

**CENTRAL FLORIDA
EXPRESSWAY AUTHORITY**

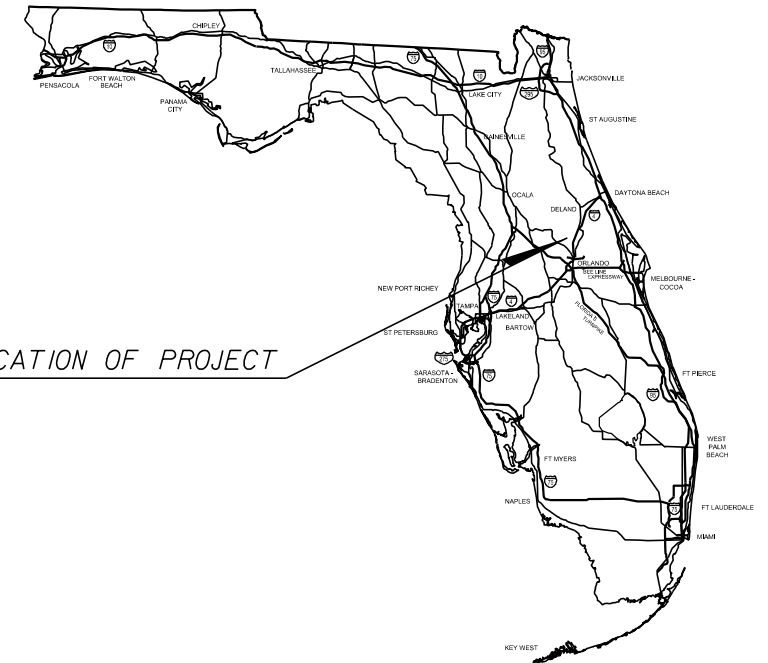
CONTRACT PLANS

SR 429 (WEKIVA PARKWAY)
EAST OF SR 429/SR 46 SYSTEM INTERCHANGE
TO EAST OF MOUNT PLYMOUTH ROAD (CR 435)

ORANGE COUNTY (75)

CONTRACT NO. 429-205

LIGHTING PLANS



LOCATION OF PROJECT

INDEX OF LIGHTING PLANS

SHEET NO.	SHEET DESCRIPTION
L-1	KEY SHEET
L-2	TABULATION OF QUANTITIES
L-3	GENERAL NOTES
L-4	LUMINAIRE DATA AND LEGEND
L-5 - L-11	LIGHTING PLANS
L-12 - L-13	UNDERDECK LIGHTING DETAILS
L-14	LOAD CENTERS
L-15	LED SIGN LIGHTING DETAILS

CENTRAL FLORIDA EXPRESSWAY AUTHORITY
BOARD MEMBERS

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LIGHTING PLANS
SHOP DRAWINGS TO BE SUBMITTED TO:
DAVID E. WAGNER, P.E.
201 E. PINE ST., SUITE 900
ORLANDO, FL 32801
(407) 702-6800

PLANS PREPARED BY:

PARSONS
201 E. PINE ST., SUITE 900, ORLANDO, FL 32801
PHONE: (407) 702-6800
CERTIFICATE OF AUTHORIZATION NO. 1838
VENDOR NO. 36-098-270

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

KEY SHEET REVISIONS	
DATE	DESCRIPTION

LIGHTING PLANS
ENGINEER OF RECORD: DAVID E. WAGNER, P.E.

P.E. NO.: 49363

**BID SET
FEBRUARY 2016**

CFX PROJECT MANAGER: GLENN M. PRESSIMONE, P.E.

FISCAL YEAR	SHEET NO.
2017	L-1

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			L-9		L-10		L-11																				
			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	2330		1015																		3345		3345		
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	14		6																		20		20		
715-1-11	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 10 OR <	LF	270		240																		510		510		
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8 - 6	LF	1185		4485																		5670		5670		
715-1-60	LIGHTING CONDUCTORS, REMOVE AND DISPOSE	LF			6343		9699																16042		16042		
715-4-600	LIGHT POLE COMPLETE, REMOVE	EA			8		11																19		19		
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA	1		1																		2		2		
715-7-41	LOAD CENTER, REMOVE, SECONDARY VOLTAGE	EA			1																		1		1		
715-11-126	LUMINAIRE, F&I, UNDER DECK, PENDANT HUNG	EA	4		4																		8		8		

PAY ITEM FOOTNOTES

1. ITEM 630-2-11: INCLUDE CONDUIT, ELBOWS, SWEEPS, CONNECTING HARDWARE, TRENCHING AND BACKFILL AS INDICATED IN THE PLANS AND DESIGN STANDARDS. CONDUIT SHALL ALSO INCLUDE RESTORING CUT PAVEMENT, SIDEWALK, SOD, ETC. TO ITS ORIGINAL CONDITION.

2. ITEMS 715-1-11 AND 715-1-12: INCLUDE CONDUCTORS AS INDICATED IN THE PLANS AND THE DESIGN STANDARDS. PAYMENT SHALL BE MADE BASED ON LINEAR FEET OF SINGLE CONDUCTOR.

3. ITEM 715-1-60: INCLUDES REMOVAL OF CONDUIT ASSOCIATED WITH THE REMOVAL OF THE CONDUCTORS.

4. ITEM 715-4-600: INCLUDES REMOVAL OF POLE FOUNDATION. THE LIGHT POLES AND LUMINAIRES SHALL BE DELIVERED TO THE FDOT DISTRICT FIVE ORLANDO MAINTENANCE YARD AT 420 WEST LANDSTREET ROAD ORLANDO, FL 32824 AND UNLOADED IN AN AREA DESIGNATED BY A REPRESENTATIVE OF THE MAINTENANCE FACILITY. CALL (407) 858-5900 A MINIMUM OF 48 HOURS PRIOR TO DELIVERY AND FOR VERIFICATION OF DELIVERY LOCATION. THE MAINTENANCE FACILITY REPRESENTATIVE MAY DIRECT THAT THE POLES BE DELIVERED TO THE DELAND MAINTENANCE YARD INSTEAD. THE EXISTING POLES TO BE REMOVED WERE INSTALLED AS PART OF THE WEKIVA 4A/4B FDOT DISTRICT 5 PROJECT. THIS ITEM ALSO INCLUDES REMOVAL OF PULL BOXES ASSOCIATED WITH REMOVAL OF THE LIGHT POLES AND CONDUIT RUNS TO BE REMOVED.

5. ITEM 715-7-11: INCLUDES NEMA 3R SAFETY SWITCH ON LINE SIDE OF METER, BASE MOUNTED ENCLOSURES, 480-120V CONTROL POWER TRANSFORMER, FUSES, LIGHTNING PROTECTOR ON THE OUTSIDE OF ENCLOSURE, CONDUIT AND FEEDER CONDUCTORS FROM THE POWER COMPANY POINT OF SERVICE TO THE LOAD CENTER, PULL BOX AND ALL MISCELLANEOUS HARDWARE FOR A COMPLETE INSTALLATION AS PER PLANS AND STANDARD INDEX 17504 DETAIL "A". INCLUDES FURNISHING AND INSTALLING TYPE N-11 CONCRETE POLE AND ALL FEES FOR INSPECTION OF CONNECTION OF THE ELECTRICAL SERVICE SHALL BE INCIDENTAL TO THIS PAY ITEM.

6. ITEM 715-11-126: SHALL INCLUDE ALL ITEMS NECESSARY FOR A COMPLETE INSTALLATION, INCLUDING LUMINAIRE WITH LAMP, ALL NECESSARY MOUNTING HARDWARE, AND EMBEDDED JUNCTION BOXES, AS SHOWN ON THE UNDERDECK DETAIL SHEETS.

REVISIONS					<small>DAVID E. WAGNER, P.E. P.E. LICENSE NO. 49363</small> PARSONS <small>201 E PINE STREET, SUITE 900, ORLANDO, FL 32801 PHONE: (407) 702-6800 / FAX: (407) 702-6950 CERTIFICATE OF AUTHORIZATION NO. 1838</small>	<small>CENTRAL FLORIDA EXPRESSWAY AUTHORITY</small>		<h2 style="margin: 0;">TABULATION OF QUANTITIES</h2>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.		PROJECT NO.			
						SR 429	429-205		

1. THE CONTRACTOR SHALL PROVIDE A SPARE CONDUIT AT ALL ROADWAY PAVEMENT CROSSINGS AND CAP BOTH ENDS.
2. 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
 - B) LOAD CENTER EQUIPMENT

