LAKE COUNTY, FLORIDA



DEPARTMENT OF PUBLIC WORKS

ENGINEERING DIVISION

350 N. SINCLAIR AVE. **TAVARES, FLORIDA 32778**

INDEX OF SIGNALIZATION PLANS

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FINANCIAL PROJECT ID 443511-1-58-01 F. A. NO.

SIGNALIZATION PLANS

CR 452 AND CR 44

Opal Ln 44 Fort Mason HILLCREST PARK

PROJECT LOCATION

wo: 37830712 DATE: 2/26/2021 REV3

Gonzalo A. Guillen

Engineer II (E.I.) | Major Projects - Central

GGUILL1@DUKE-ENERGY.COM

Office: 407-464-1281 Cell: 407-280-3465

SIGNALIZATION SHOP DRAWINGS TO BE SUBMITTED TO:

CHRIS J. WALSH, PE No. 57626

Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778

PLANS PREPARED BY:

Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778

> NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

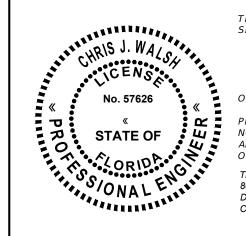
SUBMITTAL: 60%

DATE: SEPTEMBER 2020

SIGNALIZATION PLANS ENGINEER OF RECORD: CHRIS J. WALSH, P.E.

P.E. NO.: 57626

SHEET NO.



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL

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TRAFFIC ENGINEERING DATA SOLUTIONS, INC. 80 SPRING VISTA DRIVE DEBARY, FLORIDA 32713 CHRIS J. WALSH, P.E. NO: 57626

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

KEY SHEET T-1

T-2 T-3 SIGNATURE SHEET TABULATION OF QUANTITIES

T-4 GENERAL NOTES T-5 SIGNALIZATION PLAN SIGNAL DETAILS

T-6 - T-7 GUIDE SIGN WORKSHEET THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

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SIGNATURE SHEET T-2 T-101 SOIL BORING REPORT THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

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> SIGNATURE SHEET T-2 T-10 STRAIN POLE SCHEDULE

REVISIONS CHRIS J. WALSH, P.E. DATE DESCRIPTION DATE DESCRIPTION Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558
DeBary, FL 32713 Fax: 386.753.0778
CERTIFICATION OF AUTHORIZATION # 27392





DEPARTMENT OF PUBLIC WORKS **ENGINEERING DIVISION** 350 N. SINCLAIR AVE. TAVARES, FLORIDA 32778

SIGNATURE SHEET

SHEET NO.

PAY ITEM NO.	DESCRIPTION	UNIT	т	-5						1			TOT THIS S	
			PLAN	FINAL	PLAN	FINAL								
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	45										45	
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVE GROUND	LF	20										20	1
632-7-1	SIGNAL CABLE, NEW OR RECONSTRUCTED INTERSECTION, F&I	PI	1										1	1
634-4-153	SPAN WIRE ASSEMBLY, F&I, TWO POINT, BOX OR DROP BOX	PI	1										1	
635-2-11	PULL & SPLICE BOX, F&I, 13"x24" COVER SIZE	EA	2										2	
635-2-13	PULL & SPLICE BOX, F&I, 30"x60" RECTNGLR CVR SIZE	EA	1										1	
639-1-112	ELECTRICAL POWER SERVICE, F&I, OH METER PURCHSD BY CONTRACTOR FROM POWER COMPANY	AS	1										1	
639-2-1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	XX											1
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA	1										1	
641-2-18	PRESTRESSED CONCRETE POLE, F&I, TYPE P-VIII	EA	4										4	
641-2-70	PRESTRESS CONC POLE, SHALLOW POLE REM- POLE 30' AND GREATER	EA	2										2	ĺ
650-1-14	TRAFFIC SIGNAL, F&I, ALUMINUM, 3 SECTION, 1 WAY	AS	9										9	
650-1-16	TRAFFIC SIGNAL, F&I, ALUMINUM, 4 SECTION, 1 WAY	AS	1										1	
660-4-11	VEHICLE DET SYS, VIDEO, F&I, CABINET EQUIPMENT	EA	1										1	
660-4-12	VEHICLE DET SYS, VIDEO, F&I, ABOVE GROUND EQUIPMENT	EA	6										6	
663-1-111	SIGNAL PRIORITY & PREEMPTION SYS, F&I, OPTICAL, CAB ELECTRONICS	EA	1										1	
663-1-112	SIGNAL PRIORITY AND PREEMPTION SYSTEM, F&I, OPTICAL, DETECTOR	EA	4										4	
670-5-111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS	1										1	
670-5-600	TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET	AS	1										1	
700-5-22	INTERNALLY ILLUMINATED SIGN, F&I, OH MOUNT 12-18 SF	EA	4										4	
715-5-31	LUM & BRACKET ARM- ALUM, F&I NEW LUM AND ARM ON NEW/EXIST POLE	EA	3										3	
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TABULATION OF QUANTITIES

