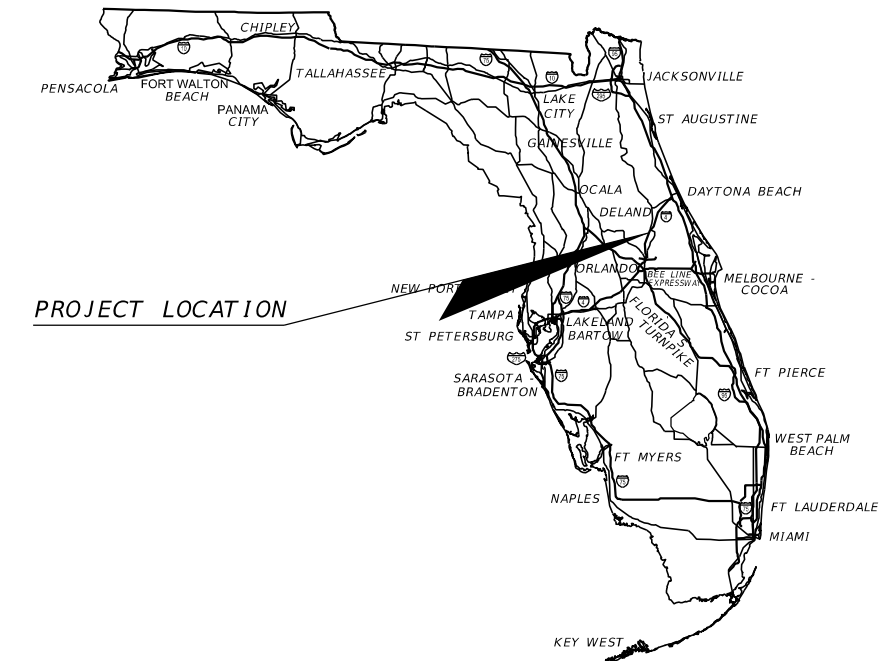


STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 240200-2-52-01
(FEDERAL FUNDS)
SEMINOLE COUNTY (77320)
STATE ROAD NO. 429 (WEKIVA PARKWAY SECTION 7A)

LIGHTING PLANS



INDEX OF LIGHTING PLANS

SHEET NO.	SHEET DESCRIPTION
L-1	KEY SHEET
L-2 Thru L-3	TABULATION OF QUANTITIES
L-4	GENERAL NOTES
L-5	POLE DATA AND LEGEND
L-6	POLE DATA
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L-22	SERVICE POINT DETAIL SHEET LOAD CENTER A
L-23	SERVICE POINT DETAIL SHEET LOAD CENTER B
L-24	SERVICE POINT DETAIL SHEET LOAD CENTER C
L-25	SERVICE POINT DETAIL SHEET LOAD CENTER D
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L-27	SERVICE POINT DETAIL SHEET LOAD CENTER F
L-28	SERVICE POINT DETAIL SHEET LOAD CENTER G

LIGHTING SHOP DRAWINGS
TO BE SUBMITTED TO:

CHRIS J. WALSH, P.E. PE NO. 57626
TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
80 SPRING VISTA DRIVE
DEBARY, FLORIDA 32720
386.753.0558 (O) 386.753.0778 (F)

CERTIFICATION OF AUTHORIZATION # 27392

PLANS PREPARED BY:

TRAFFIC ENGINEERING DATA SOLUTIONS, INC.
80 SPRING VISTA DRIVE
DEBARY, FLORIDA 32720
386.753.0558 (O) 386.753.0778 (F)

CONTRACT NO. C9B55
VENDOR NO. F-208375642001
CERTIFICATION OF AUTHORIZATION # 27392

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

100% SUBMITTAL
OCTOBER 2015

KEY SHEET REVISIONS	
DATE	DESCRIPTION

LIGHTING PLANS
ENGINEER OF RECORD: CHRIS J. WALSH

P.E. NO.: 57626

FISCAL YEAR	SHEET NO.
18	L-1

FDOT PROJECT MANAGER: KEVIN MOSS, P.E.

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET	
			L-8		L-9		L-10		L-11		L-12		L-13		L-14		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	946		539		950		579		798		566		2126		6504	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	23		22		46		26		115		64				296	
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF	50				50				50				50		200	
630-2-15	CONDUIT, FURNISH & INSTALL, BRIDGE MOUNTED	LF	94		85		70		70		96		96		85		596	
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	EA	9		7		11		6		9		6		10		58	
715-1-11	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 10 OR <	LF	282		255		210		210		288		288		255		1788	
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO.8-6	LF	3816		2073		4140		2226		3708		2310		3480		21753	
715-1-14	LIGHTING CONDUCTORS, F&I, INSULATED, NO.1 TO NO. 0	LF	-		-		-		-		-		-		3225		3225	
715-4-129	LIGHT POLE COMPLETE, F&I, WIND SPEED 130, POLE HEIGHT CUSTOM	EA	3		6		6		6		6		6		6		39	
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA	-		1		1		-		1		-		1		4	
715-11-2	LUMINAIRE, UNDER DECK PENDANT, F&I, Project 240200-2-52-01	EA	4		4		4		4		4		4		4		28	
715-11-125	LUMINAIRE, F&I, UNDER DECK, WALL MOUNT	EA	-		-		-		-		-		-		-		-	
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	7		6		7		6		6		6		7		45	
715-515-125	LIGHT POLE COMPLETE, SPECIAL DESIGN, F&I, SINGLE ARM BRIDGE MOUNT, ALUM., 25'	EA	4		-		1		-		-		-		1		6	

<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>CHRIS J. WALSH, P.E. PE NO. 57626 TRAFFIC ENGINEERING DATA SOLUTIONS, INC. 80 SPRING VISTA DRIVE DEBARY, FLORIDA 32720 386.753.0558 (O) 386.753.0778 (F) CERTIFICATION OF AUTHORIZATION # 27392</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>429</td> <td>SEMINOLE</td> <td>240200-2-52-01</td> </tr> </tbody> </table>			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	429	SEMINOLE	240200-2-52-01	<p>TABULATION OF QUANTITIES</p>				<p>SHEET NO. L-2</p>
DATE	DESCRIPTION	DATE	DESCRIPTION																									
ROAD NO.	COUNTY	FINANCIAL PROJECT ID																										
429	SEMINOLE	240200-2-52-01																										

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			L-15		L-16		L-17		L-18		L-19		L-20		L-21		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	581		842		566		496		500		108		605		3698		10202	
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF			81		38				171					290		586		
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF			50				100							150		350		
630-2-15	CONDUIT, FURNISH & INSTALL, BRIDGE MOUNTED	LF	79		92		108		210		444					933		1529		
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	EA	7		11		7		5		10		2		6	48		106		
715-1-11	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 10 OR <	LF	237		276		324		630		1336					2803		4591		
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO.8-6	LF	2199		3909		2670		2328		2267		324		1815	15512		37265		
715-1-14	LIGHTING CONDUCTORS, F&I, INSULATED, NO.1 TO NO. 0	LF	-		-		-		-		-		-		-			3225		
715-4-129	LIGHT POLE COMPLETE, F&I, WIND SPEED 130, POLE HEIGHT CUSTOM	EA	2		6		6						2		6	22		61		
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA			1				1							2		6		
715-11-2	LUMINAIRE, UNDER DECK PENDANT, F&I, Project 240200-2-52-01	EA	4		4		4		4							16		44		
715-11-125	LUMINAIRE, F&I, UNDER DECK, WALL MOUNT	EA									16					16		16		
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	7		6		6		4				2		6	31		76		
715-515-125	LIGHT POLE COMPLETE, SPECIAL DESIGN, F&I, SINGLE ARM BRIDGE MOUNT, ALUM., 25'	EA	5													5		11		

<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>CHRIS J. WALSH, P.E. PE NO. 57626 TRAFFIC ENGINEERING DATA SOLUTIONS, INC. 80 SPRING VISTA DRIVE DEBARY, FLORIDA 32720 386.753.0558 (O) 386.753.0778 (F) CERTIFICATION OF AUTHORIZATION # 27392</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>429</td> <td>SEMINOLE</td> <td>240200-2-52-01</td> </tr> </tbody> </table>			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	429	SEMINOLE	240200-2-52-01	<p>TABULATION OF QUANTITIES</p>				<p>SHEET NO. L-3</p>
DATE	DESCRIPTION	DATE	DESCRIPTION																									
ROAD NO.	COUNTY	FINANCIAL PROJECT ID																										
429	SEMINOLE	240200-2-52-01																										

GENERAL NOTES

1. PRIOR TO ANY EQUIPMENT ORDER, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL EQUIPMENT SPECIFICATION OR DESIGN DATA FOR ALL MATERIAL PROPOSED FOR THE PROJECT. THESE MUST SPECIFICALLY INCLUDE:

- | | |
|-------------------------------------|---|
| A) LUMINAIRE PHOTOMETRICS | D) POLE STRENGTH CALCULATIONS |
| B) LOAD CENTER ELECTRICAL EQUIPMENT | E) POLE FRANGIBILITY TEST |
| C) POLE SHOP DRAWINGS | F) BOLT SPECIFICATIONS AND BOLT CIRCLE DIAMETER |

SUBMITTAL DATA SHALL INCLUDE COMPUTER PRINTOUT SHOWING HORIZONTAL FOOT CANDLE LEVELS TO BE OBTAINED USING THE SUBMITTED LUMINAIRES ON THIS PROJECT. AT FINAL INSPECTION, THE CONTRACTOR SHALL VERIFY THE HORIZONTAL FOOT-CANDLE LEVELS ON THE ROADWAY WITH AN APPROVED CURRENTLY CALIBRATED LIGHT METER. PAYMENT TO BE INCIDENTAL TO THE LIGHTING AND LUMINAIRE PAY ITEM NUMBERS. A REPORT DETAILING ACTUAL FIELD LIGHT LEVEL READINGS SHALL BE SUBMITTED FOR APPROVAL. SEVEN COPIES OF SHOP DRAWINGS AND DESIGN DATA FOR HIGHWAY LIGHTING EQUIPMENT AND LOAD CENTER ELECTRICAL EQUIPMENT SHALL BE SUBMITTED TO THE ENGINEER IN CHARGE OF THE PROJECT.

2. THE LOCATIONS OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, ARE APPROXIMATE AND BASED ON THE INFORMATION FURNISHED TO THE ENGINEER BY THE UTILITY OWNER(S) AND ARE SHOWN AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. THE CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND NOTIFY UTILITY OWNER(S) FOR LOCATION AND STAKING OF UNDERGROUND FACILITIES BEFORE EXCAVATING.
3. FLORIDA STATUTE 553.851 (2004) AND 556 (2004) REQUIRES THAT BEFORE EXCAVATING, NOTICE BE GIVEN TO THE UTILITY OWNER A MINIMUM OF TWO (2) DAYS AND A MAXIMUM OF FIVE (5) DAYS, EXCLUDING SATURDAY, SUNDAY AND LEGAL HOLIDAYS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF "SUNSHINE" 1-800-432-4770. SEE ROADWAY PLANS FOR UTILITY OWNERS'S PHONE NUMBERS.
4. THE LOCATION OF THE POLES, CONDUCTORS, CONDUITS, JUNCTION BOXES AND SERVICE POLES ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED BY THE ENGINEER TO ACCOMMODATE LOCAL CONDITIONS AND EXISTING UTILITY LOCATIONS.
5. ALUMINUM POLES, LUMINAIRES AND BASES SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" AND SHALL HAVE BEEN TESTED BY FHWA-APPROVED METHODS. CERTIFICATION FOR TESTS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
6. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST ADOPTED EDITIONS OF THE NATIONAL ELECTRICAL CODE (N.E.C.), THE NATIONAL ELECTRICAL SAFETY CODE (N.E.S.C.) AND THE STATE OF FLORIDA D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER N.E.C. REQUIREMENTS
7. INSTALL SURGE PROTECTORS, PROPERLY GROUNDED, IN POWER (SECONDARY) ENTRANCES.
8. IN ACCORDANCE WITH N.E.C., IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL IDENTIFYING THE CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANDHOLE FOR EACH POLE.
9. THE CONTRACTOR SHALL NOTIFY FLORIDA POWER & LIGHT AT LEAST 2 BUSINESS DAYS PRIOR TO ANY INSTALLATION THAT IS WITHIN TEN (10) FEET OF ENERGIZED ELECTRICAL CONDUCTORS. FLORIDA POWER & LIGHT, AT ITS OPTION, SHALL ASSIST THE CONTRACTOR, PROVIDE PROTECTION FOR ENERGIZED CONDUCTORS AT INSTALLATION SITE, OR TAKE OTHER SAFETY PRECAUTIONS AS NECESSARY. EXTREME CAUTION SHALL BE EXERCISED AT ALL TIMES IN PERFORMANCE OF WORK AROUND PRIMARY HIGH VOLTAGE COMPONENTS.
10. PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET AND MEET MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY N.E.C. OR N.E.S.C. FOR CABLE USED. PULL CABLE SHALL BE POLYESTER. STEEL CABLE OR FISH TAPES SHALL NOT BE UTILIZED.
11. ALL CONDUITS UNDER ROADWAY AND/OR SIDEWALK SHALL BE INSTALLED PRIOR TO INSTALLATION OF ROADWAY BASE AND SURFACE (OR CONCRETE), EXCEPT WHERE OTHERWISE SPECIFIED IN THE PLANS.
12. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE WITHIN 2 FEET OF THE LIGHTING POLE FOUNDATIONS OR CONDUIT RUN, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR WILL HAND DIG THE FIRST 4 FEET OF THE HOLE FOR THE POLE FOUNDATION AND CONDUIT RUN. VACUUM EXTRACTION MAY BE USED AS AN ALTERNATIVE.

14. CONDUIT LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. CONDUIT MUST BE PLACED WITHIN THE RIGHT-OF-WAY BUT CAN BE ADJUSTED TO FIT AROUND THE EXISTING AND PROPOSED UTILITIES. WHERE PLANNED LOCATION OF LIGHTING CONDUIT RUNS 36" UNDER PAVEMENT IS FOUND TO CONFLICT WITH UNDERGROUND UTILITIES, THE LIGHTING CONDUIT POSITION SHALL BE ALTERED VERTICALLY OR HORIZONTALLY TO AVOID THE CONFLICT AS RECOMMENDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

15. CONTRACTOR SHALL PREPARE ACCURATELY DIMENSIONED "AS BUILT" PLANS OF FINAL POLE, CONTROLLER, CABLE AND CONDUIT PULL BOX LOCATIONS. PLANS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER AND SUBMITTED TO THE RESIDENT ENGINEER. COST OF SUCH PREPARATION SHALL BE INCIDENTAL TO PAY ITEMS PROVIDED.

16. INSPECT ALIGNMENT OF EACH INDIVIDUAL POLE AND FIXTURE AS FOLLOWS:

POLE ALIGNMENT: WITHIN ONE HALF DEGREE ON VERTICAL +/-, CONFIRM VERTICAL ALIGNMENT, VIEWING FROM ADJACENT SERIES OF POLES, IN BOTH DIRECTIONS.

FIXTURE ALIGNMENT: WITHIN ONE DEGREE OF HORIZONTAL +/-, USING CALIBRATED LEVEL ALONG BOTH AXES OF CUT-OFF FIXTURE FACE, WITH LENS ONLY.

17. SCREW TYPE ANCHOR FOUNDATION IS NOT TO BE USED ON THIS PROJECT.

18. LIGHTING CONTRACTOR SHALL COORDINATE WITH STRUCTURAL CONTRACTOR TO ENSURE PROPER MOUNTING BOLT CIRCLES ARE CONSTRUCTED FOR THE PROPOSED POLE BASES AND TO COORDINATE LOCATIONS OF EMBEDDED CONDUIT AND PULL BOXES WITHIN THE WALLS AND BRIDGES.

19. NECESSARY CARE SHALL BE TAKEN SUCH THAT EXISTING POLES AND LUMINAIRES TO REMAIN OR TO BE RELOCATED ARE NOT DAMAGED DURING CONSTRUCTION. DAMAGED POLES AND LUMINAIRES, AS DETERMINED BY THE RESIDENT ENGINEER, SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

20. PULL BOXES AND LOAD CENTERS SHALL NOT BE PLACED IN DITCHES OR LOW LYING AREAS IN ORDER TO AVOID WATER INTRUSION.

21. FURNISH AND INSTALL AN ALUMINUM IDENTIFICATION TAG ON EACH ROADWAY LIGHT POLE. TAGS SHALL BE 2"x8" IN SIZE WITH BLACK LETTERS ON YELLOW BACKGROUND, ATTACHED WITH RIVETS (NO SCREWS). NUMBERS SHALL BE AS SHOWN ON THE POLE DATA SHEET ON THE POLE IDENTIFICATION TAG DETAIL. IDENTIFICATION TAG SHALL FACE THE ROADWAY. THE CONTRACTOR SHALL COORDINATE WITH FDOT MAINTENANCE FOR PROPER NUMBERING OF THE LOAD CENTER AND CIRCUIT BEFORE ORDERING THE LIGHT POLE IDENTIFICATION TAGS. COST OF TAGS SHALL BE INCLUDED IN THE BID ITEMS FOR LIGHT POLE COMPLETE FOR PROPOSED POLES. TAG SHALL BE PLACED 5' ABOVE GRADE. SEE DETAIL BELOW.

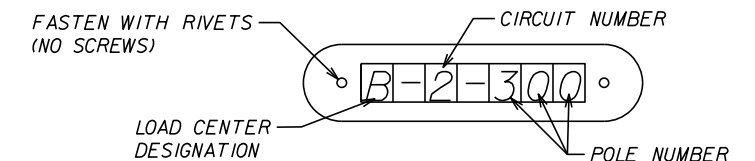
22. ALL CONDUITS SHALL BE MANDREL TESTED AND CLEANED. CONDUIT PLACED FOR FUTURE USE SHALL HAVE 3#4" POLYESTER CORD PULLED IN PLACE AND CAPPED, WITH NOTATION INSIDE CONDUIT AS TO LOCATION OF OPPOSITE END. PLACE DUCT MARKER OR PULL BOXES TO MARK ENDS OF EMPTY CONDUITS.

23. ALL POLE SET BACKS SHOWN ON THE POLE DATA SHEETS ARE AS FOLLOWS:

- ALL UNDER DECK AND WALL MOUNTED FIXTURES AND LOAD CENTERS ARE FROM THE ϕ OF CONSTRUCTION FOR SR 429
- ALL POLES ARE FROM THE NEAREST FRONTAGE ROAD/SIDE STREET BASELINE.

