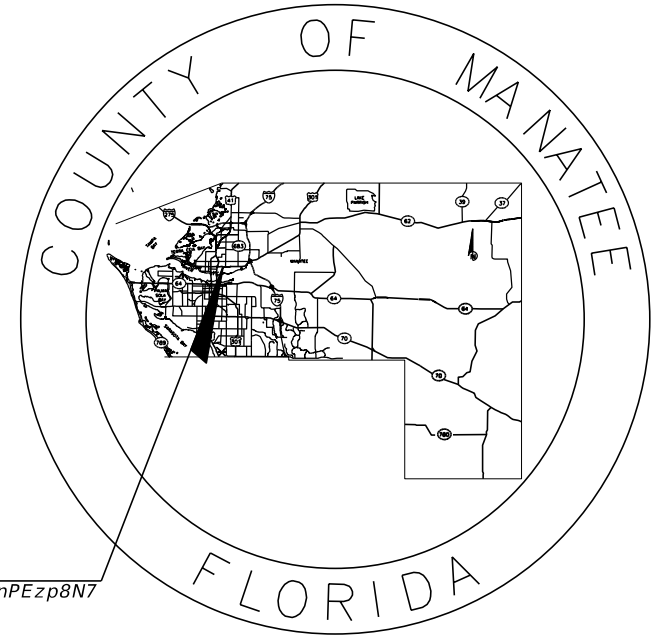


**MANATEE COUNTY
PUBLIC WORKS DEPARTMENT**

CONTRACT PLANS

**MANATEE COUNTY
PROJECT NUMBER 6094361
CANAL ROAD (16TH AVENUE EAST)
SEGMENT 1 - US 301 TO 24TH STREET EAST**

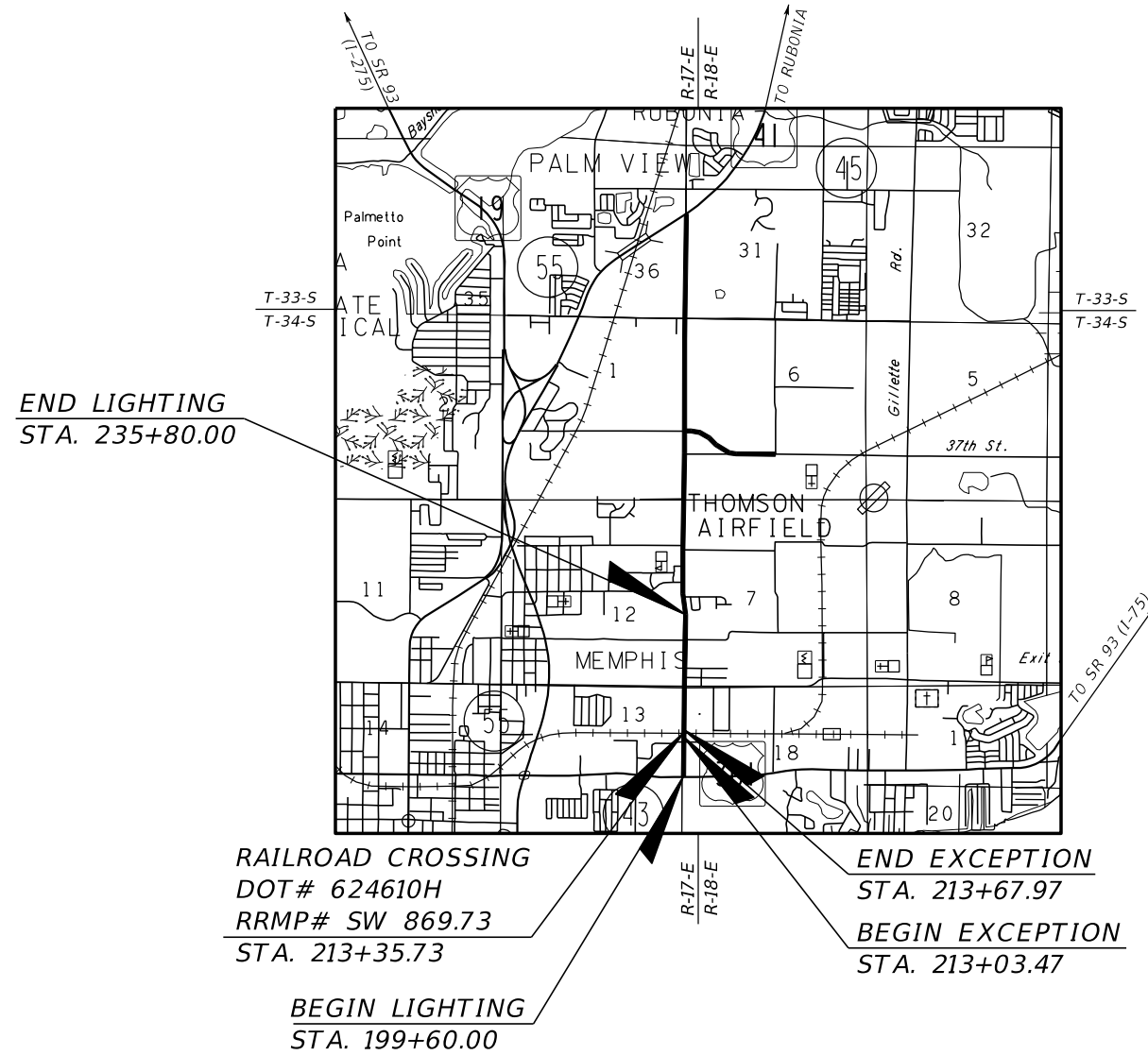
LIGHTING PLANS



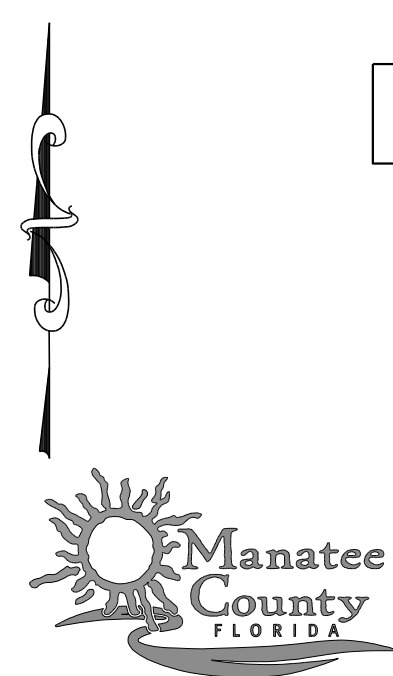
LOCATION OF PROJECT
<https://goo.gl/maps/UoqZ3RrEVnPEzp8N7>

INDEX OF LIGHTING PLANS

SHEET NO.	SHEET DESCRIPTION
L-1	KEY SHEET
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L-5	POLE DATA
L-6	GENERAL NOTES
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L-14	ELECTRICAL DISTRIBUTION PANELBOARD SCHEDULE
L-15	LIGHTING CONTROL PANEL ENCLOSURE



**CSX SUBMITTAL
1/2023**



**LIGHTING PLANS
ENGINEER OF RECORD:**

BIJAN BEHZADI, P.E.
P.E. NO.: 43868
HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
VENDOR NO. 47-0680568
CONTRACT NO.: 15-0909JE

MANATEE CO. PROJECT MANAGER:
MICHAEL L. STURM, P.E.

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

FISCAL YEAR	SHEET NO.
22	L-1

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

LEGEND

SYMBOLS

DESCRIPTION



98 WATT LED LUMINAIRES WIRED FOR 480V OPERATION, ATTACHED ON SHOULDER MOUNTED DOUBLE ARM CONVENTIONAL LIGHT POLE. ANALYZED USING GENERAL ELECTRIC LIGHTING LUMINAIRE, PHOTOMETRIC CURVE NUMBER ERLH_11C340XXXXX AT 11500 LUMENS EACH. POLE MOUNTING HEIGHT IS 35 FT AND ARM LENGTHS ARE 8 FT. SYMBOL INCLUDES LUMINAIRES, DUAL ARMS, POLE WITH STANDARD FOUNDATION, MODIFIED CONCRETE SLAB (6' x 6.5'), BREAKAWAY TRANSFORMER BASE, PULL BOX AND POLE CABLE DISTRIBUTION SYSTEM. THE LUMINAIRE IS A CUTOFF FIXTURE DESIGNED FOR MEDIUM THROW TYPE III DISTRIBUTION WITH ZERO TILT.



149 WATT LED LUMINAIRE WIRED FOR 480V OPERATION, ATTACHED ON SHOULDER MOUNTED CONVENTIONAL LIGHT POLE. ANALYZED USING GENERAL ELECTRIC LIGHTING LUMINAIRE, PHOTOMETRIC CURVE NUMBER ERLH_16C340XXXXX AT 16000 LUMENS. POLE MOUNTING HEIGHT IS 35 FT AND ARM LENGTH IS 8 FT. SYMBOL INCLUDES LUMINAIRE, ARM, POLE WITH STANDARD FOUNDATION, CONCRETE SLAB, BREAKAWAY TRANSFORMER BASE, PULL BOX, AND POLE CABLE DISTRIBUTION SYSTEM. THE LUMINAIRE IS A CUTOFF FIXTURE DESIGNED FOR MEDIUM THROW TYPE III DISTRIBUTION WITH ZERO TILT.



