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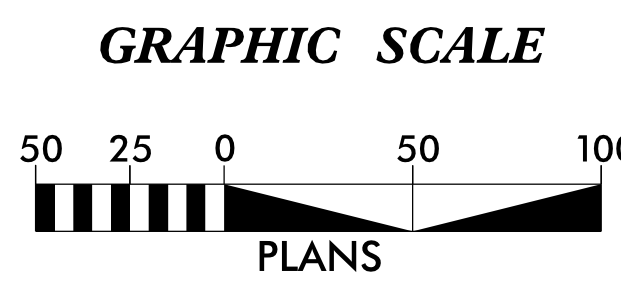
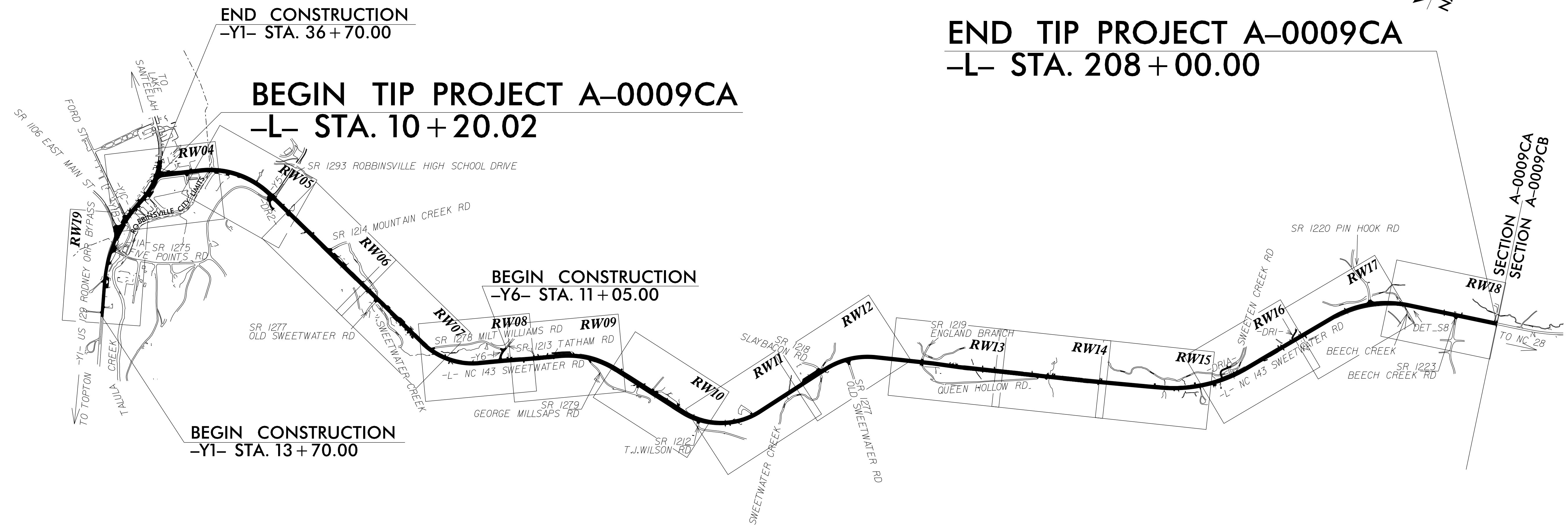
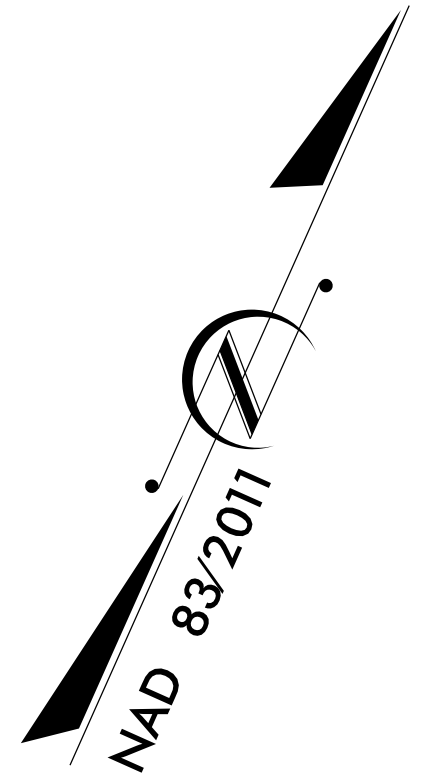
09/06/99

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:

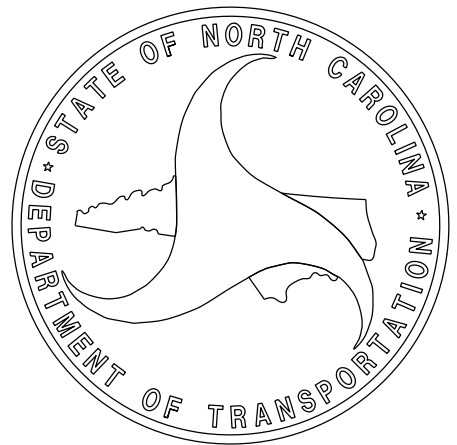
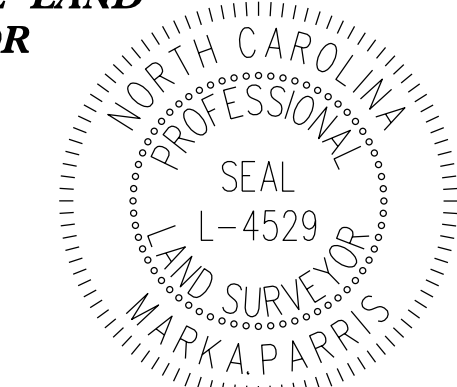
**V&M**  
**Vaughn & Melton**  
 1318-F Patton Avenue  
 Asheville, NC 28806  
 Firm License # F-1088

2018 STANDARD SPECIFICATIONS

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

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

PROFESSIONAL LAND SURVEYOR




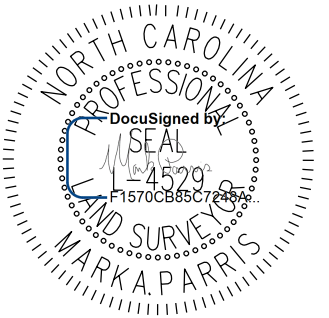
DocuSigned by:  
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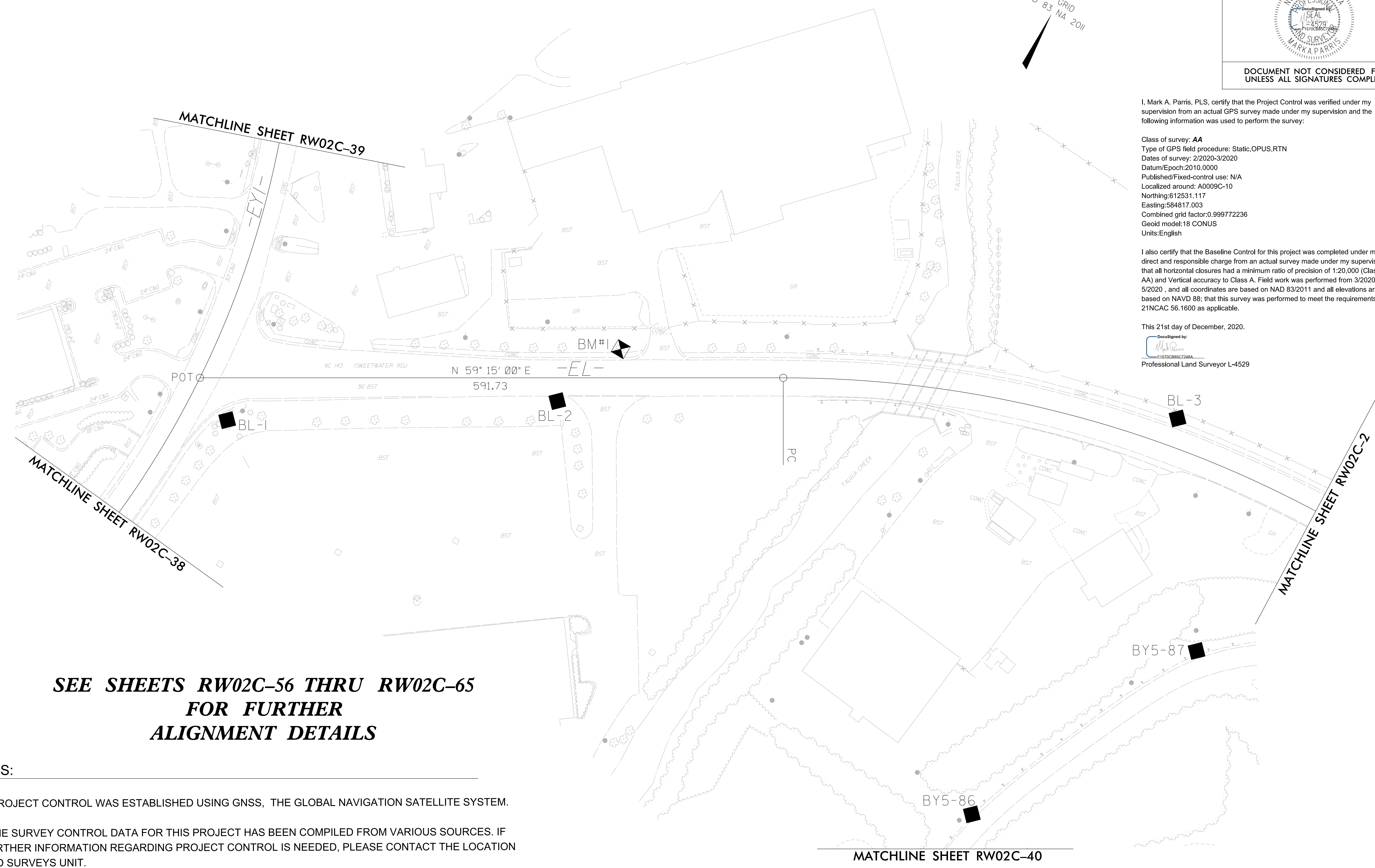
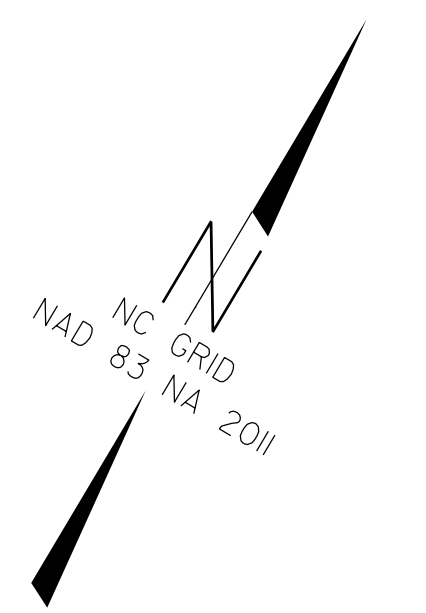
Date:

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

# SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

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

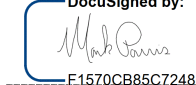


I, Mark A. Parris, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

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:**


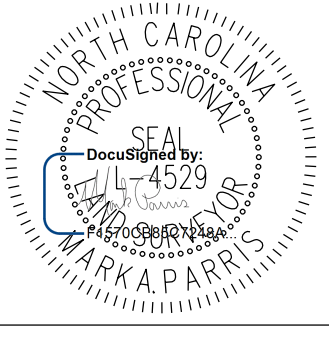
1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

