



Florida Department of Transportation

RON DESANTIS
GOVERNOR

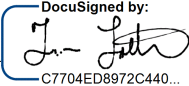
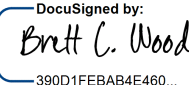
605 Suwannee Street
Tallahassee, FL 32399-0450

KEVIN J. THIBAUT, P.E.
SECRETARY

OFFICE OF DESIGN MEMORANDUM 19-01 SURVEYING AND MAPPING MEMORANDUM 19-01

DATE: April 17, 2019

TO: District Directors of Transportation Operations, District Directors of Transportation Development, District Design Engineers, District Construction Engineers, District Structures Design Engineers, District Maintenance Engineers, District Roadway Design Engineers, District Traffic Operations Engineers, District Program Management Engineers, District Consultant Project Management Engineers, District Materials Engineers, District Project Development Engineers

FROM: Tim Lattner, P.E., Director of Design 
Brett C. Wood, PSM, State Surveyor 

COPIES: Tom Byron, Courtney Drummond, Michael Shepard, April Blackburn, John Krause, Jason Watts, Rudy Powell, Amy Tootle, Stefanie Maxwell, Trey Tillander, Paul Hiers, Robert Robertson, Dan Hurtado, Gregory Schiess, Erik Fenniman, Chad Thompson (FHWA), Bren George (FHWA)

SUBJECT: **Signing and Sealing Project Control Sheets**

This Memorandum is providing information on upcoming changes to signing and sealing of Project Control sheets in the **FDOT Design Manual (FDM)**. These changes will be implemented with the **2020 FDM**; however, they may be implemented immediately at the discretion of the districts.

Draft changes to the **FDM** and the associated exhibits are included as attachments to this memorandum. The following bullets provide a summary of the changes:

- **FDM 130.2.1** and **FDM 302.6.1** will be updated to reflect that Project Control (CTL) sheets will no longer be eligible as early works.
- **FDM 310.1** will be updated to state:
“The Engineer of Record will create the Project Control sheet from data extracted from the project survey and sign and seal the Project Control sheet.”
- **Exhibit 310-2** and **Exhibit 310-3** will replace the surveyor signatory with an Engineer of Record (EOR) signatory.

Office of Design Memorandum 19-01
Surveying and Mapping Memorandum 19-01
Project Control Sheets
Page 2 of 2

- The following note will be added to **Exhibit 311-1** General Notes sheet:
“2. All survey information was obtained from a licensed Florida Professional Surveyor and Mapper and utilized as supporting data in the production of design plans and for construction on subject project. The Professional Surveyor and Mapper of Record is:
Surveyor Name, P.S.M.
P.S.M. No.: #
Company Name
Company Address
Certificate of Authorization: #”

BACKGROUND

The 2018 and 2019 versions of the **FDM** illustrate two options for a responsible professional signing and sealing the Project Control sheets: 1. Professional Engineer of Record, and 2. Professional Surveyor and Mapper of Record. The purpose of this change is to provide one consistent method to sign and seal Project Control sheets within a set of plans.

CONTACTS

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FDOT Design Manual Manager
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ATTACHMENTS

Attachment A – Draft FDM 130.2.1
Attachment B – Draft FDM 302.6.1
Attachment C – Draft FDM 310.1
Attachment D – Draft Exhibits 310-2, 310-3, & 311-1

TL/BW/mjh

ATTACHMENT 'A'
DRAFT FDM 130.2.1

- (1) Roadway Plans
- (2) Signing and Pavement Marking Plans
- (3) Signalization Plans
- (4) Intelligent Transportation System (ITS) Plans
- (5) Lighting Plans
- (6) Landscape Plans
- (7) Architectural Plans
- (8) Structures Plans
- (9) Toll Facilities Plans

Component plans may require insertion of sheets that were prepared early in, or prior to the design process (“early works”). The following early plan sheets may be contained in a separate signed and sealed PDF that is to be included as part of the Contract Plans:

CTL # Project Control

- GR-# Soil Survey and Report of Core Borings
- TR-# Tree Survey
- UTV-# Verified Utility Locate

No other plans sheets than those listed above are to be submitted separate from the component plans, except for manually signed and sealed documents as discussed in **FDM 130.2.2**.

See **FDM 302** for instruction on how to show early plan sheets on the Key Sheet.