UTILITY OWNERS:	NUMBERS:
AT & T Corp	407-578-8000
AT & T FLORIDA	407-273-5084
BRIGHT HOUSE NETWORKS, LLC	407-532-8509
FLORIDA GAS TRANSMISSION	407-838-7171
FLORIDA POWER & LIGHT (D)	386-586-6432
FLORIDA PUBLIC UTILITIES	407-668-9842
SEMINOLE COUNTY (W, NPW,SS)	407-665-2267

POLE IDENTIFICATION TAG DETAIL
REFER TO GENERAL NOTE 21



REVISIONS				CHRIS J. WALSH, P.E. PE NO. 57626 TRAFFIC ENGINEERING DATA SOLUTIONS, INC. 80 SPRING VISTA DRIVE DEBARY, FLORIDA 32720 386.753.0558 (O) 386.753.0778 (F) CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-4

POLE DATA

CONVENTIONAL
LIGHTING DESIGN CRITERIA

Average Initial Intensity 1.5 Foot Candles
 Uniformity Ratio Avg./Min. 4:1 or Less
 Max. / Min. 10:1 or Less
 Wind Speed 130 MPH
 Veiling Luminance 0.3 or Less

POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	POLE SETBACK	PAY ITEM
1	A-1	176+96.9	3'	105	25'	29.7	715-515-125
2	A-1	177+82.3	3'	105	25'	30.7	715-515-125
3	A-1	178+70.9	3'	105	25'	32.3	715-515-125
4	A-1	2000+04.4	3'	105	25'	17.8	715-515-125
5**	A-1	3015+62.5	3'	105	25'	16.2	715-4-129
6	A-1	2001+41.9	3'	105	25'	26.4	715-4-129
7	A-1	20+95.9	3'	105	25'	21.9	715-4-129
8	A-1	20+42.3	3'	105	25'	25.6	715-4-129
9**	A-1	3016+71.8	3'	105	25'	14.1	715-4-129
10	A-1	2002+75.0	3'	105	25'	26.0	715-4-129
11	A-2	3018+59.0	3'	105	25'	16.3	715-4-129
12	A-2	3019+47.6	3'	105	25'	17.2	715-4-129
13	A-2	3020+30.6	3'	105	25'	17.2	715-4-129
14	A-2	3021+15.1	3'	105	25'	17.2	715-4-129
15	B-1	2021+29.7	3'	105	25'	22.8	715-515-125
16	B-1	2022+45.1	3'	105	25'	21.3	715-4-129
17	B-1	2023+51.2	3'	105	25'	21.3	715-4-129
18	B-1	2024+76.4	3'	105	25'	31.9	715-4-129
19	B-2	3039+15.7	3'	105	25'	20.4	715-4-129
20	B-1	32+28.8	3'	105	25'	57.0	715-4-129
21	B-1	30+70.7	3'	105	25'	33.0	715-4-129
22	B-2	3040+34.1	3'	105	25'	32.3	715-4-129
23	B-1	32+00.0	3'	105	25'	24.1	715-4-129
24	B-1	2026+95.0	3'	105	25'	21.1	715-4-129
25	B-2	3041+64.5	3'	105	25'	22.8	715-4-129
26	B-2	3042+73.3	3'	105	25'	19.1	715-4-129
27	B-2	3043+87.1	3'	105	25'	18.0	715-4-129
28	B-2	3045+02.3	3'	105	25'	17.8	715-4-129
29	C-1	2036+07.7	3'	105	25'	23.0	715-4-129
30	C-1	2037+15.2	3'	105	25'	23.0	715-4-129
31	C-1	2038+15.0	3'	105	25'	23.2	715-4-129
32	C-1	2039+45.3	3'	105	25'	24.6	715-4-129
33	C-2	3054+25.8	3'	105	25'	11.3	715-4-129
34	C-1	2040+68.0	3'	105	25'	33.9	715-4-129
35	C-2	3055+42.0	3'	105	25'	28.0	715-4-129
36	C-1	2041+65.9	3'	105	25'	25.8	715-4-129
37	C-2	3056+48.2	3'	105	25'	13.9	715-4-129
38	C-2	3057+78.0	3'	105	25'	18.4	715-4-129
39	C-2	3058+86.7	3'	105	25'	18.7	715-4-129
40	C-2	3059+92.2	3'	105	25'	18.1	715-4-129
41	D-1	2077+87.4	3'	105	25'	23.0	715-4-129
42	D-1	2078+98.0	3'	105	25'	23.0	715-4-129
43	D-1	2080+26.1	3'	105	25'	23.0	715-4-129
44	D-1	2081+18.1	3'	105	25'	7.2	715-4-129
45	D-2	3096+99.8	3'	105	25'	23.7	715-515-125
46	D-1	2082+46.6	3'	105	25'	23.5	715-4-129
47	D-1	52+79.0	3'	105	25'	41.9	715-4-129
48	D-1	51+61.3	3'	105	25'	28.2	715-4-129

LEGEND

SYMBOLS

DESCRIPTION



Bridge mounted 105 watt LED luminaire (Holophane model No. GBLF_105_4K_XXXX_L3 or equal). Designed for TYPE III cutoff Type short distribution. Bug rating = B1-U0-G2. Integral regulator type ballast wired for 240 volt operation. Pole mounting height 25 ft with 3 ft. arm. Use Holophane Test No. 501148.



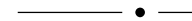
Shoulder mounted 105 watt LED luminaire (Holophane model No. GBLF_105_4K_XXXX_L3 or equal). Designed for TYPE III cutoff Type short distribution. Bug rating = B1-U0-G2. Integral regulator type ballast wired for 240 volt operation. Pole mounting height 25 ft with 3 ft. arm. Use Holophane Test No. 501148.



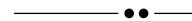
Pendant hung underdeck luminaire, 99 watt LED luminaire (Holophane model No. PLED2_10L_5K_AS_UN_NA_G_ or equal), equipped with glass refractor. Integral regulator ballast wired for 240 volt operation. 50% of luminaire to be below bridge beam.



Pier cap mounted luminaire, 72 watt LED luminaire (Holophane model No. W4G_LED_20C_1000_40K_T3M or equal), equipped with glass refractor. Integral regulator ballast wired for 240 volt operation.



Schedule 40 PVC conduit with THWN-2 conductors inside (conduit and conductor size as shown on plan sheets). Run one (1) 6 AWG copper bond conductor (green insulation) inside conduit with other conductors.



Schedule 40 PVC conduit directional bored under pavement with THWN-2 conductors inside (conduit and conductor size as shown on plan sheets). Extend conduit beyond edge of pavement to pull boxes. Run one (1) 6 AWG copper bond conductor (green insulation) inside conduit with other conductors.



Rigid galvanized steel conduit bridge mounted with THWN-2 conductors inside (conduit and conductor size as shown on plan sheets). Run one (1) 6 AWG copper bond conductor (green insulation) inside conduit with other conductors.



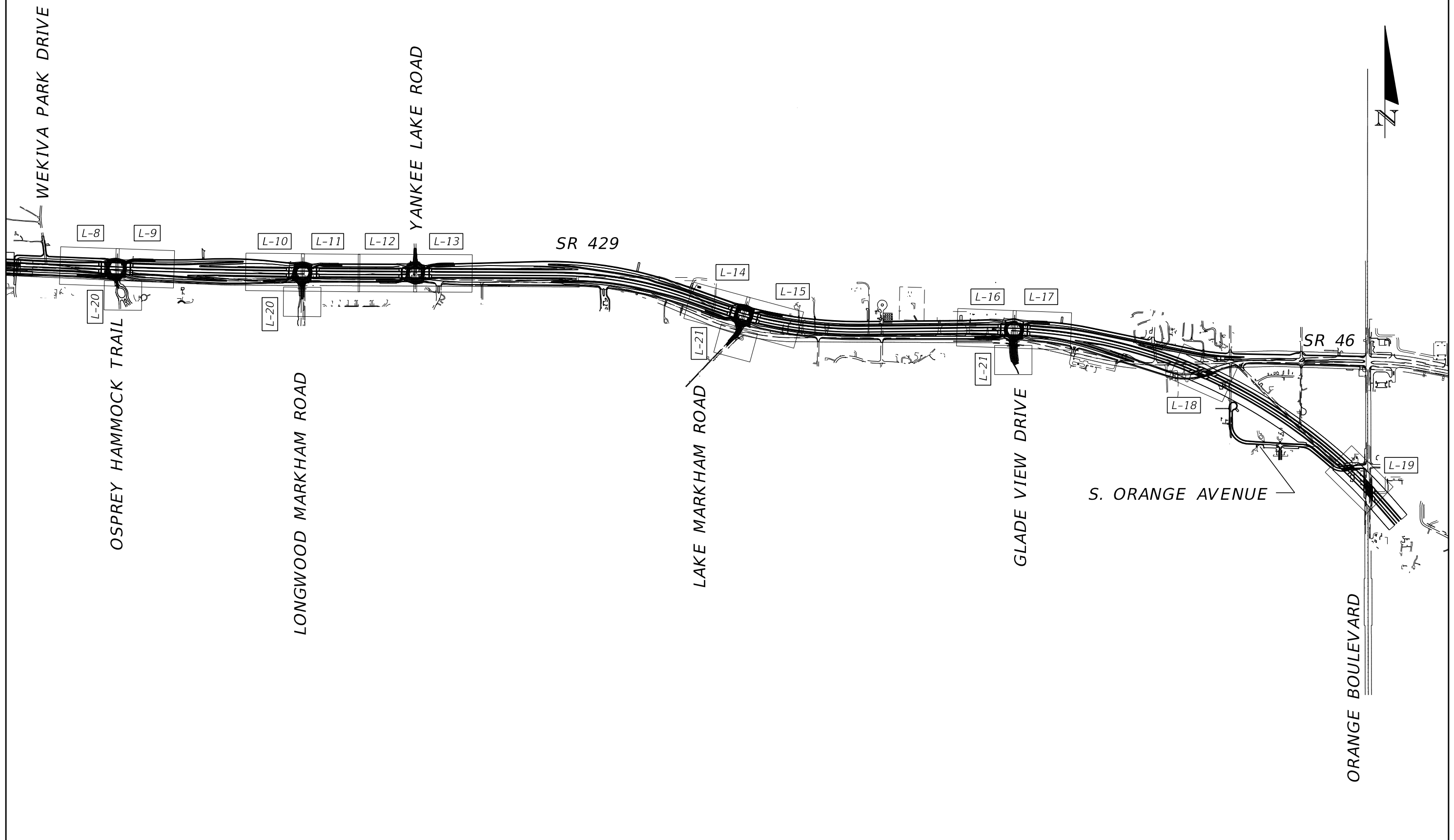
Pull box.



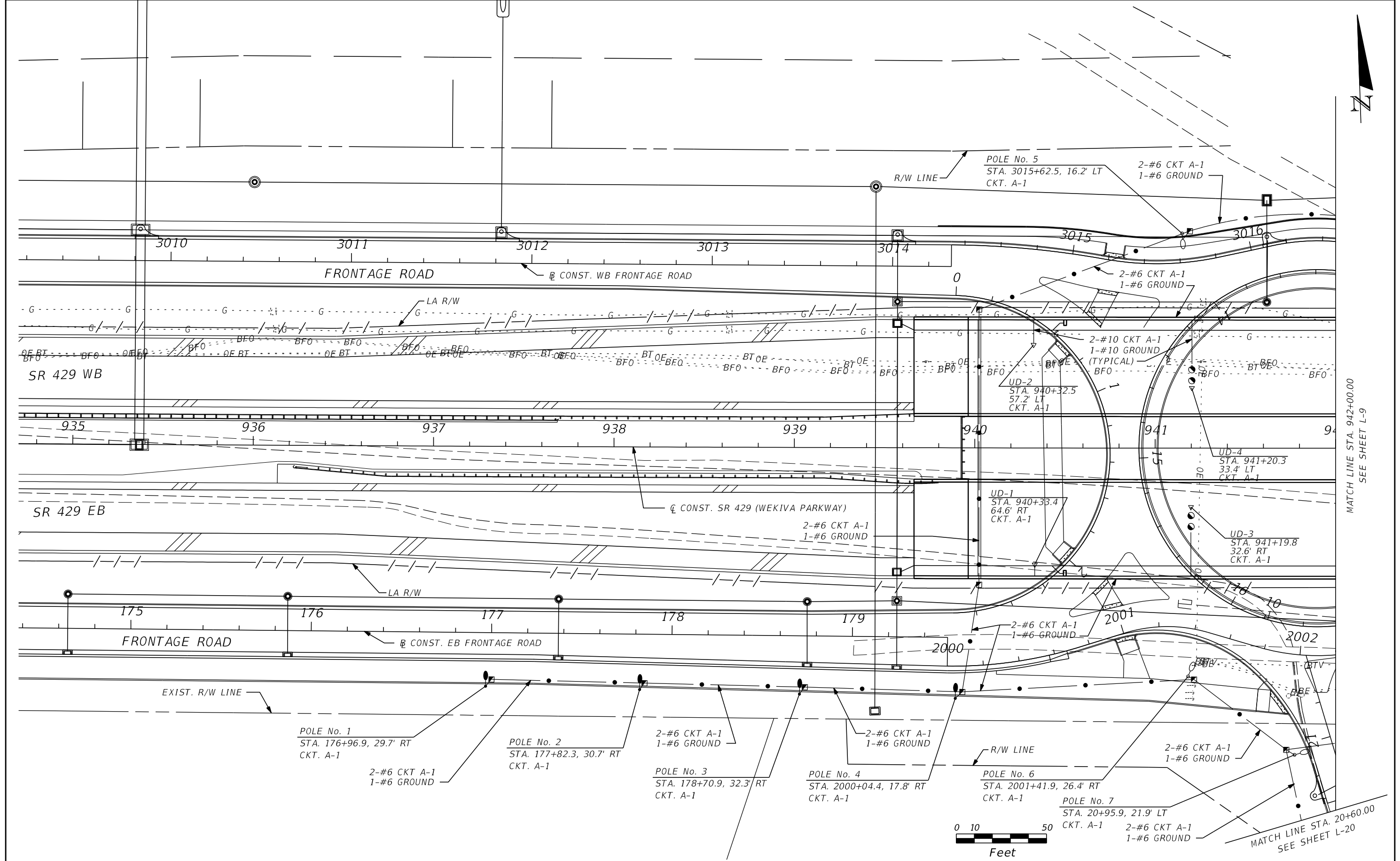
Distribution point.

** Pole installation requires an extended foundation. Embedment depth shall be as required, the top of the foundation shall match the elevation of the adjacent gravity wall.

REVISIONS				CHRIS J. WALSH, P.E. PE NO. 57626 TRAFFIC ENGINEERING DATA SOLUTIONS, INC. 80 SPRING VISTA DRIVE DEBARY, FLORIDA 32720 386.753.0558 (O) 386.753.0778 (F) CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			POLE DATA AND LEGEND	SHEET NO. L-5
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					429	SEMINOLE	240200-2-52-01		



REVISIONS				CHRIS J. WALSH, P.E. PE NO. 57626 TRAFFIC ENGINEERING DATA SOLUTIONS, INC. 80 SPRING VISTA DRIVE DEBARY, FLORIDA 32720 386.753.0558 (O) 386.753.0778 (F) CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			PROJECT LAYOUT	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		L-7
					429	SEMINOLE	240200-2-52-01		



MATCH LINE STA. 942+00.00
SEE SHEET L-9

MATCH LINE STA. 20+60.00
SEE SHEET L-20

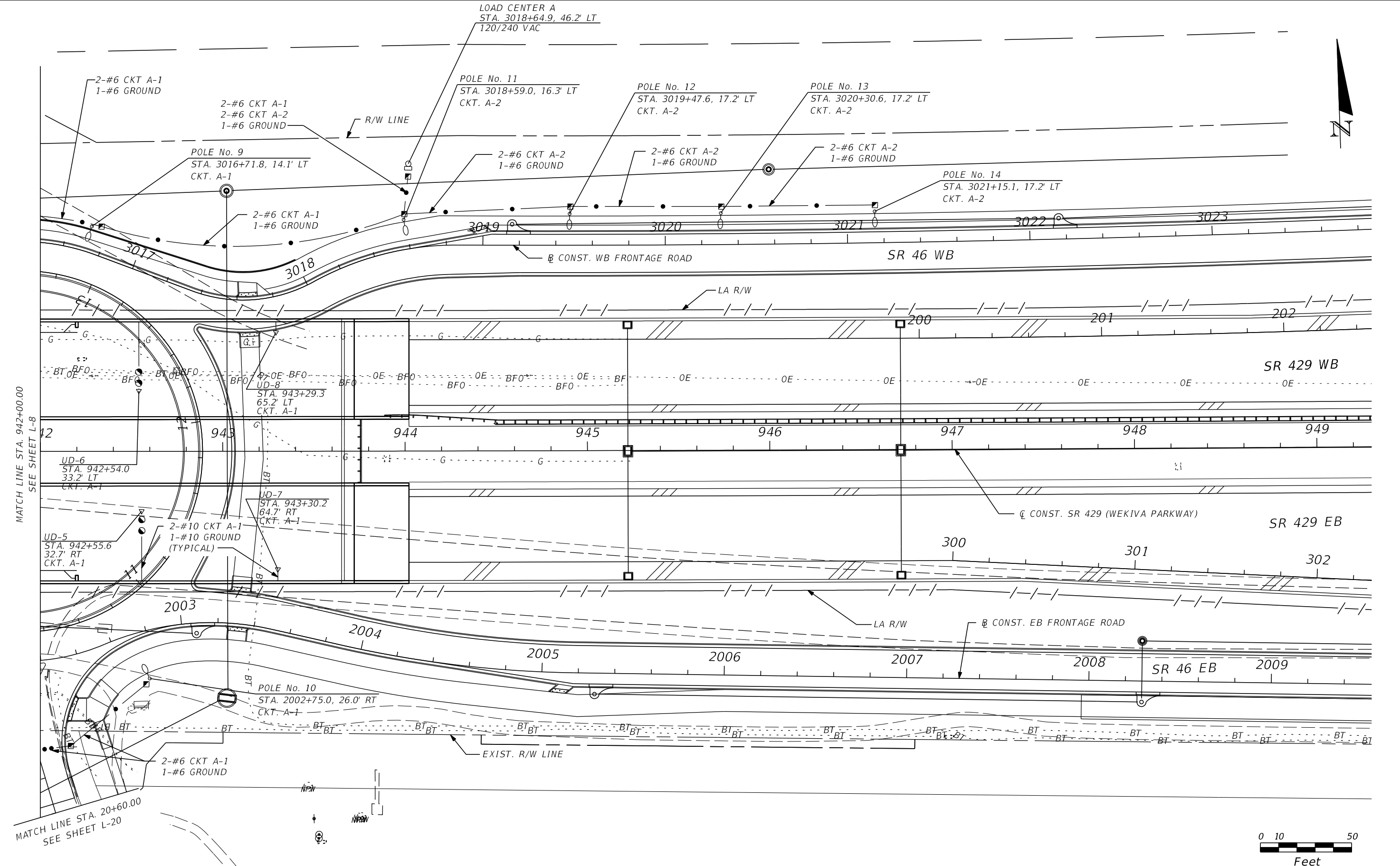
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CHRIS J. WALSH, P.E. PE No. 57626
 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
429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-8