SEVEN (7) COPIES OF SHOP DRAWINGS AND DESIGN DATA FOR HIGHWAY LIGHTING EQUIPMENT SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AND A COPY OF THE TRANSMITTAL LETTER SHALL BE RECEIVED BY THE RESIDENT ENGINEER IN CHARGE OF THE PROJECT. ALLOW A TWO WEEK TURN-AROUND FOR SHOP DRAWING REVIEWS.
3. 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). THESE LOCATIONS 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.
4. STATE OF FLORIDA STATUTE 556 (2013) REQUIRES THAT BEFORE EXCAVATING, NOTICE BE GIVEN TO THE SUNSHINE STATE ONE-CALL OF FLORIDA, INC. (SSOCOF) A MINIMUM OF TWO (2) FULL BUSINESS DAYS (DEFINED IN STATUTE) AT 1-800-432-4770. NOT ALL UTILITY COMPANIES ARE MEMBERS OF SSOCOF. PROVIDE ALL UTILITY OWNERS A MINIMUM OF TWO (2) FULL BUSINESS DAYS PRIOR TO EXCAVATION. SEE ROADWAY PLANS FOR UTILITY OWNER'S PHONE NUMBERS.
5. THE LOCATIONS OF THE CONDUCTORS, CONDUITS, JUNCTION BOXES AND SERVICE POLES ARE APPROXIMATE AND MAY BE SHIFTED BY THE ENGINEER TO ACCOMMODATE LOCAL CONDITIONS AND EXISTING UTILITY LOCATIONS.
6. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST ADOPTED EDITIONS OF THE NATIONAL ELECTRICAL CODE (NEC), 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 LIGHTNING ARRESTERS, PROPERLY GROUNDED, IN POWER (SECONDARY) ENTRANCES, ON THE OUTSIDE OF THE ENCLOSURE.
8. IN ACCORDANCE WITH N.E.C., IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS".
9. THE CONTRACTOR SHALL NOTIFY DUKE ENERGY AT LEAST 48 HOURS PRIOR TO ANY INSTALLATION THAT IS WITHIN TEN (10) FEET OF ENERGIZED ELECTRICAL CONDUCTORS. DUKE ENERGY, AT IT'S 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 THE PRIMARY HIGH VOLTAGE COMPONENTS.
10. PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET. 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 OR NYLON ROPE. STEEL CABLE OR FISH TAPE SHALL NOT BE USED.
11. SIGN ILLUMINATION SHALL BE SIMILAR OR EQUAL TO PHILIPS HADCO LEDGINE LED SIGN LIGHT, MODEL C10735 (A OR B) (79 OR 104 WATTS / 480 VOLTS) OR AUTHORITY APPROVED EQUAL. THE C10735 IS A SPECIAL ORDER PRODUCT BASED ON THE HADCO FX SERIES WITH MODIFIED OPTICS. PRODUCT CONTAINS 48 OR 96 LEDS AND SHALL CONFORM TO IES C10735A OR C10735B. SIGN LUMINAIRES SHALL BE PROVIDED WITH DRIVER OR SURGE PROTECTION LOCATED REMOTELY IN REMOTE LED DRIVER BOX. SIGN LUMINAIRES SHALL BE GREY OR SILVER IN COLOR. ILLUMINATION FOR EACH SIGN SHALL BE BETWEEN 15 AND 20 FOOTCANDLES AVERAGE INITIAL WITH A MAXIMUM-TO-MINIMUM UNIFORMITY RATIO OF 6:1 OR LESS. TOP MOUNTED LUMINAIRES SHALL NOT BE ALLOWED ON OVERHEAD SIGN STRUCTURES ALONG ANY PORTION OF THE MAINLINE OR ON RAMP WITHIN THE CFX JURISDICTION WITHOUT PRIOR AUTHORITY APPROVAL. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A COMPUTER PRINTOUT FOR EACH SIGN INDICATING THAT THE SELECTED LUMINAIRE MEETS OR EXCEEDS THE ABOVE CRITERIA. THE NUMBER OF LUMINAIRES INDICATED ON INDEX 17505 IS SUPERSEDED BY THE NUMBER OF LUMINAIRES INDICATED IN THE SCHEDULE OF LIGHTED SIGNS.
12. EACH SIGN LUMINAIRE SHALL BE PROVIDED WITH A LABEL ON THE OUTSIDE IDENTIFYING THE VOLTAGE OF THE BALLAST AND SHALL BE INCIDENTAL TO THE PAY ITEMS LOCATED IN THE SIGNING AND PAVEMENT MARKING PLAN FOR THIS PROJECT.
13. ALL METAL PULL BOX COVERS SHALL BE MARKED "STREET LIGHTING" AND SHALL BE PROVIDED WITH A GROUND LUG.
14. THE SIGN LIGHTING LUMINAIRES SHALL BE "NIGHT AIMED" TO ASSURE PROPER ILLUMINATION OF THE SIGN SURFACE. THE LUMINAIRES MUST BE AT AN ANGLE SUFFICIENT TO PREVENT THEM FROM SHINING INTO THE FACES OF DRIVERS WHO ARE TRAVELING IN THE OPPOSITE DIRECTION AND SHALL BE INCIDENTAL TO THE PAY ITEMS LOCATED IN THE SIGNING AND PAVEMENT MARKING PLAN FOR THIS PROJECT.
15. THE CONTRACTOR SHALL REFERENCE STRUCTURAL PLANS AND COORDINATE WITH THE STRUCTURAL CONTRACTOR REGARDING LOCATIONS OF EMBEDDED CONDUIT AND PULL BOXES WITHIN THE BRIDGE STRUCTURES AND TO VERIFY LOCATIONS OF TIE-INS.
16. 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.
17. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE WITHIN 2 FEET OF THE CONDUIT RUN, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR WILL HAND DIG OR VACUUM EXCAVATE THE FIRST 4 FEET OF THE HOLE FOR THE CONDUIT RUN.
18. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SIDE STREETS AT ALL TIMES DURING CONSTRUCTION.
19. 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 THE PLANNED LOCATION OF LIGHTING CONDUITS WHICH RUNS 36" UNDER THE 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. A 24" ABSOLUTE MINIMUM DEPTH SHALL BE MAINTAINED WHERE LIGHTING CONDUITS ARE RELOCATED CLOSER THAN 36" BELOW THE GROUND SURFACE AND SHALL BE PLACED IN AN ADDITIONAL 3" PVC SLEEVE OR BACKFILLED WITH A MIN. OF 4" x 4" OF CONCRETE. SUCH TREATMENT WILL BE INCIDENTAL TO THE PAY ITEMS PROVIDED. THE CONTRACTOR IS TO TAKE EXTRA CARE AND HAND DIG THE CONDUIT AT THE UTILITY CONFLICT.
20. CONTRACTOR SHALL PREPARE ACCURATELY DIMENSIONED "AS BUILT" PLANS OF FINAL CABLE, LOAD CENTER, PULL BOX, AND CONDUIT LOCATIONS. PLANS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO FINAL ACCEPTANCE. AFTER THE "AS BUILT" PLANS ARE APPROVED, THE CONTRACTOR SHALL SUBMIT TWO COPIES TO THE RESIDENT ENGINEER AND ONE COPY TO THE CFX MAINTENANCE. SUCH PREPARATION SHALL BE INCIDENTAL TO PAY ITEMS PROVIDED.
21. ALL SPLICES AND CONNECTIONS SHALL BE MADE IN PULL BOXES ONLY WITH COMPRESSION SLEEVES OR SPLIT BOLT CONNECTIONS. SPLICES AND CONNECTIONS MADE IN PULL BOXES SHALL BE LIMITED TO THE SERVICE POINT AND CONDUIT JUNCTION WITH MULTI-DIRECTIONAL CONDUITS AS INDICATED IN THE PLANS. ALL CONNECTIONS MADE AT THESE POINTS SHOULD BE PROPERLY TAPED AND HEAT SHRINK TUBES OR CAPS SHALL BE USED TO WATERPROOF THESE CONNECTIONS.
22. ALL CONDUITS SHALL BE CLEANED AND MANDREL TESTED. CONDUIT PLACED FOR FUTURE USE SHALL HAVE A 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 THE ENDS OF EMPTY CONDUITS WHICH SHALL BE INCLUDED IN THE CONDUIT PAY ITEMS.
23. LIGHTING CONTRACTOR SHALL COORDINATE WITH STRUCTURAL CONTRACTOR TO COORDINATE LOCATIONS OF EMBEDDED CONDUIT AND PULL BOXES WITHIN THE WALLS AND BRIDGES.
24. AT ALL LOCATIONS WHERE PROPOSED LIGHTING CONDUIT CROSSES PERPENDICULAR TO PROPOSED OR EXISTING WALL FOOTINGS, CONTRACTOR SHALL MAINTAIN A 1 FOOT CLEARANCE FROM BOTTOM OF FOOTING TO TOP OF CONDUIT.
25. ALL SIGN LUMINAIRES INSTALLED ON NEW SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE LIGHTED SIGNS IN THE SIGNING AND PAVEMENT MARKING PLANS COMPONENT SET. ALL ITEMS NECESSARY FOR A COMPLETE INSTALLATION INCLUDING REMOTE DRIVER BOX AND INSTALLATION. REMOTE DRIVER BOX SHALL INCLUDE LED DRIVER FOR EACH SIGN LIGHT FIXTURE, MAIN DISCONNECT, MAIN BREAKER, POWER DISTRIBUTION BLOCK, LED DRIVER SURGE PROTECTION FOR EACH DRIVER, TVSS, WIRING AND CONDUIT FROM EACH LIGHT FIXTURE TO DRIVER BOX AND SHALL BE CONSIDERED INCIDENTAL TO LIGHTED SIGNS.

REVISIONS					DAVID E. WAGNER, P.E. P.E. LICENSE NO. 49363  201 E PINE STREET, SUITE 900, ORLANDO, FL 32801 PHONE: (407) 702-6800 / FAX: (407) 702-6950 CERTIFICATE OF AUTHORIZATION NO. 1838	CENTRAL FLORIDA EXPRESSWAY AUTHORITY		SHEET NO. GENERAL NOTES L-3
DATE		DESCRIPTION	DATE			ROAD NO.	PROJECT NO.	
						SR 429	429-205	

SIGN LUMINAIRE DATA

* HORIZONTAL LUMINAIRE POSITIONS,
MEASURED FROM LEFT EDGE OF PANEL
2.67', 8', 13.33'

SIGN NO.	CIRCUIT	STATION	NO. SIGN MOUNTED LUMINAIRES	NO. OF LEDS	ARM LENGTH	TILT	NOTES	SIDE	FINAL
104/OC-1	E-2	1489+65.22 53.06' LT	3	48	6	60	LUMINAIRES SPACED PER INDEX 17505 *	LT	

UNDERDECK LIGHTING DESIGN CRITERIA

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


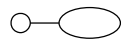
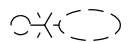
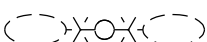


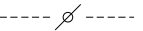
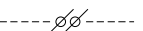





SIGN LIGHTING DESIGN CRITERIA

Average Initial Intensity 15 - 20 Foot Candles
 Uniformity Ratio Max./Min. 6:1 Or Less

