STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

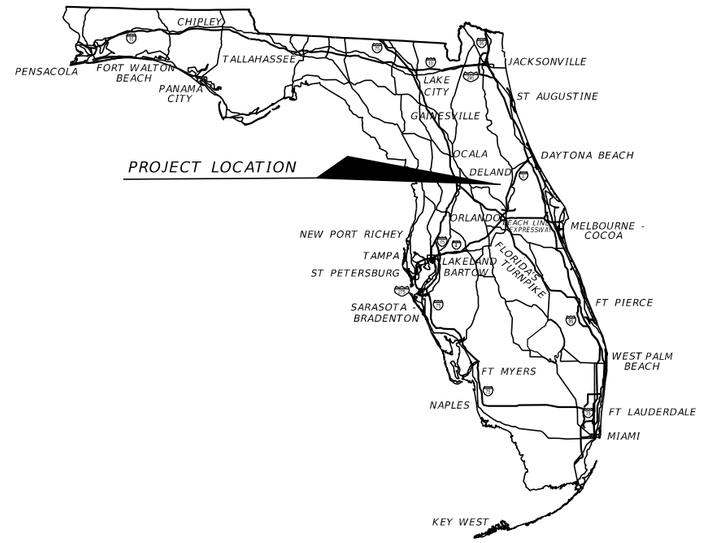
FINANCIAL PROJECT ID 240200-2-52-01

(FEDERAL FUNDS)

SEMINOLE COUNTY (77320)

STATE ROAD NO. 429 (WEKIVA PARKWAY SECTION 7A)

SIGNALIZATION PLANS



INDEX OF SIGNALIZATION PLANS

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T-9	SPLICING DIAGRAM
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SIGNALIZATION PLANS
ENGINEER OF RECORD:

SUSANNE S. HERTZ, P.E. P.E. NO. 49486
TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
80 SPRING VISTA DRIVE
DEBARY, FL 32713
CONTRACT NO.: C9B55
VENDOR NO.: F208375642002
CERTIFICATE OF AUTHORIZATION NO. 27392

FDOT PROJECT MANAGER:

KEVIN MOSS, P.E.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
T5626	18	T-1

SUSANNE S. HERTZ
LICENSE
No. 49486
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Digitally signed by Susanne S Hertz
Date: 2017.08.10 14:52:20-04'00'

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED IN THE ELECTRONIC DOCUMENTS.

SUSANNE S. HERTZ, P.E.
P.E. LICENSE NUMBER 49486
TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
80 SPRING VISTA DRIVE
DEBARY, FLORIDA 32713
CERTIFICATE OF AUTHORIZATION 27392

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	SIGNATURE SHEET
T-3	TABULATION OF QUANTITIES
T-4	GENERAL NOTES
T-5	SIGNALIZATION PLAN
T-6	SIGNAL DETAILS
T-7	STANDARD MAST ARM TABULATION
T-10	GUIDE SIGN WORKSHEET

ALEXANDER TEAL MIMS
LICENSE
No. 77095
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Alexander T Mims Date: 2017.08.10 14:17:19-04'00'

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ALEXANDER T. MIMS, P.E.
P.E. LICENSE NUMBER 77095
TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
80 SPRING VISTA DRIVE
DEBARY, FLORIDA 32713
CERTIFICATE OF AUTHORIZATION 27392

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-9	SPLICING DIAGRAM

DANIEL C. STANFILL
LICENSE
No. 42763
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Digitally signed by Daniel C Stanfill
Date: 2017.08.10 09:23:53 -04'00'

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DANIEL C. STANFILL, P.E.
P.E. LICENSE NUMBER 42763
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC.
919 LAKE BALDWIN LANE
ORLANDO, FLORIDA 32814
CERTIFICATE OF AUTHORIZATION 5882

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-11	REPORT OF SPT BORINGS

KEVIN B. FISCHER
LICENSE
No. 60074
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Kevin B Fischer
Digitally signed by Kevin B Fischer
DN: c=US, o=IdenTrust ACES Business Representative, ou=IDA CONSULTING ENGINEERS INC., cn=Kevin B Fischer, 0.9.2342.19200300.100.1.1=A01098000000144BBDE0A380000 7872
Date: 2017.08.10 13:58:16 -04'00'

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KEVIN B. FISCHER, P.E.
P.E. LICENSE NUMBER 60074
IDA CONSULTING ENGINEERS, INC.
800 N. MAGNOLIA AVE., SUITE 1402
ORLANDO, FLORIDA 32803
CERTIFICATE OF AUTHORIZATION 8171

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
T-2	SIGNATURE SHEET
T-8	STANDARD MAST ARM ASSEMBLIES TABLE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

SIGNATURE SHEET

SHEET NO.
T-2

Pam 8/9/2017 9:59:23 AM Z:\2012 Projects\10518 (Wekiva Parkway-Section 7A)\CADD\24020025201\signals\SIGNSG

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			T-4		T-5		T-6													
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF			617		40										657		657	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF			389												389		389	
632-7-1	SIGNAL CABLE-NEW OR RECONSTUCTED INTERSECTION, F&I	PI			1												1		1	
632-7-6	SIGNAL CABLE-INTERSECTION, REMOVE	PI			1												1		1	
633-1-121	FIBER OPTIC CABLE, F&I, UNDERGROUND, 2-12 FIBERS	LF			50		300										350		350	
633-2-31	FIBER OPTIC CONNECTION, INSTALL , SPLICE	EA					8										8		8	
633-3-11	FO CONNECTION, HARDWARE, F&I, SPLICE ENCLOSURE	EA					1										1		1	
633-3-12	FO CONNECTION, HARDWARE, F&I, SPLICE TRAY	EA					1										1		1	
633-3-15	FO CONNECTION, HARDWARE, F&I, PRETERM PATCH PANEL	EA			1												1		1	
634-4-600	SPAN WIRE ASSEMBLY, REMOVAL-POLES REMAIN	PI	1														1		1	
635-2-11	PULL & SPLICE BOX, F&I, 13"x24" COVER SIZE	EA			27												27		27	
635-2-12	PULL & SPLICE BOX, F&I, 24"x36" COVER SIZE	EA			1												1		1	
635-2-13	PULL & SPLICE BOX, F&I, 36" ROUND COVER SIZE	EA					1										1		1	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF			13												13		13	
641-2-80	CONC STRAIN POLE REMOVAL COMPLETE DEEP 30' >	EA	4														4		4	
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA			7												7		7	
649-21-6	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 50'	EA			2												2		2	
649-21-10	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 60'	EA			1												1		1	
649-21-21	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 78'	EA			1												1		1	
649-26-3	MAST ARM, REMOVE SHALLOW/COMPLETE FOUND, BOLT ON ATTACHMENT	EA			4												4		4	
650-1-24	TRAFFIC SIGNAL, FURNISH & INSTALL, POLY W/ALUM TOP, 3 SEC, 1 WAY	AS			9												9		9	
650-1-26	TRAFFIC SIGNAL, FURNISH & INSTALL, POLY W/ALUM TOP, 4 SEC, 1 WAY	AS			4												4		4	
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED CNTDWN, 1 WAY	AS			6												6		6	
653-1-12	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED CNTDWN, 2 WAY	AS			1												1		1	
660-1-101	LOOP DETECTOR INDUCTIVE, F&I, TYPE 1	EA			12												12		12	
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	EA			4												4		4	
660-2-102	LOOP ASSEMBLY - F&I, TYPE B	AS			10												10		10	
660-2-106	LOOP ASSEMBLY - F&I, TYPE F (40')	AS			6												6		6	
660-4-41	VIDEO DETECTION SYS-VIDEO, RELOCATE CABINET EQUIPMENT	EA			1												1		1	
660-4-42	VIDEO DETECTION SYS-VIDEO, RELOCATE ABOVE GROUND EQUIPMENT	EA			4												4		4	
665-1-11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA			8												8		8	
670-5-110	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA	AS			1												1		1	
670-5-600	TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET	AS	1		1												2		2	
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA			1												1		1	
700-3-201	SIGN PANEL, FURNISH & INSTALL, OVERHEAD MOUNT, UP TO 12 SF	EA			2												2		2	
700-5-22	INTERNALLY ILLUMINATED SIGN, F&I, OH MOUNT 12 - 18 SF	EA			4												4		4	
715-5-32	LUMINAIRE& BRACKET ARM-GALV STEEL, F&I, NEW LUM & ARM ON NEW/EXIST POLE	EA			4												4		4	