149 WATT LED LUMINAIRE WIRED FOR 480V OPERATION, ATTACHED ON SHOULDER MOUNTED CONVENTIONAL LIGHT POLE. ANALYZED USING GENERAL ELECTRIC LIGHTING LUMINAIRE, PHOTOMETRIC CURVE NUMBER ERLH_16C340XXXXX AT 16000 LUMENS. POLE MOUNTING HEIGHT IS 35 FT AND ARM LENGTH IS 12 FT. SYMBOL INCLUDES LUMINAIRE, ARM, POLE WITH STANDARD FOUNDATION, CONCRETE SLAB, BREAKAWAY TRANSFORMER BASE, PULL BOX AND POLE CABLE DISTRIBUTION SYSTEM. THE LUMINAIRE IS A CUTOFF FIXTURE DESIGNED FOR MEDIUM THROW TYPE III DISTRIBUTION WITH ZERO TILT.



149 WATT LED LUMINAIRE WIRED FOR 480V OPERATION, ATTACHED ON SHOULDER MOUNTED UTILITY CONFLICT LIGHT POLE. ANALYZED USING GENERAL ELECTRIC LIGHTING LUMINAIRE, PHOTOMETRIC CURVE NUMBER ERLH_16C340XXXXX -ELSHS-ERL1-BLCK AT 15600 LUMENS. POLE MOUNTING HEIGHT IS 35 FT AND ARM LENGTH IS 16 FT. SYMBOL INCLUDES LUMINAIRE, HOUSE SIDE SHIELD, ARM, POLE WITH STANDARD FOUNDATION, CONCRETE SLAB, BREAKAWAY TRANSFORMER BASE, PULL BOX AND POLE CABLE DISTRIBUTION SYSTEM. THE LUMINAIRE IS A CUTOFF FIXTURE DESIGNED FOR MEDIUM THROW TYPE III DISTRIBUTION WITH ZERO TILT.



149 WATT LED LUMINAIRE WIRED FOR 480V OPERATION, ATTACHED ON SHOULDER MOUNTED UTILITY CONFLICT LIGHT POLE. ANALYZED USING GENERAL ELECTRIC LIGHTING LUMINAIRE, PHOTOMETRIC CURVE NUMBER ERLH_16C340XXXXX AT 16000 LUMENS. POLE MOUNTING HEIGHT IS 35 FT AND ARM LENGTH IS 16 FT. SYMBOL INCLUDES LUMINAIRE, ARM, POLE WITH STANDARD FOUNDATION, BREAKAWAY TRANSFORMER BASE, AND POLE CABLE DISTRIBUTION SYSTEM. THE LUMINAIRE IS A CUTOFF FIXTURE DESIGNED FOR MEDIUM THROW TYPE III DISTRIBUTION WITH ZERO TILT.



251 WATT LED LUMINAIRE WIRED FOR 480V OPERATION, ATTACHED ON SHOULDER MOUNTED CONVENTIONAL LIGHT POLE. ANALYZED USING GENERAL ELECTRIC LIGHTING LUMINAIRE, PHOTOMETRIC CURVE NUMBER ERL2_28C340XXXXX AT 28000 LUMENS. POLE MOUNTING HEIGHT IS 35 FT AND ARM LENGTH IS 15 FT. SYMBOL INCLUDES LUMINAIRE, ARM, POLE WITH SPREAD FOOTER FOUNDATION, CONCRETE SLAB, BREAKAWAY TRANSFORMER BASE, AND POLE CABLE DISTRIBUTION SYSTEM. THE LUMINAIRE IS A CUTOFF FIXTURE DESIGNED FOR MEDIUM THROW TYPE III DISTRIBUTION WITH ZERO TILT.



251 WATT LED LUMINAIRE WIRED FOR 480V OPERATION, ATTACHED ON SHOULDER MOUNTED CONVENTIONAL LIGHT POLE. ANALYZED USING GENERAL ELECTRIC LIGHTING LUMINAIRE, PHOTOMETRIC CURVE NUMBER ERL2_28C340XXXXX AT 28000 LUMENS. POLE MOUNTING HEIGHT IS 35 FT AND ARM LENGTH IS 15 FT. SYMBOL INCLUDES LUMINAIRE, ARM, POLE WITH STANDARD FOUNDATION, CONCRETE SLAB, BREAKAWAY TRANSFORMER BASE, PULL BOX AND POLE CABLE DISTRIBUTION SYSTEM. THE LUMINAIRE IS A CUTOFF FIXTURE DESIGNED FOR MEDIUM THROW TYPE III DISTRIBUTION WITH ZERO TILT.



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CONDUIT INSTALLED BY OPEN TRENCH METHOD WITH CONDUCTORS INSIDE. RUN ONE (1) COPPER GROUND BONDING CONDUCTOR (GREEN INSULATION) INSIDE WITH OTHER CONDUCTORS.



TWO CONDUITS (ONE SPARE) INSTALLED BY DIRECTIONAL BORE METHOD WITH CONDUCTORS INSIDE. RUN ONE (1) COPPER GROUND BONDING CONDUCTOR (GREEN INSULATION) INSIDE WITH OTHER CONDUCTORS.



PROPOSED TYPICAL FDOT SHOULDER MOUNTED LIGHTING PULL BOX WITH MODIFIED CONCRETE SLAB OF 36" X 36". PULL BOX COVER SIZE 13" X 24" UNLESS OTHERWISE NOTED.



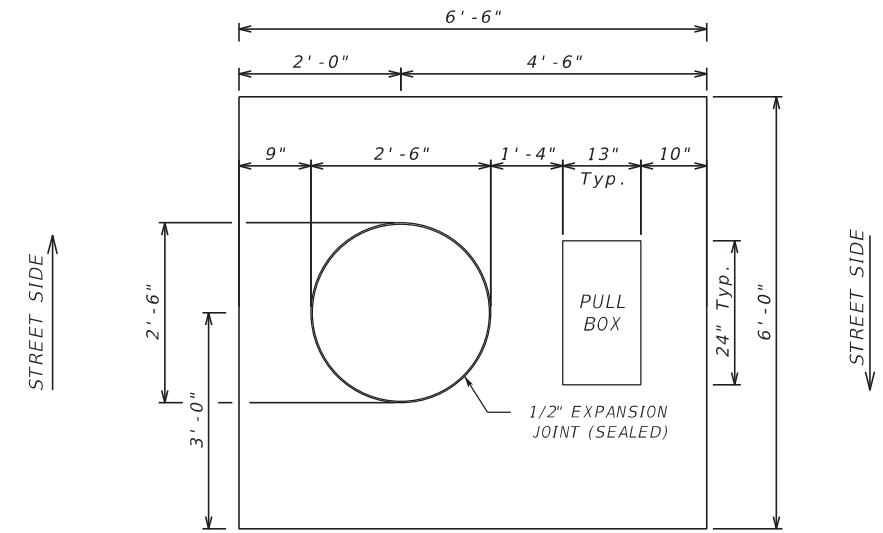
PROPOSED LOAD CENTER "A" 240/ 480 VOLT, SINGLE PHASE, 3 WIRE, PER FDOT STANDARD PLANS AND SPECIFICATIONS INCLUDING THE METER ENCLOSURE WITH BASE AND SERVICE DISCONNECT PER FP&L REQUIREMENTS. INCLUDE A MANUAL BYPASS SWITCH TO THE METER BASE PER FP&L REQUIREMENTS.

CONVENTIONAL LIGHTING DESIGN CRITERIA FOR SIGNALIZED INTERSECTION

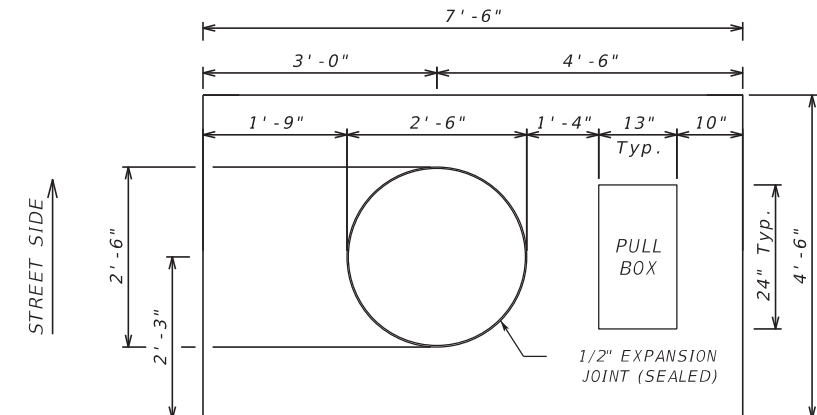
DESIGN WIND SPEED	140 MPH
AVERAGE HORIZONTAL INITIAL ILLUMINATION	3.0 H.F.C. STD / 1.5 H.F.C. MIN
AVERAGE VERTICAL INITIAL ILLUMINATION	1.5 V.F.C. STD / 1.2 V.F.C. MIN
AVERAGE TO MIN.	4:1 OR LESS
MAX TO MIN.	10:1 OR LESS