LEGEND

SYMBOLS

DESCRIPTION

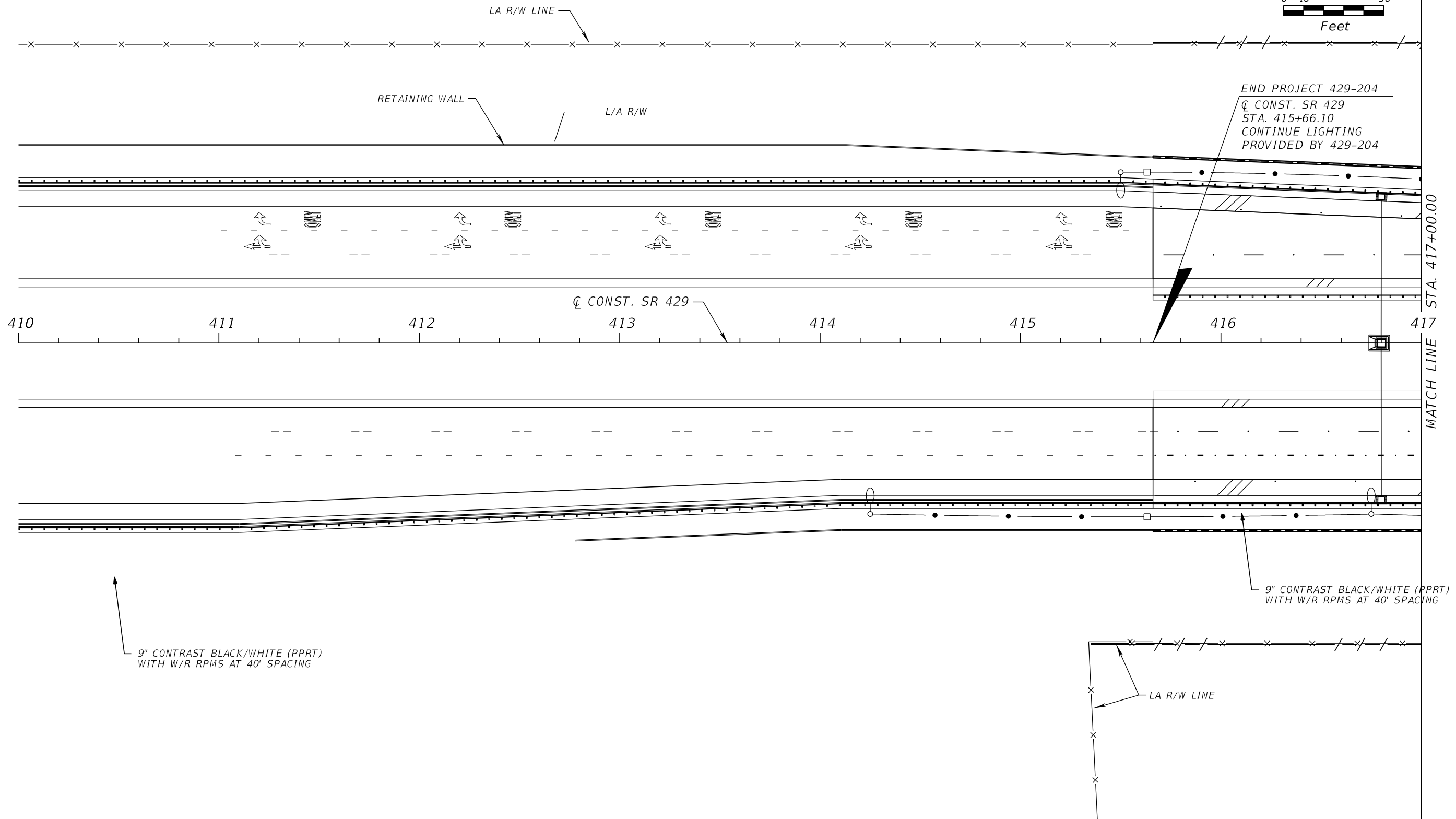
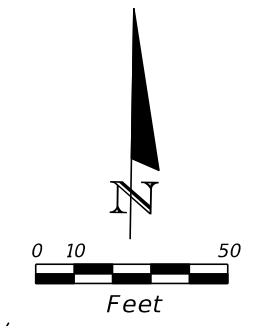
-  Pendant hung underdeck luminaire, Type IV medium distribution, 80 LEDs, 4000K color temperature, 350mA (Standard) Drive Current, 480 volt operation (curve no. TSP-EDG-4M-__-08-D-UH-350-40K-CONFIGURED.IES). Beta LED catalog no. TSP-EDG-4M-PD2-08-D-UH-SV-350-40K with Leveler (part no. XA-PNDTLVL and Bird Spikes (part no. XA-BRDSPK) or Authority approved equal.
-  Light pole furnished and installed under Project 429-204.
-  Existing light pole to be removed.
-  Existing light pole to be removed.
-  Schedule 40 PVC conduit, 2" (unless specified otherwise on the plan sheet), with THWN-2 conductors inside (conductor size as shown on plan sheets). Run one (1) #6 AWG minimum copper bond conductor (TW green insulation) inside conduit with other conductors. Conduit (with Conductors) shown on sheets L-5 through L-8 are furnished and installed under Project 429-204.
-  Schedule 80 PVC conduit Embedded in Concrete Bridge Rail and deck slab installed under bridge plans. Conduits sizes as shown in bridge plans. Lighting contractor to run conductors as specified in these plans.
-  Existing Underground Conduit (with Conductors). See plan sheet for disposition.
-  Existing Underpavement Conduit (with Conductors) to remain.
-  Pull box. For specifications see Section 635 of Standard Specifications For Road And Bridge Construction. Pull Boxes shown on sheets L-5 through L-8 are furnished and installed under Project 429-204.
-  Existing Pull box. See plan sheet for disposition.
-  Distribution point. For requirements see Index No. 17504 of Design Standards.
-  Existing Distribution point. See plan sheet for disposition.
-  Embedded Bridge pull box integral to structure (8" x 8" minimum). Box size to be increased when required by the NEC and installed under bridge plans.

UNDERDECK LUMINAIRE DATA

LUM NO.	CIRCUIT	STATION, OFFSET	NO. OF LEDS	MOUNTING HEIGHT *	MOUNTING	PAY ITEM
UD - 101	W-1	434+56 38.5' LT C SR 429	80	17.0	PENDANT HUNG	715-11-126
UD - 102	W-1	435+20 38.5' LT C SR 429	80	17.0	PENDANT HUNG	715-11-126
UD - 103	W-1	434+59 38.5' RT C SR 429	80	17.0	PENDANT HUNG	715-11-126
UD - 104	W-1	435+23 38.5' RT C SR 429	80	17.0	PENDANT HUNG	715-11-126
UD - 201	E-1	1493+44 19.0' LT B SB SR 429	80	18.5	PENDANT HUNG	715-11-126
UD - 202	E-1	1494+08 19.0' LT B SB SR 429	80	18.5	PENDANT HUNG	715-11-126
UD - 203	E-1	493+34 43.0' RT B NB SR 429	80	17.5	PENDANT HUNG	715-11-126
UD - 204	E-1	493+98 43.0' RT B NB SR 429	80	16.5	PENDANT HUNG	715-11-126

* MOUNTING HEIGHT IS APPROXIMATE; ADJUST LUMINAIRES TO BE FLUSH WITH THE BOTTOM OF THE ADJACENT BEAMS.

LIGHTING DESIGN PROVIDED IN PROJECT 429-204
 SHOWN FOR INFORMATION ONLY. LIGHT POLES,
 PULL BOXES, AND CONDUIT SHOWN ON THIS
 SHEET TO BE PROVIDED BY PROJECT 429-204.



MATCH LINE STA. 417+00.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ATKINS

2001 NW 107TH Avenue, Miami, FL 33172
 Certificate of Authorization No. 24
 Pedro L. Trevin P.E. No. 15309

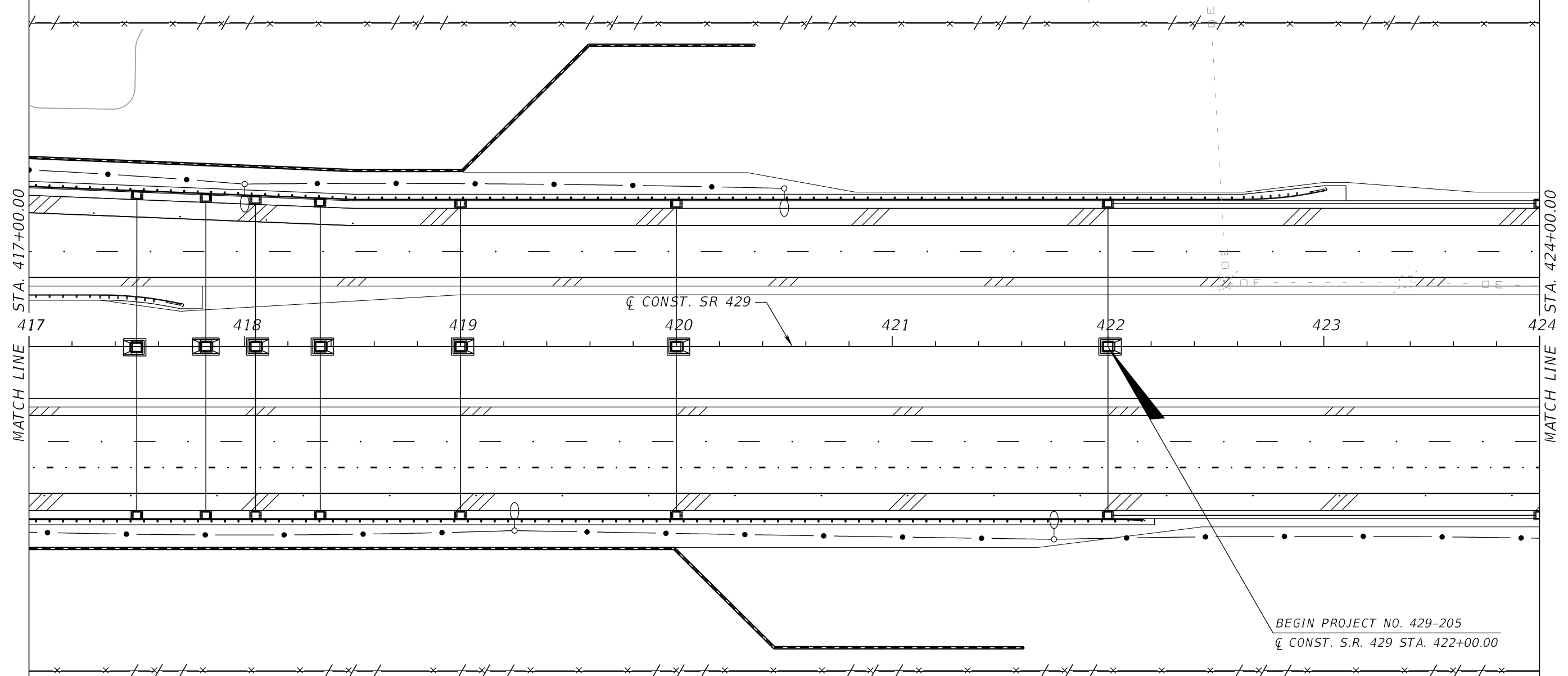
CENTRAL FLORIDA EXPRESSWAY AUTHORITY	
ROAD NO.	PROJECT NO.
SR 429	429-205

LIGHTING PLAN

SHEET
NO.

L-5

LIGHTING DESIGN PROVIDED IN PROJECT 429-204
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 PULL BOXES, AND CONDUIT SHOWN ON THIS
 SHEET TO BE PROVIDED BY PROJECT 429-204.



