

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

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SURVEY CONTROL, EXISTING CENTERLINES,  
RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

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**BR-0093**

R/W    01

NORTH CAROLINA  
DEPARTMENT  
OF TRANSPORTATION



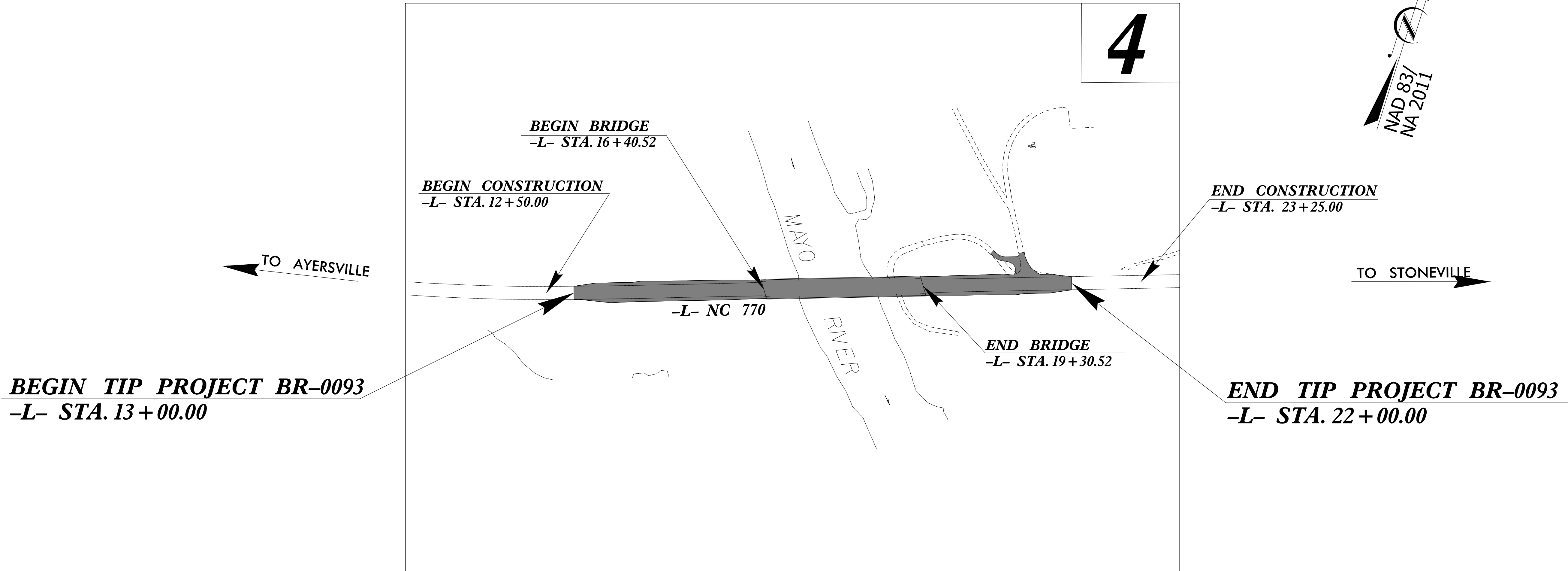
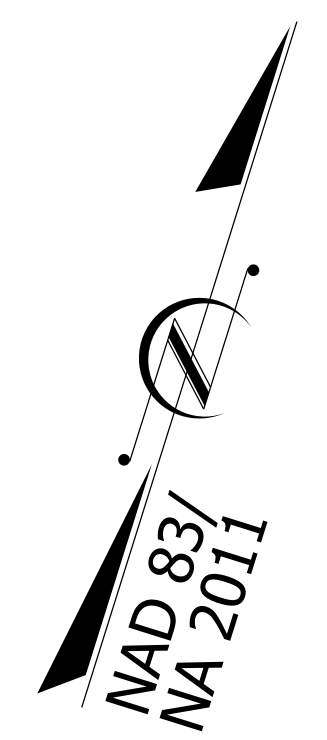
PROFESSIONAL LAND  
SURVEYOR