	REVI			
DATE	DESCRIPTION	DATE	DESCRIPTION	-F1885
				CHRIS J. WALSH, P.E. PE No. 5762 Traffic Engineering Data Solutions, In
				80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392
				CERTIFICATION OF HOTHORIZITION # 27572



DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
350 N. SINCLAIR AVE.
TAVARES, FLORIDA 32778

TABULATION OF QUANTITIES

SHEET NO.

GENERAL NOTES:

- A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH LAKE COUNTY TRAFFIC OPERATIONS, (352) 742-1766, PRIOR TO ANY CONSTRUCTION.
 IT SHALL BE NOTED THAT NO TEST BORINGS BE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS PRIOR TO SUBMITTING BID PROPOSALS.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING LAKE COUNTY TRAFFIC OPERATIONS, AT (352) 742-1766, 48 HOURS IN ADVANCE OF ALL PHASES OF CONSTRUCTION INCLUDING AND NOT LIMITED TO, INSTALLING SIGNAL POLES, GROUND RODS, UNDERGROUND CONDUIT, AND SIGNAL HEAD *ASSEMBLIES.*
- DURING CONSTRUCTION TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE FDOT STANDARD PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS INCLUDING THE ELECTRIC PERMIT. THE APPLICATION FOR POWER SHOULD BE COORDINATED WITH THE CITY OF EUSTIS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE POWER COMPANY PROVIDING THE ELECTRICAL POWER, TO DETERMINE IF ANY ADDITIONAL FEES ARE REQUIRED TO CONNECT POWER. IF REQUIRED. THE FEE SHALL BE INCLUDED AS PART OF BID ITEM PAYMENT FOR ELECTRICAL SERVICE
- 7. THE EXACT LOCATIONS OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION.
- THE CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND HAVE IT APPROVED BY LAKE COUNTY TRAFFIC OPERATIONS.
- THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY DEPARTMENT AT LEAST 48 HOURS IN ADVANCE OF POLE SETTING OPERATIONS WHERE A CONFLICT WITH OVERHEAD ELECTRICAL CONDUCTORS IS EXPECTED
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING THE PROPER AMOUNT OF RAKE WITH RESPECT TO LOADING TO BE USED ON POLES AT THE TIME OF INSTALLATION.
- 11. ALL MATERIALS AND HARDWARE SHALL BE F.D.O.T. APPROVED, AND PRE-APPROVED BY LAKE COUNTY TRAFFIC OPERATIONS.
- 12. ANY STRIPING/PAVEMENT MARKINGS OR LANSCAPING DESTROYED BY THE CONTRACTOR DURING
- CONSTRUCTION SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE.

 13. THE COST FOR THE USE OF "TRAFFIC CONTROL OFFICER" IN THE EVENT OF LANE CLOSURES SHALL BE INCIDENTAL TO THE WORK AND WILL NOT BE PAID SEPARATELY.
- 14. THE CONTRACTOR SHALL FURNISH LAKE COUNTY TRAFFIC OPERATIONS WITH EMERGENCY CONTACTS AND PHONE NUMBERS AND HAVE AN IMSA LEVEL II CERTIFIED SIGNAL TECHNICIAN ON CALL WITHIN A TWO HOUR MINIMUM RESPONSE TIME.