BEGIN PROJECT NO. 429-205
 CONST. S.R. 429 STA. 422+00.00

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ATKINS

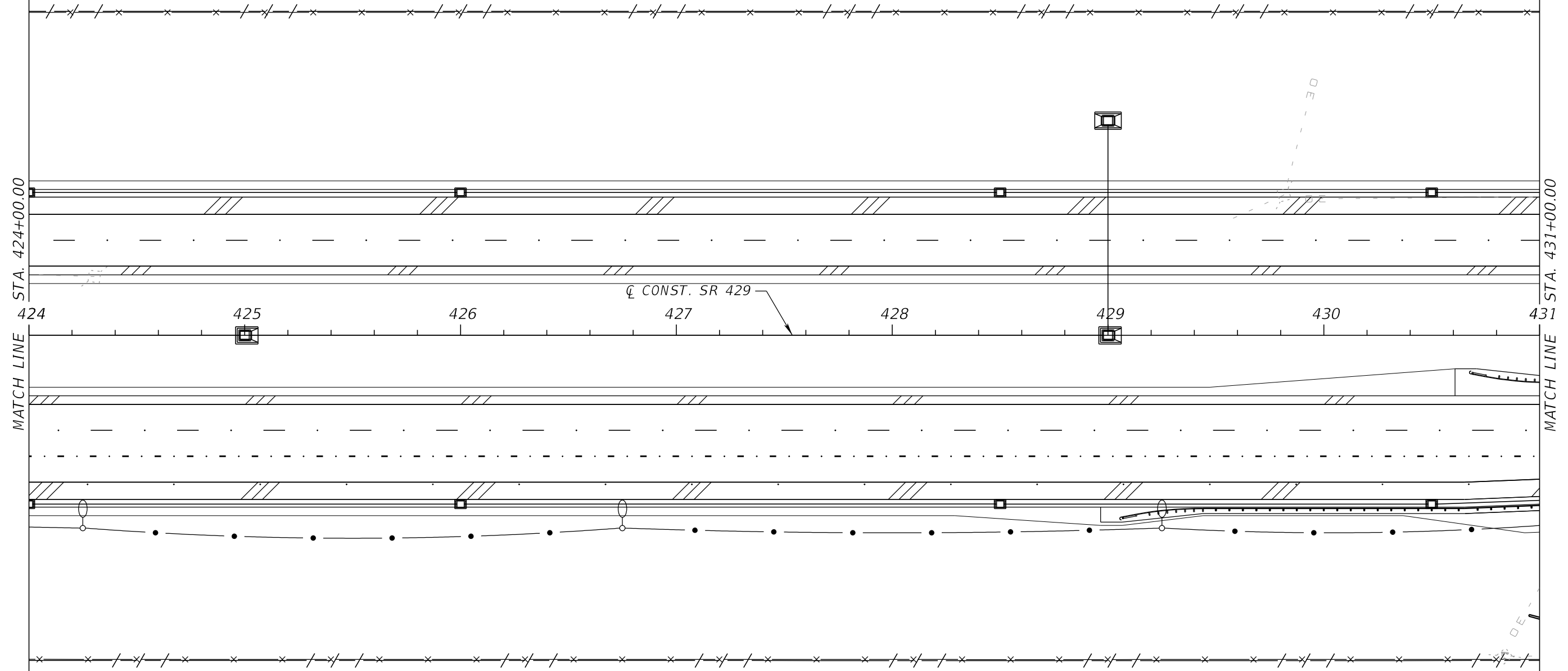
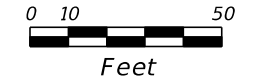
2001 NW 107TH Avenue, Miami, FL 33172
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 Pedro L. Trevin P.E. No. 15309

CENTRAL FLORIDA EXPRESSWAY AUTHORITY	
ROAD NO.	PROJECT NO.
SR 429	429-205

LIGHTING PLAN

SHEET NO.
L-6

LIGHTING DESIGN PROVIDED IN PROJECT 429-204
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 PULL BOXES, AND CONDUIT SHOWN ON THIS
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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

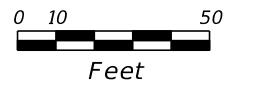
ATKINS
 2001 NW 107TH Avenue, Miami, FL 33172
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CENTRAL FLORIDA EXPRESSWAY AUTHORITY	
ROAD NO.	PROJECT NO.
SR 429	429-205

LIGHTING PLAN

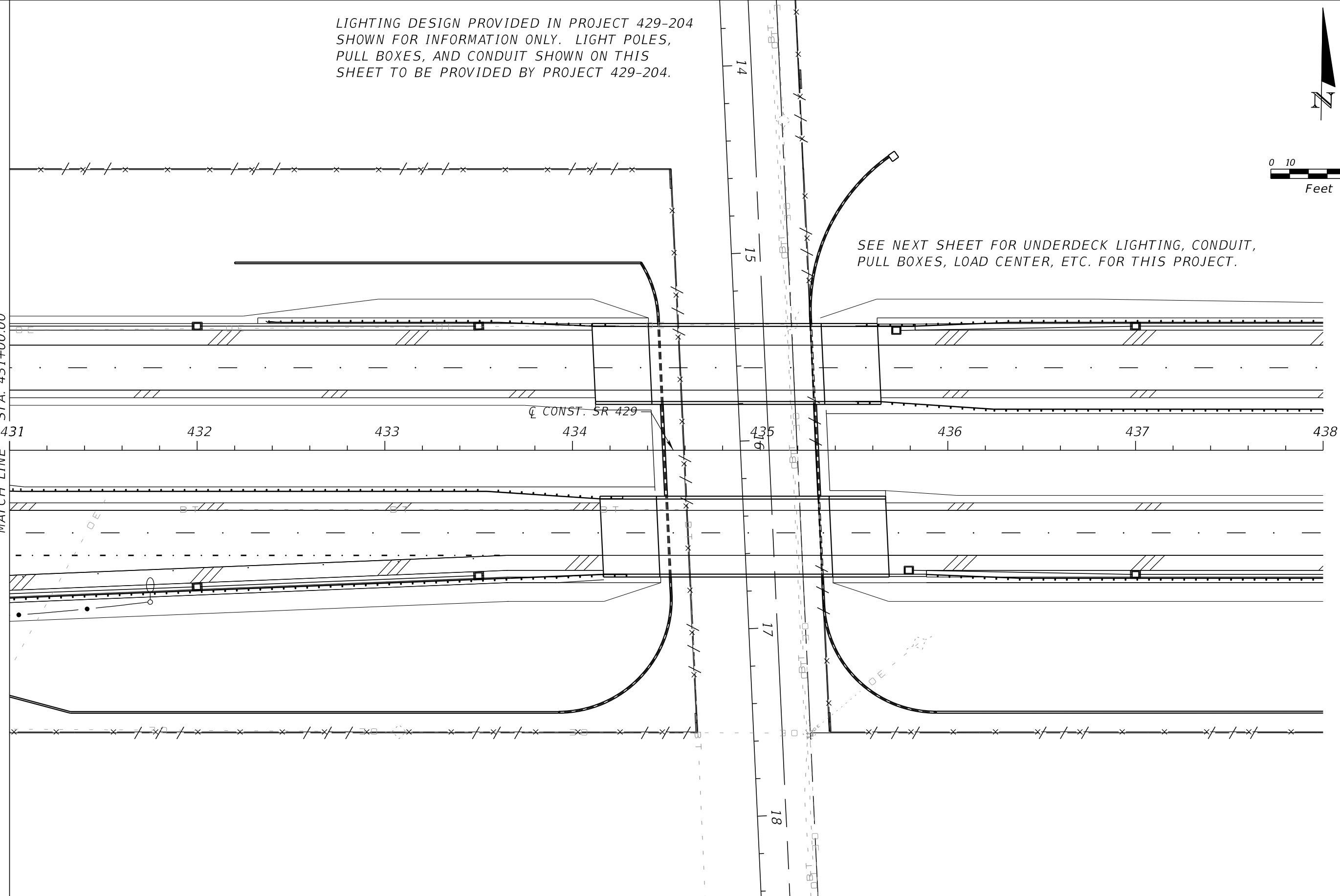
SHEET NO.
L-7

LIGHTING DESIGN PROVIDED IN PROJECT 429-204
 SHOWN FOR INFORMATION ONLY. LIGHT POLES,
 PULL BOXES, AND CONDUIT SHOWN ON THIS
 SHEET TO BE PROVIDED BY PROJECT 429-204.

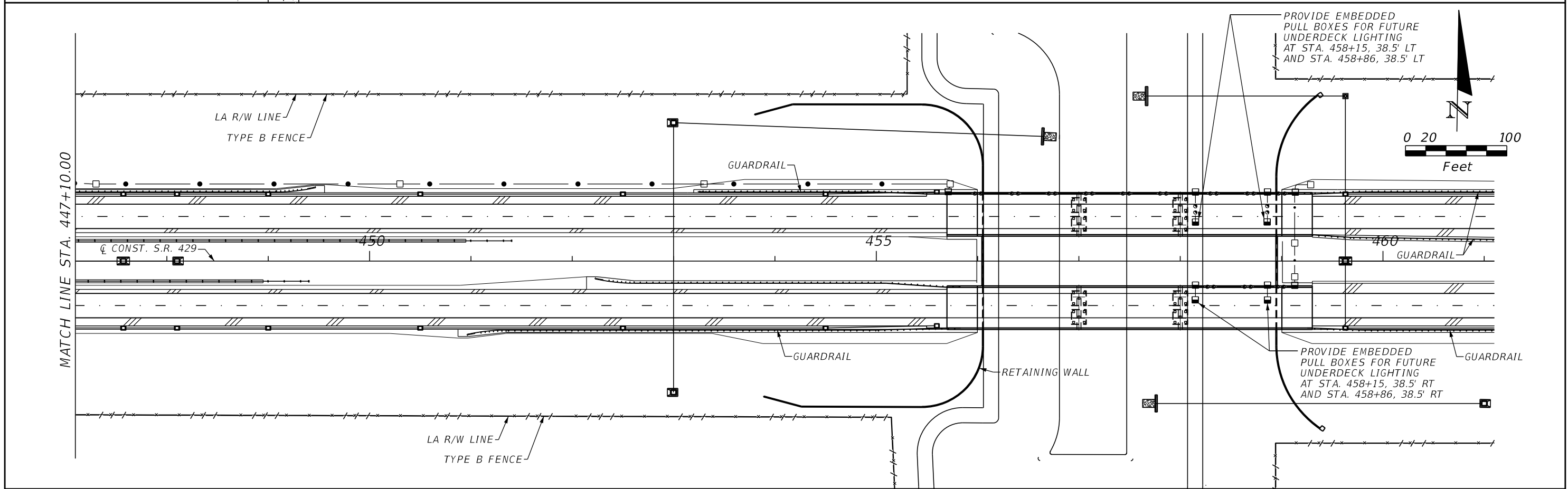
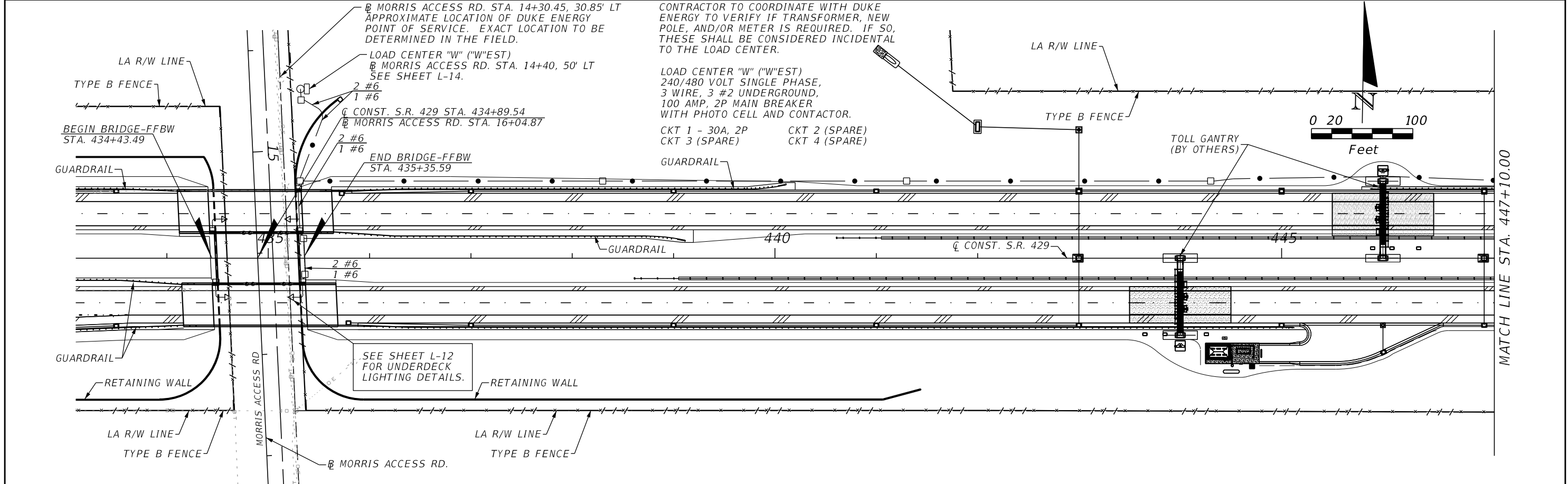


SEE NEXT SHEET FOR UNDERDECK LIGHTING, CONDUIT,
 PULL BOXES, LOAD CENTER, ETC. FOR THIS PROJECT.

