

09/06/99

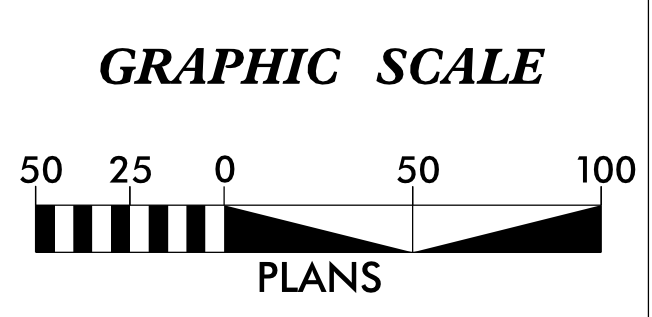
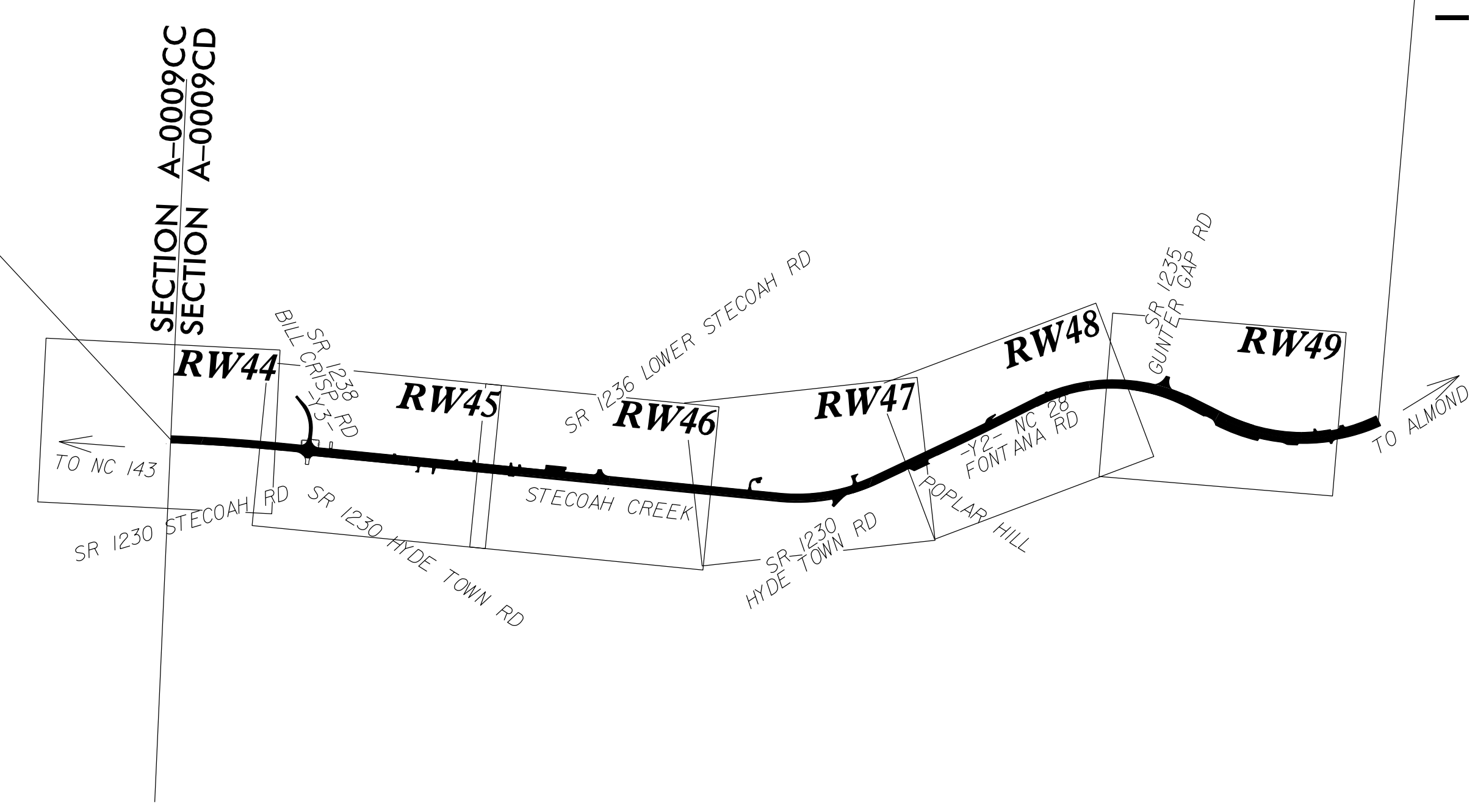
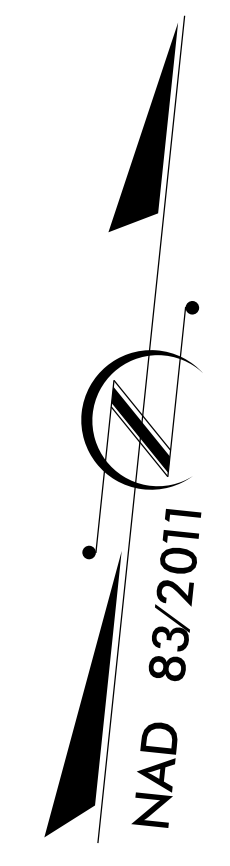
TIP PROJECT: A-0009CD

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	A-0009CD	RW01	28

STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS  
 SURVEY CONTROL, EXISTING CENTERLINES,  
 RIGHT OF WAY, EASEMENTS AND PROPERTY TIES  
**GRAHAM COUNTY**

BEGIN TIP PROJECT A-0009CD  
 -Y2- STA. 89 + 80.00

END TIP PROJECT A-0009CD  
 -Y2- STA. 169 + 60.00

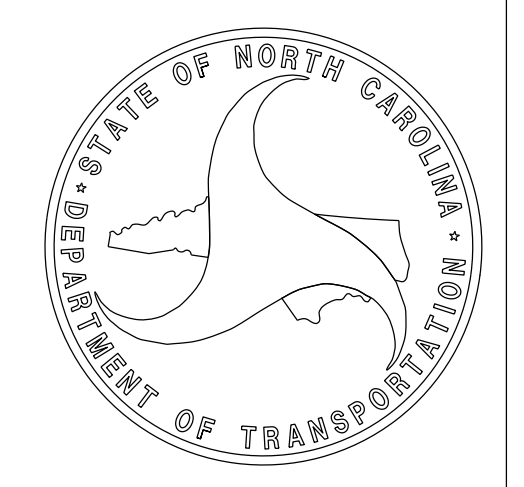
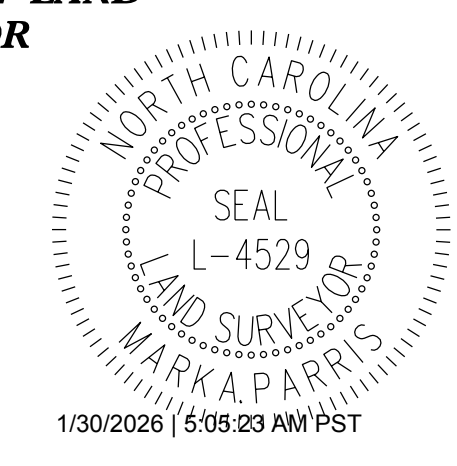


**DATUM DESCRIPTION**  
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "A0009C-10" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 612,531.117(ft) EASTING: 584,817.003(ft) ELEVATION: 2,216.16(ft)  
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999772236  
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "A0009C-10" TO -L- STATION 414+50 IS N 51°45'07.2" E 13,718.44(ft)  
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
 VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:  
**V&M**  
**Vaughn & Melton**  
 1318-F Patton Avenue  
 Asheville, NC 28806  
 Firm License # F-1088

2024 STANDARD SPECIFICATIONS  
**RIGHT OF WAY DATE:** 08/12/2021  
**LETTING DATE:** 5/19/2026

PROFESSIONAL LAND SURVEYOR  
 DocuSigned by:  
 Mark A. Parris  
 F1570CB85C7248A...  
 SIGNATURE: \_\_\_\_\_



\$\$\$\$\$ SYSTEM TIME\$\$\$\$\$  
 \$\$\$ DDMMYY \$\$\$  
 \$\$\$ USERNAME \$\$\$

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
Dates of survey: 2/2020-3/2020  
Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
Northing: 612531.117  
Easting: 584817.003  
Combined grid factor: 0.99977236  
Geoid model: 18 CONUS  
Units: English

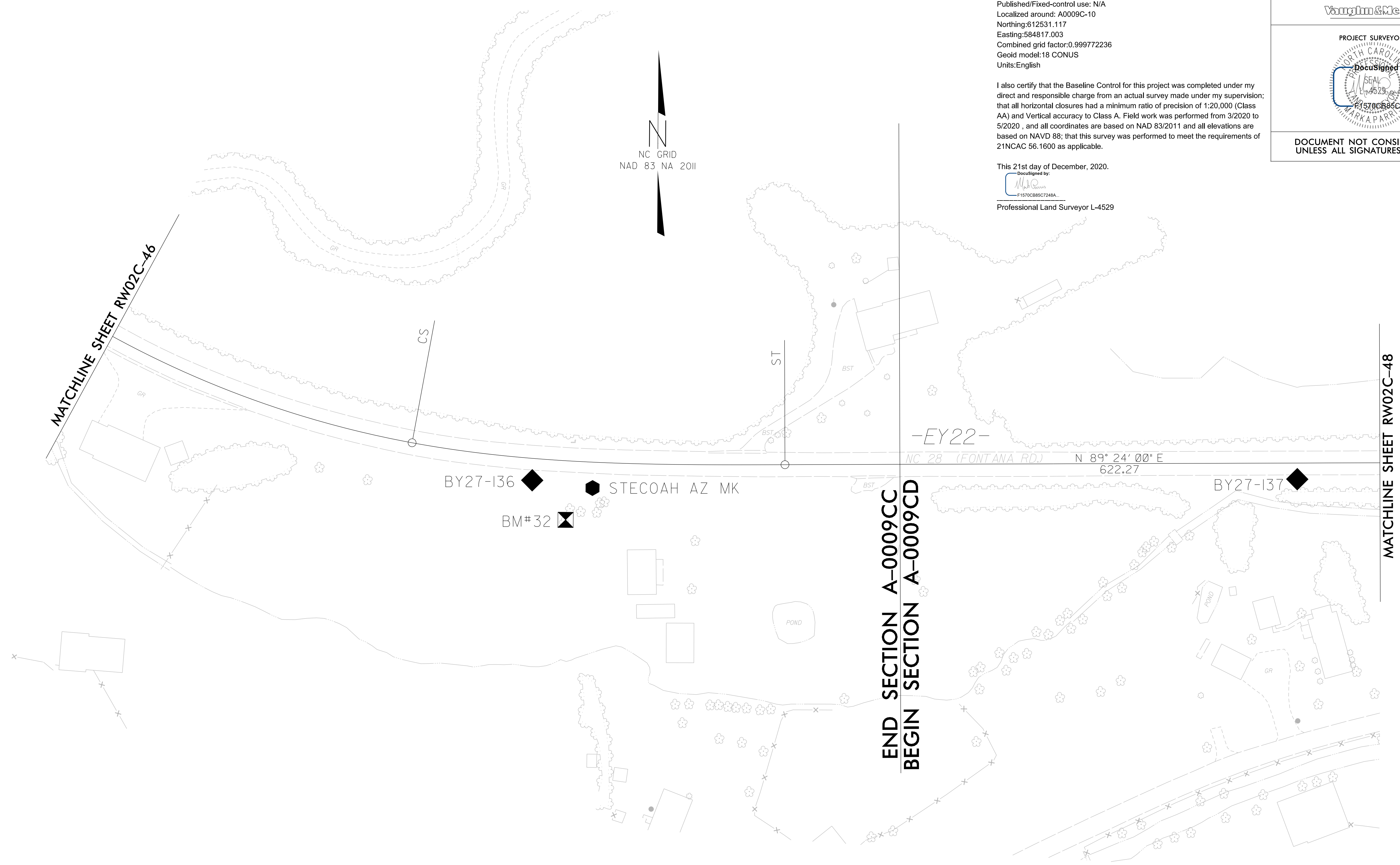
I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 3/2020 to 5/2020, 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 21st day of December, 2020.  
DocuSigned by:  
Mark A. Parris  
F1570CB85C7248A...  
Professional Land Surveyor L-4529

PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW02C-47
<b>Location and Surveys</b>	
PROJECT SURVEYOR DocuSigned by: 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

27-OCT-2022 10:46  
V:\NC\Survey\03212-31\p13--con.vam2\Survey\Property Data\09 stuf\A0009CD\_Revise.DGNs\A0009CD\_1s\_RW02C-47.dgn  
P:\shpman



**SEE SHEETS RW02C-56 THRU RW02C-65  
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

I, Mark A. Parris, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

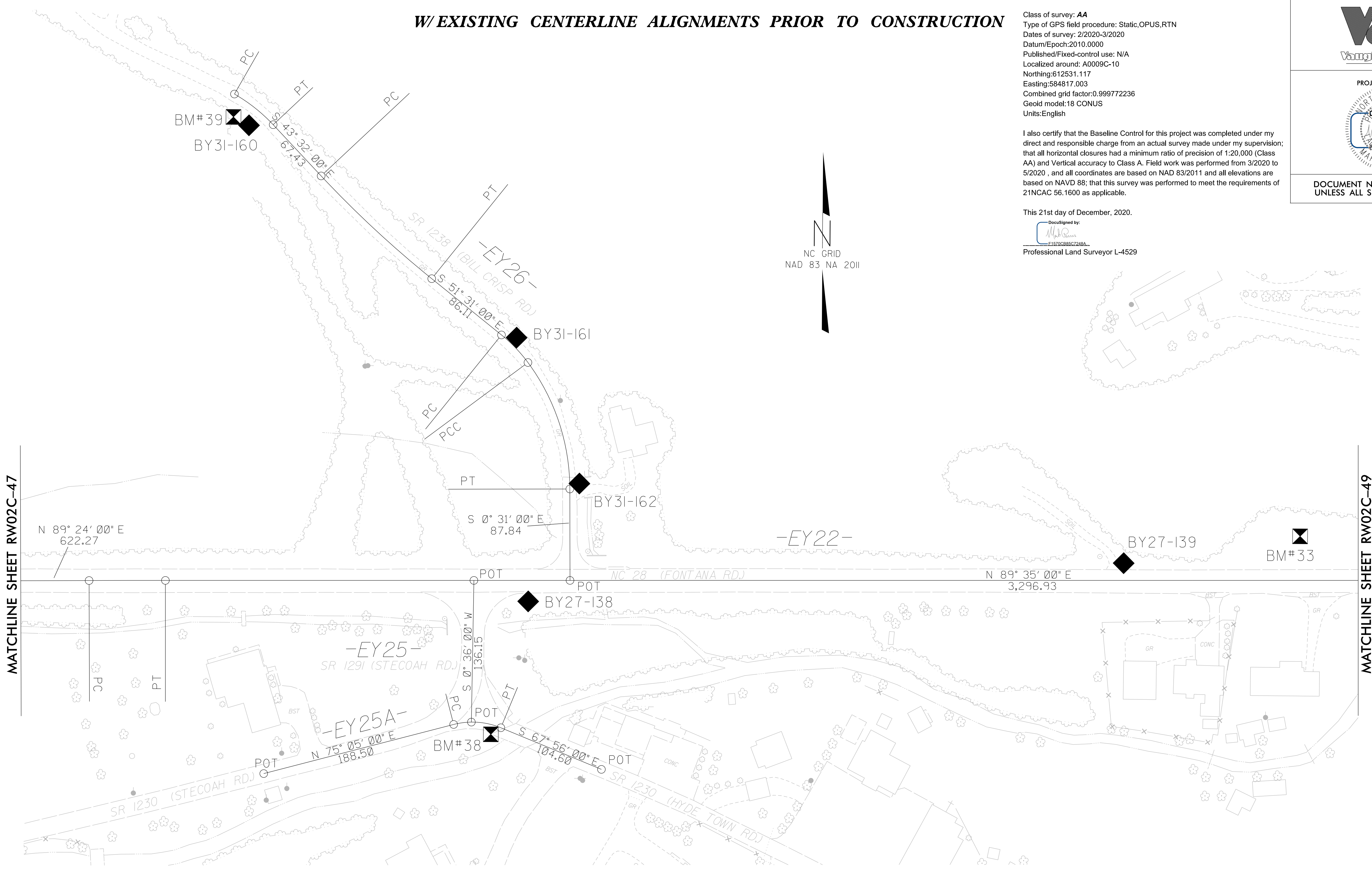
Class of survey: AA  
Type of GPS field procedure: Static, OPUS, RTN  
Dates of survey: 2/2020-3/2020  
Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
Northing: 612531.117  
Easting: 584817.003  
Combined grid factor: 0.999772236  
Geoid model: 18 CONUS  
Units: English

PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW02C-48
Location and Surveys	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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 3/2020 to 5/2020, 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 21st day of December, 2020.

Professional Land Surveyor L-4529



MATCHLINE SHEET RW02C-47

MATCHLINE SHEET RW02C-49

**SEE SHEETS RW02C-56 THRU RW02C-65 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.

REVISIONS

27-OCT-2022 10:48  
V:\NC\Survey\032212-31\p13--con.vam2\Survey\Project\Drawings\A0009CD-1s-RW02C-48.dgn  
P:\shpman

6/2/09

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
Dates of survey: 2/2020-3/2020  
Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
Northing: 612531.117  
Easting: 584817.003  
Combined grid factor: 0.999772236  
Geoid model: 18 CONUS  
Units: English

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This 21st day of December, 2020.

