 4	1	0-15	2/8/2023	Quartzite, white with tan veining, size: 1 - 2 in	6	Laura Short	2/17/2023
38UN1861 6		2	1	Precontact Ceramic	Plainware, Grit/Sand and shell temper	TR 3 - ST 4	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	6	Laura Short	2/17/2023
38UN1861 6		3	2	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 4	1	0-15	2/8/2023	Body sherd, size: 1 - 2 in	6	Laura Short	2/17/2023
38UN1861 7		1	1	Lithic debitage	Tertiary Flake	TR 3 - ST 4 + 15m N	1	0-10	2/8/2023	Quartzite, white, size: 0.5 - 1 in	7	Laura Short	2/17/2023
38UN1861 7		2	1	Lithic debitage	Shatter	TR 3 - ST 4 + 15m N	1	0-10	2/8/2023	Quartzite, white with orange veining, size: 0.5 - 1 in	7	Laura Short	2/17/2023
38UN1861 7		3	1	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 4 + 15m N	1	0-10	2/8/2023	Body sherd, size: 0.25 - 0.5 in	7	Laura Short	2/17/2023
38UN1861 7		4	1	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 4 + 15m N	1	0-10	2/8/2023	Body sherd, size: 0.5 - 1 in	7	Laura Short	2/17/2023
38UN1861 7		5	1	Ecofact	Schist	TR 3 - ST 4 + 15m N	1	0-10	2/8/2023	Body sherd, size: 0.5 - 1 in	7	Laura Short	2/17/2023
38UN1861 8		1	1	Lithic debitage	Tertiary Flake	TR 3 - ST 5	1	0-15	2/8/2023	Slate, green, size: 2 - 4 in	8	Laura Short	2/17/2023
38UN1861 8		2	1	Precontact Ceramic	Stamped, Grit/Sand and shell temper	TR 3 - ST 5	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in, piece too small to determine type	8	Laura Short	2/17/2023
38UN1861 8		3	1	Precontact Ceramic	Plainware, Grit/Sand temper	TR 3 - ST 5	1	0-15	2/8/2023	Body sherd, size: 0.25 - 0.5 in	8	Laura Short	2/17/2023
38UN1861 9		1	1	Lithic debitage	Shatter	TR 4 - ST 14 + 15m S	1	0-15	2/8/2023	Quartzite, white, size: 0.5 - 1 in	9	Laura Short	2/17/2023
38UN1861 9		2	1	Precontact Ceramic	Plainware, Grit/Sand temper	TR 4 - ST 14 + 15m S	1	0-15	2/8/2023	Body sherd, size: 1 - 2 in	9	Laura Short	2/17/2023
38UN1861 9		3	2	Precontact Ceramic	Plainware, Grit/Sand temper	TR 4 - ST 14 + 15m S	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	9	Laura Short	2/17/2023
38UN1861 9		4	3	Precontact Ceramic	Plainware, Grit/Sand and shell temper	TR 4 - ST 14 + 15m S	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	9	Laura Short	2/17/2023
38UN1861 9		5	1	Ecofact	Schist	TR 4 - ST 14 + 15m S	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	9	Laura Short	2/17/2023

Artifact Catalog

Site number	Provenience number	Specimen number	Count	Class	Type	Transect - Shovel Test	Level	Depth (cmbs)	Recovery Date	Notes	Bag Number	Cataloger Name	Catalog Date
38UN1861	10	1	1	Precontact Ceramic	Plainware, Grit/Sand temper	TR 4 - ST 14	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	10	Laura Short	2/17/2023
38UN1861	11	1	2	Precontact Ceramic	Plainware, Grit/Sand and shell temper	TR 4 - ST 13	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	11	Laura Short	2/17/2023
38UN1861	11	2	6	Precontact Ceramic	Plainware, Grit/Sand temper	TR 4 - ST 13	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	11	Laura Short	2/17/2023
38UN1861	12	1	1	Lithic debitage	Shatter	TR 4 - ST 13 + 15 m N	1	0-15	2/8/2023	Quartzite, tan with orange veining, size: 0.5 - 1 in	12	Laura Short	2/17/2023
38UN1861	12	2	1	Precontact Ceramic	Plainware, Grit/Sand temper	TR 4 - ST 13 + 15 m N	1	0-15	2/8/2023	Body sherd, size: 1 - 2 in	12	Laura Short	2/17/2023
38UN1861	12	3	2	Precontact Ceramic	Plainware, Grit/Sand temper	TR 4 - ST 13 + 15 m N	1	0-15	2/8/2023	Body sherd, size: 0.5 - 1 in	12	Laura Short	2/17/2023

Attachment B – Natural Resources Technical Memo



Memo

Date: April 7, 2023

Project: SC-114 Bridge Replacement over Sandy Run Creek
SCDOT PIN # P041239

To: Will McGoldrick – SCDOT

From: Paul Bright – HDR
Michael Inman – HDR

Subject: **Natural Resources Survey Technical Memorandum**

HDR conducted a natural resources survey for the South Carolina Department of Transportation (SCDOT) SC-114 (Bobby Faucette Road) Bridge Replacement over Sandy Run Creek (Project) on February 1, 2023. The Project will involve the replacement of the SC-114 Bridge over Sandy Run Creek to improve structural integrity, capacity, and/or safety concerns.

The Study Area is 100 feet from the road centerline (200 feet total) and extends 1,500 feet from either end of the bridge along SC-114. The Study Area encompasses approximately 14.4 acres and primarily consists of undeveloped forested lands and residential land use with existing road right-of-way along SC-114 in Union County, South Carolina (Attachment 1, Figures 1 through 3). This technical memorandum provides a summary of HDR's methods and findings from a desktop analysis and on-site natural resources survey. Attached to this memorandum are supporting figures, an SCDOT Permit Determination Form and South Carolina Department of Health and Environmental Control (SCDHEC) Watershed and Water Quality Information Report, HDR's biological assessment, and a U.S. Fish and Wildlife Service (USFWS) Consistency Letter.

Desktop Analysis Methods

A desktop analysis was completed as part of an initial Study Area evaluation to identify key environmental resources to be considered for permitting and/or design. The potential resources identified in the desktop evaluation were field-verified by HDR to ensure that critical regulatory items will not adversely impact the Project. The following resources were consulted during the desktop analysis:

- Federal Emergency Management Agency (FEMA) Map Service Center (<https://msc.fema.gov/portal>)
- South Carolina Department of Natural Resources (SCDNR) and South Carolina Natural Heritage Program (SCNHP) (<https://schportal.dnr.sc.gov/portal/apps/sites/#/natural-heritage-program>)
- USFWS Environmental Conservation Online System (ECOS) (<https://ecos.fws.gov/ecp/>)
- USFWS Information for Planning and Consultation (IPaC) (<https://ecos.fws.gov/ipac/>)

- USFWS National Wetland Inventory (NWI) (<http://www.fws.gov/wetlands>)
- U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) (<http://nhd.usgs.gov/>)
- USGS Topographic Quadrangle Maps (1:24,000-scale) Whitmire North Quadrangle

Wetlands and Jurisdictional Waters of U.S.