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL SIGNATURES  
ARE COMPLETED

2024 STANDARD  
SPECIFICATIONS

DocuSigned by:  
*Clinton B. Osborne*  
DA8F6B085F6449B...  
8/23/2023



**DATUM DESCRIPTION**

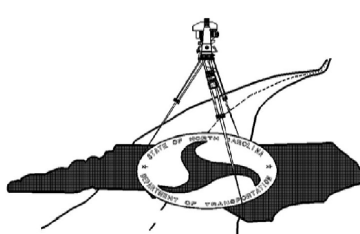
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BR0093 GPS-1" WITH NAD 83/NSRS 2011 STATE PLANE GRID COORDINATES OF NORTHING: 992,052.253(ft) EASTING: 1,721,529.085(ft) ELEVATION: 692.981(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000715288 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BR0093 GPS-1" TO -L- STATION 10+00.00 IS S 72°56'04.2" W 1925.43(ft) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD88 (GEIOD 18)

2024 STANDARD SPECIFICATIONS

<b>RIGHT OF WAY DATE:</b> 7/14/2023	<b>LETTING DATE:</b> 6/18/2023
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**TIP PROJECT: BR-0093**  
County: ROCKINGHAM

PREPARED FOR



LOCATION AND  
SURVEYS UNIT

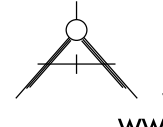
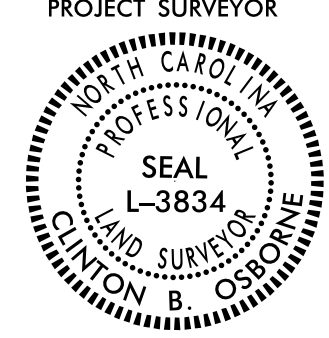
PREPARED BY



ALLIED ASSOCIATES, P.A.  
4720 KESTER MILL ROAD  
WINSTON SALEM,  
NC 27103  
WWW.ALLIEDAPA.COM  
C-2198  
(336)765-2377

# SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. BR-0093	SHEET NO. RW02C-1
<b>Location and Surveys</b>	
 ALLIED ASSOCIATES, P.A. 4720 KESTER MILL ROAD WINSTON SALEM, NC 27103 WWW.ALLIEDAPA.COM C-2198 (336)765-2377	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Clinton B. Osborne, PLS, certify that the Project Control was performed under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

