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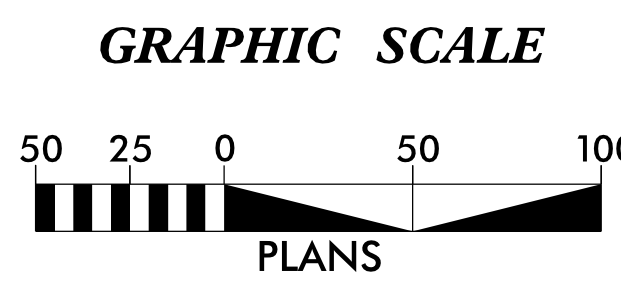
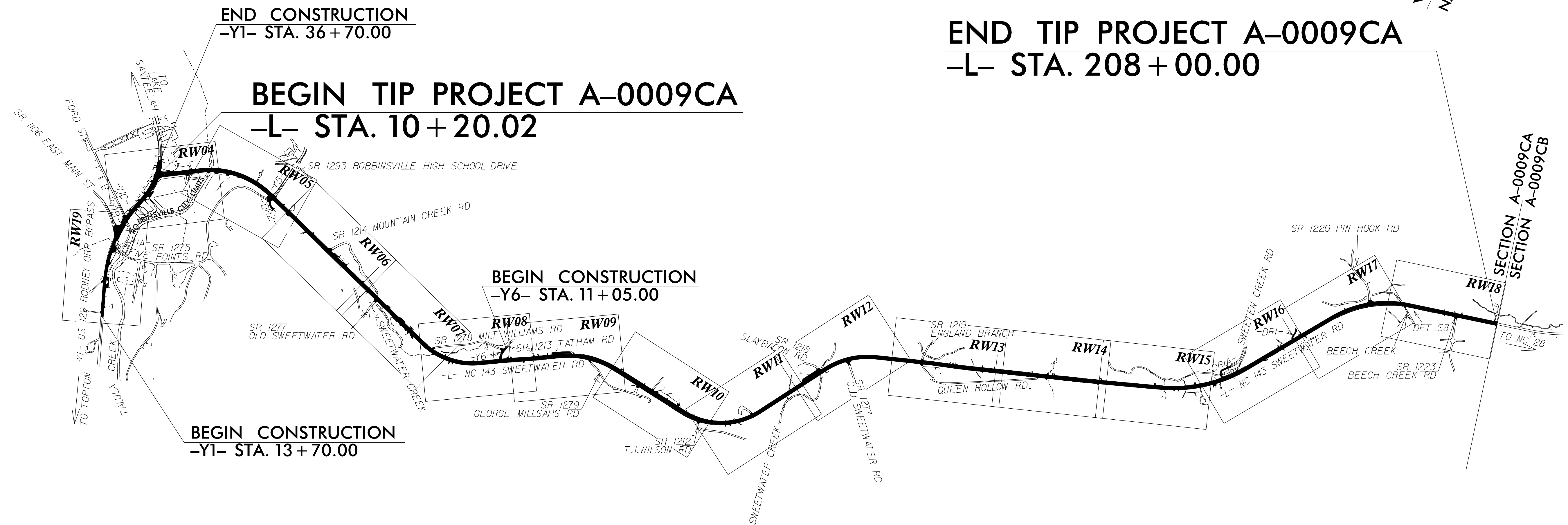
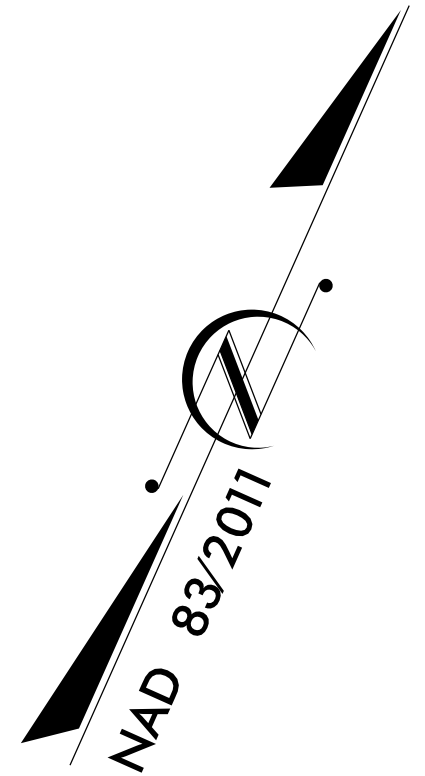
09/06/99

TIP PROJECT: A-0009CA

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	A-0009CA	RW01	49

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

# GRAHAM COUNTY



### 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 10+00 IS S 73-15'22.6" W 17,456.75(ft)  
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

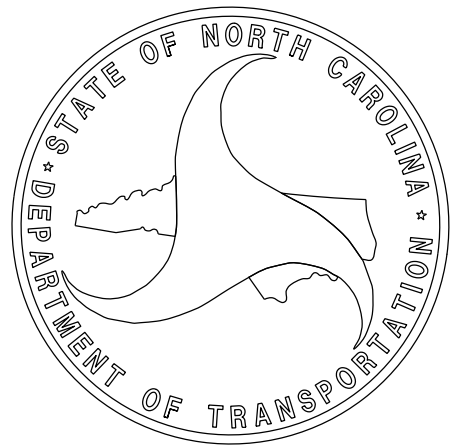
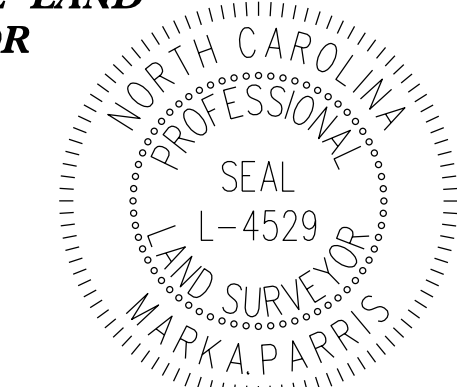
**V&M**  
**Vaughn & Melton**  
 1318-F Patton Avenue  
 Asheville, NC 28806  
 Firm License # F-1088

2018 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
 07/16/2021

**LETTING DATE:**  
 08/16/2022

PROFESSIONAL LAND SURVEYOR




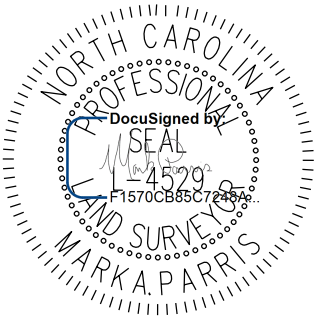
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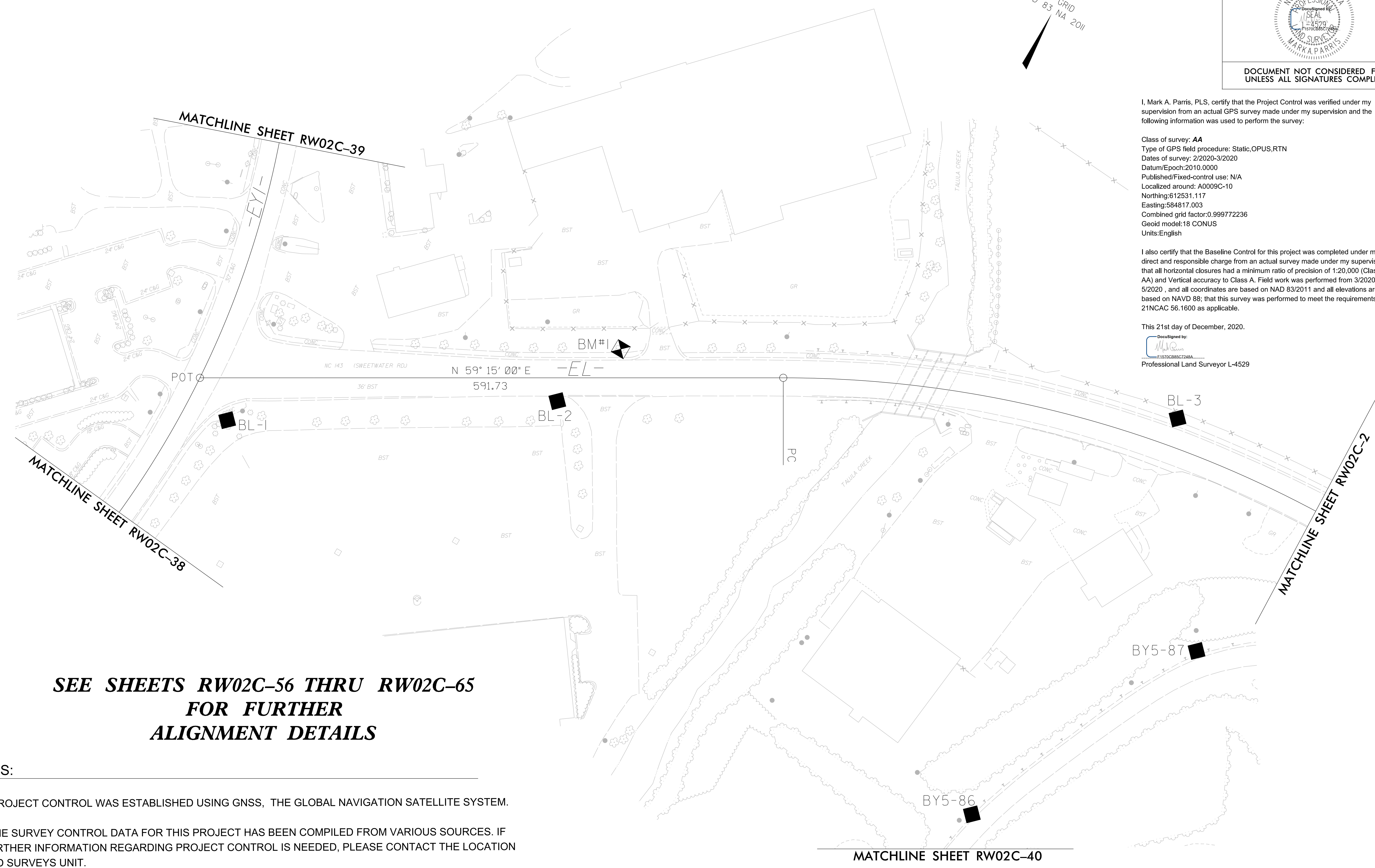
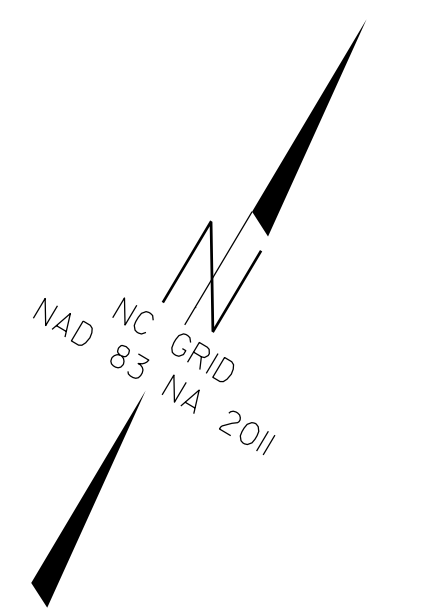
Date:

\$\$\$\$\$ SYSTEM \$\$\$\$\$\$  
 \$\$\$ DDN \$\$\$  
 \$\$\$ USERNAME \$\$\$

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-1
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

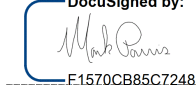


I, Mark A. Parris, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

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

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:  
  
 E1570C985C7248A  
 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.
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.

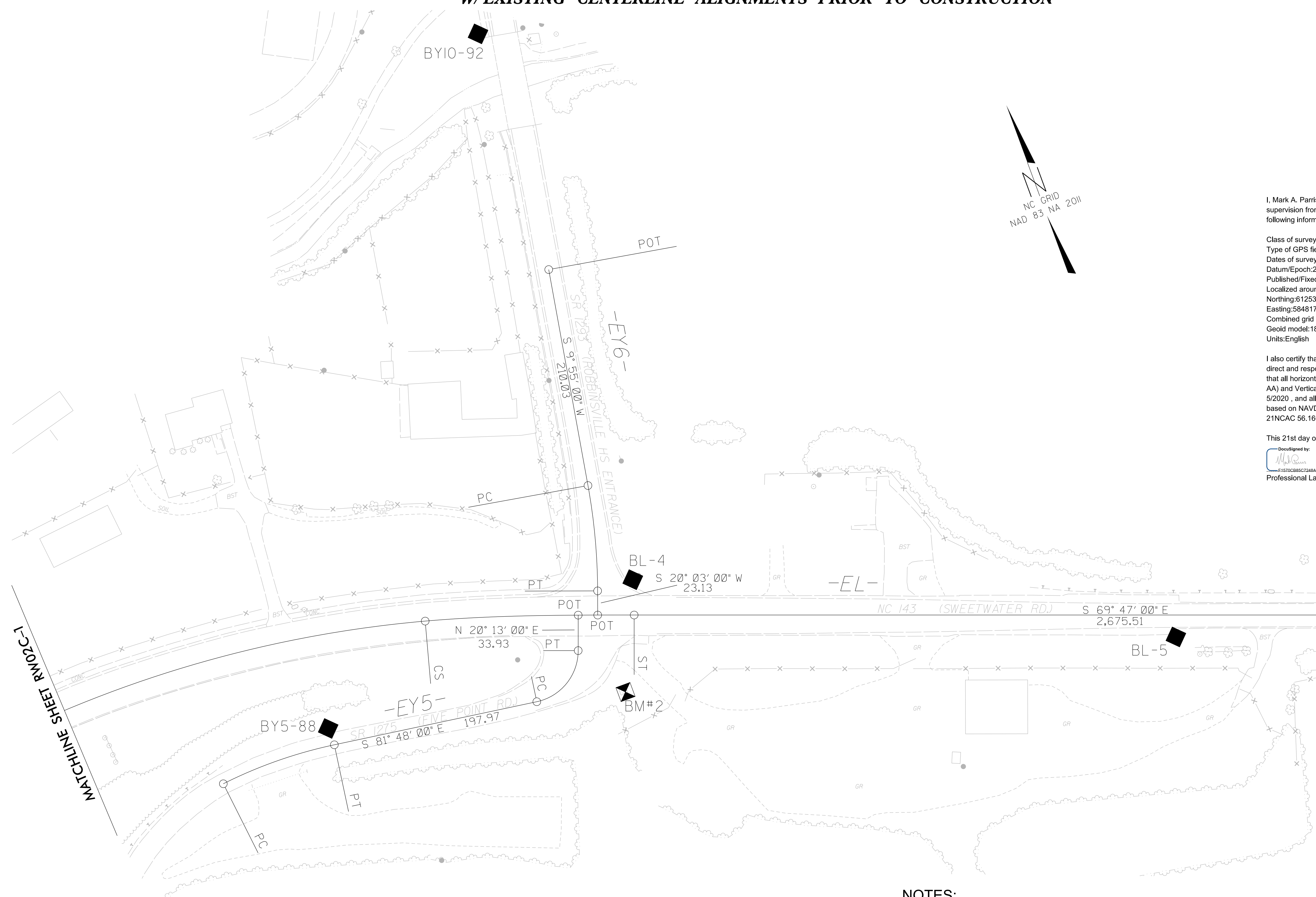
REVISIONS

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 jcgordon

# SURVEY CONTROL SHEET

W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-2
<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