130.2.1.1 Single Digital Signature

Component plans that will be signed and sealed by a single professional (signatory) may place a signature block, as shown in **Figure 130.2.1**, on the component Key Sheet in lieu of using a Signature Sheet. Listing the sheets contained in the PDF to be signed and sealed is not required.

ATTACHMENT 'B'
DRAFT FDM 302.6.1

Topic #625-000-002
FDOT Design Manual

302.6.1 Early Works

The roadway plans may require insertion of sheets that were prepared early, or prior to the design process. These sheets may be identified and numbered with the following prefixes:

CTL-#Project Control

- (1) GR-# Soil Survey and Report of Core Borings normally associated with the roadway plans set (including miscellaneous structures but excluding bridges and walls)
- (2) TR-# Tree Survey
- (3) UTV-#Verified Utility Locate

Show these early works sheets in the index of roadway plan sheets behind the Summary of Quantities sheets. Include an asterisk next to the early works title and a note below the index per **Exhibit 302-1**.

No plans sheets other than those listed above are to be separated from the component plans.

302.7 Professional Responsibility

An Engineer of Record (EOR) is the lead Florida licensed professional engineer in charge of the preparation of the component plans. Place in the lower right corner the name and license number of the EOR. Also show the name and address of the engineering business or agency where the EOR is employed. Include the consultant contract number, certificate of authorization number and vendor number when plans are prepared by an engineering business.

For non-engineering professionals that are in charge of the preparation of the component plans, change title to "Licensed Professional of Record". Include similar information that applies to their profession.

Place the name of the Department's Project Manager below the EOR information. Show only the Department's Project Manager at this location, except for:

- (1) When plans are prepared by Department Personnel, the name of the Department's designer may be placed immediately below the name of the Department's Project Manager.

ATTACHMENT 'C'

DRAFT FDM 310.1

310 Project Control

310.1 General

The Project Control sheet provides a summary of horizontal and vertical datum (i.e., reference points, benchmarks and control points). The datum shown on this sheet must provide clear and sufficient information to establish horizontal and vertical control during the construction of the project. The data shown can be extracted from the project network control survey and historical control data, or reflect assumed datum. The Engineer of Record will create the Project Control sheet from data extracted from the project survey and sign and seal the Project Control sheet.

These sheets are to be placed in the component plans in accordance with **FDM 302.6**.

See **Exhibits 310-1** through **310-3** for examples of a Project Control sheet.

310.2 Sheet Setup

Use the standard plan format sheet provided in the FDOT CADD Software to prepare the sheet. Use standard symbols contained in the [FDOT CADD Manual](#).

Provide a note on the Project Control sheet that identifies horizontal and vertical datum that the survey is based on.

310.3 Reference Points

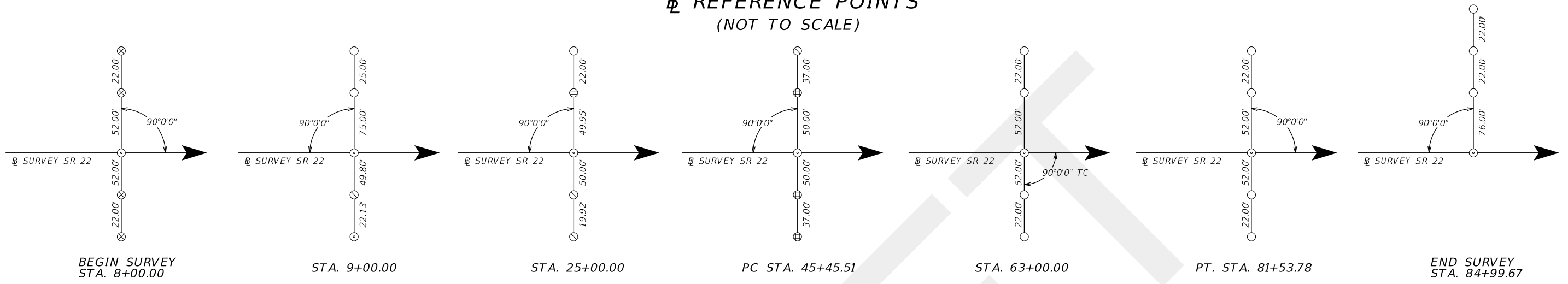
Reference points are prominent, easily located points in the terrain used to define a location of another point that is located on the baseline of survey. The purpose of reference points is provide horizontal location to re-establish primary control points along the baseline of survey. Reference points should not be located on the baseline. Detailed descriptions of each reference point is illustrated with a sketch.