LOOPS/PULL BOXES:

- 15. PULL BOX COVERS SHALL BE FDOT APPROVED NON METALLIC WITH RECESSED COVER LOGO "TRAFFIC SIGNAL" OR "FIBER OPTICS" AS APPROPRIATE.
- 16. PULL BOXES SHALL BE LOCATED AWAY FROM EDGE OF PAVEMENT, OR BEHIND A CURB WHEN POSSIBLE, ATTEMPTING TO KEEP FROM THE BOTTOM OF A DITCH OR RETENTION AREA. AND WHERE LARGE VEHICLES PARK

UTILITY OWNERS:

CENTURYLINK	RON PRARIO	(407) 754-0116
CITY OF EUSTIS (W/WW) FLORIDA GAS TRANSMISSION	RICK GIEROK JOSEPH SANCHEZ	(352) 483-5480 (407) 832-3348
TECO ENERGY	BRUCE STOUT	(407) 632-3346
DUKE ENERGY FLORIDA (D)	ROBB BROWN	(407) 905-3376
DUKE ENERGY FLORIDA (T) COMCAST	JENNIFER WILLIAMS SCOTT OSEBOLD	(813) 909-9210
CUMCAST	SCULL USEBULD	(352) 315-8527

CABINET/CONTROLLER:

- 17. THE CONTROLLER ASSEMBLY SHALL BE A "LAKE COUNTY" NAZTEC REGIONAL TS2-1; WITH A TS2-2 CONTROLLER ETHERNET ENABLED FOR COUNTY CLOSED LOOP SYSTEM, TYPE 6 CABINET
- TO INCLUDE A GENERATOR SWITCH BOX PANEL.

 18. UNINTERRUPTABLE POWER SUPPLY (UPS) SHALL BE STAND ALONE WITHIN ITS OWN CABINET, INSTALLED ON A CONCRETE PAD ADJACENT TO THE CABINET BASE. THE UNINTERRUPTABLE POWER SUPPLY SHALL BE ON THE FDOT APPROVED PRODUCTS LIST (APL).

 19. A GENERATOR PAD, 3'X3'X4" CONCRETE SHALL BE INSTALLED WITH 5" EYEBOLT INSTALLED IN THE PAD ADJACENT TO CABINET BASE.
- 20. THE CABINET CONCRETE BASE SHALL BE A MINIMUM OF 32"x 48" TO ACCOMMODATE TYPE 6 CABINETS.
- GROUNDING FOR THE CONTROLLER ASSEMBLY SHALL MEASURE 25 OHMS. OR LESS. THE CABINET DOOR SHALL OPEN AWAY FROM THE INTERSECTION WHEN POSSIBLE.
- THE MOUNTING OF THE ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL CABINET SHALL
- 24. AN ELECTRICAL SERVICE DISCONNECT WITH A 30 AMP BREAKER FOR THE TRAFFIC SIGNAL AND A 20 AMP BREAKER FOR THE OVERHEAD INTERNALLY ILLUMINATED STREET SIGNS SHALL BE INSTALLED AT THE TRAFFIC SIGNAL CABINET ON A SEPARATE POLE.
- 25. A MANUAL PUSH BUTTON CORD SHALL BE FURNISHED IN ALL CONTROLLER CABINETS.

SIGNAL/PEDESTRIAN HEADS:

- 26. SIGNAL HEADS SHALL BE WIRED DIRECTLY TO THE TERMINAL BLOCKS. THE USE OF "JONES" PLUGS IS PROHIBITED.
- 27. DISCONNECTS SHALL OPEN FROM THE SIGNAL FACE. (NOT FROM THE REAR)
 28. SIGNAL HEADS SHALL BE WIRED PER IMSA NEMA PHASING, PHASES 2 AND 6 ARE
 TYPICALLY ASSIGNED TO MAJOR-STREET WITH PHASE 2 BEING SOUTH OR WEST BOUND THROUGH MOVEMENTS. THE USUAL CONVENTION IS FOR THROUGH PHASES TO BE NUMBERED IN THE CLOCKWISE DIRECTION STARTING WITH PHASE 2, AND THE LEFT-TURN PHASES TO BE NUMBERED IN THE CLOCKWISE DIRECTION, WITH PHASE 1 BEING THE ACCOMPANYING LEFT-TURN TO PHASE 6.
- 29. VEHICLE SIGNAL HEAD ASSEMBLIES SHALL BE BLACK, CAST ALUMINUM, WITH TUNNEL VISORS, AND LED'S FOR ALL INDICATIONS, UNLESS OTHERWISE NOTED.
- SIGNAL CABLE SHALL BE ATTACHED TO MESSENGER WIRE USING PROPER SIZE SPIRAL WRAP. FOR SPAN WIRE ASSEMBLIES, THE DUAL POINT SPAN WIRE ATTACHMENT, SEE FOOT STANDARD PLANS

ILLUMINATED STREET SIGNS:

INDEX 634-001.