CONVENTIONAL LIGHTING DESIGN CRITERIA FOR ROADWAY SEGMENT

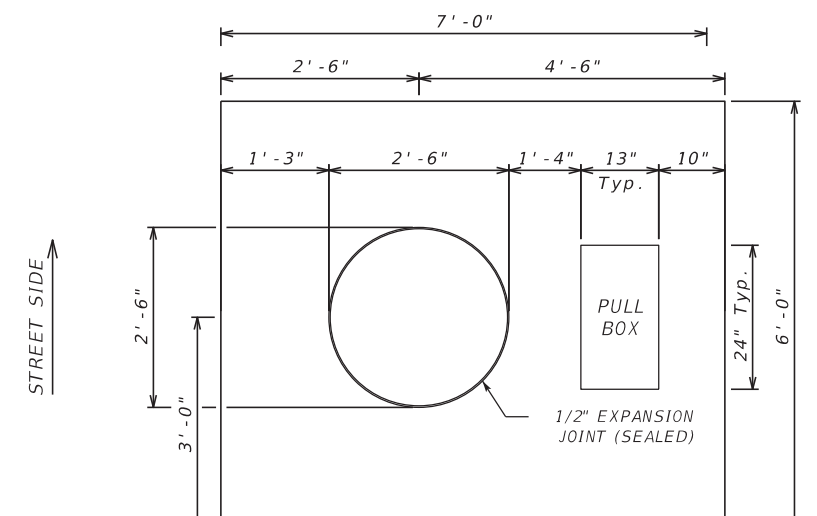
DESIGN WIND SPEED	140 MPH
AVERAGE HORIZONTAL INITIAL ILLUMINATION	1.0 H.F.C.
AVERAGE TO MIN.	4:1 OR LESS
MAX TO MIN.	10:1 OR LESS
VEILING LUMINANCE RATIO	0.3 : 1 OR LESS



SLAB DETAILS - MEDIAN MOUNT (6' X 6.5')



SLAB DETAILS - POLE NO. 24 (4.5' X 7.5')



SLAB DETAILS - POLE NO. 28 (6' X 7')

No.	REVISIONS	DATE	BY	SCALE	AS NOTED	DESIGNED BY	BB	DRAWN BY	SM	CHECKED BY	JG	HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233	DATE	10/2022	PROJECT NO.	6094361	DESIGN ENGINEER	BIJAN BEHZADI	FL. LICENSE NO.	43868	SHEET NO.	L-4
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LEGEND AND LIGHTING DESIGN CRITERIA



POLE DATA

POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	OFFSET / POLE SETBACK	PAY ITEM
1	A-1	STA. 200+84	15'	251W	35'	75' LT / 5.4' FROM FOP TO FOC	715-61-252
2	A-1	STA. 199+60	15'	251W	35'	92' LT / 11.6' FROM FOP TO FOG	715-62-252
3	A-1	STA. 199+78	15'	251W	35'	91' RT / 26.3' FROM FOP TO EOTL	715-62-252
4	A-1	STA. 200+94	15'	251W	35'	133' RT / 20.0' FROM FOP TO EOTL	715-61-252
5	A-1	STA. 200+93.5	15'	251W	35'	73' RT	715-61-252
6	A-1	STA. 201+60	8'	98W	35'	5.5' RT / CENTER OF MEDIAN	715-512-135
7	A-1	STA. 203+20	8'	98W	35'	5.5' RT / CENTER OF MEDIAN	715-512-135
8	A-1	STA. 204+80	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
9	A-1	STA. 206+40	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
10	A-1	STA. 208+00	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
11	A-1	STA. 209+60	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
12	A-1	STA. 211+20	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
13	A-1	STA. 212+80	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
14	A-1	STA. 213+90	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
15	A-1	STA. 215+35	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
16	A-1	STA. 216+80	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
17	A-2	STA. 218+27	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
18	A-2	STA. 219+74	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
19	A-2	STA. 221+21	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
20	A-2	STA. 222+68	8'	98W	35'	3' LT / CENTER OF MEDIAN	715-512-135
21	A-2	STA. 224+15	8'	98W	35'	5.5' LT / CENTER OF MEDIAN	715-512-135
22	A-2	STA. 225+65	8'	98W	35'	5.5' LT / CENTER OF MEDIAN	715-512-135
23	A-2	STA. 226+19	12'	149W	35'	59' LT	715-61-242
24	A-2	STA. 226+31	8'	149W	35'	118' LT / 11' FROM FOP TO EOTL	715-61-211
25	A-2	STA. 227+51	12'	149W	35'	65' LT	715-61-242
26	A-2	STA. 226+30.4	16'	149W	35'	60' RT	715-65-266
27	A-2	STA. 226+50	8'	149W	35'	100' RT / 10' FROM FOP TO EOTL	715-61-211
28	A-2	STA. 227+42.6	16'	149W	35'	48.6' RT	715-65-266

POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	OFFSET / POLE SETBACK	PAY ITEM
29	A-2	STA. 227+90	8'	98W	35'	5.5' RT / CENTER OF MEDIAN	715-512-135
30	A-2	STA. 229+48	8'	98W	35'	5.5' RT / CENTER OF MEDIAN	715-512-135
31	A-2	STA. 231+06	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
32	A-2	STA. 232+64	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
33	A-2	STA. 234+22	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135
34	A-2	STA. 235+80	8'	98W	35'	0' / CENTER OF MEDIAN	715-512-135

TABLE LEGEND

EOTL - EDGE OF TRAVEL LANE
 FOC - FACE OF CURB
 FOG - FACE OF GUARDRAIL
 FOP - FACE OF POLE

SCALE AS NOTED		 HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233	DATE	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	<p style="text-align: center;">POLE DATA</p>	SHEET NO.
DESIGNED BY BB			10/2022		BIJAN BEHZADI		
DRAWN BY SM			PROJECT NO.		FL. LICENSE NO.		
CHECKED BY JG			6094361		43868		
No.	REVISIONS	DATE	BY			L-5	



GENERAL NOTES:

1. "LOCATES "SUNSHINE ONE CALL OF FLORIDA, INC." SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATION LINES. CONTACT THE RAILROAD'S REPRESENTATIVE TWO (2) WEEKS IN ADVANCE OF THOSE PLACES WHERE EXCAVATION, PILE DRIVING OR HEAVY LOADS MAY DAMAGE RAILROAD UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION OF POWER LINES IN THE AREA TO BE DISTURBED, AVOID EXCAVATION OR OTHER DISTURBANCES OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND THE PUBLIC. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATIONS OR POWER LINE, THE LINE SHALL BE POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION AND PROTECTED DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.
2. SEE ROADWAY PLANS FOR UTILITY OWNERS.
3. SEE SIGNALIZATION PLANS FOR ADDITIONAL CONDUIT DETAILS.
4. PRIOR TO ANY EQUIPMENT ORDER, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL EQUIPMENT SPECIFICATION OR DESIGN DATA FOR ALL MATERIAL PROPOSED FOR THE PROJECT, INCLUDING BUT NOT LIMITED TO:
 - A) LUMINAIRE PHOTOMETRICS, INCLUDING ELECTRONIC IES PHOTOMETRIC FILES
 - B) POLE STRENGTH CALCULATIONS
 - C) POLE FRANGIBILITY TEST
 - D) BOLT SPECIFICATIONS AND BOLT CIRCLE DIAMETER
 - E) POLE SHOP DRAWINGS
 - F) LOAD CENTER ELECTRICAL EQUIPMENT, INCLUDING WIRING SCHEMATICS
5. 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. BEFORE EXCAVATING STAKE ALL POLE LOCATIONS AND TAKE RESPONSIBILITY FOR NOTIFYING THE UTILITY COMPANY OWNER(S) AND REQUEST THEM TO LOCATE AND STAKE THEIR UNDERGROUND FACILITIES.
6. PROVIDE NOTICE TO THE UTILITY OWNER(S) PER FLORIDA STATUTE 556 (2012). THIS STATUTE REQUIRES THAT BEFORE EXCAVATION, NOTICE BE GIVEN TO THE SUNSHINE STATE ONE-CALL OF FLORIDA, INC. (SSOCOF) A MINIMUM OF TWO (2) FULL BUSINESS DAYS BEFORE BEGINNING ANY EXCAVATION OR DEMOLITION, EXCLUDING SATURDAY, SUNDAY, AND LEGAL HOLIDAYS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF SSOCOF 1-800-432-4770.
7. THE LOCATION OF THE CONDUCTORS, CONDUITS AND JUNCTION BOXES ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED BY THE ENGINEER TO ACCOMMODATE LOCAL CONDITIONS AND EXISTING UTILITY LOCATIONS.
8. ALUMINUM POLES, LUMINAIRES AND BASES SHALL BE FABRICATED IN ACCORDANCE WITH AASHTO'S "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.
9. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE, THE NATIONAL ELECTRICAL SAFETY CODE AND THE STATE OF FLORIDA D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
10. IN ACCORDANCE WITH N.E.C., IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL IDENTIFYING CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANDHOLE FOR EACH POLE.
11. 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.
12. FURNISH AND INSTALL AN ALUMINUM IDENTIFICATION TAG ON EACH ROADWAY LIGHTING STANDARD. TAGS SHALL BE 2" x 8" IN SIZE WITH BLACK LETTERS ON YELLOW BACKGROUND, ATTACHED WITH RIVETS (NO SCREWS). COST OF TAGS SHALL BE INCLUDED IN THE BID ITEMS FOR LIGHT POLE COMPLETE. TAG SHALL BE PLACED 5 FEET ABOVE FINAL GRADE.