MATCH LINE STA. 942+00.00
SEE SHEET L-8

MATCH LINE STA. 20+60.00
SEE SHEET L-20

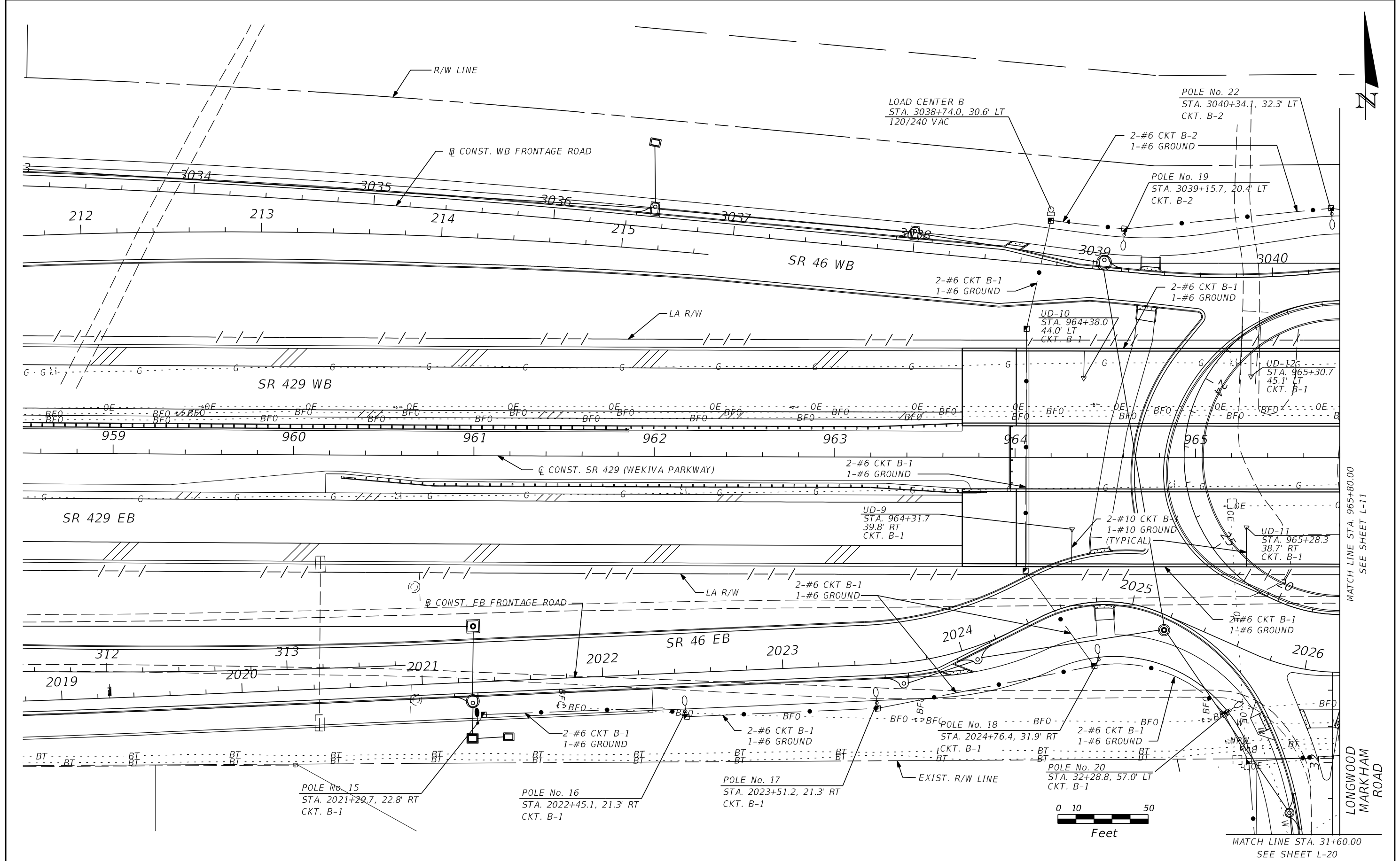
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-9



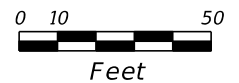
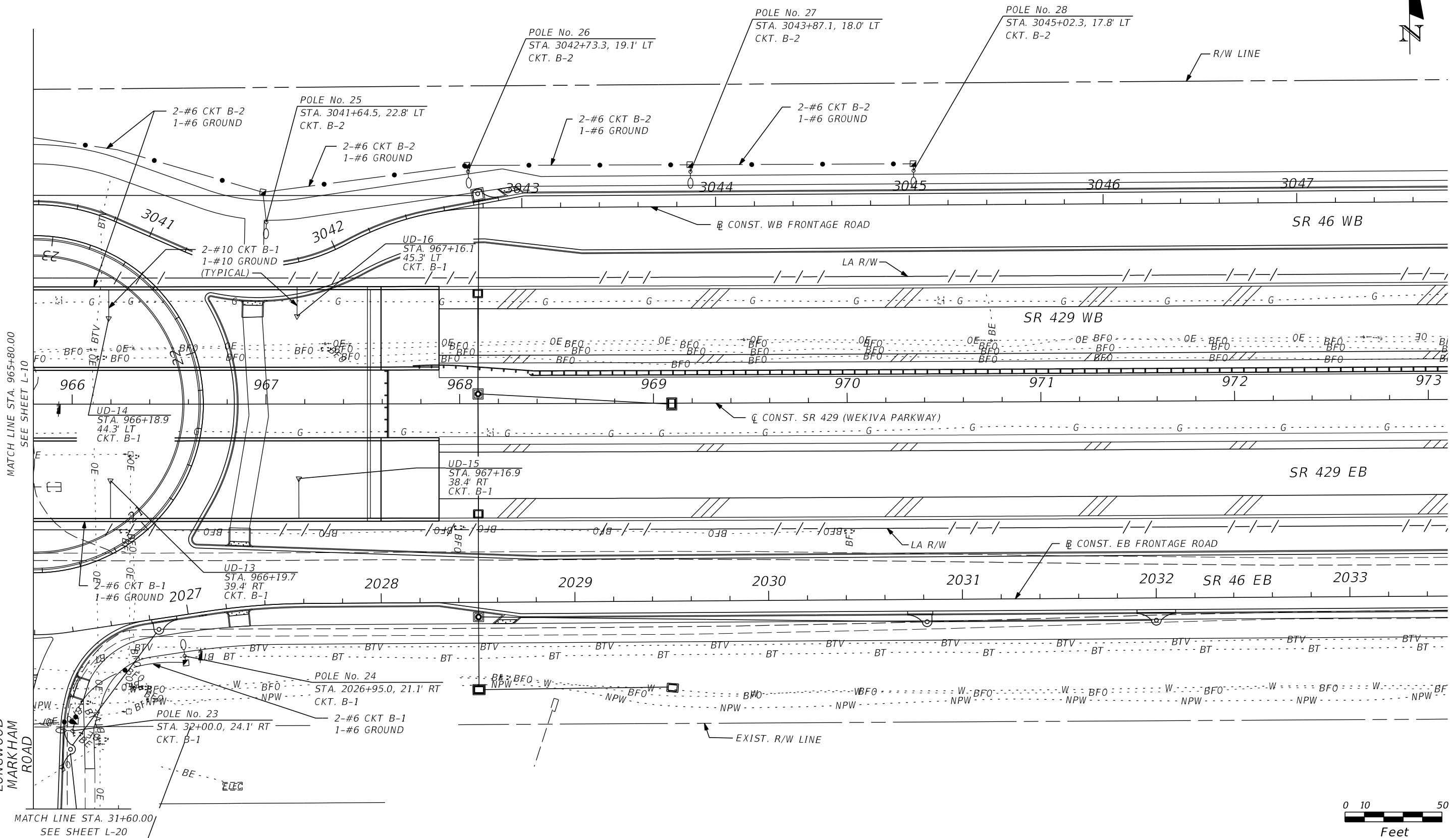
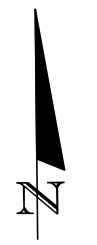
MATCH LINE STA. 965+80.00
SEE SHEET L-11

LONGWOOD
MARKHAM
ROAD

MATCH LINE STA. 31+60.00
SEE SHEET L-20

REVISIONS				CHRIS J. WALSH, P.E. Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive DeBary, FL 32713 Phone: 386.753.0558 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. L-10
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					429	SEMINOLE	240200-2-52-01	

LIGHTING PLAN

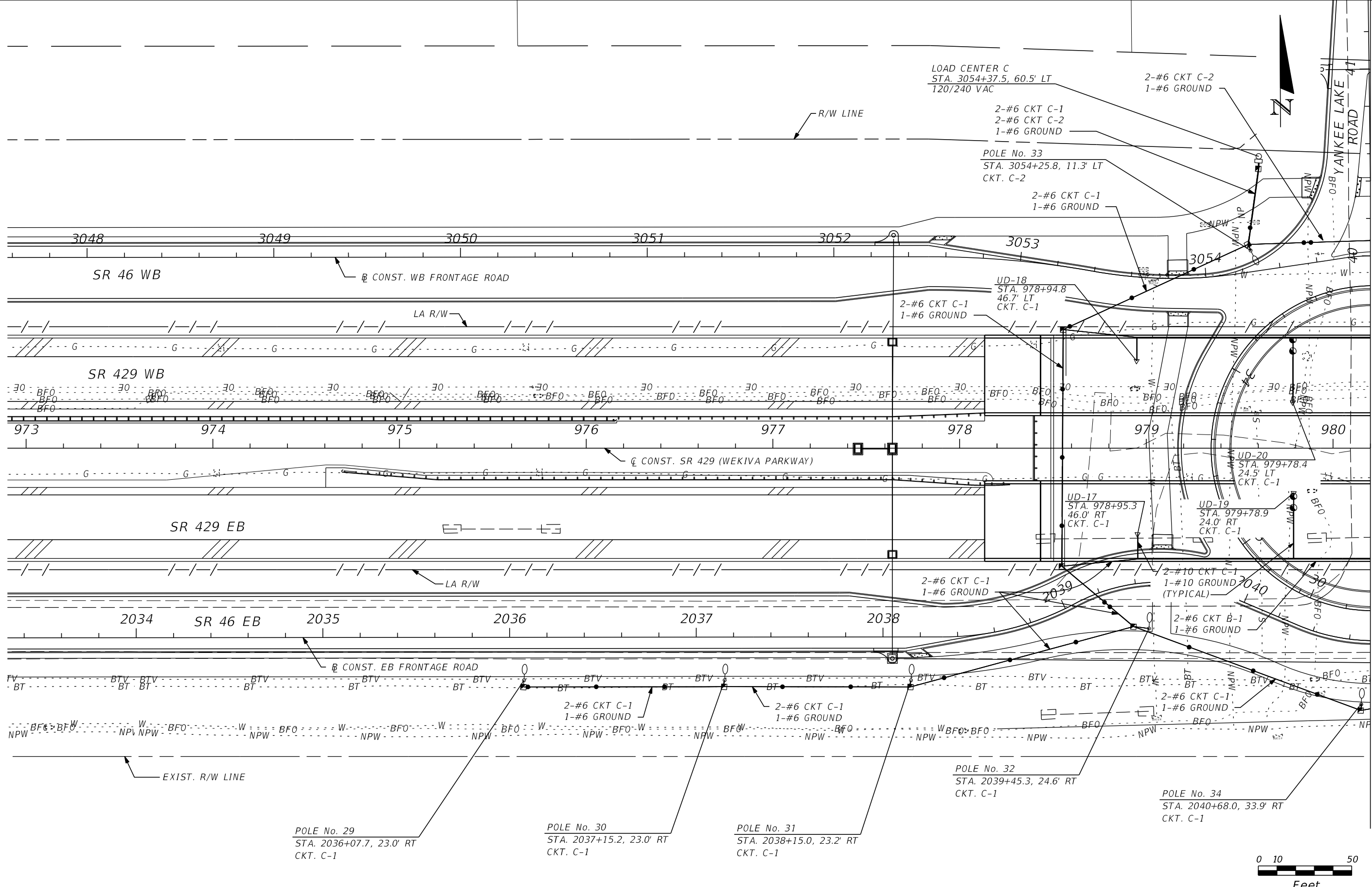


MATCH LINE STA. 965+80.00
SEE SHEET L-10

LONGWOOD
MARKHAM
ROAD

MATCH LINE STA. 31+60.00
SEE SHEET L-20

REVISIONS				CHRIS J. WALSH, P.E. PE No. 57626 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			LIGHTING PLAN	SHEET NO. L-11
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				429	SEMINOLE	240200-2-52-01			



MATCH LINE STA. 980+20.00
SEE SHEET L-13

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

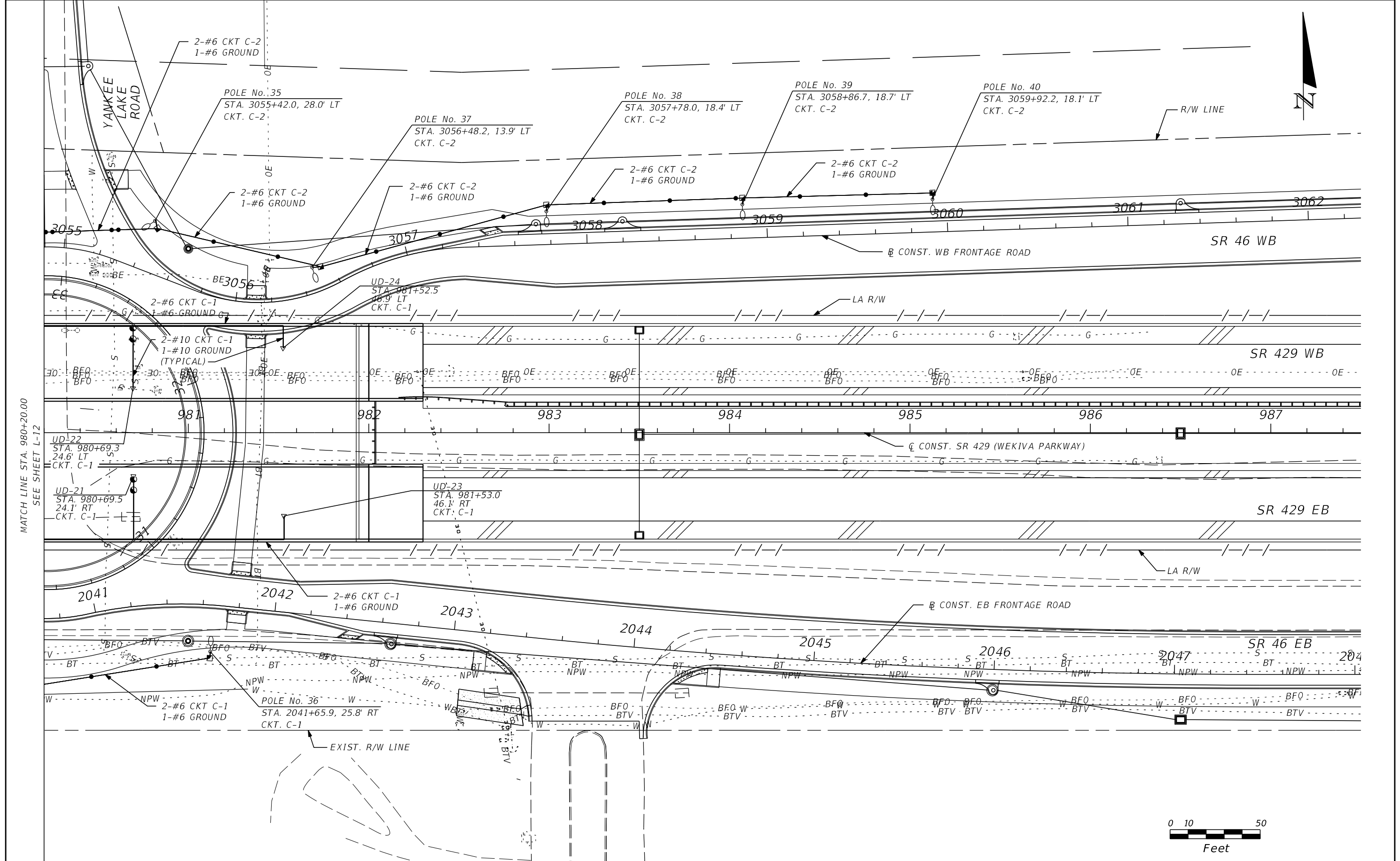
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 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET
NO.

L-12



MATCH LINE STA. 980+20.00
SEE SHEET L-12

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

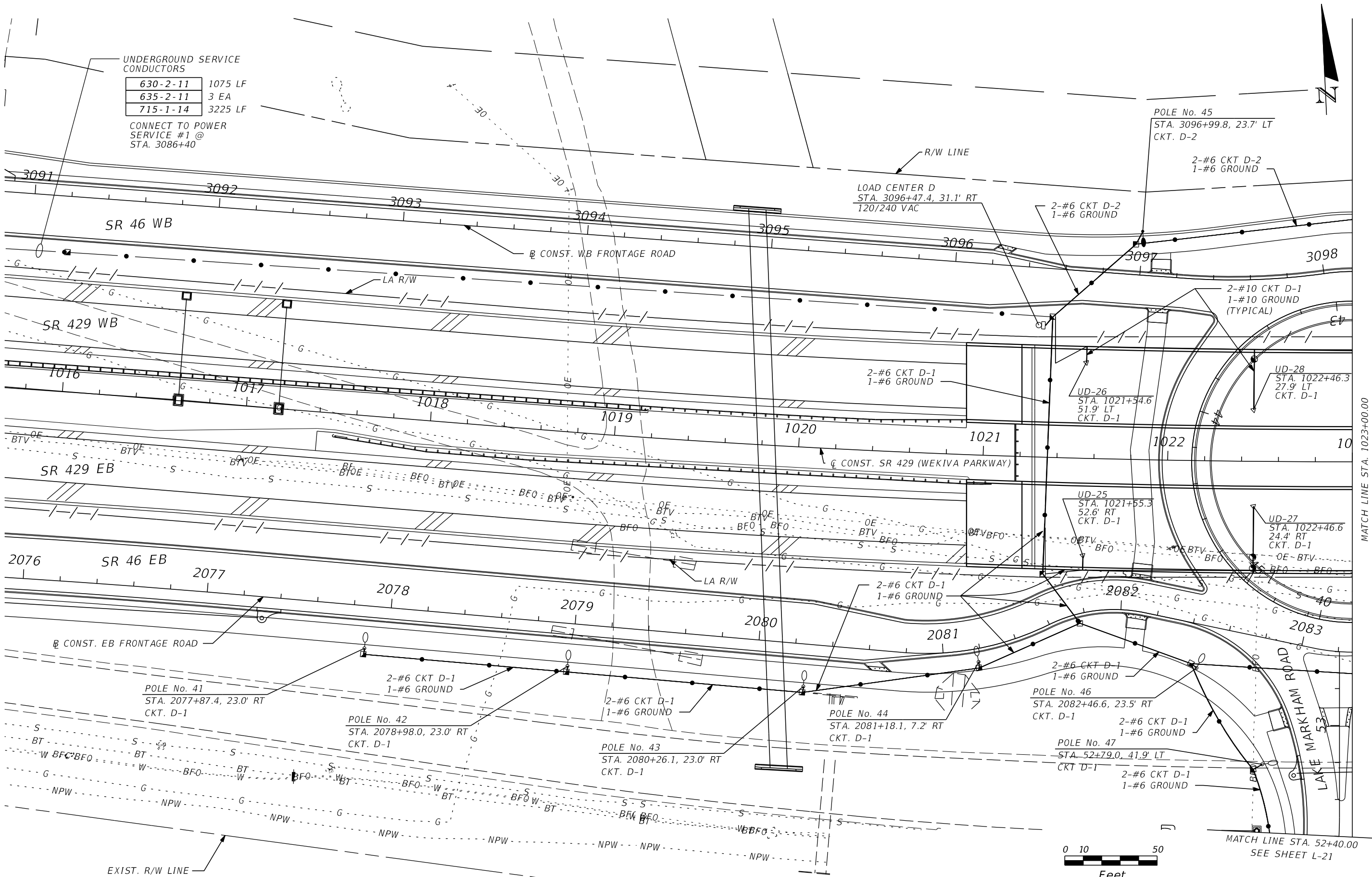
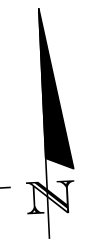
LIGHTING PLAN