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

REVISIONS

I6-AUG-2021 10:50  
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 jcgordon  
 WKS-1903PY-37

MATCHLINE SHEET RW02C-1

MATCHLINE SHEET RW02C-3

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

**NOTES:**

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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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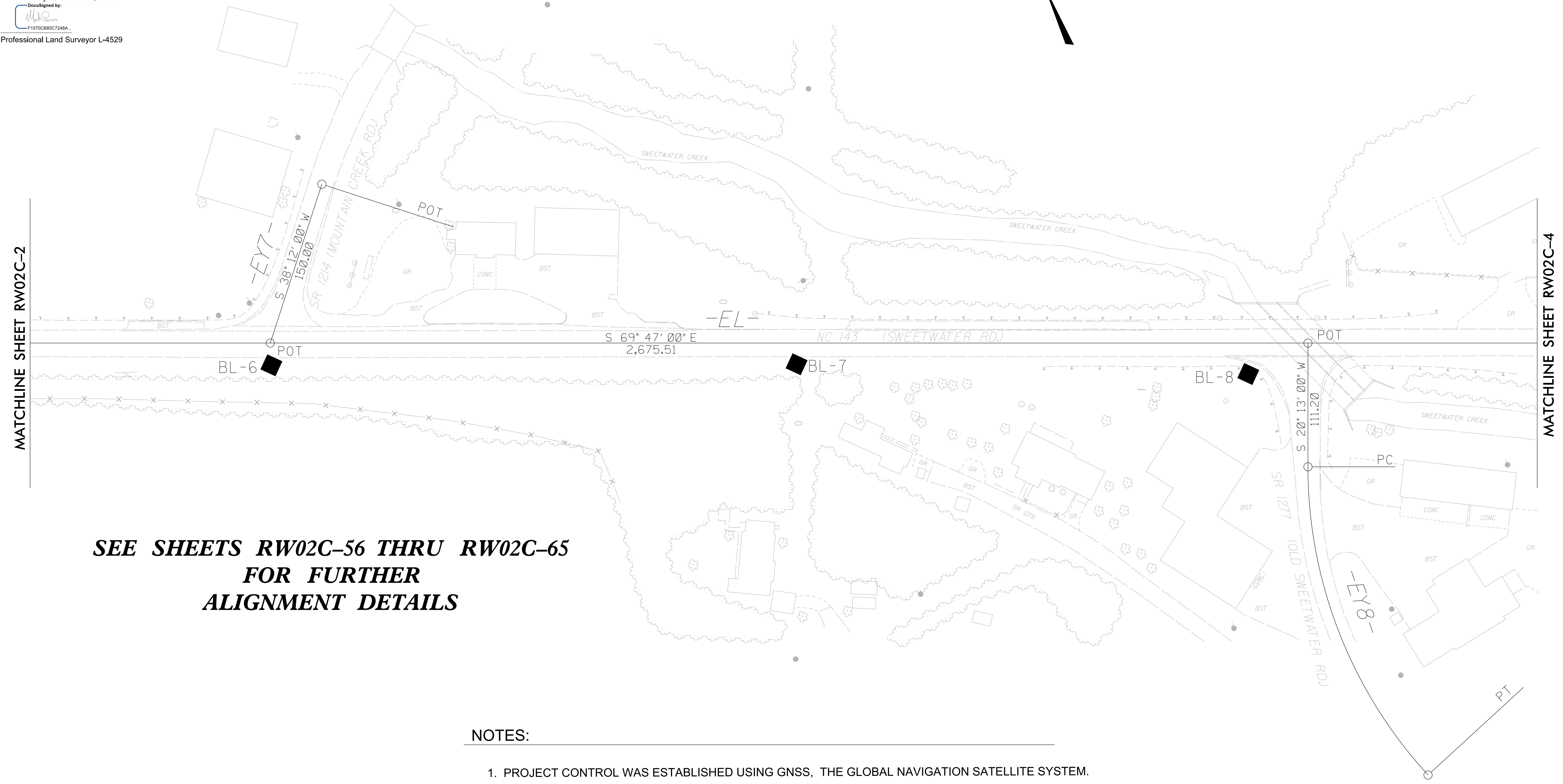
This 21st day of December, 2020.

DocuSigned by:  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-3
<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.
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REVISIONS

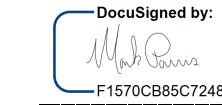
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JKS-1503PY-37  
Jegordon

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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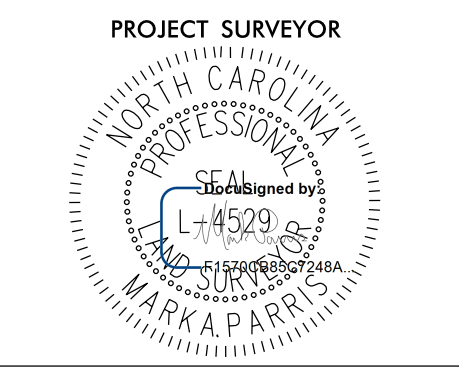
This 21st day of December, 2020.

Decided by:  


Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-4
<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:**

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REVISIONS

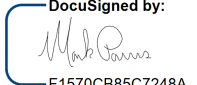
6/2/19

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:

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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


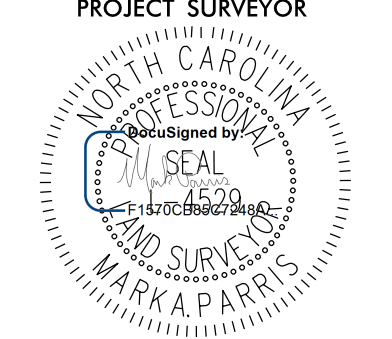
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This 21st day of December, 2020.

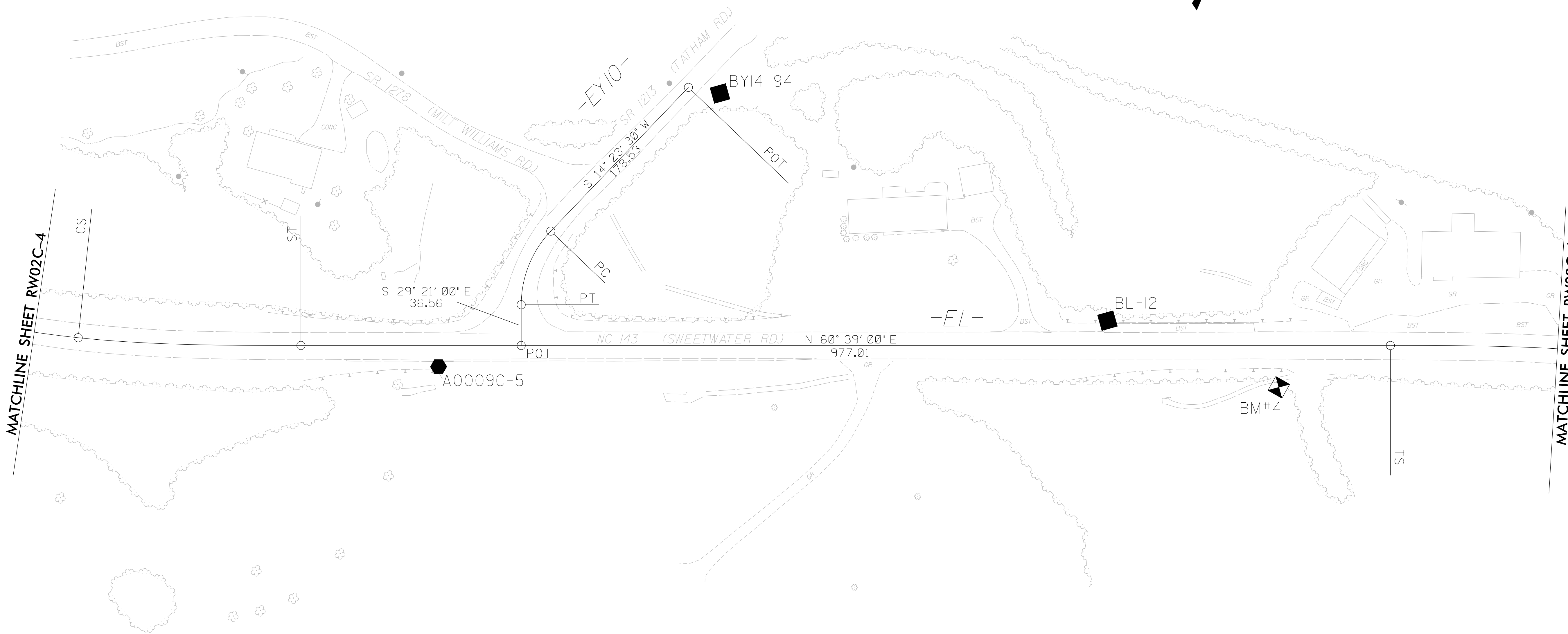
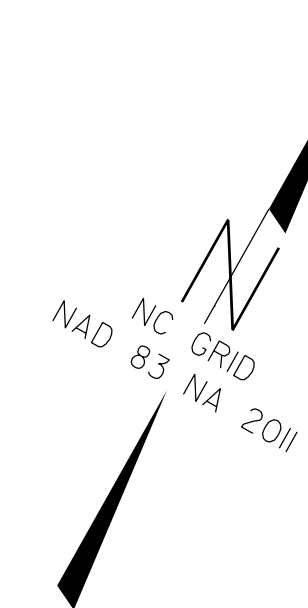
DocuSigned by:  
  
F1579C88C7248A  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-5
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

A0009C-6



**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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REVISIONS

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jcgordon

# SURVEY CONTROL SHEET

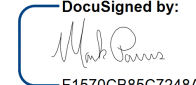
## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION


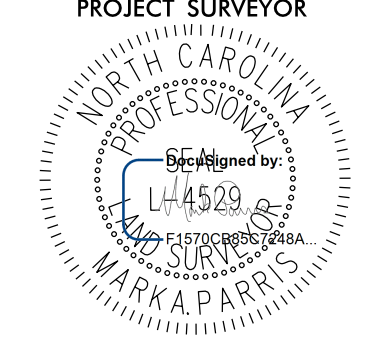
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Class of survey: **AA**  
Type of GPS field procedure: Static, OPUS, RTN  
Dates of survey: 2/2020-3/2020  
Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
Northing: 612531.117  
Easting: 584817.003  
Combined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

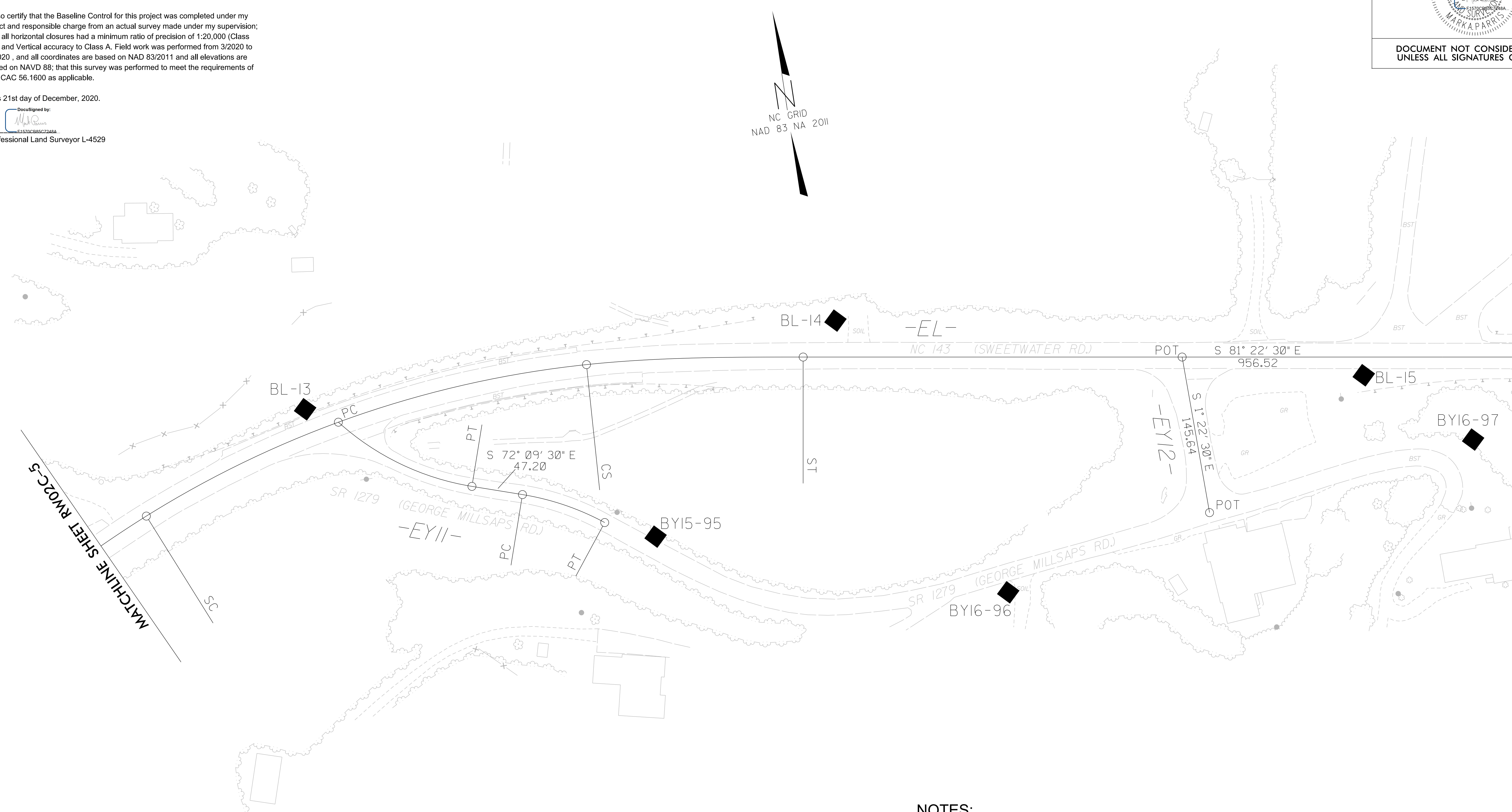
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This 21st day of December, 2020.