On-site reconnaissance activities identified one stream and one wetland within the Study Area (Attachment 1, Figure 4). A summary of jurisdictional waters of the U.S. is provided in Table 1.

Table 1. Summary of Delineated Waters of the U.S. within the Study Area

Feature Name	Coordinates (Decimal Degrees)	Type of Aquatic Resource	Cowardin et al. (1979) Classification ¹	Estimated Amount of Aquatic Resource in Study Area
Streams				
Stream 1 Sandy Run Creek	34.869665 -81.632125	non-section 10 - non-wetland	R3UB2	Length: 207 lf Average Width: 25 ft
Total Streams:				Length: 207 lf
Wetlands				
Wetland 1	34.869715 -81.631728	non-section 10 - wetland	PFO	Area: 0.08 ac.
Total Wetlands:				Area: 0.08 ac.

¹ R3UB2: Riverine, upper perennial, unconsolidated bottom, with a sand bottom
PFO: Palustrine, forested

Based on the preliminary bridge design, impacts to jurisdictional waters may occur during construction but remain below USACE General Permit limitations. An SCDOT Permit Determination Form has been completed and is provided as Attachment 2, in addition to an SCDHEC Watershed and Water Quality Information Report.

A field survey was also conducted within the Study Area pursuant to Section 7 of the Endangered Species Act. Results are provided in HDR's biological assessment (Attachment 3). The USFWS IPaC and county species list were used to determine what potential federally protected species could occur on site.



Attachments

- Attachment 1 – Figures
- Attachment 2 – SCDOT Permit Determination Form and SCDHEC Watershed and Water Quality Information Report
- Attachment 3 – Biological Assessment
- Attachment 4 – USFWS NLEB Range Map
- Attachment 5 – SCDNR South Carolina Rare, Threatened and Endangered Species Inventory for Union County

References

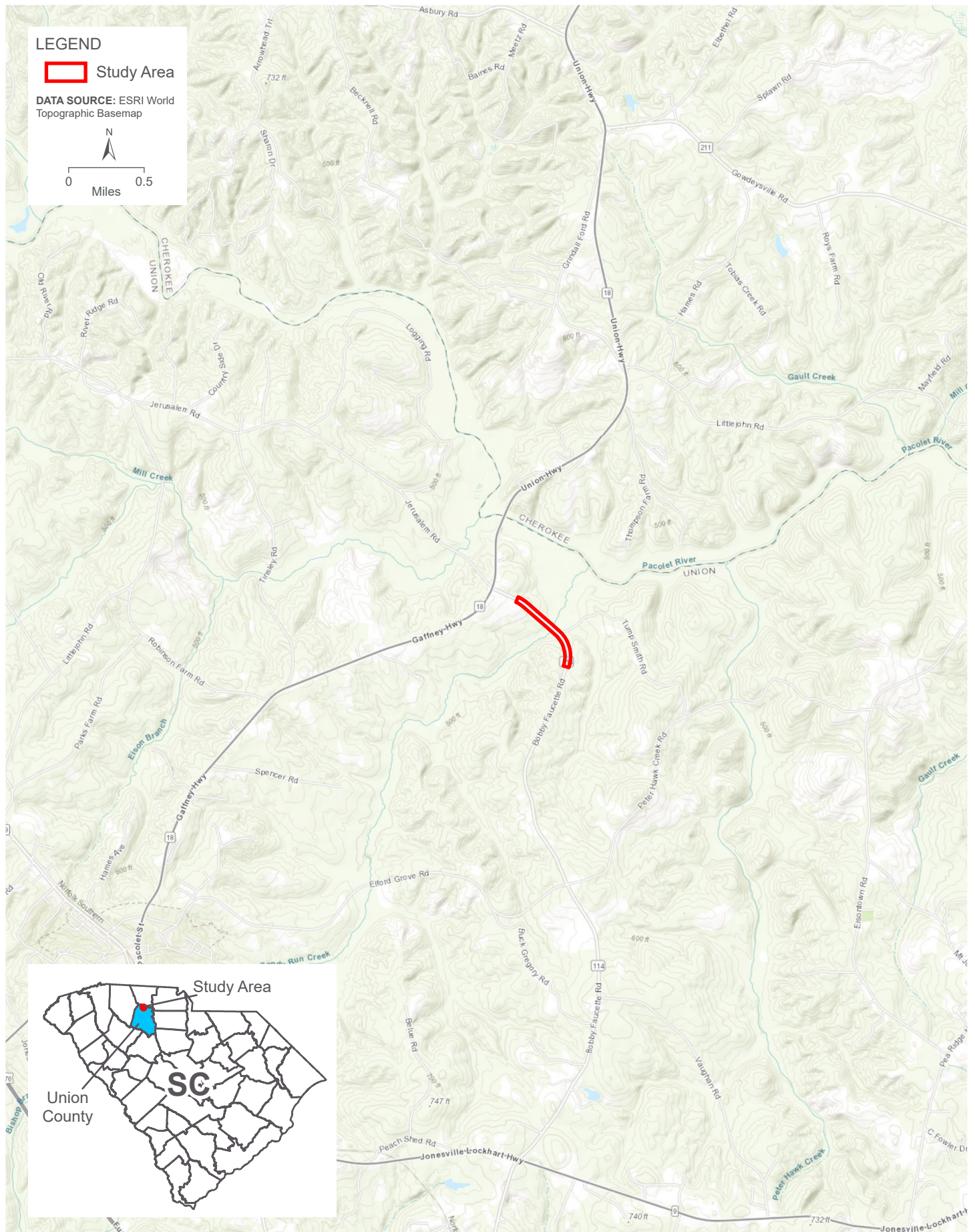
- Cowardin, L.M., Carter, V., Golet, F.C., and LaRoe, E.T. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, Washington, D.C.
- Federal Emergency Management Agency (FEMA). 2020. Special Flood Hazard Area Definition/Description. [Online] URL: <http://www.fema.gov/special-flood-hazard-area>. (Accessed January 2023).
- South Carolina Natural Heritage Program (SCNHP). 2022. Data Explorer database. [Online] URL: <https://sclportal.dnr.sc.gov/portal/apps/sites/#/natural-heritage-program>. (Accessed January 2023).