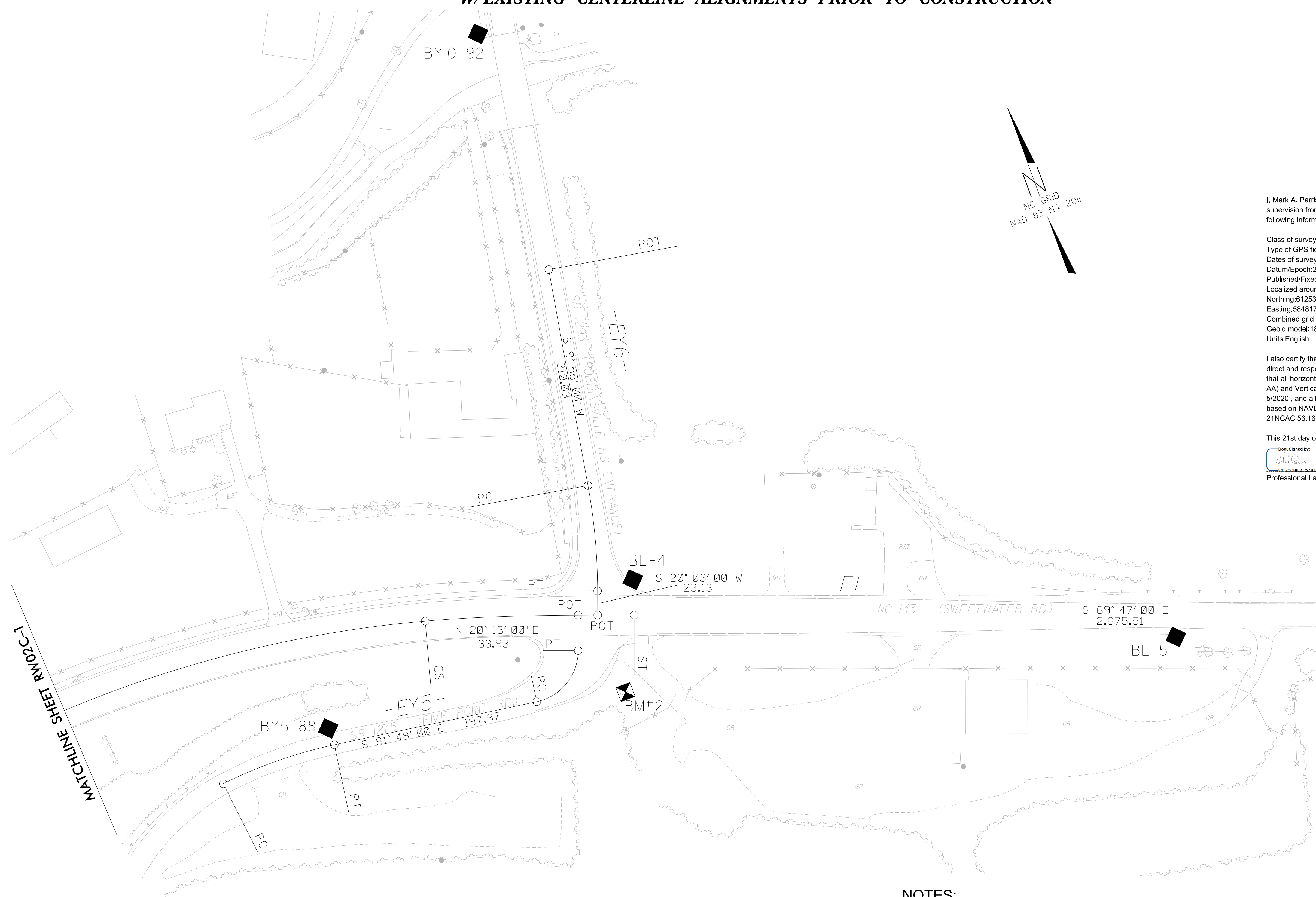
REVISIONS

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 Jcgordon

# SURVEY CONTROL SHEET

## W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

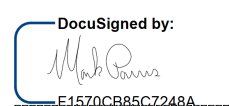
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|---|----------------------|
| PROJECT REFERENCE NO.<br>A-0009CA   | SHEET NO.<br>RW02C-2 |
| <b>Location and Surveys</b>   |                      |
|                      |                      |
| PROJECT SURVEYOR<br> |                      |
| <b>DOCUMENT NOT CONSIDERED FINAL<br/>UNLESS ALL SIGNATURES COMPLETED</b>                                |                      |



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.  
 Documented by:  
  
 Professional Land Surveyor L-4529

REVISIONS

I6-AUG-2021 10:50  
 V:\NC\Survey\202112-21\A-0009CA ROW Stationing\Survey\RW and Control Sheets\A-0009CA\A0009CA\_1s-RW02C-2.dgn  
 jcgordon

MATCHLINE SHEET RW02C-1

MATCHLINE SHEET RW02C-3

**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:

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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


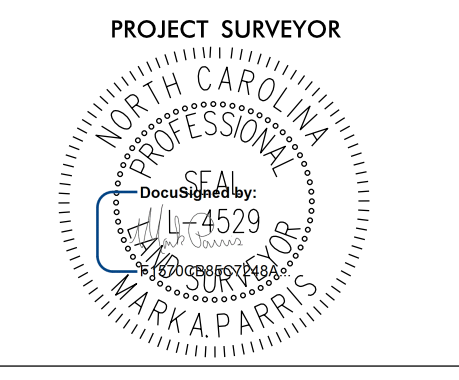
I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed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

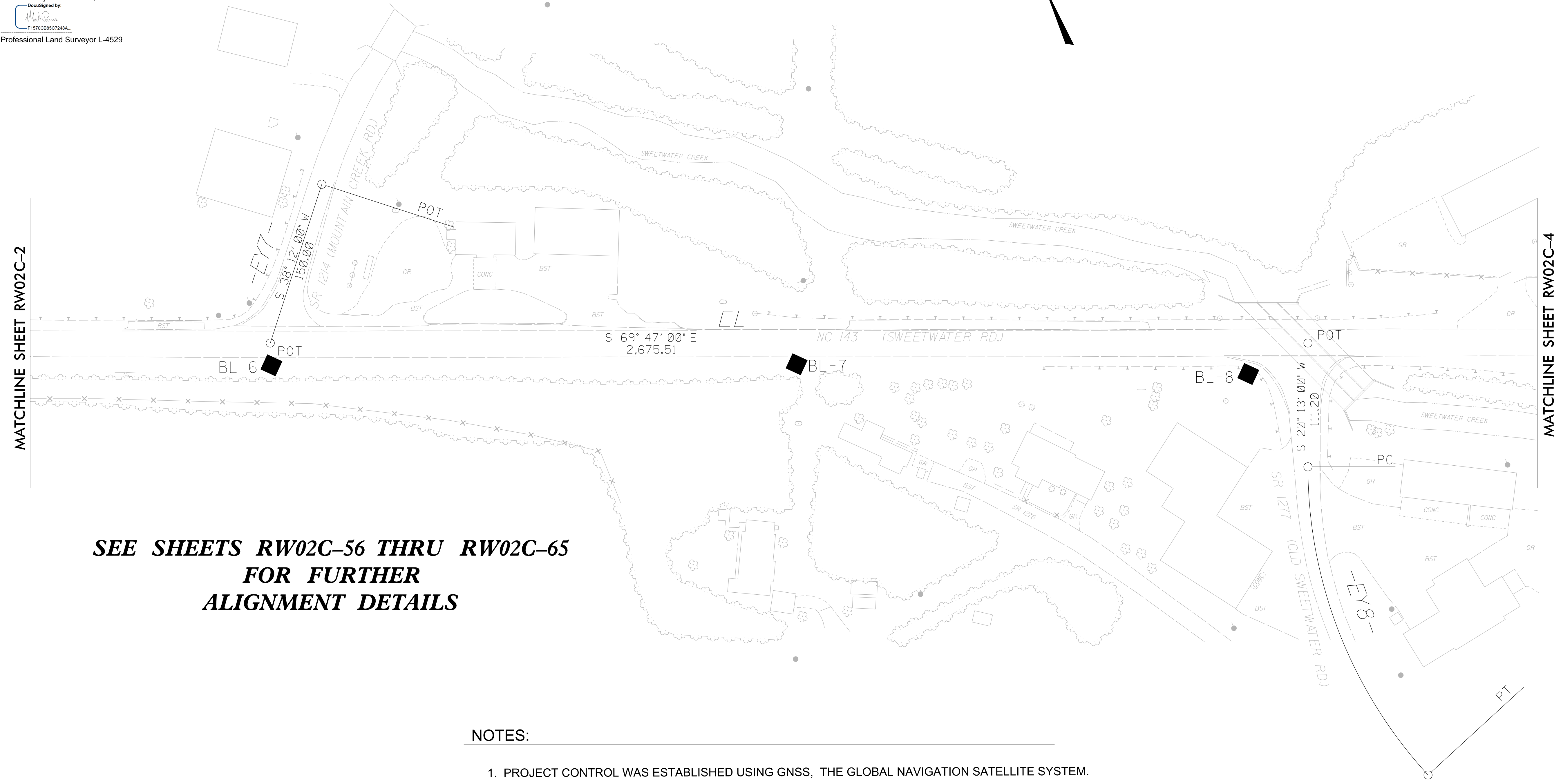
This 21st day of December, 2020.

DocuSigned by:  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

|   |                      |
|---|----------------------|
| PROJECT REFERENCE NO.<br>A-0009CA   | SHEET NO.<br>RW02C-3 |
| Location and Surveys  |                      |
|  |                      |
|  |                      |
| DOCUMENT NOT CONSIDERED FINAL<br>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

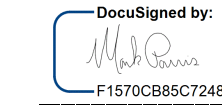
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JKGordon

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.


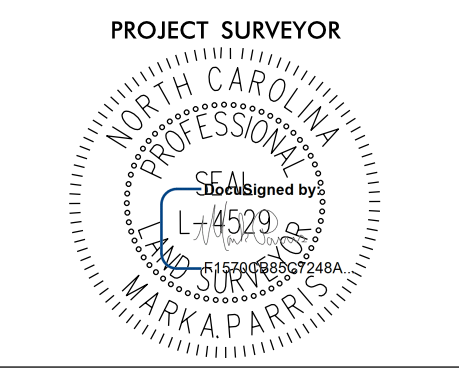
This 21st day of December, 2020.

Decided by:  


Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

|   |                      |
|---|----------------------|
| PROJECT REFERENCE NO.<br>A-0009CA   | SHEET NO.<br>RW02C-4 |
| <b>Location and Surveys</b>   |                      |
|                      |                      |
| PROJECT SURVEYOR<br> |                      |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED  |                      |



**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

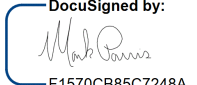
6/2/19

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:

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


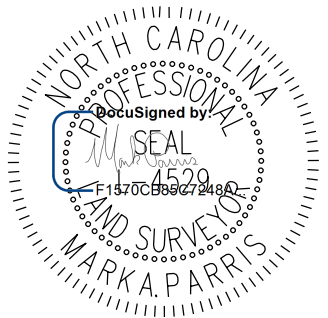
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This 21st day of December, 2020.

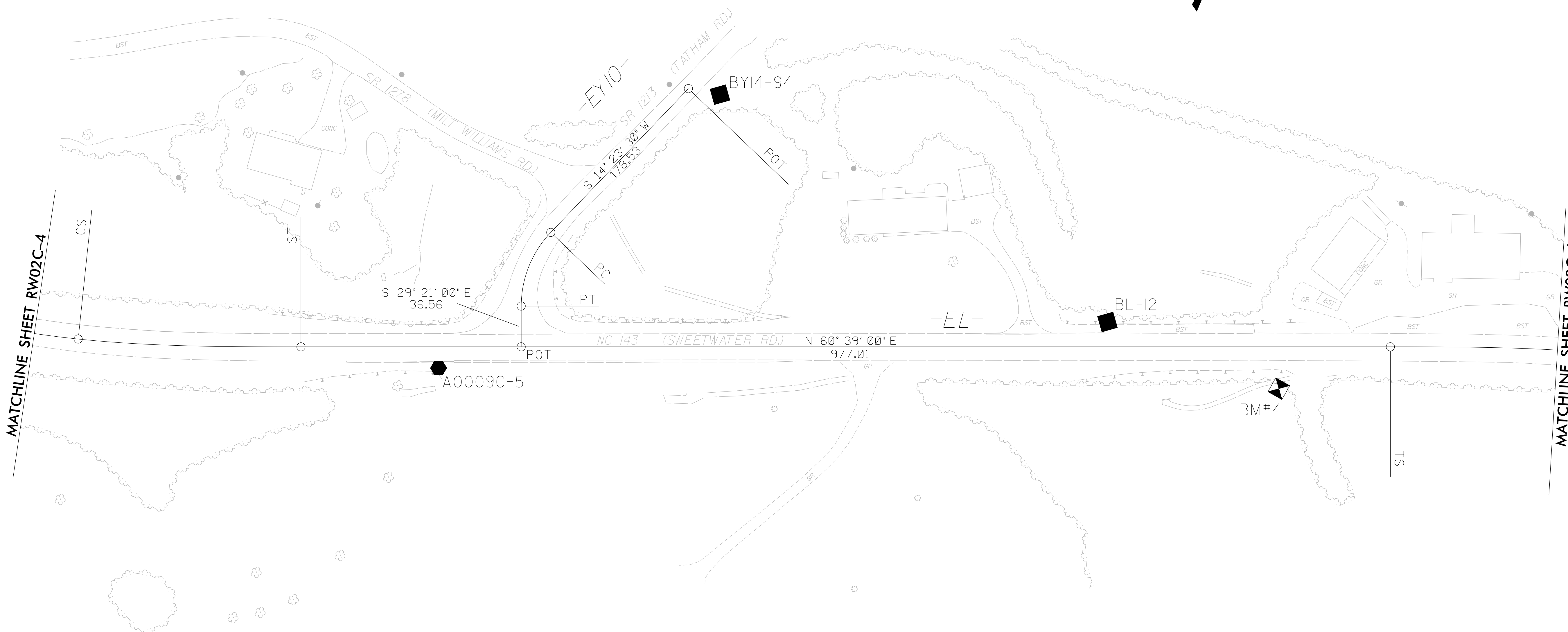
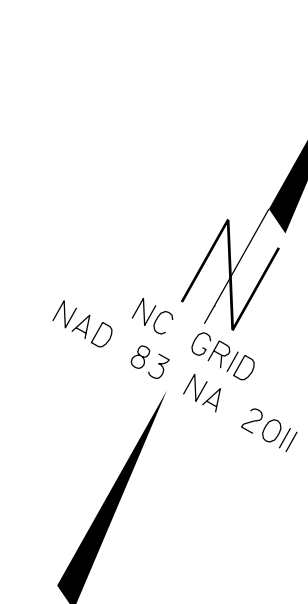
DocuSigned by:  
  
F1579C88C7248A  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

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

A0009C-6



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

### NOTES:


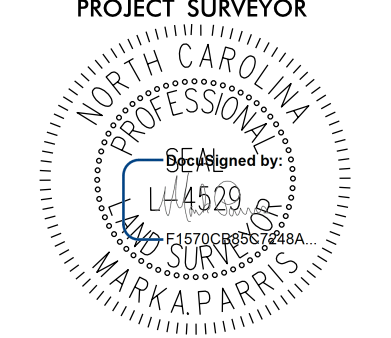
1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

I6-AUG-2021 10:55  
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jcgordon

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

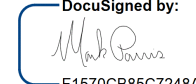
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| PROJECT REFERENCE NO.<br>A-0009CA   | SHEET NO.<br>RW02C-6 |
| <b>Location and Surveys</b>   |                      |
|  |                      |
| PROJECT SURVEYOR  |                      |
|  |                      |
| DOCUMENT NOT CONSIDERED FINAL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