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

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
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80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

TABULATION OF QUANTITIES

SHEET NO. T-3

GENERAL

1. Unless otherwise noted all removed equipment shall be turned over to Seminole County Traffic Engineering at 140 Bush Loop, Sanford, FL as directed by the engineer, except concrete poles or foundations, which shall be disposed of by the contractor. Contractor to notify Seminole County Traffic Engineering Charles Wetzel at 407-665-5686 2 business days prior to beginning construction. Mast arms that are removed shall be delivered to Seminole County Traffic Engineering at 140 Bush Loop, Sanford, FL.

2. The Contractor is required to inspect the installation of the traffic signals. The Contractor shall coordinate the final acceptance inspection with the engineer at least ten days in advance. Seminole County Traffic Engineering and FDOT Traffic Signal Quality Assurance Manager at (386) 943-5318 should be contacted ten days before the inspection is to be performed so they may be present.

CONTROLLER

1. The controller assembly shall consist of a NEMA TS2 cabinet type 6 with a TS 2 Type 2 controller. The controller assembly shall have all necessary hardware to communicate with Seminole County Traffic Engineering signal system. Any additional equipment and/or accessories required for the termination and operation of the fiber optic interconnect cable shall be furnished and installed as part of the controller assembly.

2. The controller cabinet shall be oriented so that the door opens away from the intersection.

3. The controller shall revert to time based coordination upon disconnecting the coordinating unit when loops are available on the non-coordinated approaches.

SIGNAL CABLE, LOOPS, CONDUIT, & PULL BOXES

1. Delay times for loops marked "delay" shall be set to 5 seconds. All others shall be set to zero.

2. The far advanced Type "B" loops are to be wired to the system panel and shall function as both system loops and advanced loops. Additionally, each "B" loop shall have a separate detector channel.

3. The 40' Type "F" loops shall be placed 5' in front of stop bar.

MAST ARMS

1. If a continuous run of signal cable is not possible from the cabinet to the signal head, then a terminal block shall be used to connect cables at the signal pole hand hole. At least 6' of slack cable shall be available for troubleshooting.

2. For miscellaneous structures that have been completed and scheduled for acceptance, the Contractor shall contact District Five Structures Maintenance Office at (386) 740 3463 one month prior to completion of project to schedule an inspection of structures including cable signs, cantilever signs, truss signs, high mast light poles, ITS, DMS and traffic signal mast arms.

PAY ITEM NOTES

1. Pay item number 633-3-15 includes factory terminal fiber optic jumpers as required to provide the connections indicated in the plans.

2. Pay item numbers 634-4-600 and 642-1-80, and 670-5-600 includes the removal of the existing signal at SR 46 and Longwood Markham Rd (See TCP Plans).

3. Pay item numbers 660-4-41 and 660-4-42 to relocate existing Adaptive System cameras and cabinet equipment to new mast arms and new cabinet including new cable for rewiring.

4. Pay item number 700-5-22 shall include a master photocell mounted near the electric service within reach of a lift truck. Photocell shall be installed where streetlights do not affect operation.

5. Pay item 715-5-32 to include conductors in the mast arm to the pull box for the luminaire to tie into the lighting circuit. See lighting plans sheet L-13 for conductor size.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
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80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

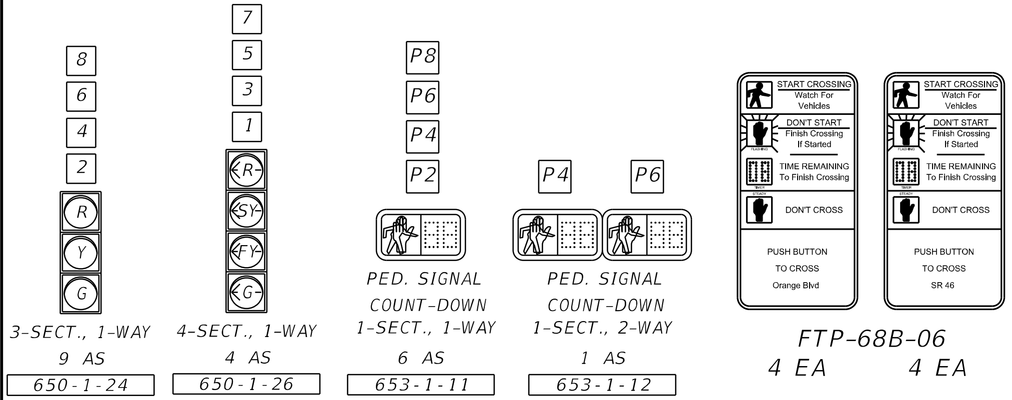
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

GENERAL NOTES

SHEET NO. T-4

$USER$ $DATE$ $TIME$ $FILE$



8
6
4
2
R
Y
G
3-SECT., 1-WAY
9 AS
650-1-24
7
5
3
1
R
SY
FY
G
4-SECT., 1-WAY
4 AS
650-1-26
P8
P6
P4
P2
PED. SIGNAL
COUNT-DOWN
1-SECT., 1-WAY
6 AS
653-1-11
P4
P6
PED. SIGNAL
COUNT-DOWN
1-SECT., 2-WAY
1 AS
653-1-12
START CROSSING Watch For Vehicles
DON'T START Finish Crossing If Started
TIME REMAINING To Finish Crossing
DON'T CROSS
PUSH BUTTON TO CROSS Orange Blvd
PUSH BUTTON TO CROSS SR 46
FTP-68B-06
4 EA
4 EA