1

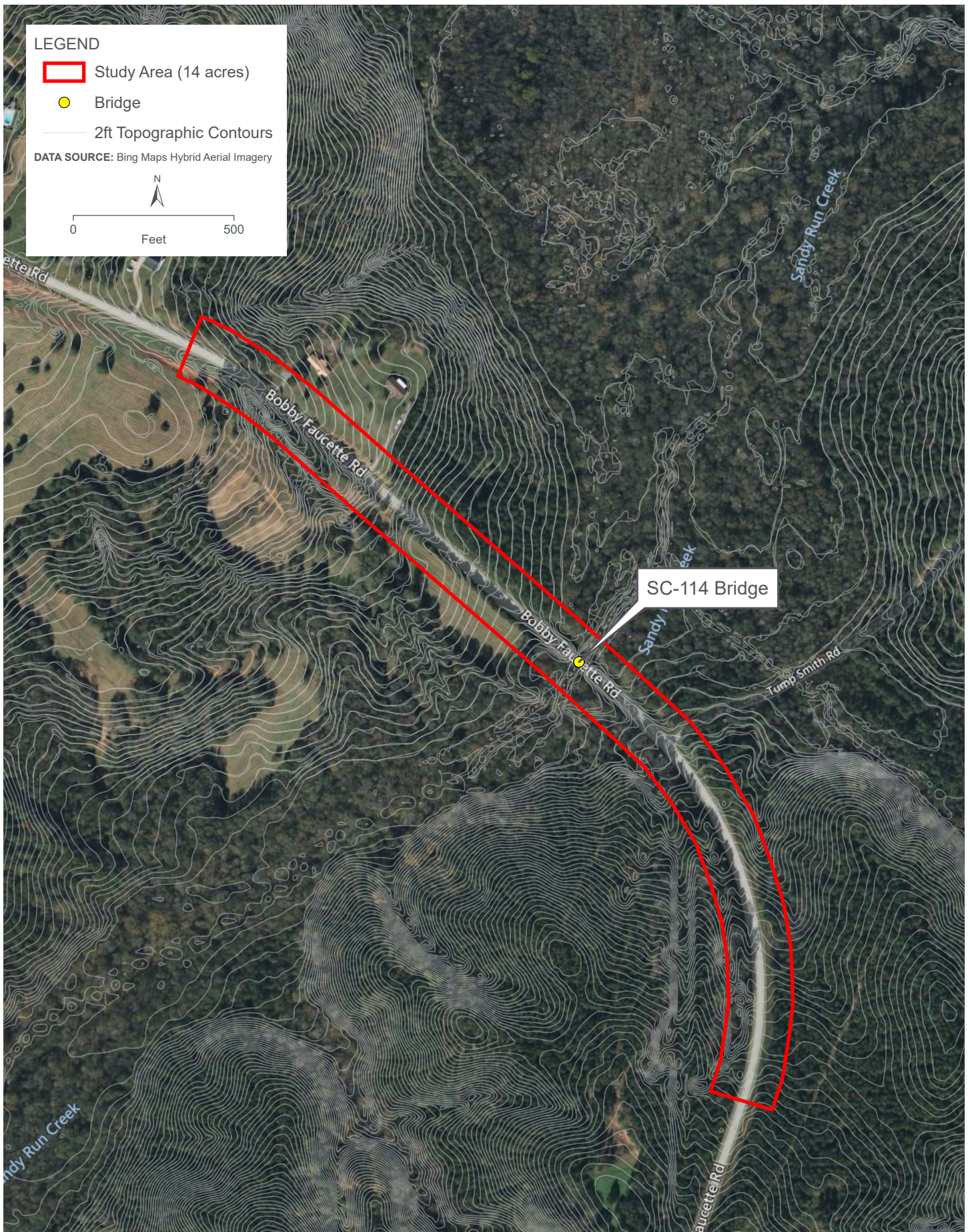
Figures





SC-114 BRIDGE REPLACEMENT OVER SANDY RUN CREEK PROJECT VICINITY

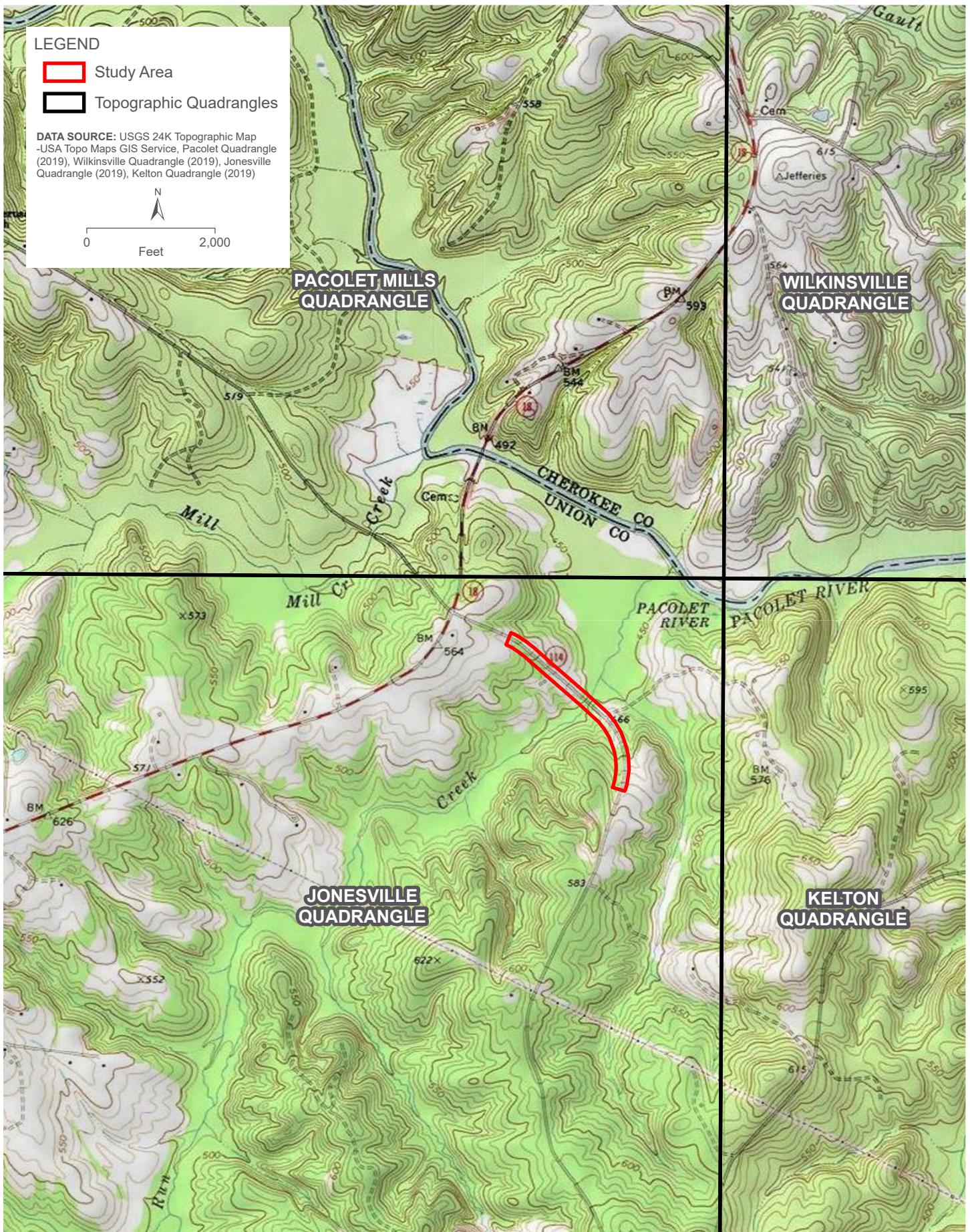
Figure 1



SC-114 BRIDGE REPLACEMENT OVER SANDY RUN CREEK

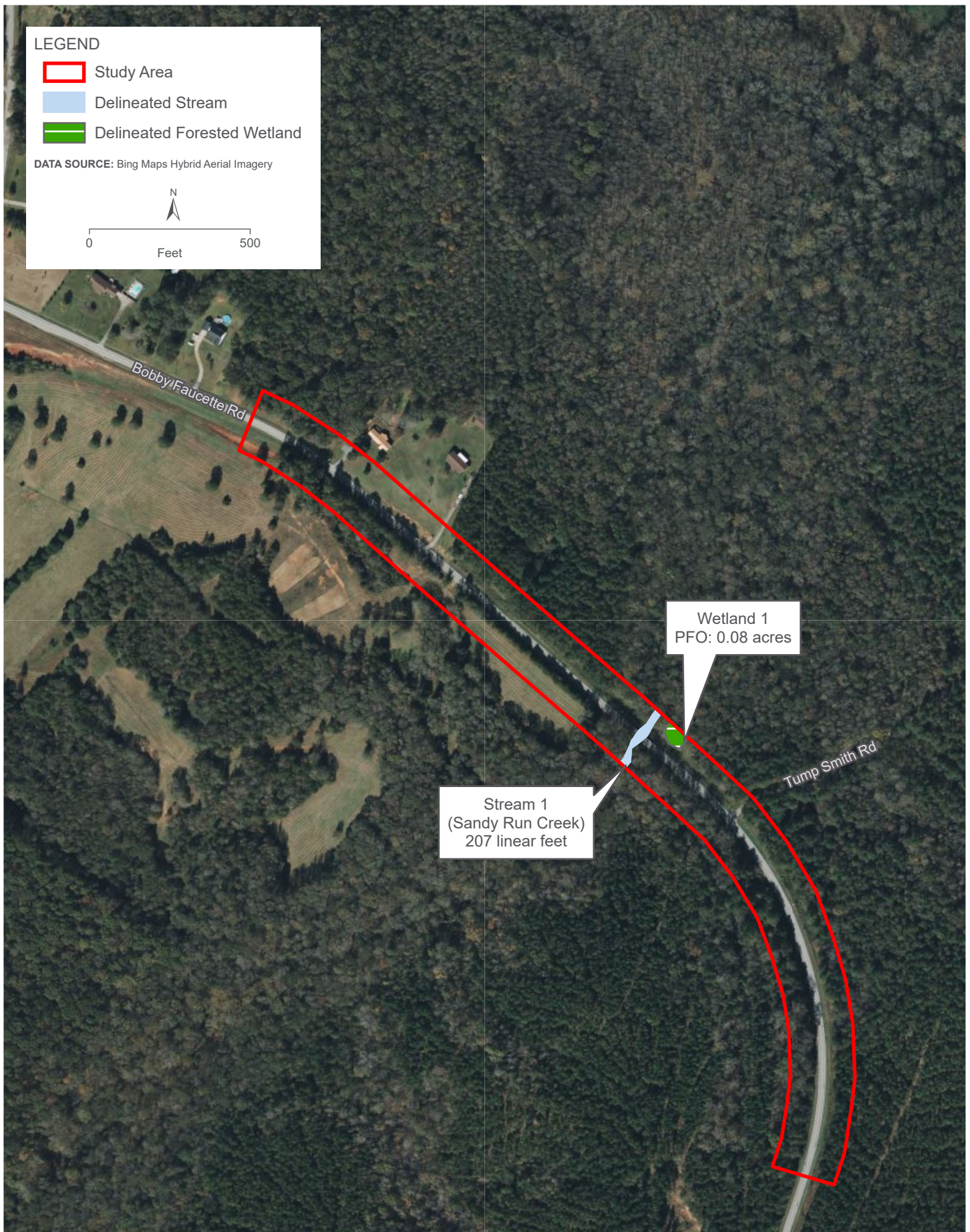
PROJECT AERIAL

Figure 2



SC-114 BRIDGE REPLACEMENT OVER SANDY RUN CREEK USGS TOPOGRAPHIC QUADRANGLES

Figure 3



SC-114 BRIDGE REPLACEMENT OVER SANDY RUN CREEK APPROXIMATE BOUNDARIES OF WATERS OF THE U.S.

Figure 4

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2

SCDOT Permit Determination Form and SCDHEC Watershed and Water Quality Information Report

Date: 4/7/2022

PERMIT DETERMINATION

FROM Paul Bright COMPANY HDR Engineering, Inc.

CONTACT INFO (phone and/or email) paul.bright@hdrinc.com

SCDOT PROJECT ENGINEER Michael Pitts

TO Will McGoldrick - Design Build Coordinator

Project Description Replacing SC-114 (Bobby Faucette Road) bridge over Sandy Run Creek in Union County

Route or Road No. SC-114 County Union

CONST. PIN P041239 OTHER PINS or STRUCTURE # _____

RESPONSE:

☐ It has been determined that no permits are required because:

☒ The following permit(s) is/are necessary:
(Please check which type(s) of permit the project will need)

USACE Permit ☒ GP ☐ IP ☐ 401 ☐ JD

OCRM Permit ☐ CAP ☐ CZC

Navigable ☐ SCDHEC NAVGP — if checked a USCG and/or USACE navigable permit may also be required, but will be determined during the NEPA and Permitting stages.

Other _____