SHEET NO.
L-13

UNDERGROUND SERVICE CONDUCTORS

630-2-11	1075 LF
635-2-11	3 EA
715-1-14	3225 LF

CONNECT TO POWER SERVICE #1 @ STA. 3086+40



MATCH LINE STA. 1023+00.00
SEE SHEET L-15

MATCH LINE STA. 52+40.00
SEE SHEET L-21

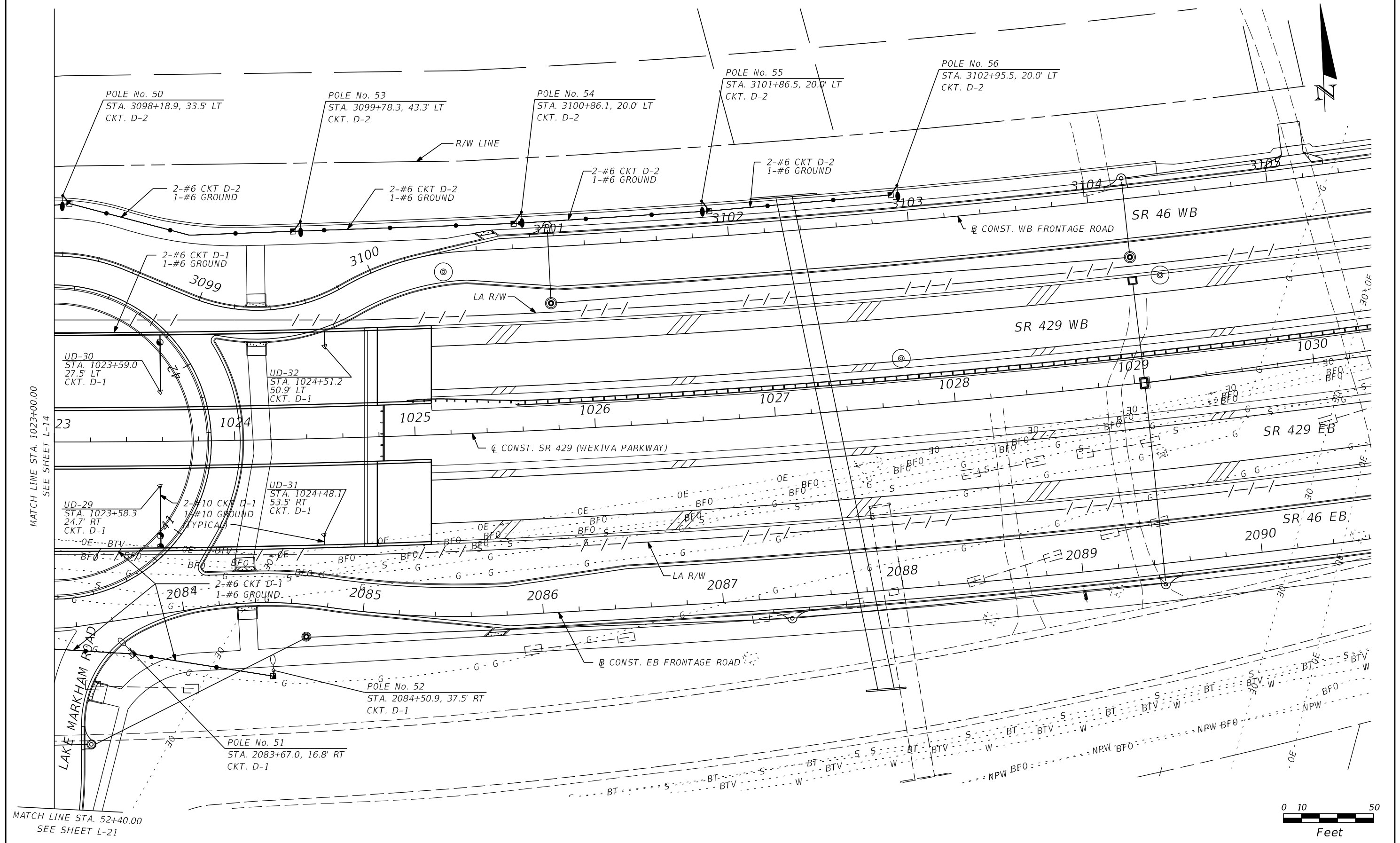
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-14



MATCH LINE STA. 1023+00.00
SEE SHEET L-14

MATCH LINE STA. 52+40.00
SEE SHEET L-21

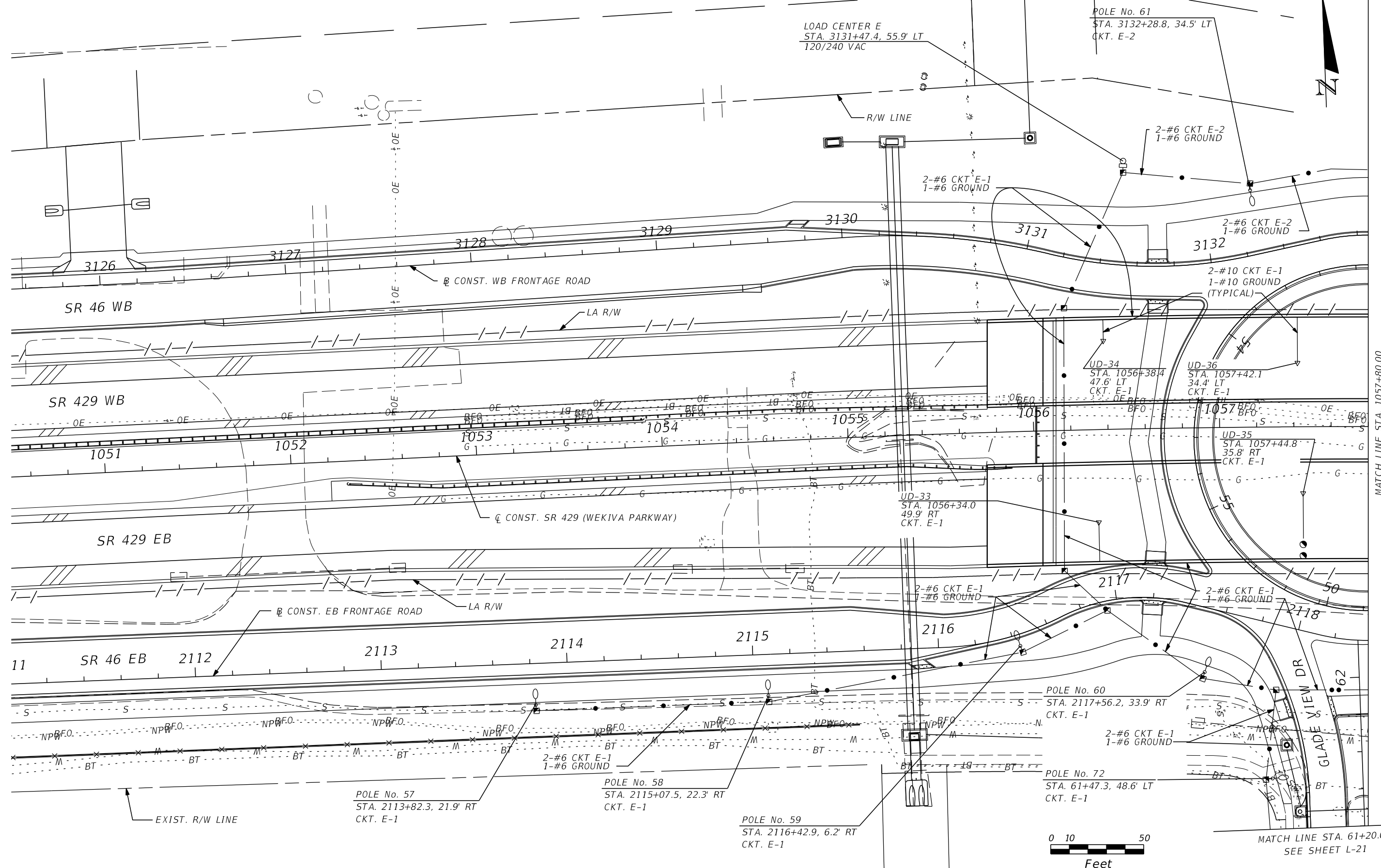
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-15



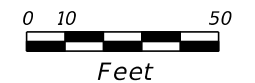
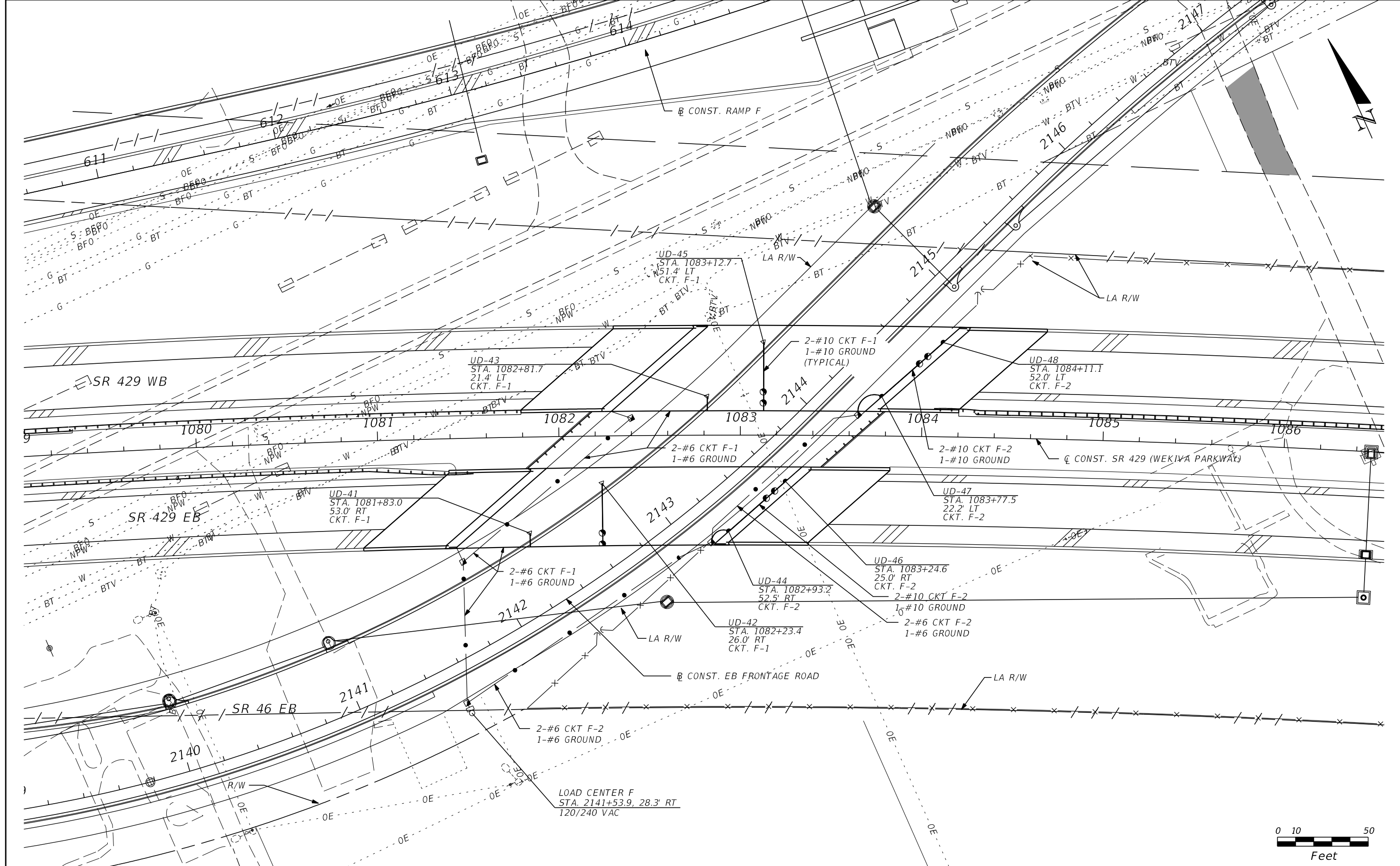
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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

LIGHTING PLAN

SHEET NO.
L-16



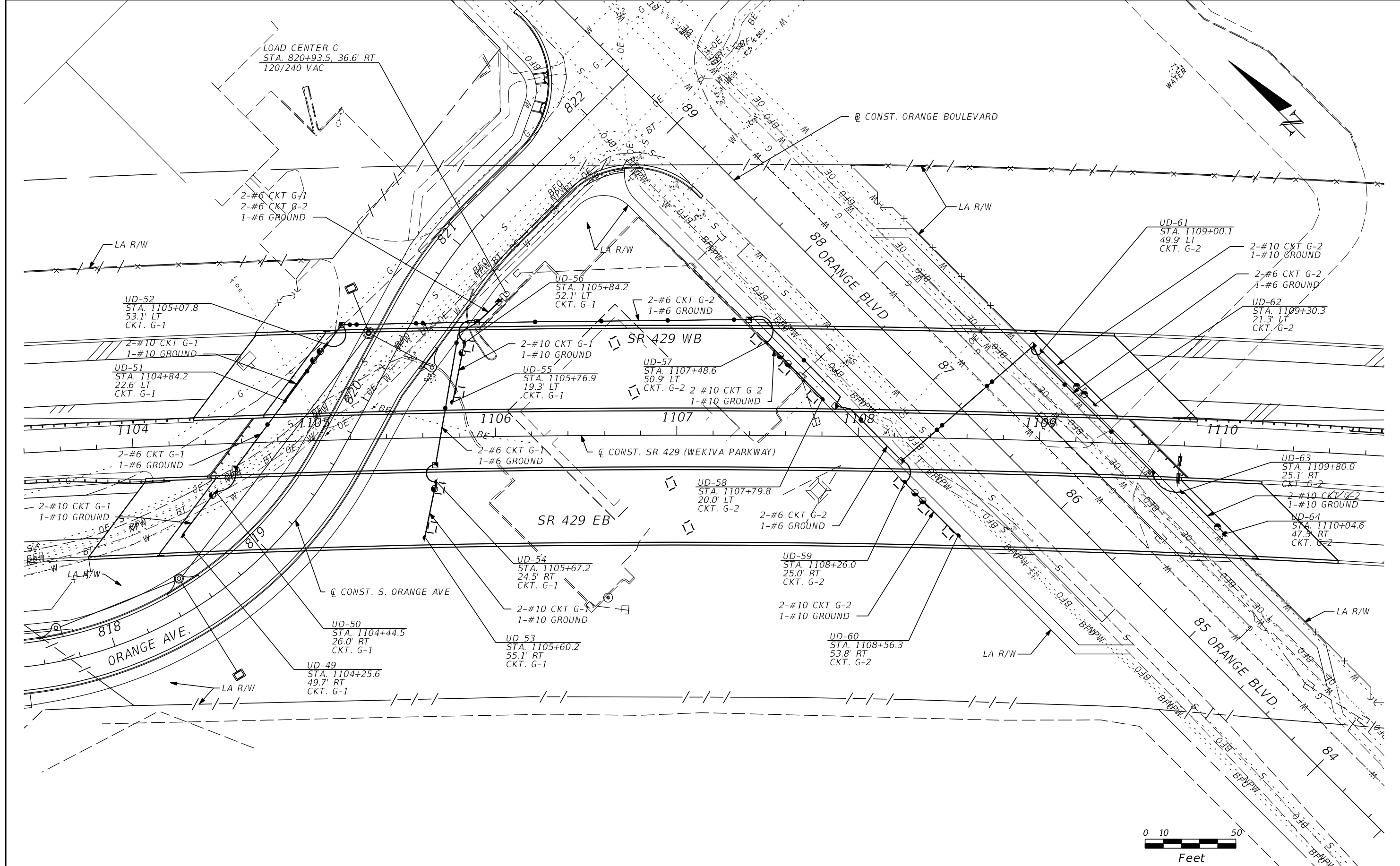
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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

LIGHTING PLAN

SHEET NO.
L-18



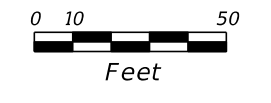
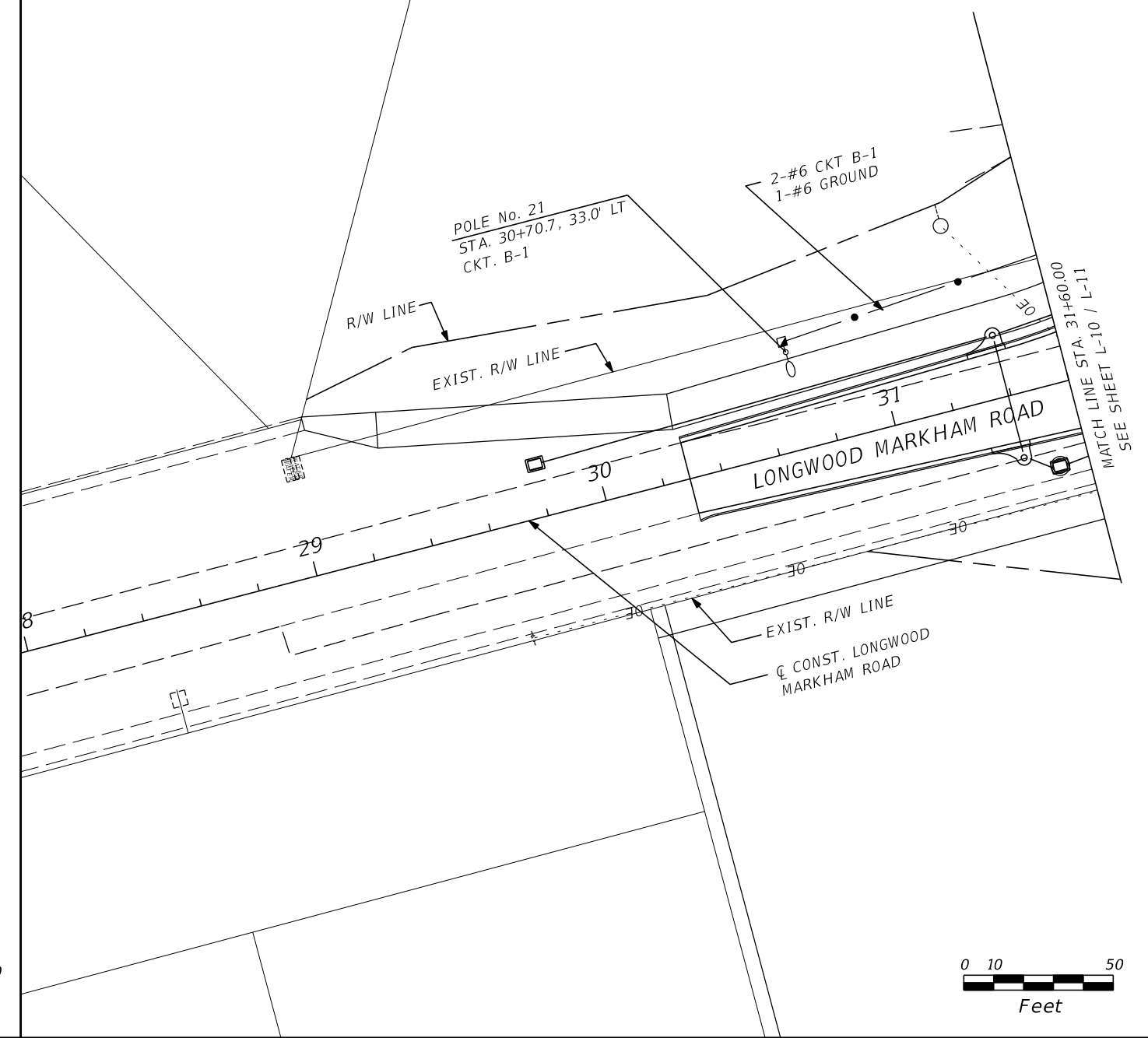
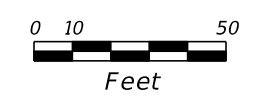
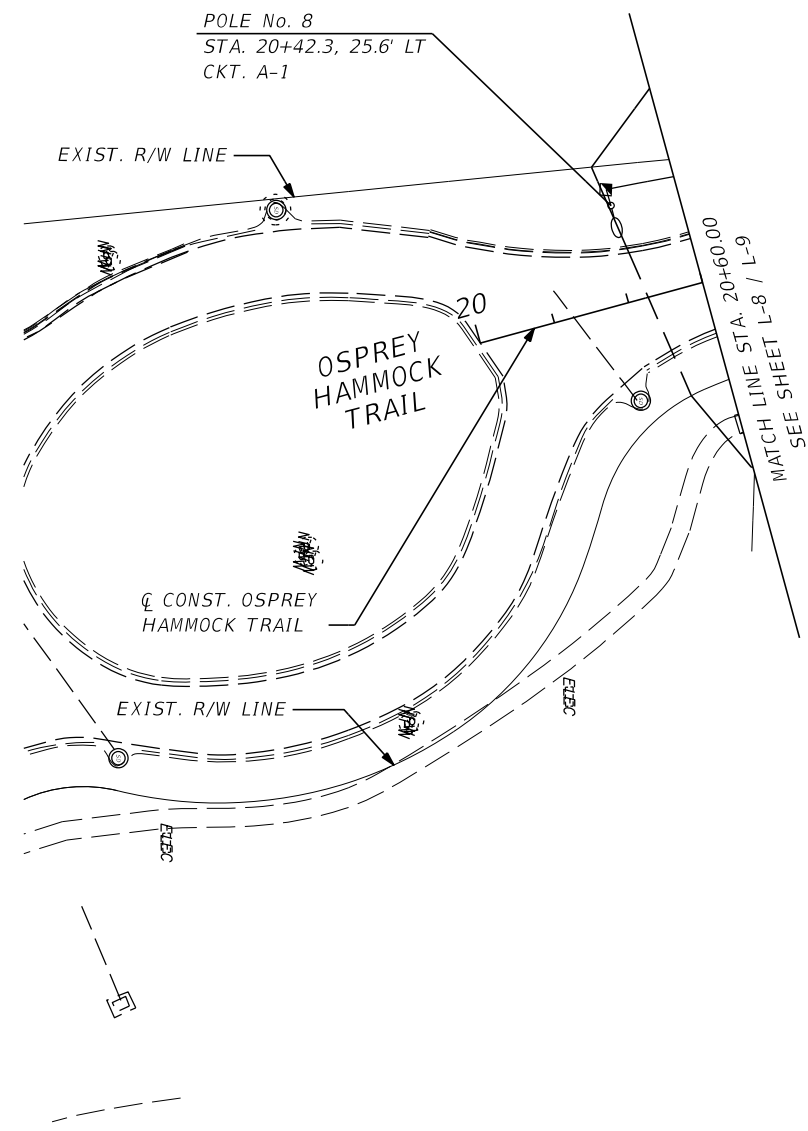
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-19