(A) **SR 46** 2 EA (B) **Orange Blvd** 2 EA

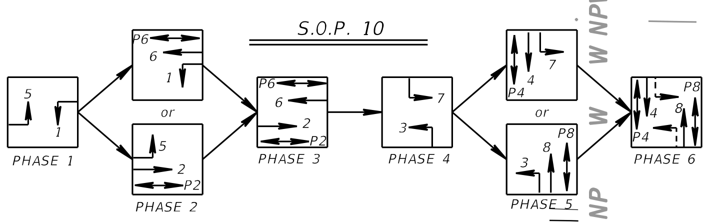
700-5-22

INTERNALLY ILLUMINATED SIGNS SHALL BE DOUBLE SIDED

LEFT TURN YIELD ON FLASHING YELLOW ARROW (C) FTP-85-13

700-3-201 2 EA

S.O.P. 10

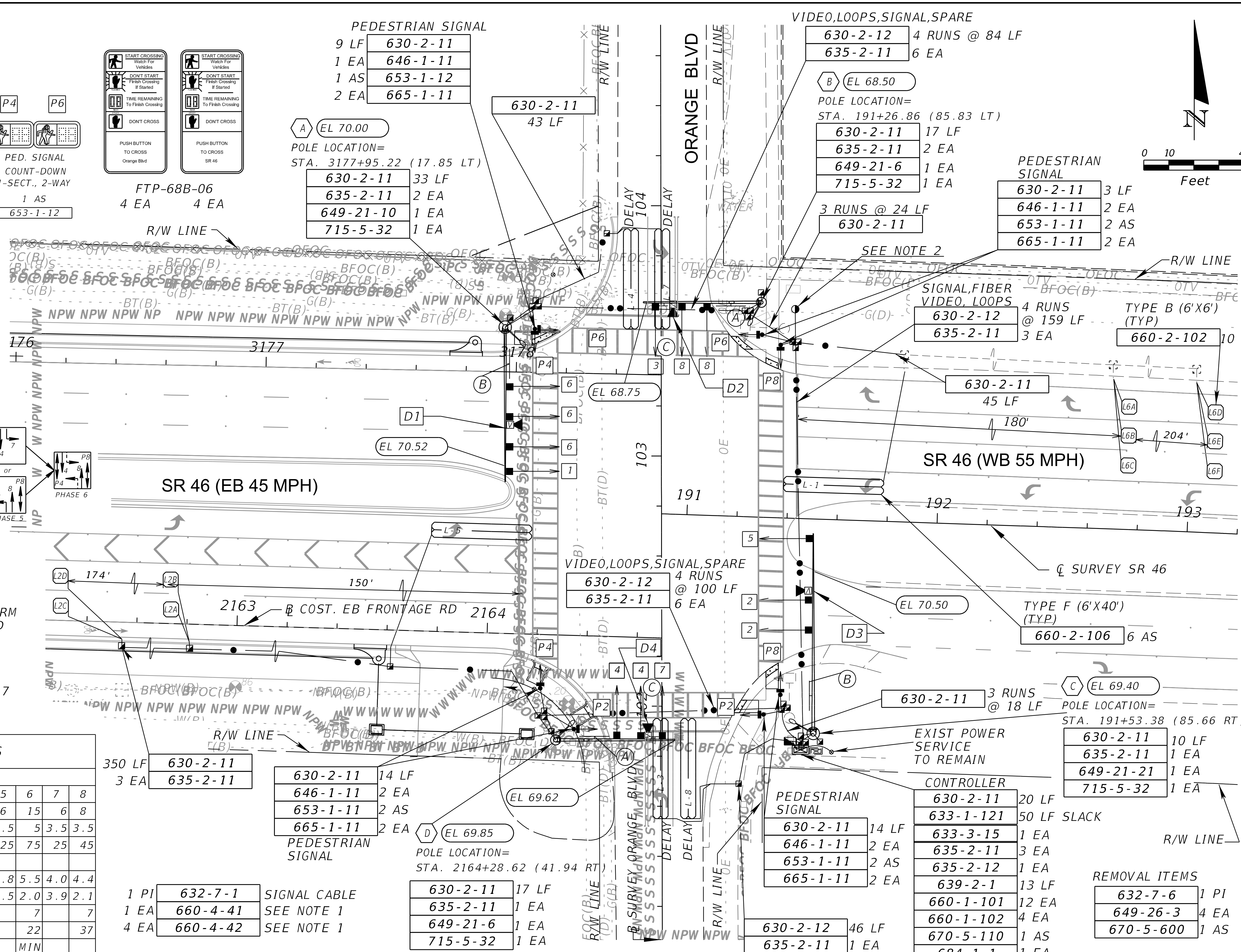


NOTES:

1. ELEVATIONS FOR POLES 'C' AND 'D' FOUNDATIONS INCLUDE THE 6" ABOVE PROPOSED GROUND ELEVATION.
2. SEE SHEET T-6 AND T-9 FOR FIBER DETAILS
3. LUMINAIRE: ONE PULL BOX BY MAST ARM POLE IS FOR LUMINAIRE TO BE WIRED WITH THE LIGHTING CIRCUIT. LUMINAIRE TO BE 45° TO MAST ARM.
4. LEFT TURN 4 SECTION SIGNAL HEADS TO RUN PROTECTIVE ONLY FOR MOVEMENTS 1 & 5. MOVEMENTS 3 & 7 TO RUN PROTECTIVE/PERMISSIVE.

CONTROLLER TIMINGS

		1	2	3	4	5	6	7	8
TIMING FUNCTION									
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
TIMING FUNCTION	MINIMUM GREEN	6	15	6	8	6	15	6	8
	EXTENSION	3.5	5	3.5	3.5	3.5	5	3.5	3.5
	MAXIMUM GREEN 1	25	75	25	45	25	75	25	45
	MAXIMUM GREEN 2								
	YELLOW CLEARANCE	5.5	4.8	4.4	4.0	4.8	5.5	4.0	4.4
	ALL RED	3.4	2.0	4.1	2.5	3.5	2.0	3.9	2.1
	PEDESTRIAN WALK		7		7		7		7
	PED. CLEARANCE		19		38		22		37
	RECALL		MIN				MIN		