DocuSigned by:  
  
Professional Land Surveyor L-4529

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-6
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS



MATCHLINE SHEET RW02C-5

MATCHLINE SHEET RW02C-7

### NOTES:

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



REVISIONS

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

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Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
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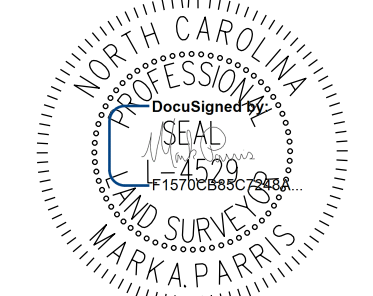
This 21st day of December, 2020.  
DocuSigned by:  
Mark A. Parris  
F1570CB85C7248A  
Professional Land Surveyor L-4529

PROJECT REFERENCE NO. SHEET NO.  
A-0009CA RW02C-7

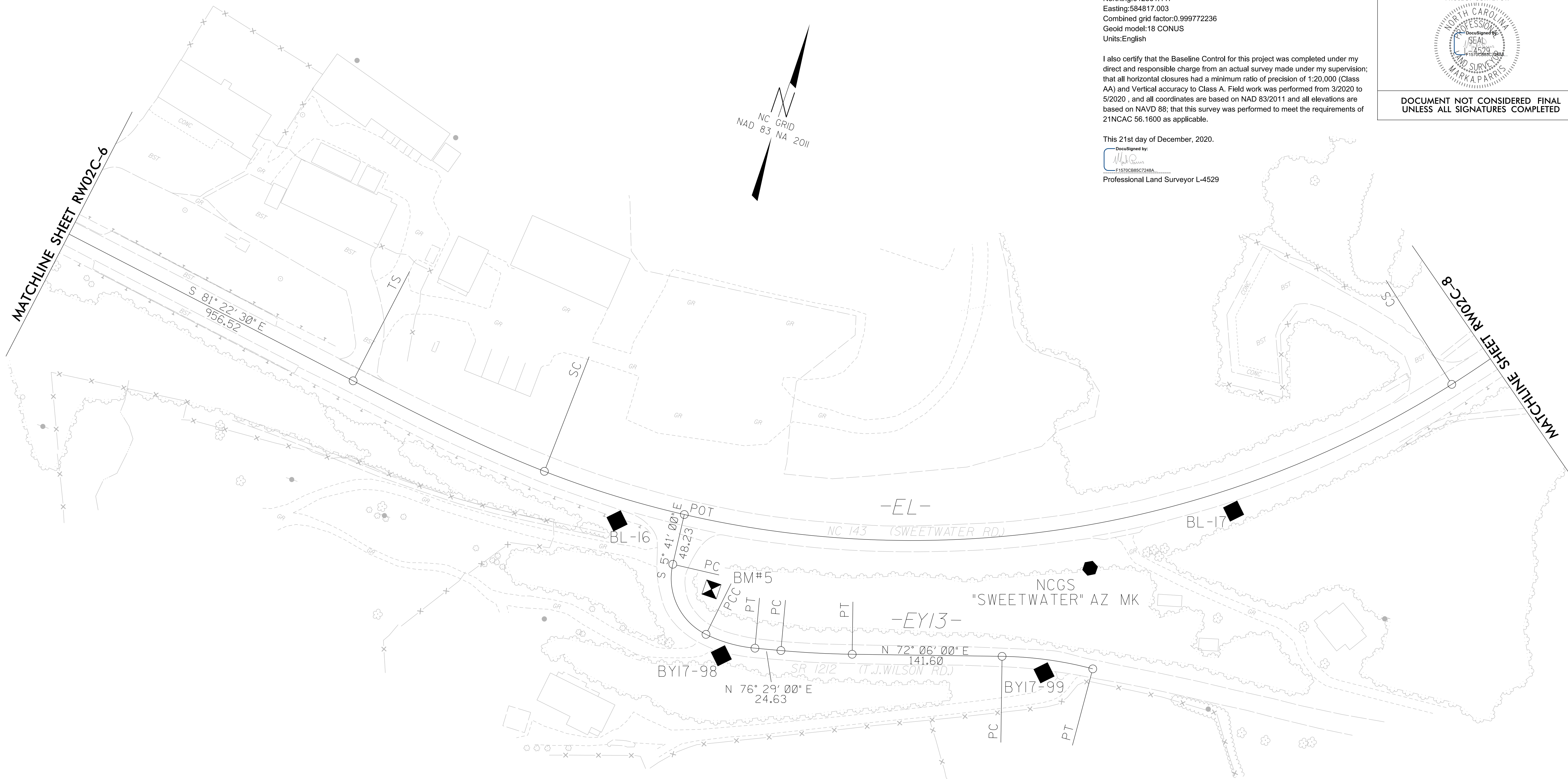
### Location and Surveys



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.
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# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION


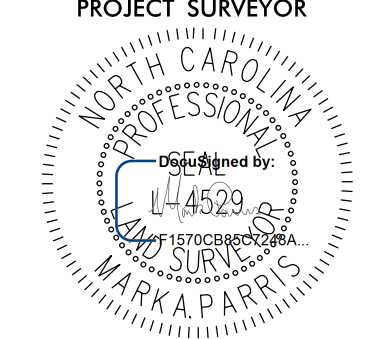
I, Mark A. Parris, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

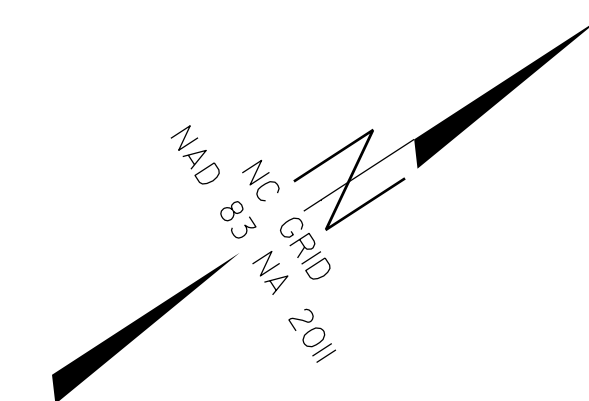
Class of survey: AA  
Type of GPS field procedure: Static, OPUS, RTN  
Dates of survey: 2/2020-3/2020  
Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
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Units: English

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This 21st day of December, 2020.

DocuSigned by:  
Professional Land Surveyor L-4529

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-8
Location and Surveys	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS

MATCHLINE SHEET RW02C-7

MATCHLINE SHEET RW02C-9

**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.

6/2/19

16-AUG-2021 10:01 AM V:\NC\Survey\032112-21-A-0009CA ROW Staking\Survey\RW and Control Sheets\A-0009CA\A0009CA\_1s-RW02C-9.dgn jcgordon

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:

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Northing: 612531.117  
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This 21st day of December, 2020.

DocuSigned by:  
MGP  
F1570C885C7248A

Professional Land Surveyor L-4529



# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-9
<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.

6/2/19

I6-AUG-2021 10:02 V:\NC\Survey\032112-21-A-0009CA ROW Staking\Survey\RW and Control Sheets\A-0009CA\A0009CA\_1s-RW02C-10.dgn jcgordon

REVISIONS

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

● A0009C-8

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:  
  
F1570C85C7248A  
Professional Land Surveyor L-4529

PROJECT REFERENCE NO.

A-0009CA

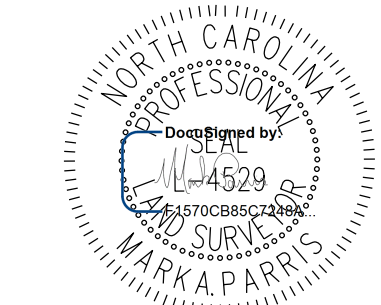
SHEET NO.

RW02C-10

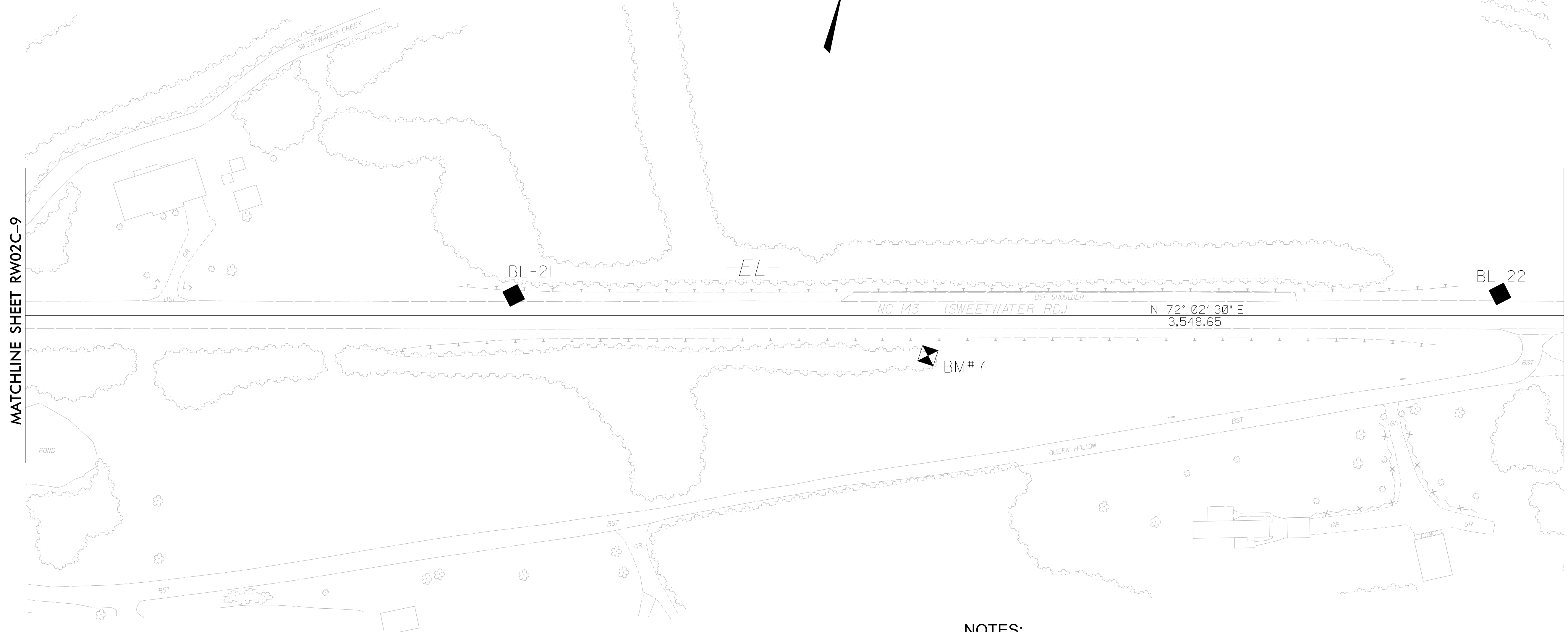
Location and Surveys



PROJECT SURVEYOR



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



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

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REVISIONS

# SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

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Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
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Easting: 584817.003  
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This 21st day of December, 2020.

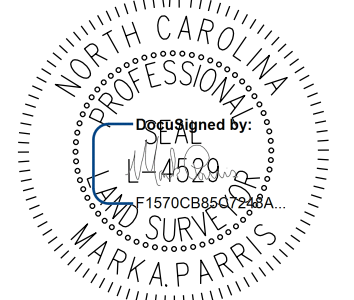
DocuSigned by:  
*Mark A. Parris*  
E1570C85C7248A  
Professional Land Surveyor L-4529

PROJECT REFERENCE NO. SHEET NO.  
A-0009CA RW02C-11

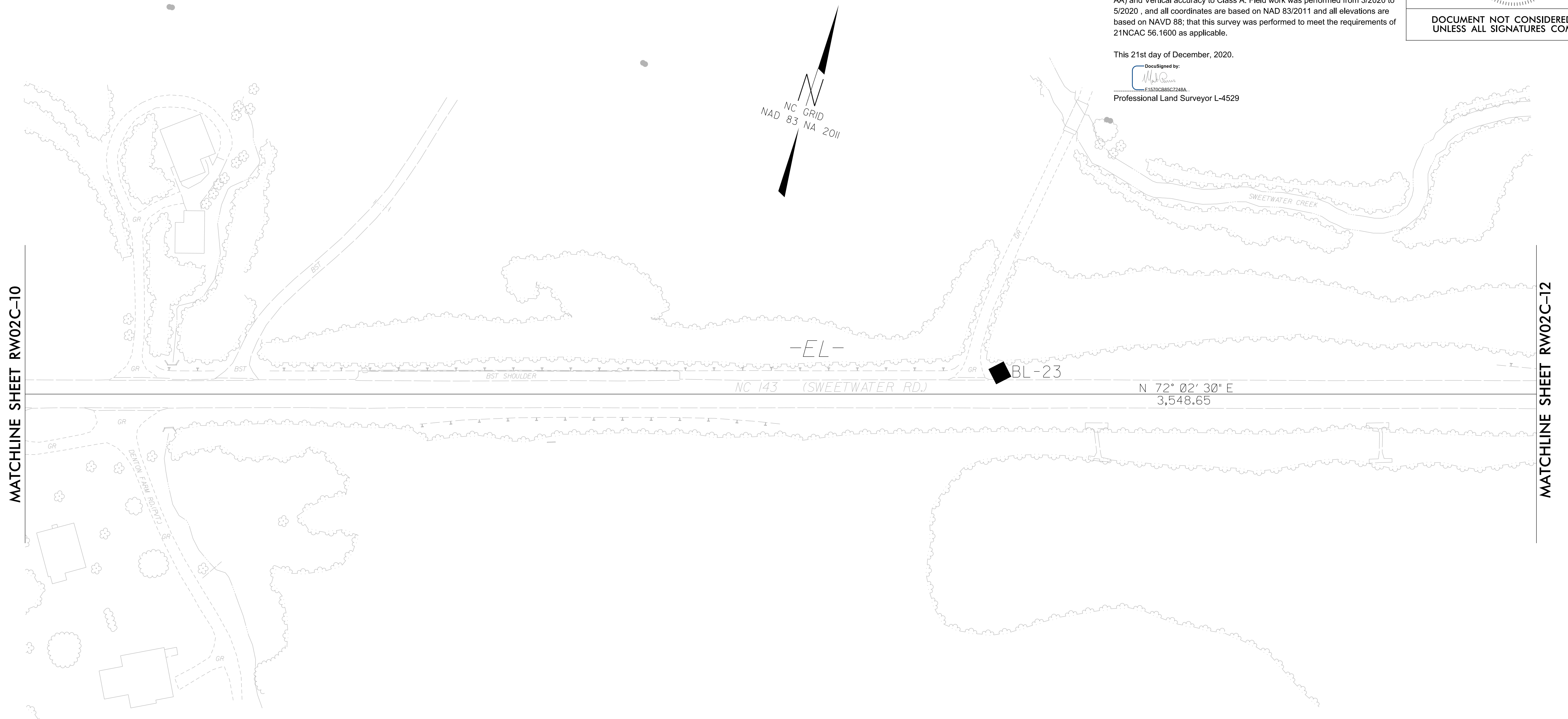
### Location and Surveys



PROJECT SURVEYOR



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



MATCHLINE SHEET RW02C-10

MATCHLINE SHEET RW02C-12

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

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REVISIONS

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JKS-1503PY-37  
Jcgordon

# SURVEY CONTROL SHEET

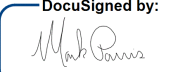
## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION


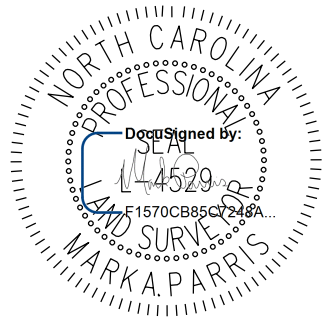
I, Mark A. Parris, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

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.

