

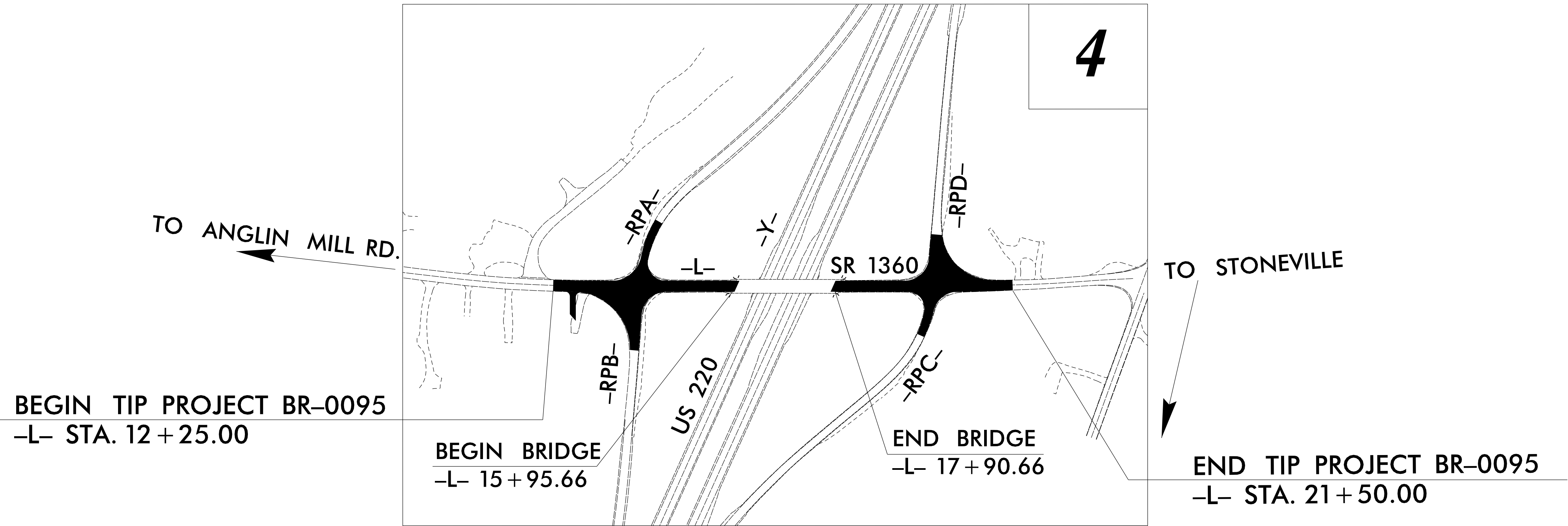
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0095	RW01	04

**TIP PROJECT: BR-0095**

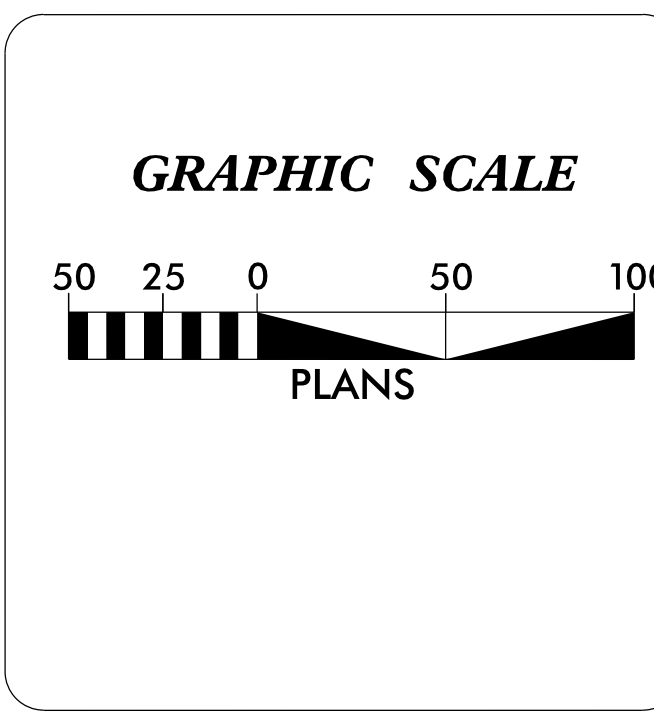
STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS

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

**ROCKINGHAM COUNTY**



07-MAR-2023 07:49  
 Y:\Projects\PAZ302IT\dgm\br0095\_is\_rw01.dgn  
 apal APAL-PC



**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR GPS MONUMENT "BR0095-2" WITH NAD 83/NSRS 2011 STATE PLANE GRID COORDINATES OF NORTHING: 1,002,920.702(ft) EASTING: 1,728,783.728(ft) ELEVATION: 984.38(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000596236

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BR0095-2" TO -L- STATION 10+00.00 IS S75°1'43.9"W 366.42(ft)

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
 VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

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

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2018 STANDARD SPECIFICATIONS

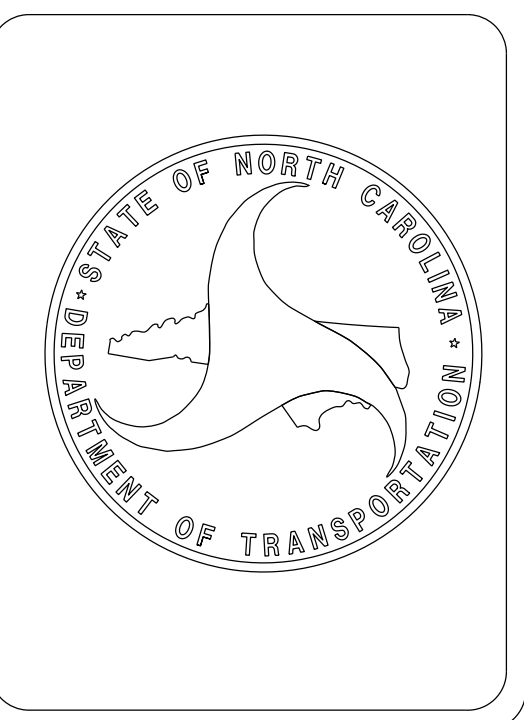
**RIGHT OF WAY DATE:** 02-06-2023

**LETTING DATE:** 01-16-2024

**PROFESSIONAL LAND SURVEYOR**

DocuSigned by:  
 Clinton B. Osborne  
 3/16/2023



SEAL L-3834  
 CLINTON B. OSBORNE





# SURVEY CONTROL SHEET

## W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. BR-0095	SHEET NO. RW02C-1
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

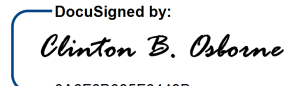


I, Clinton B. Osborne, PLS, certify that the Project Control established by NCDOT was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: **AA**  
 Type of GPS field procedure: RTK  
 Dates of survey: February 2020  
 Datum/Epoch: NAD 83/NA 2011  
 Published/Fixed-control use: RTK  
 Localized around: BR0095-2  
 Northing: 1002920.702  
 Easting: 1728783.728  
 Combined grid factor: 0.99994038  
 Geoid model: 12B  
 Units: US Survey Ft

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 February 2020 to May 2020, and all coordinates are based on NAD 83/NA 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 15th day of May, 2023.

DocuSigned by:  
  
 DAF68055F6449B  
 Professional Land Surveyor L-3834

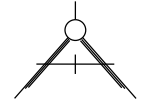

SEE SHEET RW2C-3  
 FOR FURTHER  
 ALIGNMENT DETAILS

### 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. BR-0095	SHEET NO. 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	
PROJECT SURVEYOR	
 SEAL L-3834 CLINTON B. OSBORNE SURVEYOR	
DocuSigned by: <i>Clinton B. Osborne</i> DAMP8085F6449B	3/15/2023
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

BL	POINT	DESC.	NORTH	EAST	ELEVATION
3		BL-3	1002777.8208	1727863.2595	966.12
1		GPS BR0095-1	1002786.3830	1728235.0740	973.22
2		GPS BR0095-2	1002920.7020	1728783.7280	984.38
4		BL-4	1003061.2149	1729353.2186	992.15
5		BL-5	1003107.7843	1729783.1195	989.89