32. INTERNALLY ILLUMINATED STREET NAME SIGNS (LED), SHALL BE INSTALLED 1' BELOW THE MESSENGER CABLE WHERE POSSIBLE, POWERED BY A SEPARATE CIRCUIT BREAKER, AND BE DESIGNED AND INSTALLED IN ACCORDANCE WITH LAKE COUNTY PUBLIC WORKS INTÉRNALLY ILLUMINATED STREET NAME SIGN DETAIL AND SPECIFICATIONS. A PHOTOCELL SHALL BE INSTALLED NEAR THE ELECTRIC SERVICE WITHIN REACH OF A LIFT TRUCK. CARE TO BE GIVEN TO INSTALL WHERE STREET LIGHTING DOES NOT AFFECT OPERATION.

OTHER:

- 34. THE CONTRACTOR SHALL FURNISH LAKE COUNTY TRAFFIC OPERATIONS, TWO COMPLETE SETS OF AS-BUILT PLANS THAT INCLUDE CONDUIT AND PULL BOX LOCATIONS, AT FINAL INSPECTION.
- 35. OPTICOM PREEMPTION OR EQUIVALENT SHALL BE USED WHEN EMERGENCY PREEMPTION IS REQUESTED. 36. A FIBER OPTIC VAULT AND CONDUIT INTO THE CONTROLLER ASSEMBLY SHALL BE INSTALLED.