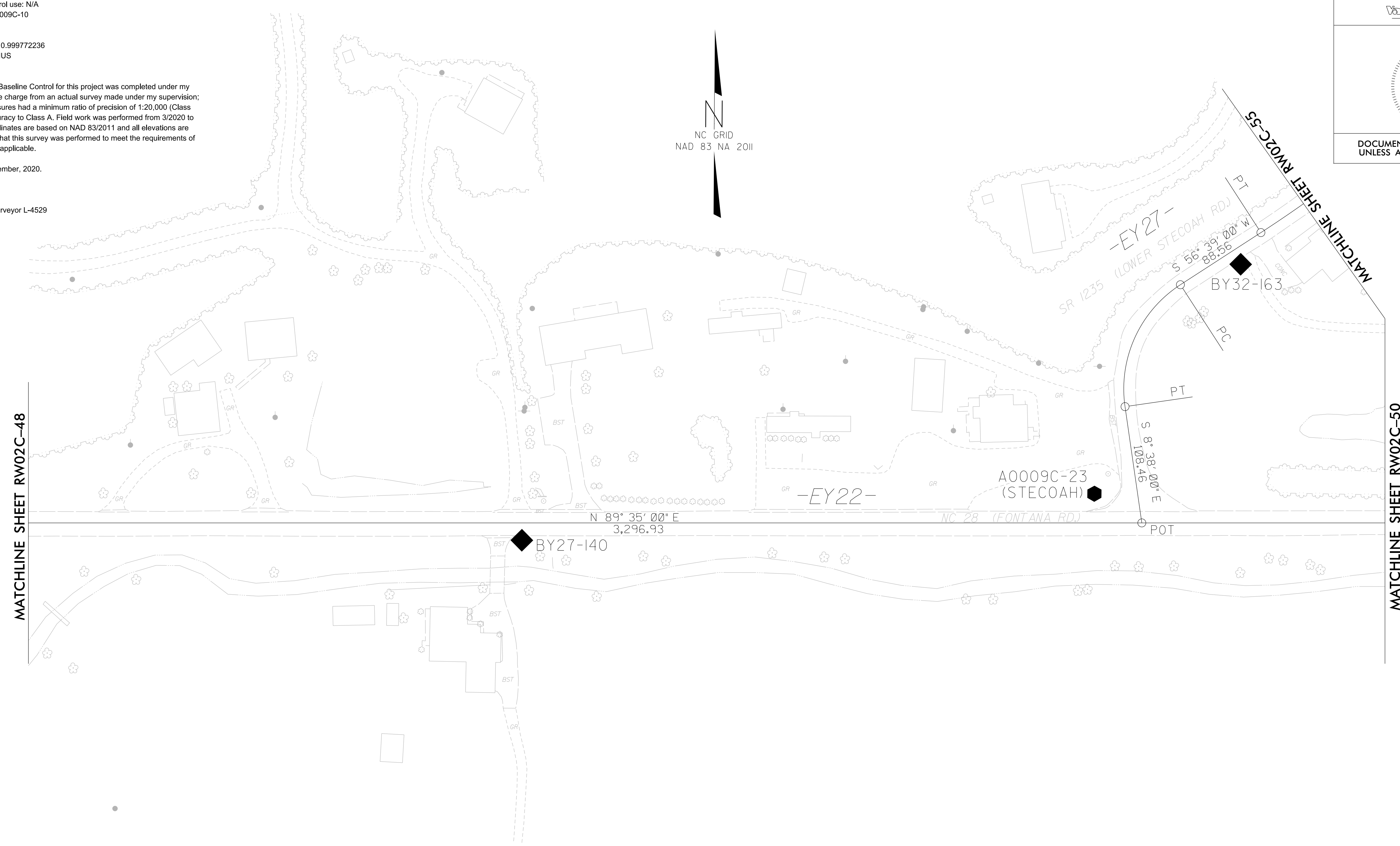
DocuSigned by:  
Mark A. Parris  
F1570C85C7248A...

Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW02C-49
<b>Location and Surveys</b>	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**SEE SHEETS RW02C-56 THRU RW02C-65  
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.

REVISIONS

27-OCT-2022 10:51  
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P:\shpman

6/2/2022

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
Dates of survey: 2/2020-3/2020  
Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
Northing: 612531.117  
Easting: 584817.003  
Combined grid factor: 0.999772236  
Geoid model: 18 CONUS  
Units: English

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 3/2020 to 5/2020, 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 21st day of December, 2020.

*Mark A. Parris*  
Professional Land Surveyor L-4529

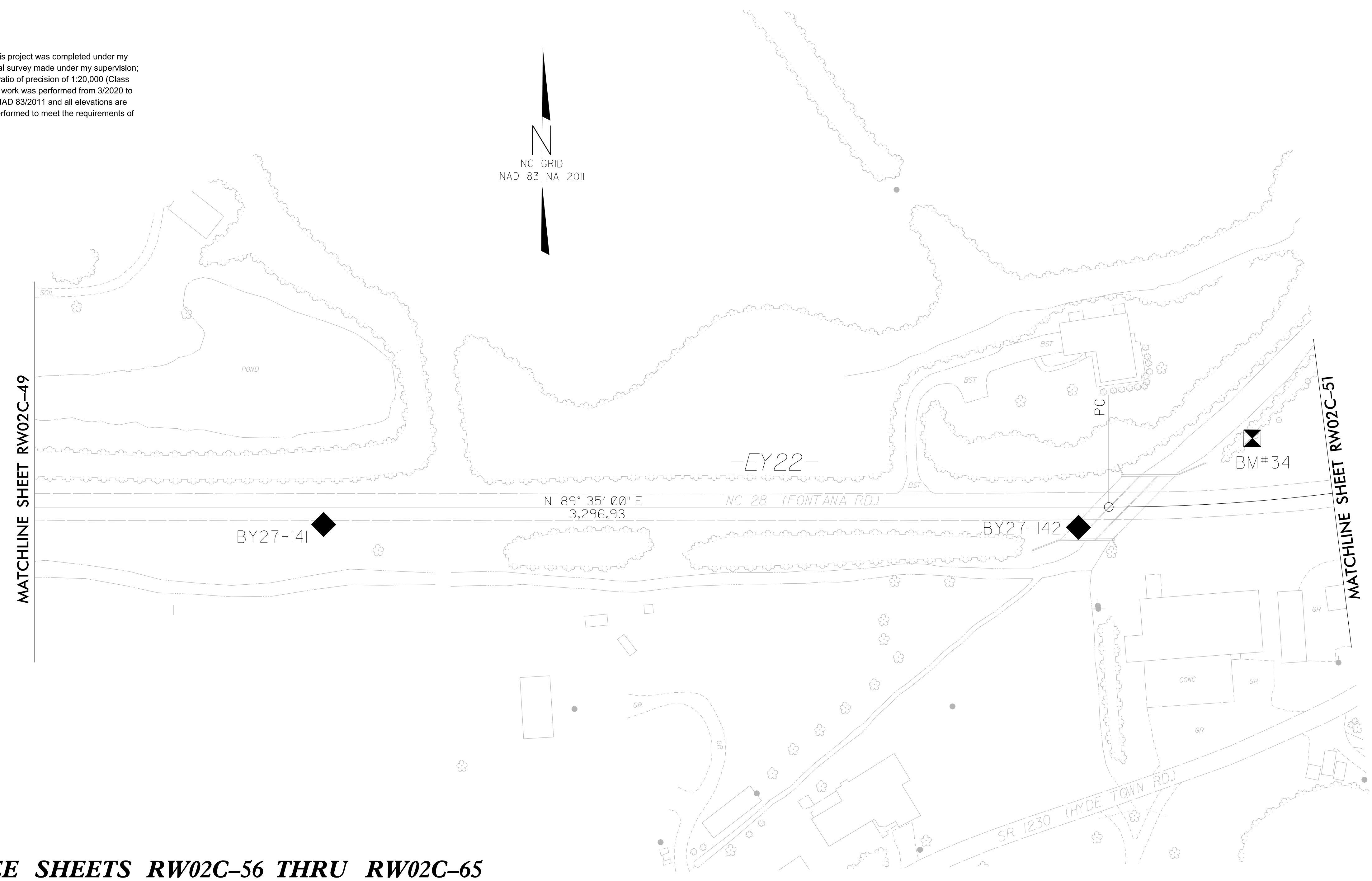
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW02C-50
Location and Surveys	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NC GRID  
NAD 83 NA 2011



**SEE SHEETS RW02C-56 THRU RW02C-65  
FOR FURTHER  
ALIGNMENT DETAILS**

**NOTES:**

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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.

REVISIONS

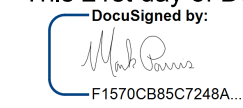
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I, Mark A. Parris, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: AA  
Type of GPS field procedure: Static, OPUS, RTN  
Dates of survey: 2/2020-3/2020  
Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
Northing: 612531.117  
Easting: 584817.003  
Combined grid factor: 0.999772236  
Geoid model: 18 CONUS  
Units: English

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This 21st day of December, 2020.

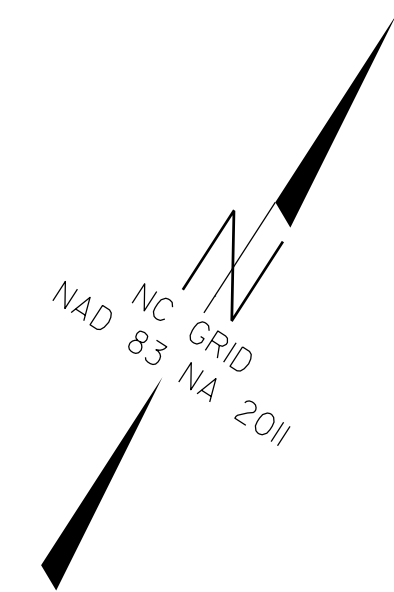


Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW02C-51
<b>Location and Surveys</b>	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**SEE SHEETS RW02C-56 THRU RW02C-65  
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.

REVISIONS

27-OCT-2022 10:57  
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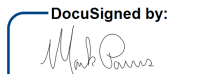
6/2/09

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
Dates of survey: 2/2020-3/2020  
Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
Northing: 612531.117  
Easting: 584817.003  
Combined grid factor: 0.999772236  
Geoid model: 18 CONUS  
Units: English


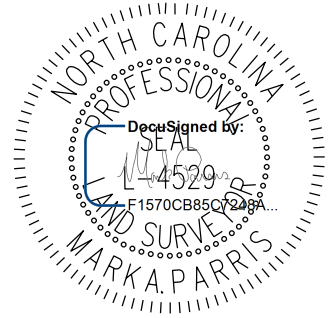
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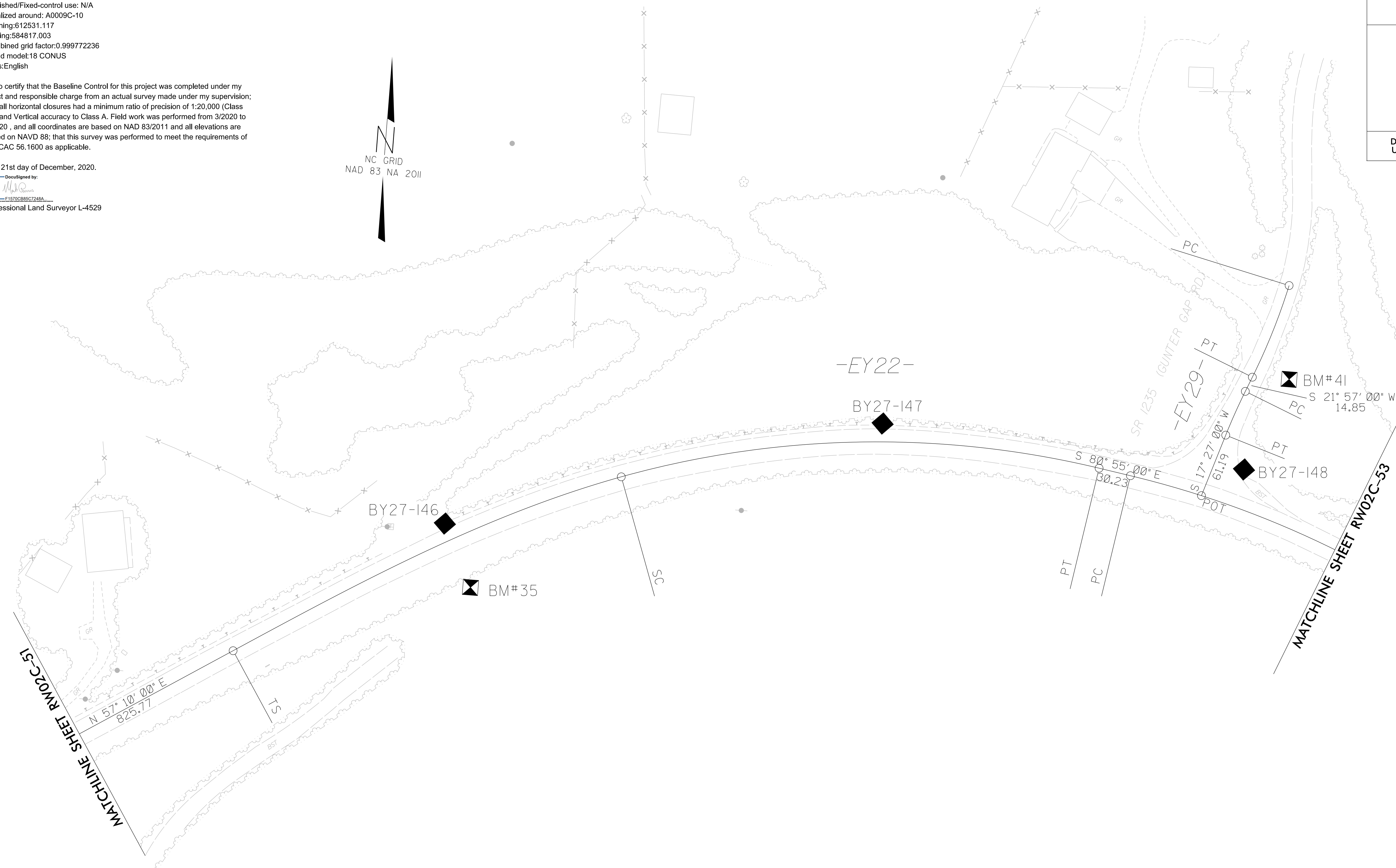
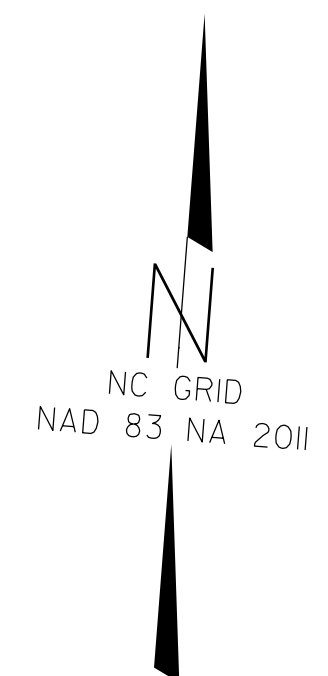
This 21st day of December, 2020.

DocuSigned by:  
  
E1570C8B5C7248A  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW02C-52
Location and Surveys	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**SEE SHEETS RW02C-56 THRU RW02C-65  
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.

REVISIONS

27-OCT-2022 10:01  
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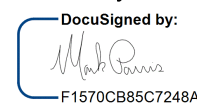
6/2/09

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
Dates of survey: 2/2020-3/2020  
Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
Northing: 612531.117  
Easting: 584817.003  
Combined grid factor: 0.999772236  
Geoid model: 18 CONUS  
Units: English


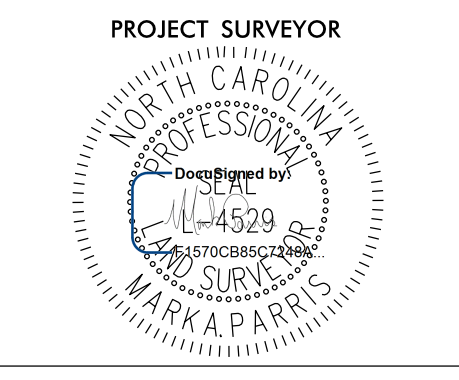
I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 3/2020 to 5/2020, 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.

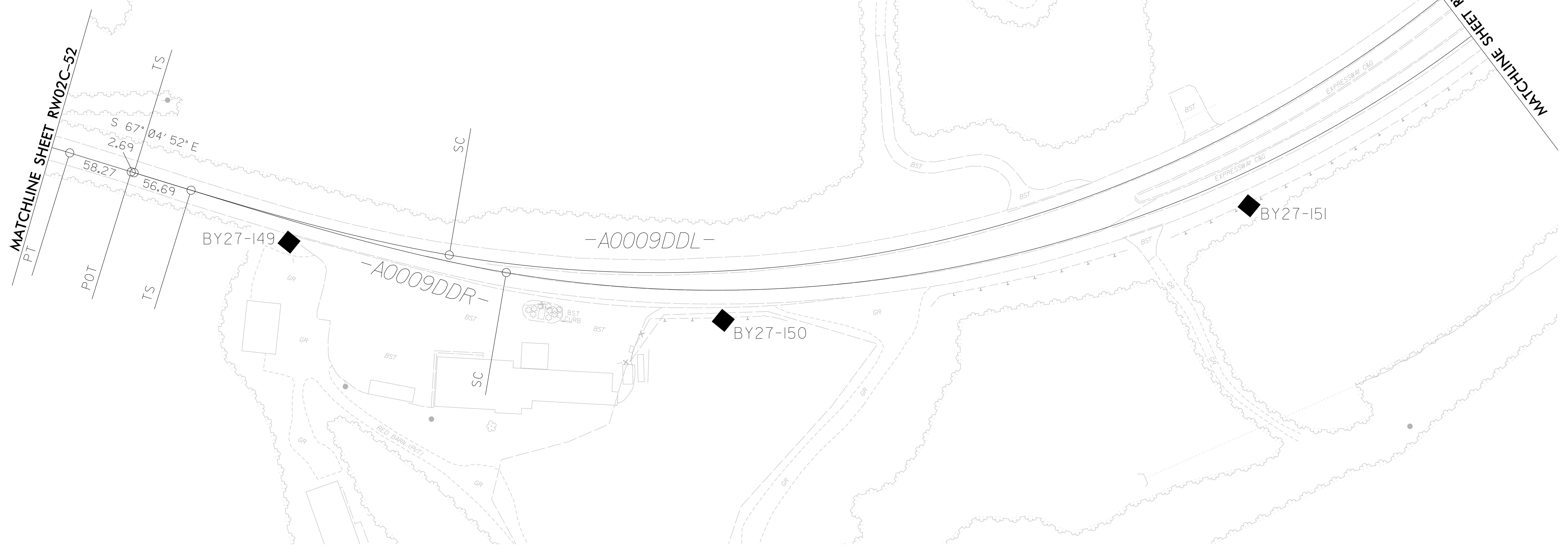
This 21st day of December, 2020.