BY1	POINT	DESC.	NORTH	EAST	ELEVATION
10		BY1-10	1003556.9896	1729844.7888	981.63
11		BY1-11	1002782.1170	1729757.1637	983.30

BYA	POINT	DESC.	NORTH	EAST	ELEVATION
6		BY-6	1003349.6480	1729041.0656	973.54
7		BY-7	1002419.5584	1728916.7772	960.78

BYB	POINT	DESC.	NORTH	EAST	ELEVATION
8		BY-8	1003409.7357	1729318.2009	977.87
9		BY-9	1002710.5413	1729278.9758	975.57

.....  
 BM1 ELEVATION = 950.91  
 N 1003130 E 1728186  
 RAILROAD SPIKE SET IN 30' POPLAR  
 .....

.....  
 BM2 ELEVATION = 987.49  
 N 1003100 E 1729987  
 RAILROAD SPIKE SET IN 12' POPLAR  
 .....

**NOTES:**

1. PROJECT CONTROL WAS ESTABLISHED BY NCDOT 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. BR-0095	SHEET NO. RW02C-3
<b>Location and Surveys</b>	
PROJECT SURVEYOR	
DocuSigned by: <i>Clinton B. Osborne</i> 3/23/2023	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

EL		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	1002781.345	1728051.983		N 83°15'06.6" E	380.40					
LINE										
PC	1002826.045	1728429.748		N 79°41'09.8" E	298.53	07°07'53.6"(LT)	02°23'14.4"	298.73	149.56	2400.00
CURVE										
PT	1002879.494	1728723.457		N 76°07'13.0" E	742.75					
LINE										
PC	1003057.669	1729444.521		N 74°04'44.2" E	213.72	04°04'57.5"(LT)	01°54'35.5"	213.77	106.93	3000.00
CURVE										
PT	1003116.295	1729650.044		N 72°02'15.5" E	172.21					
LINE										
POT	1003169.403	1729813.859								

EY		N	E	BEARING	DIST
POT	1003608.177	1729221.820		S 10°23'47.0" W	1500.00
LINE					
POT	1002132.802	1728951.134			

EY1		N	E	BEARING	DIST
POT	1003377.761	1729836.387		S 06°10'15.5" W	554.95
LINE					
POT	1002826.030	1729776.733			

EYRAMPA		N	E	BEARING	DIST	DELTA	D	L	T	R
PC	1003268.927	1728978.174		S 35°16'46.7" W	159.14	01°39'28.4"(RT)	01°02'30.3"	159.15	79.58	5500.00
CURVE										
PT	1003139.014	1728886.260		S 36°06'30.9" W	35.86					
LINE										
PC	1003110.042	1728865.127		S 13°50'58.6" W	173.62	44°31'04.7"(LT)	25°00'01.2"	178.07	93.80	229.18
CURVE										
PT	1002941.466	1728823.566		S 08°24'33.8" E	36.31					
LINE										
POT	1002905.543	1728828.876								

EYRAMPB		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	1002905.303	1728827.905		S 08°47'18.8" E	382.98					
LINE										
PC	1002526.820	1728886.420		S 06°47'18.8" E	125.64	03°59'59.9"(RT)	03°10'59.2"	125.66	62.86	1800.00
CURVE										
PT	1002402.064	1728901.271		S 04°47'18.8" E	3.84					
LINE										
PC	1002398.236	1728901.592		S 00°11'45.9" E	229.38	09°11'05.9"(RT)	04°00'00.0"	229.62	115.06	1432.39
CURVE										
PT	1002168.860	1728902.377								