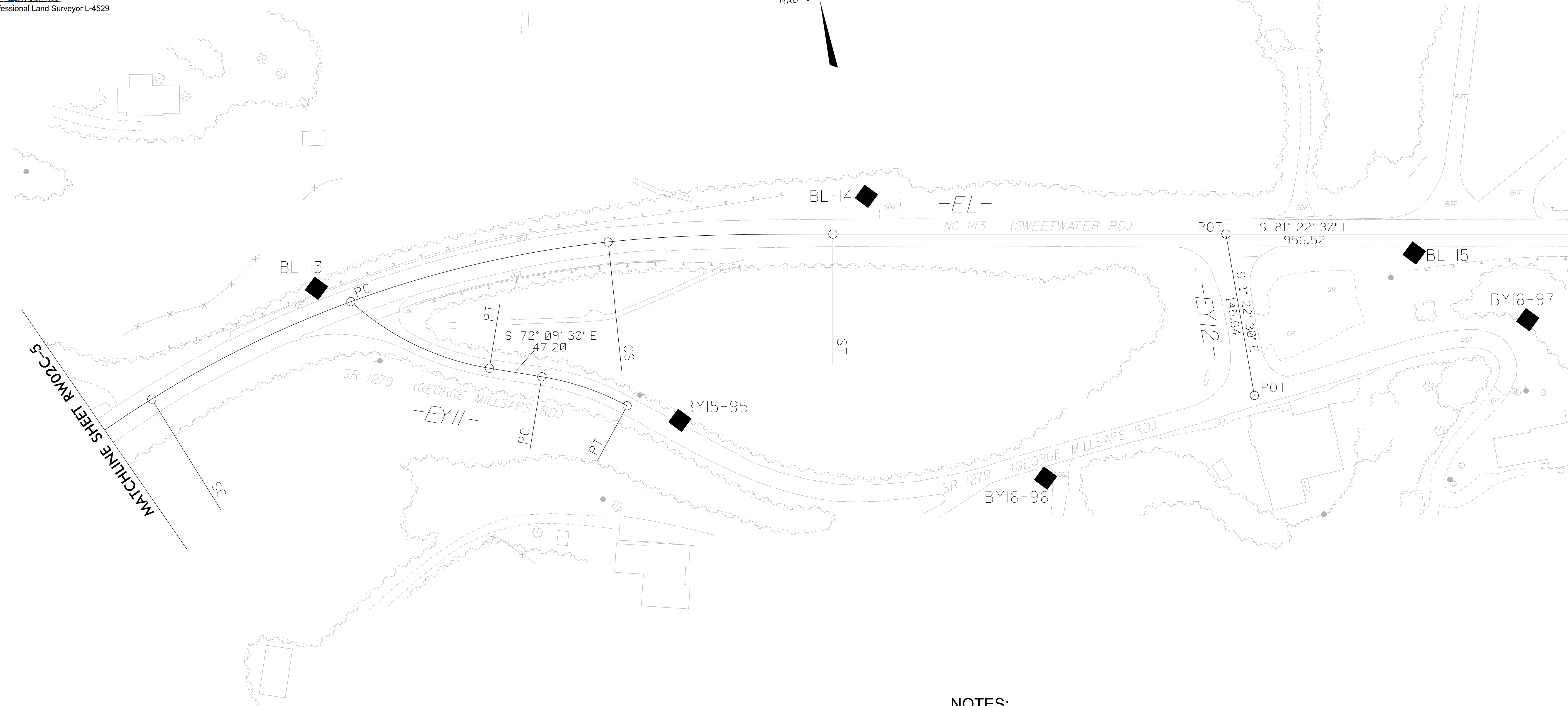
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Class of survey: **AA**  
 Type of GPS field procedure: Static, OPUS, RTN  
 Dates of survey: 2/2020-3/2020  
 Datum/Epoch: 2010.0000  
 Published/Fixed-control use: N/A  
 Localized around: A0009C-10  
 Northing: 612531.117  
 Easting: 584817.003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

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



REVISIONS

I6-AUG-2021 10:56  
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 WKS-1903PY-37  
 Jcgordon

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


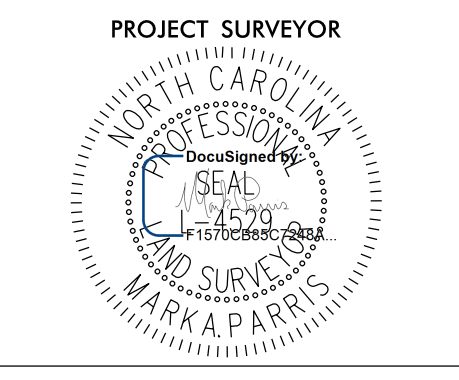
**NOTES:**

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

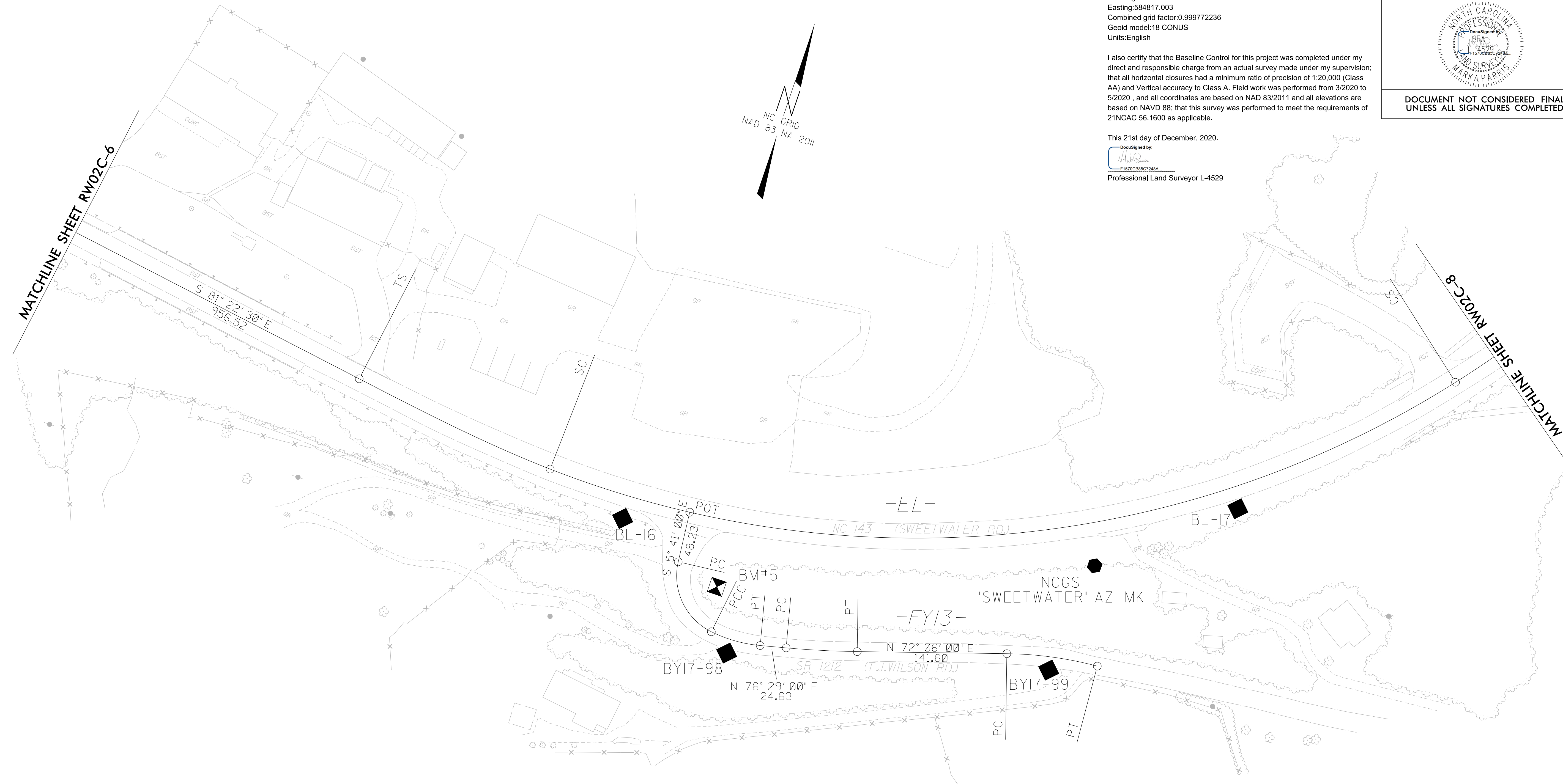
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|---|----------------------|
| PROJECT REFERENCE NO.<br>A-0009CA   | SHEET NO.<br>RW02C-7 |
| <b>Location and Surveys</b>   |                      |
|                      |                      |
| PROJECT SURVEYOR<br> |                      |
| DOCUMENT NOT CONSIDERED FINAL<br>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:

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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:  
  
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


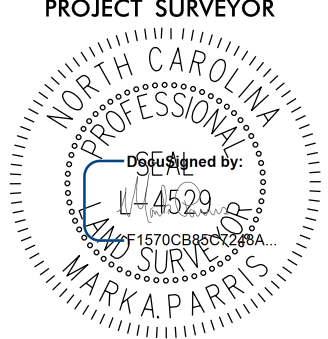
I, Mark A. Parris, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

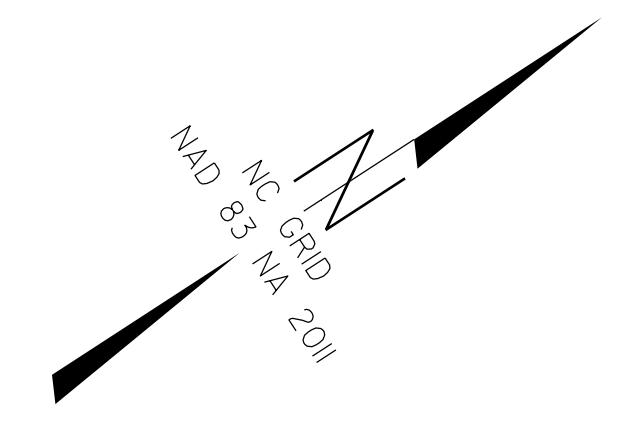
Class of survey: AA  
Type of GPS field procedure: Static, OPUS, RTN  
Dates of survey: 2/2020-3/2020  
Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
Northing: 612531.117  
Easting: 584817.003  
Combined grid factor: 0.999772236  
Geoid model: 18 CONUS  
Units: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

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This 21st day of December, 2020.

DocuSigned by:  
  
Professional Land Surveyor L-4529

|   |                      |
|---|----------------------|
| PROJECT REFERENCE NO.<br>A-0009CA   | SHEET NO.<br>RW02C-8 |
| <b>Location and Surveys</b>   |                      |
|                      |                      |
| PROJECT SURVEYOR<br> |                      |
| DOCUMENT NOT CONSIDERED FINAL<br>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 Stationing\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:

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:  
MJC  
F1570C885C7248A

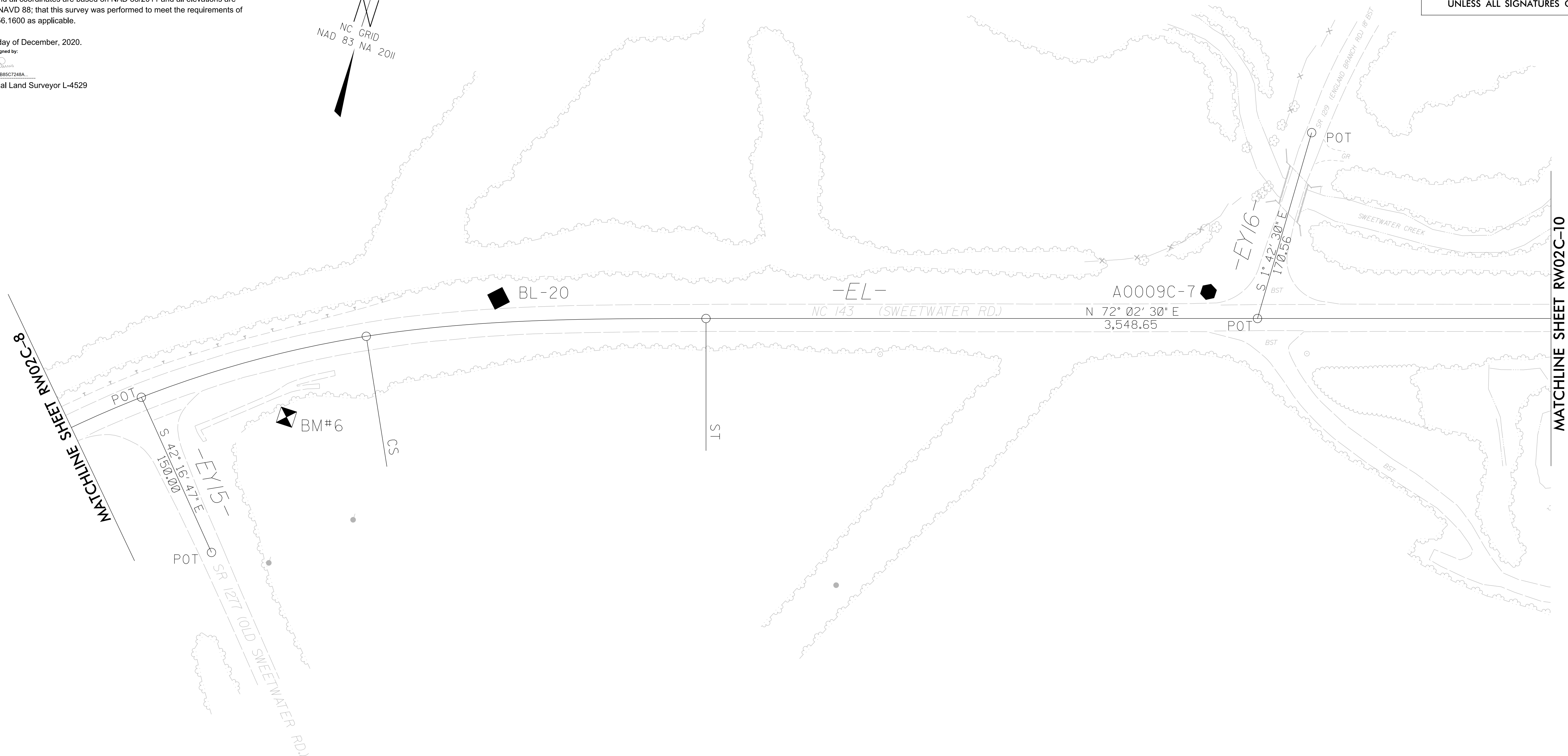
Professional Land Surveyor L-4529



# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

|  |                      |
|--|----------------------|
| PROJECT REFERENCE NO.<br>A-0009CA                                | SHEET NO.<br>RW02C-9 |
| <b>Location and Surveys</b>                                      |                      |
|  |                      |
| PROJECT SURVEYOR   |                      |
|  |                      |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED |                      |



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

### NOTES:

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6/2/19

I6-AUG-2021 10:02 V:\NC\Survey\02112-21-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:

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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

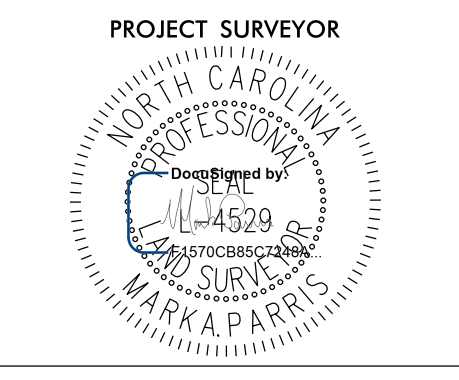
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This 21st day of December, 2020.