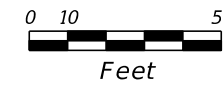
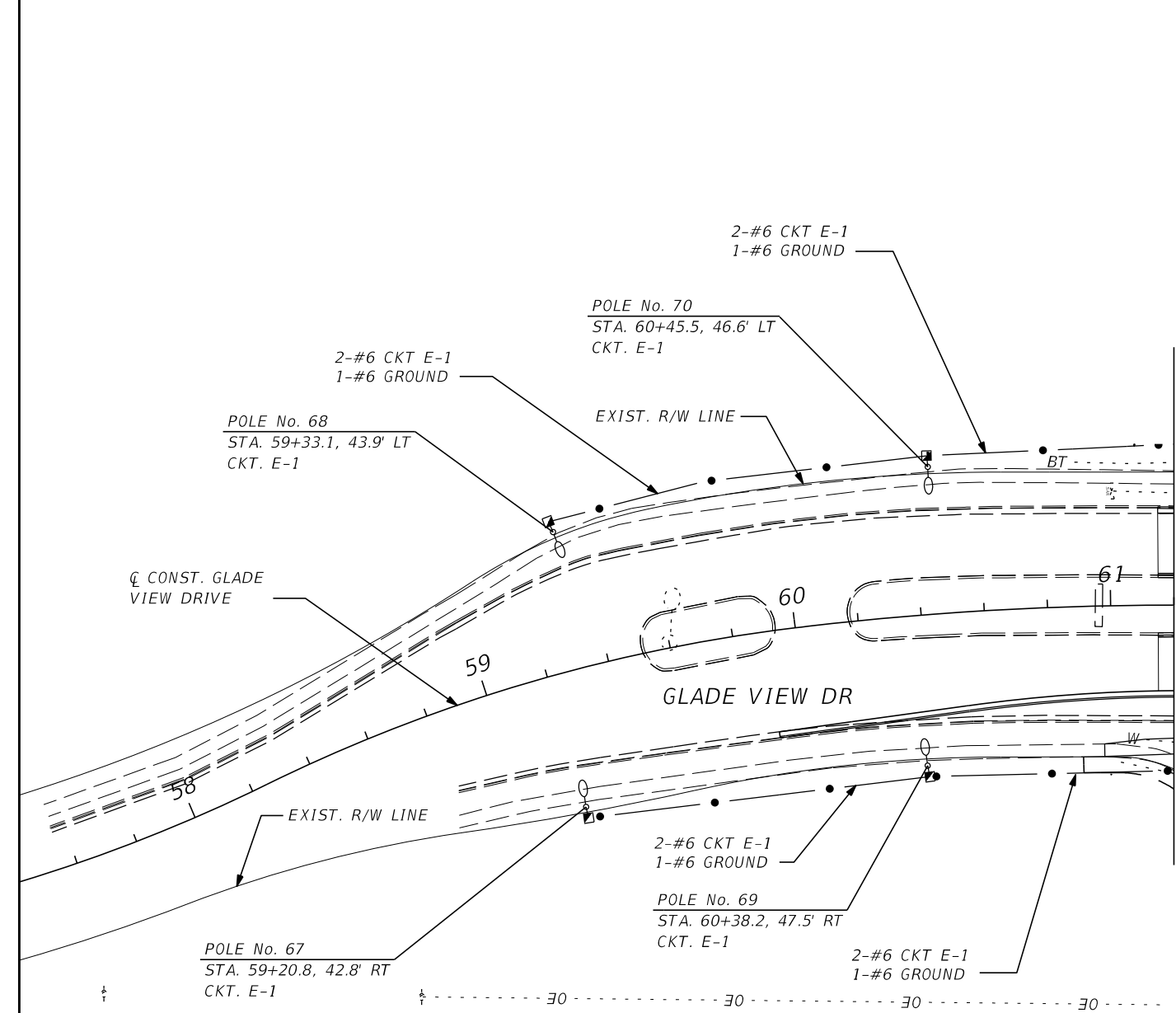
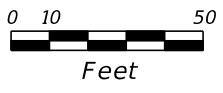
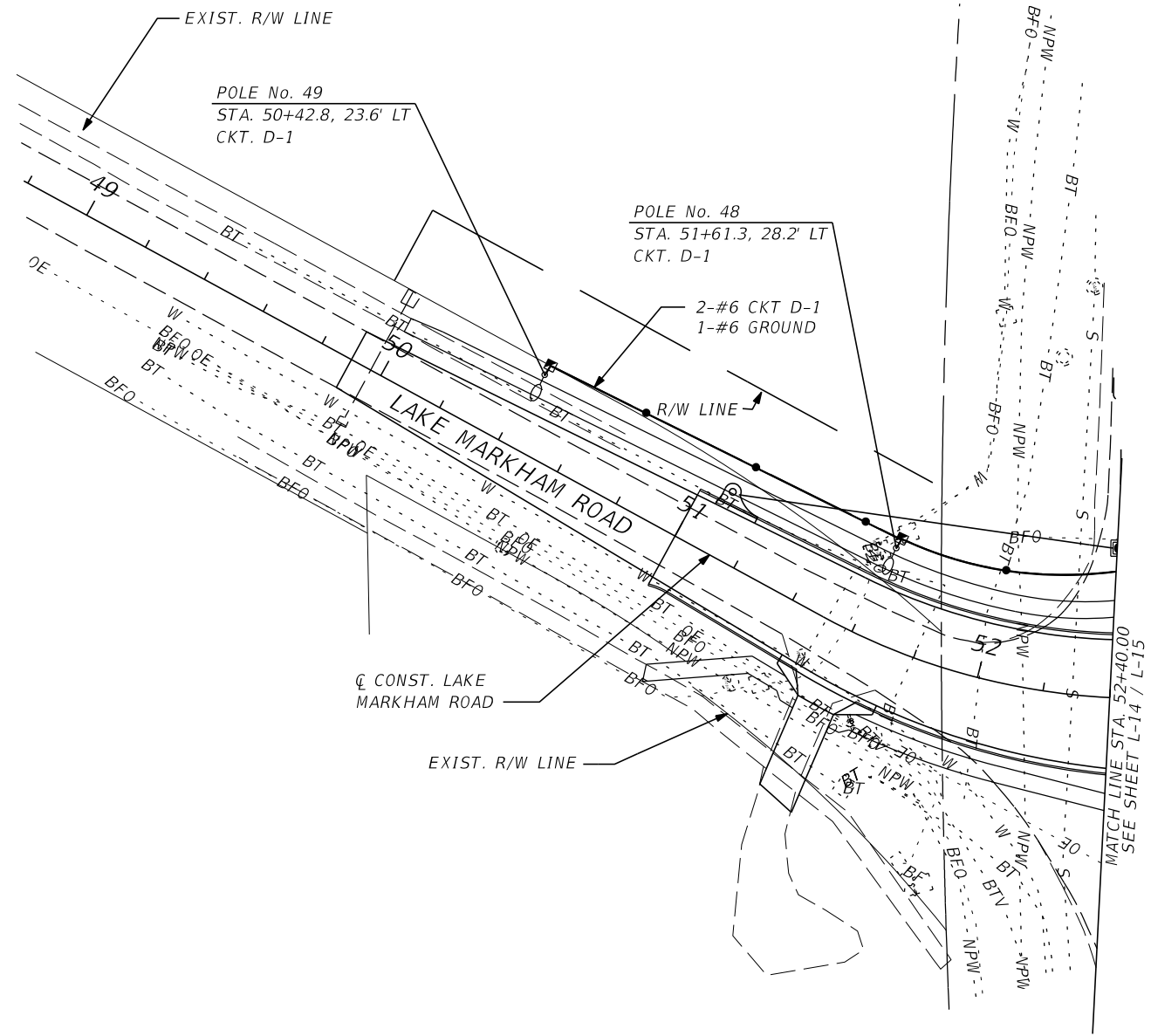
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-20



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

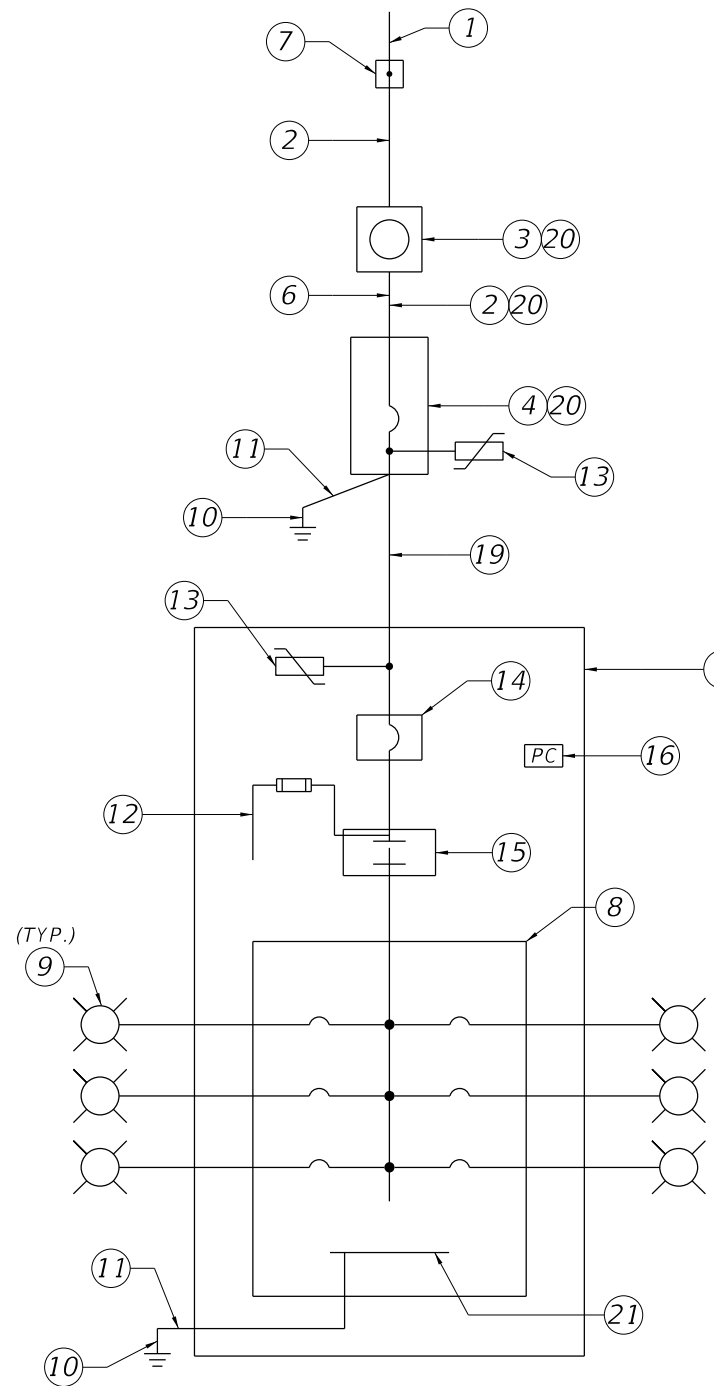
CHRIS J. WALSH, P.E. PE No. 57626
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 80 Spring Vista Drive Phone: 386.753.0558
 DeBary, FL 32713 Fax: 386.753.0778
 CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

LIGHTING PLAN

SHEET NO.
L-21

SERVICE POINT DETAIL LOAD CENTER A



ONE LINE DIAGRAM DISTRIBUTION POINT

Keyed Notes:

1. 120/240V, Single Phase, 3 Wire Electric Distribution Underground Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Concrete Riser Pole.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" Copper Clad Ground Rod, 40' Long.
11. #6 Insulated Copper Ground Wire. Bond the Service Neutral to Ground at Service Main Disconnect.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure: Minimum Voltage and Current Rating to Meet or Exceed Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Riser Pole.
21. Ground BUS.

AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	14.2
LIGHTING LOAD CENTER	8.2

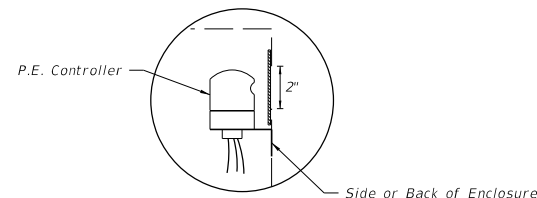
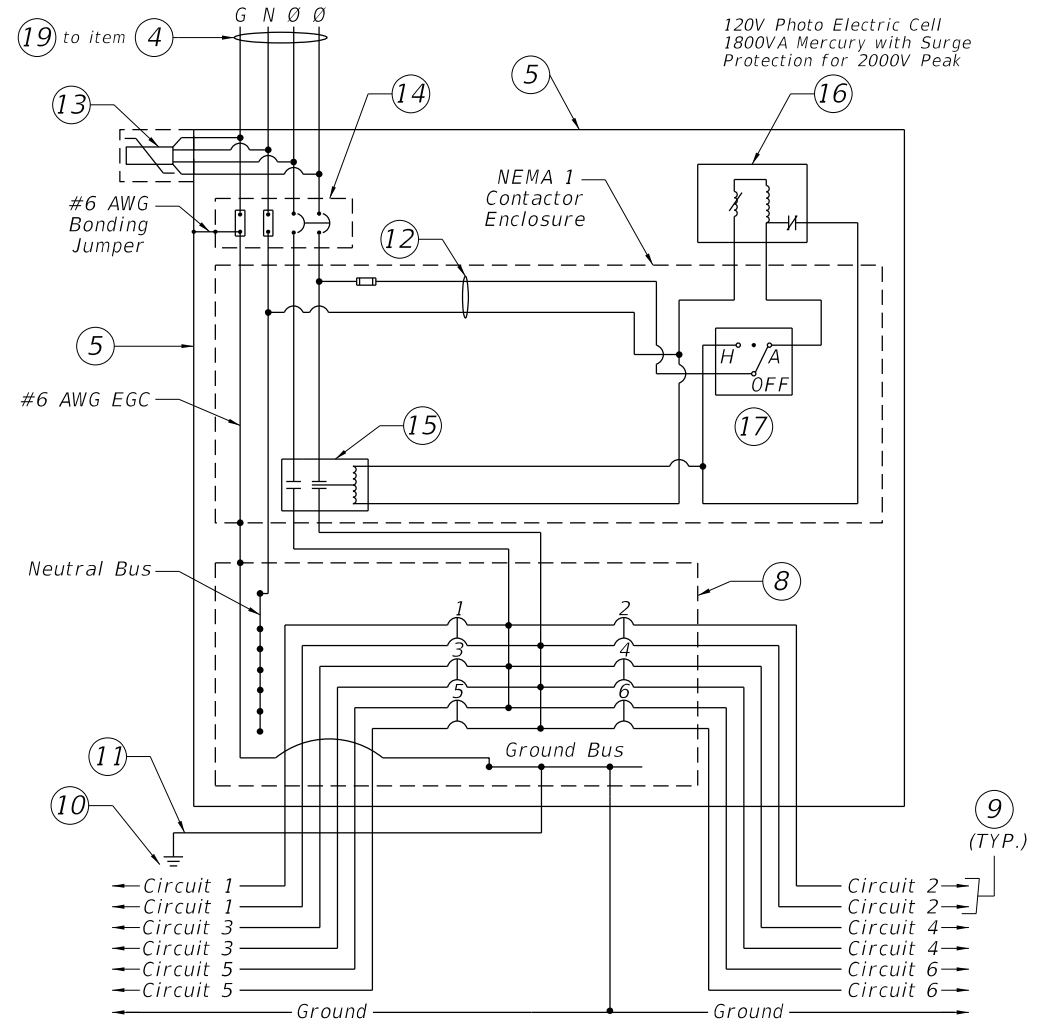


PHOTO ELECTRIC CONTROLLER DETAIL

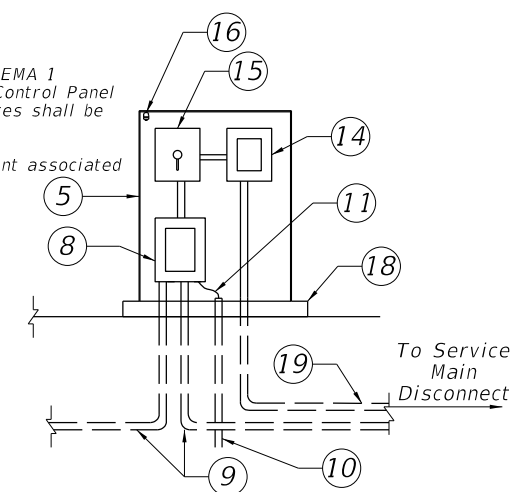
PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	A-1	LED LUMINARIES	20 A	2	864	240	2	20 A	A-2	LED LUMINARIES	2
3						864	240				4
5											6
7											8
9											10
11											12
TOTAL LOAD:					1104	1104					
TOTAL AMPS:					9.2	9.2					



TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CHRIS J. WALSH, P.E. PE No. 57626
 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