DocuSigned by:  
  
1570C886C7248A  
Professional Land Surveyor L-4529

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-12
<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**

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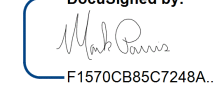
6/2/19

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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  
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This 21st day of December, 2020.



Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

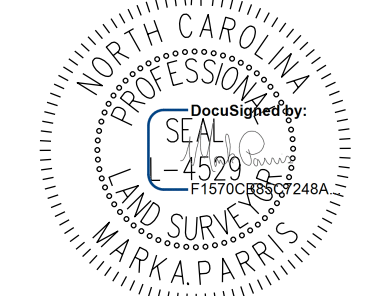
## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. SHEET NO.  
A-0009CA RW02C-13

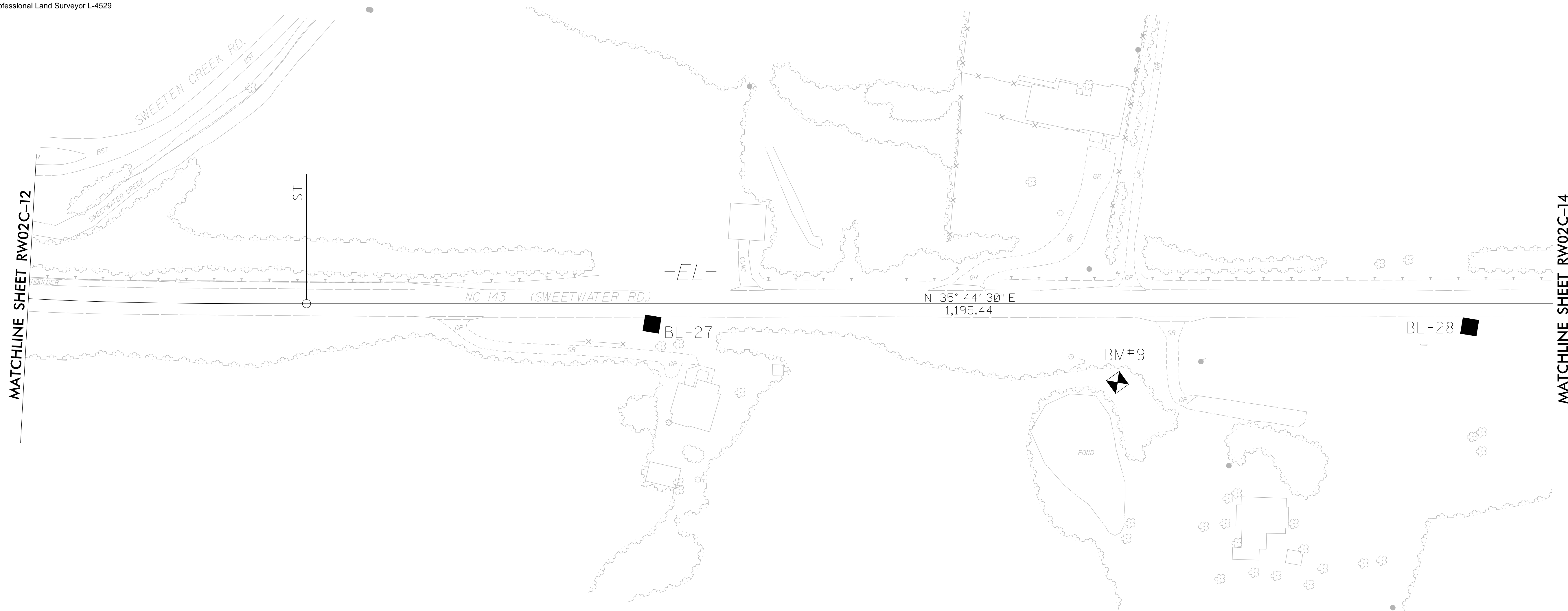
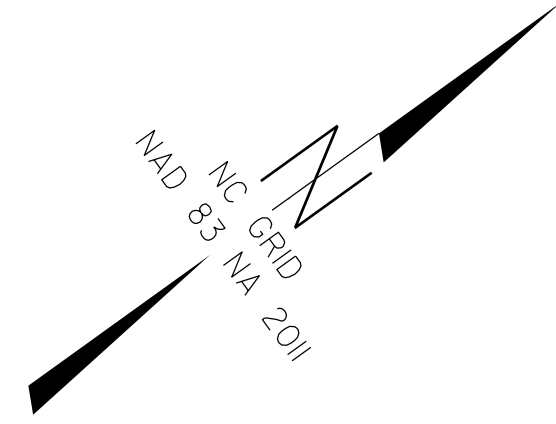
Location and Surveys



PROJECT SURVEYOR



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



MATCHLINE SHEET RW02C-12

MATCHLINE SHEET RW02C-14

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

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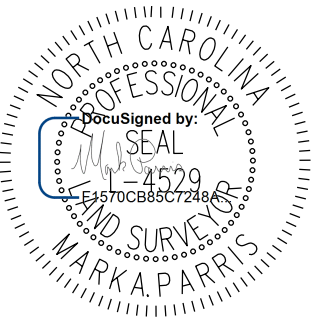
REVISIONS

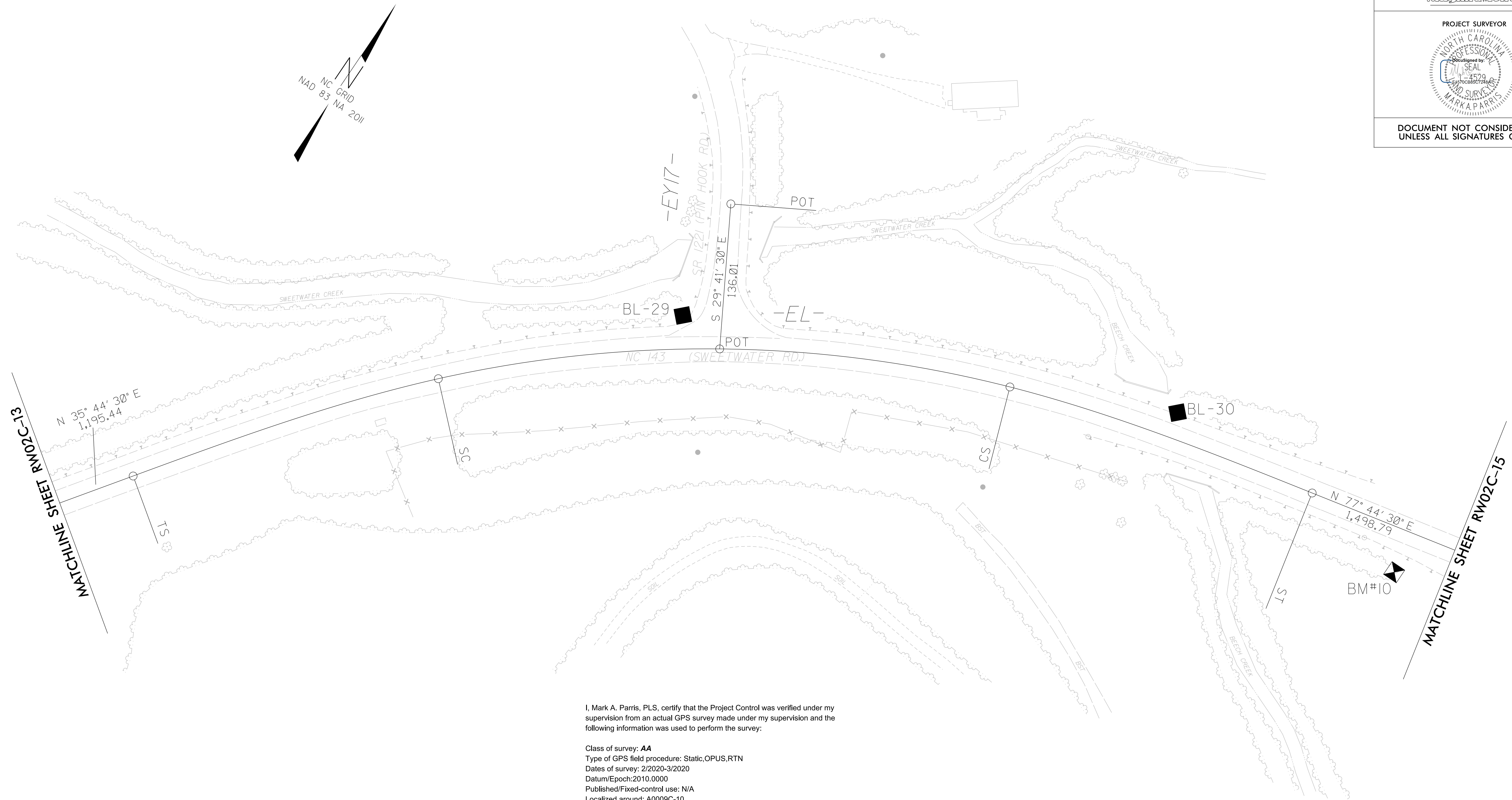
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JKGordon

REVISIONS

# SURVEY CONTROL SHEET

## W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

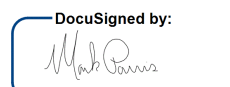
PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-14
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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.  
  
 Professional Land Surveyor L-4529

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

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Easting: 584817.003  
Combined grid factor: 0.999772236  
Geoid model: 18 CONUS  
Units: English


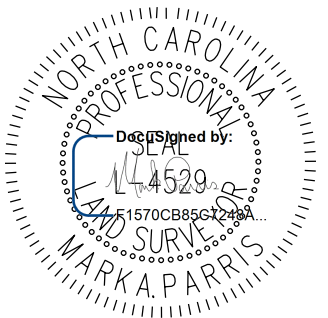
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DocuSigned by:  
  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

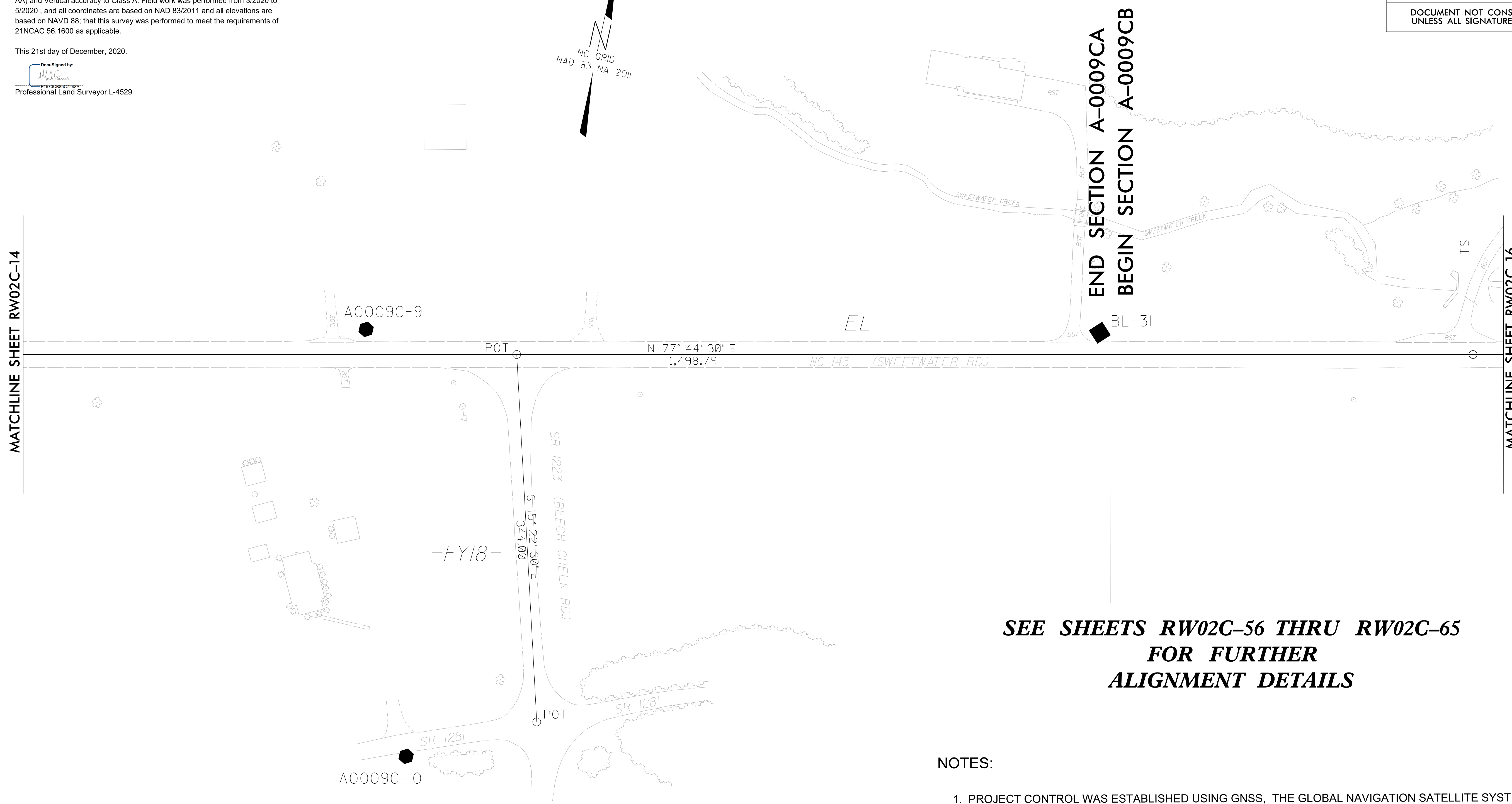
## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-15
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

MATCHLINE SHEET RW02C-14

MATCHLINE SHEET RW02C-16



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

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6/2/19

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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