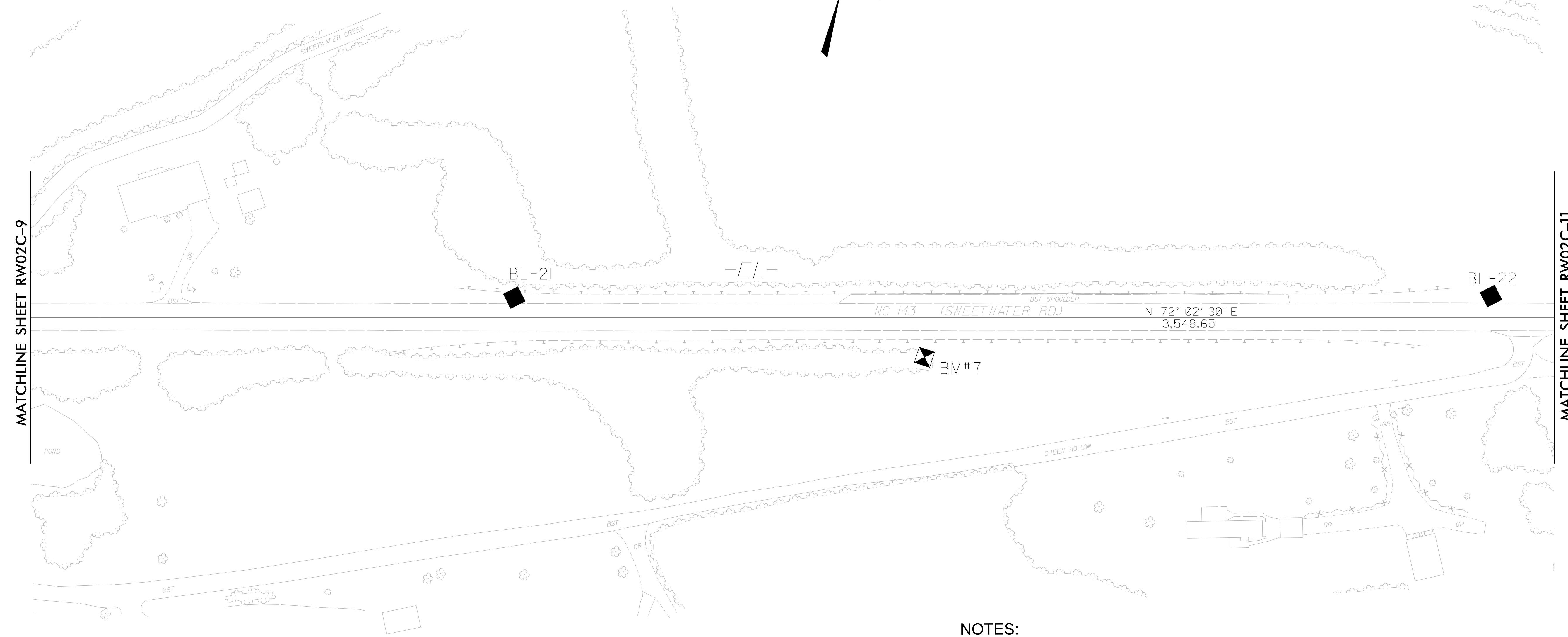
DocuSigned by:  
  
F1570C85C7248A  
Professional Land Surveyor L-4529

PROJECT REFERENCE NO. SHEET NO.  
A-0009CA RW02C-10

Location and Surveys



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



MATCHLINE SHEET RW02C-9

MATCHLINE SHEET RW02C-11

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

### NOTES:

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REVISIONS

# SURVEY CONTROL SHEET

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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.

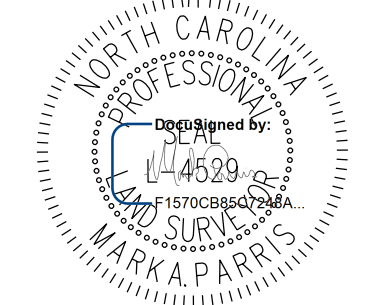
DocuSigned by:  
*Mark A. Parris*  
E1570C85C7248A  
Professional Land Surveyor L-4529

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

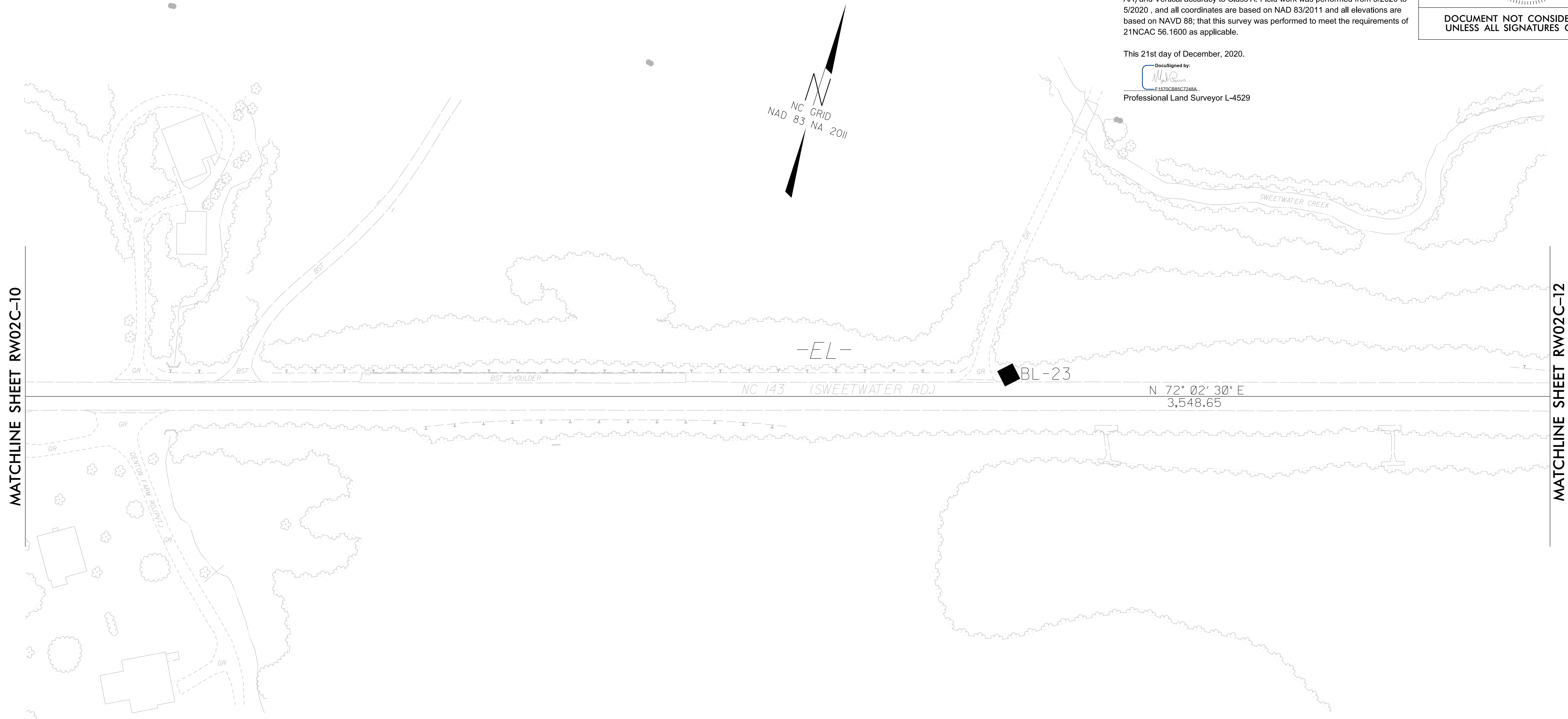
Location and Surveys



PROJECT SURVEYOR



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



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

**NOTES:**

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REVISIONS

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JKS-1503PY-37  
Jcgordon

# SURVEY CONTROL SHEET

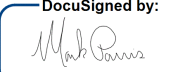
## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION


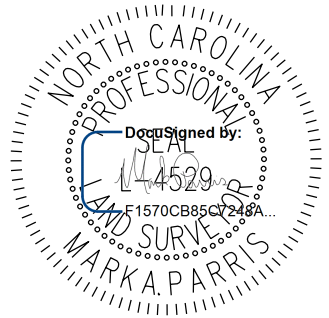
I, Mark A. Parris, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

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.<br>A-0009CA   | SHEET NO.<br>RW02C-12 |
| <b>Location and Surveys</b>   |                       |
|                      |                       |
| PROJECT SURVEYOR<br> |                       |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED  |                       |



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

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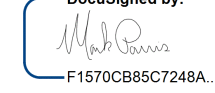
6/2/19

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:

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

# SURVEY CONTROL SHEET

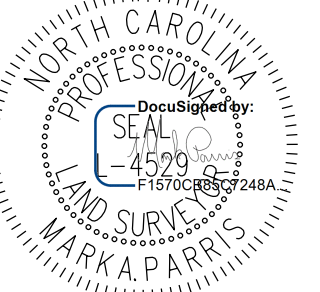
## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

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

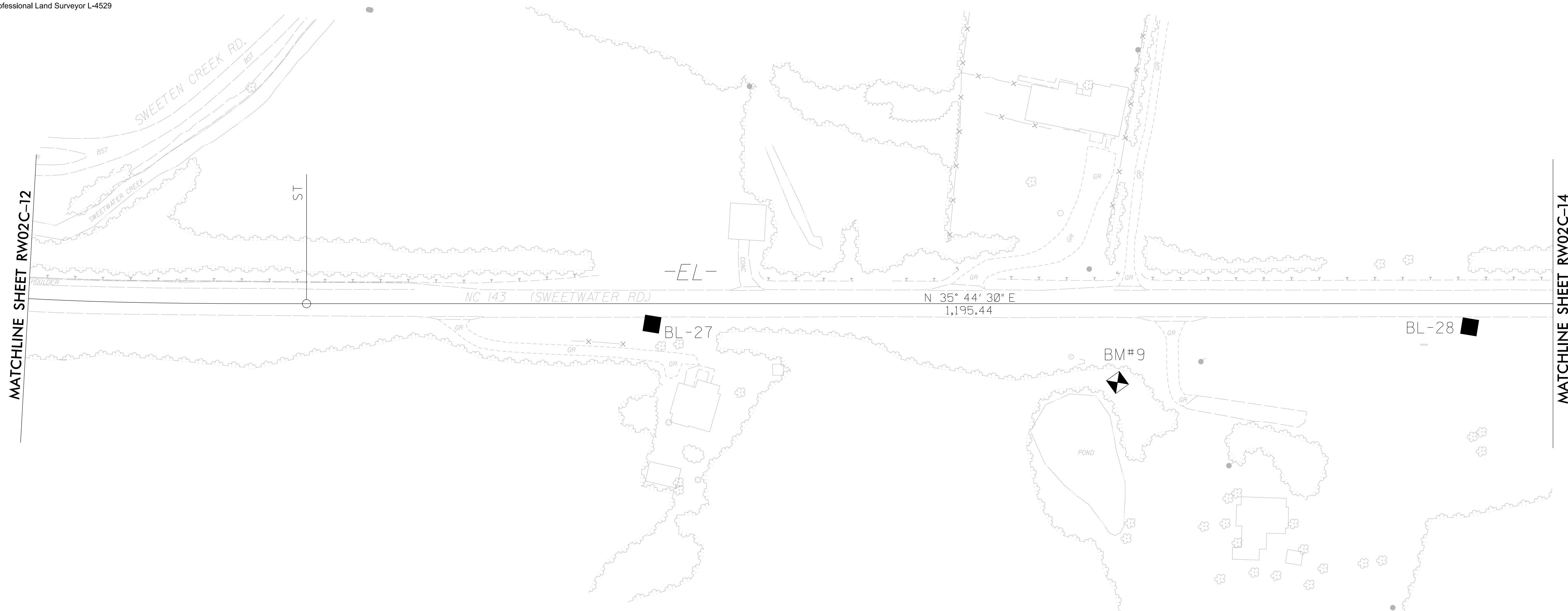
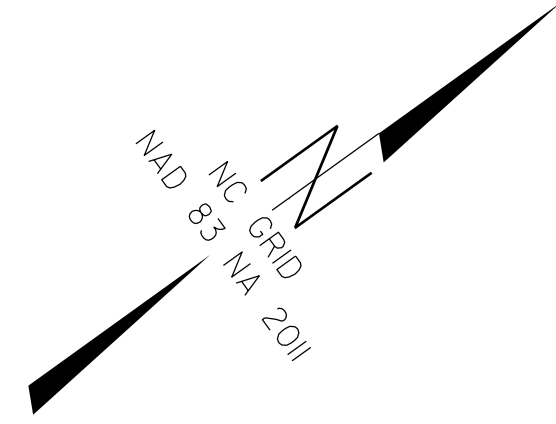
Location and Surveys