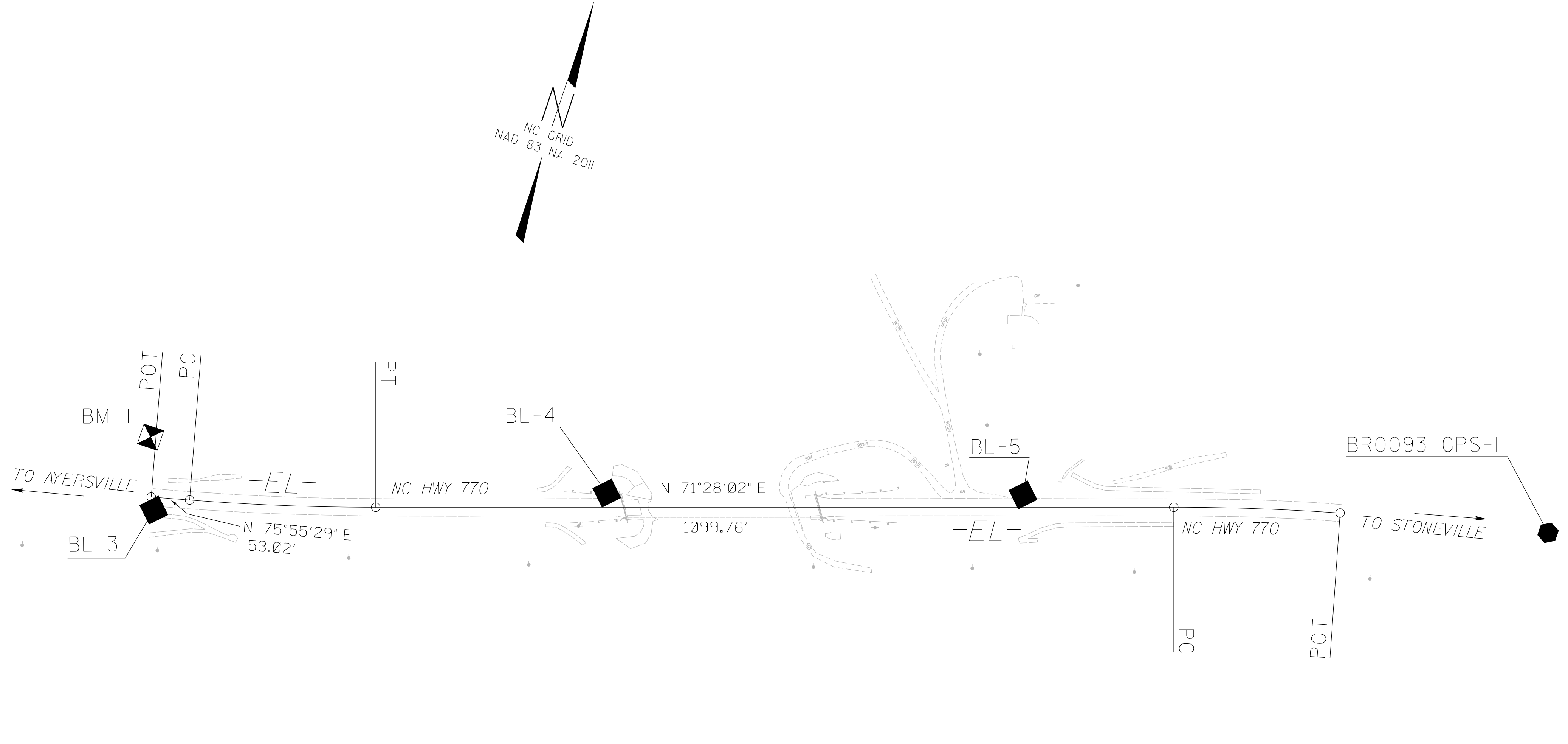
Class of survey: **AA**  
 Type of GPS field procedure: RTN  
 Dates of survey: 10-25-2021 to 11-16-2021  
 Datum/Epoch: NAD83/NA2011  
 Published/Fixed-control use: NCGS VRS-RTN  
 Localized around: BR0093 GPS-1  
 Northing: 992052.253(ft)  
 Easting: 1721529.085(ft)  
 Combined grid factor: 1.0000715288  
 Geoid model: 18  
 Units: US Survey Foot

I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 10-25-2021 to 12-08-2021, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 21th day of December, 2021.

DocuSigned by:  
  
 Clinton B. Osborne  
 046FEB085F6449B

Professional Land Surveyor L-3834



SEE SHEET RW02C-3  
FOR FURTHER ALIGNMENT DETAIL

**NOTES:**

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

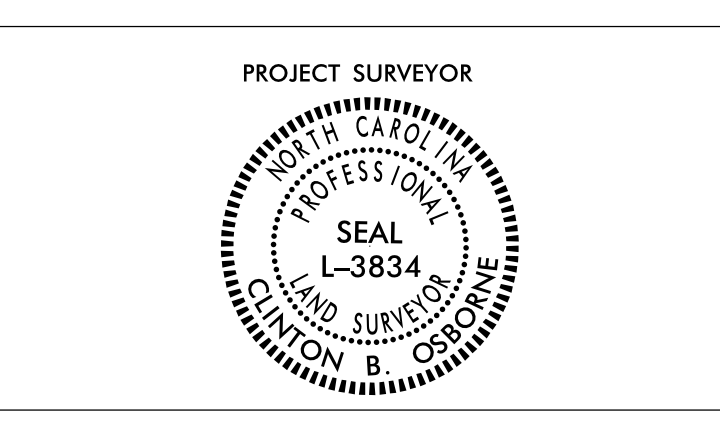
# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