Water Classification: FW *Print and attach the SCDHEC water quality report*

303(d) listed ☒ no ☐ yes, for * _____

TMDL developed ☐ no ☒ yes, for * ECOLI

*List all that apply using the SCDHEC abbreviations

Comments: S-183 is a bridge replacement project. Impacts to jurisdictional features are anticipated but would meet USACE General Permit thresholds.

The determination above was based on the most recently available information at the time. This is a preliminary determination and is subject to change if the design of the project is modified.

Bright, Paul Digitally signed by Bright, Paul
Date: 2023.04.07 14:03:59
+04'00'

Biologist, SCDOT/Consultant

4/7/2023

Date



Watershed and Water Quality Information

General Information

Applicant Name: SCDOT

Permit Type: Construction

Address: 1460 BOBBY FAUCETTE RD,
JONESVILLE, SC, 29353

Latitude/Longitude: 34.869660 / -81.632110

MS4 Designation: Not in designated area

Monitoring Station: B-653

Within Coastal Critical Area: No

Water Classification (Provisional): FW

Waterbody Name: SANDY RUN CREEK

Entered Waterbody Name:

Parameter Description

NH3N	Ammonia	CD	Cadmium	CR	Chromium
CU	Copper	HG	Mercury	NI	Nickel
PB	Lead	ZN	Zinc	DO	Dissolved Oxygen
PH	pH	TURBIDITY	Turbidity	ECOLI	Escherichia coli (Freshwaters)
FC	Fecal Coliform (Shellfish)	BIO	Macroinvertebrates (Bio)	TP	(Lakes) Phosphorus
TN	(Lakes) Nitrogen	CHLA	(Lakes) Chlorophyll a	ENTERO	Enterococcus (Coastal Waters)
HGF	Mercury (Fish Tissue)	PCB	PCB (Fish)		

