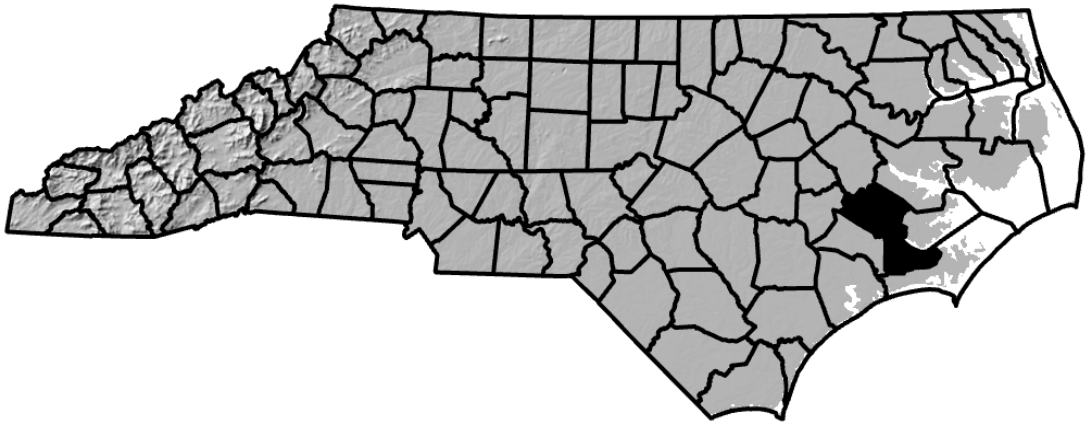
ANNUAL REPORT FOR 2025



Br. 138 and 139 over Neuse River and Neuse River Overflow on Maple Cypress Road Temporary Impact Site
Craven County
TIP No. B-4484
COE Action ID: SAW-2017-00829
DWR Project #: 20200142
CAMA Permit #: 45-20

Prepared By:
Roadside Environmental Unit and Environmental Analysis Unit
North Carolina Department of Transportation
August 2025

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SUMMARY

The Br. 138 and 139 over Neuse River and Neuse River Overflow on Maple Cypress Road Temporary Impact Site is located in Craven County and hereafter referred to as the Maple Cypress Road Temporary Impact Site. This is an annual report for temporary impacts associated with TIP No. B-4484 bridge replacement of Bridge No. 138 over Neuse River and Bridge No. 139 over the Neuse River Overflow on Maple Cypress Road. The project reforestation was completed in March 2023.

The temporary impacts encompass approximately 0.02 acres of temporary wetland fill and 0.36 acres of hand clearing within a wetland for the bridge project. The area that was impacted is being monitored for two years to ensure that it re-attains wetland jurisdictional status.

The buffer restoration areas at the Neuse River (planted trees) and Neuse River Overflow (planted shrubs) consist of approximately 0.26 acres of restored planted buffer. The buffers will be monitored for five years and meet a success criteria of 260 stems per acre at the end of the five year monitoring period. Two 30 ft. x 30 ft. vegetation plots were set within the restored buffer areas to determine the stems per acre.

An onsite meeting was held on June 3, 2025 with Regulatory Agencies and NCDOT to review the project. It was agreed that temporary wetland impact Site #2 monitoring could be discontinued. The buffer restoration monitoring will continue through the 5-year monitoring cycle. Based on this visit it appeared the Neuse River Overflow planted vegetation was sparse. NCDOT agreed if this area was not meeting the vegetation success criteria for Year 3 then NCDOT would replant this area with suitable trees like baldcypress, river birch, and swamp blackgum. Also, some cutting of the planted vegetation was noted at the Neuse River Buffer but majority of this planted vegetation was resprouting back. NCDOT agreed to sign this site to prevent future encroachments.

After the third year of monitoring, the Maple Cypress Road buffer restoration areas showed an overall tree density of 434 stems per acre for Year 3. The Neuse River Overflow Plot #2 had a density of 277 stems per acre. Due to this low stem density within this area NCDOT will complete a supplemental planting during the 2025/2026 planting window with the agreed upon trees. NCDOT has installed signs at the site.

NCDOT will continue monitoring the buffer restoration areas at the Maple Cypress Road Temporary Impact Site in 2026.