PEDESTRIAN SIGNAL
9 LF 630-2-11
1 EA 646-1-11
1 AS 653-1-12
2 EA 665-1-11
(A) EL 70.00
POLE LOCATION=
STA. 3177+95.22 (17.85 LT)
630-2-11 33 LF
635-2-11 2 EA
649-21-10 1 EA
715-5-32 1 EA
630-2-11
43 LF
ORANGE BLVD
VIDEO,LOOPS,SIGNAL,SPARE
630-2-12 4 RUNS @ 84 LF
635-2-11 6 EA
(B) EL 68.50
POLE LOCATION=
STA. 191+26.86 (85.83 LT)
630-2-11 17 LF
635-2-11 2 EA
649-21-6 1 EA
715-5-32 1 EA
3 RUNS @ 24 LF
630-2-11
SEE NOTE 2
PEDESTRIAN SIGNAL
630-2-11 3 LF
646-1-11 2 EA
653-1-11 2 AS
665-1-11 2 EA
0 10 40
Feet
R/W LINE
SIGNAL,FIBER VIDEO, LOOPS
630-2-12 4 RUNS @ 159 LF
635-2-11 3 EA
TYPE B (6'X6') (TYP)
660-2-102 10 AS
630-2-11
45 LF
180'
204'
SR 46 (WB 55 MPH)
SR 46 (EB 45 MPH)
D1
EL 70.52
EL 68.75
D2
103
191
192
193
3177
3178
176
174'
150'
2163
2164
℄ COST. EB FRONTAGE RD
℄ SURVEY SR 46
VIDEO,LOOPS,SIGNAL,SPARE
630-2-12 4 RUNS @ 100 LF
635-2-11 6 EA
EL 70.50
D3
TYPE F (6'X40') (TYP)
660-2-106 6 AS
D4
630-2-11 3 RUNS @ 18 LF
(C) EL 69.40
POLE LOCATION=
STA. 191+53.38 (85.66 RT)
630-2-11 10 LF
635-2-11 1 EA
649-21-21 1 EA
715-5-32 1 EA
EXIST POWER SERVICE TO REMAIN
CONTROLLER
630-2-11 20 LF
633-1-121 50 LF SLACK
633-3-15 1 EA
635-2-11 3 EA
635-2-12 1 EA
639-2-1 13 LF
660-1-101 12 EA
660-1-102 4 EA
670-5-110 1 AS
684-1-1 1 EA
R/W LINE
REMOVAL ITEMS
632-7-6 1 PI
649-26-3 4 EA
670-5-600 1 AS
350 LF 630-2-11
3 EA 635-2-11
630-2-11 14 LF
646-1-11 2 EA
653-1-11 2 AS
665-1-11 2 EA
PEDESTRIAN SIGNAL
EL 69.62
(D) EL 69.85
POLE LOCATION=
STA. 2164+28.62 (41.94 RT)
630-2-11 17 LF
635-2-11 1 EA
649-21-6 1 EA
715-5-32 1 EA
PEDESTRIAN SIGNAL
630-2-11 14 LF
646-1-11 2 EA
653-1-11 2 AS
665-1-11 2 EA
630-2-12 46 LF
635-2-11 1 EA
1 PI 632-7-1 SIGNAL CABLE
1 EA 660-4-41 SEE NOTE 1
4 EA 660-4-42 SEE NOTE 1
R/W LINE
DELAY
104

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

SIGNALIZATION PLAN
SR 46 AT ORANGE BLVD

SHEET NO. T-5

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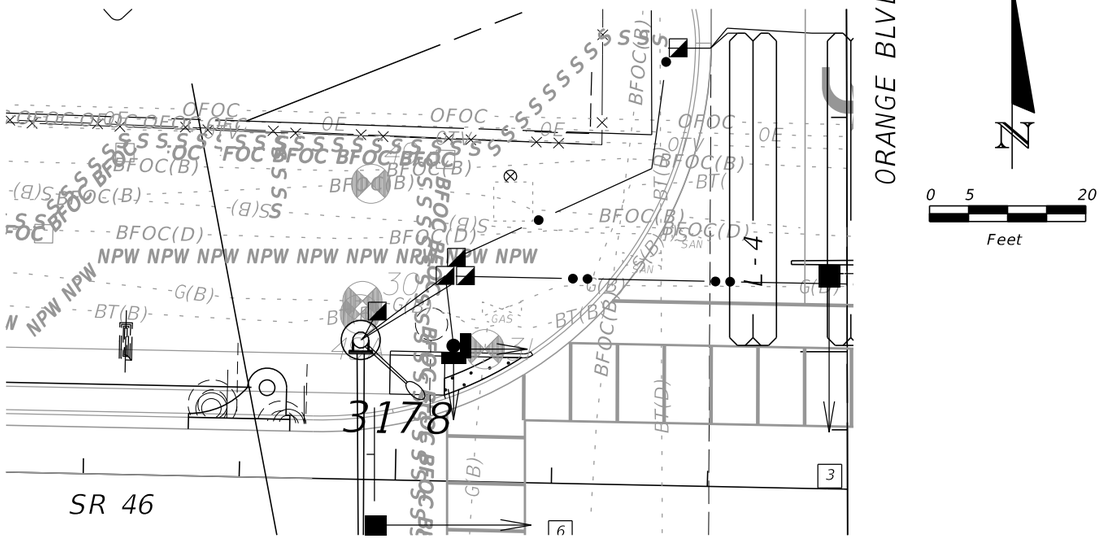
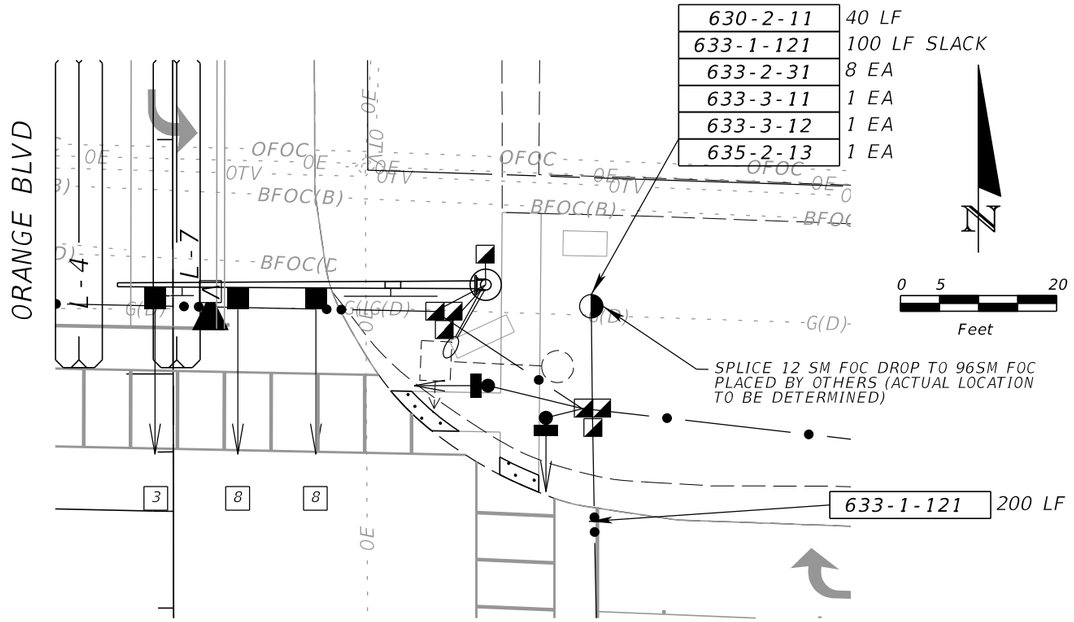
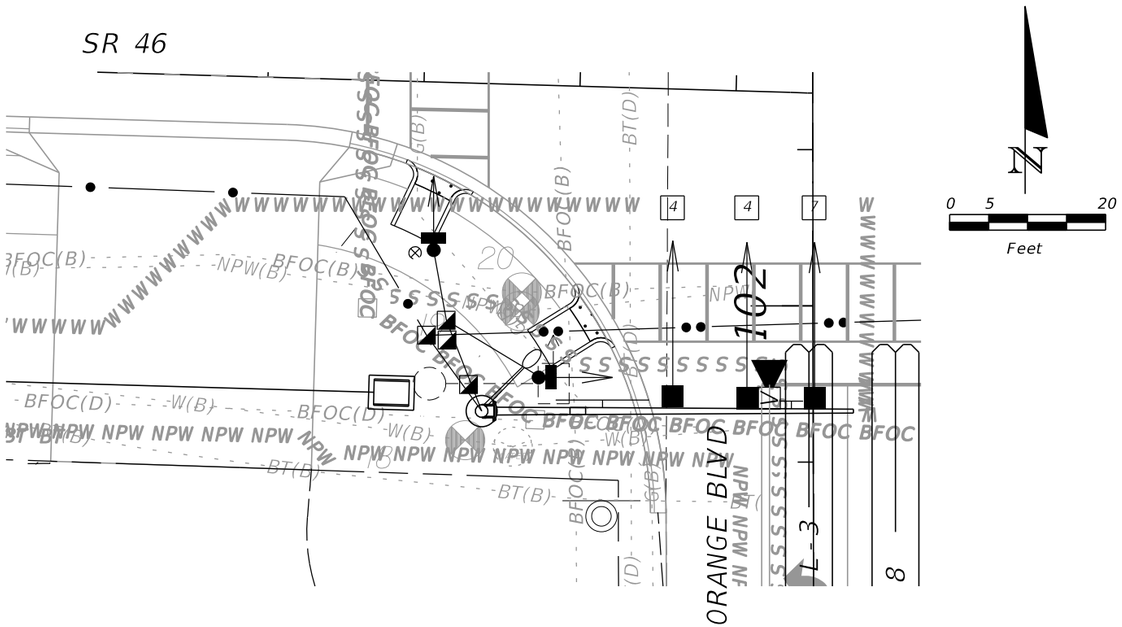