RAILROAD REQUIRMENTS:

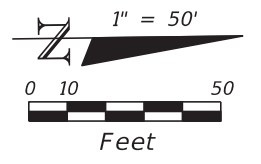
1. THE CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIAL OF ANY KIND ON CSXT RIGHT-OF-WAY (ROW) OR WHERE THEY MAY HAVE THE POTENTIAL TO INTERFERE WITH CSXT OPERATIONS UNLESS CONTRACTOR HAS RECEIVED PRIOR WRITTEN AUTHORIZATION BY CSXT REPRESENTATIVE.
2. COORDINATE ALL RAILROAD ACTIVITIES THROUGH MANATEE COUNTY, FLORIDA, COUNTY ENGINEER.
3. CSXT RAILROAD FLAGMAN IS REQUIRED ANYTIME CONTRACT ACTIVITIES OCCUPY OR HAVE POTENTIAL TO IMPACT CSXT ROW OR TRACKS.
4. UNDER NO CONDITIONS SHALL WORK AFFECT THE SAFE PASSAGE OF TRAINS OR OTHER ON TRACK EQUIPMENT. CONTRACTORS AND ALL SUBCONTRACTORS (IF APPLICABLE) SHALL PROCURE AND MAINTAIN RAILROAD PROTECTIVE LIABILITY INSURANCE AND COVERAGE OF INSURANCE BEFORE ACCESSING CSXT ROW.
5. CONTRACTOR SHALL REFER TO THE CSXT PUBLIC PROJECTS MANUAL, MOST RECENT EDITION, FOR CONSTRUCTION REQUIREMENTS WHILE WITHIN THE CSXT ROW.
6. CONTRACTOR MUST HAVE AN EMERGENCY ACTION AND HURRICANE PREPAREDNESS PLAN, WHICH SHOULD BE SITE SPECIFIC AND MUST INCLUDE COORDINATION WITH CSXT AND CSXT REPRESENTATIVE, WHILE WORKING WITHIN THE CSXT ROW LIMITS. THIS PLAN MUST BE PROVIDED TO CSXT FOR RECORD PRIOR TO WORK COMMENCING WHICH MAY IMPACT CSXT ROW OR FACILITIES.
7. AGENCY AND CONTRACTOR ARE NOT PERMITTED TO CROSS CSXT'S PROPERTY OR TRACKS, EXCEPT ON EXISTING PUBLIC ROAD CROSSINGS, WITH VEHICLES, MEN, OR EQUIPMENT OF ANY KIND WITHOUT PRIOR AUTHORIZATION FROM CSXT OR AUTHORIZED REPRESENTATIVE.
8. IF ANY ISSUE OR INCIDENT OCCURS WITHIN CSXT ROW, OPERATIONS ARE TO CEASE IMMEDIATELY. THE CONTRACTOR MUST CONTACT THE CSXT PUBLIC SAFETY COORDINATION CENTER AT 800-232-0144 AND NOTIFY THE CSXT REPRESENTATIVE. THE CONTRACTOR MUST RECEIVE AUTHORIZATION FROM CSXT BEFORE RESUMING CONSTRUCTION ACTIVITIES AT SITE.
9. ALL SOILS EXCAVATED WITHIN CSXT'S RAILROAD RIGHT-OF-WAY SHALL REMAIN ON CSXT'S RIGHT-OF-WAY. TESTING OF SOILS ON CSXT ROW IS PROHIBITED WITHOUT PRIOR WRITTEN CSXT AUTHORIZATION. ANY SOILS EXCAVATED ON CSXT ROW CAN BE REUSED ON THE ROW PROVIDED PLACING SOILS ALONG CSXT ROW POSES NO ADVERSE IMPACTS TO THE EXISTING TERRAIN, DRAINAGE OR ENVIRONMENT. SHOULD SOIL NEED TO BE REMOVED FROM CSXT ROW, THE CSXT ENVIRONMENTAL DEPARTMENT WILL SAMPLE THE SOIL FOR DISPOSITION. SOIL STAGED ON CSXT MUST FOLLOW CSXT PROTOCOL AND BE PROPERLY STORED AND/OR PROTECTED FROM THE ELEMENTS AND POTENTIAL EXPOSURE.

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

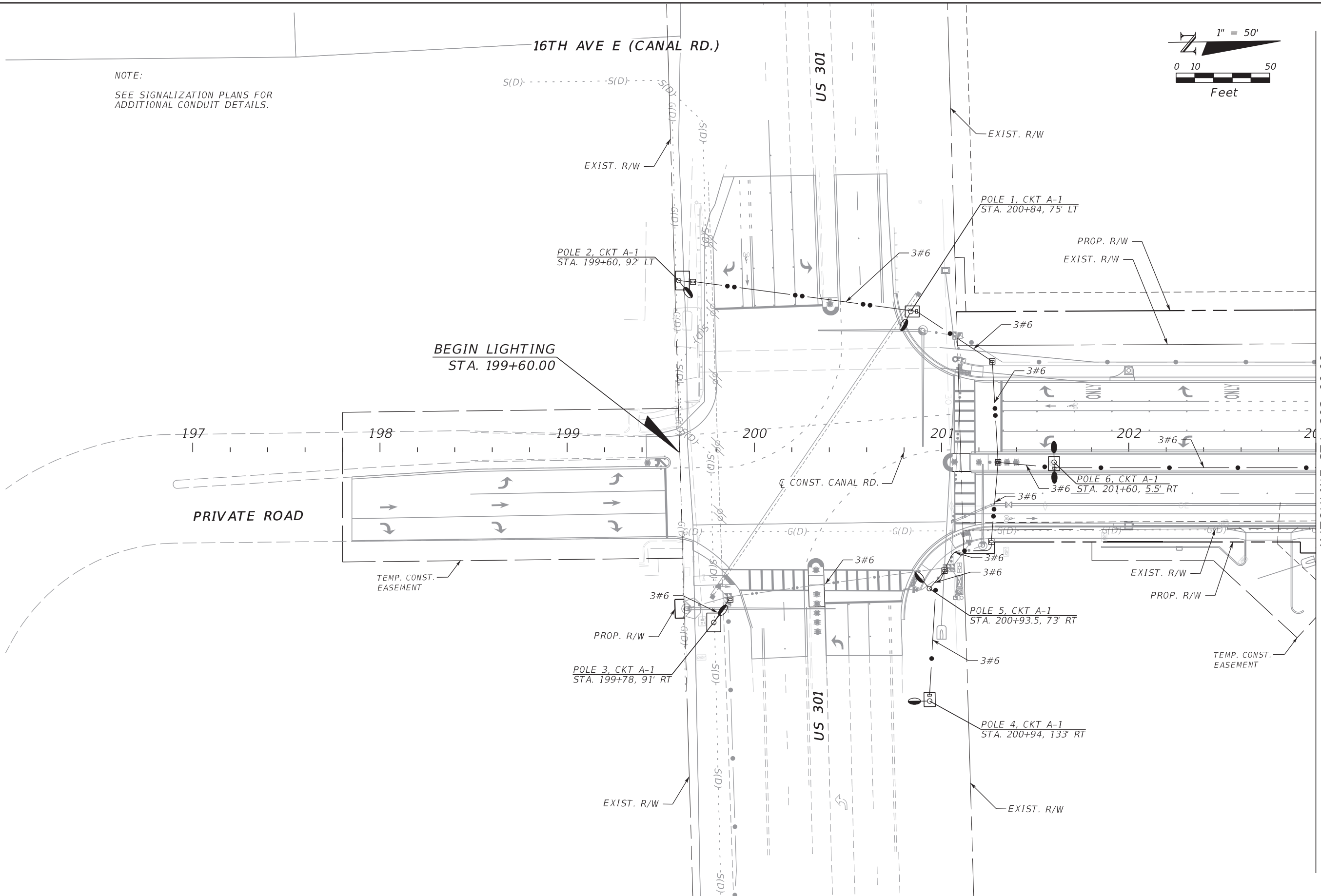
			SCALE	AS NOTED			DATE	10/2022	
			DESIGNED BY	BB		HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233		MANATEE COUNTY PUBLIC WORKS	
			DRAWN BY	SM					DESIGN ENGINEER BIJAN BEHZADI
			CHECKED BY	JG					
			No.	REVISIONS	DATE	BY			
2:04:04 PM	10/24/2022								

GENERAL NOTES

SHEET NO.
L-6





NOTE:
SEE SIGNALIZATION PLANS FOR
ADDITIONAL CONDUIT DETAILS.