DocuSigned by:  
  
F1570C885C7248A  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW02C-53
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**SEE SHEETS RW02C-56 THRU RW02C-65  
FOR FURTHER  
ALIGNMENT DETAILS**

**NOTES:**


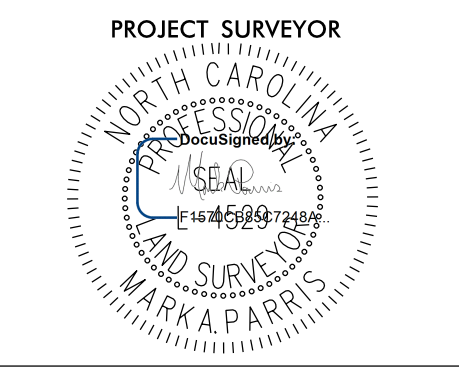
1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

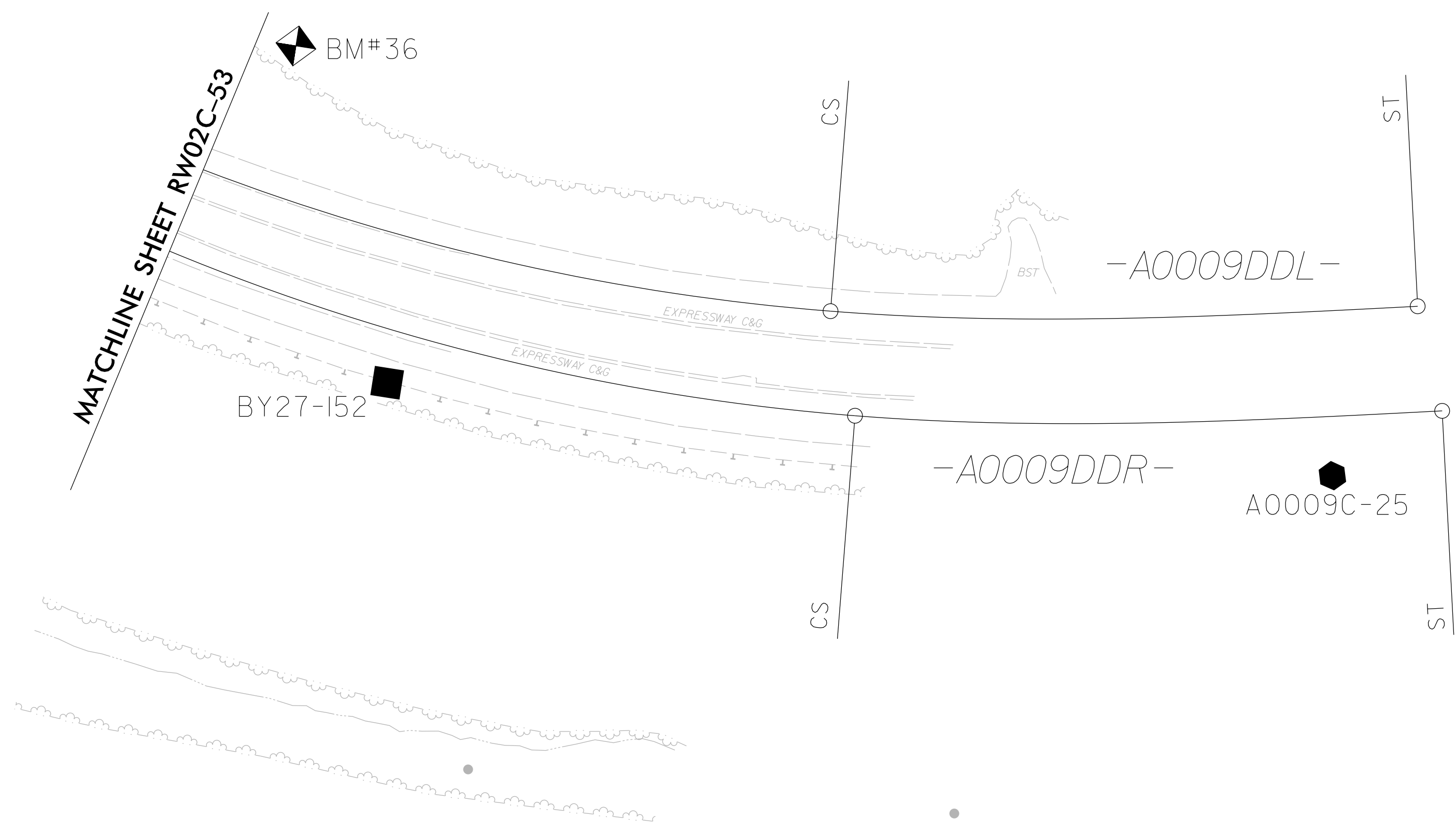
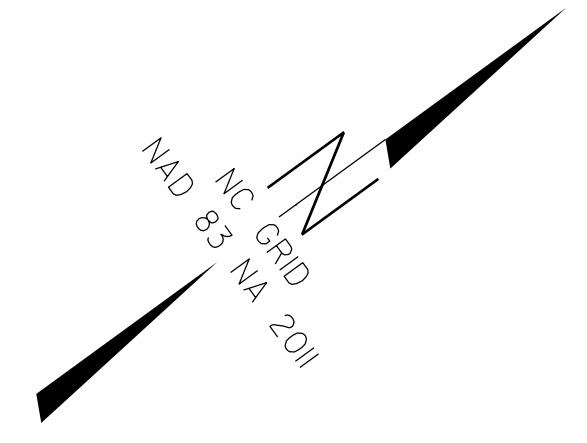
REVISIONS

27-OCT-2022 13:32  
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# SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

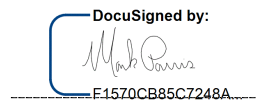
PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW02C-54
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 584817.003  
 Combined grid factor: 0.999772236  
 Geoid model: 18 CONUS  
 Units: English

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This 21st day of December, 2020.  
 DocuSigned by:  
  
 Professional Land Surveyor L-4529

**SEE SHEETS RW02C-56 THRU RW02C-65  
 FOR FURTHER  
 ALIGNMENT DETAILS**

**NOTES:**

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
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A0009C-26


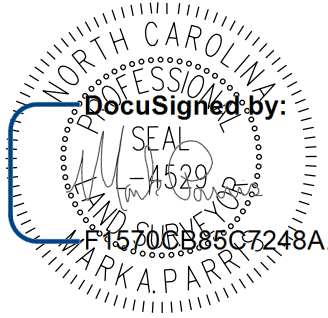


REVISIONS

27-OCT-2022 13:36  
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 P:\shpman

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW02C-55
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

27-OCT-2022 13:38  
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**SEE SHEETS RW02C-56 THRU RW02C-65**  
**FOR FURTHER**  
**ALIGNMENT DETAILS**

### NOTES:

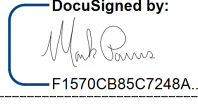
1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 584817.003  
 Combined grid factor: 0.999772236  
 Geoid model: 18 CONUS  
 Units: English


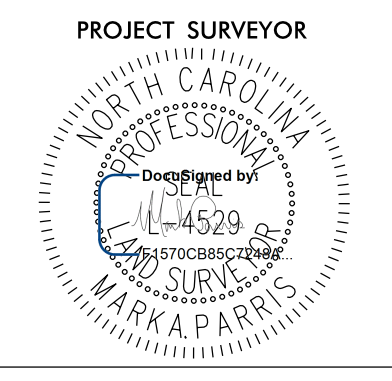
I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 3/2020 to 5/2020, 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 21st day of December, 2020.

Designed by:  
  
 Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW02C-56
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

BL	POINT	DESC.	NORTH	EAST	ELEVATION
1	BL -1		607480.8260	568146.0580	1993.46
2	BL -2		607668.6540	568423.9930	1992.40
3	BL -3		607975.2340	568973.6670	1998.76
4	BL -4		607895.6970	569695.5230	2012.80
5	BL -5		607664.7910	570164.0000	2013.94
6	BL -6		607499.3880	570616.0120	2015.91
7	BL -7		607337.3140	571059.8600	2020.97
8	BL -8		607188.9590	571436.3810	2015.83
9	BL -9		607008.3250	571960.6260	2023.68
10	BL -10		606851.1840	572395.1610	2036.09
11	BL -11		606835.5810	572745.4190	2045.11
GPS5	A0009C-5		607061.2380	573293.1200	2060.95
12	BL -12		607391.1830	573795.7120	2097.53
13	BL -13		607663.3560	574364.8790	2139.38
14	BL -14		607670.8580	574860.6500	2157.62
15	BL -15		607547.9820	575334.7410	2161.09
16	BL -16		607453.2850	576050.4320	2138.21
17	BL -17		607648.7420	576599.1850	2112.89
18	BL -18		608143.3850	576938.7680	2084.57
19	BL -19		608772.5500	577402.4760	2087.33
20	BL -20		609212.6580	577878.2080	2105.61
GPS7	A0009C-7		609410.9490	578471.3700	2105.62
21	BL -21		609631.0670	579169.3910	2120.08
22	BL -22		609900.2280	579995.4600	2143.59
23	BL -23		610179.2680	580857.8860	2150.87
24	BL -24		610376.2540	581461.9310	2155.15
25	BL -25		610560.2610	582027.5120	2160.21
26	BL -26		610924.7490	582430.3420	2168.99
27	BL -27		611457.8380	582822.4360	2178.94
28	BL -28		612053.8860	583254.4340	2187.77
29	BL -29		612599.1420	583666.0720	2197.33
30	BL -30		612783.3070	584100.4350	2202.40
GPS9	A0009C-9		612913.2580	584695.7140	2208.43
31	BL -31		613055.7330	585366.3940	2217.12
32	BL -32		613221.8360	586178.6200	2228.54
33	BL -33		613574.5010	586706.2820	2234.82
34	BL -34		614067.4120	587191.5890	2245.18
35	BL -35		614664.9920	587814.9680	2262.31
36	BL -36		615091.2660	588382.2260	2274.06
37	BL -37		615469.1960	588836.7060	2287.81
38	BL -38		615948.6020	589168.9120	2301.93
39	BL -39		616494.7660	589416.3220	2316.28
GPS11	A0009C-11		617324.4280	589561.2440	2335.15
40	BL -40		617874.8580	589687.9530	2353.90
41	BL -41		618420.5900	589810.2160	2392.11
42	BL -42		618968.9160	589996.9380	2439.77
43	BL -43		619404.8890	590492.6090	2489.55
44	BL -44		619919.5370	590902.2820	2544.28
45	BL -45		620597.1760	591057.1780	2599.60
46	BL -46		621020.7940	591422.4830	2643.76
47	BL -47		621188.0490	591920.5580	2684.81
48	BL -48		621540.1460	592296.4520	2724.38
49	BL -49		621890.8420	592554.1220	2760.76
50	BL -50		622282.7570	593217.4850	2822.43
GPS13	A0009C-13		622270.7170	593578.2810	2849.80
51	BL -51		621928.8920	593815.8700	2880.42
52	BL -52		621311.4490	593648.1260	2924.14
53	BL -53		620845.9440	593442.8150	2961.77
54	BL -54		620272.7540	593436.8130	3001.33
55	BL -55		619821.2230	593190.3870	3037.94
56	BL -56		619313.5090	593159.2730	3072.25
57	BL -57		618744.5480	593199.0420	3111.86
GPS15	A0009C-15		618530.1870	593483.6780	3128.98
GPS16	A0009C-16		618695.0490	593826.6310	3133.05
58	BL -58		619036.0340	594022.1770	3122.53
59	BL -59		619437.9470	594211.7200	3100.95
60	BL -60		619776.2050	594618.6070	3060.18
61	BL -61		620124.3470	594920.6190	3029.73
62	BL -62		620691.0820	595016.2590	2990.54
GPS17	A0009C-17		621003.0840	595356.0870	2958.21
GPS18	A0009C-18		621064.6070	596036.0000	2910.01
63	BL -63		621692.4700	596453.4800	2863.40
64	BL -64		622233.7870	596739.2000	2835.09
65	BL -65		622582.2170	596619.6530	2803.93
66	BL -66		622973.4180	596234.8630	2760.57
67	BL -67		623508.1470	596025.7490	2713.87
68	BL -68		624042.3910	595816.8510	2673.09
69	BL -69		624613.5480	595723.7020	2634.00
GPS19	A0009C-19		625233.1270	596132.9040	2577.91
GPS20	A0009C-20		626011.6230	596470.4230	2510.58

BY1	POINT	DESC.	NORTH	EAST	ELEVATION
GPS1	A0009C-1		608026.2410	567925.9280	1990.27
70	BL -70		607787.1890	568057.8430	1992.29
81	BL -1		607480.8260	568146.0580	1993.46
71	BL -71		607129.5170	568082.9430	1996.57
72	BL -72		606909.6870	567957.3210	1998.83
73	BY1-73		606655.7600	567978.5330	2000.34
BY14	37-0020 BY1-4		606487.2560	567958.7680	2002.49
8L1	37-0020 BL-1		606304.6550	567974.9810	2004.20
BY13	37-0020 BY1-3		606116.8260	568009.0020	2004.87
74	BY1-74		605917.0380	568072.0300	2007.27
75	BY1-75		605574.2960	568141.7460	2010.67
76	BY1-76		605137.8990	568300.2280	2016.71
77	BY1-77		604679.2980	568472.5590	2023.55
GPS3	A0009C-3		604306.4560	568686.9910	2023.79
BY3	POINT	DESC.	NORTH	EAST	ELEVATION
872	BY1-72		606909.6870	567957.3210	1998.83
78	BY3-78		606721.8800	568115.0010	1996.20
BY4	POINT	DESC.	NORTH	EAST	ELEVATION
79	BY4-79		606945.1130	567521.5510	2022.32
80	BY4-80		606772.0230	567761.9900	2011.66
BY14	37-0020 BY1-4		606487.2560	567958.7680	2002.49
BY5	POINT	DESC.	NORTH	EAST	ELEVATION
BBL1	37-0020 BL-1		606304.6550	567974.9810	2004.20
BL2	37-0020 BL-2		606326.8200	568195.8070	2002.82
81	BY5-81		606347.5430	568394.8310	1997.00
G100	37-0020 GPS-100		606393.0410	568537.8980	1999.19
82	BY5-82		606497.5480	568790.9510	2008.98
83	BY5-83		606654.7710	569036.2550	2020.81
91	BY9-91		606757.2530	569284.7900	2028.99
84	BY5-84		606942.5900	569105.8710	2029.11
85	BY5-85		607203.9050	568976.8430	2035.48
86	BY5-86		607523.3980	568999.6830	2035.73
87	BY5-87		607782.3720	569110.8320	2037.37
88	BY5-88		607862.7850	569372.9780	2026.12
BB4	BL-4		607895.6970	569695.5230	2012.80
BY10	POINT	DESC.	NORTH	EAST	ELEVATION
92	BY10-92		608436.8970	569737.0970	1991.61
84	BL-4		607895.6970	569695.5230	2012.80
BY13	POINT	DESC.	NORTH	EAST	ELEVATION
93	BY13-93		607021.7880	572659.0690	2029.79
B10	BL-10		606851.1840	572395.1610	2036.09
BY14	POINT	DESC.	NORTH	EAST	ELEVATION
94	BY14-94		607398.5460	573392.9230	2050.28
BGPS5	A0009C-5		607061.2380	573293.1200	2060.95

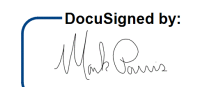
BY15	POINT	DESC.	NORTH	EAST	ELEVATION
B13	BL -13		607663.3560	574364.8790	2139.38
95	BY15-95		607498.8190	574666.8040	2150.10
BY16	POINT	DESC.	NORTH	EAST	ELEVATION
B15	BL -15		607547.9820	575334.7410	2161.09
96	BY16-96		607399.3180	574980.5940	2165.30
97	BY16-97		607474.2510	575425.5600	2137.91
BY17	POINT	DESC.	NORTH	EAST	ELEVATION
B16	BL -16		607453.2850	576050.4320	2138.21
98	BY17-98		607364.1270	576184.5940	2120.10
99	BY17-99		607446.5980	576478.5560	2087.59
BY18	POINT	DESC.	NORTH	EAST	ELEVATION
100	BY18-100		608788.9920	577195.9890	2087.10
B19	BL -19		608772.5500	577402.4760	2087.33

I, Mark A. Parris, PLS, certify that the Project Control was verified under my supervision from an actual GPS field procedure: Static, OPUS, RTN and the following information was used to perform the survey:

Class of survey: **AA**  
 Type of GPS field procedure: Static, OPUS, RTN  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 584817.003  
 Combined grid factor: 0.999772236  
 Geoid model: 18 CONUS  
 Units: English

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 3/2020 to 5/2020, 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 21st day of December, 2020.

  
 Professional Land Surveyor L-4529

### NOTES:

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

REVISIONS

25-JAN-2021 10:24:7  
 V:\NC\SURVEY\032012-14\_A-0009 CON\SURVEY\DATA  
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 jcgordon

# SURVEY CONTROL SHEET

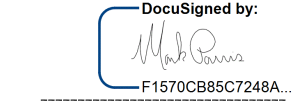
## W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
Dates of survey: 2/2020-3/2020  
Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
Northing: 612531.117  
Easting: 584817.003  
Combined grid factor: 0.999772236  
Geoid model: 18 CONUS  
Units: English

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 3/2020 to 5/2020, 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 21st day of December, 2020.