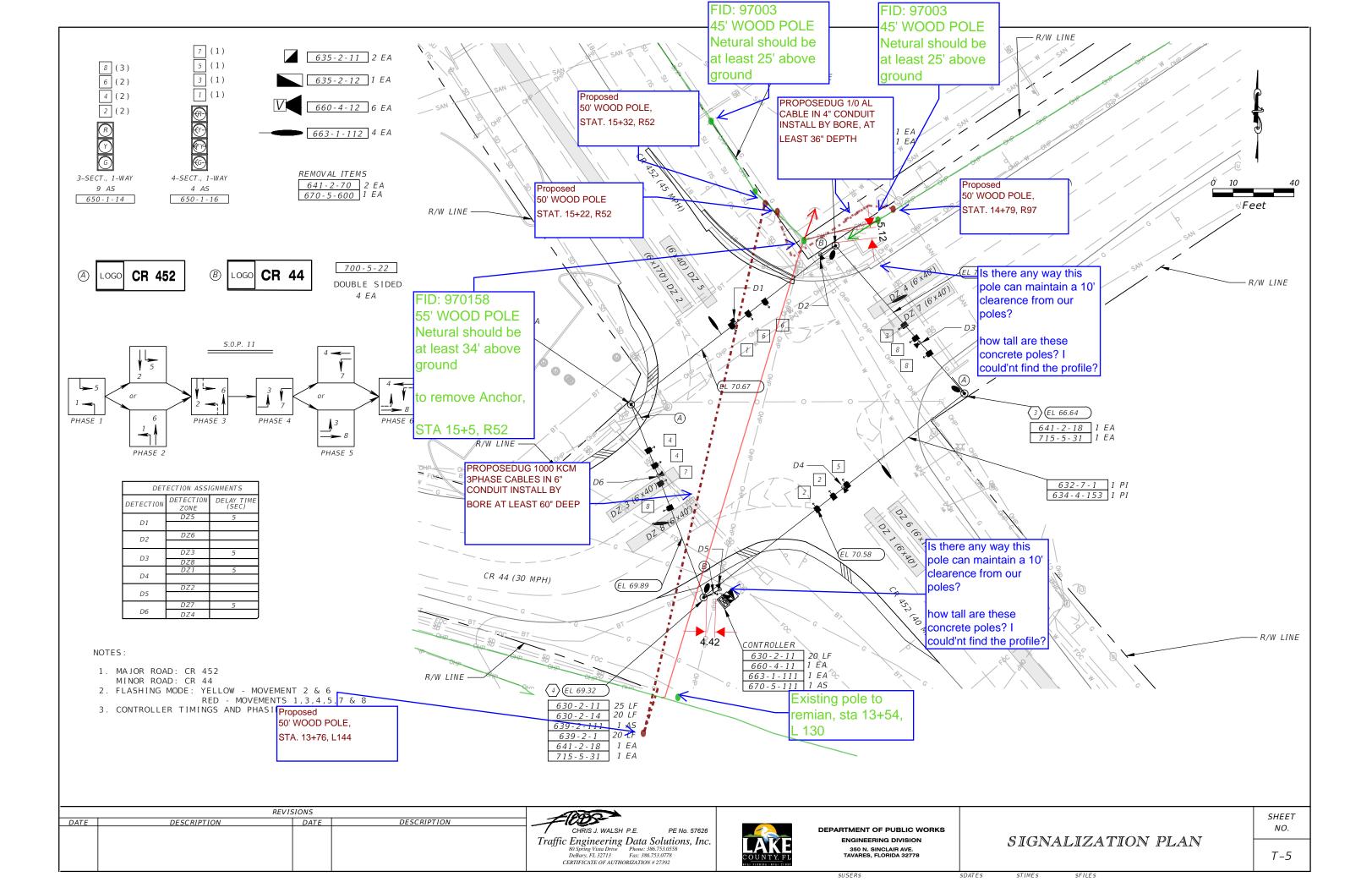
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DATE	DESCRIPTION	DATE	DESCRIPTION	7-1000
				CHRIS J. WALSH P.E. PE No. 57626
				Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558
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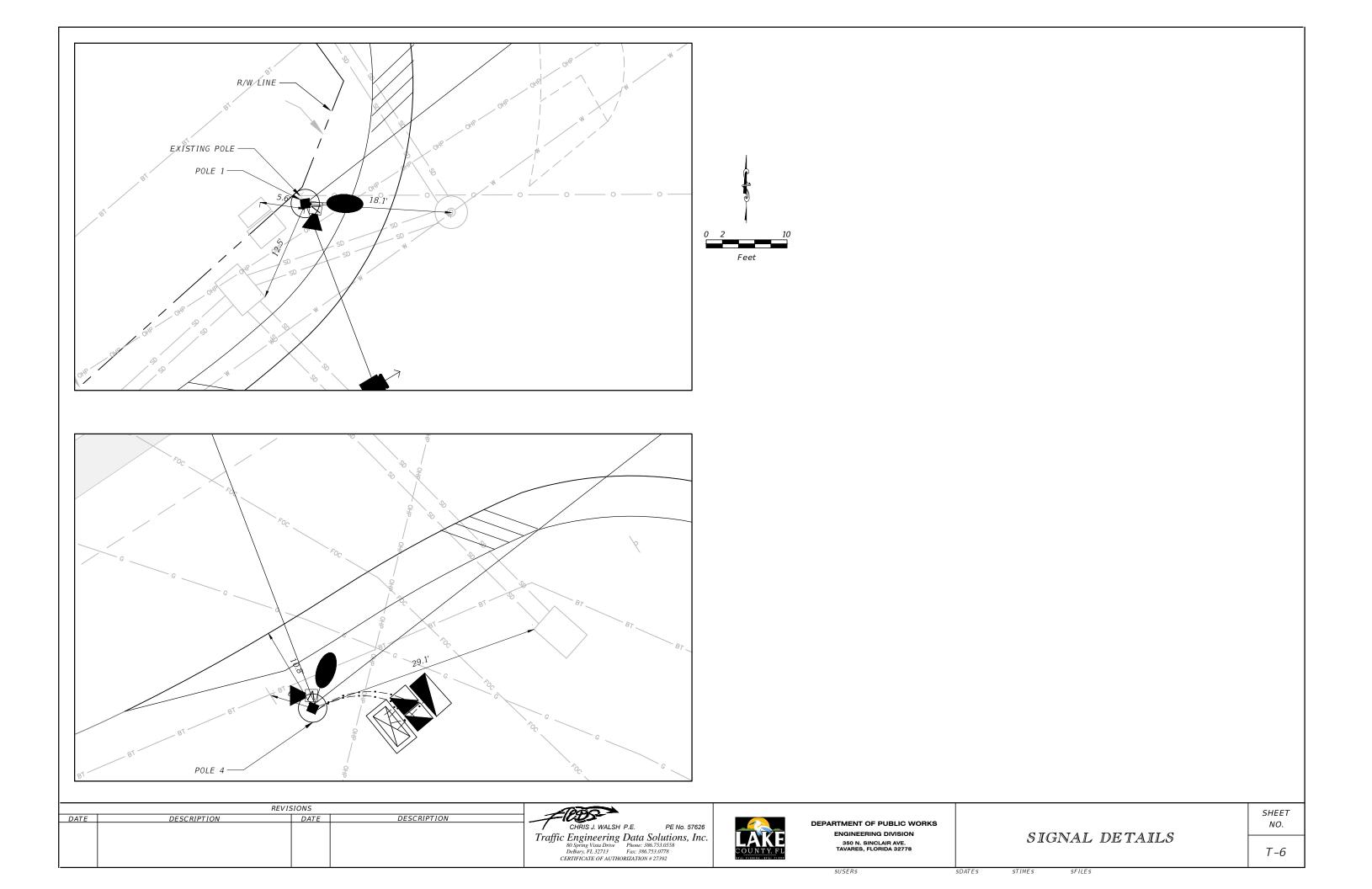