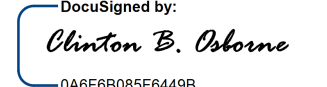
PROJECT REFERENCE NO.	SHEET NO.
BR-0093	RW02C-2

### Location and Surveys


 ALLIED ASSOCIATES, P.A.  
 4720 KESTER MILL ROAD  
 WINSTON SALEM, NC 27103  
 WWW.ALLIEDAPA.COM C-2198  
 (336)765-2377



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Drawn/signed by:  
  
 12/21/2021

BL	POINT	DESC.	NORTH	EAST	ELEVATION
3		BL-3	991471.2005	1719697.3275	710.28
4		BL-4	991691.8082	1720281.7377	678.66
5		BL-5	991871.6870	1720826.3425	670.75
1		BR0093 GPS-1	992052.2530	1721529.0850	692.98
2		BR0093 GPS-2	992010.2422	1722244.5814	714.13

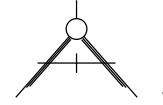
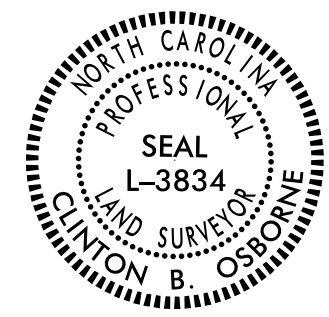
\*\*\*\*\*  
 BM1 ELEVATION = 721.47  
 N 991565 E 1719661  
 BL STATION 5+00.00  
 N 20°56'04.3" W DIST 100.51  
 RAILROAD SPIKE IN 24" POPLAR  
 \*\*\*\*\*

### NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
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# SURVEY CONTROL SHEET

**W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION**

PROJECT REFERENCE NO. BR-0093	SHEET NO. RW02C-3
Location and Surveys	
 <div style="font-size: 8px; display: inline-block; vertical-align: middle;">                 ALLIED ASSOCIATES, P.A.                  4720 KESTER MILL ROAD                  WINSTON SALEM, NC 27103                  WWW.ALLIEDAPA.COM C-2198                  (336)765-2377             </div>	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

DocuSigned by:  
*Clinton B. Osborne*  
0AEF8B85F6449B...

12/21/2021

EL		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	LINE	991487.207	1719688.432	N 75°55'28.7" E	53.02					
PC	CURVE	991500.102	1719739.862	N 73°41'45.4" E	256.66	04°27'26.6*(LT)	01°44'10.4"	256.73	128.43	3300.00
PT	LINE	991572.156	1719986.203	N 71°28'02.1" E	1099.76					
PC	CURVE	991921.712	1721028.935	N 73°27'31.6" E	229.36	03°58'58.9*(RT)	01°44'10.4"	229.41	114.75	3300.00
PT		991987.012	1721248.803							

**NOTES:**

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# PROPOSED ALIGNMENT CONTROL SHEET

I, Clinton B. Osborne, PLS, certify that the data compiled came from available surveys/mapping performed by others and provided to me by NCDOT and do not certify to the accuracy or quality of the individual data sources.

This 23 day of August, 2023.

DocuSigned by:  
*Clinton B. Osborne*  
0A6F6B085F6449B...