1.0 INTRODUCTION

1.1 Project Description

The Maple Cypress Road Temporary Impact Site is located in Craven County at Bridge No. 138 over Neuse River and Bridge No. 139 over the Neuse River Overflow on Maple Cypress Road (Figure 1). The temporary impacts encompass approximately 0.02 acres of temporary wetland fill and 0.36 acres of hand clearing within a wetland for the bridge project. The area that was impacted is being monitored for two years to ensure that it re-attains wetland jurisdictional status. The buffer restoration areas at the Neuse River and Neuse River Overflow consist of approximately 0.26 acres of restored planted buffer. The buffers will be monitored for five years and meet a success criteria of 260 stems per acre at the end of the five year monitoring period.

1.2 Purpose

In order for a temporary impact site to be considered successful, a site must meet the success criteria. This report details the monitoring in 2025 at the Maple Cypress Road Temporary Impact Site.

1.3 Project History

March 2023	Project Reforestation Completed
June 2023	Vegetation Monitoring (Year 1)
January 2024	Supplemental Planting of Shrub Area
June 2024	Vegetation Monitoring (Year 2)
June 2025	Onsite Regulatory Agency Meeting
June 2025	Vegetation Monitoring (Year 3)

1.4 Debit Ledger

The restoration of the Maple Cypress Road temporary impact site was used entirely to compensate for temporary impacts on the B-4484 project. There were no wetland or buffer mitigation credits generated from the restoration of the temporary impacted areas.

2.0 VEGETATION: MAPLE CYPRESS ROAD TEMPORARY IMPACT SITE (YEAR 3 MONITORING)

2.1 Success Criteria

ACOE permit:

Condition #14. Due to the possibility that compaction and/or other site alterations might prevent the temporary wetland impact areas from re-attaining jurisdictional wetland status; the permittee shall provide an update on the wetland areas temporarily impacted. This update shall be conducted two growing seasons after completion of the work and shall consist of photographs and a brief report on the progress of the areas in re-attaining wetland jurisdictional status. Upon submission of this update to the USACE, the permittee shall schedule an agency field meeting with the USACE to determine if the temporarily impacted wetlands by this project have re-attained jurisdictional wetland status. If the wetland areas temporarily impacted by this project have not re-attained jurisdictional wetland status, the USACE shall determine if additional compensatory wetland mitigation is required.

NCDWR permit:

Condition #4. Due to the possibility that compaction and/or other site alterations might prevent the temporary wetland impact area from re-attaining jurisdictional wetland status; the permittee shall provide an update on the wetland areas temporarily impacted at Site 2. This update shall be conducted two growing seasons after completion of the work at Site 2 and shall consist of photographs and a brief report on the progress of the areas in re-attaining wetland jurisdictional status. Upon submission of this update to the NCDWR, the permittee shall schedule an agency field meeting with the NCDWR to determine if the wetland areas temporarily impacted by this project have re-attained jurisdictional wetland status. If the wetland areas temporarily impacted by this project have not re-attained jurisdictional wetland status, the NCDWR shall determine if compensatory wetland mitigation is to be required.

Buffer Restoration. Per 15A NCAC 2B .0714 (11) (ee), Temporary roads, provided that the disturbed area is restored to pre-construction topographic and hydrologic conditions and replanted with comparable vegetation within two months of when construction is complete. Tree planting may occur during the dormant season. At the end of five years, any restored wooded riparian buffer shall comply with the restoration criteria in Rule .0295(i) of this Subchapter. The disturbed area shall be revegetated and after 5 years meet the success criteria outlined in 15A NCAC 2B .0295 which is 260 stems per acre.

2.2 Description of Species

The following species were planted in the buffer restoration area:

Neuse River Buffer

Taxodium distichum, Baldcypress

Nyssa sylvatica, Blackgum

Platanus occidentalis, Sycamore

Querus phellos, Willow Oak

Neuse River Overflow Buffer

Cephalanthus occidentalis, Buttonbush

Physocarpus opulifolius, Ninebark

Sambucus canadensis, Elderberry

Lyonia lucida, Fetterbush

Cornus amomum, Silky Dogwood

Aronia arbutifolia, Red Chokeberry

The following species were planted in the temporary wetland impact area:

There were no wetland tree species planted within the temporary wetland impact areas. Areas were left to revegetate naturally.