Professional Land Surveyor L-4529

PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW02C-57
<b>Location and Surveys</b>	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

POINT	DESC.	NORTH	EAST	ELEVATION
B40	BL - 40	617874.8580	589687.9530	2353.90
101	BY25-101	618094.3990	589858.2180	2361.85
102	BY25-102	618463.3860	589933.2950	2375.42
103	BY25-103	618773.9610	590049.0190	2397.53
104	BY25-104	618852.4600	590231.3830	2421.71
105	BY25-105	619074.5250	590376.8040	2435.57
106	BY25-106	619127.6290	590572.0880	2449.68
107	BY25-107	619223.1130	590671.1520	2459.21
108	BY25-108	619426.6460	590723.2200	2470.81
109	BY25-109	619592.5040	590924.7330	2489.75
110	BY25-110	619780.3410	590959.9380	2500.97
111	BY25-111	619891.7040	591079.8550	2520.42
112	BY25-112	620091.3970	591018.2560	2533.21
113	BY25-113	620152.7280	591158.2880	2553.95
114	BY25-114	620295.9930	591222.2840	2569.85
115	BY25-115	620440.2020	591197.9380	2584.80
B45	BL - 45	620597.1760	591057.1780	2599.60

POINT	DESC.	NORTH	EAST	ELEVATION
153	BY28-153	624417.1610	597608.9850	2263.12
154	BY28-154	624325.8510	597917.7750	2239.15
155	BY28-155	624278.9330	598098.4640	2225.72
156	BY28-156	624314.9970	598370.3740	2206.90
157	BY28-157	624189.9470	598694.1370	2184.02
158	BY28-158	624094.7480	598887.8720	2173.67
159	BY28-159	624069.7320	599157.9850	2162.39
YY133	BY27-133	623951.4930	599326.2620	2177.41

POINT	DESC.	NORTH	EAST	ELEVATION
160	BY31-160	623371.8520	601893.1250	2051.44
161	BY31-161	623169.7250	602151.7110	2030.72
162	BY31-162	623029.9760	602213.0550	2023.15
Y138	BY27-138	622916.3840	602164.6920	2021.20

POINT	DESC.	NORTH	EAST	ELEVATION
116	BY27-116	627668.7710	595746.1540	2396.26
117	BY27-117	627326.8000	595877.6660	2423.89
118	BY27-118	627008.2080	596006.2820	2451.34
119	BY27-119	626682.7130	596209.7880	2482.85
120	BY27-120	626363.1360	596498.3810	2514.49
YGPS20	A0009C-20	626011.6230	596470.4230	2510.58
121	BY27-121	625776.6740	596555.8310	2502.81
122	BY27-122	625496.1090	596516.2830	2484.55
123	BY27-123	625187.5690	596523.0380	2464.13
124	BY27-124	624993.6440	596480.9010	2451.73
125	BY27-125	624688.4920	596531.7970	2427.37
126	BY27-126	624381.8220	596676.0270	2401.29
127	BY27-127	624086.8430	596954.9890	2369.62
128	BY27-128	623916.0190	597303.6880	2338.16
129	BY27-129	623901.6750	597674.7440	2307.40
130	BY27-130	623923.5590	598192.9300	2266.46
131	BY27-131	623940.6670	598571.9230	2236.14
132	BY27-132	623956.8800	598922.7950	2207.83
133	BY27-133	623951.4930	599326.2620	2177.41
134	BY27-134	623822.0140	599570.4980	2153.60
GPS21	A0009C-21	623606.0530	599868.7320	2122.69
135	BY27-135	623071.7070	600405.2240	2080.82
136	BY27-136	622910.5300	600884.0640	2063.26
137	BY27-137	622916.7800	601599.8220	2037.15
138	BY27-138	622916.3840	602164.6920	2021.20
139	BY27-139	622957.2640	602736.5220	2012.03
140	BY27-140	622929.6210	603417.6160	1997.79
GPS23	NCGS "STECOAH"	622976.4500	603945.8670	1988.16
141	BY27-141	622938.6050	604456.0790	1978.34
142	BY27-142	622940.8330	605087.6130	1966.33
143	BY27-143	623053.9380	605538.9120	1958.94
144	BY27-144	623316.9250	606070.0410	1975.21
145	BY27-145	623582.7310	606398.6840	2000.07
146	BY27-146	623836.6670	606805.8240	2032.90
147	BY27-147	623961.9320	607208.1130	2055.75
148	BY27-148	623945.1160	607549.4850	2064.37
149	BY27-149	623769.6940	607845.3930	2068.27
150	BY27-150	623659.4710	608229.4840	2063.54
151	BY27-151	623714.6670	608713.6890	2041.99
152	BY27-152	623896.7650	609047.4660	2018.05
GPS25	A0009C-25	624253.0900	609365.0450	1986.82

POINT	DESC.	NORTH	EAST	ELEVATION
YGPS23	NCGS "STECOAH"	622976.4500	603945.8670	1988.16
163	BY32-163	623189.2390	604079.3270	1991.07
164	BY32-164	623535.8830	604485.6710	2006.37
165	BY32-165	623766.7880	604751.7330	2005.72

.....  
 BM1 ELEVATION = 1993.80  
 N 607747 E 568452  
 SPIKE NAIL IN 18" MAPLE  
 .....

.....  
 BM10 ELEVATION = 2200.60  
 N 612773 E 584352  
 SPIKE NAIL IN 14" DOUBLE POPLAR  
 .....

.....  
 BM2 ELEVATION = 2015.91  
 N 607797 E 569652  
 CHISELED "X" IN CONC PAD FOR TRAFFIC SIGNAL BOX  
 .....

.....  
 BM11 ELEVATION = 2234.92  
 N 613603 E 586710  
 SPIKE NAIL IN 18" POPLAR  
 .....

.....  
 BM3 ELEVATION = 2016.23  
 N 607058 E 571713  
 SPIKE NAIL IN 10" POPLAR  
 .....

.....  
 BM12 ELEVATION = 2269.68  
 N 614929 E 588131  
 SPIKE NAIL IN 15" POPLAR  
 .....

.....  
 BM4 ELEVATION = 2108.41  
 N 607414 E 573959  
 SPIKE NAIL IN 14" PINE  
 .....

.....  
 BM13 ELEVATION = 2313.25  
 N 616593 E 589377  
 SPIKE NAIL IN 24" POPLAR  
 .....

.....  
 BM5 ELEVATION = 2132.48  
 N 607421 E 576156  
 SPIKE NAIL IN 15" DOUBLE OAK  
 .....

.....  
 BM14 ELEVATION = 2410.76  
 N 618630 E 589915  
 SPIKE NAIL IN 14" POPLAR  
 .....

.....  
 BM6 ELEVATION = 2100.03  
 N 609056 E 577733  
 SPIKE NAIL IN 24" WHITE OAK  
 .....

.....  
 BM15 ELEVATION = 2571.99  
 N 620243 E 591023  
 SPIKE NAIL IN 10" POPLAR  
 .....

.....  
 BM7 ELEVATION = 2125.10  
 N 609693 E 579533  
 SPIKE NAIL IN 20" POPLAR  
 .....

.....  
 BM16 ELEVATION = 2715.81  
 N 621413 E 592250  
 SPIKE NAIL IN 13" PINE  
 .....

.....  
 BM8 ELEVATION = 2148.72  
 N 610368 E 581380  
 SPIKE NAIL IN 14" POPLAR  
 .....

.....  
 BM17 ELEVATION = 2882.87  
 N 621951 E 593832  
 SPIKE NAIL IN 12" POPLAR  
 .....

.....  
 BM9 ELEVATION = 2183.22  
 N 611767 E 583110  
 SPIKE NAIL IN 30" MAPLE  
 .....

.....  
 BM18 ELEVATION = 3033.61  
 N 619882 E 593172  
 SPIKE NAIL IN 10" POPLAR  
 .....

.....  
 BM19 ELEVATION = 3094.55  
 N 619399 E 594281  
 SPIKE NAIL IN 24" MAPLE  
 .....

.....  
 BM31 ELEVATION = 2178.05  
 N 623982 E 599277  
 SPIKE NAIL IN 26" POPLAR  
 .....

.....  
 BM20 ELEVATION = 2982.50  
 N 620695 E 595078  
 SPIKE NAIL IN 20" POPLAR  
 .....

.....  
 BM32 ELEVATION = 2055.94  
 N 622874 E 600916  
 SPIKE NAIL IN 36" POPLAR  
 .....

.....  
 BM21 ELEVATION = 2806.49  
 N 622539 E 596717  
 SPIKE NAIL IN 24" PRINCESS TREE  
 .....

.....  
 BM33 ELEVATION = 2011.30  
 N 622984 E 602906  
 SPIKE NAIL IN 10" POPLAR  
 .....

.....  
 BM22 ELEVATION = 2715.62  
 N 623495 E 595954  
 SPIKE NAIL IN 12" POPLAR  
 .....

.....  
 BM34 ELEVATION = 1956.92  
 N 623016 E 605233  
 SPIKE NAIL IN 18" WALNUT  
 .....

.....  
 BM23 ELEVATION = 2523.73  
 N 625892 E 596342  
 SPIKE NAIL IN 15" POPLAR  
 .....

.....  
 BM35 ELEVATION = 2036.22  
 N 623779 E 606834  
 SPIKE NAIL IN 12" DOUBLE POPLAR  
 .....

.....  
 BM24 ELEVATION = 1989.37  
 N 608121 E 567911  
 BOLT IN MCDONALDS SIGN BASE  
 .....

.....  
 BM36 ELEVATION = 2022.34  
 N 623959 E 608884  
 SPIKE NAIL IN 24" POPLAR  
 .....

.....  
 BM25 ELEVATION = 2027.51  
 N 604128 E 568732  
 SPIKE NAIL IN 18" WALNUT  
 .....

.....  
 BM37 ELEVATION = 2238.93  
 N 624326 E 597907  
 SPIKE NAIL IN 12" TRIPLE POPLAR  
 .....

.....  
 BM26 ELEVATION = 2018.64  
 N 606947 E 567547  
 SPIKE NAIL IN SYCAMORE  
 .....

.....  
 BM38 ELEVATION = 2021.11  
 N 622788 E 602130  
 SPIKE NAIL SET IN 6X6 BRIDGE BEAM  
 .....

.....  
 BM27 ELEVATION = 2011.45  
 N 606635 E 568845  
 SPIKE NAIL IN 12" POPLAR  
 .....

.....  
 BM39 ELEVATION = 2056.76  
 N 623380 E 601878  
 SPIKE NAIL SET IN 36" DOUBLE SYCAMORE  
 .....

.....  
 BM28 ELEVATION = 2360.04  
 N 618106 E 589822  
 SPIKE NAIL IN 14" POPLAR  
 .....

.....  
 BM40 ELEVATION = 2001.31  
 N 623696 E 604730  
 SPIKE NAIL IN 30" POPLAR  
 .....

.....  
 BM29 ELEVATION = 2368.94  
 N 627954 E 595589  
 SPIKE NAIL IN 18" POPLAR  
 .....

.....  
 BM41 ELEVATION = 2063.76  
 N 624033 E 607585  
 SPIKE NAIL IN 22" POPLAR  
 .....

.....  
 BM30 ELEVATION = 2373.76  
 N 624052 E 596958  
 SPIKE NAIL IN 30" POPLAR  
 .....

### 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.


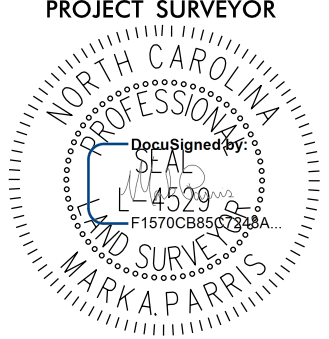
REVISIONS

Work\Contr-ol Sheets\A0009C-1s-RW02C-57.dgn

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# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW02C-58
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

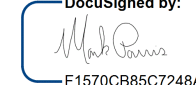
EL POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	DELTA S	Ls	LT	ST
POT	607503.678	568100.391											
LINE				591.73									
TS	607806.223	568608.923	N 59°15'00.0" E	591.73									
SPIRAL			N 90°00'00.0" E	0.00						00°00'00.0"(RT)	0.00	0.00	0.00
SC	607806.223	568608.923											
CURVE			N 82°14'00.0" E	894.88	45°58'00.0"(RT)	05°00'00.0"	919.33	486.02	1145.92				
CS	607927.156	569495.590	S 71°26'59.6" E	199.93						05°00'00.0"(RT)	200.00	133.39	66.72
SPIRAL	607863.551	569685.135	S 69°47'00.0" E	2675.51									
ST													
LINE	606938.973	572195.811	S 71°46'59.3" E	199.90						06°00'00.0"(LT)	200.00	133.41	66.74
TS	606876.480	572385.695	N 85°26'00.0" E	614.96	37°34'00.0"(LT)	06°00'00.0"	626.11	324.77	954.93				
SPIRAL	606925.443	572998.699	N 62°38'59.3" E	199.90						06°00'00.0"(LT)	200.00	133.41	66.74
SC	607017.283	573176.255	N 60°39'00.0" E	977.01									
CURVE			N 62°38'59.3" E	199.90						06°00'00.0"(RT)	200.00	133.41	66.74
CS	607588.001	574205.419	N 79°38'15.0" E	429.22	25°58'30.0"(RT)	06°00'00.0"	432.92	220.24	954.93				
SPIRAL	607665.207	574627.637	S 83°22'29.3" E	199.90						06°00'00.0"(RT)	200.00	133.41	66.74
ST	607642.144	574826.204	S 81°22'30.0" E	956.52									
LINE	607498.698	575771.902	S 83°22'29.3" E	199.90						06°00'00.0"(LT)	200.00	133.41	66.74
TS	607475.635	575970.470	N 65°49'30.0" E	861.11	53°36'00.0"(LT)	06°00'00.0"	893.33	482.37	954.93				
SPIRAL	607475.635	575970.470	N 65°49'30.0" E	861.11						06°00'00.0"(LT)	200.00	133.41	66.74
SC	607828.282	576756.062	N 35°01'29.3" E	199.90						06°00'00.0"(LT)	200.00	133.41	66.74
CURVE			N 33°01'30.0" E	833.40									
CS	607991.983	576870.792	N 36°01'27.7" E	299.67						09°00'00.0"(RT)	300.00	200.26	100.24
SPIRAL	608690.729	577324.997	N 52°32'00.0" E	348.32	21°01'00.0"(RT)	06°00'00.0"	350.28	177.13	954.93				
ST	608933.093	577501.242	N 69°02'32.3" E	299.67						09°00'00.0"(RT)	300.00	200.26	100.24
LINE	609144.974	577777.704	N 72°02'30.0" E	3548.65									
TS	610346.299	581433.315	N 70°32'30.3" E	299.92						04°30'00.0"(LT)	300.00	200.06	100.06
SPIRAL	610446.208	581716.103	N 53°53'30.0" E	901.42	27°18'00.0"(LT)	03°00'00.0"	910.00	463.81	1909.86				
SC	610446.208	581716.103	N 37°14'29.7" E	299.92						04°30'00.0"(LT)	300.00	200.06	100.06
CURVE			N 35°44'30.0" E	1195.44									
CS	610977.425	582444.361	N 38°14'28.7" E	299.77						07°30'00.0"(RT)	300.00	200.18	100.16
SPIRAL	611216.187	582625.864	N 56°44'30.0" E	535.02	27°00'00.0"(RT)	05°00'00.0"	540.00	275.11	1145.92				
ST	612186.478	583324.160	N 75°14'31.3" E	299.77						07°30'00.0"(RT)	300.00	200.18	100.16
LINE	612421.922	583509.711	N 59°57'00.0" E	1208.86	30°35'00.0"(LT)	02°30'00.0"	1223.33	626.62	2291.83				
TS	612715.334	583957.096	N 42°59'30.0" E	199.98						02°30'00.0"(LT)	200.00	133.35	66.68
SPIRAL	612791.697	584246.978	N 77°44'30.0" E	1498.79									
SC	613109.920	585711.600	N 76°54'30.0" E	199.98						02°30'00.0"(LT)	200.00	133.35	66.68
CURVE			N 59°57'00.0" E	1208.86	30°35'00.0"(LT)	02°30'00.0"	1223.33	626.62	2291.83				
CS	613155.218	585906.386	N 42°59'30.0" E	199.98						02°30'00.0"(LT)	200.00	133.35	66.68
SPIRAL	613760.563	586952.763	N 42°09'30.0" E	405.21									
ST	613906.841	587089.130	N 42°49'30.0" E	199.99						02°00'00.0"(RT)	200.00	133.34	66.67
LINE	614207.223	587361.102	N 42°49'30.0" E	199.99						02°00'00.0"(RT)	200.00	133.34	66.67
TS	614353.902	587497.047	N 47°55'00.0" E	375.56	07°31'00.0"(RT)	02°00'00.0"	375.83	188.19	2864.79				
SPIRAL	614605.609	587775.779	N 53°00'30.0" E	199.99						02°00'00.0"(RT)	200.00	133.34	66.67
SC	614725.942	587935.515	N 53°40'30.0" E	621.30									
CURVE			N 52°50'30.0" E	199.98						02°30'00.0"(LT)	200.00	133.35	66.68
CS	615093.978	588436.078	N 33°14'00.0" E	1411.99	35°53'00.0"(LT)	02°30'00.0"	1435.33	742.08	2291.83				
SPIRAL	615214.772	588595.459	N 13°37'30.0" E	199.98						02°30'00.0"(LT)	200.00	133.35	66.68
ST	616395.825	589369.300	N 12°47'30.0" E	2009.81									
LINE	616590.180	589416.409	N 14°47'29.3" E	199.90						06°00'00.0"(RT)	200.00	133.41	66.74
TS	618550.114	589861.395	N 30°15'00.0" E	379.40	22°55'00.0"(RT)	06°00'00.0"	381.94	193.56	954.93				
SPIRAL	618743.392	589912.431	N 45°42'30.7" E	199.90						06°00'00.0"(RT)	200.00	133.41	66.74
SC	619071.135	590103.565	N 47°42'30.0" E	422.48									
CURVE			N 45°42'30.7" E	199.90						06°00'00.0"(LT)	200.00	133.41	66.74
CS	619210.728	590246.654	N 31°11'00.0" E	348.86	21°03'00.0"(LT)	06°00'00.0"	350.83	177.42	954.93				
SPIRAL	619495.020	590559.178	N 16°39'29.3" E	199.90						06°00'00.0"(LT)	200.00	133.41	66.74
ST	619634.613	590702.267	N 14°39'30.0" E	226.68									
LINE	619933.071	590882.901	N 16°39'29.3" E	199.90						06°00'00.0"(RT)	200.00	133.41	66.74
TS	620124.584	590940.205	N 41°59'30.0" E	694.79	42°40'00.0"(RT)	06°00'00.0"	711.11	372.95	954.93				
SPIRAL	620343.887	590997.568	N 67°19'30.7" E	199.90						06°00'00.0"(RT)	200.00	133.41	66.74
SC	620535.400	591054.872	N 69°19'30.0" E	105.80									
CURVE			N 65°59'33.1" E	199.73						10°00'00.0"(LT)	200.00	133.55	66.86
CS	621051.800	591519.705											
SPIRAL	621128.862	591704.156											
ST	621166.216	591803.140											
LINE	621247.477	591985.591											

REVISIONS

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 584817.003  
 Combined grid factor: 0.999772236  
 Geoid model: 18 CONUS  
 Units: English

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 3/2020 to 5/2020, 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 21st day of December, 2020.  
  