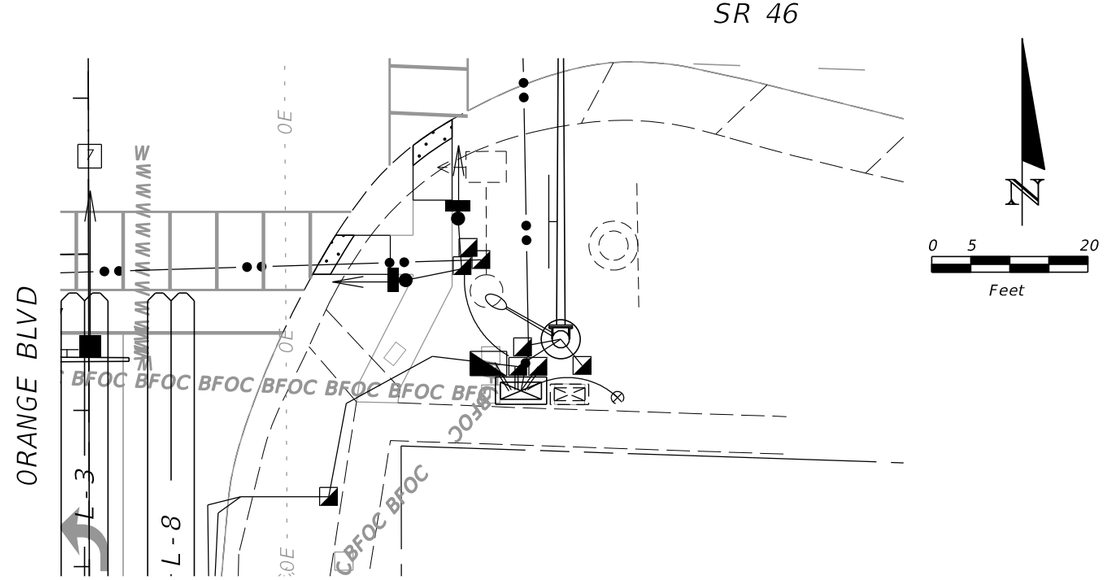
POLE A



POLE B



POLE D



POLE C

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
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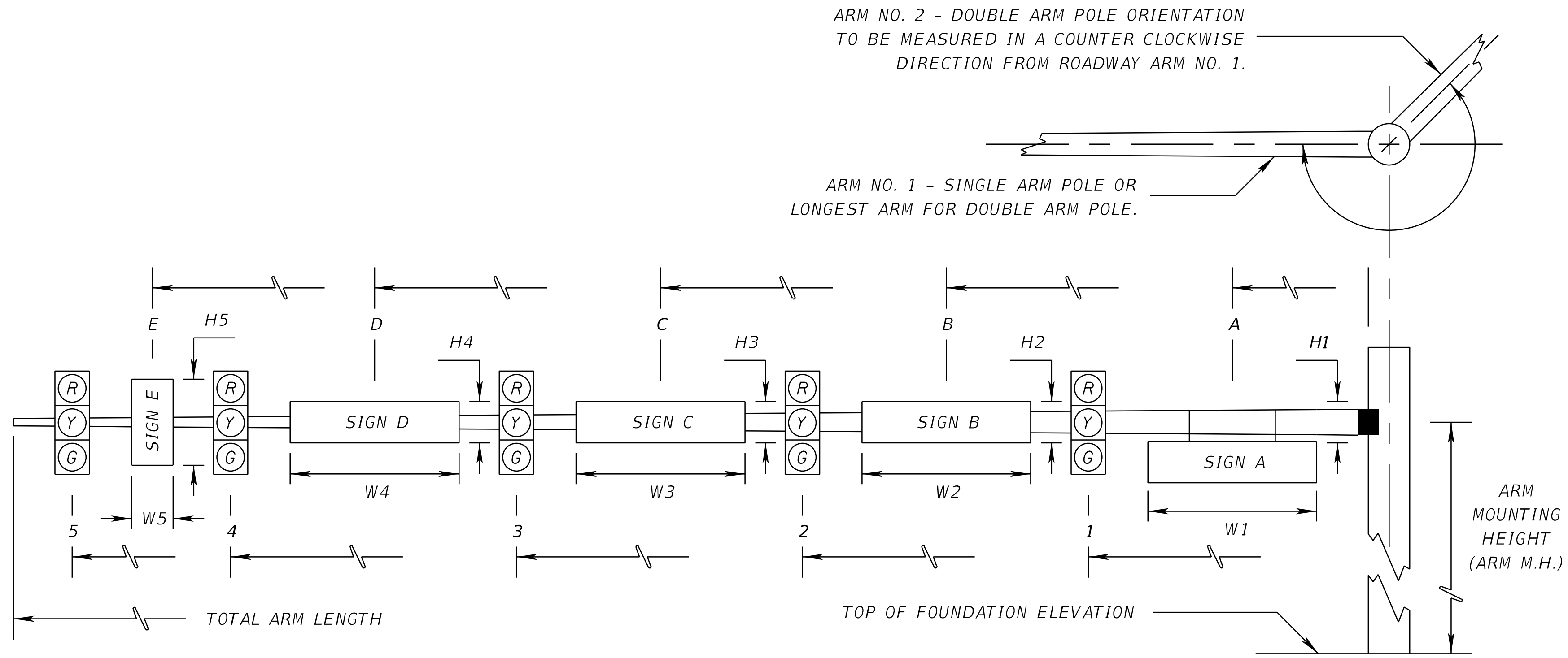
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