2.3 Results of Vegetation Monitoring

Plot #	Baldcypress	Blackgum	Sycamore	Willow Oak	Buttonbush	Ninebark	Elderberry	Fetterbush	Silky Dogwood	Red Chokeberry	Total (Year 3)	Total (at planting)	Density (Trees/Acre)
1	11	1	6	2							20	23	591
2					9	2					11	27	277
Year 3 Average Density													**434**
Year 2 Average Density													650
Year 1 Average Density													531

Site Notes:

Buffer Restoration Area - The Neuse River buffer restoration area is meeting the success criteria for Year 3 while the Neuse River Overflow buffer restoration area is showing a low stem density. The Neuse River Overflow planted area had been inundated for quite a while based on current site observations. Other species noted within this area included sweetgum, green ash, river birch, persimmon, volunteer baldcypress, and various grasses.

2.4 Conclusions

There were approximately 0.02 acres of temporary wetland fill, 0.36 acres of hand clearing within a wetland and 0.26 acres of planted buffer at the Maple Cypress Road Temporary Impact Site. The planted restored buffer had two 30 ft. x 30 ft. vegetation plots established to determine the stem per acre survival. The Maple Cypress Road Temporary Impact Site had a planted stem density surviving at 434 trees per acre for Year 3.

3.0 OVERALL CONCLUSIONS AND RECOMMENDATIONS

NCDOT proposes to complete a supplemental planting of the Neuse River Overflow buffer during the 2025/2026 planting window. NCDOT will continue monitoring the buffer restoration areas at the Maple Cypress Road Temporary Impact Site in 2026.

Figure 1. Vicinity Map

APPENDIX A

SITE PHOTOS & SITE MAP

Maple Cypress Road Temporary Impact Site

PP#1

PP#2

Vegetation Plot #1

PP#3

PP#4

PP#5

June 2025

Maple Cypress Road Temporary Impact Site

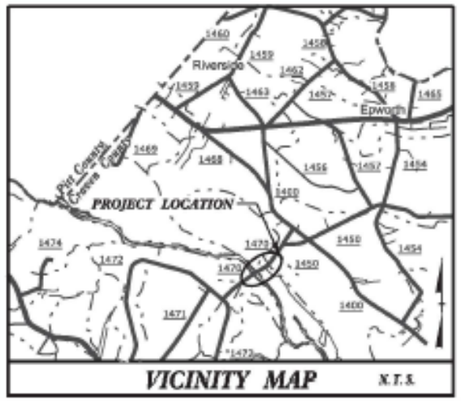
Vegetation Plot #2

June 2025

TIP PROJECT: B-4484

CONTRACT:

PERMIT DRAWINGS



VICINITY MAP N.T.S.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

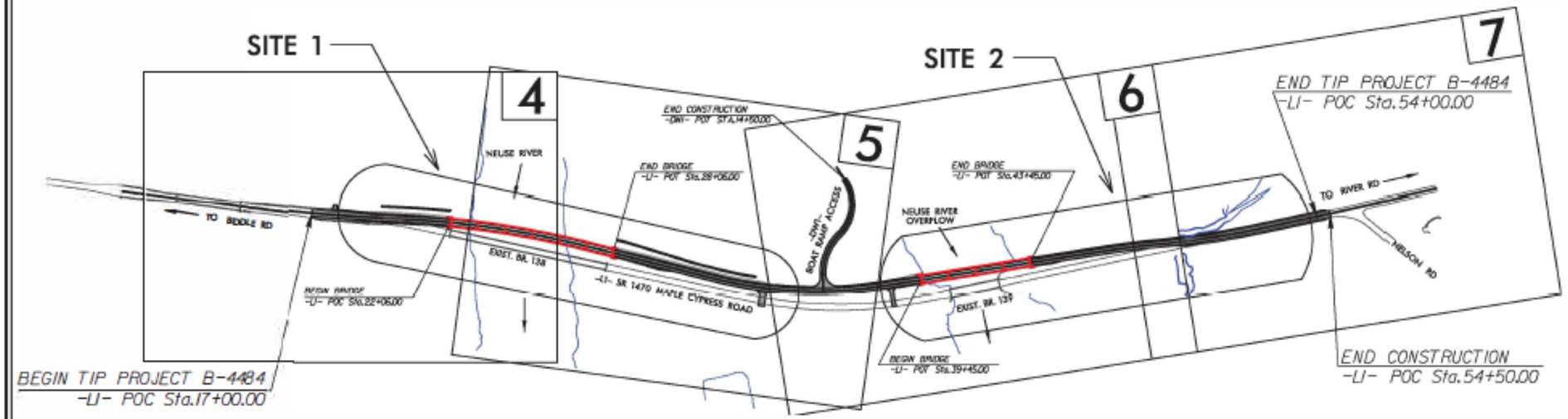
CRAVEN COUNTY

N.C.	B-4484	1	
33723.1.2	N/A	PE	
33723.2.1	N/A	ROW UTIL	

LOCATION: REPLACE BRIDGES NO. 138 & 139 OVER NEUSE RIVER AND NEUSE RIVER OVERFLOW ON SR 1470 (MAPLE CYPRESS ROAD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, RETAINING WALLS, AND STRUCTURES

NAD 83/2001



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACCUISITION
THESE PLANS ARE NOT CONSIDERED FINAL

GRAPHIC SCALES

PLANS 50 25 0 50 100

PROFILE (HORIZONTAL) 50 25 0 50 100

PROFILE (VERTICAL) 10 5 0 10 20

DESIGN DATA

ADT 2019 = 1,863
ADT 2039 = 2,279
K = 12 %
D = 60 %
T = 10 % *
V = 60 MPH
*(TTST=3% + DUAL=7%)
FUNC CLASS = MAJOR COLLECTOR
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4484	=	0.512 MILE
LENGTH STRUCTURE TIP PROJECT B-4484	=	0.189 MILE
TOTAL LENGTH TIP PROJECT B-4484	=	0.701 MILE

PREPARED IN THE OFFICE OF:
RS&H
1520 SOUTH BOULEVARD, SUITE 200
CHARLOTTE, N.C. 28203
N.C. FIRM LICENSE No: F-0493

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 7, 2019

LETTING DATE: APRIL 21, 2020

JENNIFER FARINO, PE
PROJECT ENGINEER

DREW MORROW, PE
PROJECT DESIGN ENGINEER

HON YEUNG, PE
NCDOT CONTACT

HYDRAULICS ENGINEER

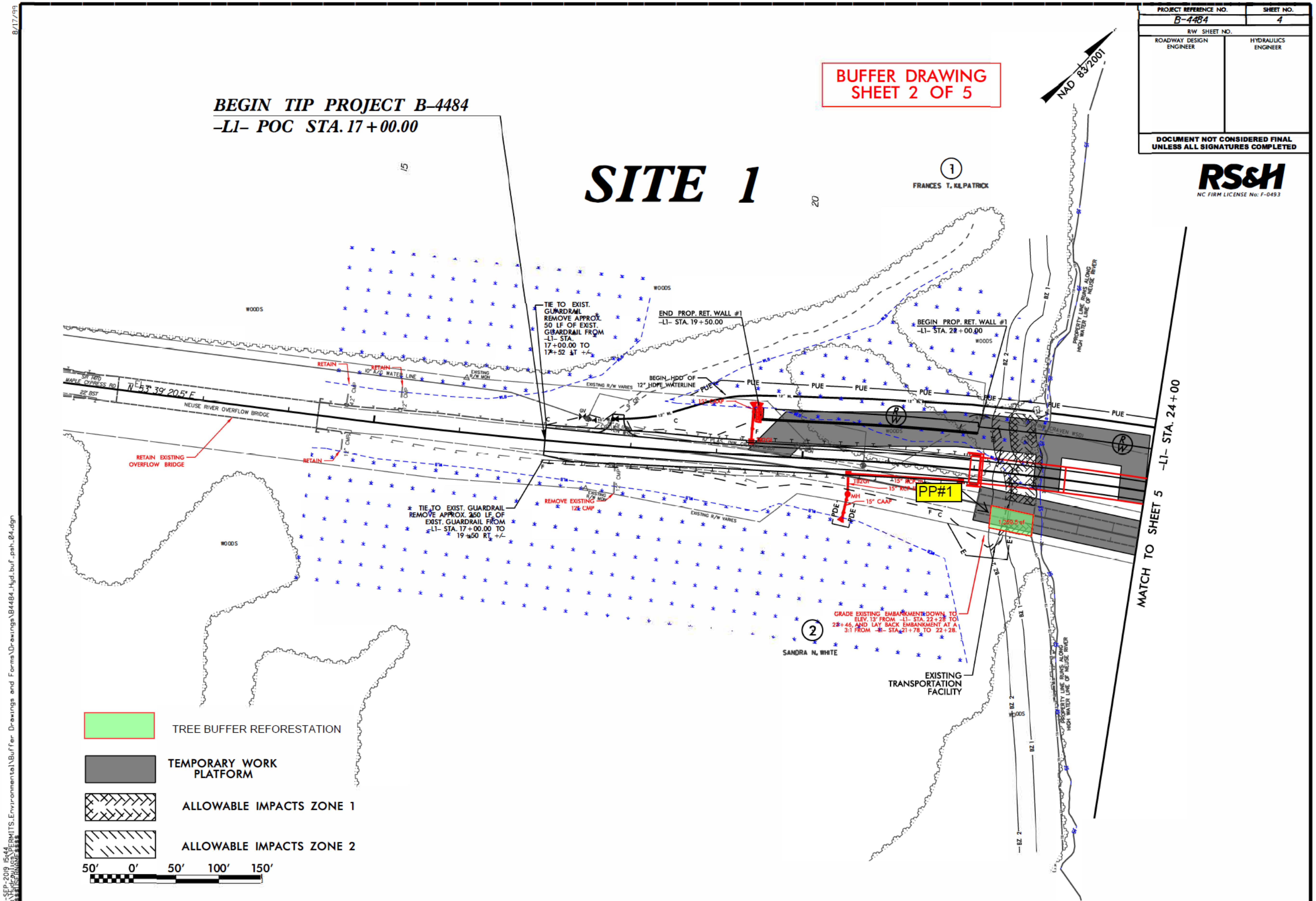
SIGNATURE P.E.