MATCH LINE STA. 431+00.00



DATE		DESCRIPTION		REVISIONS		<p style="text-align: center;">ATKINS</p> <p style="font-size: small;">2001 NW 107TH Avenue, Miami, FL 33172 Certificate of Authorization No. 24 Pedro L. Trevin P.E. No. 15309</p>	<p style="text-align: center;">CENTRAL FLORIDA EXPRESSWAY AUTHORITY</p>		<p style="font-size: large; font-weight: bold;">LIGHTING PLAN</p>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	PROJECT NO.		<p style="font-size: large; font-weight: bold;">L-8</p>			
				SR 429	429-205					



REVISIONS	
DATE	DESCRIPTION

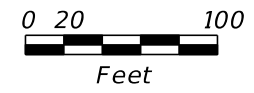
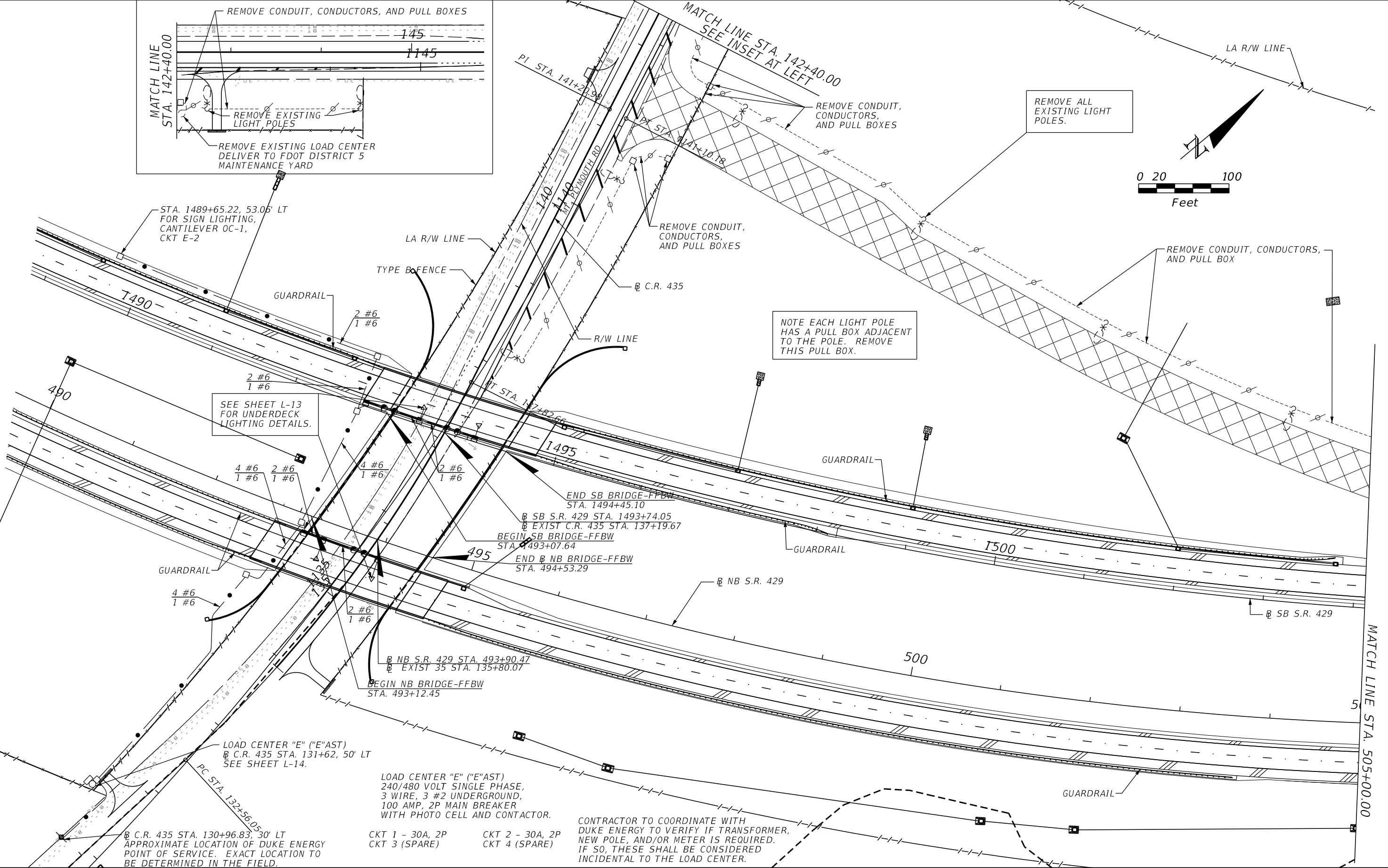
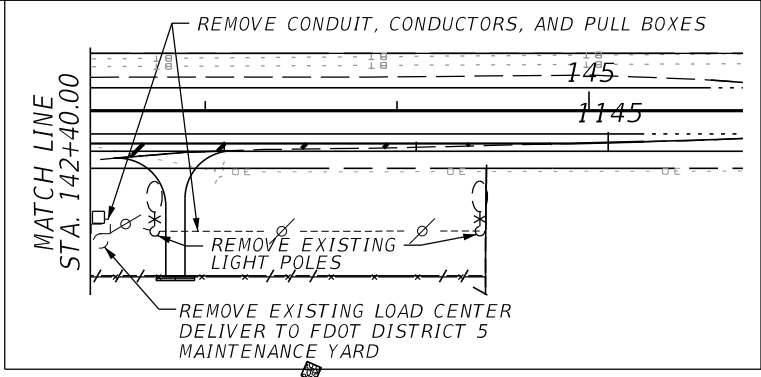
DAVID E. WAGNER, P.E.
 P.E. LICENSE NO. 49363
PARSONS
 201 E PINE STREET, SUITE 900, ORLANDO, FL 32801
 PHONE: (407) 702-6800 / FAX: (407) 702-6950
 CERTIFICATE OF AUTHORIZATION NO. 1838

CENTRAL FLORIDA
 EXPRESSWAY AUTHORITY

ROAD NO.	PROJECT NO.
SR 429	429-205

LIGHTING PLAN

SHEET
 NO.
 L-9



REVISIONS	
DATE	DESCRIPTION

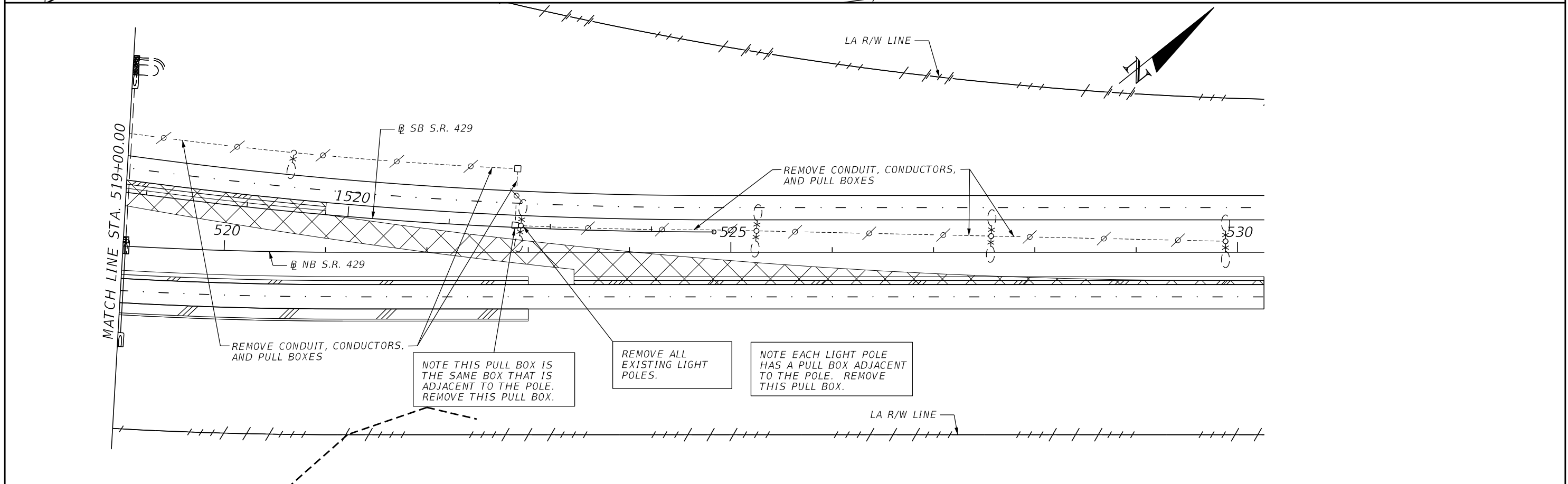
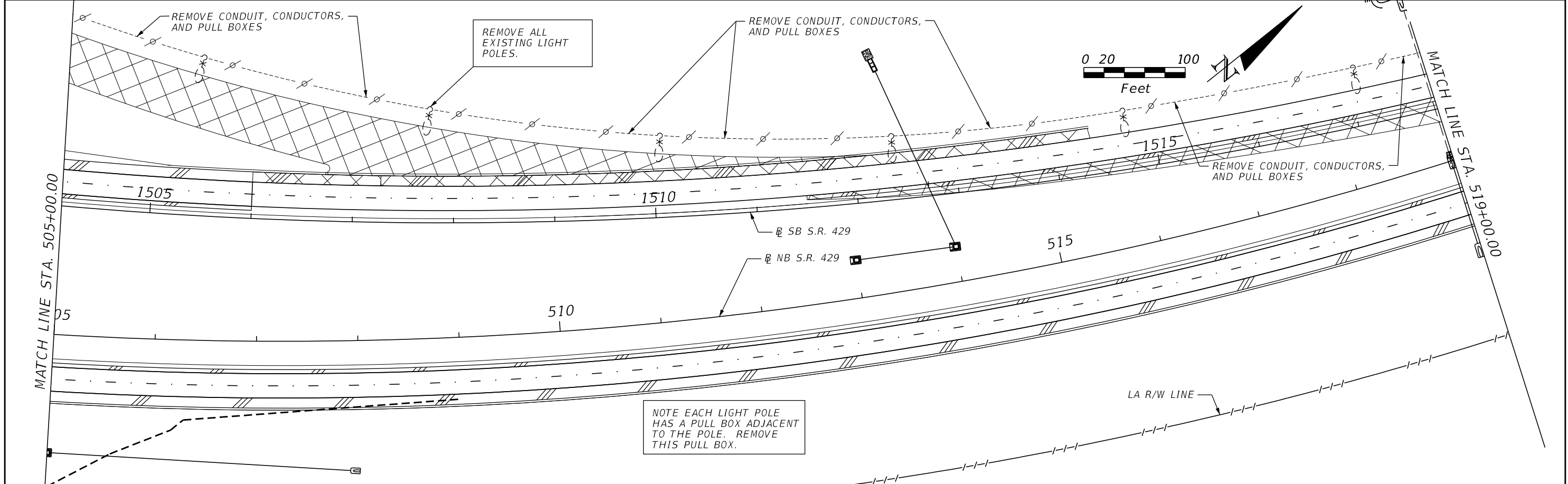
DAVID E. WAGNER, P.E.
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ROAD NO.	PROJECT NO.
SR 429	429-205