Place survey reference points on the Project Control sheet along the top of the sheet or where other space allows. Clearly indicate the baseline of survey and reference points, including all ties. Complete length of survey baseline between two consecutive reference points need not be shown. Clearly label each reference point, beginning at the first reference point within the limits of the project, and progressing in the direction of stationing. Reference points need not be drawn to any particular scale, but distances and angles shown must be proportionate.

ATTACHMENT 'D'

DRAFT FDM EXHIBITS 310-2, 310-3, & 311-1

REFERENCE POINTS (NOT TO SCALE)



LEGEND

- = SET 5/8" IRC STAMPED F.D.O.T. REF.
- ⊙ = SET NAIL W/ DISC STAMPED F.D.O.T. CONTROL
- ⊗ = SET X CUT IN CONCRETE NO ID
- ⊖ = FOUND 100D NAIL NO ID
- ⊕ = FOUND 1/2" IRON ROD NO ID
- ⊗ = FOUND 5/8" IRON ROD NO ID

STATION	(Y) NORTHING	(X) EASTING	SCALE FACTOR
08+00.00	731006.941	1104363.972	1.00002712
09+00.00	730958.261	1104451.323	1.00002771
25+00.00	730179.373	1105848.941	1.00002829
45+45.51	729183.610	1107635.714	1.00002892
63+00.00	728109.980	1109014.692	1.00002967
81+53.78	726580.821	1110048.276	1.00003004
84+99.67	726266.795	1110193.287	1.00003049

PROJECT CONTROL NOTES

- PROJECT IS BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM NAD 1983 / 2011 HORIZONTAL DATUM.
- ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

HORIZONTAL AND VERTICAL CONTROL

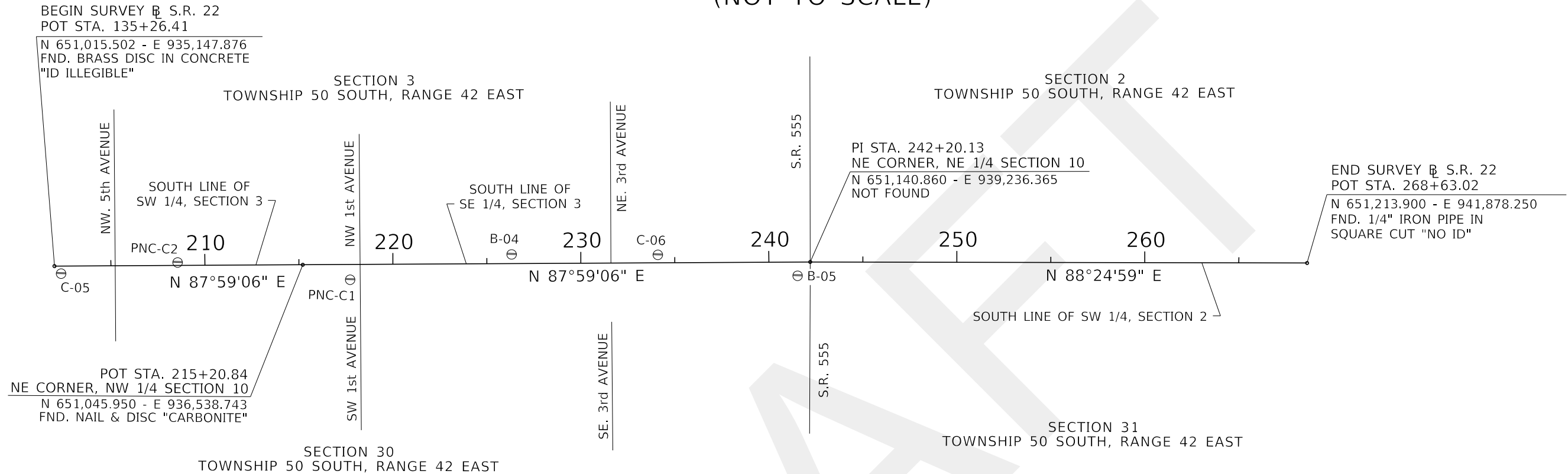
CONTROL POINT	STATION	OFFSET	(Z) ELEVATION	DESCRIPTION	(Y) NORTHING	(X) EASTING	LATITUDE	LONGITUDE	SCALE FACTOR
C-02	08+22.65	44.80' LT.	3.05'	FOUND FDOT BRASS DISK IN CONCRETE STAMPED "842 86 11 C02"	731019.964	1104363.964	26°07'18.96289"	80°09'56.29283"	1.00002712
B-01	14+66.25	33.25' LT.	7.23'	SET FDOT BRASS DISK IN CONCRETE STAMPED "842 86 14 B01"	730958.234	1104451.326	26°07'18.90268"	80°09'45.88657"	1.00002967
C-03	25+73.33	36.96' RT.	4.18'	FOUND FDOT BRASS DISK IN CONCRETE STAMPED "842 86 11 C03"	730456.349	1105848.917	26°07'18.38998"	80°09'35.78475"	1.00003088
B-02	31+18.07	25.60' RT.	4.05'	SET FDOT BRASS DISK IN CONCRETE STAMPED "842 86 14 B02"	730229.364	1108642.646	26°07'18.79454"	80°09'24.88094"	1.00003148
C-04	46+75.51	83.53' LT.	4.12'	FOUND FDOT BRASS DISK IN CONCRETE STAMPED "842 86 11 C04"	729283.642	1109014.635	26°07'20.21998"	80°09'11.99337"	1.00003203
B-03	55+98.14	22.04' LT.	4.84'	SET FDOT BRASS DISK IN CONCRETE STAMPED "842 86 14 B03"	729002.211	1109544.542	26°07'19.77658"	80°08'41.06068"	1.00003253
C-05	63+00.00	40.41' RT.	4.23'	FOUND FDOT BRASS DISK IN CONCRETE STAMPED "842 86 11 C05"	728109.925	1110193.265	26°07'19.35577"	80°08'31.67213"	1.00003301