PROJECT SURVEYOR



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



REVISIONS

MATCHLINE SHEET RW02C-12

MATCHLINE SHEET RW02C-14

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

**NOTES:**


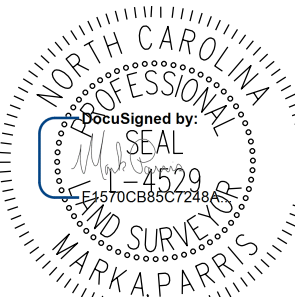
1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
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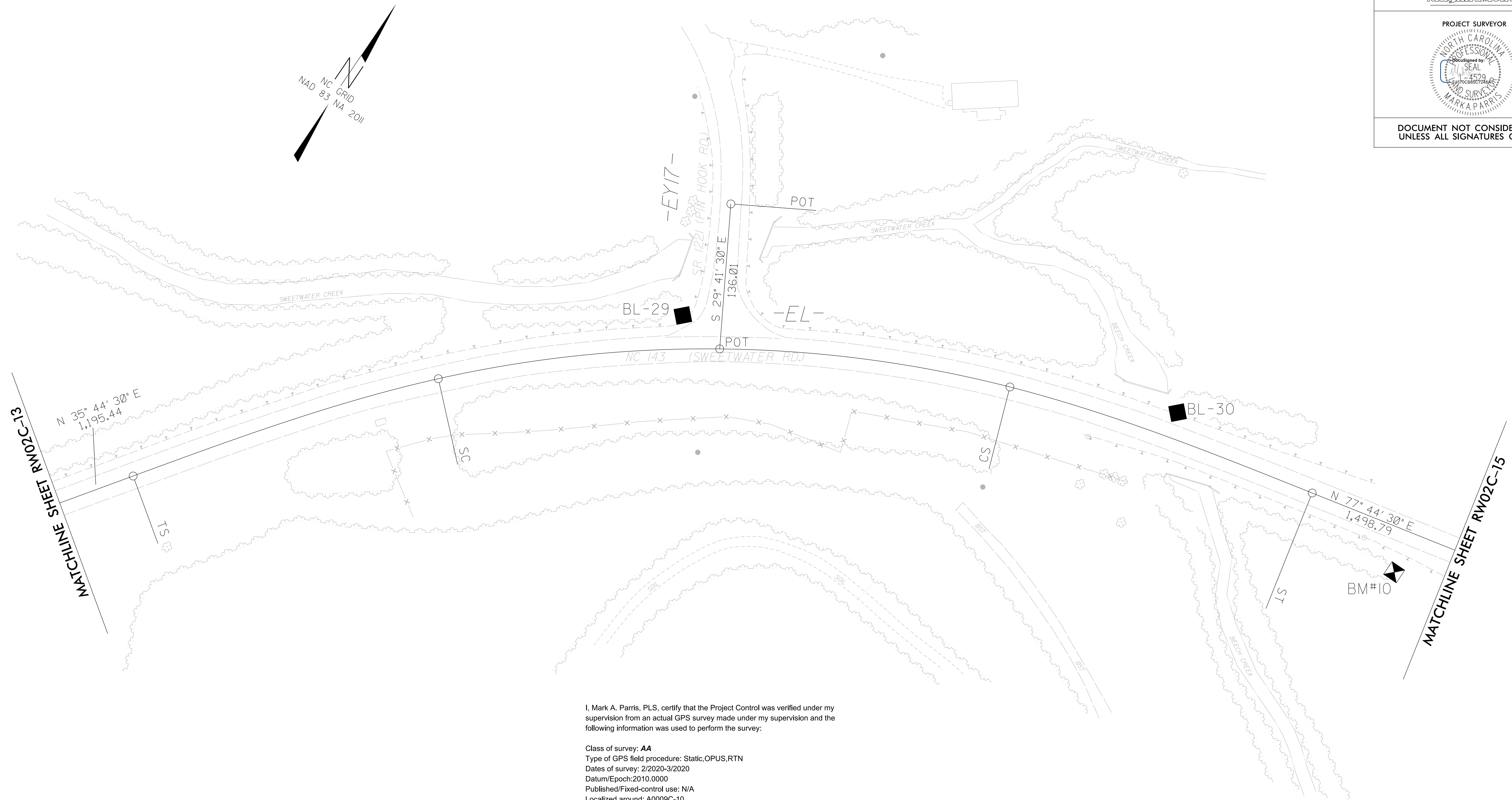
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JKGordon

REVISIONS

# SURVEY CONTROL SHEET

## W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

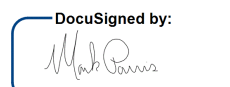
|   |                       |
|---|-----------------------|
| PROJECT REFERENCE NO.<br>A-0009CA   | SHEET NO.<br>RW02C-14 |
| Location and Surveys  |                       |
|                      |                       |
| PROJECT SURVEYOR<br> |                       |
| DOCUMENT NOT CONSIDERED FINAL<br>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**

### NOTES:

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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  
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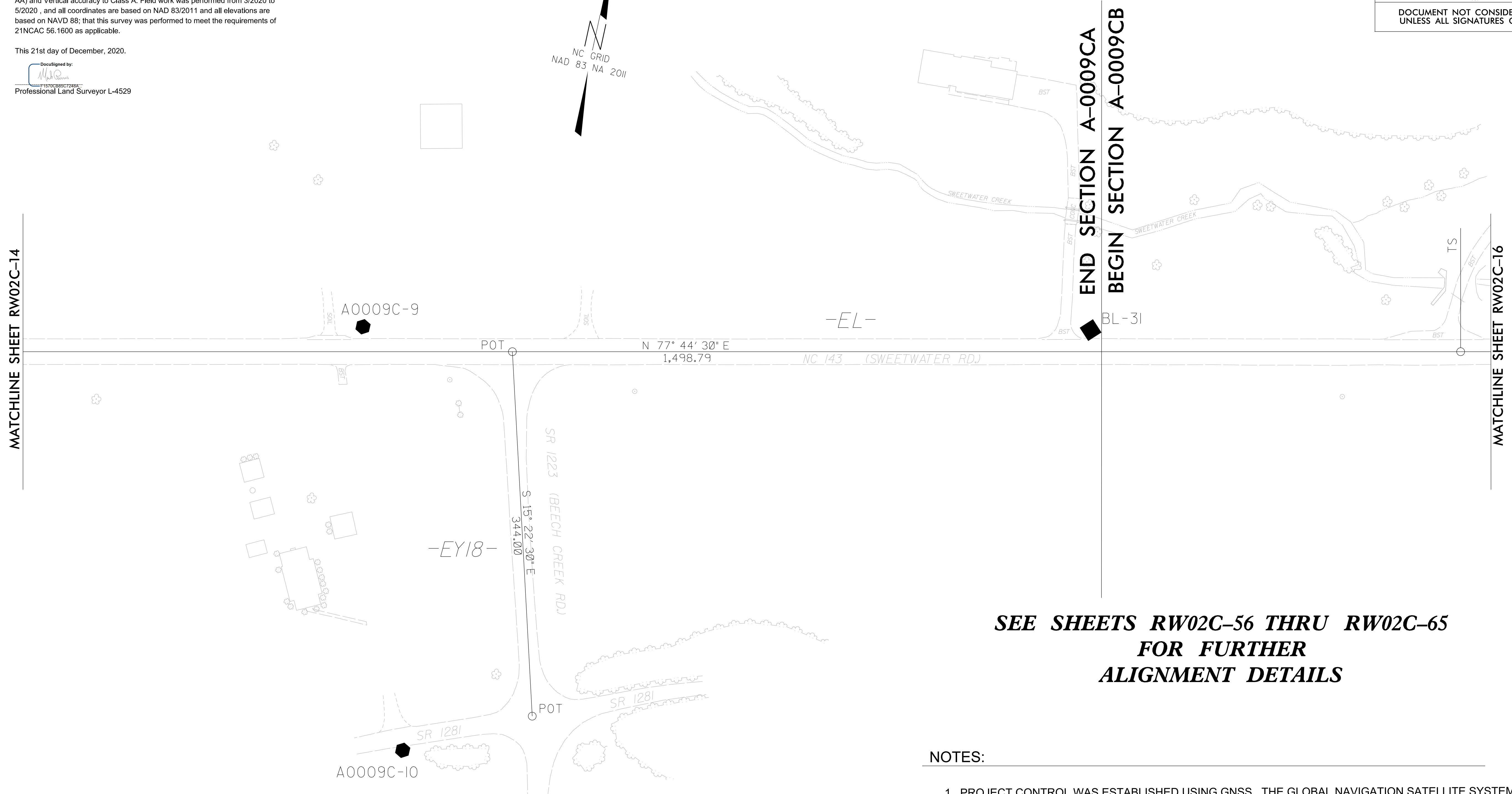
This 21st day of December, 2020.

DocuSigned by:  
  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

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



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

**NOTES:**

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REVISIONS

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AT WKS-1503PY-37  
Jegordon

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  
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Easting: 584817.003  
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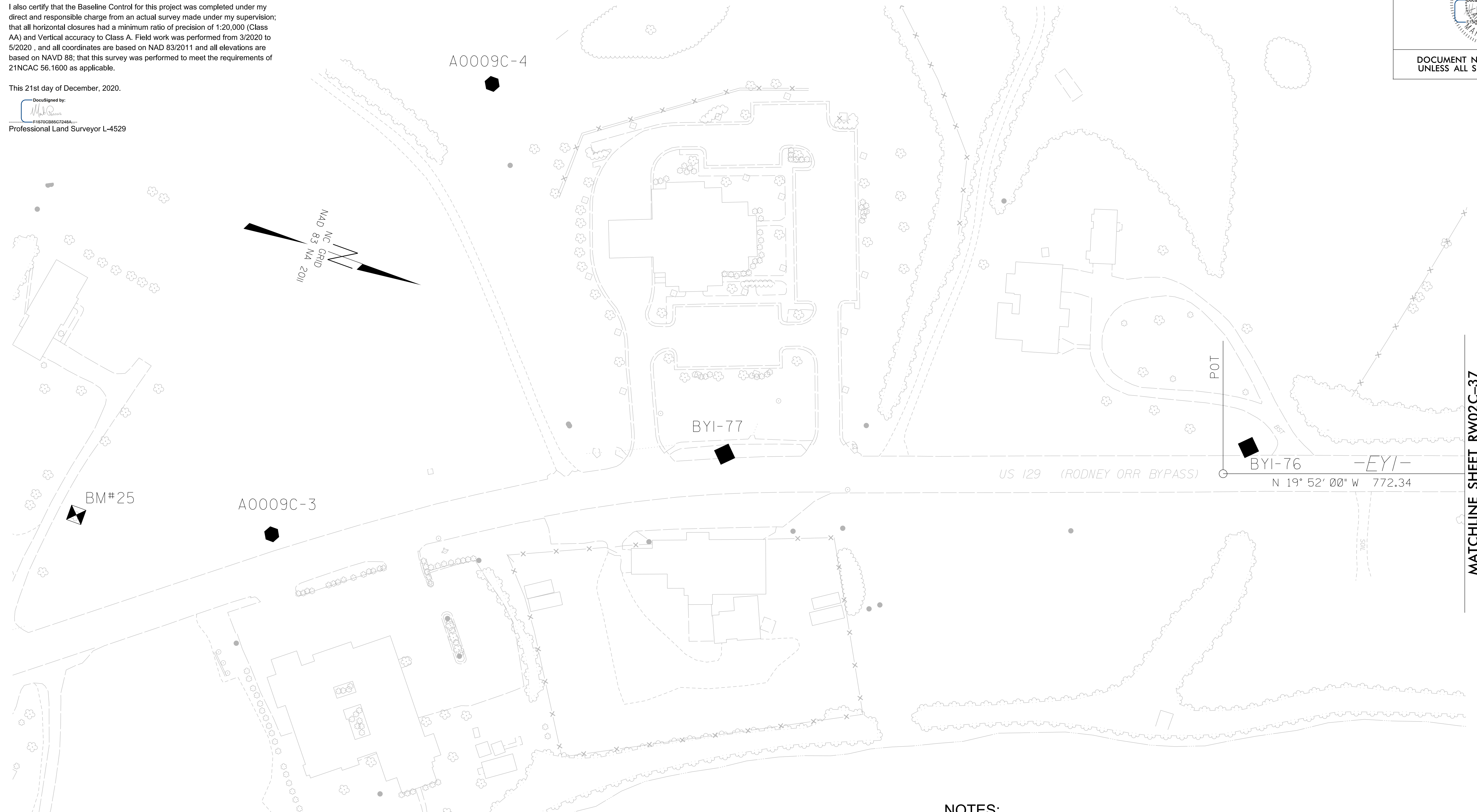
DocuSigned by:  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

|  |                       |
|--|-----------------------|
| PROJECT REFERENCE NO.<br>A-0009CA                                | SHEET NO.<br>RW02C-36 |
| <b>Location and Surveys</b>                                      |                       |
|  |                       |
| PROJECT SURVEYOR<br>   |                       |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED |                       |