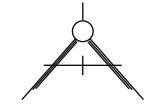

EYRAMPC		N	E	BEARING	DIST	DELTA	D	L	T	R
POT	1003043.298	1729386.362		S 08°58'31.6" E	21.12					
LINE										
PC	1003022.432	1729389.658		S 10°46'32.3" W	161.28	39°30'07.8"(RT)	24°00'36.3"	164.52	85.68	238.63
CURVE										
PCC	1002863.991	1729359.503		S 33°24'56.4" W	78.49	05°46'40.5"(RT)	07°21'30.7"	78.52	39.29	778.63
CURVE										
PT	1002798.479	1729316.280		S 36°18'16.7" W	136.83					
LINE										
PC	1002688.208	1729235.264		S 34°46'50.6" W	71.61	03°02'52.2"(LT)	04°15'20.1"	71.62	35.82	1346.37
CURVE										
PCC	1002629.391	1729194.415		S 31°11'23.6" W	151.22	04°08'01.8"(LT)	02°43'59.2"	151.25	75.66	2096.37
CURVE										
PT	1002500.030	1729116.102								

EYRAMPD		N	E	BEARING	DIST
POT	1003364.078	1729334.841		S 09°00'48.9" E	324.94
LINE					
POT	1003043.146	1729385.749			

**NOTES:**

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- 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.

# PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO. BR-0095	SHEET NO. RW02D-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 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 15th day of March, 2023.

DocuSigned by:  
*Clinton B. Osborne*

Professional Land Surveyor L-3834

L

TYPE	STATION	NORTH	EAST
PC	10+00.00	1002826.0445	1728429.7482
PT	12+98.73	1002879.4944	1728723.4574
PC	20+41.04	1003057.5645	1729444.0988
PT	22+54.81	1003116.1909	1729649.6221

Y

TYPE	STATION	NORTH	EAST
POT	10+00.00	1002531.1399	1729023.7086
POT	18+00.00	1003318.0062	1729168.0744

RPA

TYPE	STATION	NORTH	EAST
PC	10+00.00	1003268.9272	1728978.1744
PT	11+59.15	1003139.0141	1728886.2601
PC	11+95.01	1003110.0422	1728865.1267
PT	13+73.08	1002941.4660	1728823.5656
POT	14+09.39	1002905.5433	1728828.8762

RPB

TYPE	STATION	NORTH	EAST
POT	10+00.00	1002905.3034	1728827.9054
POT	13+82.98	1002526.8205	1728886.4202

RPC

TYPE	STATION	NORTH	EAST
POT	10+00.00	1003043.2977	1729386.3618
PC	10+21.12	1003022.4316	1729389.6575
PCC	11+85.65	1002863.9914	1729359.5032
PT	12+64.17	1002798.4787	1729316.2798
POT	14+00.61	1002688.5207	1729235.4940

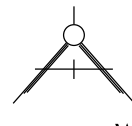

RPD

TYPE	STATION	NORTH	EAST
POT	10+00.00	1003364.0760	1729334.8410
POT	10+91.01	1003274.1927	1729349.0990
POT	12+61.98	1003105.3324	1729375.8849
POT	13+24.94	1003043.1443	1729385.7496

**NOTES:**

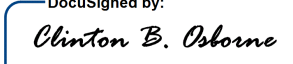
1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

# RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO. BR-0095	SHEET NO. RW03E-1
<b>Location and Surveys</b>	
ENTER CONSULTANT'S NAME IN THIS BOX	
 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, 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 March 13, 2023 and all coordinates are based on NAD83/2011. That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 15th day of March, 2023.

DocuSigned by:  
  
 Clinton B. Osborne  
 046F6B05F6449B  
 Professional Land Surveyor L-3834

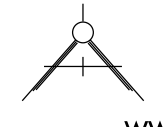

ROW MARKER PERMANENT EASEMENT - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	13+02.71	-64.24	1002942.8163	1728711.9146
L	13+02.71	-92.77	1002970.5114	1728705.0712
L	13+12.71	-122.77	1003002.0342	1728707.5826
L	13+12.71	-92.77	1002972.9102	1728714.7792
L	13+22.71	-122.77	1003004.4331	1728717.2907
L	13+22.71	-92.77	1002975.3090	1728724.4872
L	13+32.71	-83.29	1002968.5066	1728736.4689
L	13+32.71	-92.77	1002977.7079	1728734.1952