 Professional Land Surveyor L-4529


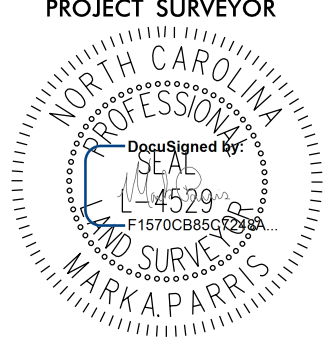
### NOTES:

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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.

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 Jcgordon

# SURVEY CONTROL SHEET

## W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW02C-59
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

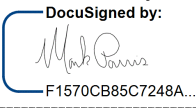
EL POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	DELTA S	Ls	LT	ST
CURVE				124.26	12°27'00.0"(LT)	10°00'00.0"	124.50	62.50	572.96				
CS	621322.082	592084.956	N 53°06'00.0" E										
SPIRAL			N 40°12'26.9" E	199.73						10°00'00.0"(LT)	200.00	133.55	66.86
ST	621474.618	592213.893											
LINE			N 36°52'30.0" E	142.18									
TS	621588.358	592299.214											
SPIRAL			N 38°52'29.3" E	199.90						06°00'00.0"(RT)	200.00	133.41	66.74
SC	621743.986	592424.677											
CURVE			N 47°44'30.0" E	162.03	09°44'00.0"(RT)	06°00'00.0"	162.22	81.31	954.93				
CS	621852.945	592544.597											
SPIRAL			N 56°36'30.7" E	199.90						06°00'00.0"(RT)	200.00	133.41	66.74
ST	621962.963	592711.501											
LINE			N 58°36'30.0" E	385.31									
TS	622163.667	593040.415											
SPIRAL			N 65°36'01.2" E	298.21						21°00'00.0"(RT)	300.00	201.43	101.30
SC	622286.858	593311.993											
CURVE			S 50°29'00.0" E	626.17	99°49'00.0"(RT)	14°00'00.0"	712.98	486.15	409.26				
CS	621888.423	593795.048											
SPIRAL			S 13°25'58.8" W	298.21						21°00'00.0"(RT)	300.00	201.43	101.30
ST	621598.368	593725.771											
LINE			S 20°25'30.0" W	538.56									
TS	621093.672	593537.825											
SPIRAL			S 17°05'33.1" W	199.73						10°00'00.0"(LT)	200.00	133.55	66.86
SS	620902.764	593479.122											
SPIRAL			S 03°45'26.9" W	199.73						10°00'00.0"(LT)	200.00	133.55	66.86
ST	620703.464	593466.033											
LINE			S 00°25'30.7" W	111.15									
TS	620592.317	593465.208											
SPIRAL			S 03°45'26.9" W	199.73						10°00'00.0"(RT)	200.00	133.55	66.86
SC	620393.017	593452.119											
CURVE			S 14°58'30.0" W	90.90	09°06'00.0"(RT)	10°00'00.0"	91.00	45.60	572.96				
CS	620305.200	593428.630											
SPIRAL			S 26°11'33.1" W	199.73						10°00'00.0"(RT)	200.00	133.55	66.86
ST	620125.980	593340.471											
LINE			S 29°31'30.0" W	49.21									
TS	620083.162	593316.221											
SPIRAL			S 27°01'31.3" W	149.89						07°30'00.0"(LT)	150.00	100.09	50.08
SC	619949.643	593248.115											
CURVE			S 17°08'30.0" W	97.55	09°46'00.0"(LT)	10°00'00.0"	97.67	48.95	572.96				
CS	619856.427	593219.365											
SPIRAL			S 07°15'28.7" W	149.89						07°30'00.0"(LT)	150.00	100.09	50.08
ST	619707.743	593200.428											
LINE			S 04°45'30.0" W	117.27									
TS	619590.879	593190.701											
PC			S 02°38'00.0" W	212.45	04°15'00.0"(LT)	02°00'00.0"	212.50	106.30	2864.79				
CURVE			S 00°30'30.0" W	368.42									
PT	619378.652	593180.940											
LINE			S 05°07'15.0" E	199.23						16°54'00.0"(LT)	200.00	133.95	67.22
TS	619010.249	593177.671											
SPIRAL			S 74°29'30.0" E	575.65	116°12'00.0"(LT)	16°54'00.0"	687.57	544.67	339.03				
SC	618811.816	593195.454											
CURVE			N 36°08'15.0" E	199.23						16°54'00.0"(LT)	200.00	133.95	67.22
CS	618657.900	593750.146											
SPIRAL			N 30°30'30.0" E	410.40									
ST	618818.797	593867.635											
LINE			N 31°50'29.8" E	199.96						04°00'00.0"(RT)	200.00	133.37	66.70
TS	619172.381	594075.982											
SPIRAL			N 38°15'30.0" E	187.37	07°30'00.0"(RT)	04°00'00.0"	187.50	93.88	1432.39				
SC	619342.246	594181.473											
CURVE			N 44°40'30.2" E	199.96						04°00'00.0"(RT)	200.00	133.37	66.70
CS	619489.371	594297.492											
SPIRAL			N 46°00'30.0" E	379.05									
ST	619631.561	594438.079											
LINE			N 42°40'33.1" E	199.73						10°00'00.0"(LT)	200.00	133.55	66.86
TS	619894.832	594710.783											
SPIRAL			N 26°30'30.0" E	189.13	19°00'00.0"(LT)	10°00'00.0"	190.00	95.88	572.96				
SC	620041.673	594846.169											
CURVE			N 10°20'26.9" E	199.73						10°00'00.0"(LT)	200.00	133.55	66.86
CS	620210.920	594930.584											
SPIRAL			N 07°00'30.0" E	1.54									
ST	620407.406	594966.436											
LINE			N 10°20'26.9" E	199.73						10°00'00.0"(RT)	200.00	133.55	66.86
TS	620408.936	594966.624											
SPIRAL			N 44°45'30.0" E	533.55	55°30'00.0"(RT)	10°00'00.0"	555.00	301.45	572.96				
SC	620605.422	595002.476											
CURVE			N 80°50'36.1" E	249.47						12°30'00.0"(RT)	250.00	167.08	83.71
CS	620984.290	595378.162											
SPIRAL			N 85°00'30.0" E	50.12									
ST	621023.989	595624.454											
LINE			N 81°40'33.1" E	199.73						10°00'00.0"(LT)	200.00	133.55	66.86
TS	621028.350	595674.381											
SPIRAL			N 57°00'30.0" E	354.11	36°00'00.0"(LT)	10°00'00.0"	360.00	186.17	572.96				
SC	621057.266	595872.006								10°00'00.0"(LT)	200.00	133.55	66.86
CURVE			N 32°20'26.9" E	199.73									
CS	621250.883	596169.013											
SPIRAL			N 29°00'30.0" E	678.77									
ST	621418.831	596275.859											
LINE			N 24°25'38.1" E	199.49						13°45'00.0"(LT)	200.00	133.74	67.03
TS	622012.451	596605.022											
SPIRAL			N 08°52'00.0" W	340.63	48°15'00.0"(LT)	13°45'00.0"	350.91	186.62	416.70				
SC	622194.083	596687.517											
CURVE			N 42°09'38.1" W	199.49						13°45'00.0"(LT)	200.00	133.74	67.03
CS	622530.644	596635.014											
SPIRAL			N 46°44'30.0" W	50.90									
ST	622678.518	596501.115											
LINE			N 43°39'32.5" W	199.77						09°15'00.0"(RT)	200.00	133.52	66.83
TS	622713.396	596464.049											
SPIRAL			N 33°52'52.5" W	78.01	07°13'15.0"(RT)	09°15'00.0"	78.06	39.08	619.41				
SC	622857.921	596326.136											
CURVE			N 24°06'12.5" W	199.77						09°15'00.0"(RT)	200.00	133.52	66.83
CS	622922.686	596282.647											
SPIRAL													
ST	623105.036	596201.064											

REVISIONS

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 584817.003  
 Combined grid factor: 0.999772236  
 Geoid model: 18 CONUS  
 Units: English

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 3/2020 to 5/2020, 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 21st day of December, 2020.  
 Designed by:  
  
 F1570CB85C724EA  
 Professional Land Surveyor L-4529


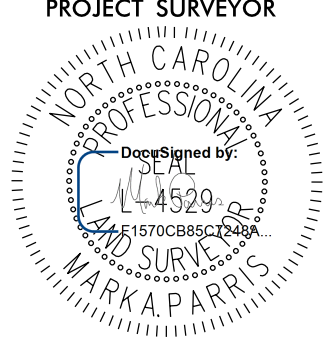
### NOTES:

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.

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# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW02C-60
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

EL POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	DELTA S	Ls	LT	ST
LINE			N 21°01'15.0" W	1077.63									
TS	624110.952	595814.510	N 15°53'56.3" W	299.04						15°22'30.0"(RT)	300.00	200.76	100.69
SPIRAL	624398.554	595732.590											
SC			N 06°04'45.0" E	227.19	23°27'00.0"(RT)	10°15'00.0"	228.78	116.01	558.98				
CURVE													
CS	624624.463	595756.650	N 26°20'51.5" E	249.44						12°48'45.0"(RT)	250.00	167.11	83.73
SPIRAL	624847.995	595867.357											
ST			N 30°37'00.0" E	837.77									
LINE													
PC	625568.973	596294.026	N 18°12'00.0" E	223.99	24°50'00.0"(LT)	11°00'00.0"	225.76	114.68	520.87				
CURVE													
PT	625781.762	596363.987	N 05°47'00.0" E	78.91									
LINE													
PC	625860.267	596371.938	N 46°31'00.0" E	115.04	81°28'00.0"(RT)	65°00'00.0"	125.33	75.91	88.15				
CURVE													
PT	625939.430	596455.408	N 87°15'00.0" E	72.56									
LINE													
POT	625942.911	596527.882											

EY1 POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	DELTA S	Ls	LT	ST
POT	605123.939	568331.392	N 19°52'00.0" W	772.34									
LINE													
TS	605850.311	568068.927	N 18°42'00.1" W	199.97						03°30'00.0"(RT)	200.00	133.36	66.69
SPIRAL	606039.722	568004.814											
SC			N 00°36'30.0" E	955.87	33°57'00.0"(RT)	03°30'00.0"	970.00	499.71	1637.02				
CURVE													
CS	606995.539	568014.963	N 00°00'00.0" E	0.00						00°00'00.0"(RT)	0.00	0.00	0.00
SPIRAL	606995.539	568014.963											
ST			N 17°35'00.0" E	50.57									
LINE													
TS	607043.747	568030.240	N 15°35'00.7" E	199.90						06°00'00.0"(LT)	200.00	133.41	66.74
SPIRAL	607236.301	568083.942											
SC			N 11°46'07.5" W	757.03	46°42'15.0"(LT)	06°00'00.0"	778.40	412.29	954.93				
CURVE													
CS	607977.418	567929.537	N 39°07'15.7" W	199.90						06°00'00.0"(LT)	200.00	133.41	66.74
SPIRAL	607977.418	567929.537											
ST													

EY2 POINT	N	E	BEARING	DIST
POT	606376.640	567943.210		
LINE			S 79°51'54.5" E	155.16
POT	606349.336	568095.954		

EY3 POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	606848.675	567645.797	S 50°44'00.0" E	102.59	07°42'00.0"(RT)	07°30'00.0"	102.67	51.41	763.94
CURVE									
PT	606783.743	567725.223	S 46°53'00.0" E	294.91					
LINE									
POT	606582.179	567940.493							

EY4 POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	606951.118	567789.285	S 49°45'30.0" E	166.73					
LINE									
PC	606843.406	567916.557	S 64°12'30.0" E	38.13	28°54'00.0"(LT)	75°00'00.0"	38.53	19.69	76.39
CURVE									
PT	606826.817	567950.885	S 78°39'30.0" E	19.94					
LINE									
POT	606822.895	567970.438							

EY5 POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	607847.825	569260.651	S 89°08'02.5" E	112.52	14°40'05.0"(RT)	13°00'00.0"	112.83	56.73	440.74
CURVE									
PT	607846.124	569373.162	S 81°48'00.0" E	197.97					
LINE									
PC	607817.888	569569.103	N 59°12'30.1" E	62.92	77°58'59.9"(LT)	114°35'29.6"	68.05	40.48	50.00
CURVE									
PT	607850.099	569623.154	N 20°13'00.1" E	33.93					
LINE									
POT	607881.939	569634.880							

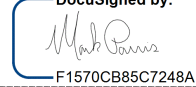
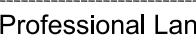
EY6 POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	608201.941	569722.672	S 09°55'00.0" W	210.03					
LINE									
PC	607995.052	569686.502	S 14°59'00.0" W	101.20	10°08'00.0"(RT)	10°00'00.0"	101.33	50.80	572.96
CURVE									
PT	607897.291	569660.337	S 20°03'00.0" W	23.13					
LINE									
POT	607875.565	569652.408							

I, Mark A. Parris, PLS, certify that the Project Control 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: **Static, OPUS, RTN**  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 584817.003  
 Combined grid factor: 0.99972236  
 Geoid model: 18 CONUS  
 Units: English

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 3/2020 to 5/2020, 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 21st day of December, 2020.

  
 Documented by:  
  
 Professional Land Surveyor L-4529

### 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.


REVISIONS

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 Jcgordon

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW02C-61
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**EY7**

POINT	N	E	BEARING	DIST
POT	607636.414	570714.779		
LINE			S 38°12'00.0" W	150.00
POT	607518.536	570622.018		

**EY15**

POINT	N	E	BEARING	DIST
POT	609032.793	577605.804		
LINE			S 42°16'47.3" E	150.00
POT	608921.813	577706.716		

**EY8**

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	607196.569	571496.314							
LINE			S 20°13'00.1" W	111.20					
PC	607092.219	571457.887							
CURVE			S 01°03'59.9" E	297.10	42°34'00.1(LT)	14°00'00.0"	304.05	159.43	409.26
PT	606795.167	571463.417							

**EY16**

POINT	N	E	BEARING	DIST
POT	609572.432	578514.608		
LINE			S 01°42'30.0" E	170.56
POT	609401.948	578519.693		

**EY9**

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	606865.913	572432.267							
LINE			N 30°08'00.0" E	28.91					
PC	606890.914	572446.779							
CURVE			N 44°41'00.0" E	61.25	29°06'00.0(RT)	47°00'00.0"	61.91	31.64	121.91
PT	606934.464	572489.850							
LINE			N 59°14'00.0" E	148.10					
POT	607010.225	572617.110							

**EY17**

POINT	N	E	BEARING	DIST
POT	612710.734	583644.833		
LINE			S 29°41'30.0" E	136.01
POT	612592.578	583712.205		

**EY10**

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	607389.438	573365.625							
LINE			S 14°23'30.0" W	178.53					
PC	607216.513	573321.252							
CURVE			S 07°28'45.0" E	71.15	43°44'30.0(LT)	60°00'00.0"	72.90	38.33	95.49
PT	607145.973	573330.512							
LINE			S 29°21'00.0" E	36.56					
POT	607114.103	573348.434							

**EY18**

POINT	N	E	BEARING	DIST
POT	612920.172	584838.284		
LINE			S 15°22'29.8" E	344.00
POT	612588.483	584929.490		

**EY11**

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	607647.033	574393.491							
CURVE			S 55°42'30.1" E	136.63	32°53'59.7(LT)	23°45'00.0"	138.53	71.23	241.25
PT	607570.054	574506.372							
LINE			S 72°09'30.0" E	47.20					
PC	607555.594	574551.299							
CURVE			S 62°36'04.2" E	80.11	19°06'51.5(RT)	23°45'00.0"	80.48	40.62	241.25
PT	607518.730	574622.421							

**EY19**

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	613267.000	586230.207							
LINE			S 13°33'00.0" E	27.47					
PC	613240.298	586236.642							
CURVE			S 25°12'30.0" E	39.92	23°19'00.0(LT)	58°00'00.0"	40.20	20.38	98.79
PT	613204.175	586253.646							
LINE			S 36°52'00.0" E	15.32					
PC	613191.923	586262.835							
CURVE			S 04°40'00.0" W	30.39	83°04'00.0(RT)	250°00'00.0"	33.23	20.30	22.92
PT	613161.631	586260.362							
LINE			S 46°12'00.0" W	58.79					
POT	613120.940	586217.930							

**EY12**

POINT	N	E	BEARING	DIST
POT	607589.735	575171.722		
LINE			S 01°22'30.0" E	145.64
POT	607444.137	575175.217		

**EY13**

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	607479.326	576108.768							
LINE			S 05°41'00.0" E	48.23					
PC	607431.335	576113.544							
CURVE			S 44°01'37.7" E	73.29	76°41'15.5(LT)	97°00'00.1"	79.06	46.72	59.07
PCC	607378.640	576164.480							
CURVE			N 87°03'22.3" E	48.06	21°08'44.5(LT)	43°45'00.0"	48.33	24.44	130.96
PT	607381.108	576212.476							
LINE			N 76°29'00.0" E	24.63					
PC	607386.864	576236.422							
CURVE			N 74°17'30.0" E	67.42	04°23'00.0(LT)	06°30'00.0"	67.44	33.73	881.47
PT	607405.117	576301.323							
LINE			N 72°06'00.0" E	141.60					
PC	607448.640	576436.073							
CURVE			N 79°08'43.1" E	86.49	14°05'26.2(RT)	16°15'00.0"	86.71	43.58	352.59
PT	607464.929	576521.019							

**EY14**

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	608774.473	577205.716							
CURVE			S 78°55'30.0" E	95.80	44°12'00.0(RT)	44°59'59.9"	98.22	51.70	127.32
PT	608756.069	577299.736							
LINE			S 56°49'30.0" E	56.83					
POT	608724.972	577347.303							

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 584817.003  
 Combined grid factor: 0.999772236  
 Geoid model: 18 CONUS  
 Units: English

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This 21st day of December, 2020.

