## 01-19-2024 LETTING ITEM 002

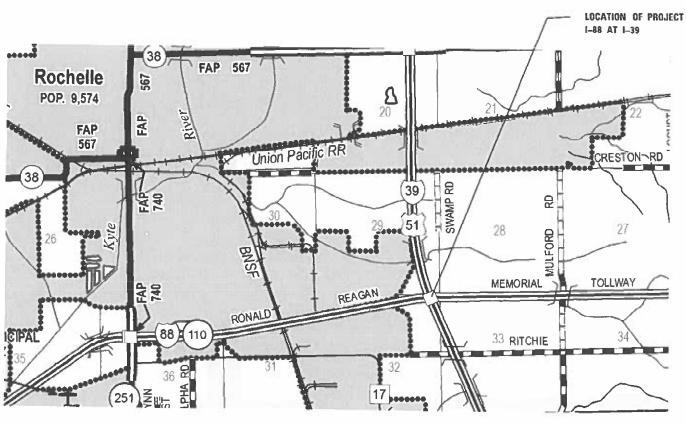
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

FOR INDEX OF SHEETS, SEE SHEET NO. 2

# **PROPOSED HIGHWAY PLANS**

FAI ROUTE 39 (I-39) SECTION ILU 2023–1 PROJECT NHPP–IY3T(983) LIGHTING UPGRADE OGLE COUNTY





DEMENT TWP. - SEC. 28,29,32 & 33

J.U.L.I.E Joint Utility Location information for excavators 1–800–892–0123 Or 811

PROJECT ENGINEER SCOTT KULLERSTRAND PROJECT MANAGER KRISTINE HILL

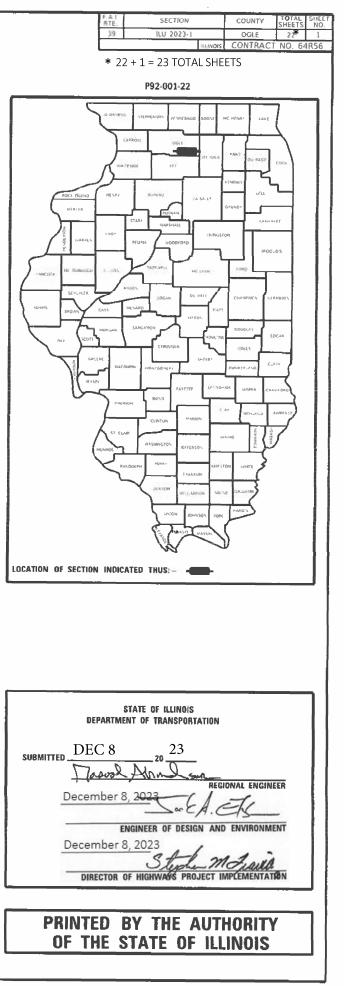
CONTRACT NO. 64R56

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REV. 10/31/23

# INDEX OF SHEETS

- COVER SHEET 1 2 INDEX OF SHEETS, LEGEND, CONDUCTOR SCHEDULE. AND HIGHWAY STANDARDS 3 SUMMARY OF QUANTITIES 4 UTILITIES 5 LUMINAIRE PERFORMANCE TABLE AND WIRING DIAGRAMS 6 LIGHTING SHEETS LAYOUT 7-14 LIGHTING REMOVAL PL \*\*\*\* 15-23 PROPOSED LIGHTING PLANS
- HIGHWAY STANDARDS

821101-02	LUMINAIRE WIRING IN POLE
825021-04	LIGHTING CONTROLLER BASE MOUNT 240V
830001-03	LIGHT POLE ALUMINUM MAST ARM
836001-04	LIGHT POLE FOUNDATION
838001-01	BREAKAWAY DEVICES
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701400-12	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-13	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >/= 45 MPH
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS >/= 45 MPH
701456-05	PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
701901-09	TRAFFIC CONTROL DEVICES

# CONDUCTOR SCHEDULE

- $\langle 1 \rangle$ UNIT DUCT, 600V, 2-10 NO. 8, 1/C NO. 8 GROUND (XLP-TYPE USE) 3/4" DIA. POLYETHYLENE
- UNIT DUCT, 600V, 2-1C NO. 6, 1/C NO. 8 GROUND  $\langle 2 \rangle$ (XLP-TYPE USE) 3/4" DIA. POLYETHYLENE
- $\langle 3 \rangle$ EXISTING UNIT DUCT TO REMAIN

# LEGEND

/

OR SPEEDS >/= 45 MP

- <sup></sup> R	EXISTING SERVICE TO BE REMOVED
-	PROPOSED ELECTRIC SERVICE 240V
	EXISTING LIGHTING CONTROLLER TO BE
	PROPOSED LIGHTING CONTROLLER, BASE
⊙ <sub>R</sub>	EXISTING LIGHT TOWER FOUNDATION TO
© <sub>R</sub>	EXISTING LIGHT TOWER AND FOUNDATIO
°−⊂ <sub>E</sub>	EXISTING LIGHTING UNIT 50 FT MOUNT
	PROPOSED LIGHTING UNIT, ALUMINUM PA HEIGHT, WITH 15' MAST ARM, ON BREAK STAINLESS STEEL SCREEN, AND LUMINA OUTPUT DESIGNATION H
	EXISTING UNIT DUCT TO REMAIN
	PROPOSED UNIT DUCT, SIZED AS NOTED
	PROPOSED COILABLE NONMETALLIC CON