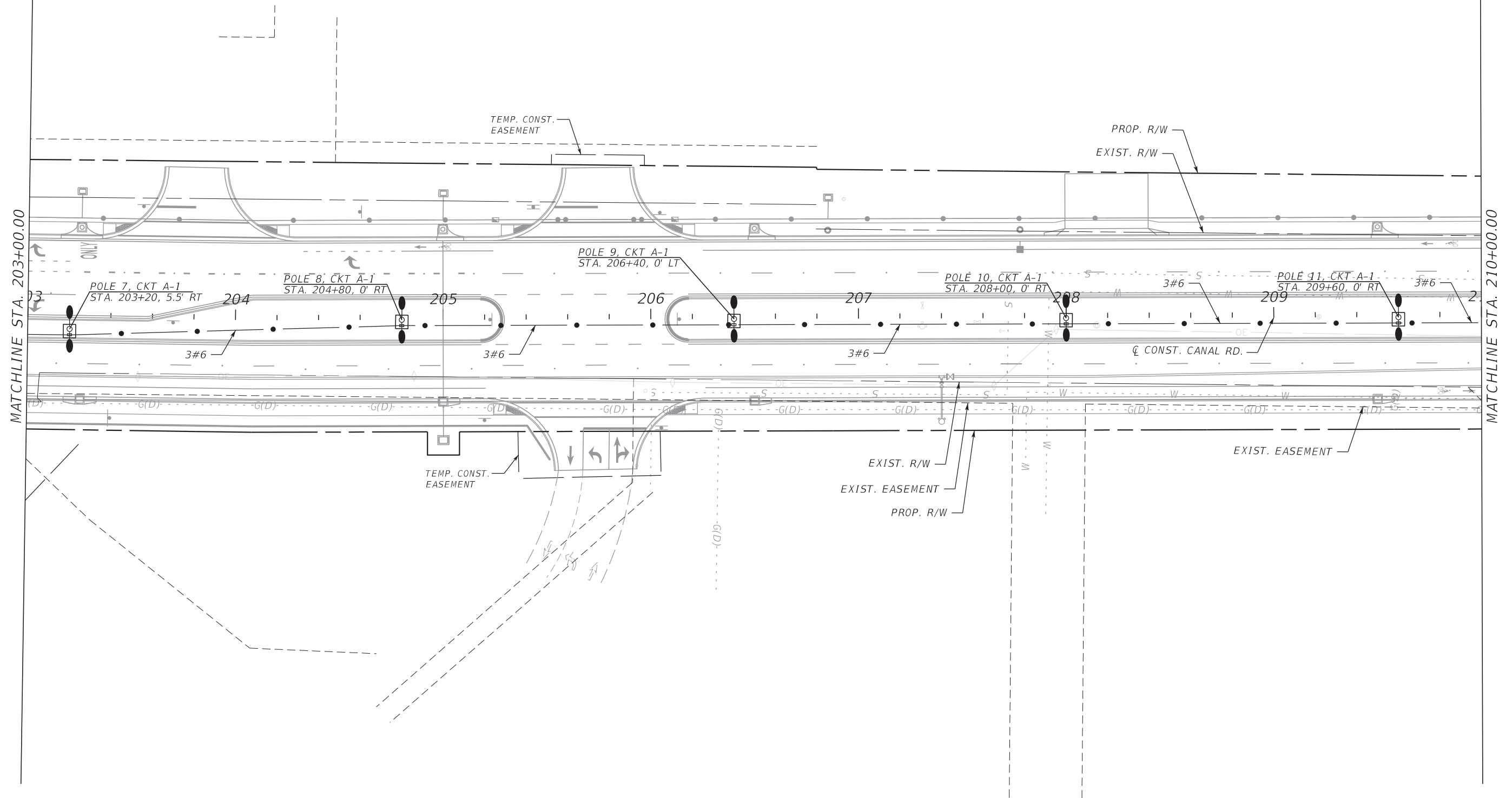
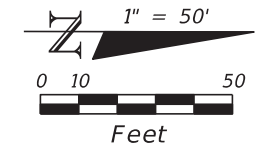


MATCHLINE STA. 203+00.00



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

No.		REVISIONS		DATE	BY	 HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233	DATE	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BIJAN BEHZADI FL. LICENSE NO. 43868	LIGHTING PLAN (1)	SHEET NO.
2:04:31 PM		10/24/2022			JG		PW:\		10/2022			PROJECT NO.

16TH AVE E (CANAL RD.)

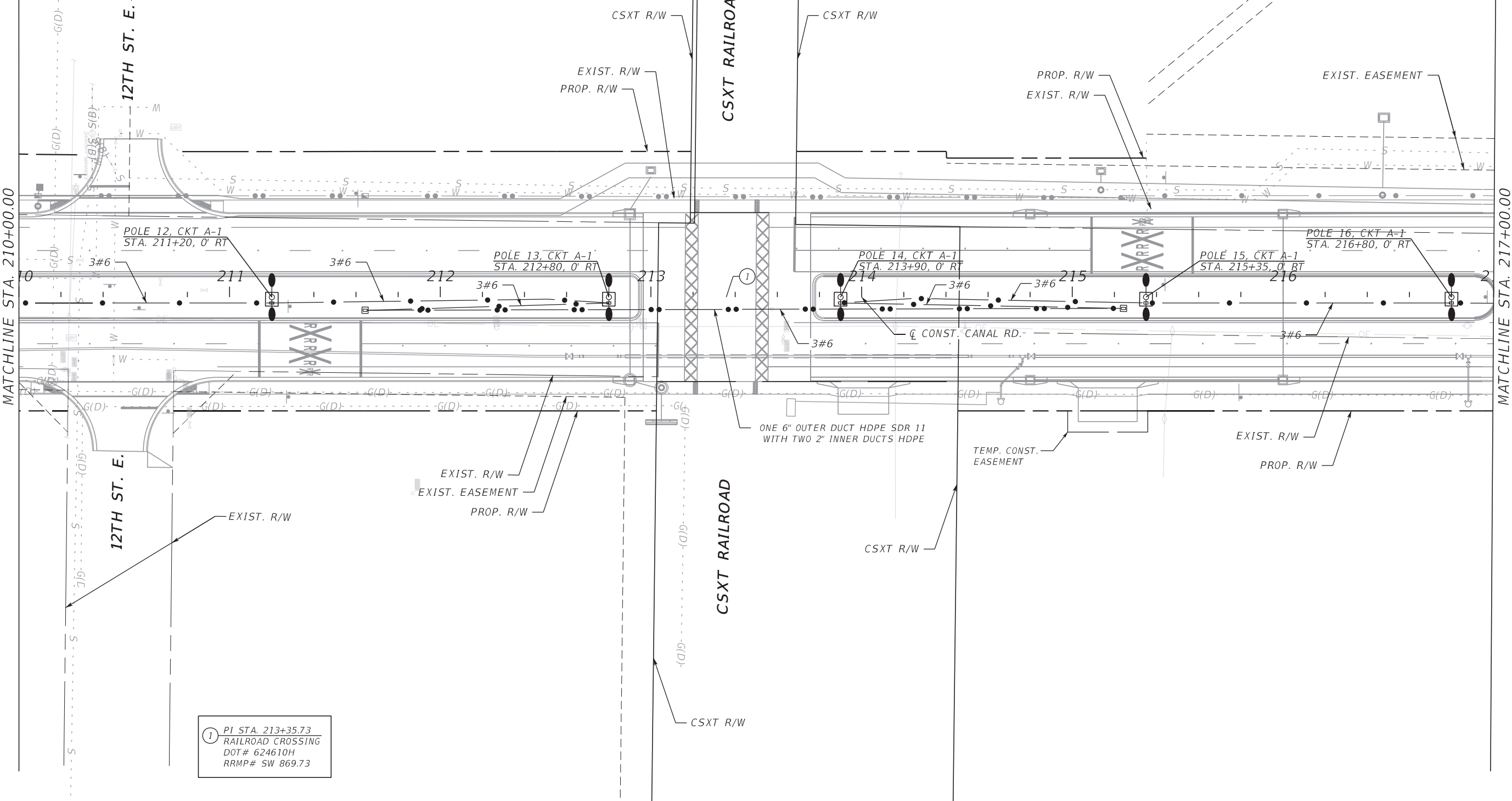
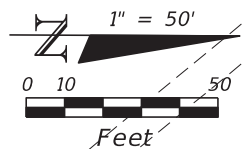




THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

No.		REVISIONS		DATE	BY	 HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233	DATE	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BIJAN BEHZADI FL. LICENSE NO. 43868	SHEET NO.		
2:04:35 PM		10/24/2022					PROJECT NO.	6094361	LIGHTING PLAN (2)		L-8		

SCALE AS NOTED
 DESIGNED BY BB
 DRAWN BY SM
 CHECKED BY JG

16TH AVE E (CANAL RD.)

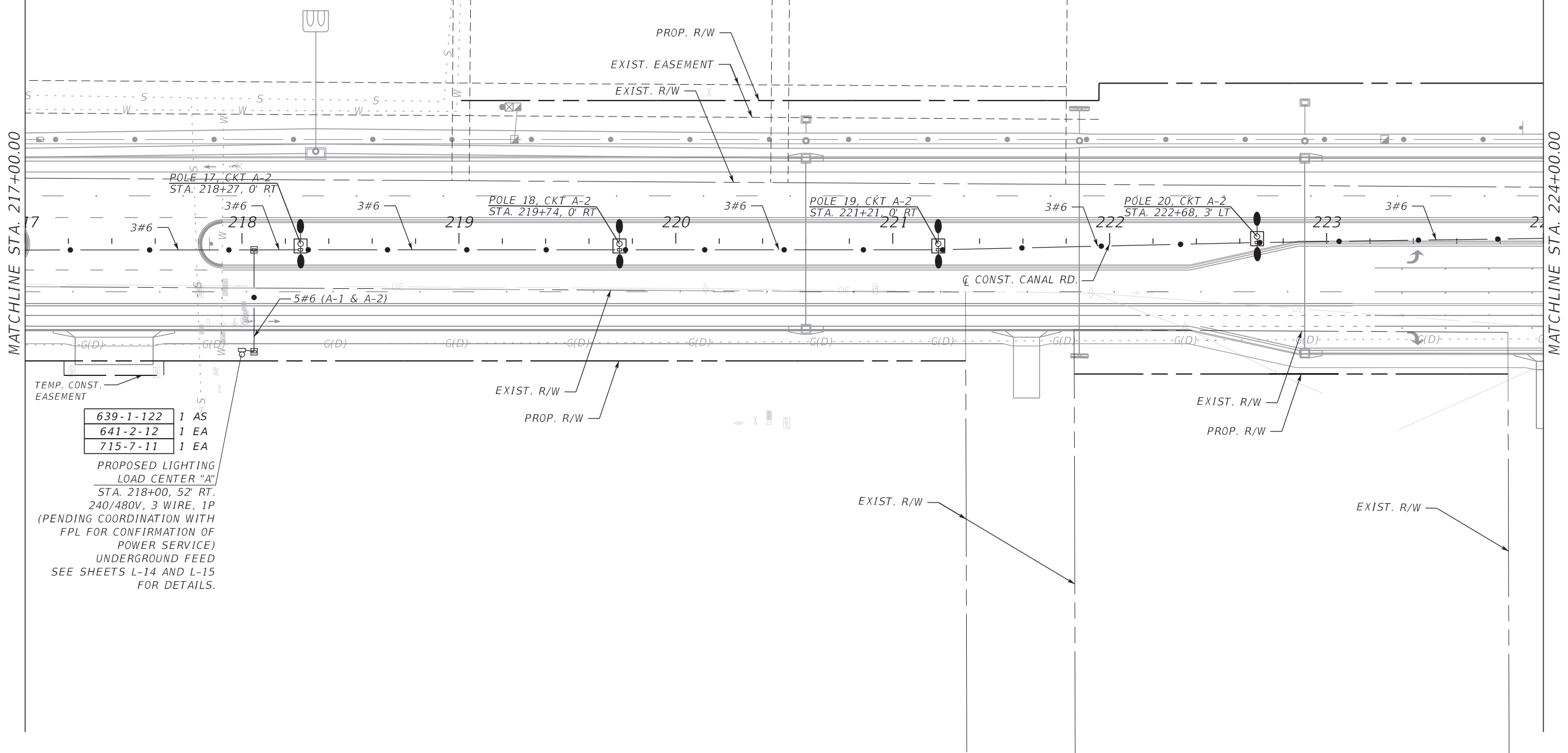
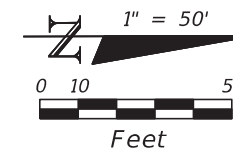