DocuSigned by:  
  
 Professional Land Surveyor L-4529

**NOTES:**

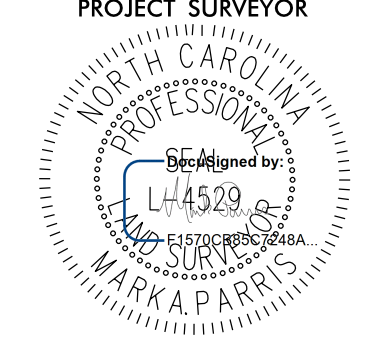
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REVISIONS

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# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW02C-62
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

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EY20										
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	
POT	617950.675	589725.298								
LINE			N 83°12'00.0" E	45.76						
PC	617956.093	589770.734								
CURVE			N 63°37'55.9" E	30.70	39°08'08.3"(L T)	125°00'00.2"	31.31	16.29	45.84	
PCC	617969.729	589798.243								
CURVE			N 29°42'25.9" E	45.83	28°42'51.7"(L T)	62°00'00.1"	46.31	23.65	92.41	
PT	618009.536	589820.955								
LINE			N 15°21'00.0" E	240.69						
PC	618241.636	589884.668								
CURVE			N 15°46'00.0" E	27.78	00°50'00.0"(RT)	03°00'00.0"	27.78	13.89	1909.86	
PT	618268.369	589892.216								
LINE			N 16°11'00.0" E	52.62						
PC	618318.902	589906.882								
CURVE			N 15°31'30.0" E	43.89	01°19'00.0"(L T)	03°00'00.0"	43.89	21.95	1909.86	
PT	618361.189	589918.629								
LINE			N 14°52'00.0" E	178.51						
PC	618533.722	589964.429								
CURVE			N 15°06'00.0" E	46.67	00°28'00.0"(RT)	01°00'00.0"	46.67	23.33	5729.58	
PT	618578.777	589976.585								
LINE			N 15°20'00.0" E	224.24						
PC	618795.031	590035.881								
CURVE			N 19°54'11.4" E	52.93	09°08'22.7"(RT)	17°15'00.0"	52.98	26.55	332.15	
PCC	618844.797	590053.899								
CURVE			N 61°36'11.4" E	87.01	74°15'37.3"(RT)	79°30'00.0"	93.41	54.57	72.07	
PT	618886.175	590130.437								
LINE			S 81°16'00.0" E	50.47						
PC	618878.512	590180.324								
CURVE			N 71°12'38.0" E	87.17	55°02'44.0"(L T)	60°45'00.1"	90.61	49.14	94.31	
PCC	618906.587	590262.844								
CURVE			N 31°37'08.0" E	79.21	24°08'16.0"(L T)	30°15'00.0"	79.79	40.50	189.41	
PT	618974.035	590304.369								
LINE			N 19°33'00.0" E	61.89						
PC	619032.355	590325.079								
CURVE			N 50°46'30.0" E	99.01	62°27'00.0"(RT)	60°00'00.0"	104.08	57.89	95.49	
PT	619094.964	590401.776								
LINE			N 82°00'00.0" E	65.49						
PC	619104.078	590466.626								
CURVE			N 73°35'55.0" E	74.41	16°48'10.0"(L T)	22°30'00.0"	74.68	37.61	254.65	
PCC	619125.089	590538.010								
CURVE			N 59°20'34.2" E	80.61	11°42'31.5"(L T)	14°30'00.0"	80.75	40.52	395.14	
PCC	619166.192	590607.353								
CURVE			N 32°37'09.2" E	129.59	41°44'18.5"(L T)	31°30'00.0"	132.50	69.35	181.89	
PT	619275.344	590677.210								
LINE			N 11°45'00.0" E	40.71						
PC	619315.198	590685.500								
CURVE			N 26°21'36.5" E	132.89	29°13'13.0"(RT)	21°45'00.0"	134.35	68.67	263.43	
PCC	619434.275	590744.507								
CURVE			N 44°27'06.5" E	132.55	06°57'47.0"(RT)	05°15'00.0"	132.63	66.40	1091.35	
PT	619528.893	590837.331								
LINE			N 47°56'00.0" E	98.27						
PC	619594.733	590910.283								
CURVE			N 42°19'05.4" E	44.41	11°13'49.3"(L T)	25°15'00.0"	44.48	22.31	226.91	
PCC	619627.567	590940.179								
CURVE			N 12°37'05.4" E	72.22	48°10'10.7"(L T)	64°45'00.0"	74.39	39.55	88.49	
PT	619698.044	590955.956								
LINE			N 11°28'00.0" W	57.01						
PC	619753.914	590944.623								
CURVE			N 26°36'00.0" E	82.16	76°08'00.0"(RT)	86°00'00.0"	88.53	52.18	66.62	
PT	619827.375	590981.409								
LINE			N 64°40'00.0" E	53.21						
PC	619850.141	591029.499								
CURVE			N 22°34'20.1" E	98.48	84°11'19.8"(L T)	78°00'00.1"	107.93	66.36	73.46	
PCC	619941.080	591067.302								
CURVE			N 24°31'39.9" E	47.61	10°00'40.2"(L T)	21°00'00.0"	47.67	23.90	272.84	
PT	619984.395	591047.537								
LINE			N 29°32'00.0" W	65.08						
PC	620041.018	591015.458								
CURVE			N 28°29'00.0" E	135.94	116°02'00.0"(RT)	71°30'00.0"	162.28	128.32	80.13	
PT	620160.503	591080.288								
LINE			N 86°30'00.0" E	55.27						
PC	620163.877	591135.457								
CURVE			N 49°18'49.8" E	96.19	74°22'20.4"(L T)	72°00'00.0"	103.29	60.37	79.58	
PCC	620226.587	591208.400								
CURVE			N 02°49'49.8" E	60.20	18°35'39.6"(L T)	30°45'00.0"	60.47	30.50	186.33	
PT	620286.718	591211.373								
LINE			N 06°28'00.0" W	73.71						
PC	620359.956	591203.072								
CURVE			N 13°07'53.8" W	88.67	13°19'47.7"(L T)	15°00'00.0"	88.87	44.63	381.97	
PCC	620446.303	591182.928								
CURVE			N 34°13'53.8" W	86.56	28°52'12.3"(L T)	33°00'00.0"	87.49	44.69	173.62	
PT	620517.871	591134.233								
LINE			N 48°40'00.0" W	85.01						
POT	620574.015	591070.401								

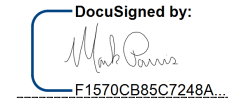
EY21										
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	
PC	618500.969	589629.459								
CURVE			S 72°07'00.9" E	117.31	22°07'58.1"(L T)	18°45'00.0"	118.04	59.77	305.58	
PT	618464.946	589741.101								
LINE			S 83°11'00.0" E	98.99						
POT	618453.196	589839.391								

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 584817.003  
 Combined grid factor: 0.999772236  
 Geoid model: 18 CONUS  
 Units: English

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 3/2020 to 5/2020, 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 21st day of December, 2020.

DocuSigned by:  
  
 F1970885C7248A  
 Professional Land Surveyor L-4529

### 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. A-0009CD	SHEET NO. RW02C-63
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR 	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

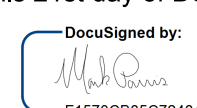
EY22 POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	DELTA S	Ls	LT	ST
PC	627741.064	595689.284											
CURVE			S 24°31'35.4" E	220.27	08°49'10.8"(RT)	04°00'00.0"	220.49	110.46	1432.39				
PT	627540.665	595780.722											
LINE			S 20°07'00.0" E	113.67									
PC	627433.928	595819.818											
CURVE			S 19°51'30.0" E	103.33	00°31'00.0"(RT)	00°30'00.0"	103.33	51.67	11459.16				
PT	627336.739	595854.920											
LINE			S 19°36'00.0" E	92.61									
TS	627249.494	595885.986											
SPIRAL			S 21°15'59.6" E	199.93						05°00'00.0"(LT)	200.00	133.39	66.72
SC	627063.177	595958.503											
CURVE			S 31°49'30.0" E	288.23	14°27'00.0"(LT)	05°00'00.0"	289.00	145.27	1145.92				
CS	626818.274	596110.497											
SPIRAL			S 42°23'00.4" E	199.93						05°00'00.0"(LT)	200.00	133.39	66.72
ST	626670.594	596245.269											
LINE			S 44°03'00.0" E	121.42									
TS	626583.329	596329.688											
SPIRAL			S 40°33'03.6" E	149.78						10°30'00.0"(RT)	150.00	100.18	50.16
SC	626469.525	596427.061											
CS	626285.057	596493.110											
CURVE			S 19°42'00.0" E	195.94	27°42'00.0"(RT)	14°00'00.0"	197.86	100.90	409.26				
SPIRAL			S 00°00'00.0" E	0.00						00°00'00.0"(RT)	0.00	0.00	0.00
ST	626285.057	596493.110											
LINE			S 05°51'00.0" E	303.67									
PC	625982.965	596524.062											
CURVE			S 03°59'30.0" E	185.80	03°43'00.0"(RT)	02°00'00.0"	185.83	92.95	2864.79				
PT	625797.615	596536.996											
LINE			S 02°08'00.0" E	33.04									
PC	625764.602	596538.226											
CURVE			S 01°45'00.0" W	310.43	07°46'00.0"(RT)	02°30'00.0"	310.67	155.57	2291.83				
PT	625454.318	596528.746											
LINE			S 05°38'00.0" W	162.84									
TS	625292.260	596512.761											
SPIRAL			S 03°08'01.3" W	299.77						07°30'00.0"(LT)	300.00	200.18	100.16
SC	624992.937	596496.373											
CURVE			S 44°40'00.0" E	1557.16	85°36'00.0"(LT)	05°00'00.0"	1712.00	1061.13	1145.92				
CS	623885.468	597591.031											
SPIRAL			N 89°11'59.6" E	199.93						05°00'00.0"(LT)	200.00	133.39	66.72
ST	623888.260	597790.943											
LINE			N 87°32'00.0" E	1166.46									
PC	623938.462	598956.324											
CURVE			N 89°20'03.9" E	205.80	03°36'07.8"(RT)	01°45'00.0"	205.84	102.95	3274.04				
PCC	623940.853	599162.113											
CURVE			S 82°21'56.4" E	199.54	12°59'51.7"(RT)	06°30'00.0"	199.96	100.41	881.47				
PCC	623914.345	599359.881											
CURVE			S 58°36'30.3" E	715.73	34°31'00.5"(RT)	04°45'00.0"	726.67	374.74	1206.23				
PT	623541.532	599970.848											
LINE			S 41°21'00.0" E	314.25									
TS	623305.630	600178.457											
SPIRAL			S 42°52'14.7" E	149.96						04°33'45.0"(LT)	150.00	100.03	50.03
SC	623195.728	600280.481											
CURVE			S 62°56'00.0" E	551.39	34°02'30.0"(LT)	06°05'00.0"	559.59	288.33	941.85				
CS	622944.828	600771.485											
SPIRAL			S 87°03'08.7" E	349.46						10°38'45.0"(LT)	350.00	233.76	117.05
ST	622926.858	601120.486											
LINE			N 89°24'00.0" E	622.27									
PC	622933.375	601742.723											
CURVE			N 89°29'30.0" E	73.33	00°11'00.0"(RT)	00°15'00.0"	73.33	36.67	22918.31				
PT	622934.025	601816.054											
LINE			N 89°35'00.0" E	3296.93									
PC	622958.001	605112.896											
CURVE			N 85°30'06.8" E	217.49	08°09'46.4"(LT)	03°45'00.0"	217.68	109.02	1527.89				
PCC	622975.050	605329.719											
CURVE			N 70°07'06.8" E	359.32	22°36'13.6"(LT)	06°15'00.0"	361.66	183.21	916.73				
PT	623097.254	605667.623											
LINE			N 58°49'00.0" E	135.14									
PC	623167.225	605783.235											
CURVE			N 57°59'30.0" E	164.99	01°39'00.0"(LT)	01°00'00.0"	165.00	82.51	5729.58				
PT	623254.679	605923.145											
LINE			N 57°10'00.0" E	825.77									
TS	623702.408	606616.998											
SPIRAL			N 61°26'33.5" E	399.11						12°50'00.0"(RT)	400.00	267.37	133.97
SC	623893.198	606967.551											
CURVE			N 84°32'30.0" E	448.40	29°05'00.0"(RT)	06°25'00.0"	453.25	231.62	892.92				
CS	623935.850	607413.914											
SPIRAL			N 90°00'00.0" E	0.00						00°00'00.0"(RT)	0.00	0.00	0.00
ST	623935.850	607413.914											
LINE			S 80°55'00.0" E	30.23									
PC	623931.078	607443.763											
CURVE			S 73°59'56.0" E	220.83	13°50'08.0"(RT)	06°15'00.0"	221.37	111.23	916.73				
PT	623870.204	607656.039											
LINE			S 67°04'52.0" E	58.27									
POT	623847.513	607709.708											

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 504817.003  
 Combined grid factor: 0.99972236  
 Geoid model: 18 CONUS  
 Units: English

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 3/2020 to 5/2020, 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 21st day of December, 2020.

DocuSigned by:  
  
 F1510C885C7248A  
 Professional Land Surveyor L-4529

REVISIONS


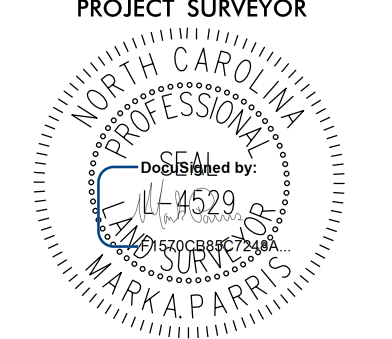
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### NOTES:

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. A-0009CD	SHEET NO. RW02C-64
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

EY23									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	624219.431	598639.498	S 69°57'00.0" E	64.08					
LINE									
PC	624197.463	598699.690	S 65°30'00.0" E	59.27	08°54'00.0"(RT)	15°00'00.0"	59.33	29.73	381.97
CURVE									
PT	624172.883	598753.627	S 61°03'00.0" E	75.35					
LINE									
PC	624136.409	598819.563	S 66°44'00.9" E	103.17	11°22'01.8"(LT)	11°00'00.0"	103.34	51.84	520.87
CURVE									
PCC	624095.657	598914.341	S 83°16'00.9" E	128.78	21°41'58.2"(LT)	16°45'00.0"	129.55	65.56	342.06
CURVE									
PT	624080.559	599042.230	N 85°53'00.0" E	33.56					
LINE									
PC	624082.968	599075.708	N 89°49'00.0" E	78.60	07°52'00.0"(RT)	10°00'00.0"	78.67	39.40	572.96
CURVE									
PT	624083.220	599154.312	S 86°15'00.0" E	63.59					
LINE									
PC	624079.061	599217.770	S 79°24'00.0" E	29.24	13°42'00.0"(RT)	46°45'00.0"	29.30	14.72	122.56
CURVE									
PT	624073.683	599246.506	S 72°33'00.0" E	8.57					
LINE									
PC	624071.113	599254.681	S 41°12'00.0" E	59.62	62°42'00.0"(RT)	100°00'00.0"	62.70	34.90	57.30
CURVE									
PT	624026.256	599293.951	S 09°51'00.0" E	26.29					
LINE									
PC	624000.354	599298.448	S 06°46'00.0" E	61.64	06°10'00.0"(RT)	10°00'00.0"	61.67	30.86	572.96
CURVE									
PT	623939.146	599305.711	S 03°41'00.0" E	13.14					
LINE									
POT	623926.029	599306.555							

EY24									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	623569.043	599945.874	S 24°40'00.0" W	65.79					
LINE									
PC	623509.253	599918.416	S 20°17'30.0" W	48.56	08°45'00.0"(LT)	18°00'00.0"	48.61	24.35	318.31
CURVE									
PT	623463.703	599901.574	S 15°55'00.0" W	47.85					
LINE									
POT	623417.684	599888.451							

EY25				
POINT	N	E	BEARING	DIST
POT	622936.181	602112.442	S 00°36'00.0" W	136.15
LINE				
POT	622800.042	602111.016		

EY25A									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	622749.119	601911.855	N 75°05'00.0" E	188.50					
LINE									
PC	622797.642	602094.005	S 86°25'30.0" E	45.43	36°59'00.0"(RT)	80°00'00.0"	46.23	23.95	71.62
CURVE									
PT	622794.810	602139.348	S 67°56'00.0" E	104.60					
LINE									
POT	622755.515	602236.282							