ROADWAY DESIGN ENGINEER

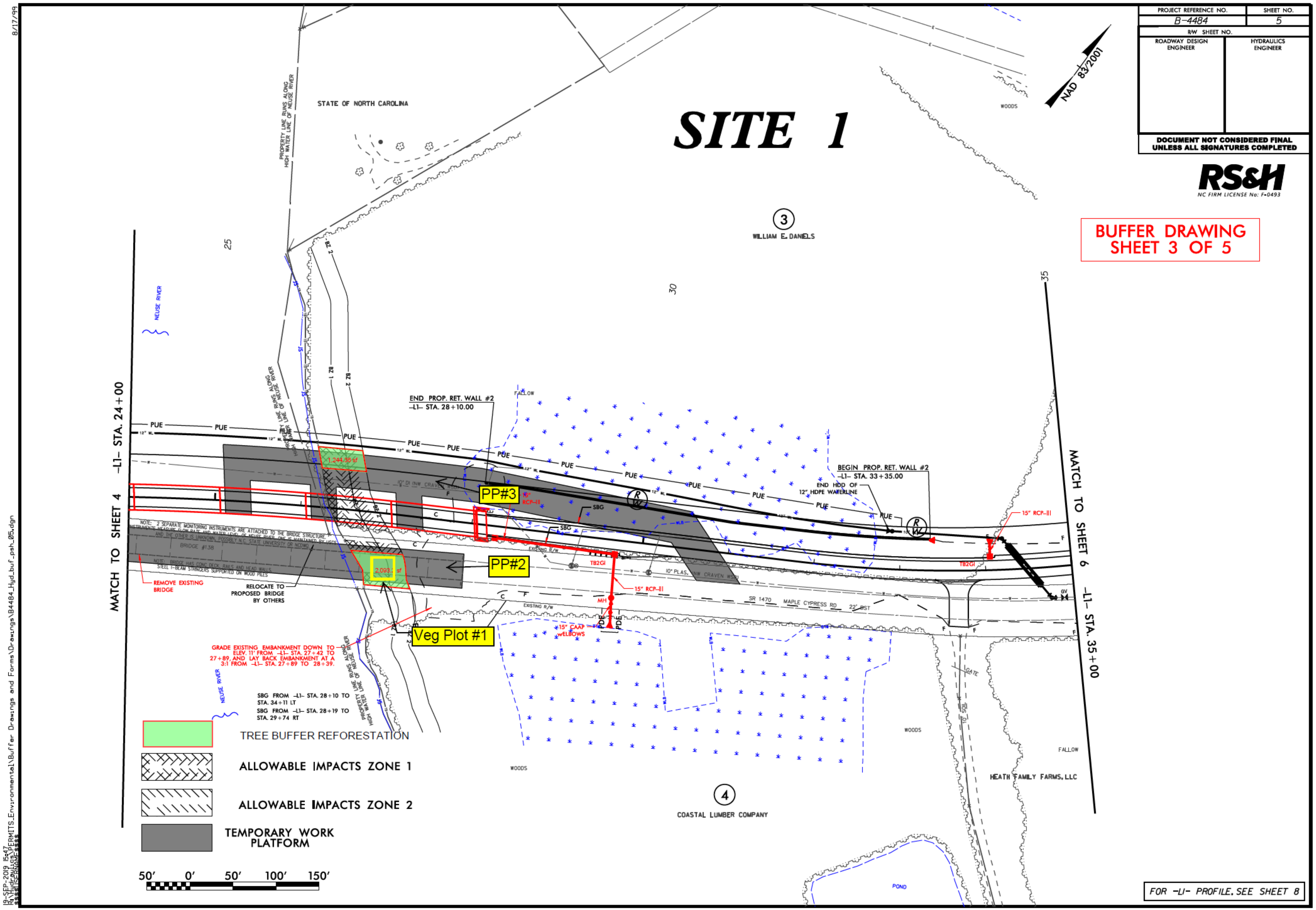
SIGNATURE P.E.