SIGNAL DETAILS
SR 46 & ORANGE BLVD

SHEET NO. T-6



SPECIAL INSTRUCTIONS

ID NO.	PED. BUTTON		PED. SIGNALS		HANDHOLE LOCATION

* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

						SIGNAL DATA			DISTANCE FROM POLE													SIGN DATA: DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN															
ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF FOUND. ELEVATION	RDWY ARM NO.	CROWN ELEV.	SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	1	*	2	*	3	*	4	*	5	*	TOTAL ARM LENGTH	ARM M.H.	ANGLE BETWEEN DUAL ARMS 90/270	A	H1	W1	B	H2	W2	C	H3	W3	D	H4	W4	E	H5	W5	PAINT COLOR
A	T-5	3177+95.22	70.00	1	70.52	V	Y	N	22.5	3	34.5	3	46.5	3	56.0	4			60	21.5		14	2	8										53	3	2.5	BLACK
				2																																	
B	T-5	191+26.86	68.50	1	68.75	V	Y	N	20.0	3	30.0	3	41.0	4					45	21.5		11	2	6										38	3	2.5	BLACK
				2																																	
C	T-5	191+53.38	69.40	1	70.50	V	Y	N	40.0	3	52.0	3	64.0	3	76.0	4			78	22		14	2	8										71.5	3	2.5	BLACK
				2																																	
D	T-5	2164+28.62	69.85	1	69.62	V	Y	N	22.5	3	32.0	3	41.0	4					45	21.5		13	2	6										38	3	2.5	BLACK
				2																																	
				1																																	
				2																																	
				1																																	
				2																																	
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				2																																	
				1																																	
				2																																	
				1																																	
				2																																	
				1																																	
				2																																	

NOTES:

1. TOP OF FOUNDATION ELEVATION FOR POLES 'C' AND 'D' INCLUDE 6" ABOVE FINAL GRADE.
2. ID NO. C - SIGNAL HEAD 3 WIRE FOR FUTURE SIGNAL HEAD.
3. COLOR BLACK IS FED STD 595-17038.
4. MOUNTING HEIGHTS ARE BASED ON ZERO DEGREE LOADED RAKE FOR THE MAST ARM.
5. SIGNS FOR LOCATION E ON POLE ID NO. A & B ARE FOR FUTURE SIGNS.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

STANDARD MAST ARM TABULATION

SHEET NO. T-7

SPECIAL MAST ARM ASSEMBLIES DATA TABLE

Table Date 01-01-12

NUMBER OF LOCATIONS	STRUCTURE NUMBER	FIRST ARM				FIRST ARM EXTENSION				SECOND ARM				SECOND ARM EXTENSION				POLE						
		FA(ft)	FB(in)	FC(in)	FD(in)	FE(ft)	FF(in)	FG(in)	FH(in)	SA(ft)	SB(in)	SC(in)	SD(in)	SE(ft)	SF(in)	SG(in)	SH(in)	UA(ft)	UB(ft)	UC(in)	UD(in)	UE(in)	UF(deg)	UG(ft)
1	POLE A	34.5	7.13	12	0.25	27.5	11.2	15	0.375	0	0	0	0	0	0	0	0	25	21.5	14.5	18	0.375	0	37.2
1	POLE B	26.5	8.23	11.9	0.25	20.5	11.2	14	0.313	0	0	0	0	0	0	0	0	25	21.5	14.5	18	0.375	0	37.2
1	POLE C	38	7.61	12.9	0.25	42	12.2	18	0.375	0	0	0	0	0	0	0	0	25	22	18.5	22	0.375	0	37.2
1	POLE D	26.5	8.23	11.9	0.25	20.5	11.2	14	0.313	0	0	0	0	0	0	0	0	25	21.5	14.5	18	0.375	0	37.2

SPECIAL MAST ARM ASSEMBLIES DATA TABLE (CONT.)

Table Date 01-01-12

STRUCTURE NUMBER	FIRST ARM CONNECTION (in)					First Arm Camber Angle = 2 Degrees						SECOND ARM CONNECTION (in)					Second Arm Camber Angle = 2 Degrees					
	#Bolts	HT	FJ	FK	FL	FN	FO	FP	FR	FS	FT	#Bolts	HT	SJ	SK	SL	SN	SO	SP	SR	SS	ST
POLE A	6	22	27	3	0.75	0.5	13.5	1.25	2	8.5	0.5	0	0	0	0	0	0	0	0	0	0	0
POLE B	6	22	27	3	0.75	0.313	13.5	1.25	2	8.5	0.313	0	0	0	0	0	0	0	0	0	0	0
POLE C	6	30	36	3	0.75	0.438	15.5	1.25	2	12.5	0.438	0	0	0	0	0	0	0	0	0	0	0
POLE D	6	22	27	3	0.75	0.313	13.5	1.25	2	8.5	0.313	0	0	0	0	0	0	0	0	0	0	0

SPECIAL MAST ARM ASSEMBLIES DATA TABLE (CONT.)

Table Date 07-01-15

STRUCTURE NUMBER	POLE BASE CONNECTION (in)					SHAFT AND REINF.								LUMINAIRE AND LUMINAIRE CONNECTION									
	#Bolts	BA	BB	BC	BF	DA(ft)	DB(ft)	RA	RB	RC	RD(in)	RE	RF(in)	LA(ft)	LB(ft)	LC(in)	LD(in)	LE	LF(ft)	LG(in)	LH(in)	LJ(in)	LK(in)	LL(deg)
POLE A	6	34	2.5	2	40	31	4.5	11	15	12	8	0	0	40	12	3	0.125	0.46	8	0.5	0.75	0.25	0.25	68
POLE B	6	30	2.5	1.5	30	28	4	11	12	12	8	0	0	40	12	3	0.125	0.46	8	0.5	0.75	0.25	0.25	58
POLE C	6	38	2.5	2	40	35.5	4.5	11	15	12	8	0	0	40	12	3	0.125	0.46	8	0.5	0.75	0.25	0.25	42
POLE D	6	32	2.5	1.75	35	25.5	4.5	11	15	12	8	0	0	40	12	3	0.125	0.46	8	0.5	0.75	0.25	0.25	39

NOTES [Notes Date 07-01-13]:
1. Work with Index 17745.
2. Design Wind Speed = 150 mph

FOUNDATION NOTES [Notes Date 01-01-12]:
1. Design based on Borings taken sealed by Geotechnical and Environmental Consultants, Inc.
2. Assumptions and Values used in design:
   Soil Type = Sand
   Soil Layer Thickness = 40 ft.
   Soil Friction Angle = 32 deg. (Poles A and C), 30 deg. (Poles B and D)
   Soil Weight = 52.60 pcf (Poles A and C), 47.60 pcf (Poles B and D)
   Design Water Table is 0 ft. below surface

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

IDA
CONSULTING ENGINEERS, INC.
800 N. Magnolia Ave., Suite 1402
Orlando, FL 32803 (407) 540-1410
Cert. of Auth. # 8171
Kevin B. Fischer License # 60074