Impaired Status (downstream sites)

Station	NH3N	CD	CR	CU	HG	NI	PB	ZN	DO	PH	TURBIDITY	ECOLI	FC	BIO	TP	TN	CHLA	ENTERO	HGF	PCB
B-653	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	F	X

F = Standards full supported

A = Assessed at upstream station

WnTN = Within TMDL, parameter not supported

WnTF = Within TMDL, parameter full supported

N = Standards not supported

X = Parameter not assessed at station

InTN = In TMDL, parameter not supported

InTF = In TMDL, parameter full supported

Parameters to be addressed (those not supporting standards)

Fish Consumption Advisory

Waters of Concern (WOC)

TMDL Information - TMDL Parameters to be addressed

In TMDL Watershed: Yes

TMDL Site: B-048

TMDL Report No: 022-04

TMDL Parameter: Fecal

TMDL Document Link: https://www.scdhec.gov/sites/default/files/docs/HomeAndEnvironment/Docs/tmdl_ubroad_fc.pdf

Report Date: January 26, 2023

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3

Biological Assessment

Biological Assessment of the
SC-114 Bridge Replacement over Sandy Run Creek
Union County, SC
SCDOT PIN # P041239
February 23, 2023

Pursuant to Section 7 of the Endangered Species Act, a field survey was conducted within the Study Area. The following list of federally protected species was obtained from the U.S. Fish and Wildlife Service (USFWS), and the South Carolina Rare, Threatened and Endangered Species Inventory for Union County. This includes bat species for which federal guidance is currently being updated:

Mammals

Northern long-eared bat (*Myotis septentrionalis*) – E
Tricolored bat (*Perimyotis subflavus*) – Proposed Endangered

Methods

The Study Area was examined by GIS and field reconnaissance methods on February 1, 2023. Habitats surveyed were determined by the species' ecological requirements.

Results

The Project consists of replacing a bridge and associated road work on SC-114 over Sandy Run Creek in Union County, South Carolina. Land use in the vicinity of the Project includes residential, agriculture, and forested upland areas with a bottomland hardwood forest riparian corridor. Habitat types within the Study Area consist of bottomland forested wetlands dominated by large canopy tree species such as river birch (*Betula nigra*), water oak (*Quercus nigra*), and American sycamore (*Platanus occidentalis*) with an understory dominated by herbaceous species such as switchcane (*Arundinaria tecta*) and Japanese stiltgrass (*Microstegium vimineum*).

Bottomland hardwoods are typically found on floodplains of rivers and streams, and can occur in the Piedmont as well as the Coastal Plain. Typical tree species found in bottomland hardwood communities include sweetgum (*Liquidambar styraciflua*), loblolly pine (*Pinus taeda*), hackberry (*Celtis laevigata*), overcup oak (*Quercus lyrata*), water oak, willow oak (*Q. phellos*), laurel oak (*Q. laurifolia*), swamp chestnut oak (*Q. michauxii*), cherrybark oak (*Q. falcata* var. *pagodafolia*), white ash (*Fraxinus americana*), sycamore (*Platanus occidentalis*), American holly (*Ilex opaca*), and American elm (*Ulmus americana*). Typically, there is a subcanopy of young canopy species and many tall shrubs including southern arrowwood (*Viburnum dentatum*) and blackhaw (*V. prunifolium*). Vine species are typically common and can include poison ivy (*Toxicodendron radicans*), summer grape (*Vitis aestivalis*), and crossvine (*Bignonia capreolata*). The herb layer contains false nettle (*Boehmeria cylindrica*), cardinal flower (*Lobelia cardinalis*), royal fern (*Osmunda regalis*), and eastern marsh fern (*Thelypteris palustris*).

The forested upland areas consist primarily of a dense mixed pine forest dominated by loblolly pine and sweetgum. In addition to the roadway embankment, there is a maintained powerline that parallels SC-114 to the northeast.

Sandy Run Creek is classified as a perennial, unconsolidated bottom, riverine system. The creek is somewhat incised with areas of minor bank erosion, and it appears that it occasionally leaves its banks during heavy rain events. Large depositional bars were observed under and directly upstream and downstream of the bridge; however, no vegetation was growing in the channel.

According to the South Carolina Department of Natural Resources (SCDNR) Heritage Trust database of endangered, threatened, and rare species, there are no occurrences of any federally listed species in the vicinity of the Project. The open grass areas, road, and transmission rights-of-way offer a variety of flowering plants for nectar, which could include plants from the milkweed genus (*Asclepias* spp.). Potential habitat for the monarch butterfly was identified within the Study Area for migrating and breeding adults; however, neither Section 7 of the Endangered Species Act nor the implementing regulations for Section 7 contain requirements for federal agencies in relation to candidate species. No individuals of monarch butterflies were observed within the Study Area during the field survey. Tricolored bat and northern long eared bat habitat was surveyed and identified within the forested areas on site as well as under the SC-114 bridge; however, there was no evidence of bat use. A formal survey for tricolored bat and northern long eared bat was not conducted.

According to the SCDNR Rare, Threatened and Endangered Species Inventory, there are no records of federally listed species occurring in Union County, South Carolina. While this inventory list does include northern long-eared bat, the current range for northern long-eared bat does not extend into Union County. A map of the northern long-eared bat range in South Carolina (USFWS 2023) is attached to this report.

Based on the lack of suitable habitat and/or no observations of the listed species in the vicinity of the Project, results of the threatened and endangered species study indicate that the proposed action will not affect any threatened or endangered species or critical habitats currently listed by the USFWS.

Submitted by:



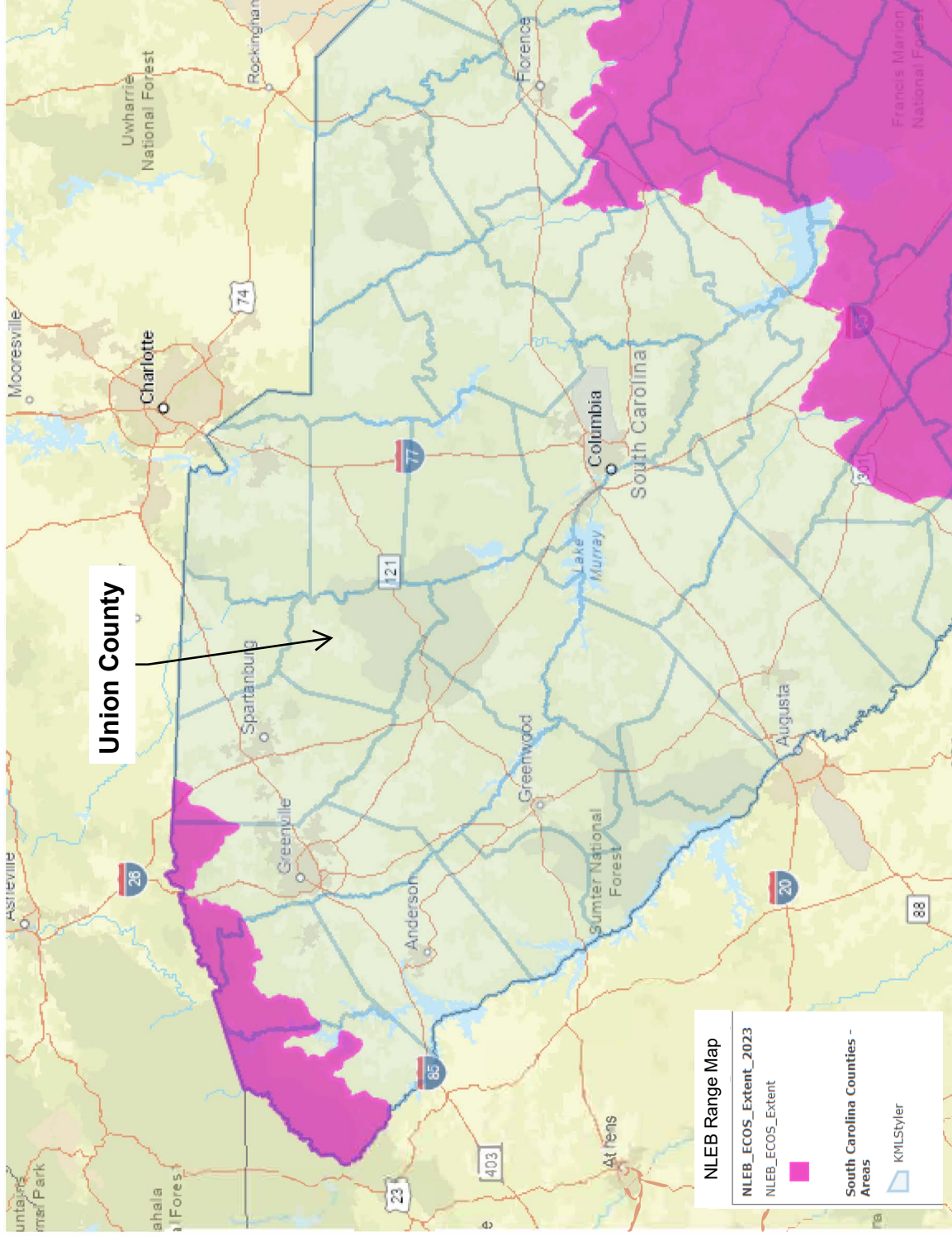
Paul Bright
HDR Environmental Scientist
4/7/2023



4

USFWS NLEB Range Map

NLEB Range Map



The page features a large blue rectangle on the left side, a grey rectangle at the top right, and a black rectangle at the bottom right. The number '5' is positioned to the right of the blue rectangle.

5

SCDNR South Carolina Rare, Threatened and Endangered Species Inventory for Union County

UNION COUNTY

CATEGORY	COMMON NAME/STATUS	SCIENTIFIC NAME	SURVEY WINDOW/ TIME PERIOD	COMMENTS
Fish	Robust redhorse (ARS)	<i>Moxostoma robustum</i>	Late April-early May	Temperature dependent: 16-24°C
Insect	Monarch butterfly (C)	<i>Danaus plexippus</i>	August-December	Overwinter population departs; March-April
Mammal	Northern long-eared bat (T)	<i>Myotis septentrionalis</i>	Year round	Winter surveys not as successful
Mammal	Tri-colored bat (ARS)	<i>Perimyotis subflavus</i>	Year round	Found in mines and caves in the winter
Plant	Georgia aster (ARS*)	<i>Symphotrichum georgianum</i>	Early October-mid November	

Note: There are no federally protected species found in this county in the amphibian, bird, crustacean, mollusk, and reptile family categories.

Attachment C – Bridge Replacement Scoping Risk Assessment Form

BRIDGE REPLACEMENT SCOPING TRIP RISK ASSESSMENT FORM

COUNTY: Union

DATE: 03/03/2023

ROAD #: SC-114

STREAM CROSSING: Sandy Run Creek

Purpose & Need for the Project:

SCDOT proposes to replace the SC-114 (Bobby Faucette Rd) Bridge over Fairforest Creek in Union County. The purpose of this project is to replace the bridge to correct the load restriction placed on it as well as restore bridge components to good condition. The existing bridge is posted for load restrictions and has one or more components in poor condition.

I. FEMA Acknowledgement

Is this project located in a regulated FEMA Floodway? ☐ Yes ☒ No

Panel Number: 45087C0200D Effective Date: 08/02/2011 (See Attached)

II. FEMA Floodmap Investigation

FEMA Flood Profile Sheet Number _____ illustrates the existing 100 year flood:

- ☐ Passes under the existing low chord elevation.
- ☐ Is in contact with the existing low chord elevation.
- ☐ Overtops the existing bridge finished grade elevation.

III. No Rise/CLOMR Preliminary Determination

- ☒ Preliminary assessment indicates this project may be constructed to meet the "No-Rise" requirements. A detailed hydraulic analysis will be performed to verify this assessment.

Justification: The SC-114 bridge over Sandy Run Creek is located within a FEMA Special Flood Hazard Area Zone A. Bridge will be replaced with similar or slightly larger structure and maintain low chord.

- ☐ Preliminary assessment indicates this project may require a CLOMR/LOMR. Impacts will be determined by a detailed hydraulic analysis.

Justification:

BRIDGE REPLACEMENT SCOPING TRIP RISK ASSESSMENT FORM

IV. Preliminary Bridge Assessment

A. Locate Existing Plans

a. Bridge Plans ☒ Yes File No. _____ Sheet No. _____ (See Attached)
☐ No

b. Road Plans ☐ Yes File No. _____ Sheet No. _____ (See Attached)
☒ No

B. Historical Highwater Data

a. USGS Gage ☐ Yes Gage No. _____ Results: _____
☒ No

b. SCDOT/USGS Documented Highwater Elevations
☐ Yes Results: _____
☒ No

c. Existing Plans ☐ Yes See Above
☒ No

V. Field Review

A. Existing Bridge

Length: _____ 84 ft. Width: _____ 42.25 ft. Max. span Length: _____ 14 ft.

Alignment: ☒ Tangent ☐ Curved

Bridge Skewed: ☐ Yes ☒ No Angle: _____

End Abutment Type: Spill-through

Riprap on End Fills: ☐ Yes ☒ No Condition: _____

Superstructure Type: Precast concrete flat slab

Substructure Type: Timber Piles

Utilities Present: ☐ Yes ☒ No

Describe:

Debris Accumulation on Bridge: Percent Blocked Horizontally: _____ <5 %
Percent Blocked Vertically: _____ <5 %

Hydraulic Problems: ☒ Yes ☐ No

Describe: Roadway overtops for 1% AEP event.