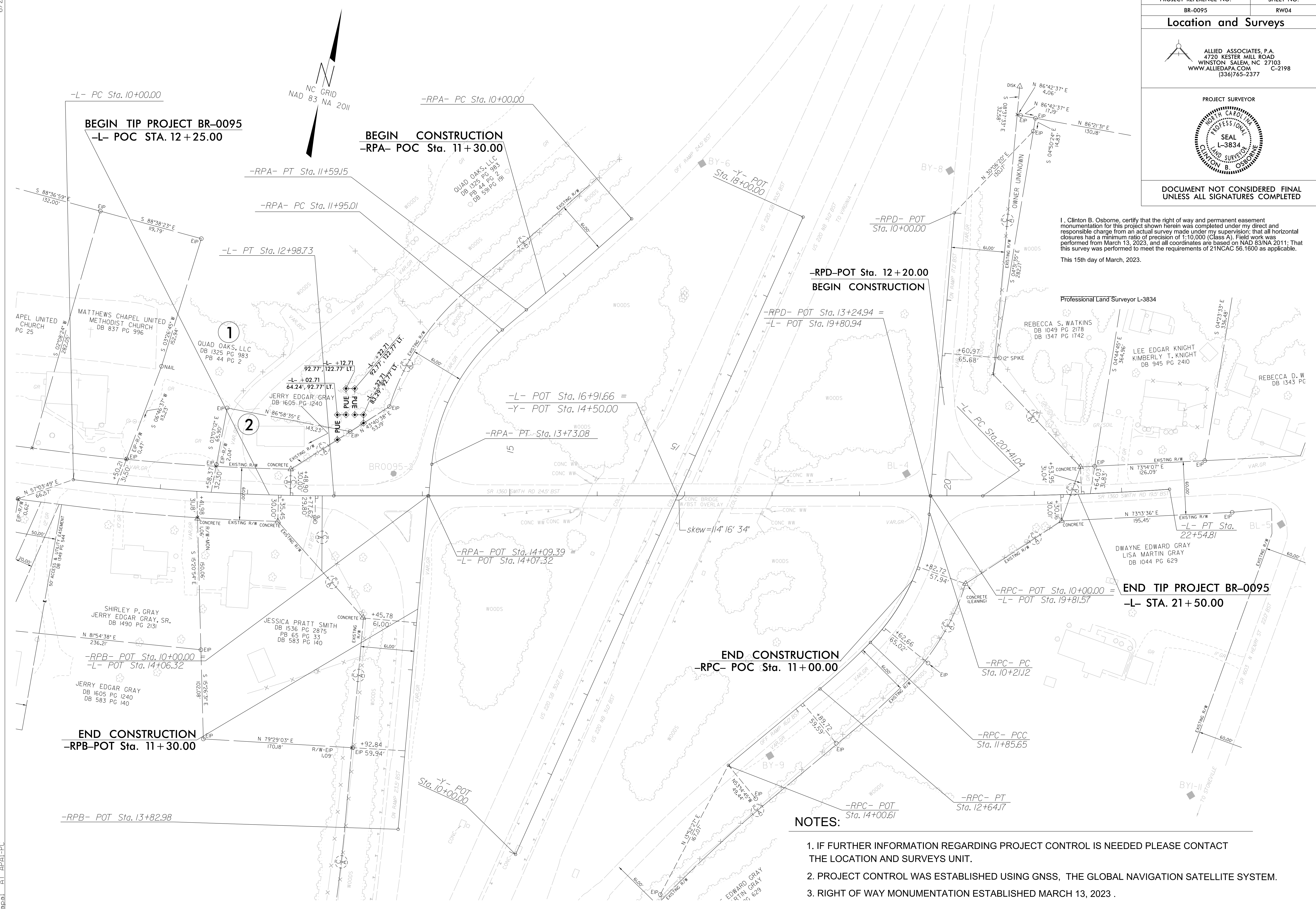
**NOTES:**

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED \_\_\_\_\_ TO \_\_\_\_\_ .



PROJECT REFERENCE NO. BR-0095	SHEET NO. RW04
<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  CLINTON B. OSBORNE	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

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 March 13, 2023, and all coordinates are based on NAD 83/NA 2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable. This 15th day of March, 2023.



**NOTES:**

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED MARCH 13, 2023 .