REVISIONS



MATCHLINE SHEET RW02C-37

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

### NOTES:

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I6-AUG-2021 11:18  
V:\NC\Survey\032112-21-A-0009CA ROW Staking\Survey\RW and Control Sheets\A-0009CA\A0009CA\_1s-RW02C-36.dgn  
jcgordon

6/2/19

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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


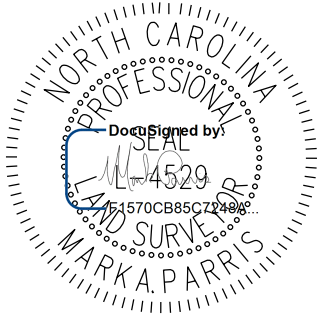
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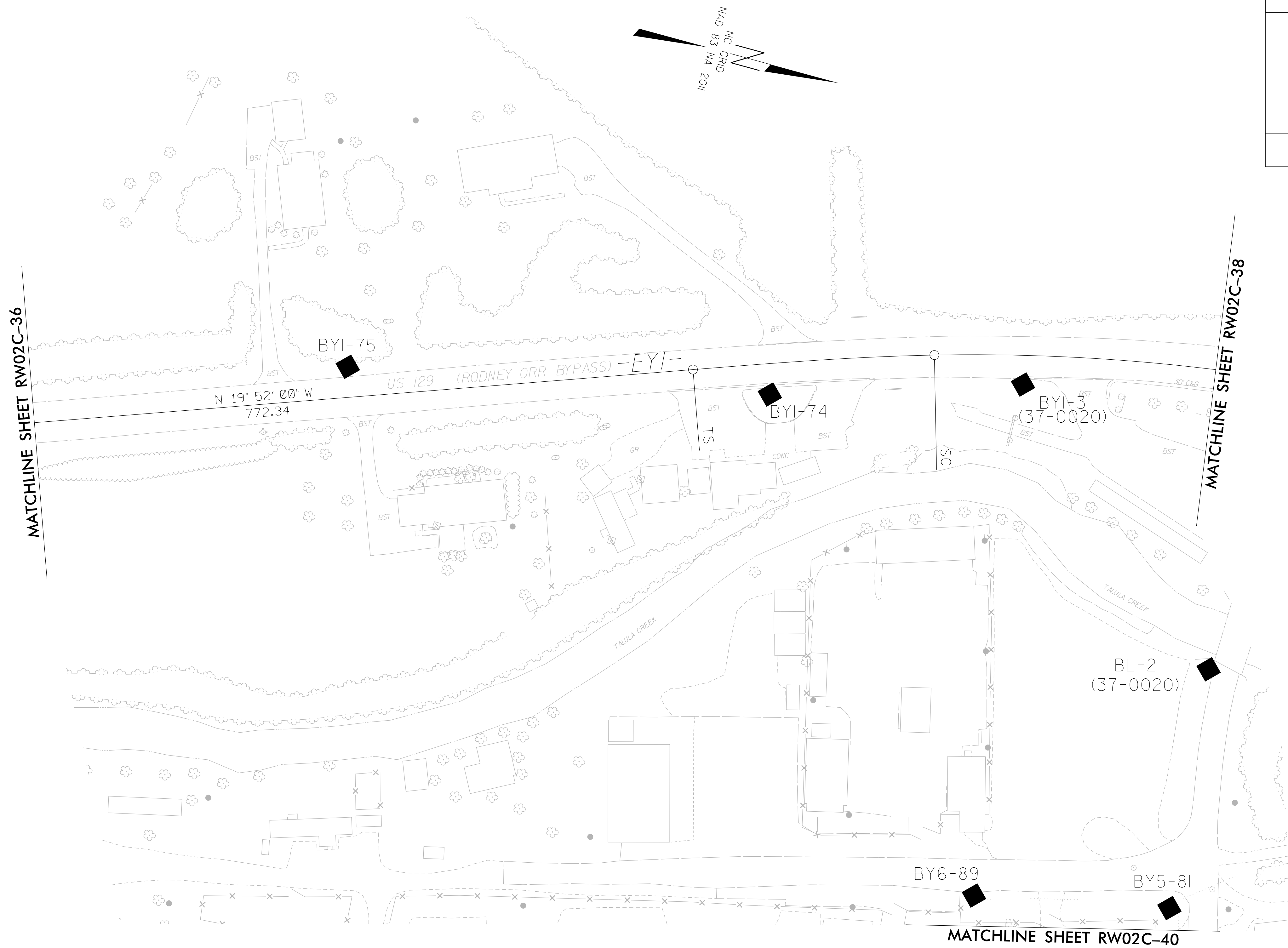
This 21st day of December, 2020.

DocuSigned by:  
Professional Land Surveyor L-4529

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

|   |                       |
|---|-----------------------|
| PROJECT REFERENCE NO.<br>A-0009CA   | SHEET NO.<br>RW02C-37 |
| <b>Location and Surveys</b>   |                       |
|                      |                       |
| PROJECT SURVEYOR<br> |                       |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED  |                       |



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

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REVISIONS

16-AUG-2021 14:20  
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jcgordon

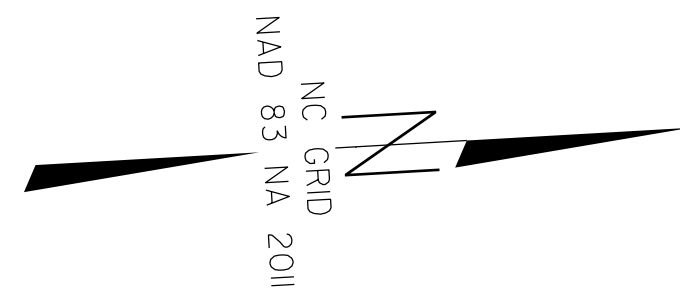
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Datum/Epoch: 2010.0000  
Published/Fixed-control use: N/A  
Localized around: A0009C-10  
Northing: 612531.117  
Easting: 584817.003  
Combined grid factor: 0.999772236  
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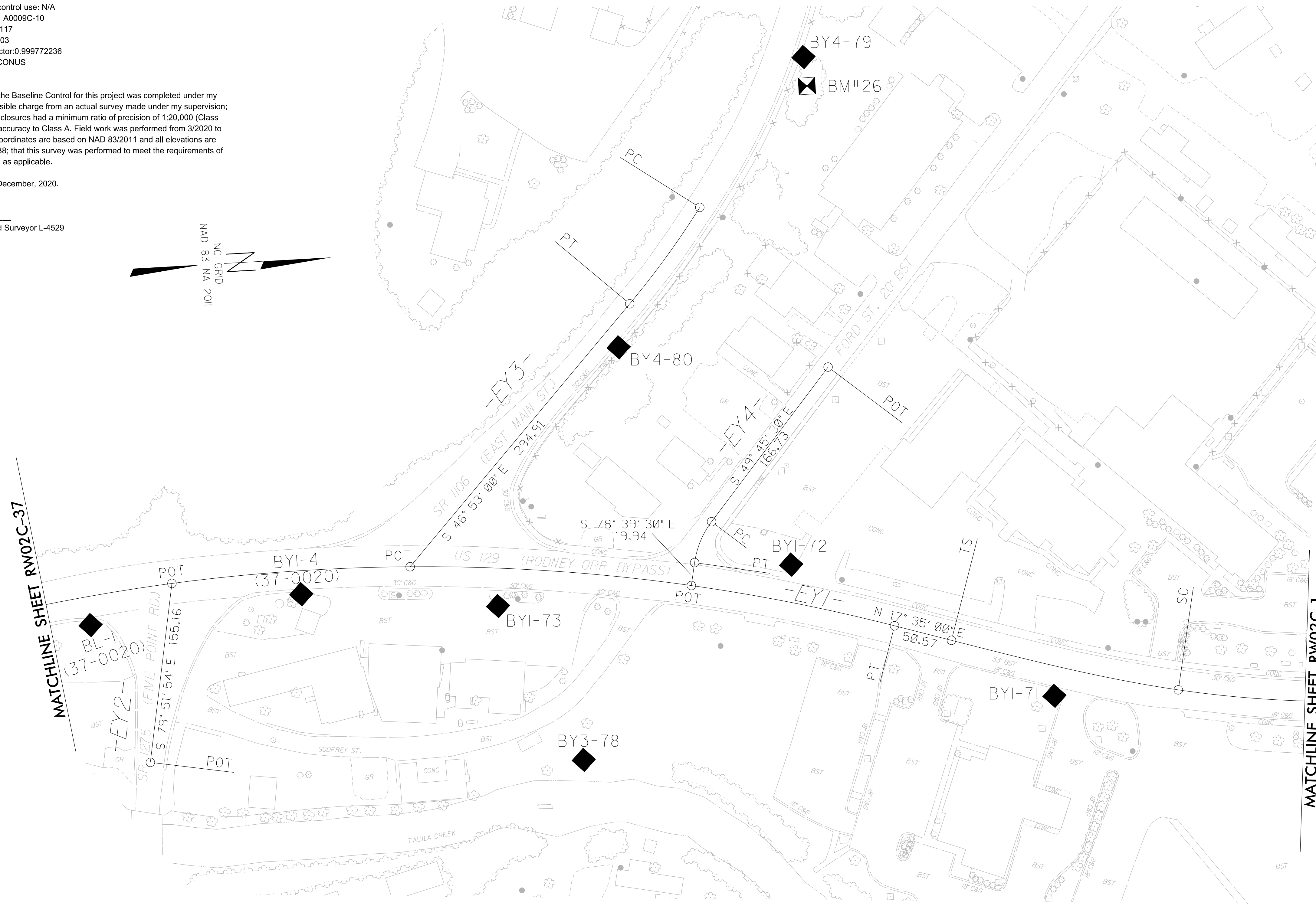
This 21st day of December, 2020.

DocuSigned by:  
Professional Land Surveyor L-4529



# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



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

REVISIONS

I6-AUG-2021 14:22  
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At WKS-1903BY-37  
Jcgordon

**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

# SURVEY CONTROL SHEET

## W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



|   |                       |
|---|-----------------------|
| PROJECT REFERENCE NO.<br>A-0009CA   | SHEET NO.<br>RW02C-39 |
| <b>Location and Surveys</b>   |                       |
|                      |                       |
| PROJECT SURVEYOR<br> |                       |
| DOCUMENT NOT CONSIDERED FINAL<br>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.  
  
 F1570CB85C7248A...  
 Professional Land Surveyor L-4529


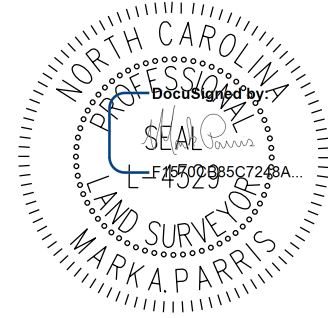
**SEE SHEETS RW02C-56 THRU RW02C-65  
 FOR FURTHER  
 ALIGNMENT DETAILS**

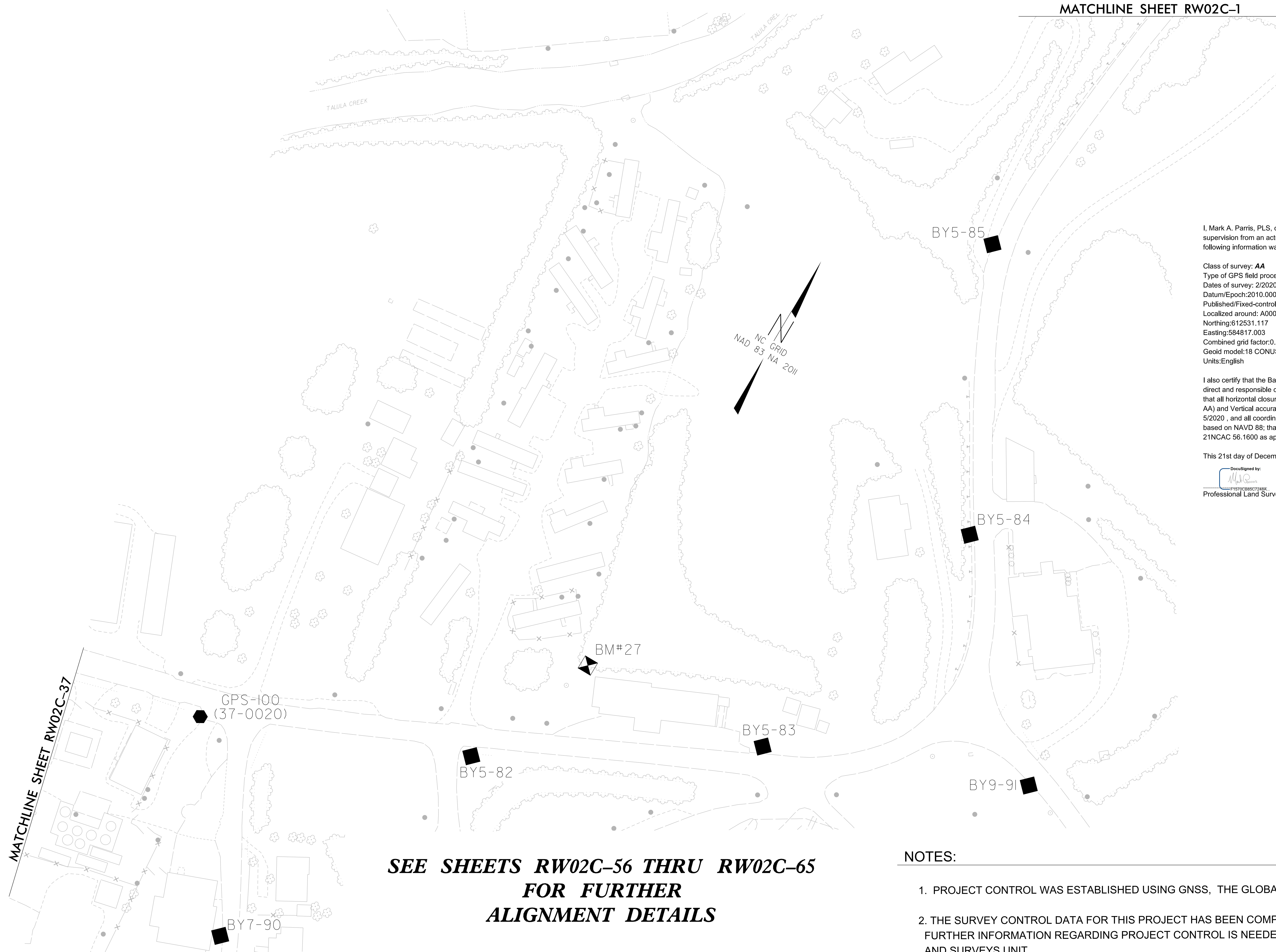
**NOTES:**

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# SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