Professional Land Surveyor L-3834

L			
TYPE	STATION	NORTH	EAST
POT	10+00.00	991487.2074	1719688.4321
PC	10+53.02	991500.1023	1719739.8623
PT	13+09.75	991572.1562	1719986.2032
PC	24+09.51	991921.7120	1721028.9347
PT	26+38.92	991987.0120	1721248.8029

DWY1			
TYPE	STATION	NORTH	EAST
PC	10+00.00	991872.6963	1720604.5697
PT	10+61.63	991871.3808	1720664.3185
PC	10+81.22	991862.8576	1720681.9638
PT	11+04.43	991861.4270	1720704.5477
POT	11+34.09	991870.8560	1720732.6745

DWY2			
TYPE	STATION	NORTH	EAST
POT	10+00.00	992000.1481	1720660.7348
POT	11+94.70	991830.0144	1720755.3992

PROPOSED ALIGNMENT NAME:L									
POINT	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R
POT	991487.2074	1719688.4321							
LINE			N75°55'28.7"E	53.0222					
PC	991500.1023	1719739.8623							
CURVE					04°27'26.6" Left	01°44'10.4"	256.727	128.428	3300.000
PT	991572.1562	1719986.2032							
LINE			N71°28'02.1"E	1099.7628					
PC	991921.7120	1721028.9347							
CURVE					03°58'58.9" Right	01°44'10.4"	229.406	114.749	3300.000

PROPOSED ALIGNMENT NAME:DWY1									
POINT	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R
PC	991872.6963	1720604.5697							
CURVE					49°02'29.3" Right	79°34'38.9"	61.627	32.844	72.000
PT	991871.3808	1720664.3185							
LINE			S64°13'04.9"E	19.5960					
PC	991862.8576	1720681.9638							
CURVE					44°18'53.0" Left	190°59'09.4"	23.203	12.217	30.000
PT	991861.4270	1720704.5477							
LINE			N71°28'02.1"E	29.6652					
POT	991870.8560	1720732.6745							

PROPOSED ALIGNMENT NAME:DWY2									
POINT	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R
POT	992000.1481	1720660.7348							
LINE			S29°05'31.6"E	194.6967					
POT	991830.0144	1720755.3992							

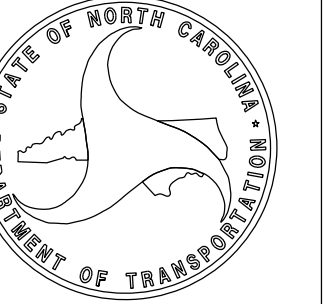
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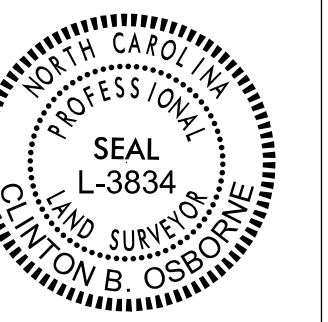
BR-0093

R/W 020-1

NORTH CAROLINA  
DEPARTMENT  
OF TRANSPORTATION



PROFESSIONAL LAND  
SURVEYOR

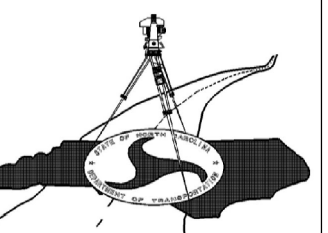


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2018 STANDARD  
SPECIFICATIONS

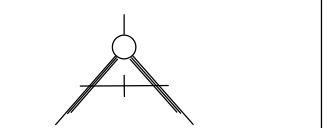
**TIP PROJECT: BR-0093**  
**County: ROCKINGHAM**

PREPARED FOR



LOCATION AND  
SURVEYS UNIT

PREPARED BY



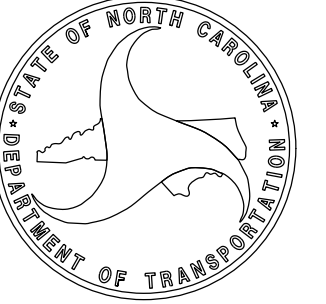
ALLIED ASSOCIATES, P.A.  
4720 KESTER MILL ROAD  
WINSTON SALEM,  
NC 27103  
WWW.ALLIEDAPA.COM  
C-2198  
(336)765-2377