No.		REVISIONS		DATE	BY	SCALE	AS NOTED	 HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233	DATE	10/2022	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BIJAN BEHZADI	LIGHTING PLAN (3)	SHEET NO.	L-9
						DESIGNED BY	BB		PROJECT NO.	6094361		FL. LICENSE NO.	43868			
						DRAWN BY	SM									
						CHECKED BY	JG									

2:04:38 PM 10/24/2022 PW:\

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16TH AVE E (CANAL RD.)



639-1-122	1	AS
641-2-12	1	EA
715-7-11	1	EA

PROPOSED LIGHTING
LOAD CENTER "A"
STA. 218+00, 52' RT.
240/480V, 3 WIRE, 1P
(PENDING COORDINATION WITH
FPL FOR CONFIRMATION OF
POWER SERVICE)
UNDERGROUND FEED
SEE SHEETS L-14 AND L-15
FOR DETAILS.

No.	REVISIONS	DATE	BY
		10/24/2022	JG

HDR
HDR Engineering, Inc.
2601 Cattlemen Road
Suite 400
Sarasota, FL 34232-6233

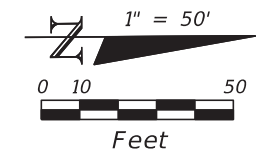
DATE
10/2022
PROJECT NO.
6094361

Manatee County
FLORIDA
**MANATEE COUNTY
PUBLIC WORKS**

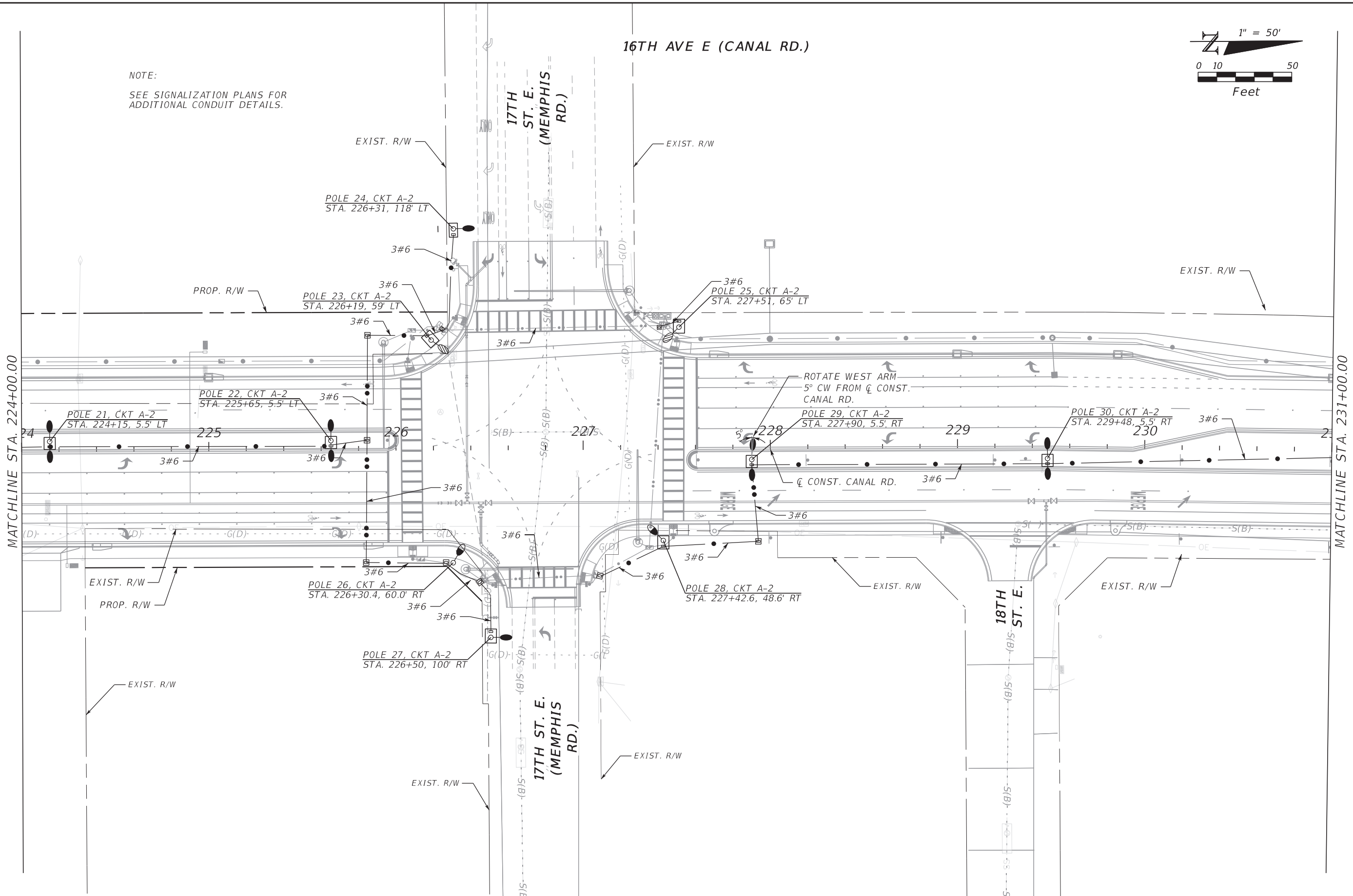
DESIGN ENGINEER
BIJAN BEHZADI
FL. LICENSE NO.
43868

LIGHTING PLAN (4)

SHEET NO.
L-10



NOTE:
SEE SIGNALIZATION PLANS FOR
ADDITIONAL CONDUIT DETAILS.



No.	REVISIONS	DATE	BY
		10/24/2022	JG

SCALE AS NOTED

DESIGNED BY BB

DRAWN BY SM

CHECKED BY JG

PW:\



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DATE
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PROJECT NO.
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DESIGN ENGINEER
BIJAN BEHZADI

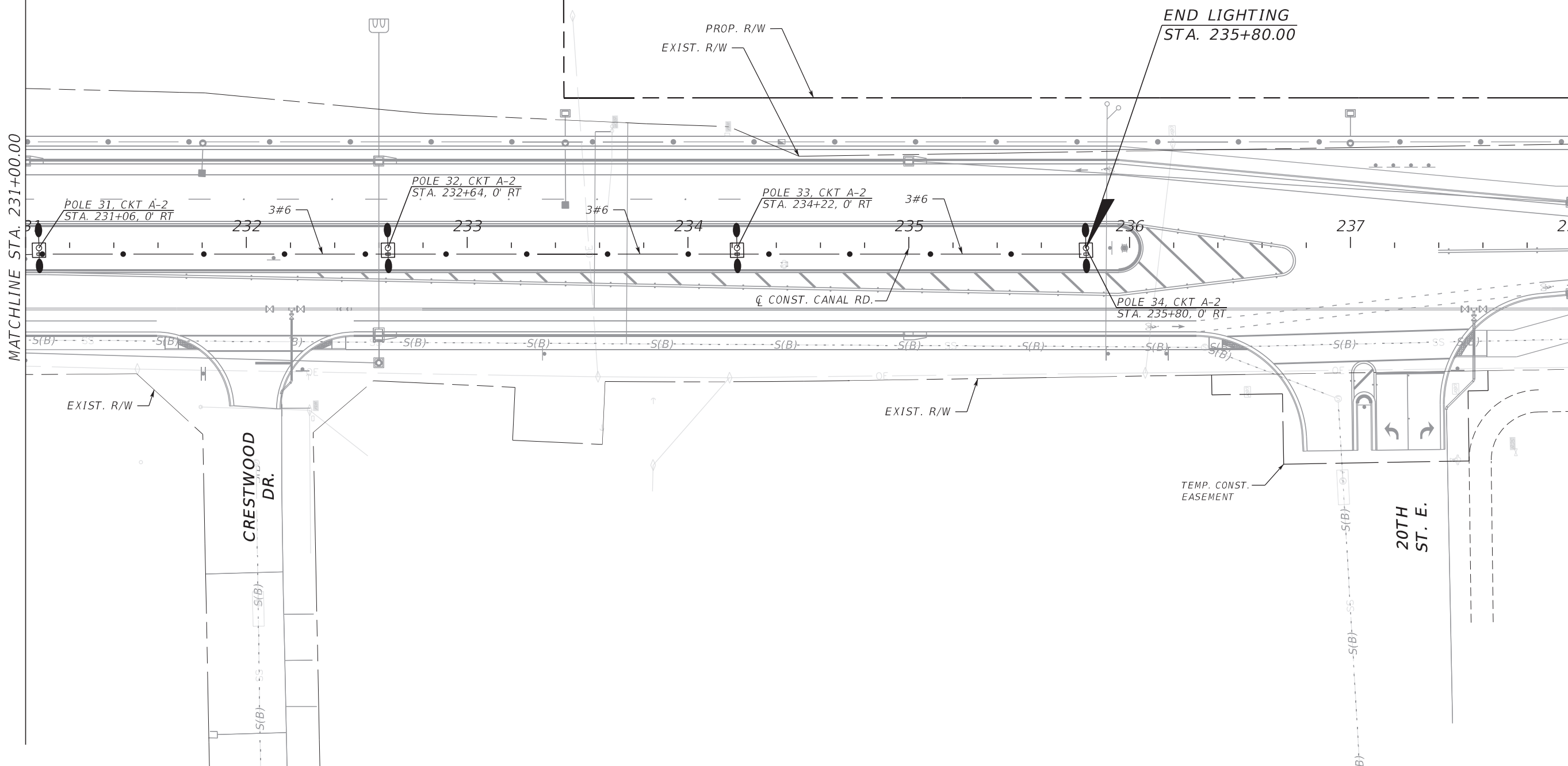
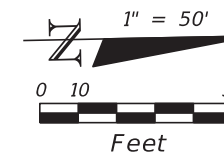
FL. LICENSE NO.
43868