DRAWN BY: KBF 04-17
CHECKED BY: TTW 04-17
DESIGNED BY: KBF 04-17
CHECKED BY: TTW 04-17

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

SHEET TITLE: STANDARD MAST ARM ASSEMBLIES DATA TABLE

REF. DWG. NO.:

PROJECT NAME: WEKIVA PARKWAY (SR 429) SECTION 7A

SHEET NO.: T-8

NSassani 7/24/2017 3:03:59 PM Z:\CADD\24020025201\IDA\struct\Misc_Structures\signals\B1DataTable01.dgn

96 SM FIBER OPTIC CABLE (UNDERGROUND) (BY OTHERS)

96 SM FIBER OPTIC CABLE (UNDERGROUND) (BY OTHERS)

SM BLUE

SM ORANGE
SM GREEN
SM BROWN
SM SLATE
SM WHITE
SM RED
SM BLACK

SR 46 WEST

SR 46 EAST

PROPOSED FIBER OPTIC SPLICE BOX

SPLICE ENCLOSURE

12 SM FOC

PROPOSED FIBER OPTIC PULL BOX

BLUE	R2	T1	BLUE
ORANGE	T2	RI	ORANGE
GREEN	(SPARE)	(SPARE)	GREEN
BROWN	(SPARE)	(SPARE)	BROWN
SLATE			SLATE
WHITE			WHITE
RED			RED
BLACK			BLACK
YELLOW			YELLOW
VIOLET			VIOLET
ROSE			ROSE
AQUA			AQUA

PROPOSED PATCH PANEL

PROPOSED SM JUMPERS

1	BLUE
2	ORANGE
3	GREEN
4	BROWN
5	SLATE
6	WHITE
7	RED
8	BLACK
9	YELLOW
10	VIOLET
11	ROSE
12	AQUA

FIBER RI
FIBER TI
FIBER R2
FIBER T2
RJ 45
RJ 45
RJ 45

CAT 5E STP

PROPOSED TRAFFIC CONTROLLER (NEMA TS2-TYPE 2)

PROPOSED MANAGED FIELD ETHERNET SWITCH (LAYER 2)

PROPOSED TRAFFIC CONTROLLER CABINET
SR 46 AND ORANGE BLVD

LEGEND

⊠ BREAK EXISTING FUSION SPLICE	SM SINGLE MODE
● FUSION SPLICE (PROPOSED)	MM MULTI MODE
○ FUSION SPLICE (EXISTING)	——— FIBER
⊣ UNTERMINATED FIBER	— — — EXISTING FIBER

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

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

ALEXANDER TEAL MIMS, P.E. PE No. 77095
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DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

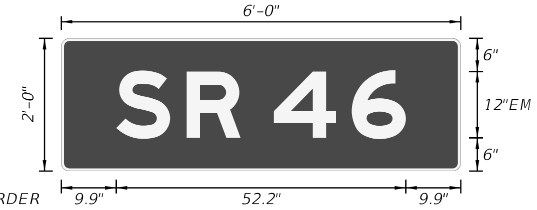
SPLICING DIAGRAM
SR 46 & ORANGE BLVD

SHEET NO. T-9

SIGN NAME	A	QTY	2	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	6'-0"	WIDTH	0.5"		
HEIGHT	2'-0"	RADII	1.5"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER		CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



BORDER
R=1.5"
TH=0.5"

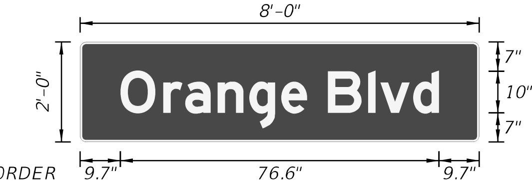
Panel Style: Street Name 6-3in.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

SIGN NAME	B	QTY	2	SIGN NUMBER	STATION(S)
PANEL		BORDER			none
WIDTH	8'-0"	WIDTH	0.5"		
HEIGHT	2'-0"	RADII	1.5"		
LEGEND	White	COLOR	White		
COLOR	Green				

SYMBOL(S)	ANGLE	X	Y	WID	HT

SIGN NUMBER		CLEARANCE Edge Of Lane	COLUMN SIZE		AVERAGE LENGTH



BORDER
R=1.5"
TH=0.5"

Panel Style: Street Name 6-3in.ssi
M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE	

Sign A:

COPY		S	R		4	6		L
SPACE	9.9	12.7	9.7	6	14	9.7	9.9	52.2
COPY								
SPACE								
COPY								
SPACE								
COPY								
SPACE								
COPY								
SPACE								
COPY								
SPACE								

Sign B:

COPY		O	r	a	n	g	e		B	l	v	d		L
SPACE	9.7	10.3	5.3	7.8	7.6	7.7	6.2	5	9.7	2.9	7.9	6.2	9.7	76.6
COPY														
SPACE														
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SPACE														

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

SUSANNE S. HERTZ, P.E. PE No. 49486
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DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

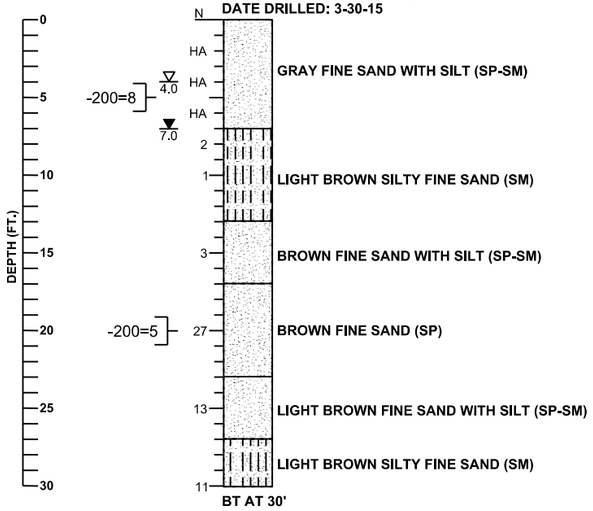
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

GUIDE SIGN WORKSHEET

SHEET NO.
T-10

MASP A (2164+04, 122' LEFT)

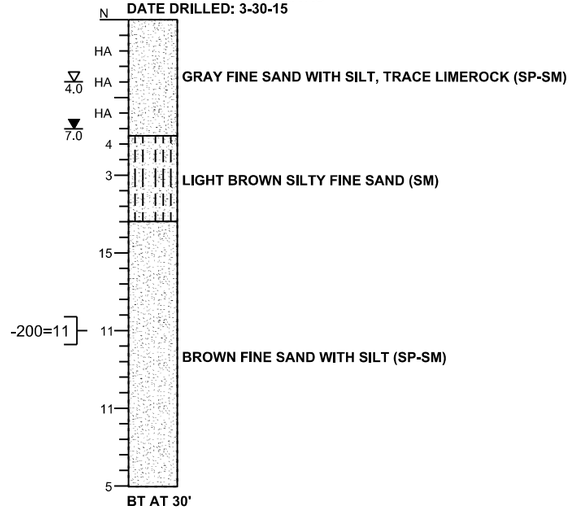
SB-14
STA. 103+52, 62' LEFT
LAT: N28.81207
LONG: W81.36324
HAMMER TYPE: AUTOMATIC
DATE DRILLED: 3-30-15