# RIGHT OF WAY CONTROL SHEET

BR-0093

R/W 03E-1

NORTH CAROLINA  
DEPARTMENT  
OF TRANSPORTATION



PROFESSIONAL LAND  
SURVEYOR



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2018 STANDARD  
SPECIFICATIONS

**TIP PROJECT: BR-0093**  
**County: ROCKINGHAM**

PERMANENT EASEMENT MARKER IRON PIN AND CAP: L			
STATION	OFFSET	NORTH	EAST
12+75.00	-75.00	991632.6427	1719930.1100
12+75.00	-115.00	991670.7002	1719917.7962
13+09.75	-115.00	991681.1926	1719949.6508
15+20.00	-115.00	991748.0200	1720148.9984
15+30.00	-75.00	991713.2728	1720171.1937
15+65.00	-75.00	991724.3974	1720204.3787
15+95.00	-100.00	991757.6364	1720224.8768
16+71.58	-75.00	991758.2720	1720305.4271
16+71.58	-100.00	991781.9756	1720297.4809
20+10.00	95.00	991704.6549	1720680.3358
20+10.00	75.00	991723.6178	1720673.9789
20+35.00	75.00	991731.5640	1720697.6825
20+35.00	95.00	991712.6011	1720704.0394

I, Clinton B. Osborne, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 8/21/23 to 8/22/23, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 23 day of August, 2023

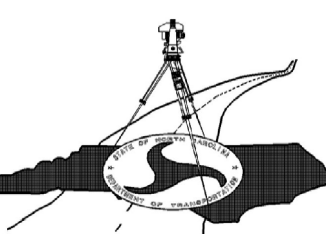
DocuSigned by:  
*Clinton B. Osborne*

0A6F6B05F6449B...  
Professional Land Surveyor L-3834

**NOTES:**

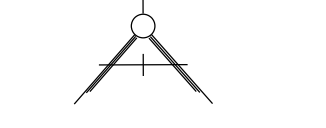
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- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

PREPARED FOR

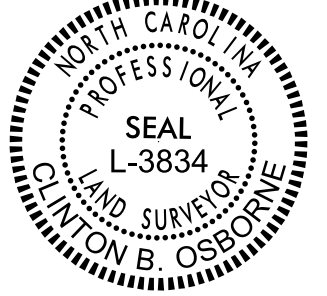
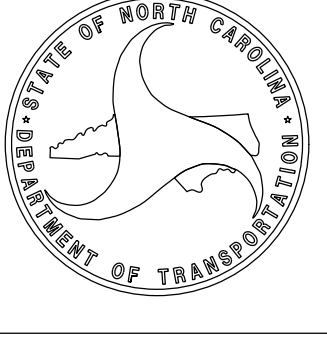