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·

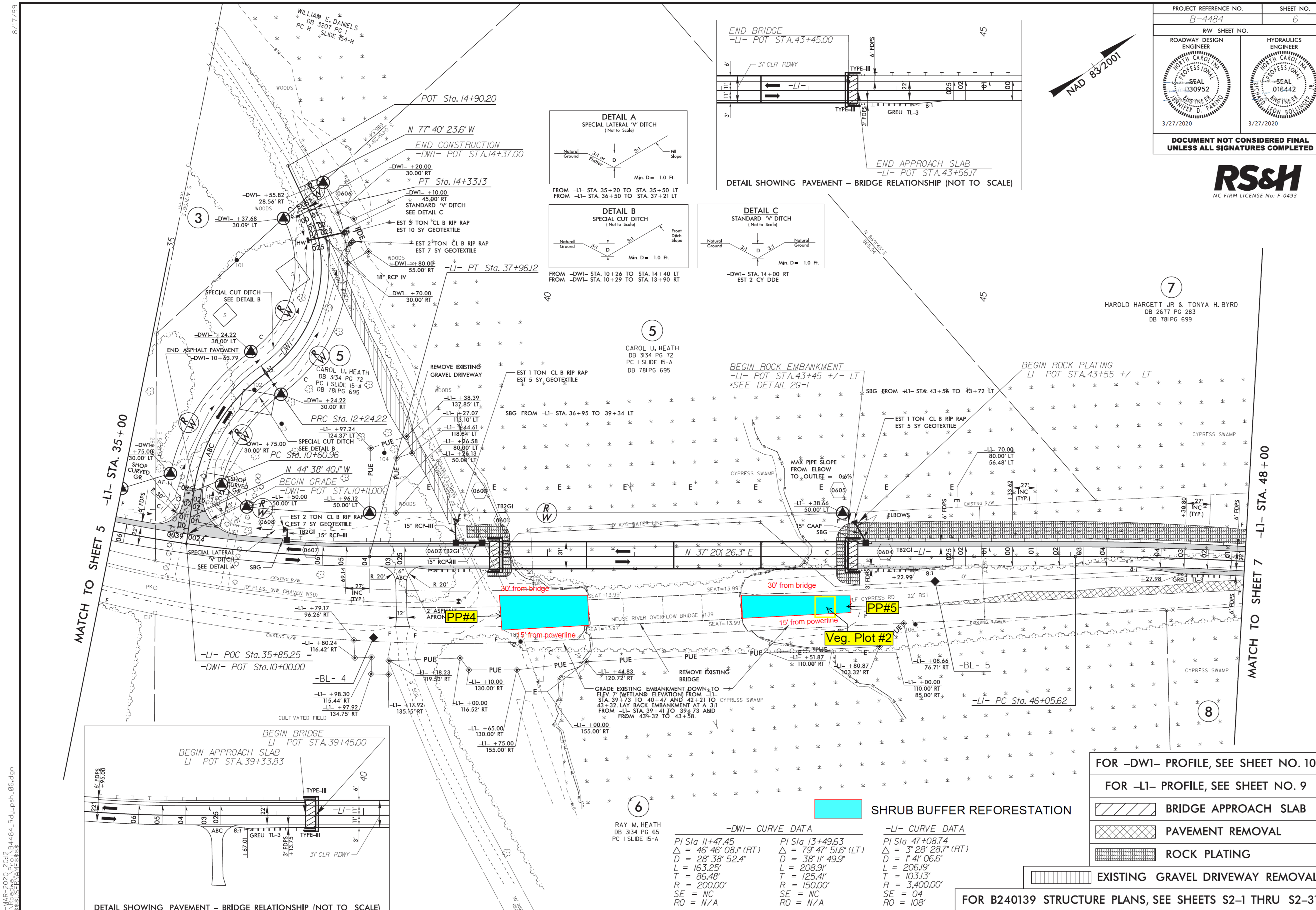
R:\Hydraulics\PERMITS_Environmental\Drawings\B4484hyc_prm_01.tsn.dgn