Exhibit 310-2
Date: 1/1/20

<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				DATE	DESCRIPTION	DATE	DESCRIPTION					<p>LUKE S. WALKER, P.E. P.E. NO.: 99991 ROADWAY ENGINEERS, INC. 123 MAIN STREET TALLAHASSEE, FL 32301 CERTIFICATE OF AUTHORIZATION: 12345</p>			<p>STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION</p> <table border="1"> <thead> <tr> <th>ROAD NO.</th> <th>COUNTY</th> <th>FINANCIAL PROJECT ID</th> </tr> </thead> <tbody> <tr> <td>SR 22</td> <td>BAY</td> <td>123456-1-52-01</td> </tr> </tbody> </table>			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	SR 22	BAY	123456-1-52-01	<p>PROJECT CONTROL</p>		<p>SHEET NO. 11</p>
DATE	DESCRIPTION	DATE	DESCRIPTION																							
ROAD NO.	COUNTY	FINANCIAL PROJECT ID																								
SR 22	BAY	123456-1-52-01																								

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

PROJECT CONTROL POINTS B SURVEY S.R. 22 (NOT TO SCALE)



HORIZONTAL AND VERTICAL CONTROL

CONTROL POINTS	(Y) NORTHING	(X) EASTING	SCALE FACTOR	LATITUDE	LONGITUDE	B SURVEY STATION	OFFSET	(Z) ELEVATION	DESCRIPTION
C-05	650,960.352	935,255.028	1.00003049	26°07'19.35577"	80°08'57.93221"	202+34.91	40.41' RT.	4.23'	FOUND FDOT BRASS DISK IN CONCRETE STAMPED "842 86 11 C05"
PNC-C2	651,038.058	935,872.919	1.00003088	26°07'20.08530"	80°08'51.14792"	208+55.15	15.52' LT.	5.17'	FOUND FDOT ALUMINUM DISK IN CONCRETE STAMPED "842-86-13 C2"
PNC-C1	650,973.805	936,792.811	1.00003148	26°07'19.38918"	80°08'41.06068"	217+72.21	81.03' RT.	3.42'	FOUND FDOT ALUMINUM DISK IN CONCRETE STAMPED "842-86-13 C1"
B-04	651,133.755	937,647.541	1.00003203	26°07'20.91756"	80°08'31.67213"	226+32.04	48.76' LT.	2.62'	SET FDOT BRASS DISK IN CONCRETE STAMPED "842 86 14 B04"
C-06	651,154.526	938,424.971	1.00003253	26°07'21.07243"	80°08'23.14164"	234+09.72	42.19' LT.	2.72'	SET FDOT ALUMINUM DISK IN CONCRETE STAMPED "842 86 14 C06"
B-05	651,065.674	939,171.400	1.00003301	26°07'20.14353"	80°08'14.95924"	241+52.56	72.86' RT.	3.76'	SET FDOT BRASS DISK IN CONCRETE STAMPED "842 86 14 B05"