LIGHTING PLAN (5)

SHEET NO.
L-11

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16TH AVE E (CANAL RD.)



MATCHLINE STA. 231+00.00

No.	REVISIONS	DATE	BY
		10/24/2022	JG

SCALE AS NOTED

DESIGNED BY BB

DRAWN BY SM

CHECKED BY JG



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Sarasota, FL 34232-6233

DATE	10/2022
PROJECT NO.	6094361



MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER	BIJAN BEHZADI
FL. LICENSE NO.	43868

LIGHTING PLAN (6)

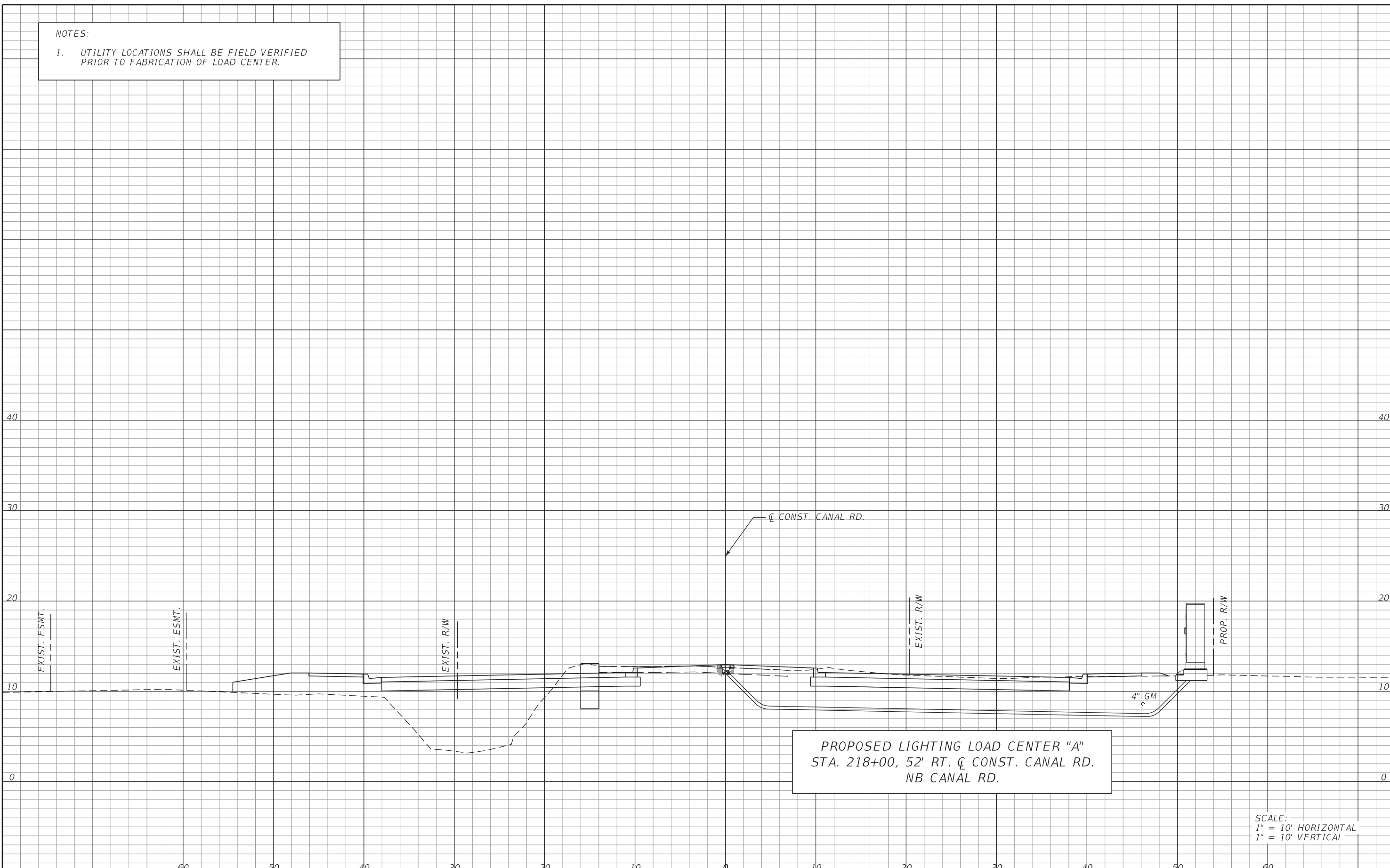
SHEET NO.	L-12
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2:04:48 PM

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NOTES:

- UTILITY LOCATIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OF LOAD CENTER.



SCALE:
 1" = 10' HORIZONTAL
 1" = 10' VERTICAL

No.	REVISIONS	DATE	BY
2:05:09 PM	10/24/2022		PW:\
SCALE AS NOTED		DESIGNED BY BB	DRAWN BY SM
		CHECKED BY JG	



HDR Engineering, Inc.
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 Suite 400
 Sarasota, FL 34232-6233

DATE	10/2022
PROJECT NO.	6094361



MANATEE COUNTY
 PUBLIC WORKS

DESIGN ENGINEER	BIJAN BEHZADI
FL. LICENSE NO.	43868

LOAD CENTER
 CROSS SECTION

SHEET NO.	L-13
-----------	------

PANELBOARD NO: A

VOLTAGE: 480/240 BUS RATING (A): 100 ENCLOSURE: NEMA 1

PHASE: @ MAIN OC DEVICE: MLO MOUNTING: SURFACE



WIRE: 3+GND INTERRUPTING RATING (KA): 35 LOCATION: LIGHTING CONTROLLER

200% NEUTRAL: NO SERVICE ENTRANCE LABEL: NO

CKT NO.	DESCRIPTION	CONNECTED LOAD (VA)				OCP			OCP		CONNECTED LOAD (VA)				DESCRIPTION	CKT NO.
		LTS	REC	MECH	MISC	AMPS	P		AMPS	P	LTS	REC	MECH	MISC		
1	CIRCUIT A-1	2,518.3				30	2	A	30	2	2,483.3				CIRCUIT A-2	2
3		2,518.3						B			2,483.3					4
5	SPARE					30	2	A	30	2					SPARE	6
7								B								8
9	SPACE							A							SPACE	10
11	SPACE							B							SPACE	12
13								A								14
15								B								16
17								A								18
19								B								20

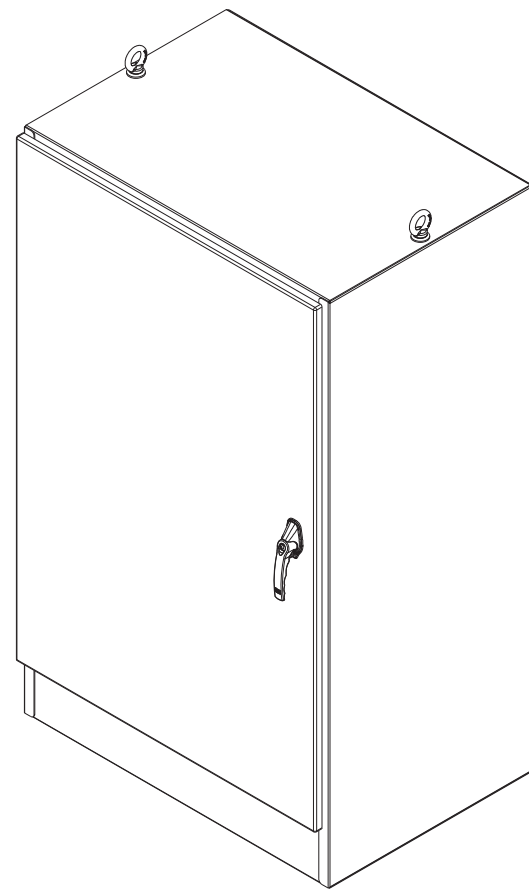
LOAD SUMMARY

	LTS	REC	MECH	MISC	SPARE	TOTAL		PHASE BALANCE
CONNECTED LOAD (KVA)	10.0	0.0	0.0	0.0	---	10.0	480	LINE-TO-LINE VOLTS
DEMAND FACTOR	1.25	NEC	1.00	1.00	20%	---	20.8	CONNECTED AMPS
DESIGN LOAD (KVA)	12.5	0.0	0.0	0.0	2.0	14.5	30.2	DESIGN AMPS
								PHASE A (KVA)
								5
								PHASE B (KVA)
								5