LIGHTING PLAN

SHEET NO.
L-10



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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CENTRAL FLORIDA EXPRESSWAY AUTHORITY

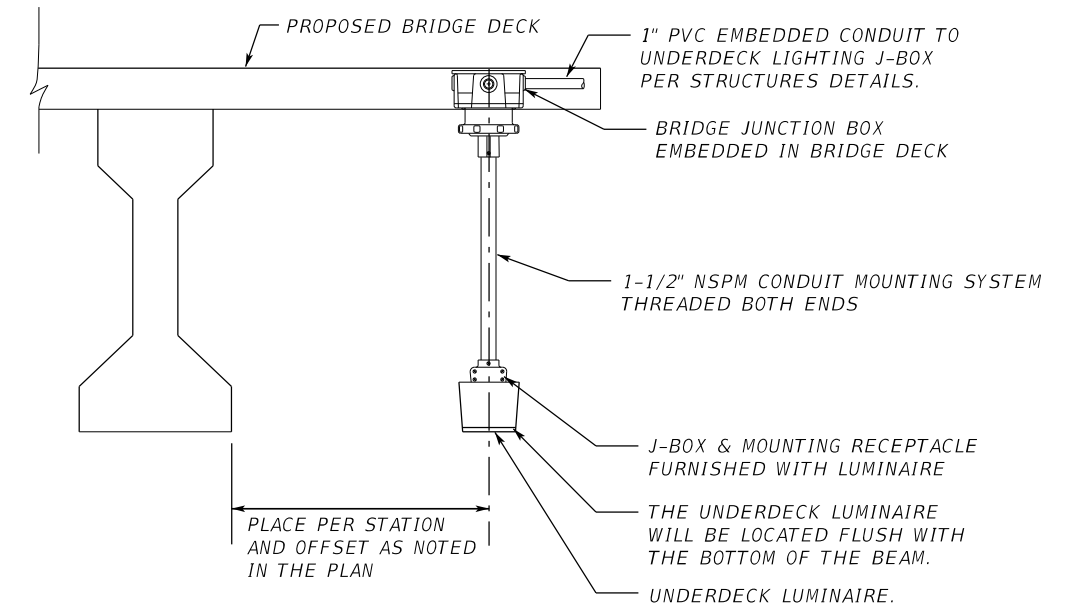
ROAD NO.	PROJECT NO.
SR 429	429-205

LIGHTING PLAN

SHEET NO.
L-11

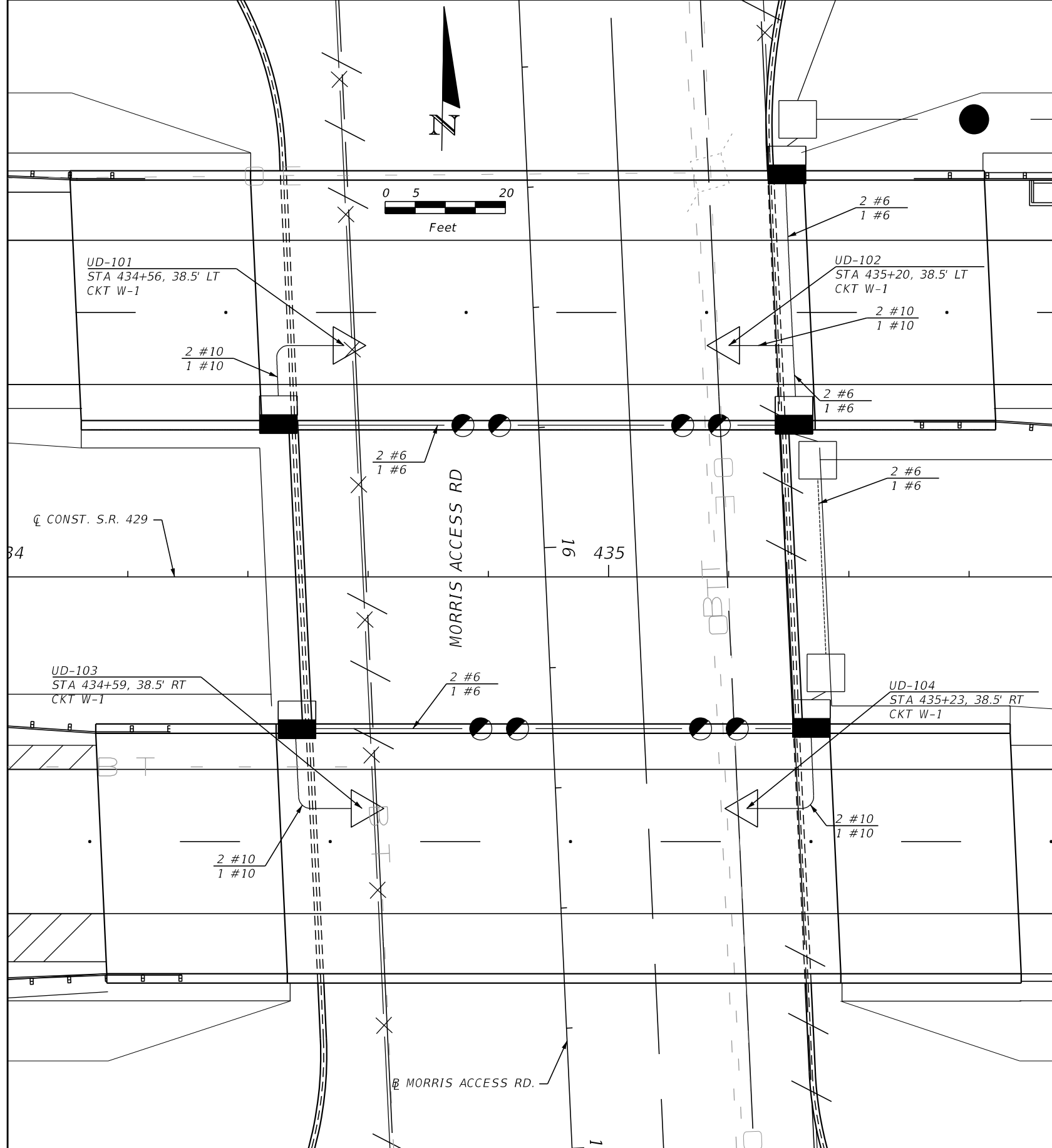
THIS DETAIL APPLIES TO THE UNDERDECK LIGHTING AT MORRIS ACCESS RD AND AT CR 435/MT PLYMOUTH RD

1. THE LIGHTING CONTRACTOR SHALL COORDINATE WITH THE STRUCTURE CONTRACTOR FOR THE LOCATION OF EMBEDDED ELECTRICAL ITEMS (CONDUITS, PULL BOXES, AND JUNCTION BOXES) REQUIRED FOR THE INSTALLATION OF UNDERDECK LIGHTING. ALL EMBEDDED CONDUIT, JUNCTION BOXES, AND RELATED HARDWARE SHALL BE CONSIDERED INCIDENTAL TO THE RELATED STRUCTURAL PAY ITEM.
2. THE CONTRACTOR SHALL DESIGN AND DETAIL THE CONNECTION AND BRACING FOR THE UNDERDECK LUMINAIRE HANGING ROD TO RESIST DESIGN WIND LOAD, IN ACCORDANCE WITH THE AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", LATEST EDITION. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS, SIGNED AND SEALED BY A FLORIDA REGISTERED P.E., WHICH SUPPORTS THE DESIGN. USE A SWIVEL HANGER TO ACCOMMODATE FIXTURE WEIGHT. PROVIDE WIND BRACING AND CONNECTIONS FROM VERTICAL CONDUIT TO UNDERSIDE OF BRIDGE DECK FOR STABILITY OF THE LUMINAIRE.



UNDERDECK LUMINAIRE DETAILS
N.T.S.

ALL QUANTITIES ASSOCIATED WITH THE WORK ON THIS SHEET ARE COMBINED WITH THE QUANTITIES ON THE RESPECTIVE PLAN SHEET AND TABULATED WITH THAT SHEET.



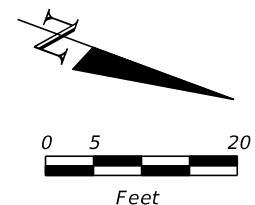
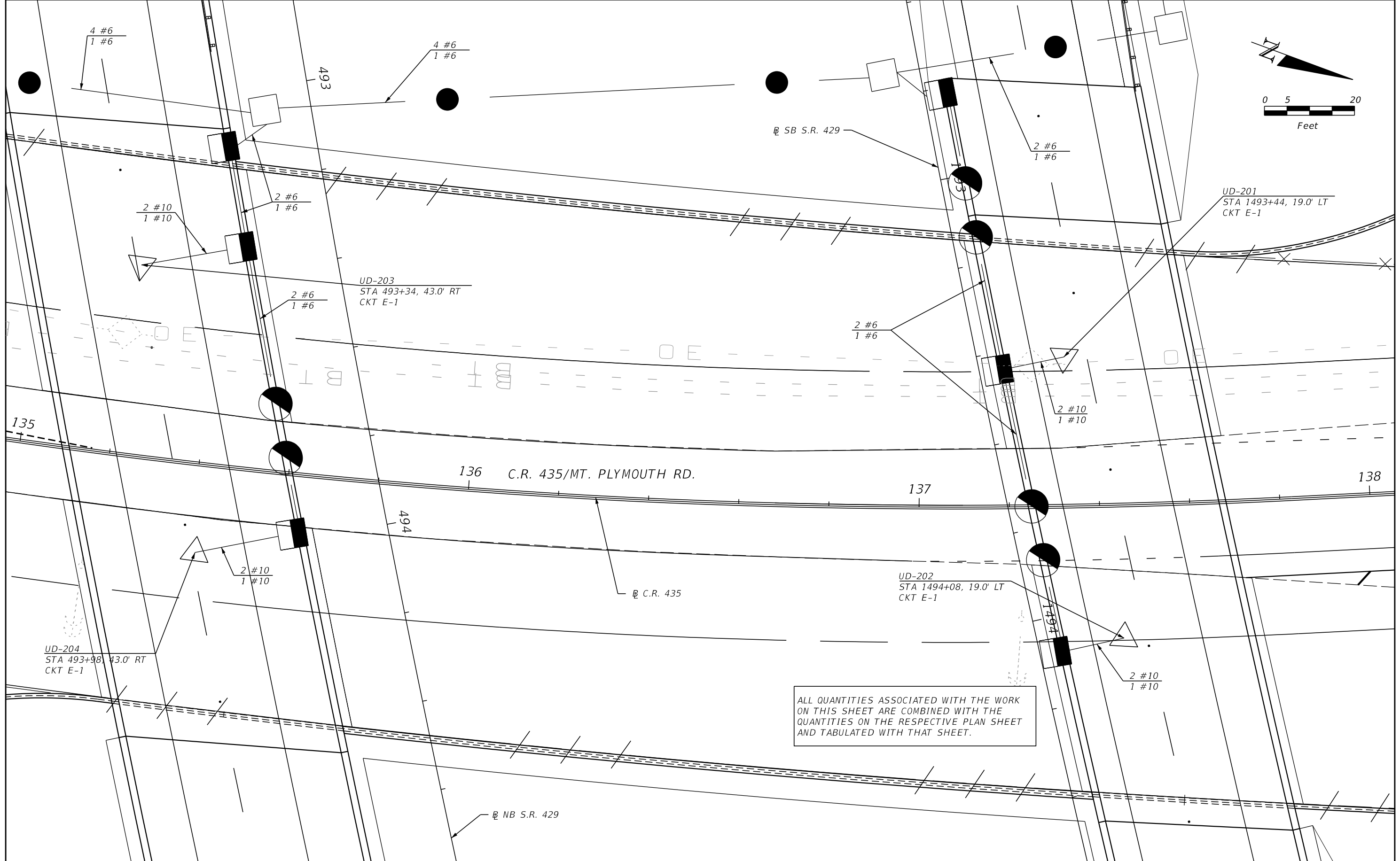
REVISIONS	
DATE	DESCRIPTION