PROJECT REFERENCE NO.
SHEET NO.
B-4484
4
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
RS&H
NC FIRM LICENSE No: F-0493
BUFFER DRAWING
SHEET 2 OF 5
NAD 83/2001
BEGIN TIP PROJECT B-4484
-L1- POC STA. 17+00.00
SITE 1
FRANCES T. KILPATRICK
SANDRA N. WHITE
WOODS
TIE TO EXIST. GUARDRAIL REMOVE APPROX. 50 LF OF EXIST. GUARDRAIL FROM -L1- STA. 17+00.00 TO 17+52 LT +/-
END PROP. RET. WALL #1 -L1- STA. 19+50.00
BEGIN PROP. RET. WALL #1 -L1- STA. 22+00.00
BEGIN HDD OF 12" HDPE WATERLINE
NEUSE RIVER OVERFLOW BRIDGE
RETAIN EXISTING OVERFLOW BRIDGE
RETAIN
REMOVE EXISTING 12" CMP
TIE TO EXIST. GUARDRAIL REMOVE APPROX. 250 LF OF EXIST. GUARDRAIL FROM -L1- STA. 17+00.00 TO 19+50 RT +/-
PP#1
GRADE EXISTING EMBANKMENT DOWN TO ELEV. 13' FROM -L1- STA. 22+28 TO 22+46, AND LAY BACK EMBANKMENT AT A 3:1 FROM -L1- STA. 21+78 TO 22+28.
EXISTING TRANSPORTATION FACILITY
PROPERTY LINE RUNS ALONG HIGH WATER LINE OF NEUSE RIVER
MATCH TO SHEET 5
-L1- STA. 24+00
TREE BUFFER REFORESTATION
TEMPORARY WORK PLATFORM
ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
50' 0' 50' 100' 150'



PROJECT REFERENCE NO.
B-4484
SHEET NO.
5
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
RS&H
NC FIRM LICENSE No: F-0493
NAD 83/2001
SITE 1
BUFFER DRAWING SHEET 3 OF 5
STATE OF NORTH CAROLINA
3
WILLIAM E. DANIELS
4
COASTAL LUMBER COMPANY
HEATH FAMILY FARMS, LLC
WOODS
FALLOW
POND
NEUSE RIVER
PROPERTY LINE RUNS ALONG HIGH WATER LINE OF NEUSE RIVER
MATCH TO SHEET 4 -L1- STA. 24+00
MATCH TO SHEET 6 -L1- STA. 35+00
END PROP. RET. WALL #2 -L1- STA. 28+10.00
BEGIN PROP. RET. WALL #2 -L1- STA. 33+35.00
END HDD OF 12" HDPE WATERLINE
PP#3
PP#2
Veg Plot #1
15" RCP-III
15" CAAP W/ELBOWS
SR 1470 MAPLE CYPRESS RD 22' BST
REMOVE EXISTING BRIDGE
RELOCATE TO PROPOSED BRIDGE BY OTHERS
GRADE EXISTING EMBANKMENT DOWN TO ELEV. 11' FROM -L1- STA. 27+42 TO 27+89, AND LAY BACK EMBANKMENT AT A 3:1 FROM -L1- STA. 27+89 TO 28+39.
SBG FROM -L1- STA. 28+10 TO STA. 34+11 LT
SBG FROM -L1- STA. 28+19 TO STA. 29+74 RT
TREE BUFFER REFORESTATION
ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
TEMPORARY WORK PLATFORM
50' 0' 50' 100' 150'
FOR -L1- PROFILE, SEE SHEET 8