EY26									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	623401.804	601878.990	S 52°02'47.2" E	47.45	17°01'34.4"(RT)	35°45'00.0"	47.63	23.99	160.27
CURVE									
PT	623372.621	601916.405	S 43°32'00.0" E	67.43					
LINE									
PC	623323.738	601962.847	S 47°31'30.0" E	145.03	07°59'00.0"(LT)	05°30'00.0"	145.15	72.69	1041.74
CURVE									
PT	623225.801	602069.820	S 51°31'00.0" E	86.11					
LINE									
PC	623172.217	602137.225	S 44°14'41.8" E	36.72	14°32'36.3"(RT)	39°30'00.0"	36.82	18.51	145.05
CURVE									
PCC	623145.912	602162.846	S 18°44'41.8" E	128.02	36°27'23.7"(RT)	28°00'00.0"	130.20	67.39	204.63
CURVE									
PT	623024.685	602203.985	S 00°31'00.0" E	87.84					
LINE									
POT	622936.852	602204.777							

EY27									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	623720.789	604718.473	S 50°30'00.0" W	14.91					
LINE									
PC	623711.302	604706.964	S 54°09'00.0" W	121.58	07°18'00.0"(RT)	06°00'00.0"	121.67	60.92	954.93
CURVE									
PT	623640.095	604608.414	S 57°48'00.0" W	42.89					
LINE									
PC	623617.239	604572.120	S 52°05'00.0" W	120.15	11°26'00.0"(LT)	09°30'00.0"	120.35	60.38	603.11
CURVE									
PT	623543.404	604477.332	S 46°22'00.0" W	65.94					
LINE									
PC	623497.902	604429.605	S 47°38'00.0" W	126.66	02°32'00.0"(RT)	02°00'00.0"	126.67	63.34	2864.79
CURVE									
PT	623412.552	604336.025	S 48°54'00.0" W	152.39					
LINE									
PC	623312.372	604221.187	S 52°46'30.0" W	154.88	07°45'00.0"(RT)	05°00'00.0"	155.00	77.62	1145.92
CURVE									
PT	623218.677	604097.860	S 56°39'00.0" W	88.56					
LINE									
PC	623169.990	604023.883	S 24°00'30.0" W	123.62	65°17'00.0"(LT)	50°00'00.0"	130.57	73.40	114.59
CURVE									
PT	623057.067	603973.586	S 08°38'00.0" E	108.46					
LINE									
POT	622949.834	603989.868							

EY28									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	623026.491	605523.570	S 14°36'00.0" W	34.14					
LINE									
PC	622993.457	605514.965	S 26°33'00.0" W	37.37	23°54'00.0"(RT)	63°30'00.0"	37.64	19.10	90.23
CURVE									
PT	622960.031	605498.264	S 38°30'00.0" W	35.71					
LINE									
PC	622932.085	605476.034	S 45°24'40.3" W	122.57	13°49'20.6"(RT)	11°15'00.0"	122.87	61.73	509.30
CURVE									
PT	622846.041	605388.746							

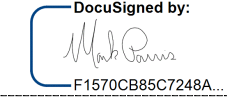
EY29									
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	624120.468	607578.448	S 17°25'45.1" W	92.64	09°02'29.8"(RT)	09°45'00.0"	92.73	46.46	587.65
CURVE									
PT	624032.083	607550.700	S 21°57'00.0" W	14.85					
LINE									
PC	624018.309	607545.150	S 19°42'00.0" W	44.99	04°30'00.0"(LT)	10°00'00.0"	45.00	22.51	572.96
CURVE									
PT	623975.954	607529.984	S 17°27'00.0" W	61.19					
LINE									
POT	623917.582	607511.635							

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 584817.003  
 Combined grid factor: 0.999772236  
 Geoid model: 18 CONUS  
 Units: English

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This 21st day of December, 2020.

  
 1-1870C888C7248A  
 Professional Land Surveyor L-4529

### 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.

REVISIONS

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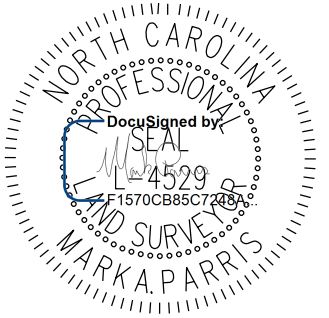
REVISIONS

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# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW02C-65
Location and Surveys	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

A9L

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	DELTA S	Ls	LT	ST
POT	623847.513	607709.708											
LINE			S 67°04'52.0" E	2.69									
TS	623846.467	607712.183	S 69°34'18.7" E	295.05									
SPIRAL										07°28'24.1"(LT)	295.27	197.03	98.58
SC	623743.484	607988.679	N 73°01'05.5" E	1213.90	64°51'16.8"(LT)	05°03'43.1"	1281.21	719.08	1131.89				
CURVE													
CS	624098.026	609149.653	N 35°36'29.7" E	295.05						07°28'24.1"(LT)	295.27	197.03	98.58
SPIRAL													
ST	624098.026	609149.653											

A9R

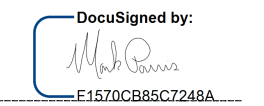
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	DELTA S	Ls	LT	ST
POT	623847.513	607709.708											
LINE			S 67°04'52.0" E	56.69									
TS	623825.437	607761.922	S 69°34'18.7" E	295.05									
SPIRAL										07°28'24.1"(LT)	295.27	197.03	98.58
SC	623722.454	608038.418	N 73°01'05.5" E	1213.90	64°51'16.8"(LT)	05°03'43.1"	1281.21	719.08	1131.89				
CURVE													
CS	624076.996	609199.392	N 35°36'29.7" E	295.05						07°28'24.1"(LT)	295.27	197.03	98.58
SPIRAL													
ST	624076.996	609199.392											

I, Mark A. Parris, PLS, certify that the Project Control 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: Static, OPUS, RTN  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 584817.003  
 Combined grid factor: 0.999772236  
 Geoid model: 18 CONUS  
 Units: English

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 3/2020 to 5/2020, 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 21st day of December, 2020.

DocuSigned by:  
  
 F1870CB85C7248A  
 Professional Land Surveyor L-4529

**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.

# PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW02D-1

Location and Surveys



PROJECT SURVEYOR

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

I, Mark A. Parris, 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 14th day of January, 2022.

DocuSigned by:  
  
 F1570CB85C7248A  
 Professional Land Surveyor L-4529

TYPE	STATION	Y2	
		NORTH	EAST
PT	88+29.49	622919.7708	601077.7389
PC	90+73.25	622934.4835	601321.0556
PT	96+97.32	622955.2338	601944.6997
PC	128+79.43	622974.7310	605126.7554
PT	135+21.96	623147.7637	605737.4634
PC	140+83.47	623439.3723	606217.3181
PT	143+78.03	623595.4179	606467.1371
PC	146+69.03	623752.6009	606712.0356
PT	156+82.10	623847.2979	607683.0805
PC	158+96.87	623768.3953	607882.8372
PT	173+59.92	624119.5564	609203.2961

TYPE	STATION	Y3	
		NORTH	EAST
PC	10+00.00	623323.7381	601962.8468
PRC	10+92.14	623259.8324	602029.1784
PT	13+06.82	623069.6841	602113.8397
POT	14+20.24	622956.2629	602112.6519

REVISIONS


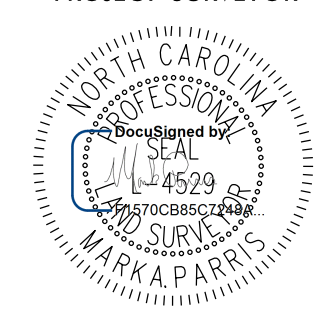
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NOTES:

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 INFORMATINO REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

6/2/19

# RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW03E-1
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Mark A. Parris, 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 11/15/21 to 1/14/22, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 14th day of January, 2022.  
 Documented by:  
  
 Professional Land Surveyor L-4529

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	123+01.58	-98.08	623069.2667	604548.3101
Y2	123+04.37	-57.71	623028.9192	604551.3506
Y2	127+00.09	-98.03	623071.6617	604946.8138
Y2	127+00.98	-58.17	623031.8033	604947.9442
Y2	148+75.22	60.00	623790.8536	606917.3280
Y2	155+85.24	60.00	623821.1886	607574.6039

ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y3	10+50.00	30.00	623266.6467	601977.4094
Y3	10+50.00	22.50	623272.0674	601982.5926
Y3	10+92.14	30.00	623237.3288	602009.3394
Y3	13+06.82	30.00	623069.9983	602083.8414
Y3	13+65.85	30.00	623010.9701	602083.2232

ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	103+84.00	-70.00	623029.4399	602630.9401
Y2	103+84.00	-55.51	623014.9540	602631.0289
Y2	104+16.00	-55.55	623015.1867	602663.0281
Y2	104+16.00	-70.00	623029.6359	602662.9395
Y2	109+60.00	-68.00	623030.9691	603206.9416
Y2	109+60.00	-56.17	623019.1427	603207.0140
Y2	109+81.00	-68.00	623031.0978	603227.9412
Y2	109+89.00	-56.21	623019.3536	603236.0133
Y2	128+67.00	-58.40	623033.0581	605113.9635
Y2	129+59.00	-85.00	623062.6508	605200.0465
Y2	130+40.00	-104.00	623089.4949	605272.1448
Y2	130+57.00	-77.00	623065.1108	605291.6663
Y2	132+00.00	-68.00	623085.0234	605424.6916
Y2	132+85.00	-71.00	623112.3812	605499.9480
Y2	132+90.00	-57.57	623101.3780	605508.9859
Y2	139+55.00	74.18	623309.2599	606146.0561
Y2	140+32.00	113.00	623316.0757	606232.0174
Y2	141+00.00	-79.77	623516.0805	606189.9172
Y2	141+05.00	131.00	623338.7430	606303.9400
Y2	141+31.00	132.00	623351.6049	606326.8848
Y2	141+61.00	82.00	623410.0511	606326.4798
Y2	141+75.00	-170.00	623631.8046	606205.9645
Y2	141+84.00	68.41	623433.7784	606339.0245
Y2	142+37.00	-132.00	623631.8596	606278.0190
Y2	142+59.00	-82.77	623601.7208	606322.6352
Y2	145+98.00	-100.00	623798.3924	606598.2455
Y2	146+00.00	-83.93	623785.9468	606608.6100
Y2	146+25.00	-103.00	623815.5011	606619.3475
Y2	146+27.00	-83.81	623800.4325	606631.3955
Y2	149+51.00	60.00	623814.8701	606984.6870
Y2	149+76.00	114.00	623769.8989	607022.3786
Y2	149+97.00	60.00	623827.1018	607026.3456
Y2	149+97.00	106.00	623782.6966	607038.3532

REVISIONS

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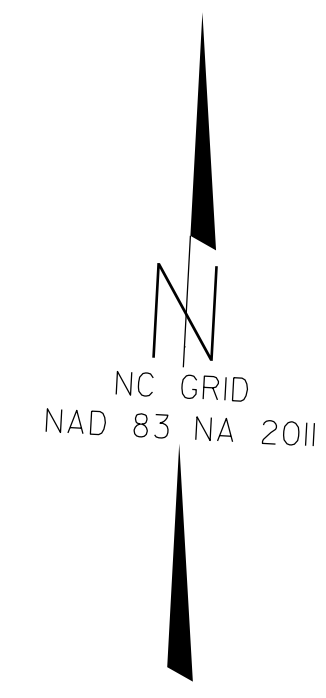
**NOTES:**

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 11/15/21 TO 1/14/22 .

6/2/19

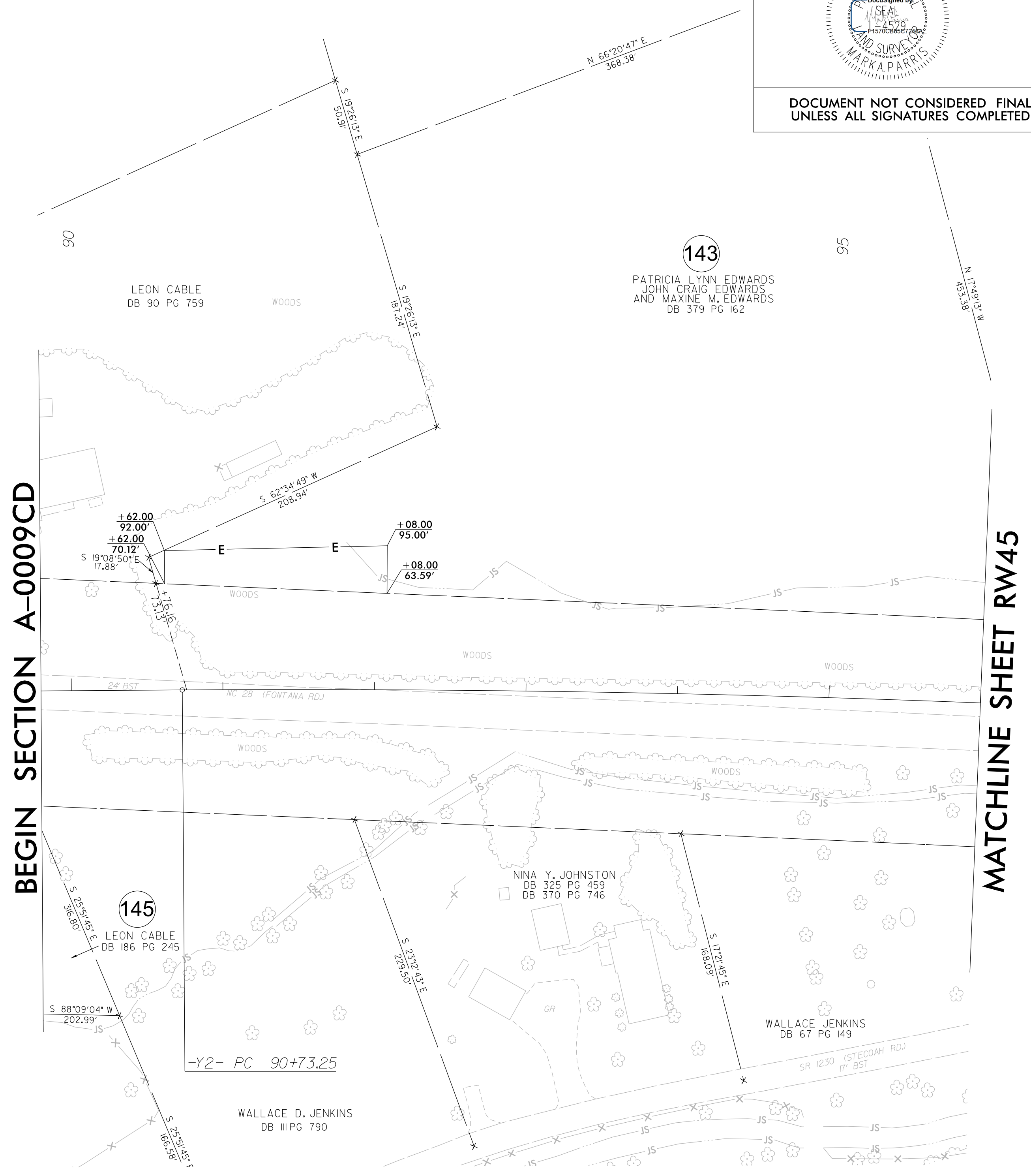
REVISIONS

27-OCT-2022 10:25  
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pushman



I, Mark A. Parris, 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 11/15/21 to 1/14/22, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 58.1600 as applicable.  
This 14th day of January, 2022.  
Professional Land Surveyor L-4529

PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW44
<b>Location and Surveys</b>	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



BEGIN SECTION A-0009CD

MATCHLINE SHEET RW45

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 11/15/21 TO 1/14/22 .

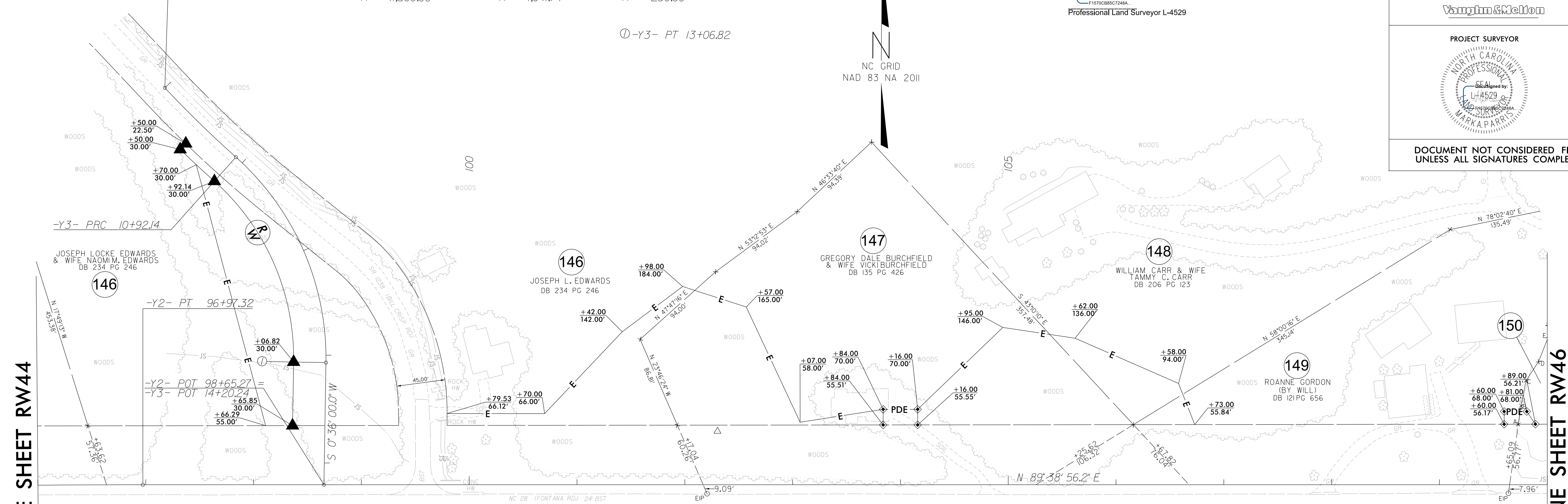
PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW45
<b>Location and Surveys</b>	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

I, Mark A. Parris, 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 11/15/21 to 1/14/22, and all coordinates are based on NAD83/2011. That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This Survey of January, 2022.