BRIDGE REPLACEMENT SCOPING TRIP RISK ASSESSMENT FORM

V. Field Review (cont.)

B. Hydraulic Features

a. Scour Present: ☐ Yes ☒ No Location: _____

b. Distance from F.G. to Normal Water Elevation: _____ ~10.3 ft.

c. Distance from Low Steel to Normal Water Elev.: _____ ~9.5 ft.

d. Distance from F.G. to High Water Elevation: _____ -0.5 ft.

e. Distance from Low Steel to High Water Elev.: _____ -1.2 ft.

f. Channel Banks Stable: ☒ Yes ☐ No

Describe: Generally stable outside of bridge with vegetated banks.

g. Soil Type: silty sand

h. Exposed Rock: ☐ Yes ☒ No Location: _____

i. Give Description and Location of any structures or other property that could be damaged due to additional backwater.

There are no structures located within the floodplain in the vicinity of the bridge. Several structures along Sandy Run Creek upstream appear to be well above the floodplain elevation.

C. Existing Roadway Geometry

a. Can the existing roadway be closed for an On-Alignment Bridge Replacement

☐ Yes ☒ No

Describe:

Adjacent roadways may not be used for detour allowing closure of the roadway for bridge construction without significant improvements to accommodate traffic.

If "yes", does the existing vertical and horizontal curves meet the proposed design speed criteria?

If "No", will the proposed bridge be:

☐ Staged Constructed

☒ Replaced on New Alignment

BRIDGE REPLACEMENT SCOPING TRIP RISK ASSESSMENT FORM

VI. Field Review (cont.)

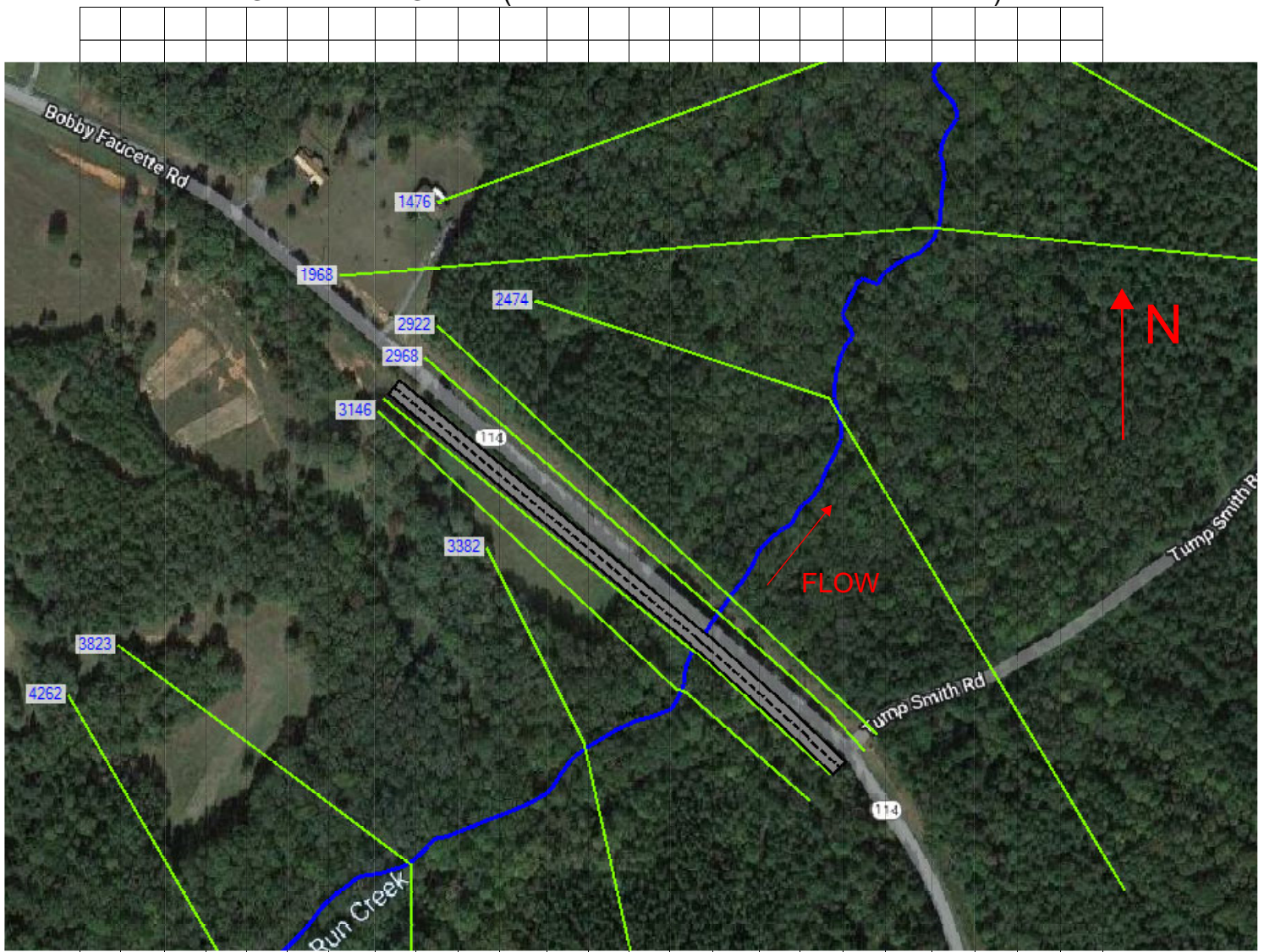
A. Proposed Bridge Recommendation:

Length: 140 ft. Width: 42.25 ft. Elevation: 468.4 ft.

Span Arrangement: Single Span

Notes: The proposed bridge is aligned approximately 37' upstream of the existing bridge.

BRIDGE SITE DIAGRAM: (Show North Arrow and Direction of Flow)



Performed By: Thomas Miller
Title: Hydraulic Engineer

Attachment D – Floodplain Checklist

**South Carolina Department of Transportation
Location and Hydraulic Design of Encroachments on Floodplains Checklist**

23 CFR 650, this regulation shall apply to all encroachments and to all actions which affect base floodplains, except for repairs made with emergency funds. Note: These studies shall be summarized in the environmental review documents prepared pursuant to 23 CFR 771.

I. PROJECT DESCRIPTION

The South Carolina Department of Transportation (SCDOT) proposes to replace the load restricted bridge crossing of Sandy Run Creek along S.C. Route 114 (Bobby Faucette Rd) in Union County.

The proposed improvement would replace the bridge and include associated roadway improvements to accommodate the proposed bridge.

A. Narrative Describing Purpose and Need for Project

- a. Relevant Project History:
- b. General Project Description and Nature of Work (attach Location and Project Map):
- c. Major Issues and Concerns:

The primary purpose of the project is to replace the bridge to correct the load restriction placed on it as well as restore all bridge components to good condition. Roadway improvements are limited to those associated with accommodating the new structure.

The project crosses Sandy Run Creek which is shown on the Flood Insurance Rate Map (FIRM) Panel 45087C0100D. Sandy Run Creek is designated as a Special Flood Hazard Area Zone A in the vicinity of the project. The project is not expected to be a significant or longitudinal encroachment as defined under 23 CFR 650A, nor is it expected to have an appreciable environmental impact on the base flood elevation. In addition, the project would be developed to comply with all appropriate floodplain regulations and guidelines.