PROJECT REFERENCE NO.
SHEET NO.
B-4484
6
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
SEAL 030952
SEAL 018442
3/27/2020
3/27/2020
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
RS&H
NC FIRM LICENSE No: F-0493
NAD 83/2001
END BRIDGE
-L1- POT STA.43+45.00
END APPROACH SLAB
-L1- POT STA.43+56.17
DETAIL SHOWING PAVEMENT – BRIDGE RELATIONSHIP (NOT TO SCALE)
DETAIL A
SPECIAL LATERAL 'V' DITCH
FROM -L1- STA. 35+20 TO STA. 35+50 LT
FROM -L1- STA. 36+50 TO STA. 37+21 LT
DETAIL B
SPECIAL CUT DITCH
FROM -DW1- STA. 10+26 TO STA. 14+40 LT
FROM -DW1- STA. 10+29 TO STA. 13+90 RT
DETAIL C
STANDARD 'V' DITCH
-DW1- STA. 14+00 RT
EST 2 CY DDE
WILLIAM E. DANIELS
DB 3207 PG 1
PC H SLIDE 154-H
POT Sta. 14+90.20
N 77° 40' 23.6" W
END CONSTRUCTION
-DW1- POT STA.14+37.00
PT Sta. 14+33.13
-L1- PT Sta. 37+96.12
CAROL U. HEATH
DB 3134 PG 72
PC I SLIDE 15-A
DB 781 PG 695
HAROLD HARGETT JR & TONYA H. BYRD
DB 2677 PG 283
DB 781 PG 699
PRC Sta. 12+24.22
PC Sta. 10+60.96
N 44° 38' 40.1" W
BEGIN GRADE
-DW1- POT STA.10+11.00
BEGIN ROCK EMBANKMENT
-L1- POT STA.43+45 +/- LT
*SEE DETAIL 2G-1
BEGIN ROCK PLATING
-L1- POT STA.43+55 +/- LT
SBG FROM -L1- STA. 36+95 TO 39+34 LT
SBG FROM -L1- STA. 43+56 TO 43+72 LT
N 37° 20' 26.3" E
30' from bridge
15' from powerline
PP#4
PP#5
Veg. Plot #2
NEUSE RIVER OVERFLOW BRIDGE
-L1- POC Sta.35+85.25 =
-DW1- POT Sta.10+00.00
-BL- 4
-BL- 5
-L1- PC Sta. 46+05.62
REMOVE EXISTING BRIDGE
GRADE EXISTING EMBANKMENT DOWN TO ELEV. 7' (WETLAND ELEVATION) FROM -L1- STA. 39+73 TO 40+47 AND 42+21 TO 43+32. LAY BACK EMBANKMENT AT A 3:1 FROM -L1- STA. 39+41 TO 39+73 AND FROM 43+32 TO 43+58.
MATCH TO SHEET 5
-L1- STA. 35+00
MATCH TO SHEET 7
-L1- STA. 48+00
RAY M. HEATH
DB 3134 PG 65
PC I SLIDE 15-A
BEGIN BRIDGE
-L1- POT STA.39+45.00
BEGIN APPROACH SLAB
-L1- POT STA.39+33.83
DETAIL SHOWING PAVEMENT – BRIDGE RELATIONSHIP (NOT TO SCALE)
SHRUB BUFFER REFORESTATION
-DW1- CURVE DATA
PI Sta 11+47.45
Δ = 46° 46' 08.1" (RT)
D = 28° 38' 52.4"
L = 163.25'
T = 86.48'
R = 200.00'
SE = NC
RO = N/A
PI Sta 13+49.63
Δ = 79° 47' 51.6" (LT)
D = 38° 11' 49.9"
L = 208.91'
T = 125.41'
R = 150.00'
SE = NC
RO = N/A
-L1- CURVE DATA
PI Sta 47+08.74
Δ = 3° 28' 28.7" (RT)
D = 1° 41' 06.6"
L = 206.19'
T = 103.13'
R = 3,400.00'
SE = .04
RO = 108'
FOR -DW1- PROFILE, SEE SHEET NO. 10
FOR -L1- PROFILE, SEE SHEET NO. 9
BRIDGE APPROACH SLAB
PAVEMENT REMOVAL
ROCK PLATING
EXISTING GRAVEL DRIVEWAY REMOVAL
FOR B240139 STRUCTURE PLANS, SEE SHEETS S2-1 THRU S2-31