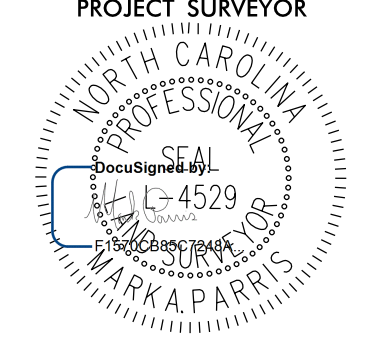
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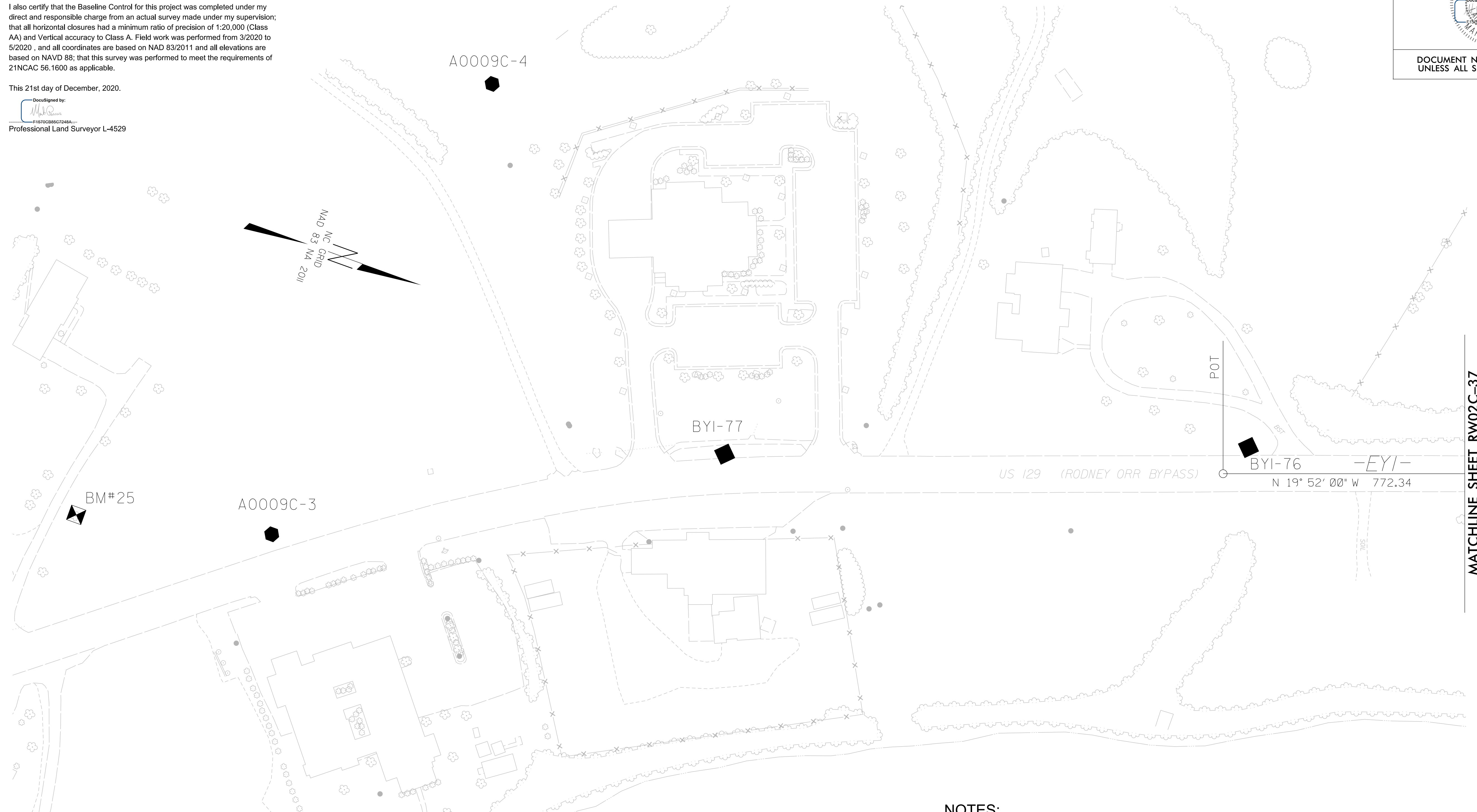
This 21st day of December, 2020.

DocuSigned by:  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-36
Location and Surveys	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



REVISIONS

MATCHLINE SHEET RW02C-37

**SEE SHEETS RW02C-56 THRU RW02C-65  
FOR FURTHER  
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jcgordon

6/2/19

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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  
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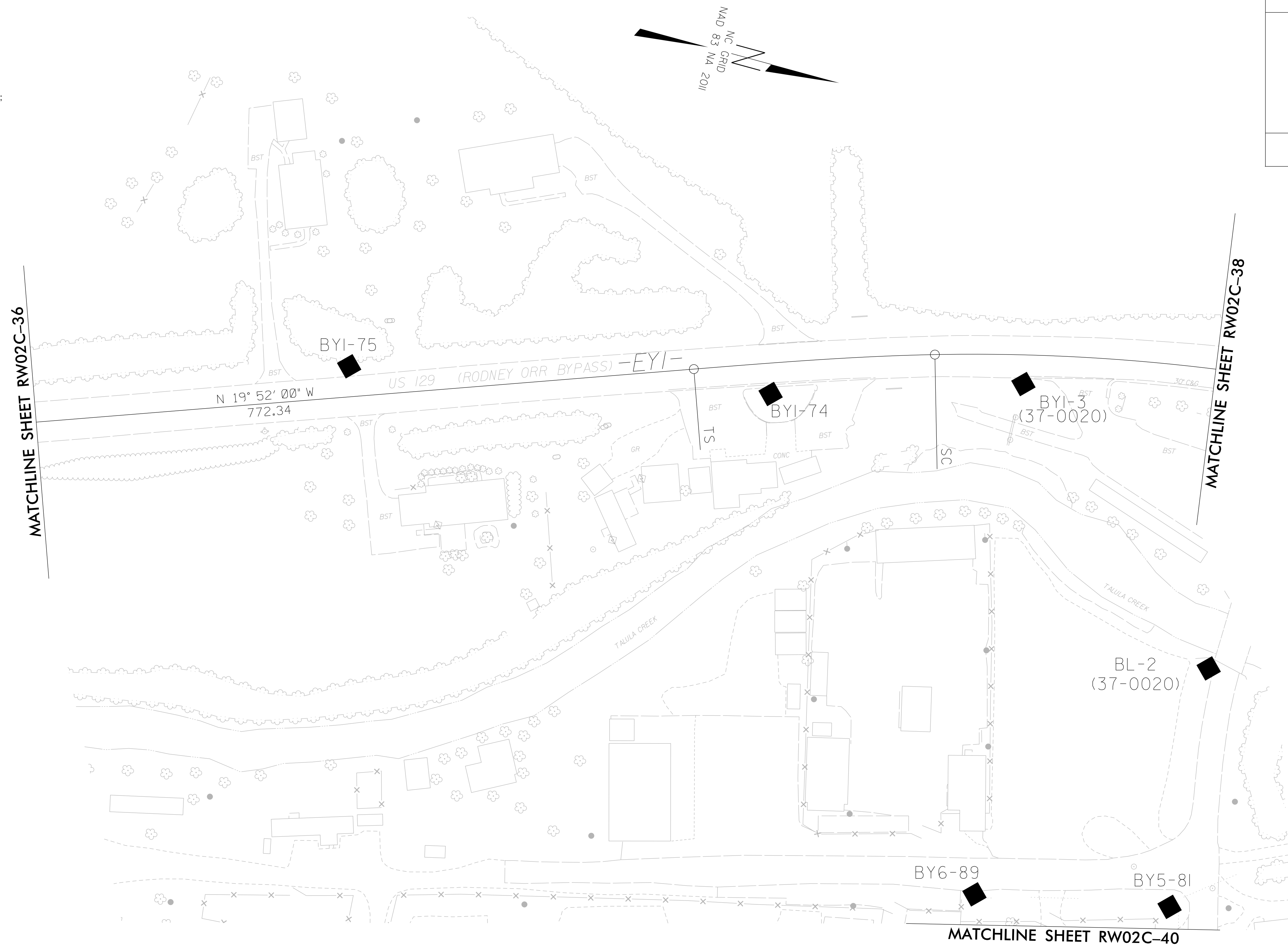
This 21st day of December, 2020.

DocuSigned by:  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-37
<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**

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REVISIONS

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jcgordon

6/2/19

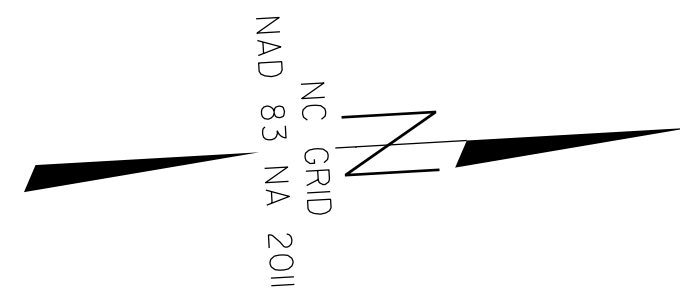
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Professional Land Surveyor L-4529



# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-38
Location and Surveys	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

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At WKS-1903BY-37  
Jcgordon

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

### NOTES:



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REVISIONS

# SURVEY CONTROL SHEET

## W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-39
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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 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.  
  
 F1570CB85C7248A...  
 Professional Land Surveyor L-4529

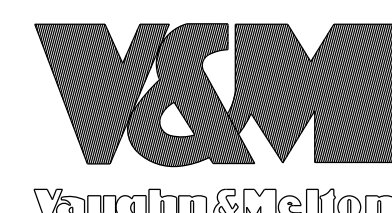
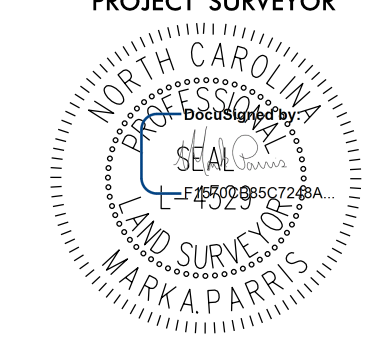
**SEE SHEETS RW02C-56 THRU RW02C-65  
 FOR FURTHER  
 ALIGNMENT DETAILS**

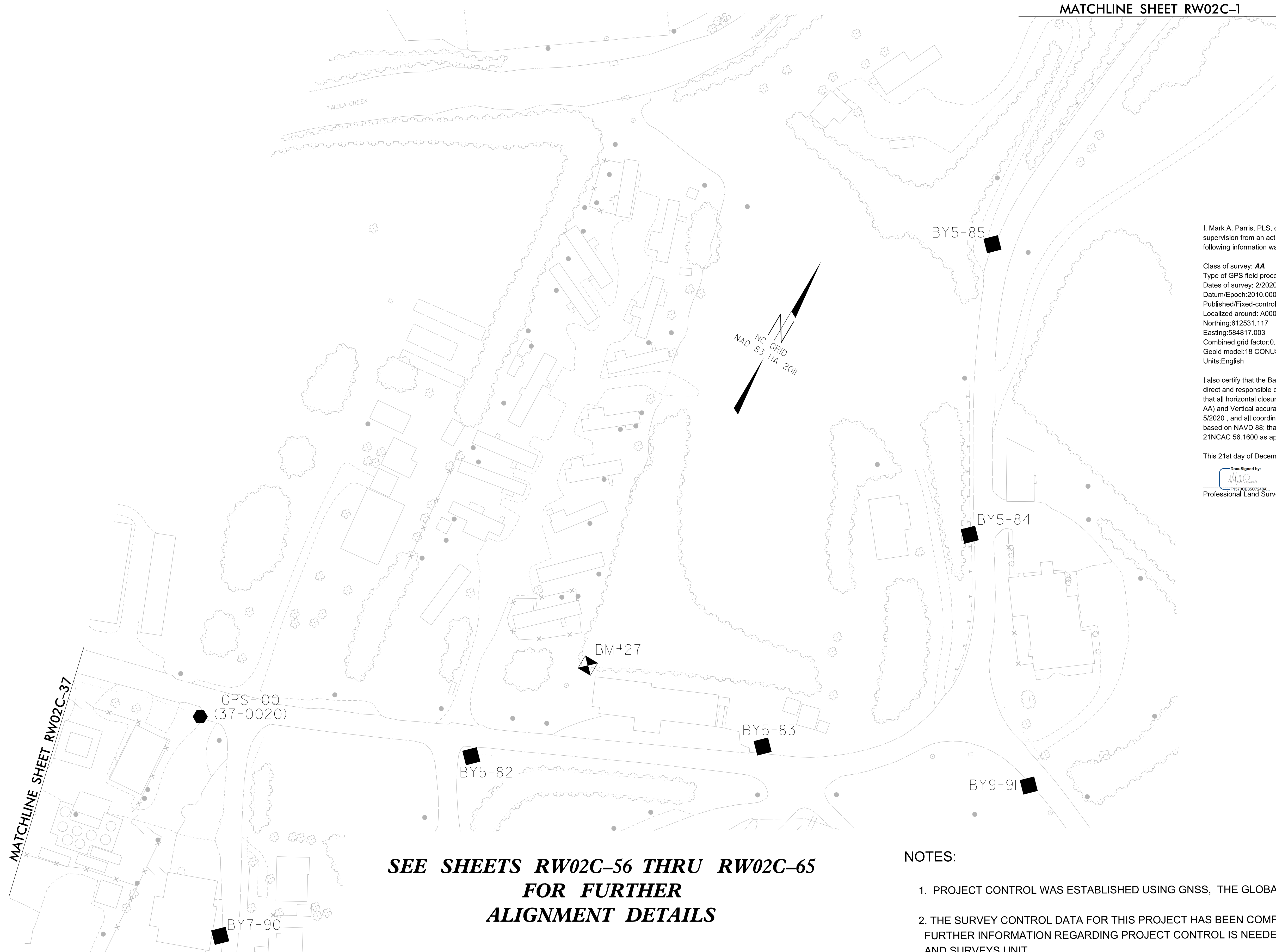
### NOTES:

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# SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009CA	SHEET NO. RW02C-40
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

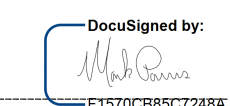


I, Mark A. Parris, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

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

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:  
  
 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.
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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 Jcgordon





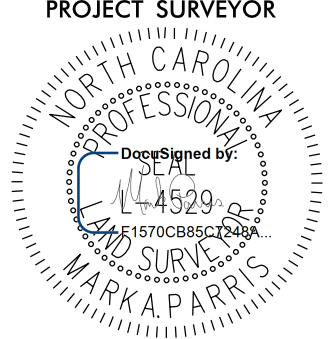






# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009-C	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							

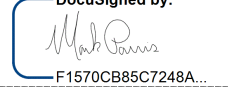
EY6 POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	608201.941	569722.672	S 09°55'00.0" W	210.03					
LINE									
PC	607995.052	569686.502	S 14°59'00.0" W	101.20	10°08'00.0"(RT)	10°00'00.0"	101.33	50.80	572.96
CURVE									
PT	607897.291	569660.337	S 20°03'00.0" W	23.13					
LINE									
POT	607875.565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

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This 21st day of December, 2020.