DAVID E. WAGNER, P.E.
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CENTRAL FLORIDA EXPRESSWAY AUTHORITY	
ROAD NO.	PROJECT NO.
SR 429	429-205

UNDERDECK LIGHTING DETAILS
MORRIS ACCESS RD

SHEET NO.
L-12



ALL QUANTITIES ASSOCIATED WITH THE WORK ON THIS SHEET ARE COMBINED WITH THE QUANTITIES ON THE RESPECTIVE PLAN SHEET AND TABULATED WITH THAT SHEET.

REVISIONS	
DATE	DESCRIPTION

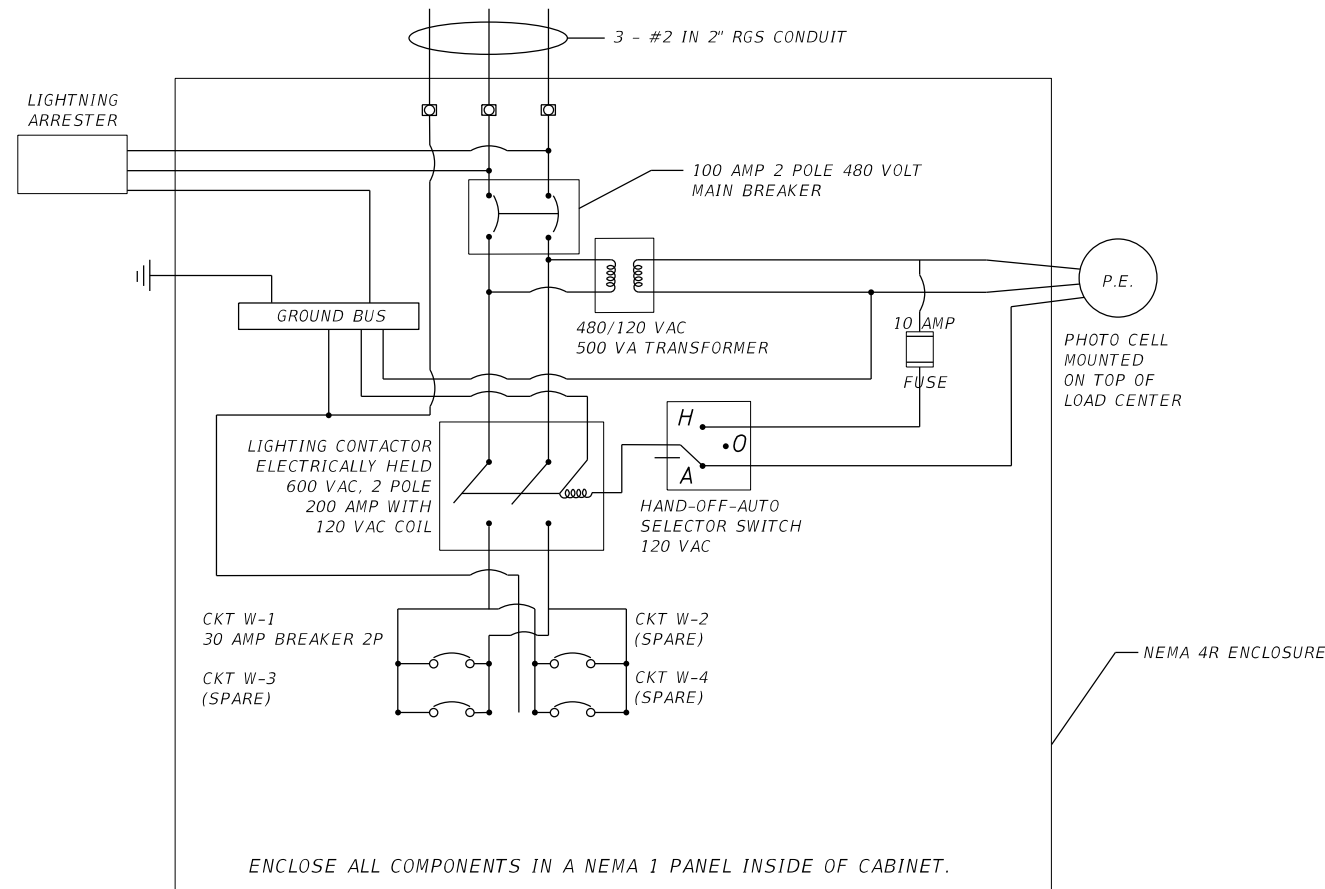
DAVID E. WAGNER, P.E.
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CENTRAL FLORIDA EXPRESSWAY AUTHORITY	
ROAD NO.	PROJECT NO.
SR 429	429-205

UNDERDECK LIGHTING DETAILS
CR 435/MT PLYMOUTH RD

SHEET NO.
L-13

CONTROL CABINET WIRING DIAGRAM
FOR LOAD CENTER "W" ("WEST")
STA. 14+40, 50' LT
MORRIS ACCESS ROAD
240/480 v., 1 PH, 3 WIRE
N.T.S.



ENCLOSE ALL COMPONENTS IN A NEMA 1 PANEL INSIDE OF CABINET.

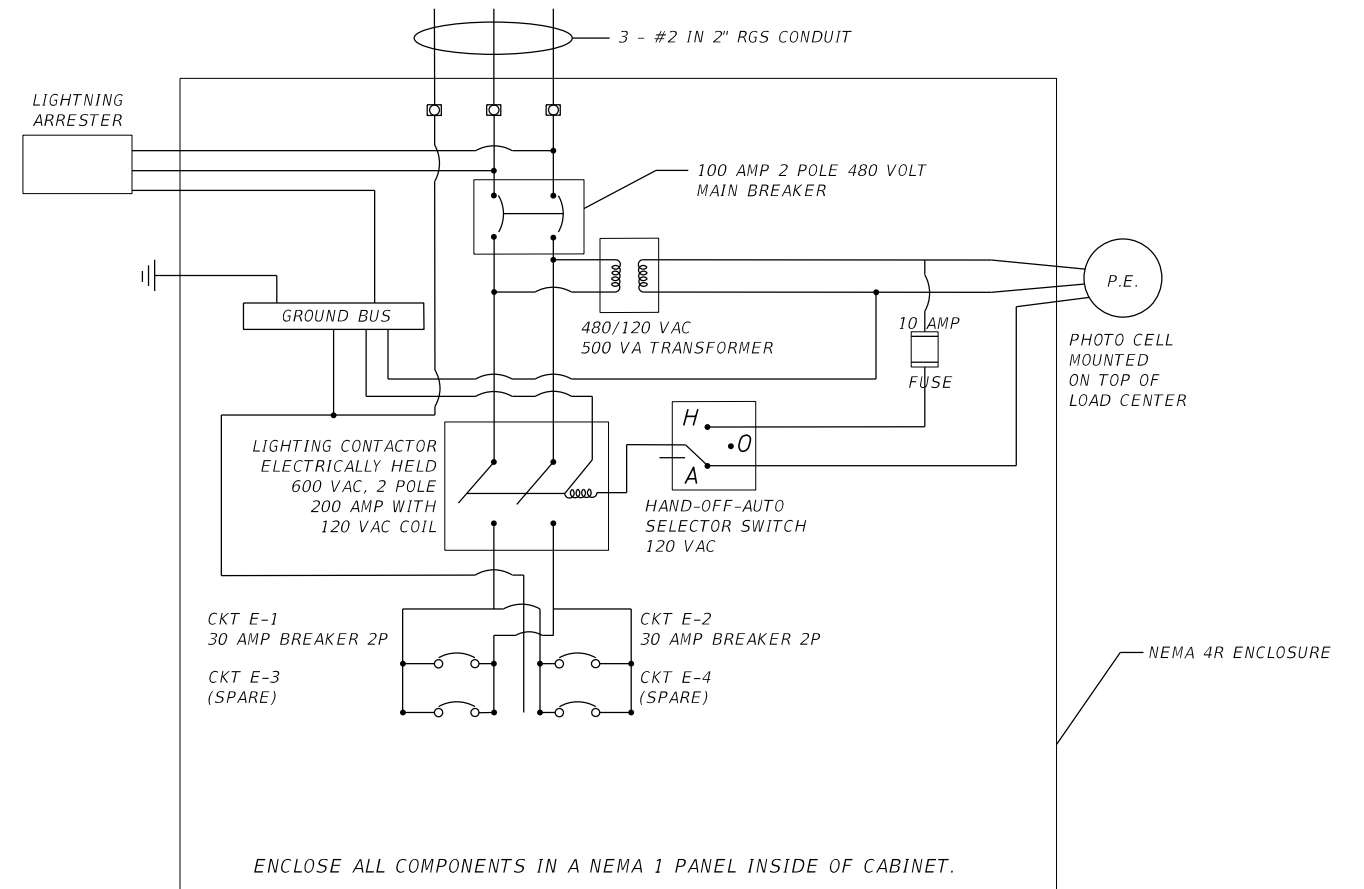
LOAD CALCULATIONS

$4 \times 0.20 \text{ AMPS} = 0.80 \text{ AMPS}$ (4 - 80 LED UNDERDECK LUMINAIRES)

$0.80 \text{ AMPS} \times 1.25 = 1.00 \text{ AMPS}$

USE 100 AMP 2-POLE MAIN CIRCUIT BREAKER

CONTROL CABINET WIRING DIAGRAM
FOR LOAD CENTER "E" ("EAST")
STA. 131+62, 50' LT
CR 435/MT. PLYMOUTH RD
240/480 v., 1 PH, 3 WIRE
N.T.S.