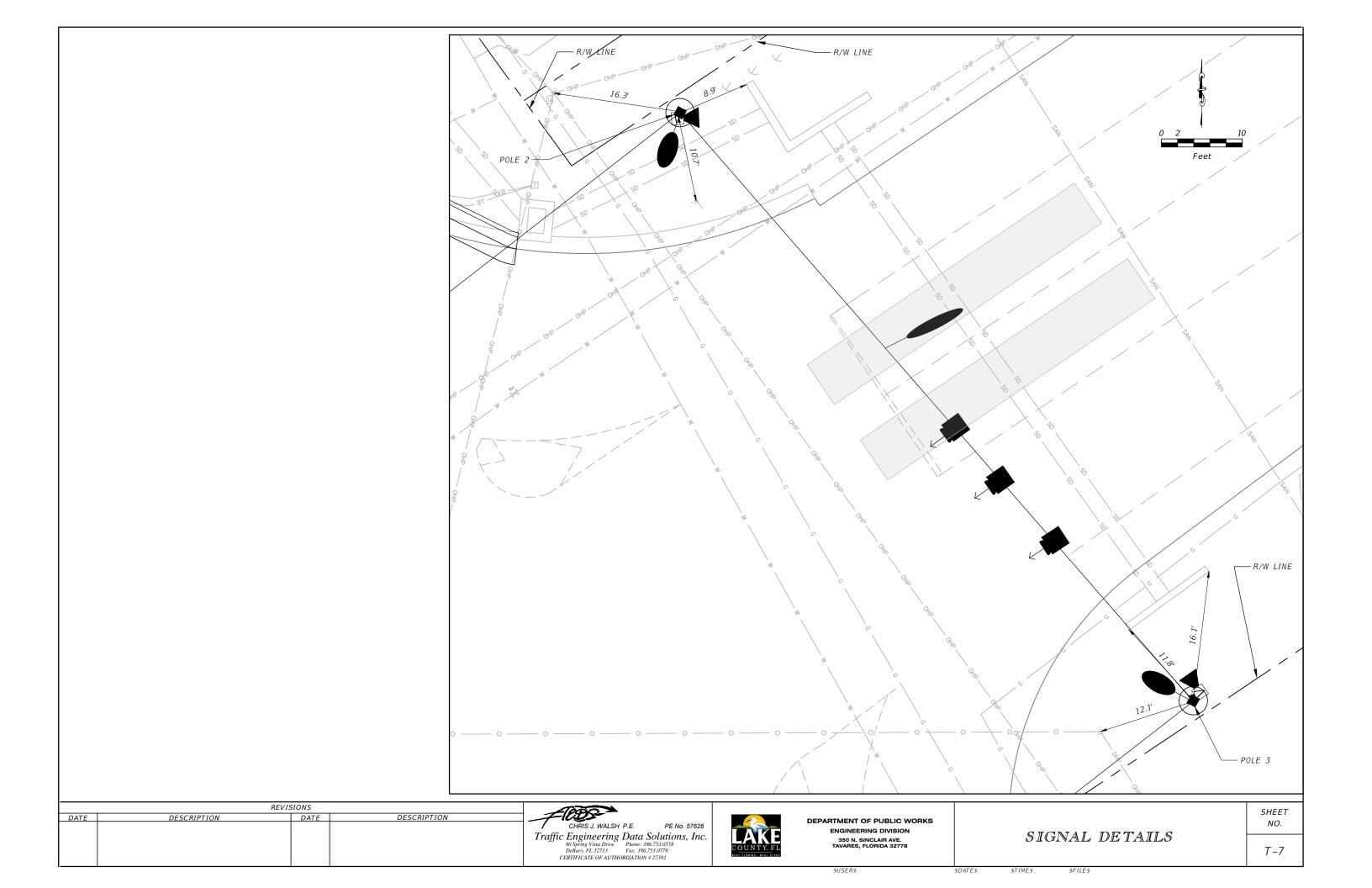
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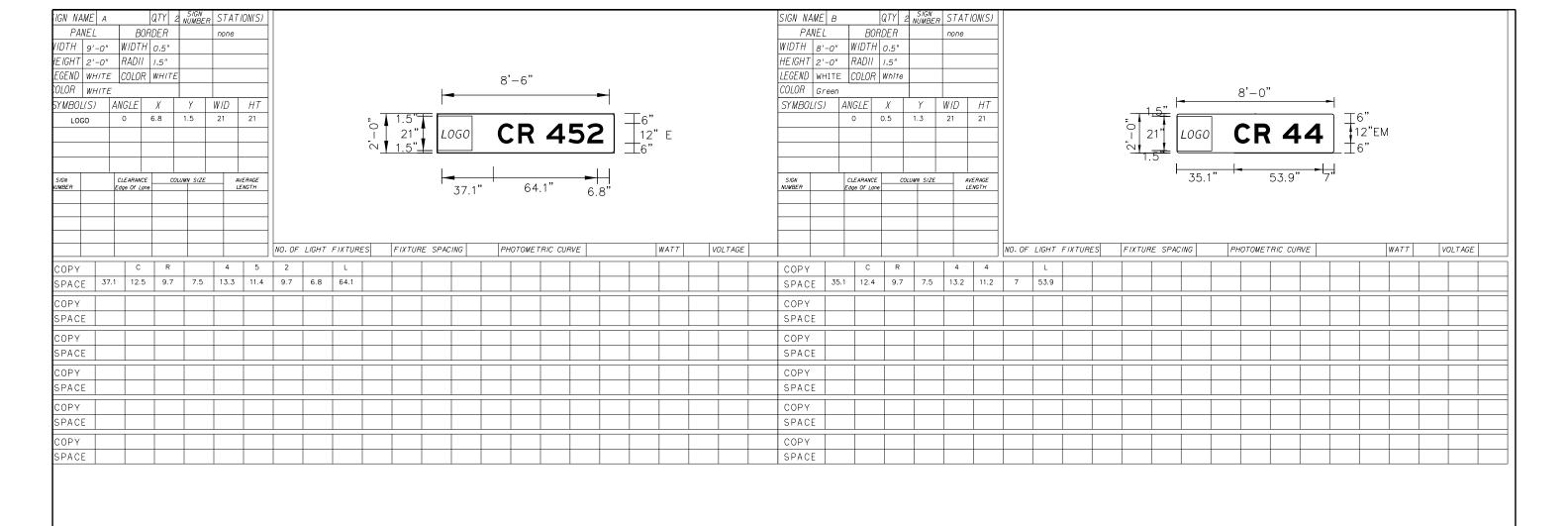
GENERAL NOTES

SHEET NO.









		REVIS	17000			
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	7(89)
						CHRIS J. WALSH, P.E. PE No. 57626
		1				Traffic Engineering Data Solutions, Inc.
						80 Spring Vista Drive Phone: 386.753.0558
						DeBary, FL 32713 Fax: 386.753.0778



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GUIDE SIGN WORKSHEET

SHEET NO.