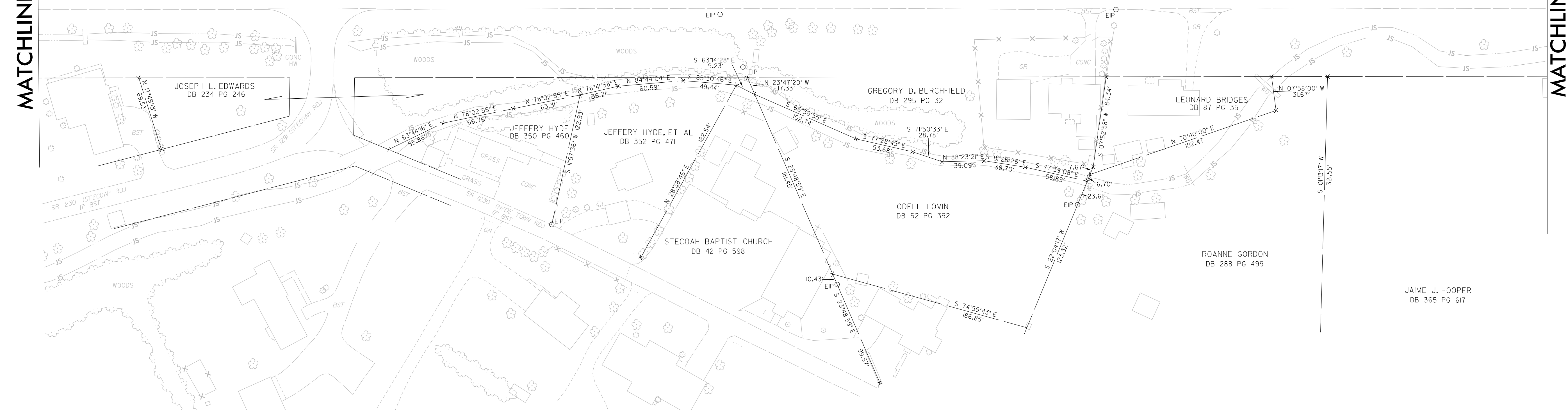
Professional Land Surveyor L-4529

-Y2- CURVE DATA		-Y3- CURVE DATA	
PI Sta 93+85.36	$\Delta = 3^{\circ}06'33.3"$ (RT)	PI Sta 10+46.10	$\Delta = 5^{\circ}04'03.3"$ (LT)
$D = 0^{\circ}29'53.6"$	$L = 624.07'$	$D = 5^{\circ}30'00.0"$	$L = 214.68'$
$T = 312.11'$	$R = 11,500.00'$	$T = 46.10'$	$R = 1,041.74'$
		$D = 22^{\circ}55'05.9"$	$L = 214.68'$
		$T = 114.46'$	$R = 250.00'$



MATCHLINE SHEET RW44

MATCHLINE SHEET RW46



**NOTES:**

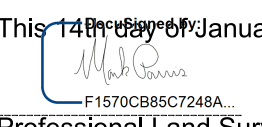
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 11/15/21 TO 1/14/22.


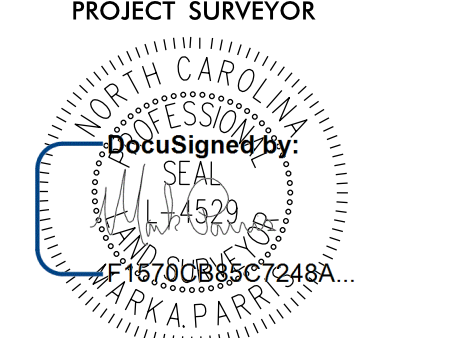
REVISIONS

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**-Y2- CURVE DATA**  
 PI Sta 132+08.73  
 $\Delta = 30^{\circ} 56' 09.8''$  (LT)  
 $D = 4^{\circ} 48' 53.2''$   
 $L = 642.52'$   
 $T = 329.30'$   
 $R = 1,190.00'$

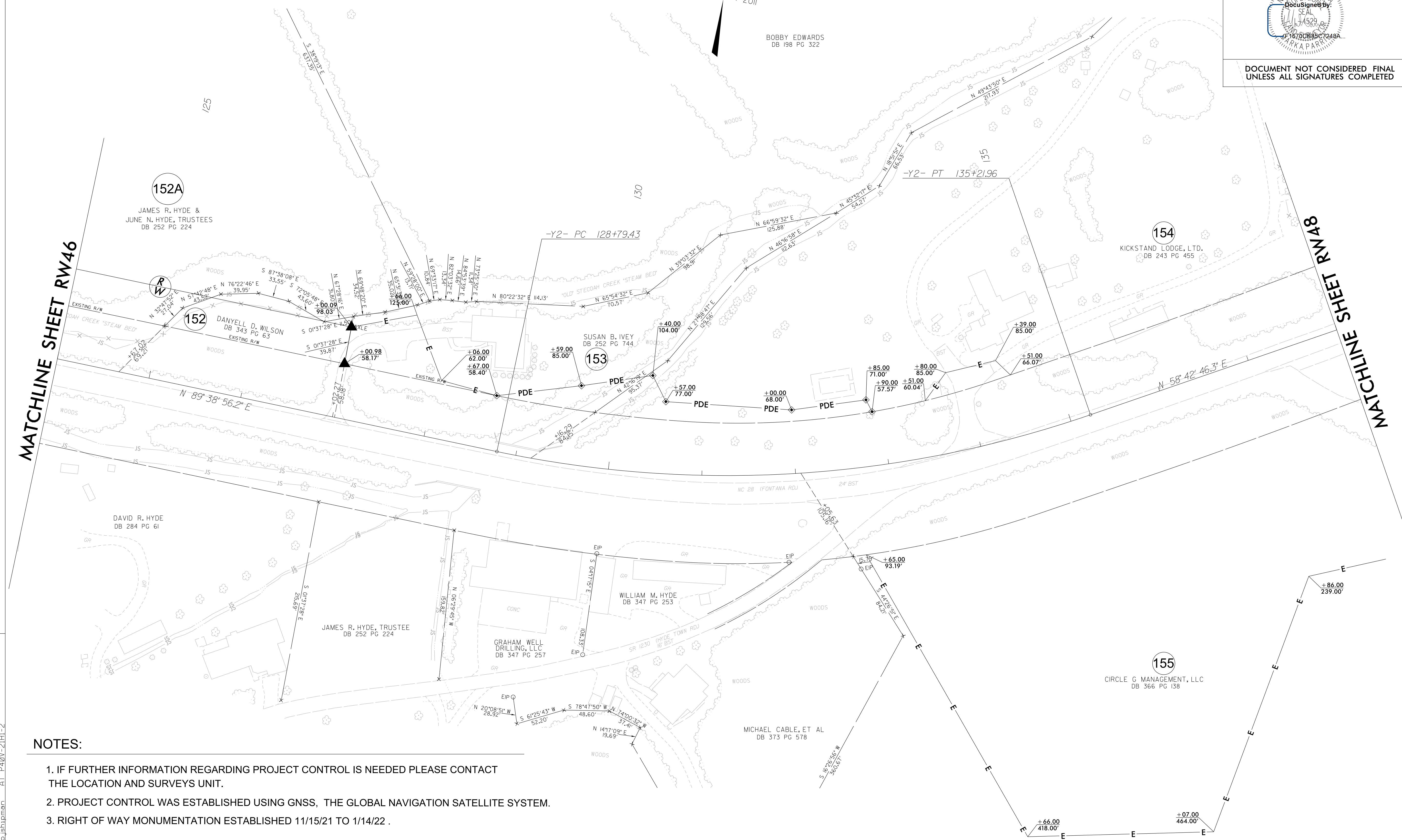
I, Mark A. Parris, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 11/15/21 to 1/14/22, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.  
 This 14th day of January, 2022.  
  
 Professional Land Surveyor L-4529

PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW47
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

MATCHLINE SHEET RW46

MATCHLINE SHEET RW48



**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 11/15/21 TO 1/14/22 .

07-OCT-2022 15:53  
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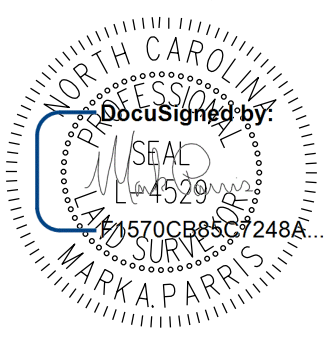
-Y2- CURVE DATA

PI Sta 142+30.76	PI Sta 152+17.13
$\Delta = 1^{\circ} 24' 23.1''$ (LT)	$\Delta = 5^{\circ} 14' 50.1''$ (RT)
$D = 0^{\circ} 28' 38.9''$	$D = 5^{\circ} 21' 17.1''$
$L = 294.56'$	$L = 1,013.07'$
$T = 147.29'$	$T = 548.10'$
$R = 12,000.00'$	$R = 1,070.00'$

I, Mark A. Parris, 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 11/15/21 to 1/14/22, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 14th day of January, 2022.

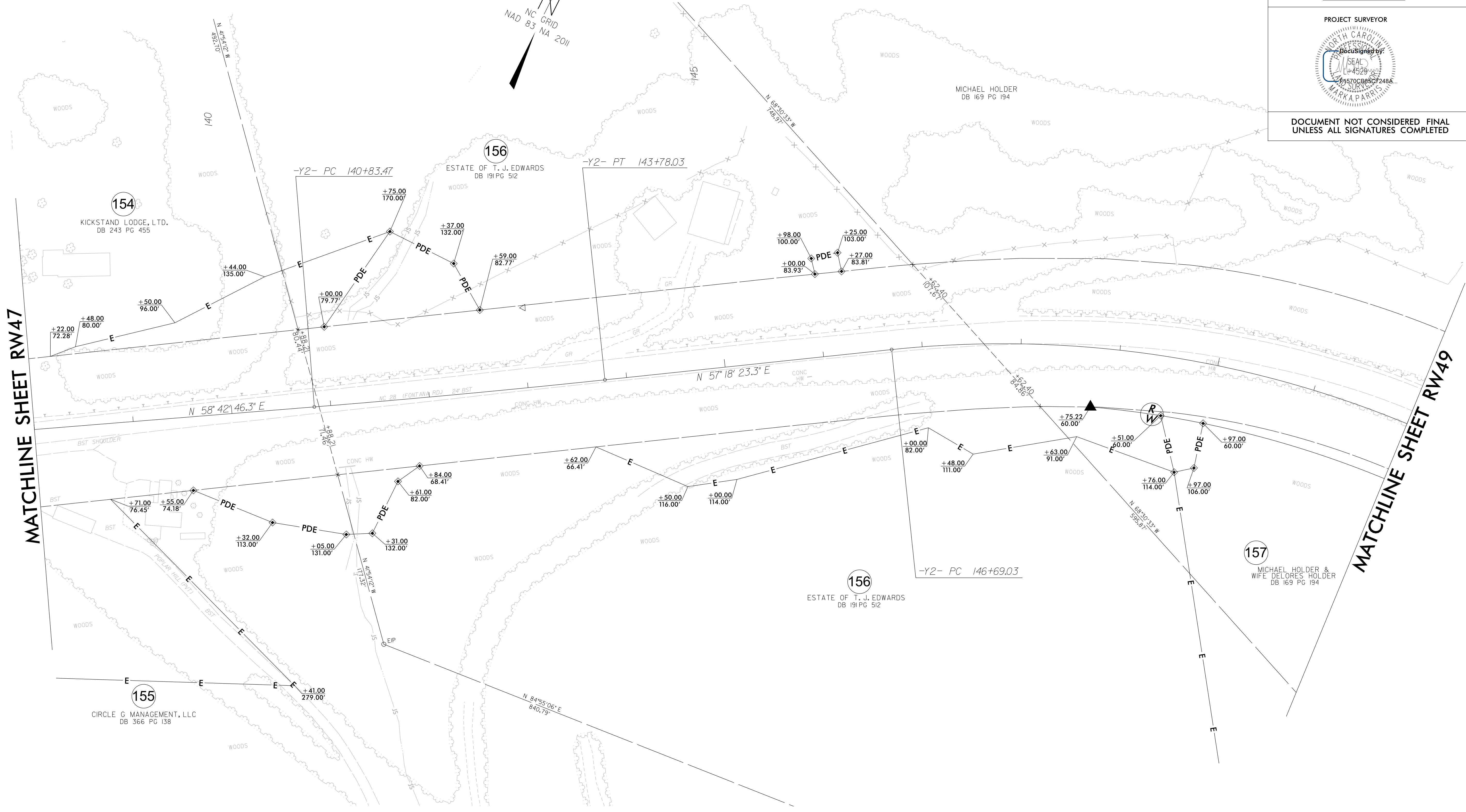
*Mark A. Parris*  
Professional Land Surveyor L-4529

PROJECT REFERENCE NO.	SHEET NO.
A-0009CD	RW48
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

MATCHLINE SHEET RW47

MATCHLINE SHEET RW49



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 11/15/21 TO 1/14/22 .

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-Y2- CURVE DATA

PI Sta 152+17.13	PI Sta 167+46.16
$\Delta = 54^{\circ}14'50.1''$ (RT)	$\Delta = 72^{\circ}53'32.5''$ (LT)
$D = 5'21.17''$	$D = 4'58'56.1''$
$L = 1,013.07'$	$L = 1,463.04'$
$T = 548.10'$	$T = 849.28'$
$R = 1,070.00'$	$R = 1,150.00'$

I, Mark A. Parris, 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 11/15/21 to 1/14/22, and all coordinates are based on NAD83/2011. This survey was performed to meet the requirements of 21NCA 56.1600 as applicable.

This 14th day of January, 2022.

*[Signature]*  
Professional Land Surveyor L-4529

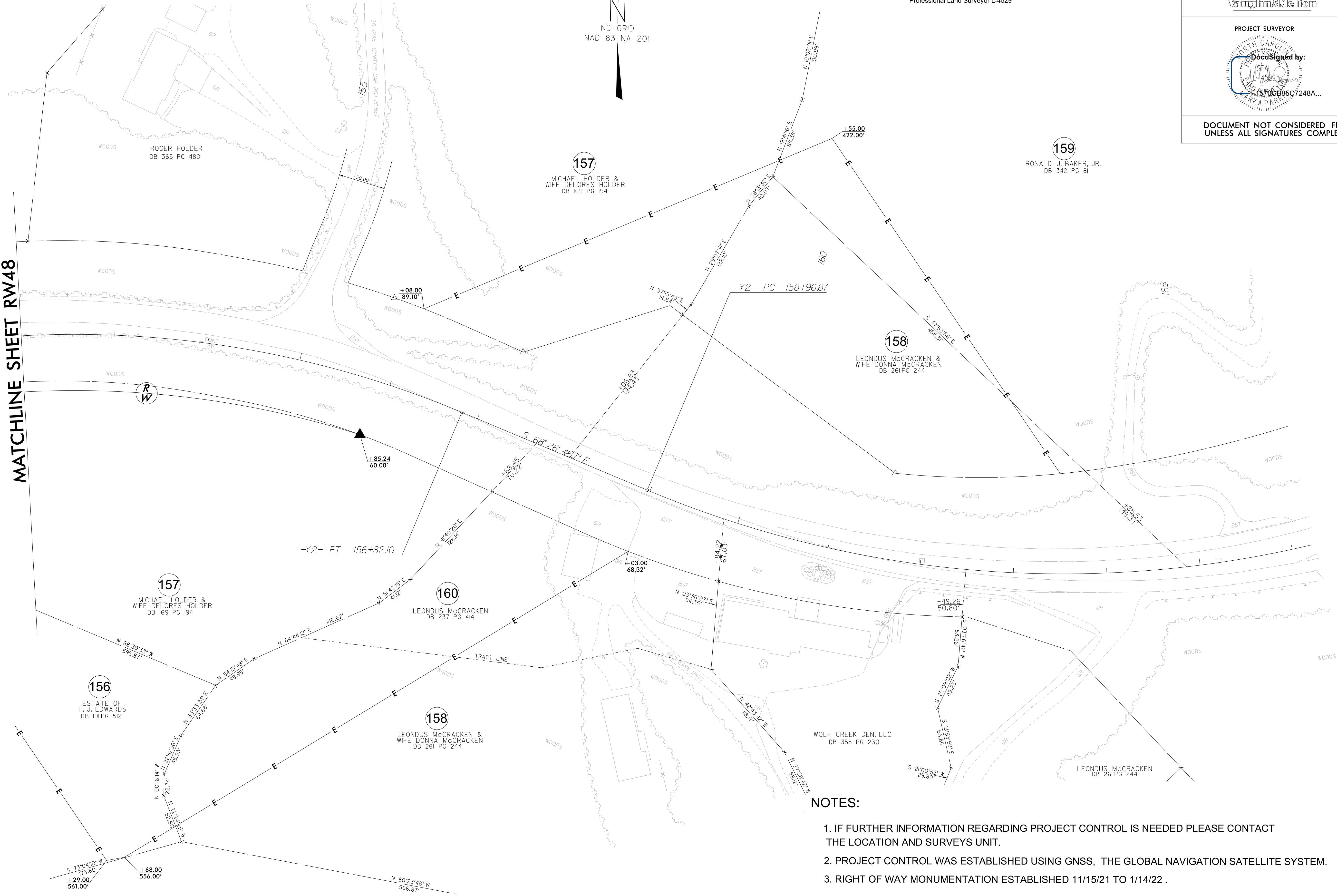
PROJECT REFERENCE NO. A-0009CD	SHEET NO. RW49
<b>Location and Surveys</b>	
PROJECT SURVEYOR	
DocuSigned by: 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCHLINE SHEET RW48

REVISIONS

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pushman



- 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 11/15/21 TO 1/14/22 .