BT AT 30'

MASP B (191+27, 86' LEFT)

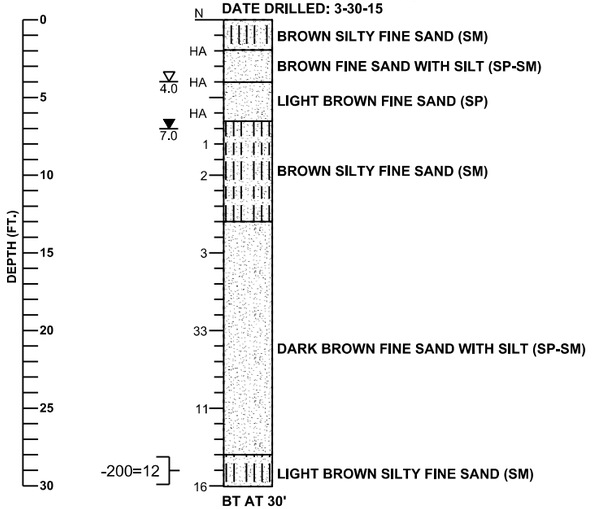
SB-15
STA. 103+57, 55' RIGHT
LAT: N28.81209
LONG: W81.36287
HAMMER TYPE: AUTOMATIC
DATE DRILLED: 3-30-15



BT AT 30'

MASP C (191+53, 86' RIGHT)

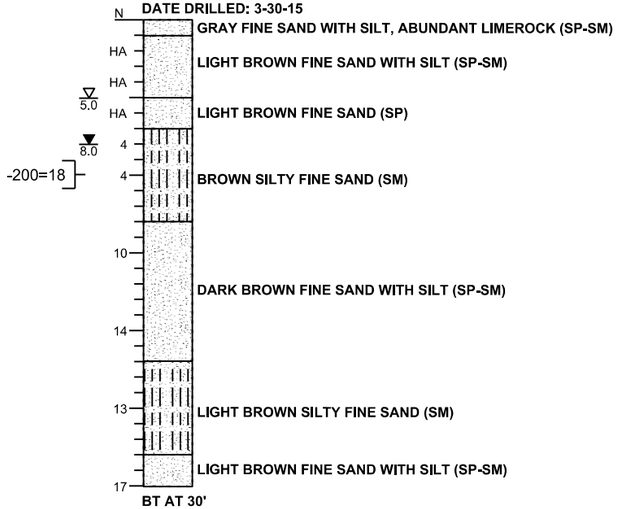
SB-16
STA. 101+93, 71' RIGHT
LAT: N28.81164
LONG: W81.36282
HAMMER TYPE: AUTOMATIC
DATE DRILLED: 3-30-15



BT AT 30'

MASP D (2164+29, 42' RIGHT)

SB-17
STA. 101+76, 42' LEFT
LAT: N28.81159
LONG: W81.36317
HAMMER TYPE: AUTOMATIC
DATE DRILLED: 3-30-15



BT AT 30'

LEGEND

N	STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
HA	HAND AUGERED FOR UTILITY CLEARANCE
▽ 4.0	ESTIMATED SEASONAL HIGH GROUNDWATER DEPTH (FT.)
▼ 7.0	ENCOUNTERED GROUNDWATER DEPTH (FT.) ON DATE DRILLED
BT	BORING TERMINATED AT DEPTH INDICATED
-200=	PERCENT PASSING NO. 200 U.S. STANDARD SIEVE

SAND

SAND AND SILT

GENERAL NOTES

SUBSURFACE CONDITIONS SHOWN ON THE BORINGS REPRESENT THE CONDITIONS ENCOUNTERED AT THE BORING LOCATIONS. ACTUAL CONDITIONS BETWEEN THE BORINGS MAY VARY FROM THOSE SHOWN. UNIFIED SOIL CLASSIFICATIONS SHOWN ON THE BORINGS ARE BASED ON VISUAL EXAMINATION AND THE LABORATORY TESTING SHOWN.

STANDARD PENETRATION TEST BORINGS WERE PERFORMED IN ACCORDANCE WITH ASTM D-1586. STANDARD PENETRATION RESISTANCES ARE SHOWN ON THE BORINGS AT THE TEST DEPTHS IN IN BLOWS PER FOOT UNLESS OTHERWISE NOTED.

THE BORING LOCATIONS WERE ESTABLISHED IN THE FIELD USING SUB-METER ACCURACY GPS UNIT (TRIMBLE GEO 7X). BORING LOCATIONS REFERENCE THE ORANGE BOULEVARD CENTERLINE.

BASED ON REVIEW OF THE U.S. GEOLOGICAL SURVEY MAP ENTITLED "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER IN ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND VICINITY, FLORIDA, SEPTEMBER 2008" FOR THE PROJECT AREA, THE MAXIMUM ELEVATION OF THE ARTESIAN HEAD IS ESTIMATED TO BE +29 FT. NAVD88. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +29 FT. NAVD88.

SPLIT SPOON SAMPLER:
INSIDE DIAMETER: 1.375 IN.
OUTSIDE DIAMETER: 2.0 IN.
AVERAGE HAMMER DROP: 30 IN.
HAMMER WEIGHT: 140 LBS.
HAMMER TYPE: AUTOMATIC

CORRELATION OF STANDARD PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY OF SOIL

GRANULAR SOILS	AUTOMATIC HAMMER N VALUE (blows per foot)	RELATIVE DENSITY
SANDS	0-3	VERY LOOSE
	3-8	LOOSE
	8-24	MEDIUM DENSE
	24-40	DENSE
	OVER 40	VERY DENSE

NON-GRANULAR SOILS	AUTOMATIC HAMMER N VALUE (blows per foot)	CONSISTENCY
SILTS, CLAYS, MUCK, PEAT	0-1	VERY SOFT
	1-3	SOFT
	3-6	FIRM
	6-12	STIFF
	12-24	VERY STIFF
	OVER 24	HARD

SB-15 / SB-16
SECTION: 30
TOWNSHIP: 19 SOUTH
RANGE: 30 EAST

SB-14 / SB-17
SECTION: 25
TOWNSHIP: 19 SOUTH
RANGE: 29 EAST

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC.
919 Lake Baldwin Lane
Orlando, FL 32814
T 407-898-1818 F 407-898-1837
Certificate of Authorization No. 5882
DANIEL C. STANFILL PE NO. 42763

DRAWN BY:	SKR
CHECKED BY:	DCS 42763
DESIGNED BY:	CGB 71571
CHECKED BY:	CGB 71571

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	SEMINOLE	240200-2-52-01

SHEET TITLE: REPORT OF SPT BORINGS

REF. DWG. NO.

PROJECT NAME: WEKIVA PARKWAY SECTION 7A

SHEET NO. T-11

Scott 7/20/2017 5:04:16 PM J:\D109\3520G Wekiva Parkway Section 7A\b1boring18.dgn