ENCLOSE ALL COMPONENTS IN A NEMA 1 PANEL INSIDE OF CABINET.

LOAD CALCULATIONS

$4 \times 0.20 \text{ AMPS} = 0.80 \text{ AMPS}$ (4 - 80 LED UNDERDECK LUMINAIRES)

$3 \times 0.20 \text{ AMPS} = 0.60 \text{ AMPS}$ (3 - 48 LED SIGN LUMINAIRES)

TOTAL = 1.40 AMPS

$1.40 \text{ AMPS} \times 1.25 = 1.75 \text{ AMPS}$

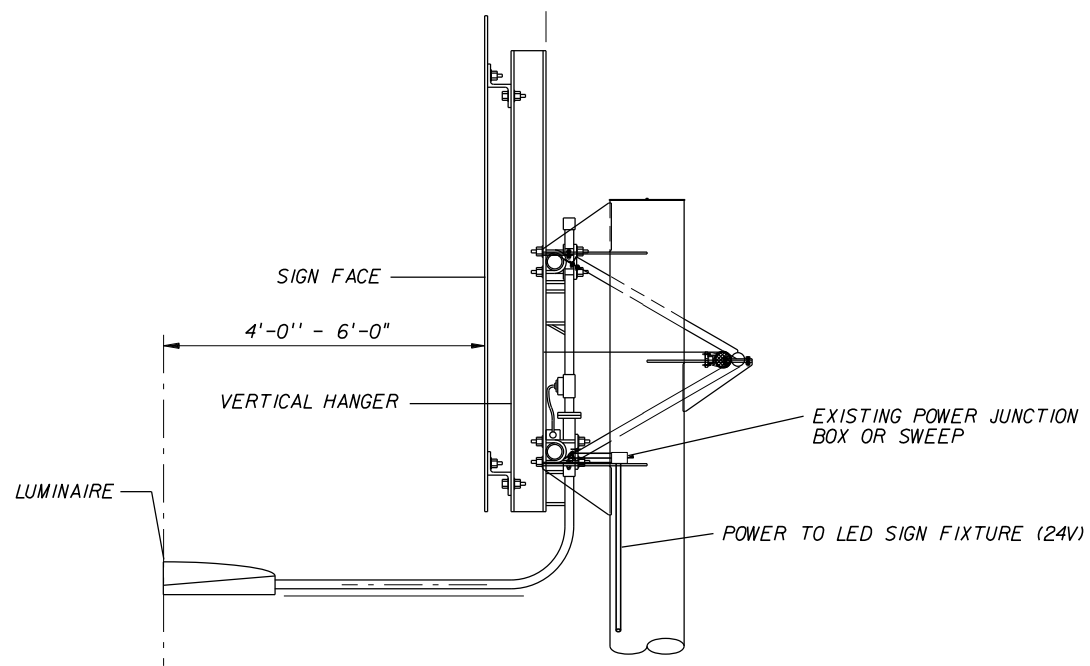
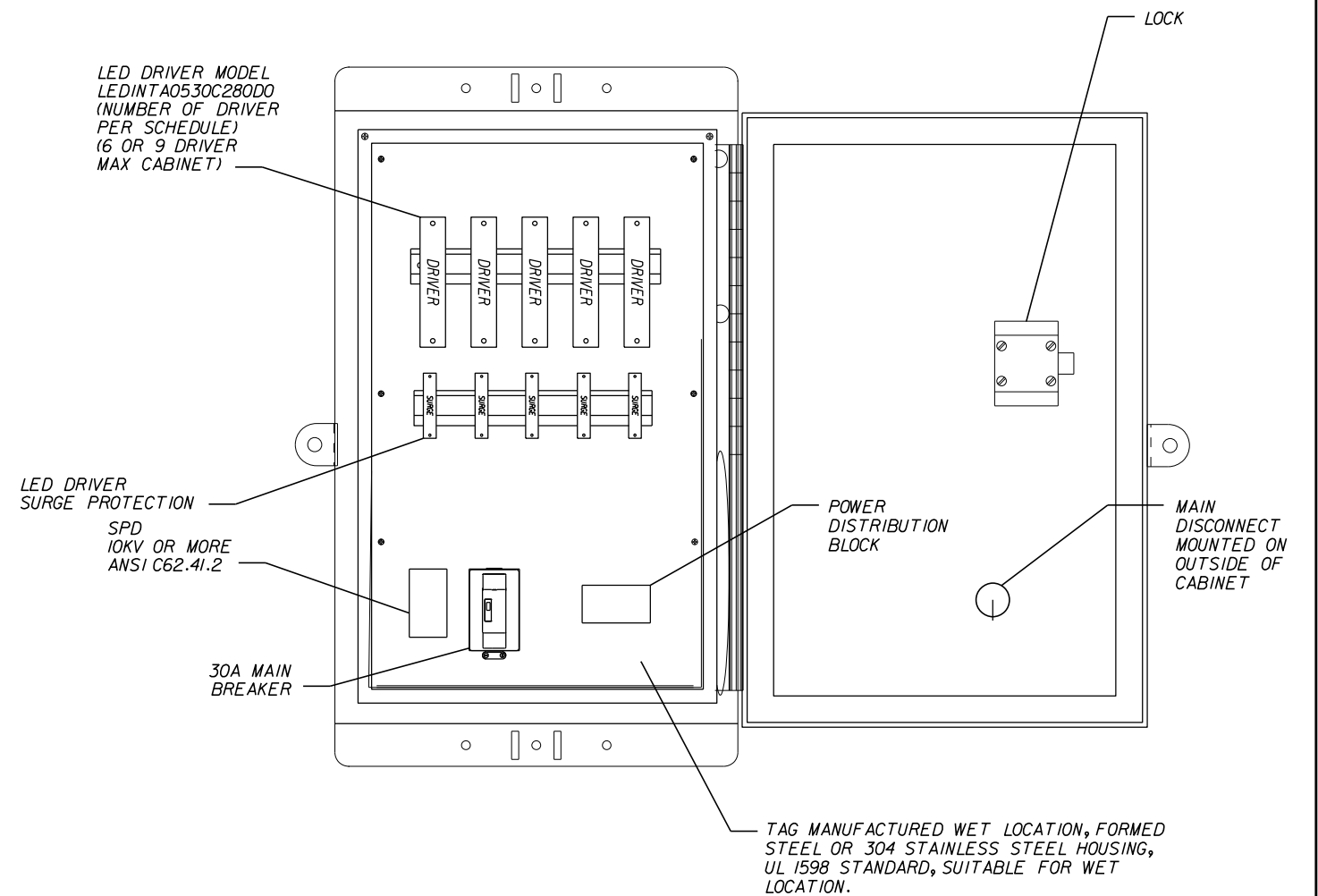
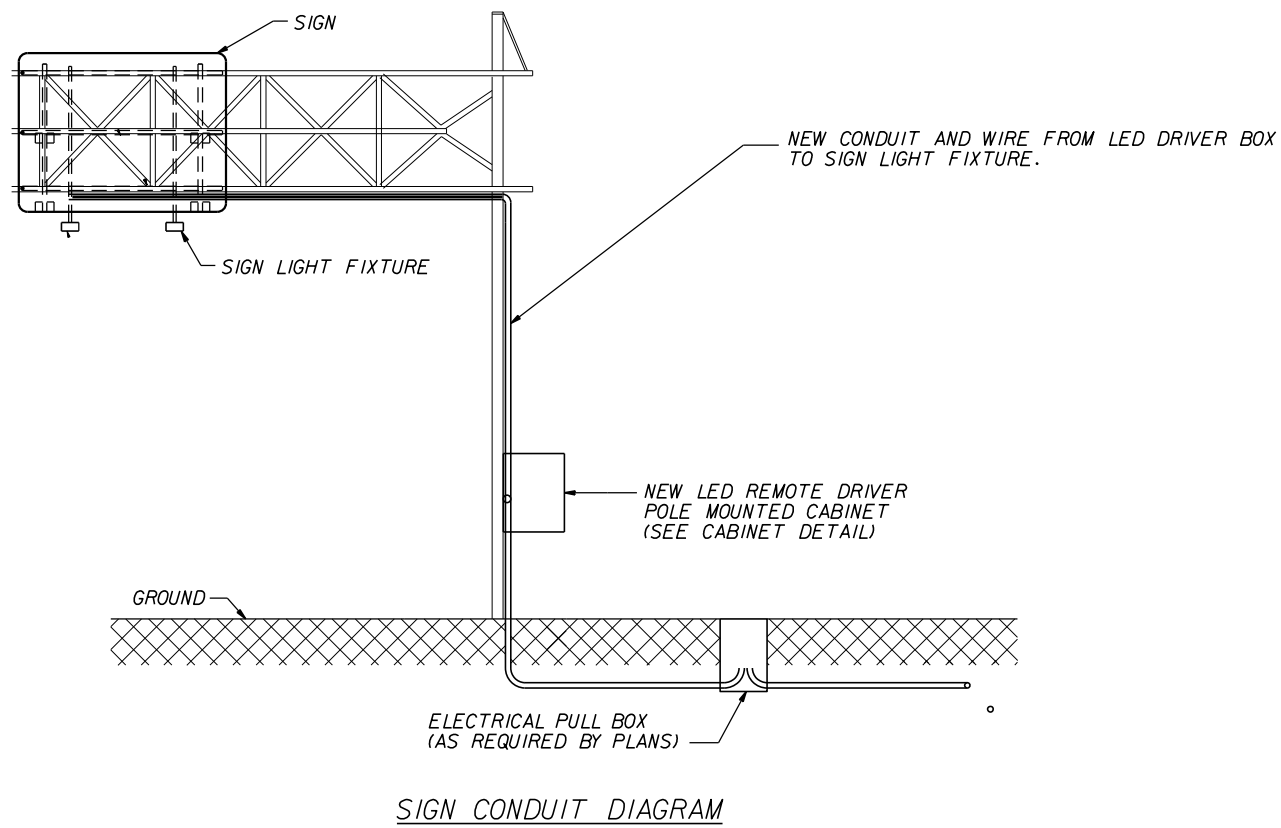
USE 100 AMP 2-POLE MAIN CIRCUIT BREAKER

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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P.E. LICENSE NO. 49363
PARSONS
201 E PINE STREET, SUITE 900, ORLANDO, FL 32801
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CENTRAL FLORIDA
EXPRESSWAY AUTHORITY
ROAD NO. SR 429
PROJECT NO. 429-205

LOAD CENTERS
L-14



LED REMOTE DRIVER BOX - POLE MOUNT

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

DAVID E. WAGNER, P.E.
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PARSONS
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CENTRAL FLORIDA EXPRESSWAY AUTHORITY	
ROAD NO.	PROJECT NO.
SR 429	429-205

LED SIGN LIGHTING DETAILS

SHEET NO.
L-15