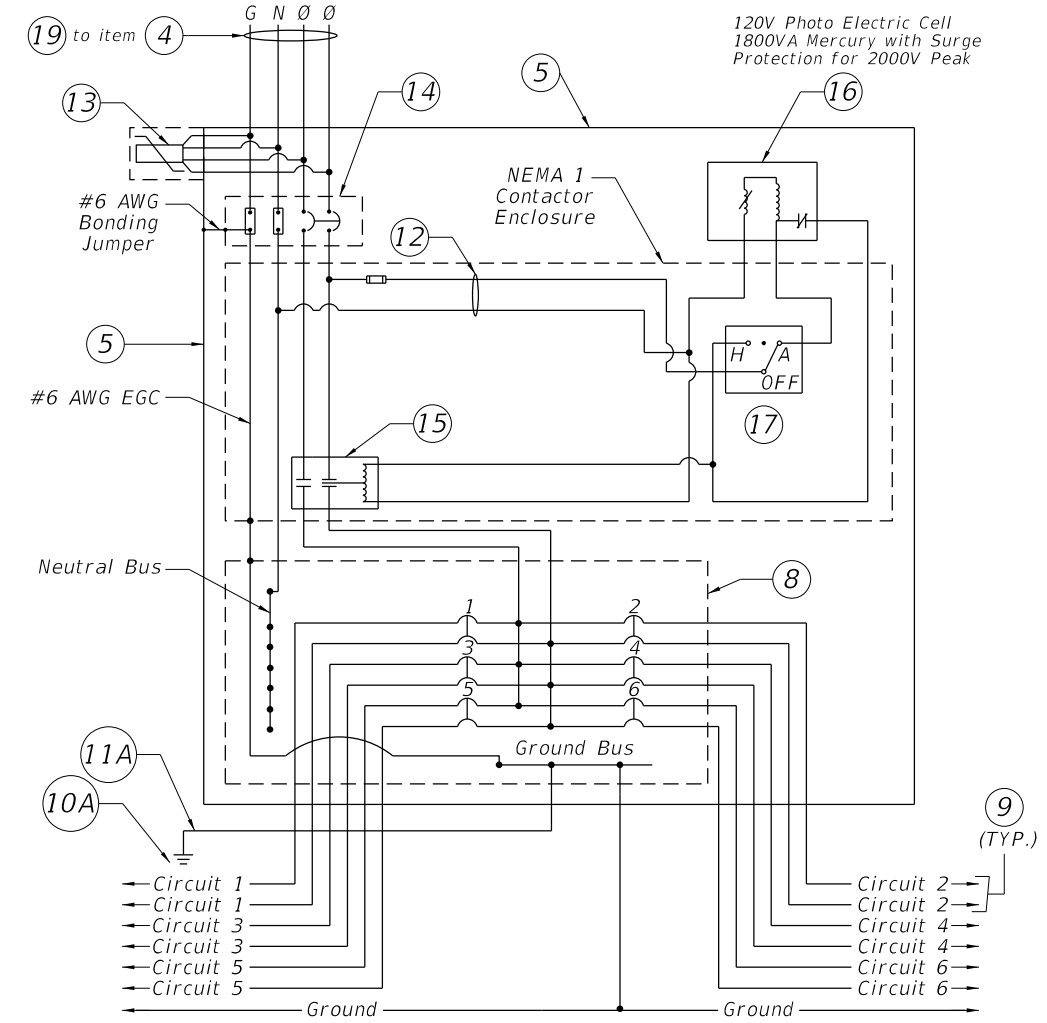
SERVICE POINT DETAIL SHEET LOAD CENTER A

SHEET NO.
L-22

SERVICE POINT DETAIL LOAD CENTER B

Keyed Notes:

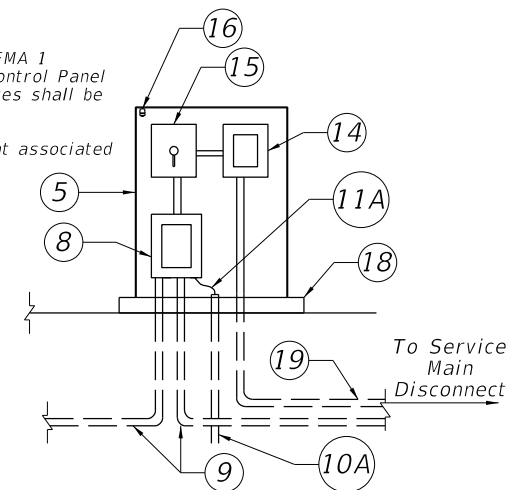
1. 120/240V, Single Phase, 3 Wire Electric Distribution Overhead Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure. Bound Enclosure to Grounded Conductor (Neutral) with #6 Main Bonding Jumper.
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Service Point H-Frame.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" x 20" Min. Copper Clad Ground Rod (Electrode). Extend or Add Additional Bonded with #2 AWG Tin Plated Bare Copper Ground Wire to Achieve 5 Ohms or Less Resistance to Ground.
- 10A. 5/8" Copper Clad Ground Rod, 40' Long.
11. #2 Insulated Copper Ground Wire (Common). Bond the Service Neutral to Ground in Wire Trough at Neutral Bus. Refer to ITS Plans for Further Detail.
- 11A. #6 Insulated Copper Ground Wire.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure: Minimum Voltage and Current Rating to Meet Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Service Point H-Frame.
21. Ground BUS.



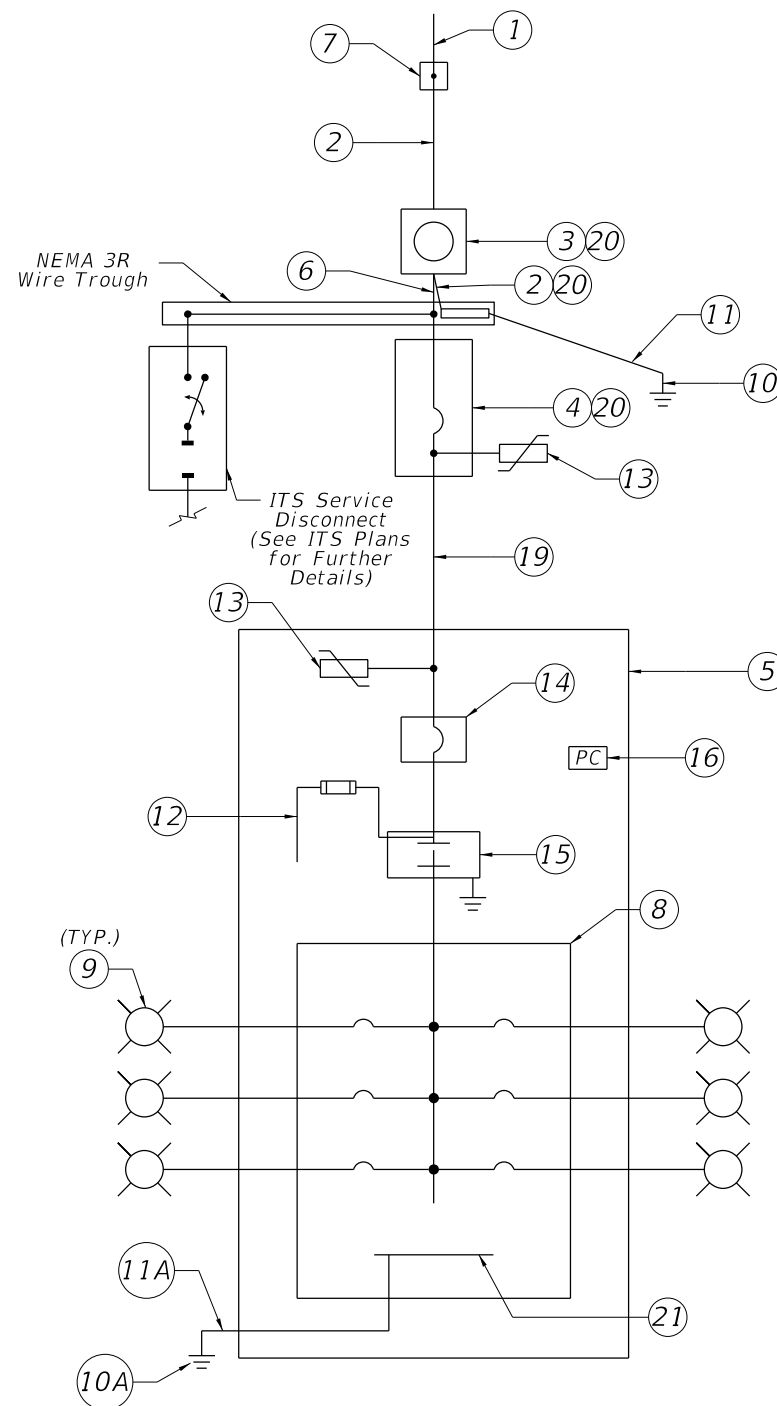
TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT



ONE LINE DIAGRAM DISTRIBUTION POINT

AVAILABLE BOLTED FAULT CURRENT AT EQUIPMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	11.5
LIGHTING LOAD CENTER	5.3

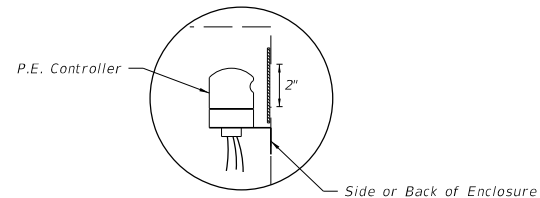


PHOTO ELECTRIC CONTROLLER DETAIL

PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	B-1	LED LUMINARIES	20 A	2	804	300	2	20 A	B-2	LED LUMINARIES	2
3	---	---	---	---		804	300	---	---	---	4
5											6
7											8
9											10
11											12
TOTAL LOAD:					1104	1104					
TOTAL AMPS:					9.2	9.2					

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CHRIS J. WALSH, P.E. PE No. 57626
 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

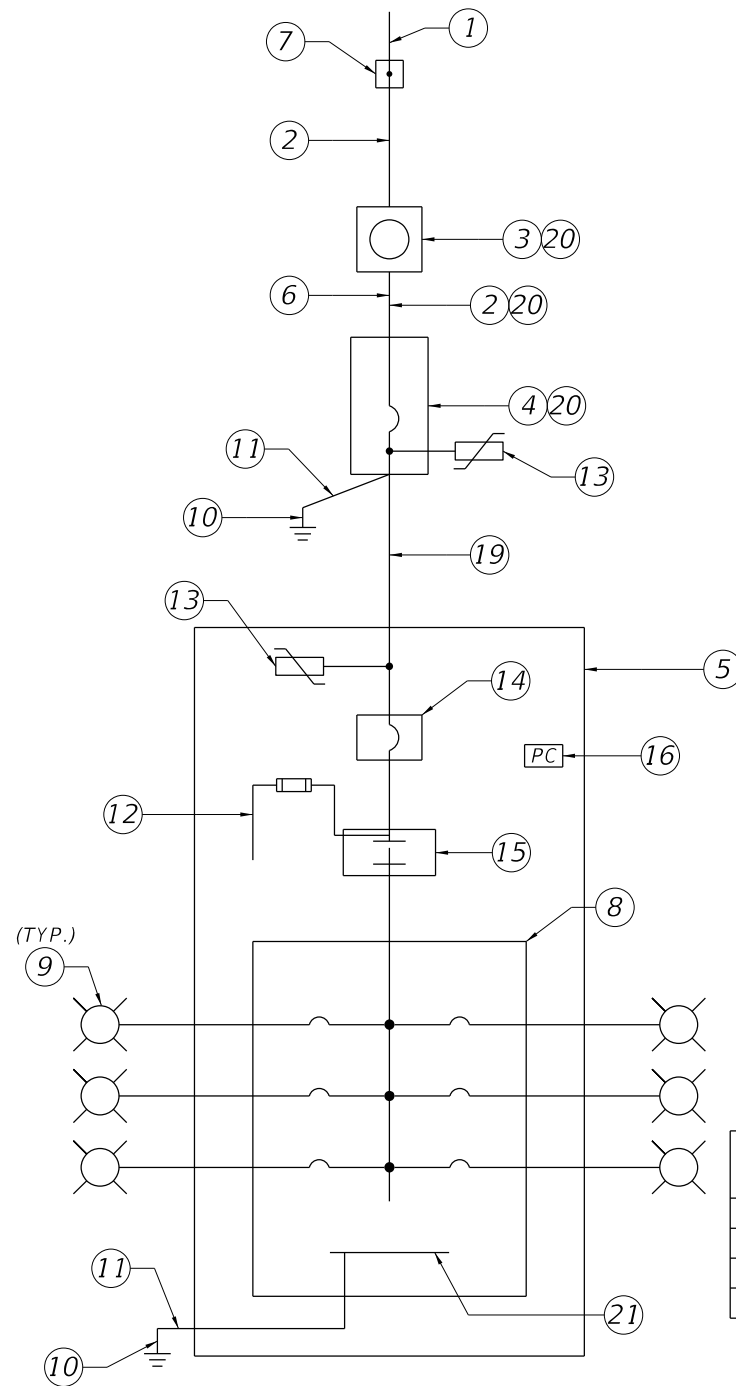
**SERVICE POINT DETAIL SHEET
LOAD CENTER B**

SHEET NO.
L-23

SERVICE POINT DETAIL LOAD CENTER C

Keyed Notes:

1. 120/240V, Single Phase, 3 Wire Electric Distribution Underground Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Concrete Riser Pole.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" Copper Clad Ground Rod, 40' Long.
11. #6 Insulated Copper Ground Wire. Bond the Service Neutral to Ground at Service Main Disconnect.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure: Minimum Voltage and Current Rating to Meet or Exceed Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Riser Pole.
21. Ground BUS.



ONE LINE DIAGRAM DISTRIBUTION POINT

AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	16.9
LIGHTING LOAD CENTER	9.0

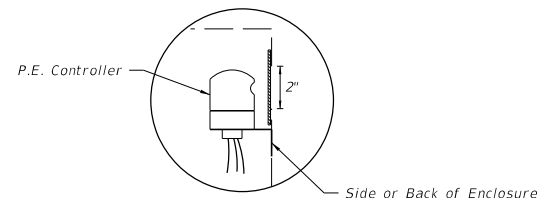
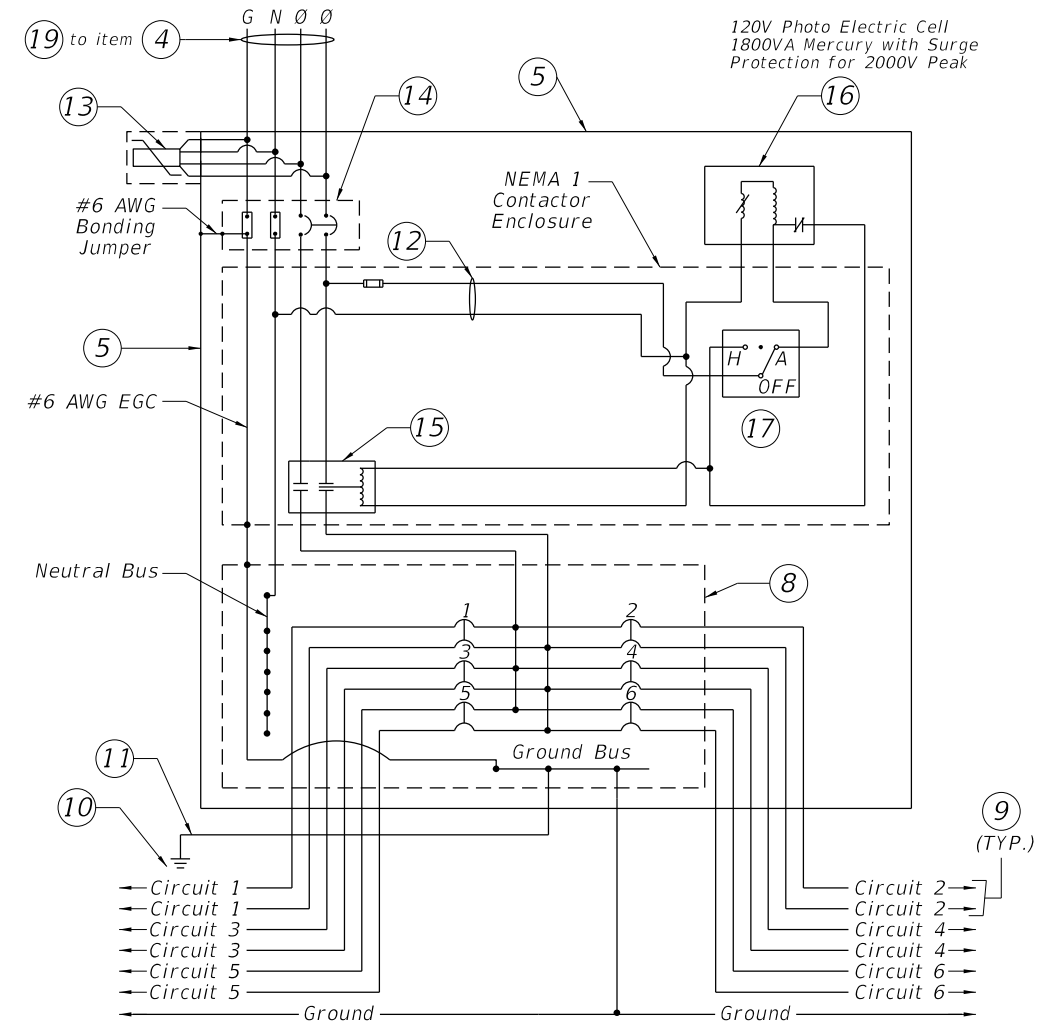


PHOTO ELECTRIC CONTROLLER DETAIL

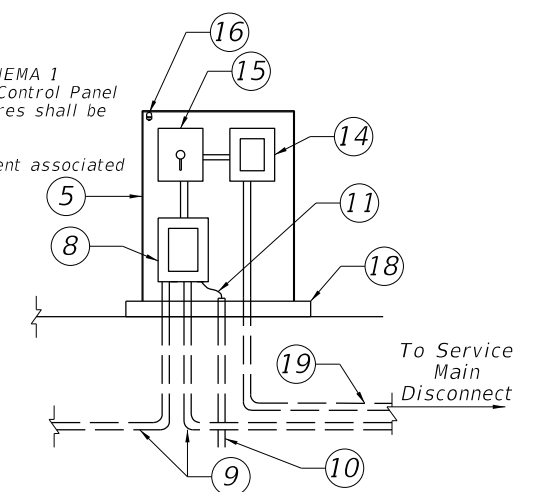
PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	C-1	LED LUMINARIES	20 A	2	744	360	2	20 A	C-2	LED LUMINARIES	2
3	---	---	---	---	---	---	---	---	---	---	4
5											6
7											8
9											10
11											12
TOTAL LOAD:					1104	1104					
TOTAL AMPS:					9.2	9.2					

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CHRIS J. WALSH, P.E. PE No. 57626
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

SERVICE POINT DETAIL SHEET
LOAD CENTER C

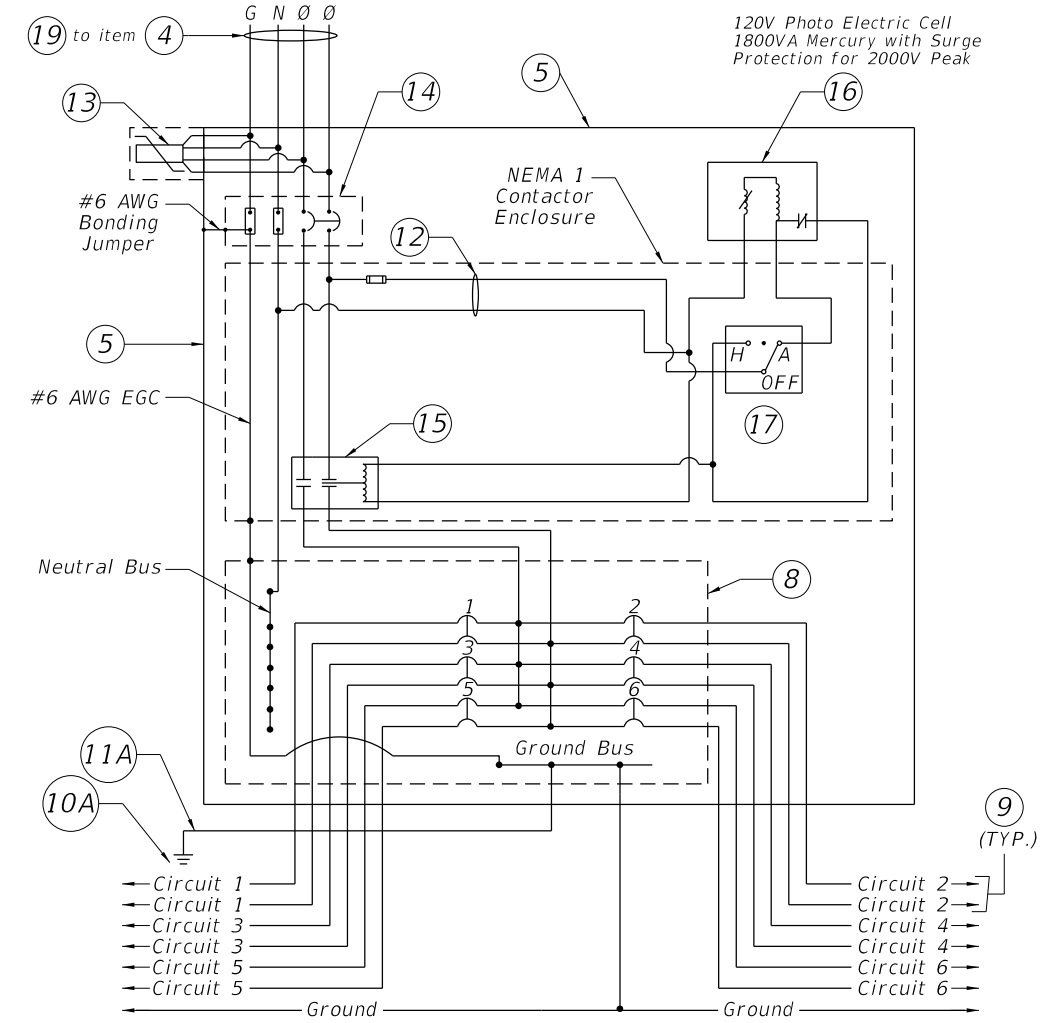
SHEET NO.