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

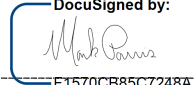


I, Mark A. Parris, PLS, certify that the Project Control was verified under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

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:**

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REVISIONS

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 Jcgordon






















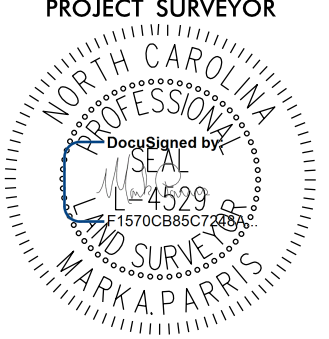
REVISIONS

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 Jcgordon

# SURVEY CONTROL SHEET

## W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

|   |                       |
|---|-----------------------|
| PROJECT REFERENCE NO.<br>A-0009-C   | SHEET NO.<br>RW02C-65 |
| Location and Surveys  |                       |
|                      |                       |
| PROJECT SURVEYOR<br> |                       |
| DOCUMENT NOT CONSIDERED FINAL<br>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

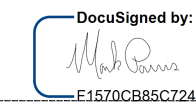
| POINT  | N          | E          | BEARING         | DIST    | DELTA           | D           | L       | T      | R       | DELTA S         | Ls     | LT     | ST    |
|--------|------------|------------|-----------------|---------|-----------------|-------------|---------|--------|---------|-----------------|--------|--------|-------|
| 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:

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 Type of GPS field procedure: Static, OPUS, RTN  
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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:  
  
 F1870CB85C7248A  
 Professional Land Surveyor L-4529

**NOTES:**

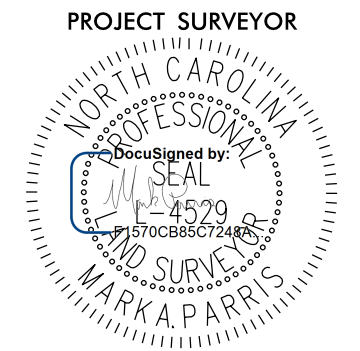
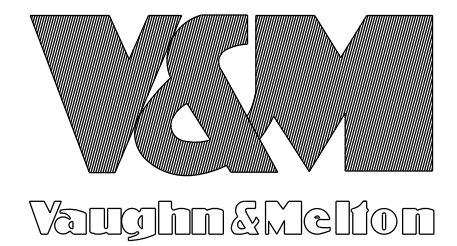
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# PROPOSED ALIGNMENT CONTROL SHEET

|                       |           |
|-----------------------|-----------|
| 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

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 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.

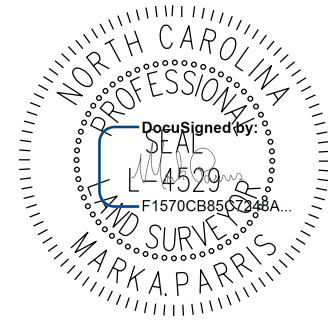


# RIGHT OF WAY CONTROL SHEET

### 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 | 567984.0589 |
| 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\112-21-A-0009CA ROW Staking\Survey\RW and Control Sheets\A-0009CA\0009CA\_1s.RW03E-2.dgn

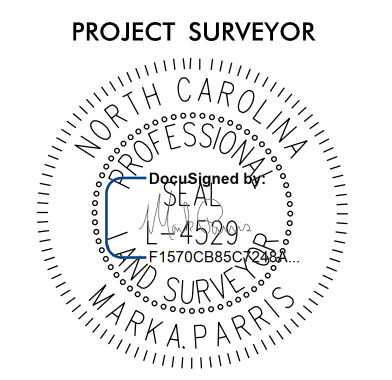
I, Mark A. Parris, certify that the right of way and permanent easement monumentation for this project shown herein was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:10,000 (Class A). 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 .

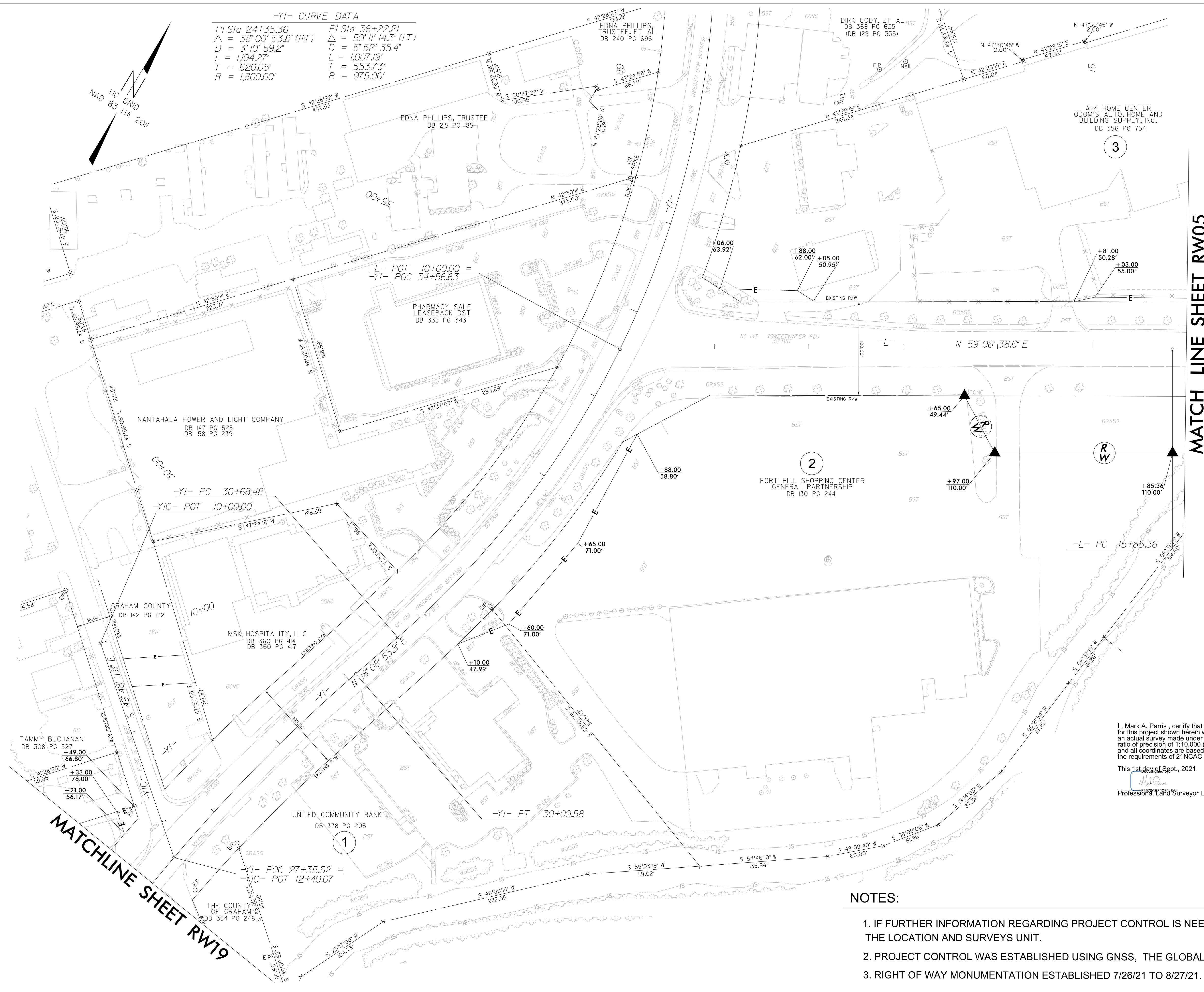
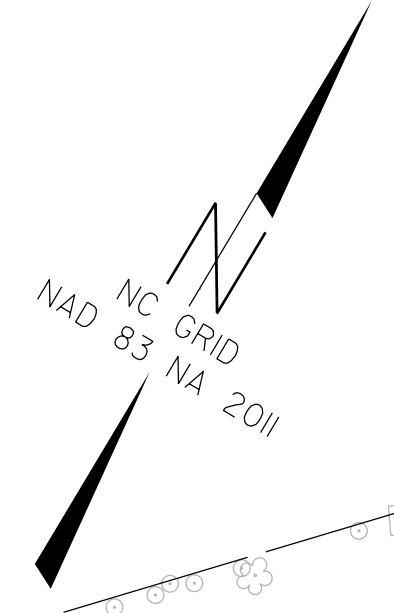
Location and Surveys



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

7 MAY 2022 10:42  
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 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.

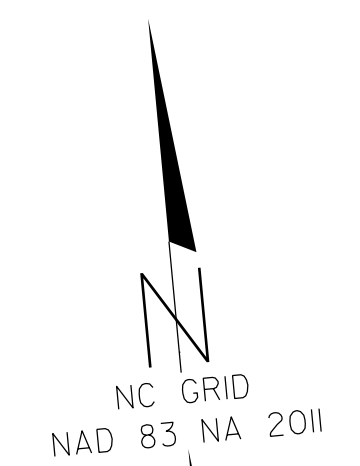
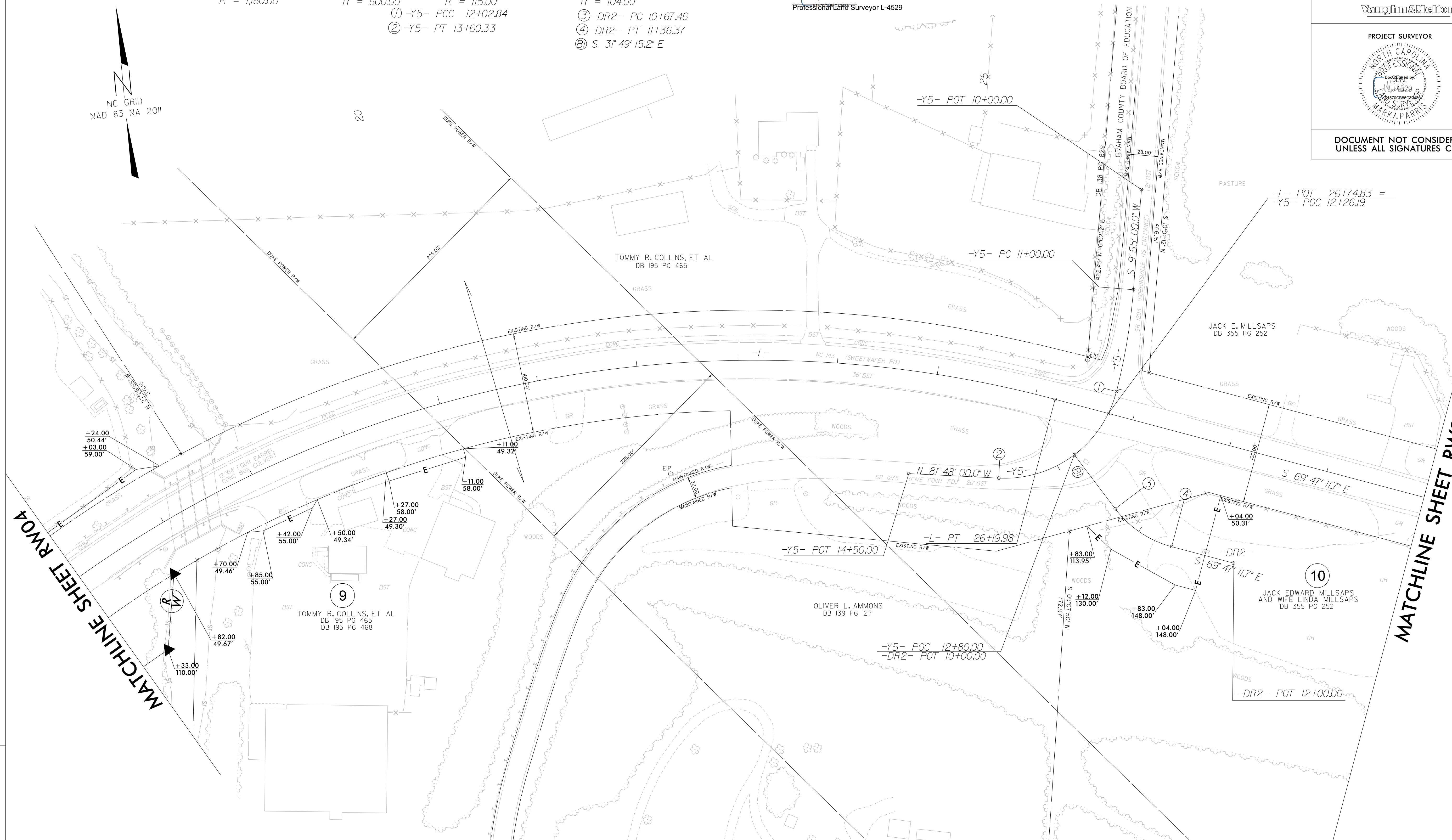
|  |           |
|--|-----------|
| PROJECT REFERENCE NO.  | SHEET NO. |
| A-0009CA   | RW05      |
| <b>Location and Surveys</b>                                      |           |
|  |           |
| PROJECT SURVEYOR   |           |
|  |           |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES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

MATCHLINE SHEET RW04

MATCHLINE SHEET RW06

**NOTES:**

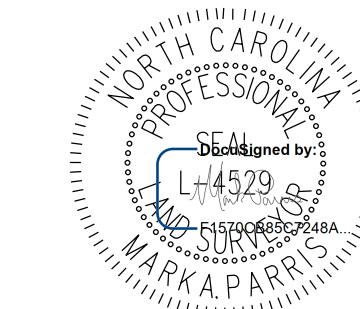
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
3. RIGHT OF WAY MONUMENTATION ESTABLISHED 7/26/21 TO 8/27/21.