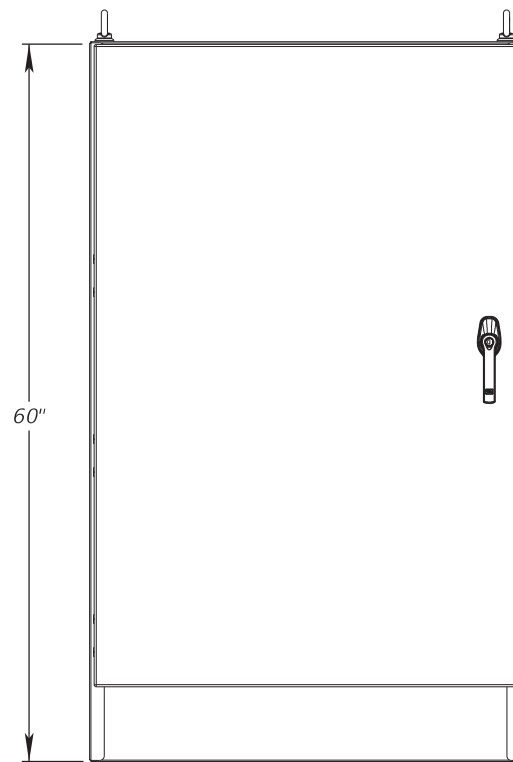
No.	REVISIONS	DATE	BY	PW:\	SCALE AS NOTED	 HDR Engineering, Inc. 2601 Cattlemen Road Suite 400 Sarasota, FL 34232-6233	DATE	10/2022	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	BIJAN BEHZADI	ELECTRICAL DISTRIBUTION PANELBOARD SCHEDULE	SHEET NO.	L-14
					PROJECT NO.		6094361	FL. LICENSE NO.		43868				

CONSTRUCTION NOTES:

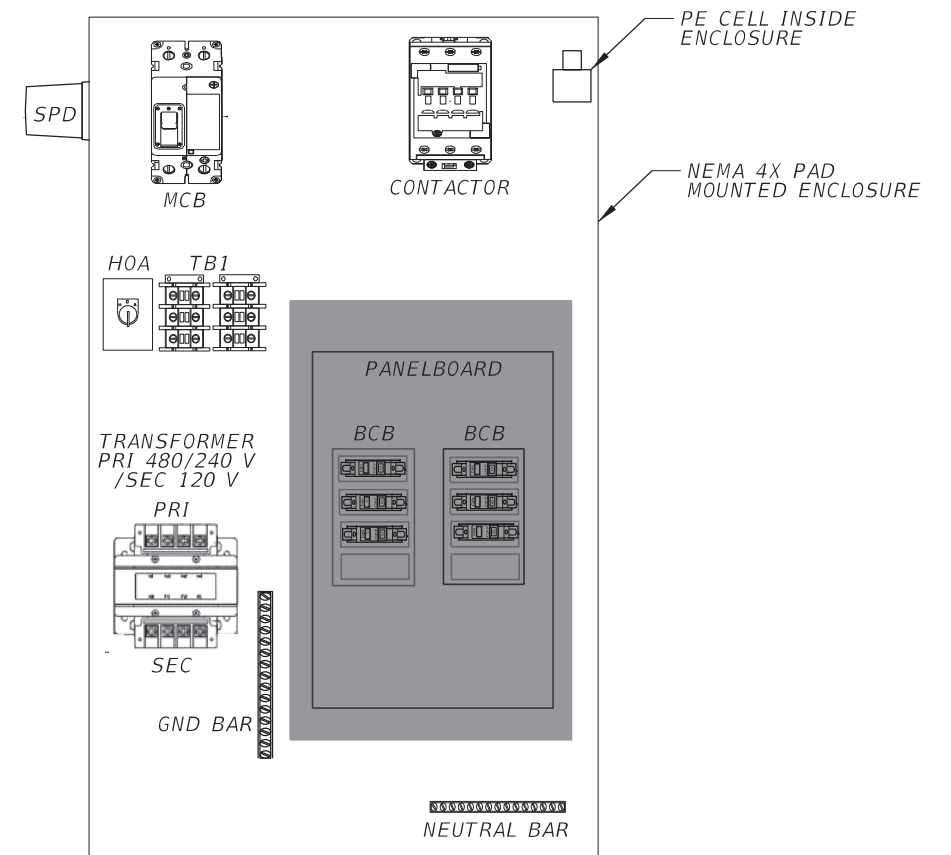
1. 12 GAUGE STAINLESS STEEL.
2. LIGHTING CONTROL PANEL ENCLOSURE (NEMA 4X SST). DIMENSIONS AS NECESSARY FOR EQUIPMENT INSIDE.
3. CONTINUOUS WELDED SEAMS GROUND SMOOTH.
4. HEAVY GAUGE CONTINUOUS HINGES TO SECURE DOORS.
5. HEAVY DUTY PADLOCKING HANDLES.
6. PRINT POCKET AND PANEL SUPPORTS.
7. DOORS WITH CLOSED CELL NEOPRENE GASKET.
8. HEAVY DUTY LIFTING EYES.
9. GROUNDING PROVISIONS.
10. KEY AND LOCKS. PROVIDE FOUR (4) KEYS TO THE MANATEE COUNTY TRAFFIC OPERATIONS DIVISION.
11. ANSI 61 GRAY POLYESTER POWDER INSIDE AND OUT OVER PHOSPHATIZED SURFACES.
12. UL 508 LISTED.



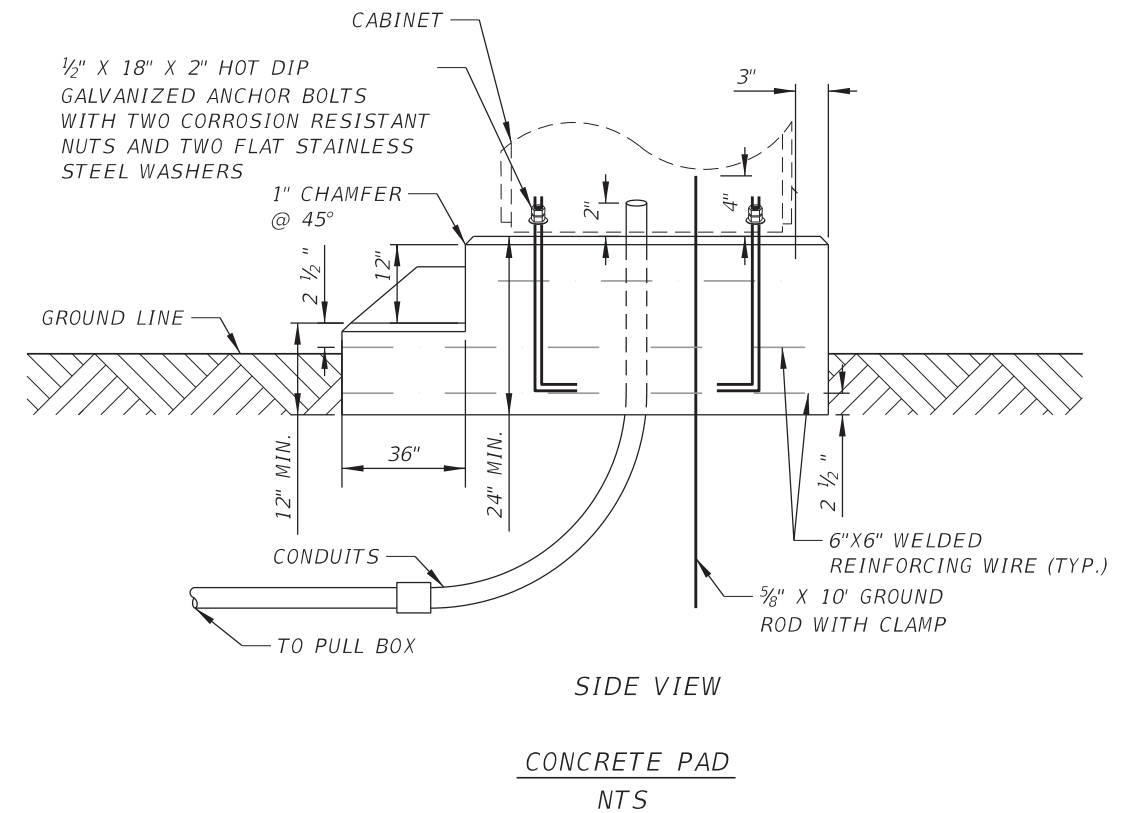
ISOMETRIC VIEW



FRONT VIEW



NEMA 4X PAD MOUNTED ENCLOSURE
(LIGHTING CONTROL EQUIPMENT)



CONCRETE PAD
NTS

SCALE	AS NOTED		
DESIGNED BY	BB		
DRAWN BY	SM		
CHECKED BY	JG		
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HDR Engineering, Inc.
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PUBLIC WORKS

DESIGN ENGINEER
BIJAN BEHZADI
FL. LICENSE NO.
43868

LIGHTING CONTROL
PANEL ENCLOSURE

SHEET
NO.
L-15