Documented by:  
  
 F1570CB85C7248A  
 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


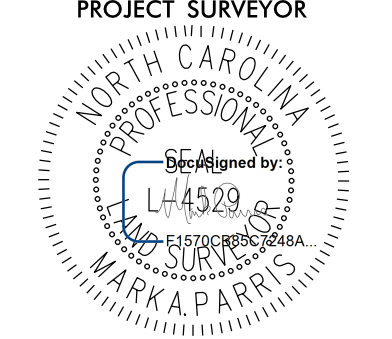
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 jcgordon



# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009-C	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	N 83°12'00.0" E	45.76						
LINE										
PC	617956.093	589770.734	N 63°37'55.9" E	30.70	39°08'08.3"(L T)	125°00'00.2"	31.31	16.29	45.84	
CURVE	617969.729	589798.243	N 29°42'25.9" E	45.83	28°42'51.7"(L T)	62°00'00.1"	46.31	23.65	92.41	
PCC	618009.536	589820.955	N 15°21'00.0" E	240.69						
PT										
LINE	618241.636	589884.668	N 15°46'00.0" E	27.78	00°50'00.0"(RT)	03°00'00.0"	27.78	13.89	1909.86	
PC										
CURVE	618268.369	589892.216	N 16°11'00.0" E	52.62						
PT										
LINE	618318.902	589906.882	N 15°31'30.0" E	43.89	01°19'00.0"(L T)	03°00'00.0"	43.89	21.95	1909.86	
PC										
CURVE	618361.189	589918.629	N 14°52'00.0" E	178.51						
PCC	618533.722	589964.429	N 15°06'00.0" E	46.67	00°28'00.0"(RT)	01°00'00.0"	46.67	23.33	5729.58	
PT										
LINE	618578.777	589976.585	N 15°20'00.0" E	224.24						
PC										
CURVE	618795.031	590035.881	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	N 61°36'11.4" E	87.01	74°15'37.3"(RT)	79°30'00.0"	93.41	54.57	72.07	
CURVE	618886.175	590130.437	S 81°16'00.0" E	50.47						
PT										
LINE	618878.512	590180.324	N 71°12'38.0" E	87.17	55°02'44.0"(L T)	60°45'00.1"	90.61	49.14	94.31	
PC										
CURVE	618906.587	590262.844	N 31°37'08.0" E	79.21	24°08'16.0"(L T)	30°15'00.0"	79.79	40.50	189.41	
PCC	618974.035	590304.369	N 19°33'00.0" E	61.89						
CURVE	619032.355	590325.079	N 50°46'30.0" E	99.01	62°27'00.0"(RT)	60°00'00.0"	104.08	57.89	95.49	
PT										
LINE	619094.964	590401.776	N 82°00'00.0" E	65.49						
PC										
CURVE	619104.078	590466.626	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	N 59°20'34.2" E	80.61	11°42'31.5"(L T)	14°30'00.0"	80.75	40.52	395.14	
CURVE	619166.192	590607.353	N 32°37'09.2" E	129.59	41°44'18.5"(L T)	31°30'00.0"	132.50	69.35	181.89	
PCC	619275.344	590677.210	N 11°45'00.0" E	40.71						
CURVE	619315.198	590685.500	N 26°21'36.5" E	132.89	29°13'13.0"(RT)	21°45'00.0"	134.35	68.67	263.43	
PT										
LINE	619434.275	590744.507	N 44°27'06.5" E	132.55	06°57'47.0"(RT)	05°15'00.0"	132.63	66.40	1091.35	
PC										
CURVE	619528.893	590837.331	N 47°56'00.0" E	98.27						
PT										
LINE	619594.733	590910.283	N 42°19'05.4" E	44.41	11°13'49.3"(L T)	25°15'00.0"	44.48	22.31	226.91	
PC										
CURVE	619627.567	590940.179	N 12°37'05.4" E	72.22	48°10'10.7"(L T)	64°45'00.0"	74.39	39.55	88.49	
PCC	619698.044	590955.956	N 11°28'00.0" W	57.01						
CURVE	619753.914	590944.623	N 26°36'00.0" E	82.16	76°08'00.0"(RT)	86°00'00.0"	88.53	52.18	66.62	
PT										
LINE	619827.375	590981.409	N 64°40'00.0" E	53.21						
PC										
CURVE	619850.141	591029.499	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	N 24°31'39.9" E	47.61	10°00'40.2"(L T)	21°00'00.0"	47.67	23.90	272.84	
CURVE	619984.395	591047.537	N 29°32'00.0" W	65.08						
PT										
LINE	620041.018	591015.458	N 28°29'00.0" E	135.94	116°02'00.0"(RT)	71°30'00.0"	162.28	128.32	80.13	
PC										
CURVE	620160.503	591080.288	N 86°30'00.0" E	55.27						
PT										
LINE	620163.877	591135.457	N 49°18'49.8" E	96.19	74°22'20.4"(L T)	72°00'00.0"	103.29	60.37	79.58	
PC										
CURVE	620226.587	591208.400	N 02°49'49.8" E	60.20	18°35'39.6"(L T)	30°45'00.0"	60.47	30.50	186.33	
PCC	620286.718	591211.373	N 06°28'00.0" W	73.71						
CURVE	620359.956	591203.072	N 13°07'53.8" W	88.67	13°19'47.7"(L T)	15°00'00.0"	88.87	44.63	381.97	
PT										
LINE	620446.303	591182.928	N 34°13'53.8" W	86.56	28°52'12.3"(L T)	33°00'00.0"	87.49	44.69	173.62	
PC										
CURVE	620517.871	591134.233	N 48°40'00.0" W	85.01						
PT										
LINE	620574.015	591070.401								
POT										

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

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This 21st day of December, 2020.  
  
 F197028852748A  
 Professional Land Surveyor L-4529

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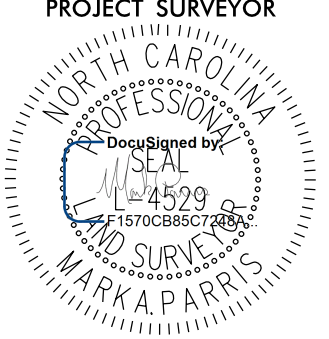
REVISIONS

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 Jcgordon

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. A-0009-C	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											
SPIRAL			S 69°34'18.7" E	295.05						07°28'24.1"(LT)	295.27	197.03	98.58
SC	623743.484	607988.679											
CURVE			N 73°01'05.5" E	1213.90	64°51'16.8"(LT)	05°03'43.1"	1281.21	719.08	1131.89				
CS	624098.026	609149.653											
SPIRAL			N 35°36'29.7" E	295.05						07°28'24.1"(LT)	295.27	197.03	98.58
ST	624098.026	609149.653											

A9R

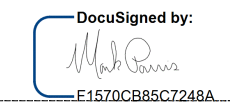
POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	DELTA S	Ls	LT	ST
POT	623847.513	607709.708											
LINE			S 67°04'52.0" E	56.69									
TS	623825.437	607761.922											
SPIRAL			S 69°34'18.7" E	295.05						07°28'24.1"(LT)	295.27	197.03	98.58
SC	623722.454	608038.418											
CURVE			N 73°01'05.5" E	1213.90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

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DocuSigned by:  
  
 Professional Land Surveyor L-4529

**NOTES:**

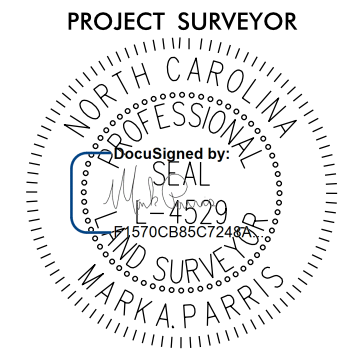
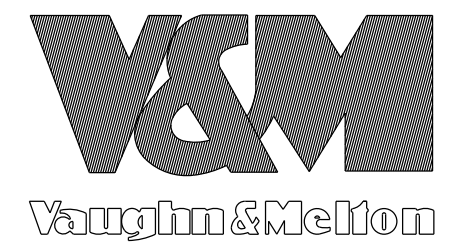
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# PROPOSED ALIGNMENT CONTROL SHEET

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

Location and Surveys



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.  
5/9/2022

This \_\_\_ day of \_\_\_\_, 2021.

DocuSigned by:  
  
E14370C985C7232A  
Professional Land Surveyor L-4529

L			
TYPE	STATION	NORTH	EAST
POT	10+00.00	607501.9780	568100.3657
PC	15+85.36	607802.4900	568602.6980
PT	26+19.98	607895.5813	569599.0205
PC	54+87.20	606904.9023	572289.6616
PT	63+18.65	606969.4923	573092.7678
PC	74+07.92	607504.3827	574041.6704
PT	82+04.49	607645.4587	574810.8669
PC	92+71.62	607485.4469	575865.9307
PT	103+70.49	607911.1774	576814.6373
PC	114+19.01	608790.1409	577386.3163
PT	121+27.59	609212.6369	577938.0895
PC	148+95.48	610064.4265	580571.6646
PT	150+78.55	610122.0900	580745.4117
PC	159+97.57	610418.2144	581615.4161
PT	171+83.07	611114.8048	582550.9210
PC	185+22.66	612206.0160	583327.9329
PT	195+93.35	612782.0029	584201.6985
PC	211+67.41	613115.6913	585739.9855

Y1			
TYPE	STATION	NORTH	EAST
POT	10+00.00	605123.9393	568331.3915
PC	18+15.31	605890.7235	568054.3239
PT	30+09.58	607063.0806	568036.7421
PC	30+68.48	607119.0505	568055.0881
PT	40+75.67	608062.8995	567863.9966

DR1			
TYPE	STATION	NORTH	EAST
POT	10+00.00	611878.5345	582930.8737
PC	10+28.35	611857.2156	582949.5603
PT	10+53.92	611833.4762	582956.7370
PC	11+34.96	611753.1448	582946.0265
PT	11+67.50	611724.7423	582958.3622
POT	11+89.39	611712.0449	582976.1940

Y1A			
TYPE	STATION	NORTH	EAST
POT	10+00.00	606383.4053	567951.1377
PC	11+14.38	606356.6521	568062.3406
PT	13+77.17	606358.0682	568322.5789

DR1A			
TYPE	STATION	NORTH	EAST
POT	10+00.00	611052.9935	582350.1014
PC	11+15.98	610968.7086	582270.4308
PT	11+92.15	610899.6921	582270.7389
POT	12+64.14	610847.8210	582320.6547

Y1B			
TYPE	STATION	NORTH	EAST
POT	10+00.00	606865.4869	567625.4495
PC	10+40.21	606841.6416	567657.8210
PT	11+45.83	606773.5773	567738.4839
PC	13+29.06	606646.4301	567870.4239
PT	13+99.35	606618.6411	567933.4202
POT	14+16.85	606617.5222	567950.8825

DR2			
TYPE	STATION	NORTH	EAST
POT	10+00.00	607838.7813	569612.9410
PC	10+67.46	607781.4622	569648.5093
PT	11+36.37	607738.7030	569700.9442
POT	12+00.00	607716.7181	569760.6543

Y1C			
TYPE	STATION	NORTH	EAST
POT	10+00.00	606952.1180	567788.1199
POT	12+40.07	606797.1718	567971.4953

Y5			
TYPE	STATION	NORTH	EAST
POT	10+00.00	608095.4627	569704.0562
PC	11+00.00	607996.9568	569686.8346
PCC	12+02.84	607897.6602	569660.5492
PT	13+60.33	607822.6726	569535.9031
POT	14+50.00	607835.4626	569447.1469

Y6			
TYPE	STATION	NORTH	EAST
POT	10+00.00	607403.9675	573369.3527
PC	11+93.35	607216.6820	573321.2950
PT	12+69.80	607142.7220	573331.0439
POT	13+03.70	607113.1906	573347.6905

REVISIONS

05-MAY-2022 08:22 V:\NCS\2021\12-21-A-0009CA ROW Staking\Survey\RW and Control Sheets\A-0009CA\0009CA-1s-RW02D-1.dgn  
 jsgordon  
 WKS-5003FY-47

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.

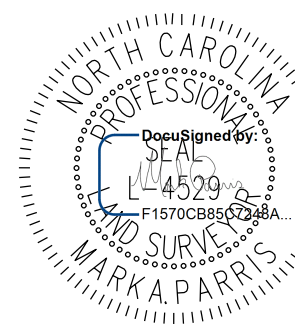


# RIGHT OF WAY CONTROL SHEET

### Location and Surveys



#### PROJECT SURVEYOR



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

#### ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	148+38.00	69.00	609981.0849	580538.2039
L	148+46.00	-52.44	610099.0944	580508.4435
L	148+46.00	-92.00	610136.7336	580496.2697
L	148+67.00	-92.00	610143.1961	580516.2506
L	148+67.00	-52.45	610105.5692	580528.4205
L	149+00.00	68.00	610001.1248	580596.9114
L	150+53.00	55.00	610061.7782	580738.8248
L	151+91.23	-49.54	610205.2969	580836.1118
L	151+95.78	-61.26	610217.8565	580836.6471
L	152+18.96	-49.14	610213.8477	580862.4939
L	152+20.03	-51.70	610216.6205	580862.6893
L	152+39.00	99.00	610080.0693	580929.2018
L	152+39.00	56.00	610120.7759	580915.3465
L	154+19.00	120.00	610118.1885	581106.3682
L	156+61.00	57.34	610255.4791	581315.2725
L	156+61.00	113.00	610202.7918	581333.2057
L	157+27.00	-71.00	610398.2446	581336.3976
L	157+27.00	-41.70	610370.5074	581345.8386
L	157+47.00	-71.00	610404.6890	581355.3309
L	157+47.00	-41.41	610376.6746	581364.8662
L	160+19.00	-40.39	610463.3190	581622.2176
L	160+19.00	-84.00	610504.4428	581607.7007
L	160+55.00	-84.00	610516.2031	581640.0364
L	160+55.00	-40.79	610475.7348	581655.1902
L	162+76.00	90.00	610446.8338	581912.6199
L	162+76.00	57.19	610476.0171	581897.6260
L	162+82.00	-90.00	610609.5585	581835.4409
L	162+82.00	-42.87	610567.7050	581857.1118
L	163+27.00	-84.00	610624.4571	581876.1563
L	163+27.00	-43.28	610588.7504	581895.7304
L	163+36.00	90.00	610476.4300	581968.0534
L	163+36.00	56.64	610505.6048	581951.8798
L	167+02.00	-90.00	610831.1430	582167.6061
L	167+02.00	-46.62	610797.9276	582195.5163
L	167+50.00	-90.00	610860.9986	582202.2389
L	167+50.00	-47.03	610828.8068	582230.7069
L	171+24.00	-72.00	611110.7901	582458.5895
L	171+31.00	84.00	611022.2250	582587.2031
L	171+31.00	50.17	611042.5940	582560.1958
L	171+37.00	-49.82	611107.4745	582483.8733
L	171+44.00	-84.00	611133.3309	582460.5218
L	171+70.00	-49.51	611133.1728	582503.1732
L	173+25.00	66.00	611192.1336	582687.0065
L	173+78.00	52.59	611243.0852	582706.8248
L	177+27.00	-84.00	611606.6041	582797.9939
L	177+45.00	-45.56	611598.9725	582839.7439
L	177+64.00	-101.00	611646.6045	582805.6073
L	177+89.00	-45.34	611634.6859	582865.4460
L	183+15.00	-42.70	612061.6239	583172.7031
L	183+20.00	-76.00	612085.0148	583148.4738
L	183+36.00	-42.59	612078.6690	583184.9700
L	183+40.00	-76.00	612101.3066	583160.0745
L	186+64.00	73.50	612268.7182	583470.8321
L	186+64.00	54.75	612281.0280	583456.6904
L	187+22.00	-83.00	612416.9048	583393.9633
L	187+25.00	-49.46	612396.1475	583420.4883
L	187+42.00	-84.00	612432.8814	583407.8606
L	187+45.00	-50.86	612412.0393	583433.8131
L	192+16.00	49.00	612611.5920	583869.7838
L	192+16.00	73.50	612589.7915	583880.9636
L	194+06.00	-55.61	612782.9564	584002.9861
L	194+34.00	96.00	612648.7216	584078.6560
L	194+34.00	65.89	612677.2735	584069.0829
L	194+58.00	-99.00	612841.5550	584041.0414
L	194+71.00	121.00	612635.3877	584118.8907
L	194+91.00	128.00	612633.9295	584138.4131
L	195+18.00	-50.63	612812.9768	584115.2212
L	196+12.29	70.14	612717.4677	584235.0793
L	196+13.00	92.00	612696.2596	584240.4053
L	203+49.00	-70.00	613010.6035	584925.3344
L	203+49.00	-50.11	612991.1680	584929.5504
L	203+70.00	-70.00	613015.0553	584945.8571
L	203+70.00	-50.12	612995.6268	584950.0716

#### ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y1	18+57.00	-50.06	605914.1801	567993.1507
Y1	18+75.00	-65.00	605927.1406	567973.1423
Y1	19+16.00	48.75	606000.3103	568069.4773
Y1	19+50.00	-52.09	606005.0048	567963.1546
Y1	19+52.00	100.00	606047.6715	568109.1505
Y1	19+83.00	46.96	606062.6434	568050.2221
Y1	20+07.00	85.00	606094.3583	568081.4529
Y1	21+49.00	56.00	606222.2411	568025.8520
Y1	21+49.00	43.50	606220.2328	568013.5137
Y1	21+67.00	56.00	606239.4683	568023.1363
Y1	21+67.00	43.22	606237.5412	568010.5013
Y1	26+42.00	-75.00	606712.9809	567884.0589
Y1	26+43.00	-57.34	606712.0225	567901.7282
Y1	26+50.00	-131.61	606727.8664	567828.7918
Y1	26+52.00	-126.00	606729.3370	567834.6126

REVISIONS

07 MAY 2022 13:34 V:\NC\S\2021\11-21-A-0009CA ROW Staking\Survey\RW and Control Sheets\A-0009CA\0009CA\_1s\_RW03E-2.dgn

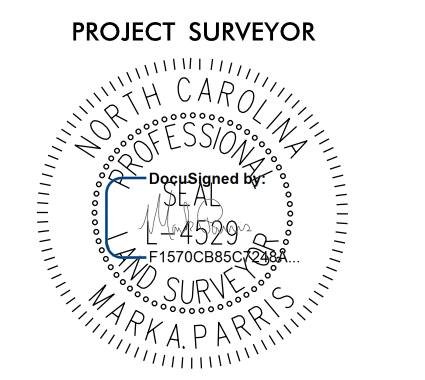
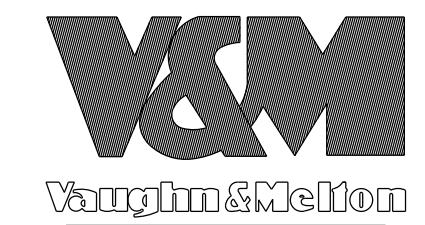
I, Mark A. Parris, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). Field work was performed from 7/26/21 to 8/27/21, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 1st day of Sept., 2021.  
  
Professional Land Surveyor L-4529

#### 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 7/26/21 TO 8/27/21 .

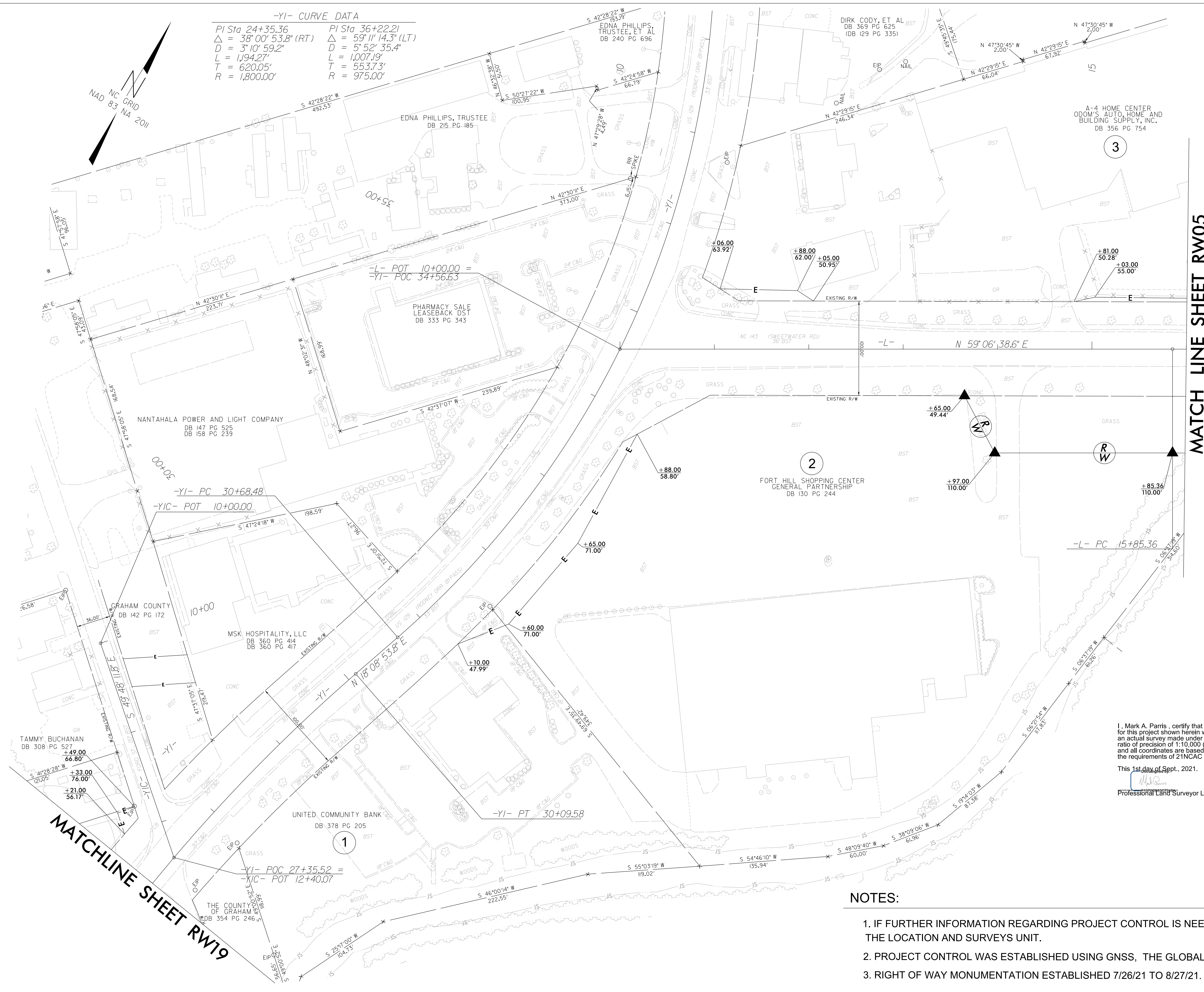
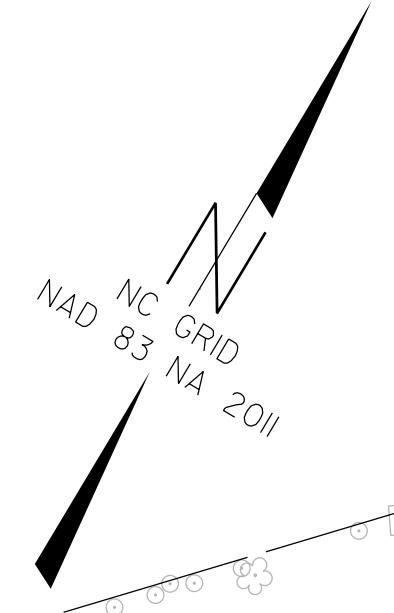
Location and Surveys



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-YI- CURVE DATA

PI Sta 24+35.36	PI Sta 36+22.21
$\Delta = 38^{\circ}00'53.8"$ (RT)	$\Delta = 59^{\circ}11'14.3"$ (LT)
D = 3' 10" 59.2"	D = 5' 52" 35.4"
L = 1,194.27'	L = 1,007.19'
T = 620.05'	T = 553.73'
R = 1,800.00'	R = 975.00'



MATCH LINE SHEET RW05

MATCHLINE SHEET RW19

REVISIONS


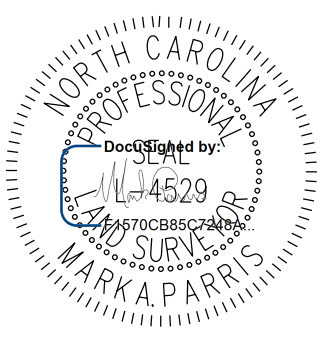
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 V:\NC\552\112-21-A-0009CA ROW Staking\Survey\RW and Control Sheets\A-0009CA\0009CA-1s-RW04.dgn  
 Jlgordon

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 7/28/21 to 8/27/21, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 1st day of Sept., 2021.  
  
 Professional Land Surveyor L-4529

NOTES:

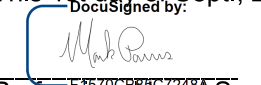
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 7/26/21 TO 8/27/21.

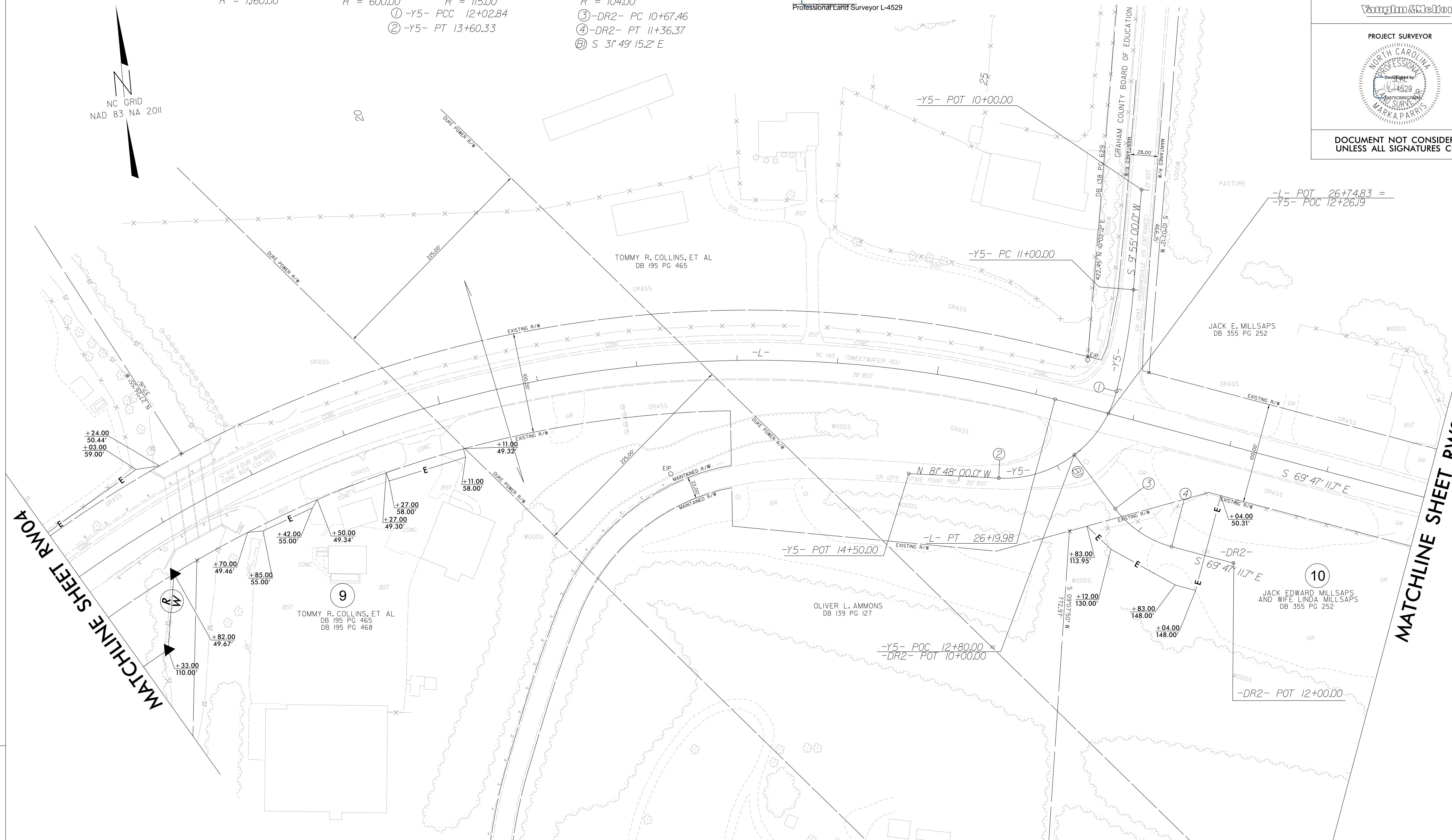
PROJECT REFERENCE NO.	SHEET NO.
A-0009CA	RW05
<b>Location and Surveys</b>	
	
PROJECT SURVEYOR	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

<b>-L- CURVE DATA</b>	<b>-Y5- CURVE DATA</b>	<b>-DR2- CURVE DATA</b>
PI Sta 21+39.93	PI Sta 11+51.55	PI Sta 12+96.74
$\Delta = 51^{\circ}06'09.7''$ (RT)	$\Delta = 9^{\circ}49'14.7''$ (RT)	$\Delta = 78^{\circ}27'45.3''$ (RT)
D = 4'56'21.4"	D = 9'32'57.5"	D = 49'49'20.7"
L = 1,034.62'	L = 102.84'	L = 157.48'
T = 554.57'	T = 51.55'	T = 93.90'
R = 1,160.00'	R = 600.00'	R = 115.00'
	① -Y5- PCC 12+02.84	③ -DR2- PC 10+67.46
	② -Y5- PT 13+60.33	④ -DR2- PT 11+36.37
		⑤ S 31°49'15.2" E

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 7/26/21 to 8/27/21, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 1st day of Sept., 2021.