L-24

SERVICE POINT DETAIL LOAD CENTER D

Keyed Notes:

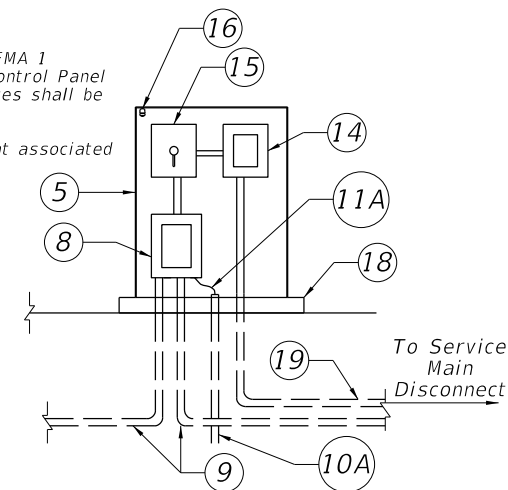
1. 120/240V, Single Phase, 3 Wire Electric Distribution Overhead Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure. Bound Enclosure to Grounded Conductor (Neutral) with #6 Main Bonding Jumper.
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Service Point H-Frame.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" x 20" Min. Copper Clad Ground Rod (Electrode). Extend or Add Additional Bonded with #2 AWG Tin Plated Bare Copper Ground Wire to Achieve 5 Ohms or Less Resistance to Ground.
- 10A. 5/8" Copper Clad Ground Rod, 40' Long.
11. #2 Insulated Copper Ground Wire (Common). Bond the Service Neutral to Ground in Wire Trough at Neutral Bus. Refer to ITS Plans for Further Detail.
- 11A. #6 Insulated Copper Ground Wire.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure: Minimum Voltage and Current Rating to Meet Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Service Point H-Frame.
21. Ground BUS.



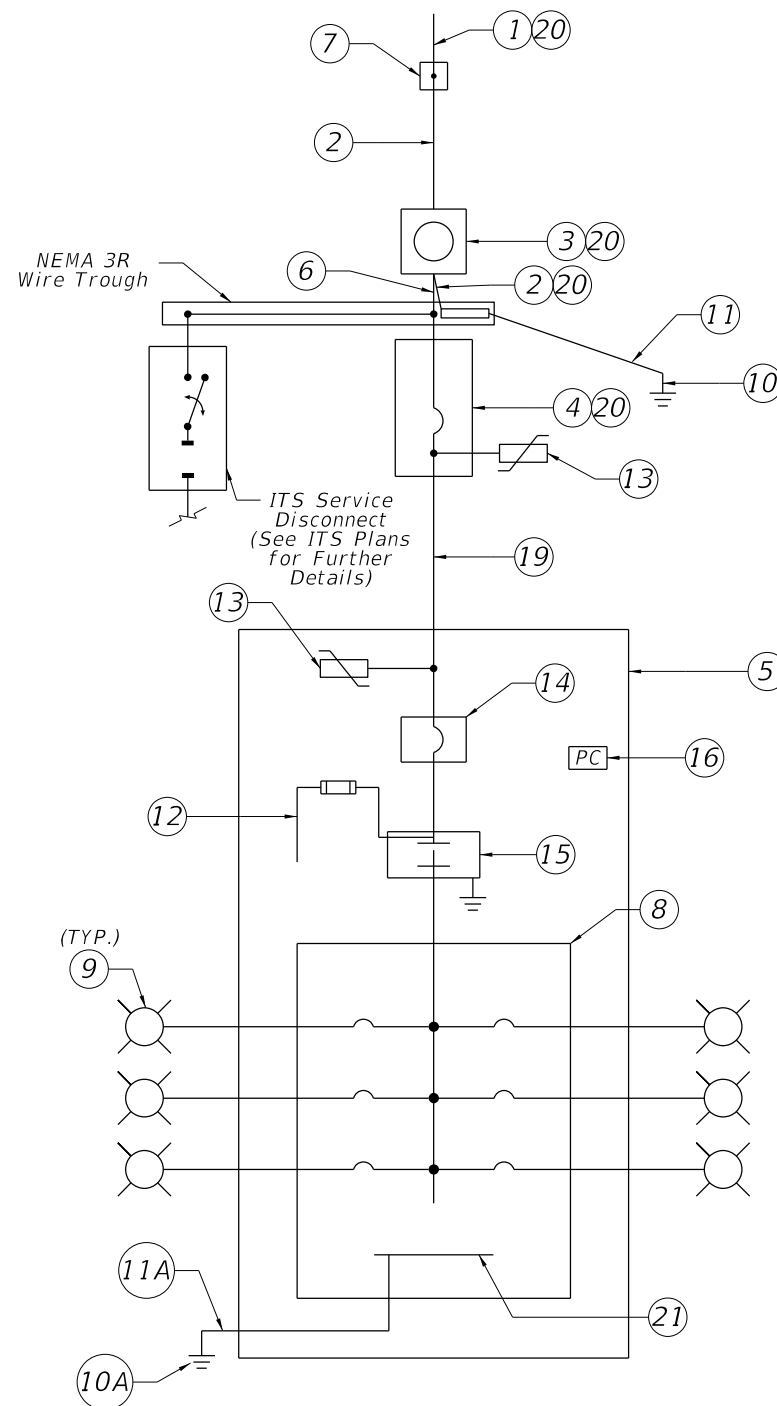
TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT



ONE LINE DIAGRAM DISTRIBUTION POINT

AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	9.7
LIGHTING LOAD CENTER	0.3

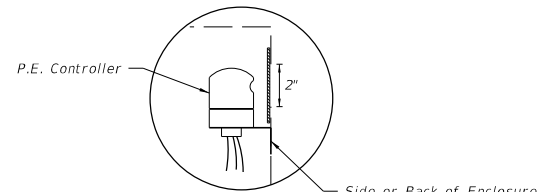


PHOTO ELECTRIC CONTROLLER DETAIL

PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	D-1	LED LUMINARIES	20 A	2	984	360	2	20 A	D-2	LED LUMINARIES	2
3	---	---	---	---		984	360	---	---	---	4
5											6
7											8
9											10
11											12
TOTAL LOAD:					1344	1344					
TOTAL AMPS:					11.2	11.2					

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

CHRIS J. WALSH, P.E. PE No. 57626
 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

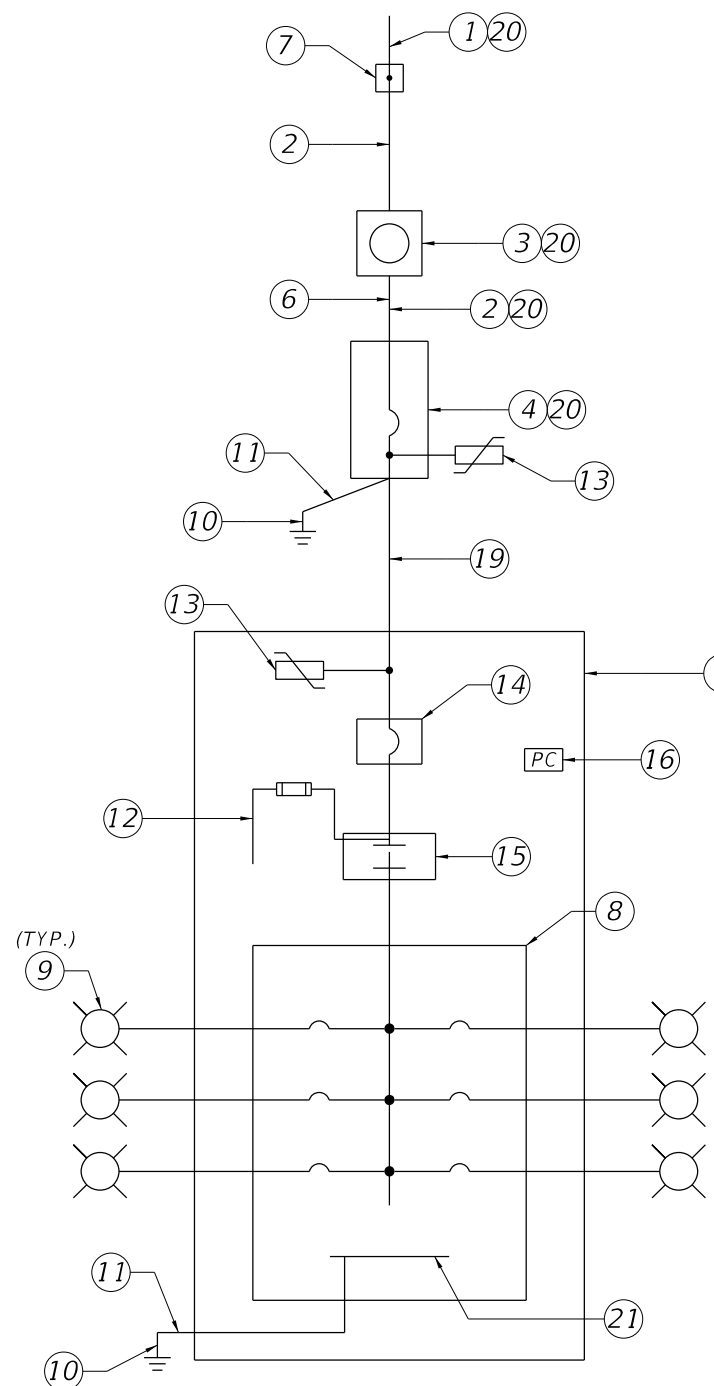
**SERVICE POINT DETAIL SHEET
LOAD CENTER D**

SHEET NO.
L-25

SERVICE POINT DETAIL LOAD CENTER E

Keyed Notes:

1. 120/240V, Single Phase, 3 Wire Electric Distribution Underground Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Concrete Riser Pole.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" Copper Clad Ground Rod, 40' Long.
11. #6 Insulated Copper Ground Wire. Bond the Service Neutral to Ground at Service Main Disconnect.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure: Minimum Voltage and Current Rating to Meet or Exceed Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Riser Pole.
21. Ground BUS.



ONE LINE DIAGRAM DISTRIBUTION POINT

AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	9.7
LIGHTING LOAD CENTER	6.5

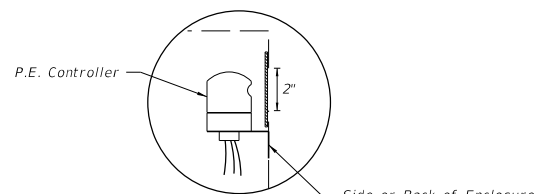
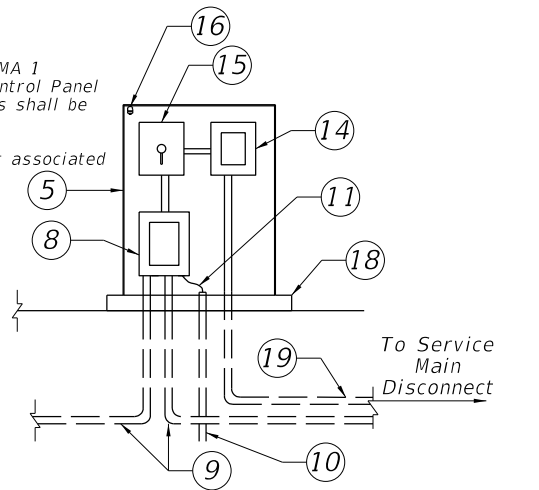


PHOTO ELECTRIC CONTROLLER DETAIL

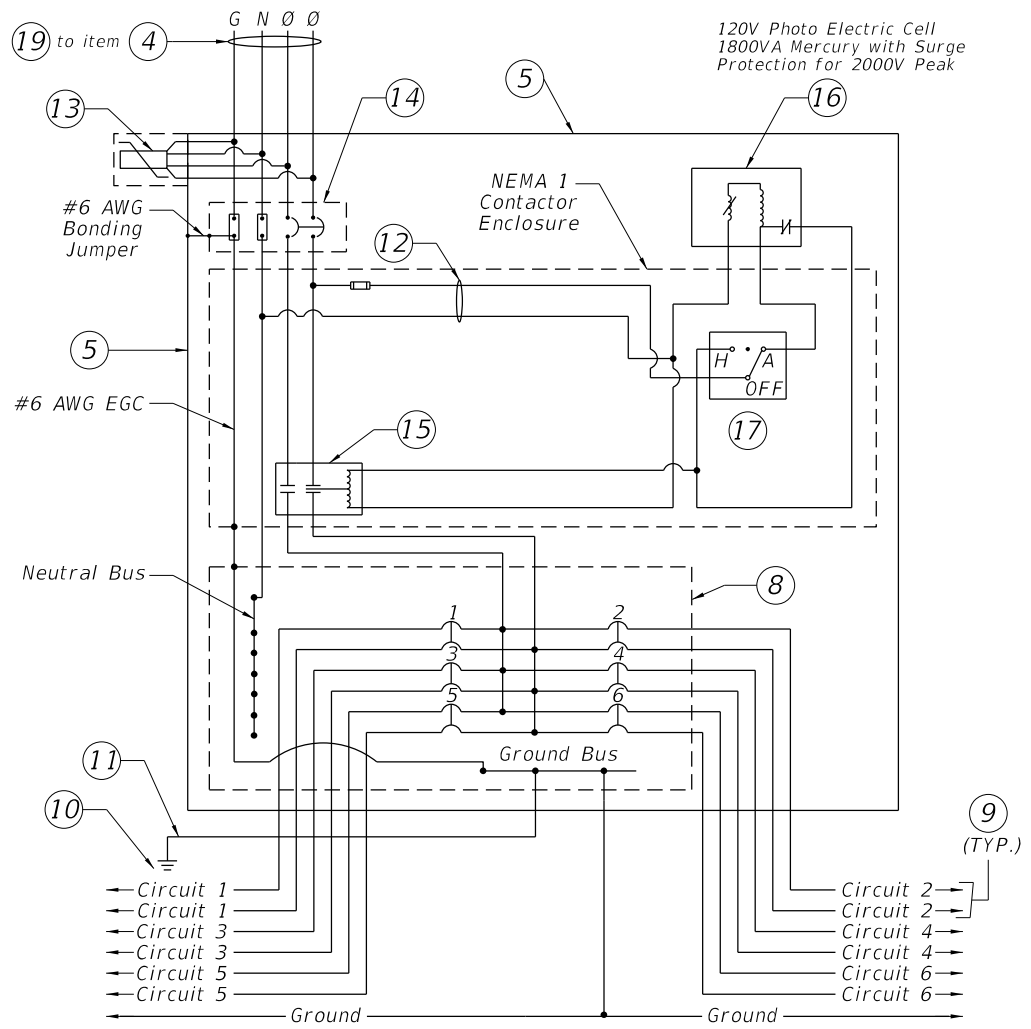
PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	E-1	LED LUMINARIES	20 A	2	1044	203	2	20 A	E-2	LED LUMINARIES	2
3	---	---	---	---	---	---	---	---	---	---	4
5											6
7											8
9											10
11											12
TOTAL LOAD:					1247	1247					
TOTAL AMPS:					10.4	10.4					

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT

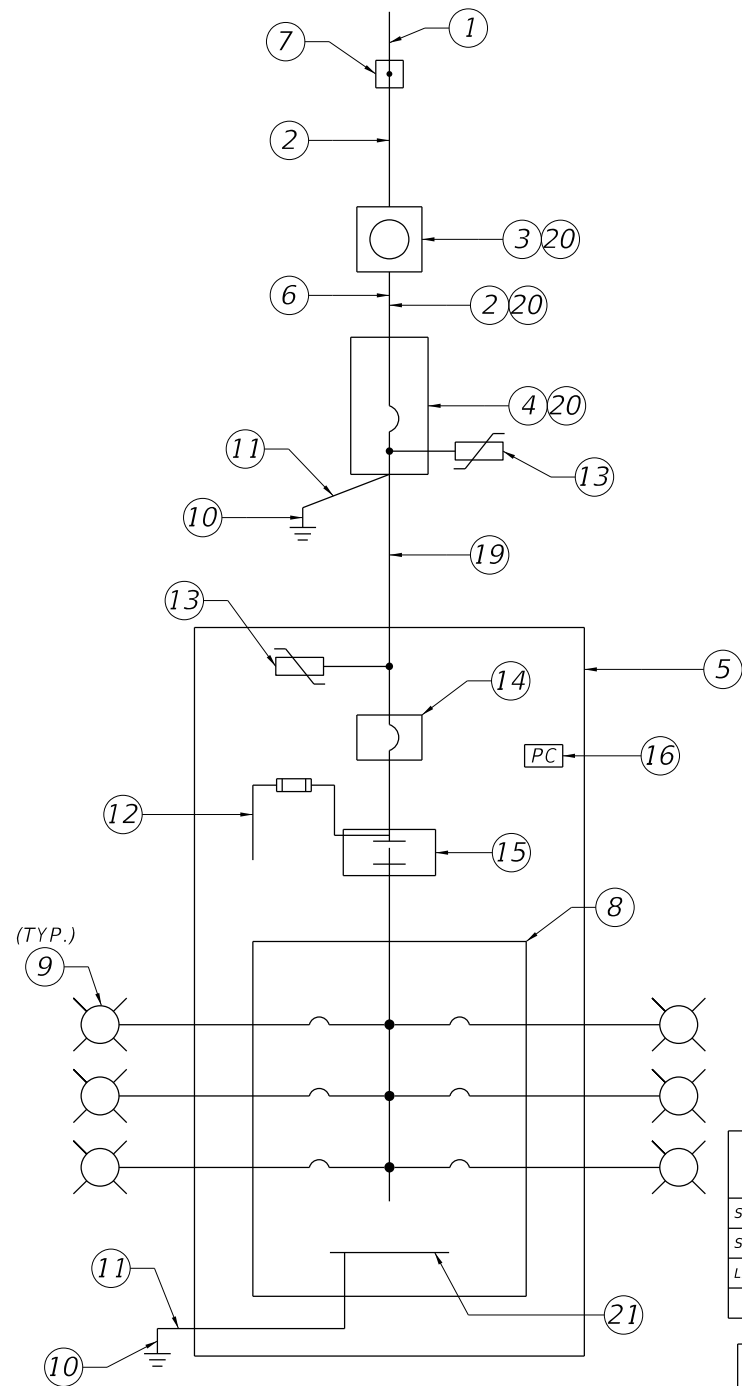


TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL

SERVICE POINT DETAIL LOAD CENTER F

Keyed Notes:

1. 120/240V, Single Phase, 3 Wire Electric Distribution Underground Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Concrete Riser Pole.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" Copper Clad Ground Rod, 40' Long.
11. #6 Insulated Copper Ground Wire. Bond the Service Neutral to Ground at Service Main Disconnect.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure: Minimum Voltage and Current Rating to Meet or Exceed Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Riser Pole.
21. Ground BUS.