7 MAY 2022 10:43  
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 jsgordon

Location and Surveys



PROJECT SURVEYOR

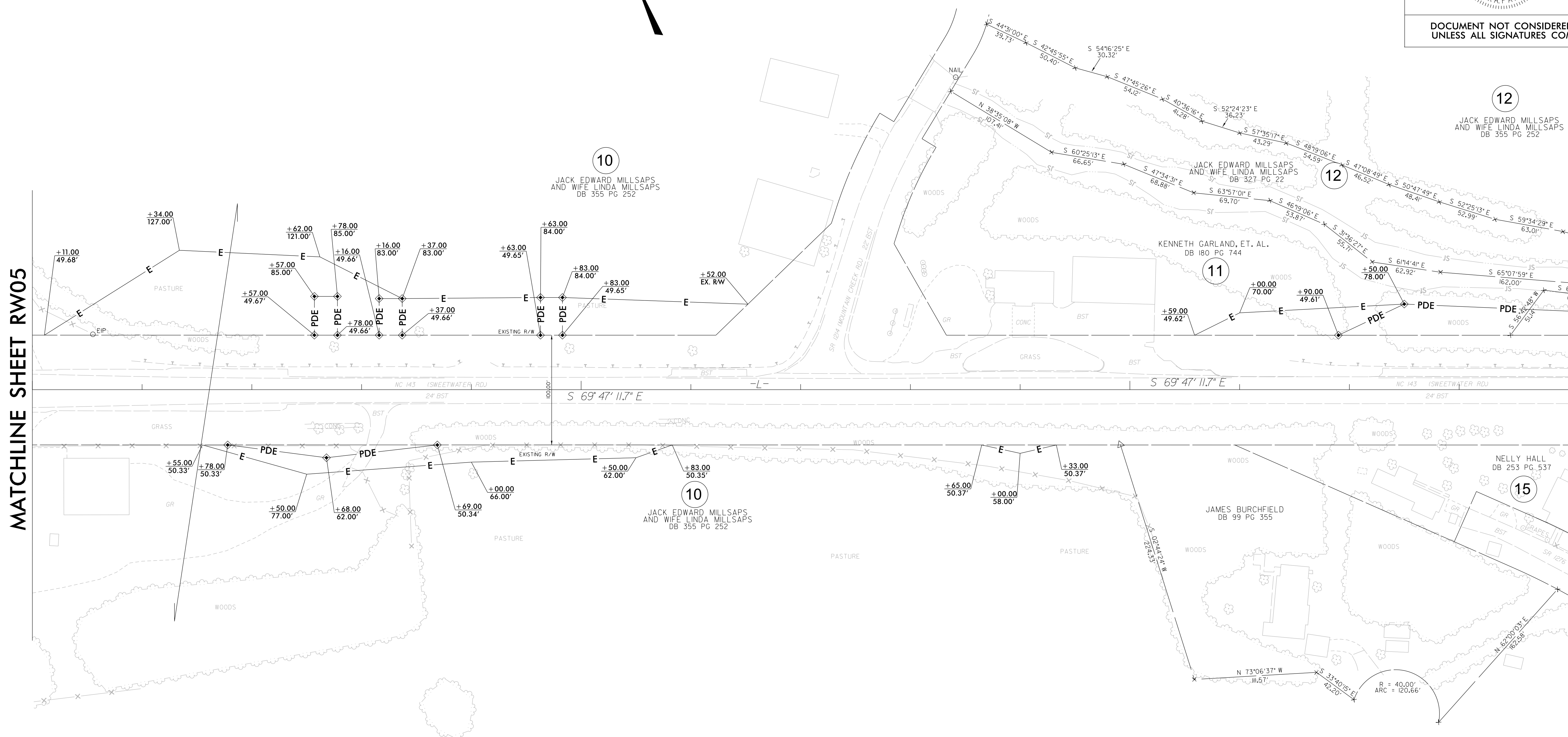


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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  
 11/21/19

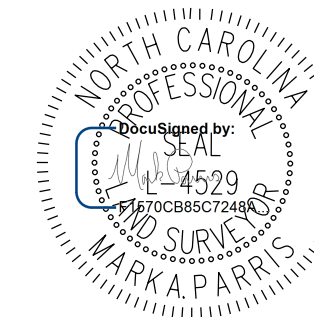
NOTES:

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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

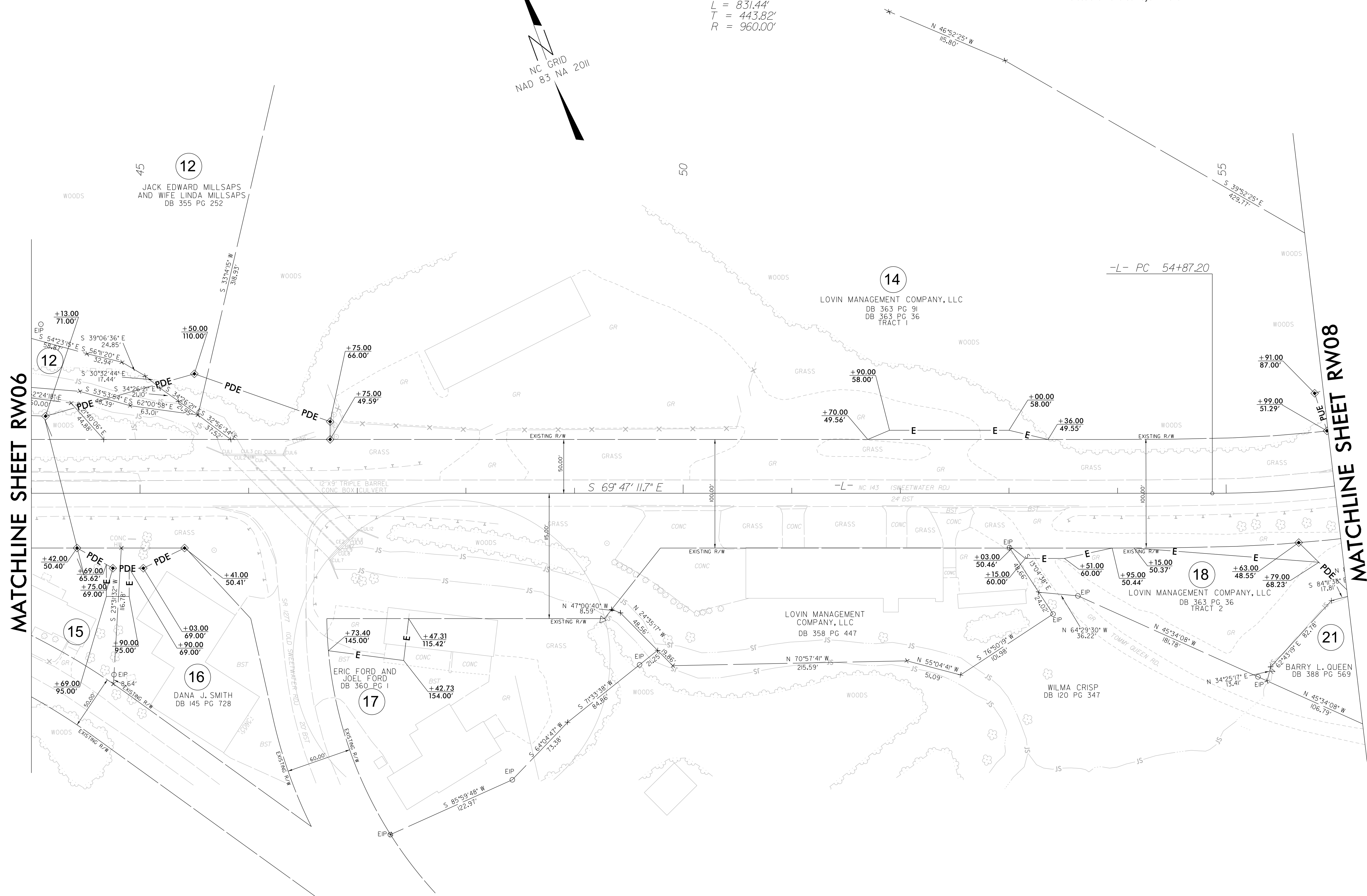


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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  
F1570C885C7248A

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



REVISIONS

7 MAY 2022 10:43  
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jsgordon

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.

-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

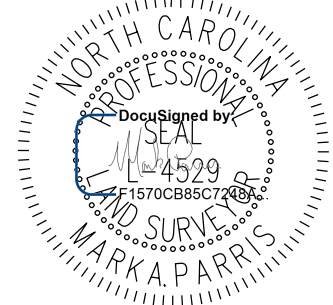
PROJECT REFERENCE NO. SHEET NO.

A-0009CA RW08

**Location and Surveys**

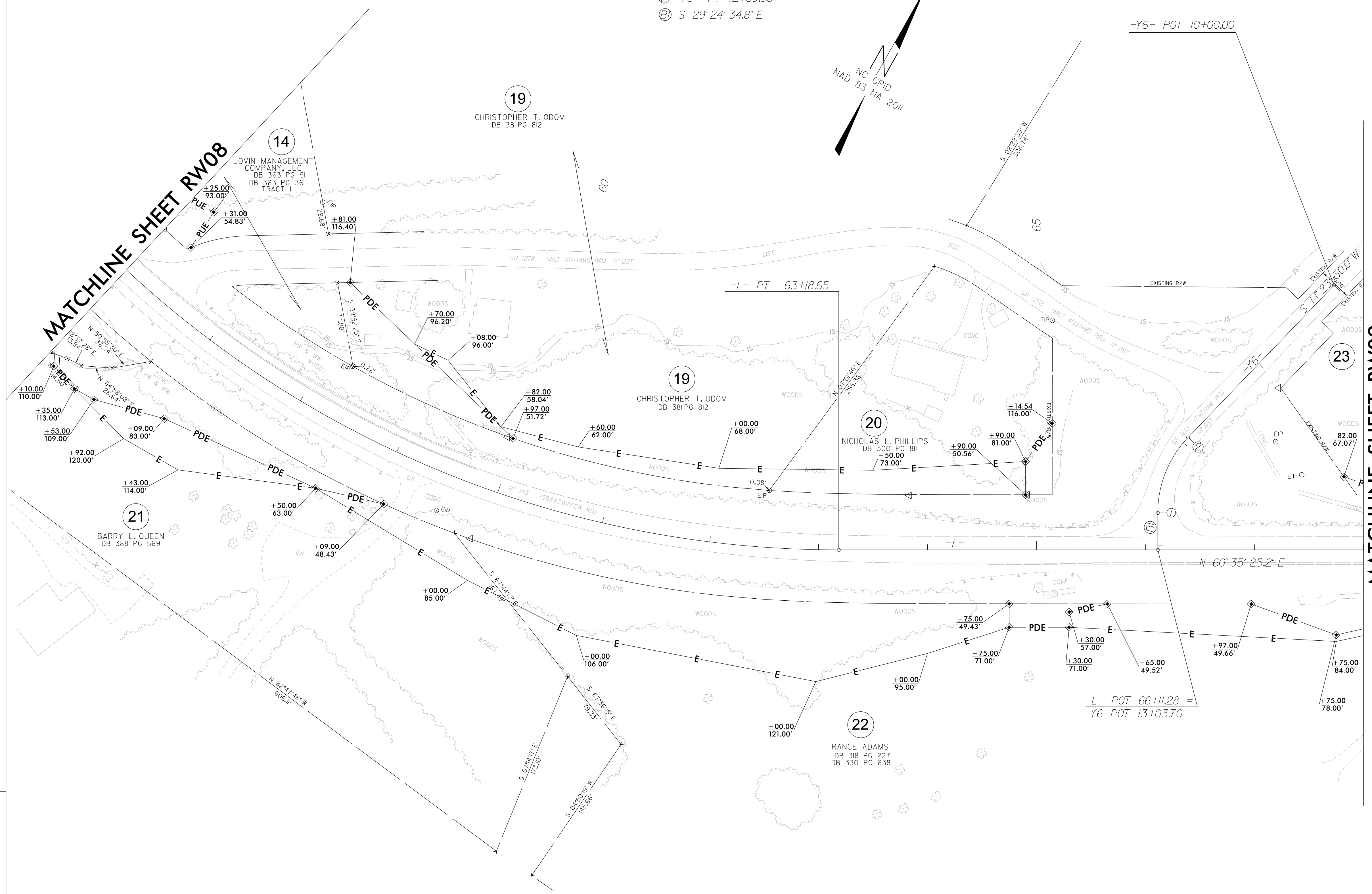


PROJECT SURVEYOR



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS



**NOTES:**

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