  
Professional Land Surveyor L-4529



REVISIONS

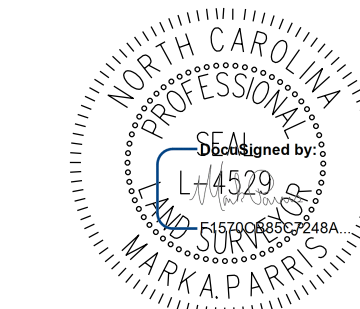
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 Jlgordon  
 11/21/21

- 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 7/26/21 TO 8/27/21.

### Location and Surveys



PROJECT SURVEYOR

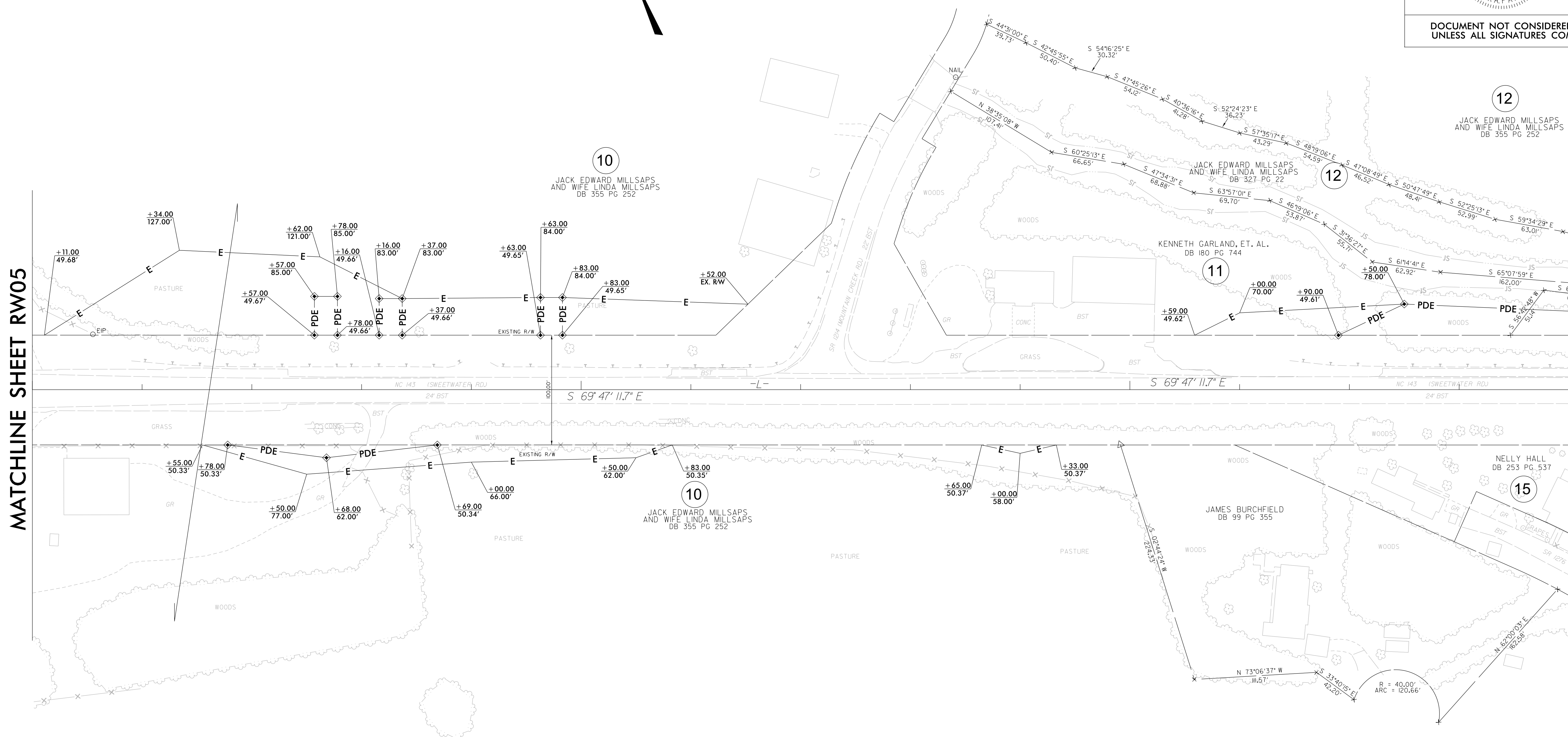


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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 7/26/21 to 8/27/21, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 1st day of Sept., 2021.

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



REVISIONS

7 MAY 2022 10:43  
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 jsgordon  
 11/21/21

### 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 7/26/21 TO 8/27/21.

Location and Surveys



PROJECT SURVEYOR

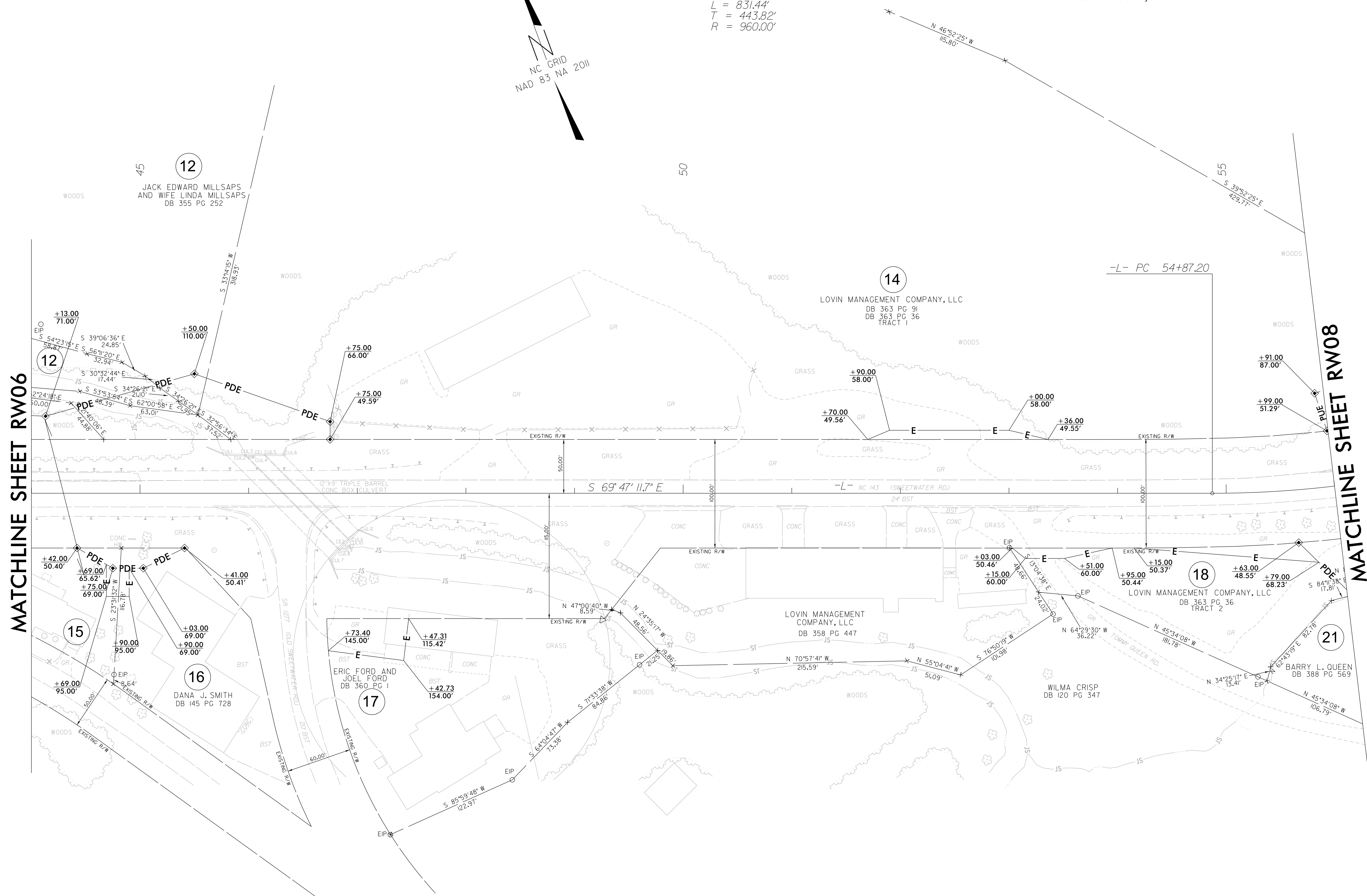


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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 7/26/21 to 8/27/21, and all coordinates are based on NAD83/2011. That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This is a true and correct copy of the original survey as shown on Sept. 21, 2021.  
Professional Land Surveyor L-4529

-L- CURVE DATA  
PI Sta 59+31.02  
 $\Delta = 49^{\circ} 37' 23.2''$  (LT)  
 $D = 5' 58'' 05.9''$   
 $L = 831.44'$   
 $T = 443.82'$   
 $R = 960.00'$



REVISIONS

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 7/26/21 TO 8/27/21.

7 MAY 2022 10:43 AM  
C:\Users\jgordon\OneDrive\Documents\Projects\A-0009CA\A-0009CA-RW07.dgn  
jgordon

-L- CURVE DATA

PI Sta 59+31.02  
Δ = 49° 37' 23.2" (LT)  
D = 5° 58' 05.9"  
L = 831.44'  
T = 443.82'  
R = 960.00'

-Y6- CURVE DATA

PI Sta 12+33.55  
Δ = 43° 48' 04.8" (LT)  
D = 57° 17' 44.8"  
L = 76.45'  
T = 40.20'  
R = 100.00'  
① -Y6- PC 11+93.35  
② -Y6- PT 12+69.80  
③ S 29° 24' 34.8" E

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 7/26/21 to 8/27/21, and all coordinates are based on NAD83/2011; That this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

This 1st day of Sept., 2021.

Professional Land Surveyor L-4529

PROJECT REFERENCE NO. SHEET NO.

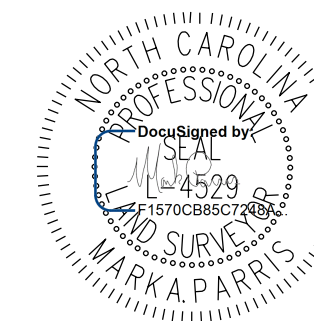
A-0009CA

RW08

**Location and Surveys**

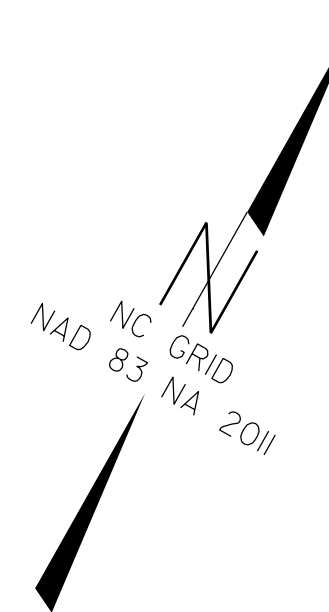
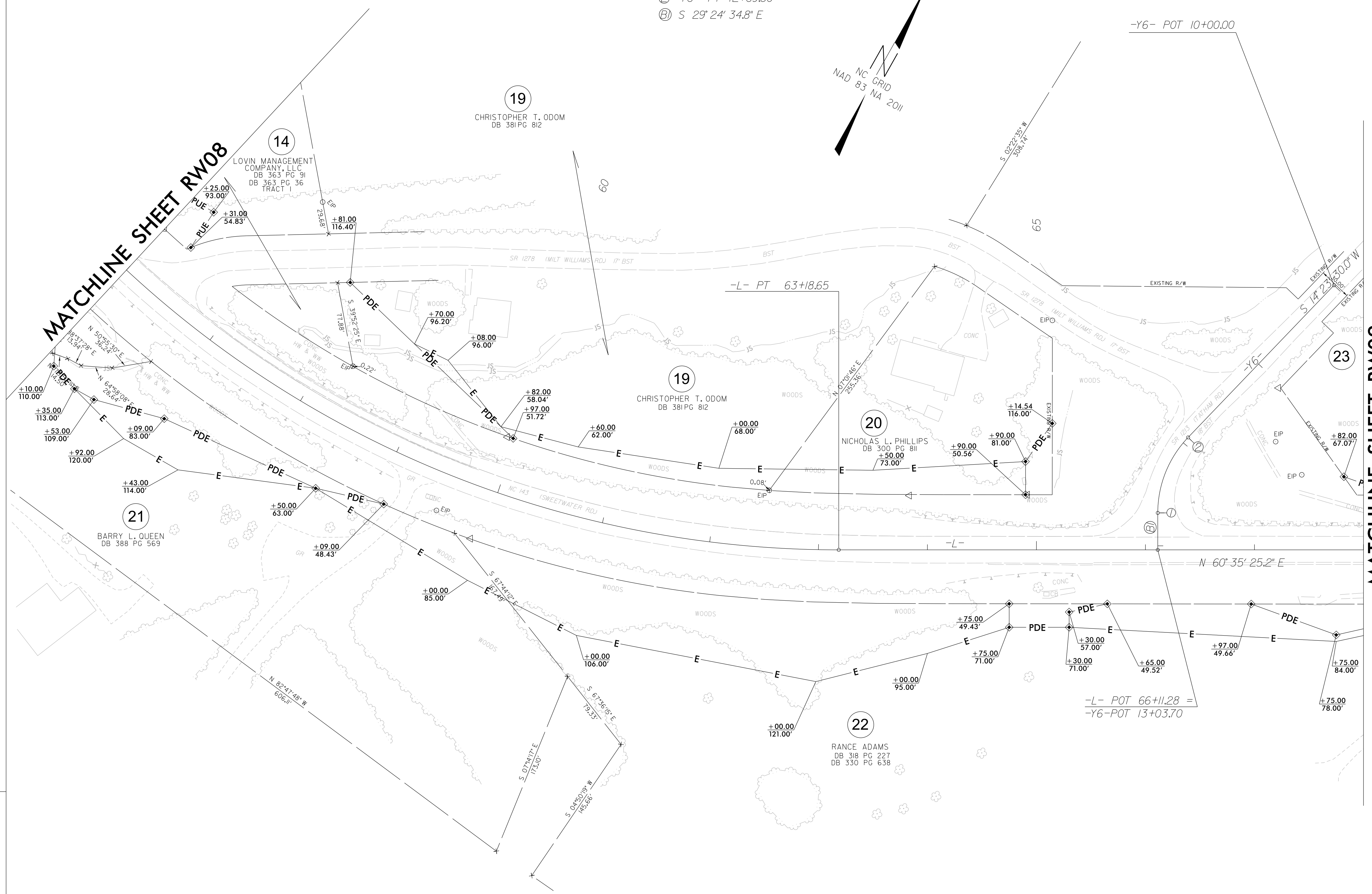


PROJECT SURVEYOR



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS



**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 7/26/21 TO 8/27/21.