ONE LINE DIAGRAM DISTRIBUTION POINT

AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	15.5
LIGHTING LOAD CENTER	8.6

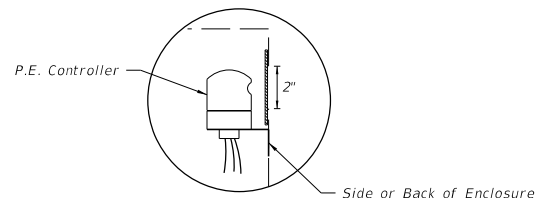
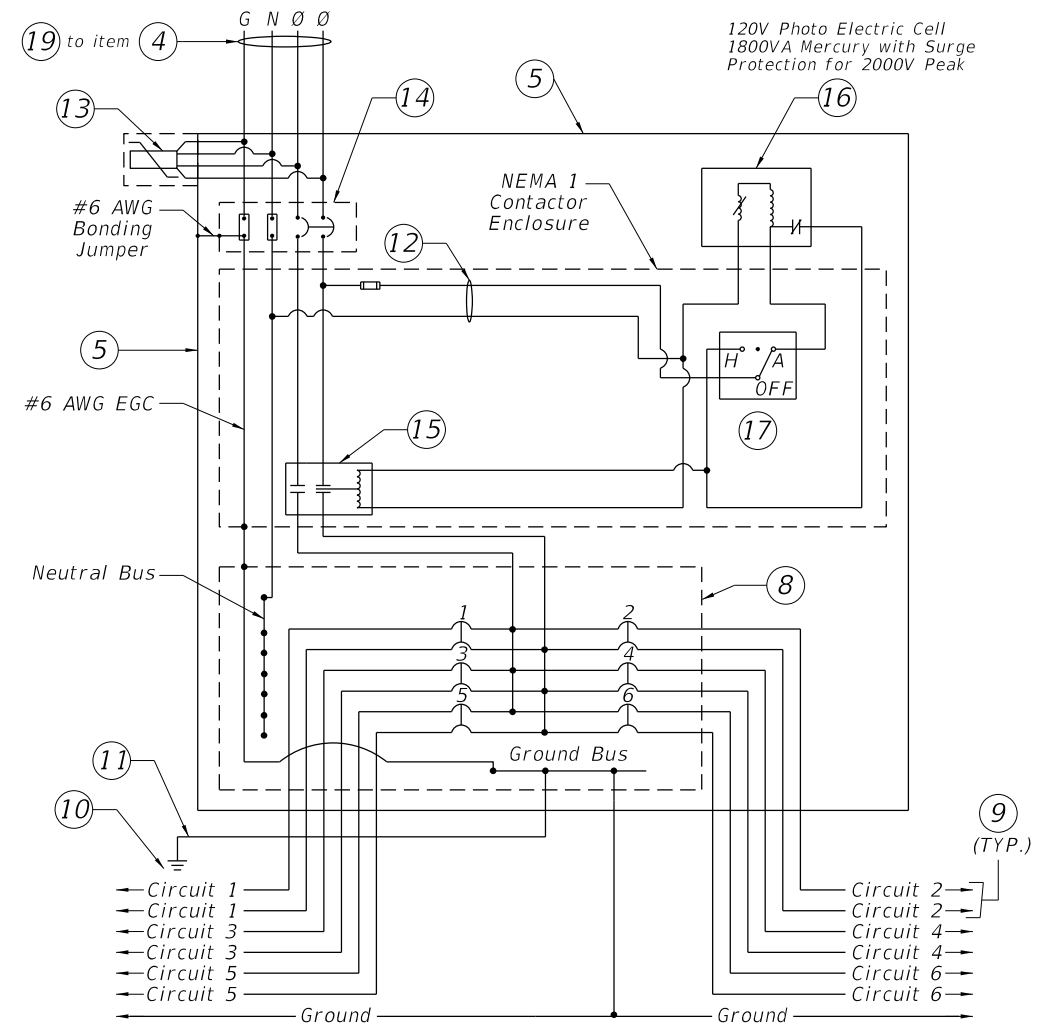


PHOTO ELECTRIC CONTROLLER DETAIL

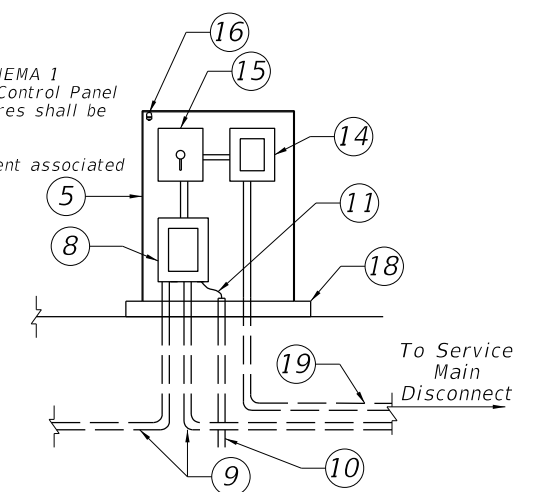
PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	F-1	LED LUMINARIES	20 A	2	144	288	2	20 A	F-2	LED LUMINARIES	2
3	---	---	---	---	---	144	288	---	---	---	4
5	---	---	---	---	---	---	---	---	---	---	6
7	---	---	---	---	---	---	---	---	---	---	8
9	---	---	---	---	---	---	---	---	---	---	10
11	---	---	---	---	---	---	---	---	---	---	12
TOTAL LOAD:					432	432					
TOTAL AMPS:					3.6	3.6					



TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL

Notes:

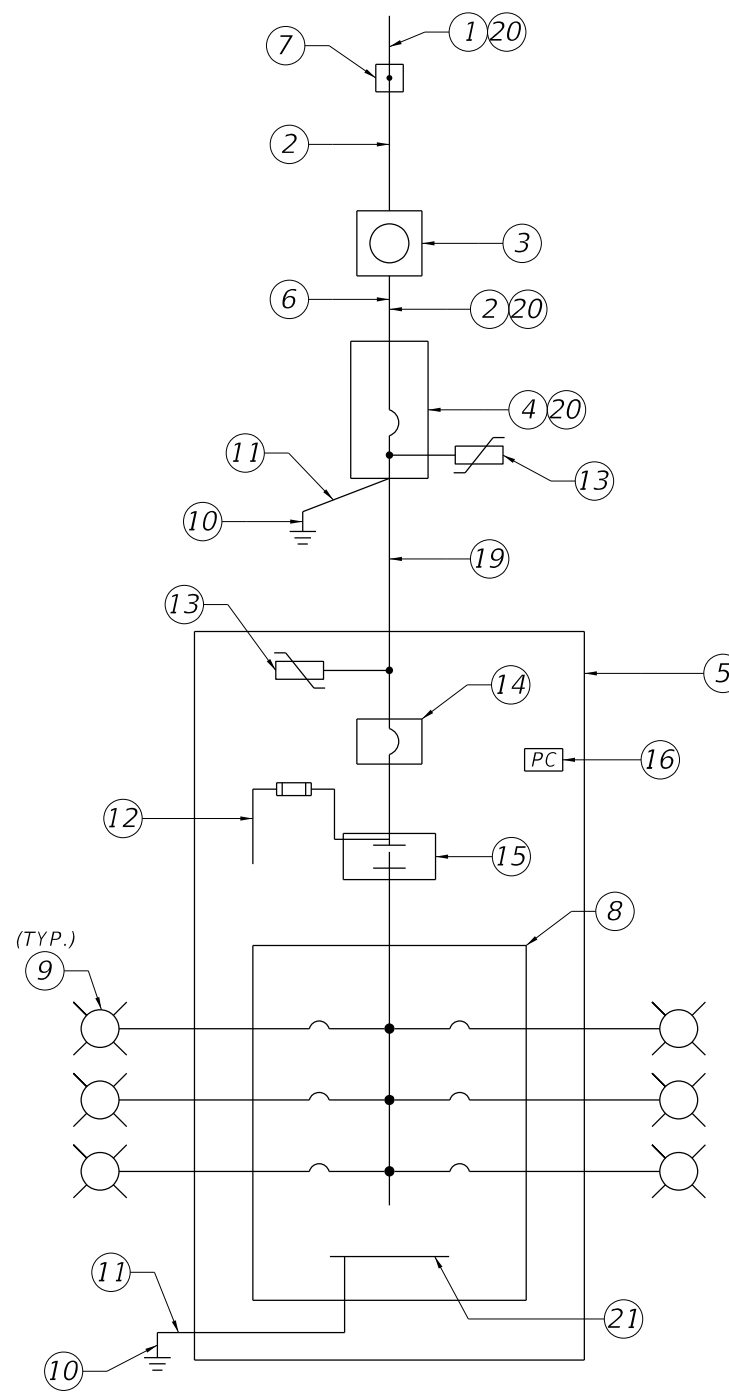
1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT

REVISIONS				CHRIS J. WALSH, P.E. PE No. 57626 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			SERVICE POINT DETAIL SHEET LOAD CENTER F	SHEET NO. L-27
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				SR 429	SEMINOLE	240200-2-52-01			

SERVICE POINT DETAIL LOAD CENTER G



ONE LINE DIAGRAM DISTRIBUTION POINT

Keyed Notes:

1. 120/240V, Single Phase, 3 Wire Electric Distribution Underground Service Drop.
2. 2-#1 AWG Ungrounded Service Conductors & 1-#1 AWG Grounded Service Conductor (Neutral) in 2" Underground Conduit
3. Meter Socket by Contractor
4. Service Main Disconnect: 240V, 2 Pole, S/N, 100A, 22,000 AIC Min. Rated Circuit Breaker, in Service Entrance Rated NEMA 4X Circuit Breaker Enclosure
5. Lighting Control Panel Enclosure. Dimensions as Necessary for Equipment Inside. Ground Mounted Cabinet per Index 17736.
6. Concrete Riser Pole.
7. Point of Service: Utility Company Installed Handhole. Contractor to provide 10' of slack service feeder for connection by Utility Company.
8. Main Lug Only Panelboard in NEMA 1 Enclosure. Number and Rating of Branch Circuit Breakers shall be as Indicated on Panelboard Schedule.
9. Branch Circuit to Roadway Luminaires in 2" Underground Conduit (See plan sheets for count of conduits).
10. 5/8" Copper Clad Ground Rod, 40' Long.
11. #6 Insulated Copper Ground Wire. Bond the Service Neutral to Ground at Service Main Disconnect.
12. Fused Control Circuit, 120VAC. Size conductors according to contactor manufactures recommendation, and size fuse per NEC.
13. Lightning Arrester (Surge Protective Device) Mounted on Outside of Enclosure.
14. Lighting Control Panel Main Breaker in NEMA 1 Enclosure: 240V, 2 Pole, S/N, 60A, 22,000 AIC Min. Rated
15. 2 Pole Electrically Held Feeder Disconnect Style Lighting Contactor in NEMA 1 Enclosure: Minimum Voltage and Current Rating to Meet or Exceed Lighting Control Panel Main Breaker, 120VAC 60Hz Coil
16. Photo Electric Switch-120V Rated.
17. Hand-off Automatic Selector Switch (Part of Lighting Contactor)
18. Concrete Pad.
19. Underground Feeder: 3-#1 & 1-#6 Ground in 2" Underground Conduit
20. Mount on Riser Pole.
21. Ground BUS.

AVAILABLE BOLTED FAULT CURRENT AT EQUIPEMENT (KA)	
SERVICE XFMR SECONDARY	31.9
SERVICE MAIN DISC.	6.0
LIGHTING LOAD CENTER	4.6

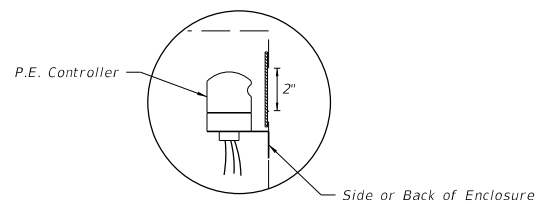
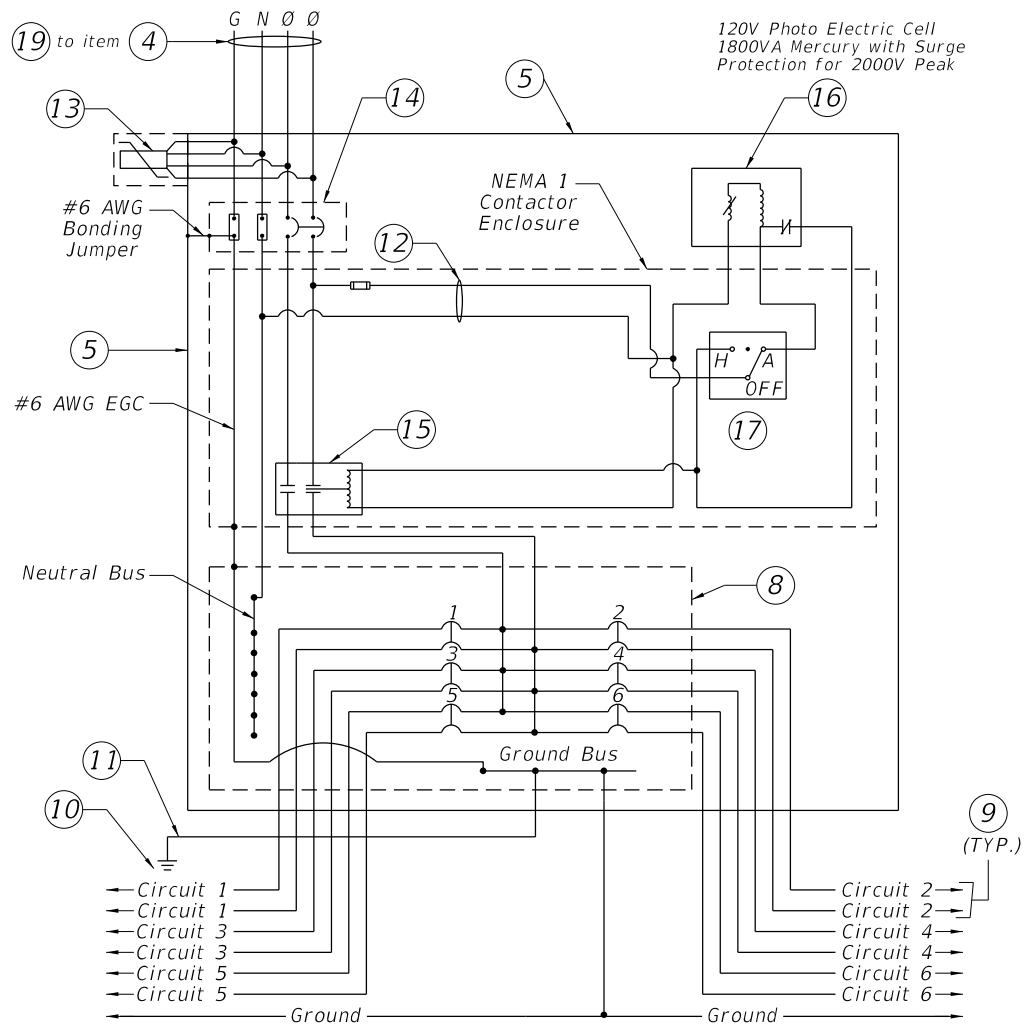


PHOTO ELECTRIC CONTROLLER DETAIL

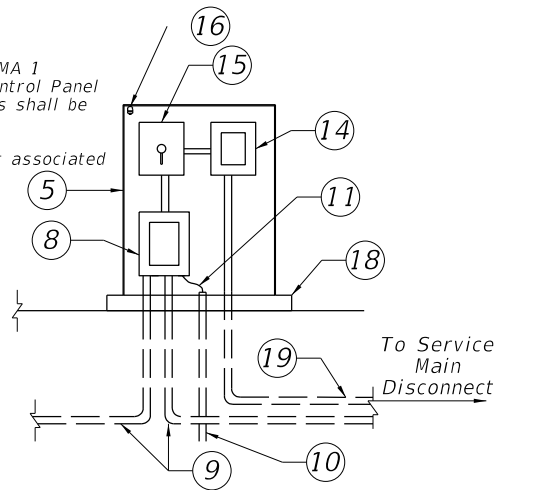
PANELBOARD SCHEDULE											
VOLTAGE: 120/240						MAINS TYPE: LUG					
PHASE: 1						MAINS RAITING: 100 A					
WIRES: 3						AIC: 22,000 A					
CKT	CKT NAME	CONNECTED LOAD	TRIP	POLES	A LOAD (VA)	B LOAD (VA)	POLES	TRIP	CKT NAME	CONNECTED LOAD	CKT
1	G-1	LED LUMINARIES	20 A	2	288	300	2	20 A	G-2	LED LUMINARIES	2
3	---	---	---	---	---	288	300	---	---	---	4
5											6
7											8
9											10
11											12
TOTAL LOAD:					588	588					
TOTAL AMPS:					4.9	4.9					



TYPICAL DISTRIBUTION POINT SCHEMATIC DETAIL

Notes:

1. All equipment shall be enclosed individual NEMA 1 Enclosures inside of the NEMA 4X Lighting Control Panel Enclosure. All wiring between these enclosures shall be installed in Intermediate Metal Conduit.
2. Shop Drawings are required for all equipment associated with the Lighting Control Panel.



RISER DIAGRAM - TYPICAL DISTRIBUTION POINT

REVISIONS				CHRIS J. WALSH, P.E. PE No. 57626 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			SERVICE POINT DETAIL SHEET LOAD CENTER G	SHEET NO. L-28
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				SR 429	SEMINOLE	240200-2-52-01			