LOCATION AND  
SURVEYS UNIT

PREPARED BY

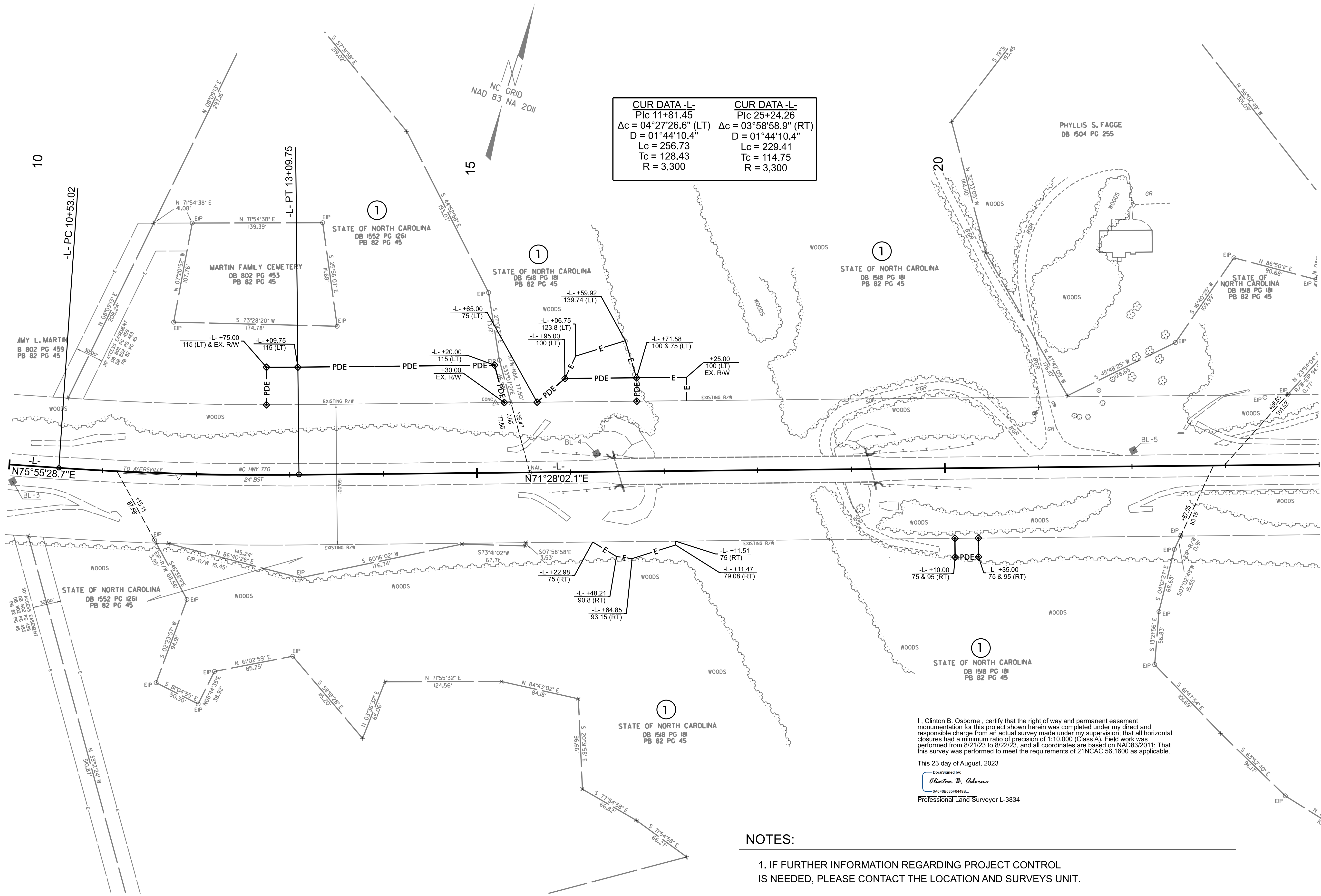
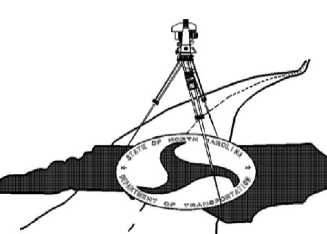


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# TIP PROJECT: BR-0093

## County: ROCKINGHAM



<b>CUR DATA -L-</b> Plc 11+81.45 $\Delta c = 04^{\circ}27'26.6''$ (LT) D = 01'44'10.4" Lc = 256.73 Tc = 128.43 R = 3,300	<b>CUR DATA -L-</b> Plc 25+24.26 $\Delta c = 03^{\circ}58'58.9''$ (RT) D = 01'44'10.4" Lc = 229.41 Tc = 114.75 R = 3,300
--	--

I, Clinton B. Osborne, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 8/21/23 to 8/22/23, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 23 day of August, 2023  
 DocuSigned by:  
**Clinton B. Osborne**  
046F6B08F6449E  
 Professional Land Surveyor L-3834

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