LEGEND

- B : BASELINE
- E : EAST
- FND : FOUND
- LT. : LEFT
- OFF. : OFFSET
- N : NORTH
- PI : POINT OF INTERSECTION
- POT : POINT ON TANGENT
- RT. : RIGHT
- S.R. : STATE ROAD
- STA. : STATION
- ⊖ : CONTROL POINT

PROJECT CONTROL NOTES:

1. BEARINGS AND COORDINATES ARE RELATIVE TO THE STATE PLANE COORDINATES, FLORIDA NORTH ZONE, NORTH AMERICAN DATUM (NAD) OF 1983 (ADJUSTMENT OF 1990)
 -A BEARING OF N 89°59'57" E HAS BEEN ESTABLISHED BETWEEN MONUMENTS HBLC-2 STAMPED "842 86 11 C02" & B-01 STAMPED "B01"
2. VERTICAL DATUM : NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
3. PROJECT UNITS : US FEET
4. FIELD BOOK REFERENCES : MGV 851 SERIES.
5. ELECTRONIC DATABASE : CAICE: "428724.ZIP"

Exhibit 310-3
Date: 1/1/20

REVISIONS				LUKE S. WALKER, P.E. P.E. NO.: 99991 ROADWAY ENGINEERS, INC. 123 MAIN STREET TALLAHASSEE, FL 32301 CERTIFICATE OF AUTHORIZATION: 12345	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			<h2 style="margin: 0;">PROJECT CONTROL</h2>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 22	BAY	123456-1-52-01		11

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

GENERAL NOTES

1. BENCHMARK ELEVATIONS SHOWN ON THE PLANS ARE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. ALL SURVEY INFORMATION WAS OBTAINED FROM A LICENSED FLORIDA PROFESSIONAL SURVEYOR AND MAPPER AND UTILIZED AS SUPPORTING DATA IN THE PRODUCTION OF DESIGN PLANS AND FOR CONSTRUCTION ON SUBJECT PROJECT. THE PROFESSIONAL SURVEYOR AND MAPPER OF RECORD IS:
 ANNA KING, P.S.M.
 P.S.M. NO.: 9993
 MAPS R US, INC.
 678 COMPASS ROAD
 MIAMI, FL 33179
 CERTIFICATE OF AUTHORIZATION: 99699
3. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED Vv, Vh, AND Vvh) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.

4. UTILITY/AGENCY OWNERS:	COMPANY	CONTACT	TELEPHONE NUMBERS
	SPRINT/FLORIDA, INC.	CHERYL FLORES	(904) 555-1234
	QWEST	JIM WEST	(904) 555-2345
	MCI WORLDCOM	ANDY WORLEY	(904) 555-3456
	SPRINT COMMUNICATIONS	ROB SPRINTER	(904) 555-4567
	CITY OF TALLAHASSEE UTILITIES	CHESTER DIGGER	(904) 555-5678

5. SPECIAL EVENT DAYS FOR THIS PROJECT INCLUDE:

JACKSONVILLE JAZZ FESTIVAL
 JACKSONVILLE JAGUARS FOOTBALL GAMES
 FLORIDA VS. GEORGIA FOOTBALL GAME
 THE GATOR BOWL PARADE
 THE MONSTER TRUCK SHOW
 THE GATE RIVER RUN

Exhibit 311-1
Date: 1/1/20

REVISIONS				LUKE S. WALKER, P.E. P.E. NO.: 99991 ROADWAY ENGINEERS, INC. 123 MAIN STREET TALLAHASSEE, FL 32301 CERTIFICATE OF AUTHORIZATION: 12345	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		12
					SR 22	BAY	123456-1-52-01		