B. Are there any floodplain(s) regulated by FEMA located in the project area?

Yes ☒

No ☐

C. Will the placing of fill occur within a 100-year floodplain?

Yes ☒

No ☐

D. Will the existing profile grade be raised within the floodplain?

The existing grade will be raised to satisfy roadway design criteria.

E. If applicable, please discuss the practicability of alternatives to any longitudinal encroachments.

Multiple alternatives including staged construction and full realignment were studied. Staged construction is not feasible due to the roadway profile change. Full realignment results in minor longitudinal encroachments.

F. Please include a discussion of the following: commensurate with the significance of the risk or environmental impact for all alternatives containing encroachments and those actions which would support base floodplain development:

a. What are the risks associated with implementation of the action?

Risks are minimal; the project will replace the existing bridge with larger bridge opening. The increased opening will have a negligible impact on the BFE's along the floodplain.

b. What are the impacts on the natural and beneficial floodplain values?

The project is not expected to impact the floodplain values, as the hydraulics will be retained/improved.

c. What measures were used to minimize floodplain impacts associated with the action?

The proposed bridge is of longer and uses larger spans reducing the number of interior bents/piers within the floodplain.

d. Were any measures used to restore and preserve the natural and beneficial floodplain values impacted by the action?

Not applicable.

- G. Please discuss the practicability of alternatives to any significant encroachments or any support of incompatible floodplain development.

The impacts are not considered significant encroachments and would not support incompatible floodplain development. The proposed project will have no significant impact to base flood elevations along the stream and will not impact the potential for development within the floodplain.

- H. Were local, state, and federal water resources and floodplain management agencies consulted to determine if the proposed highway action is consistent with existing watershed and floodplain management programs and to obtain current information on development and proposed actions in the affected? Please include agency documentation.

All analysis for the project was performed in accordance with SCDOT, FEMA, and local regulations.

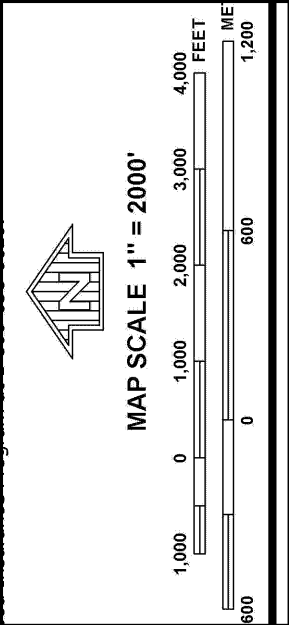
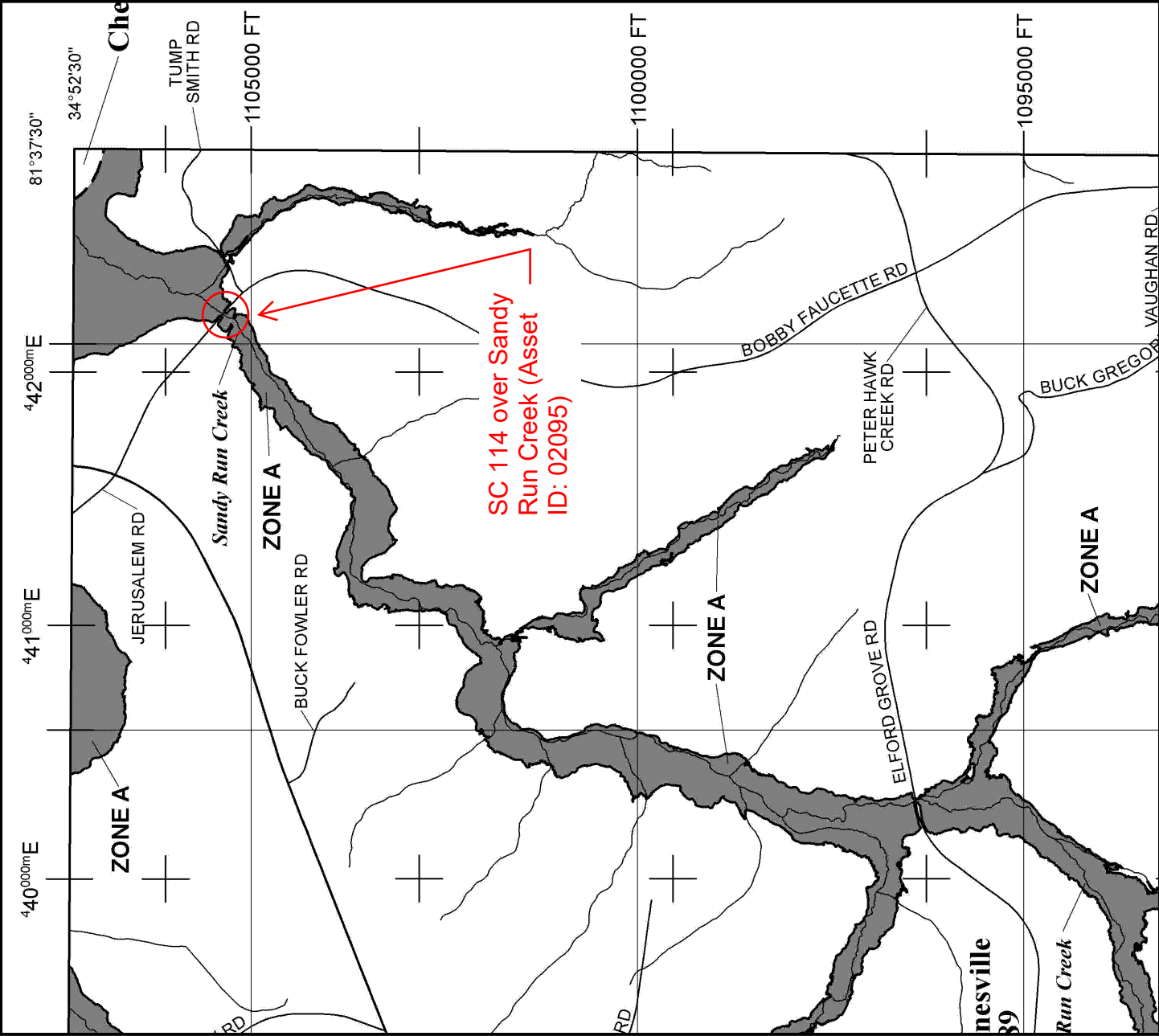
As the project progresses to final construction plans, the hydraulic modeling will be updated based on the final bridge layout.

____ Thomas Miller _____

SCDOT Hydraulic Engineer

____ 3-3-2023 _____

Date



NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0100D

FIRM
FLOOD INSURANCE RATE MAP
UNION COUNTY,
SOUTH CAROLINA
AND INCORPORATED AREAS

PANEL 100 OF 400
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JONESVILLE, TOWN OF	45239	0100	D
UNION COUNTY	450185	0100	D

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
45087C0100D

EFFECTIVE DATE
AUGUST 2, 2011

Federal Emergency Management Agency

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at <https://msc.fema.gov>.