USER MANE - Restarcher	DESIGNED -	REVISED							~	FAI	CECTION		TOTAL ISHEET
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BE REMOVED

SE MOUNTED 240V

TO BE REMOVED

ION TO BE REMOVED

TING HEIGHT

POLE. 40 FT MOUNTING KAWAY COUPLINGS WITH AIRE, LED, ROADWAY,

ED

NDUIT SIZED AS NOTED

# REV. 12/7/23 REV. 11/1/23

PAY ITEN	A DESCRIPTION	UNIT	QUANTI
6690020	NON-SPECIAL WASTE DISPOSAL	CU YD	20
6690100	1 REGULATED SUBSTANCES PRE CONSTRUCTION PLAN	LSUM	1
6690100	5 REGULATED SUBSTANCES MONITORING	CALDA	20
66901003	3 REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	LSUM	1
66900530	SOIL DISPOSAL ANALYSIS	EACH	1
67100100	MOBILIZATION	EACH	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	LSUM	1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1
70100825	TRAFFIC CONTROL AND PROTECTION, STANDARD 701456	LSUM	1
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1
81028750	UNDERGROUND CONDUIT, COILABLE NONMETALLIC, 2" DIA.	FOOT	360
81028790	UNDERGROUND CONDUIT, COILABLE NONMETALLIC, 4" DIA.	FOOT	410

			021
PAY ITEM	DESCRIPTION	UNIT	QUANTITY
81603000	UNIT DUCT, 600V, 2-1C NO. 1/C NO. 8, GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	10,000
81603040	UNIT DUCT, 600V, 2-1C NO.6, 1/C NO.8 GROUND, (XLP-TYPE USE), 1" DIA. POLYETHYLENE	FOOT	10,500
82110008	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	30
82500350	LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 100AMP	EACH	1
83008600	LIGHT POLE, ALUMINUM, 40FT. M.H. 15 FT. MAST ARM	EACH	26
83600356	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE 8 5/8" x 6'	EACH	26
83800650	BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	104
84500110	REMOVAL OF LIGHTING CONTROLLER	EACH	1
84500120	REMOVAL OF ELECTIC SERVICE INSTALLATION	EACH	1
84500130	REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	1
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	43,500
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.2
X8420502	REMOVAL OF LIGHT TOWER, NO SALVAGE	EACH	6
X8420510	REMOVAL OF TOWER FOUNDATION	EACH	7

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10 m	USER WANE = Krishne Hill	DESIGNED	REVISED			FAIL SECTION COUNTY TOTAL SHEET
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B N	PLOT SCALE == 103 6262 * / in	CHECKED -	REVISED	DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	39 ILU 2023-1 OGLE 21 3
ž G	 PLOT DATE = Oct-05-2023 08:12:07 AH	DATE	REVISED		SCALE:SHEET OF SHEETS STA TO STA.	CONTRACT NO. 64856

90% FED 10% STATE

# 90% FED 10% STATE

# REV. 11/1/23REV. 10/31/23

# NOTE: CONTACT ISTHA- ITS TECHNICIAN JOHN ANDREE AT 331-481-2337 FOR FIBER OPTIC AT THIS LOCATION.

UTIL	ITIES		
Name and address of Utility	Туре	Telephone	
Mr. Jason Liesberger	PETROLEUM	312-594-0165	JULIE MEMBER? YES
BP Pipelines North America, Inc			
30 South Wacker Drive Suite 900			CALL:
Chicago, IL 60606			
Mr. Saki Forah	GAS	630-388-3019	JULIE MEMBER? YES
NICOR Gas Co.			
1844 Ferry Road			CALL:
Naperville, IL 60563-9600			
Mr. Keith Koshinski	CATV	224-229-5432	JULIE MEMBER? YES
Comcast Cable			6
4450 Kishwaukee Street			CALL:
Rockford, IL 61109			
Mr. Sam Tesreau	Government	815-561-2023	JULIE MEMBER? YES
City of Rochelle			
417 N. 6th Steet			CALL:
Rochelle, IL 61068			
Mr. Kevin McNamara	Communications	630-343-2155	JULIE MEMBER? YES
G4S Technology, LLC			
565 Willowbrook Center Pkwy			CALL:
Willowbrook, IL 60527-5512			
Mr. Hector Garcia	TELEPHONE	6330-573-5465	JULIE MEMBER? YES
AT&T			
1000 Commerce Drive			CALL:
Oak Brook, IL 60523		-	

it v Nulde										
un -		USER NAME - Rostine Hill	DESIGNED -	REVISED -					1 00 47	1.00
AME			DRAWN .	REVISED -	STATE OF ILLINOIS				I-88 AT	
ODEI LE N	2	PLOT SCALE === 101.0618 / in,	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION				UTILIT	IES
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	F A.I RTE. 39	SECTION	COUNTY	TOTAL SHEET SHEETS NO. 21 4
TO STA				r NO. 64R56

### NOTES:

# Luminaire Performance Table

#### Project

Date	Contract Number	Section Num	ber	County	
10/12/22	64R56	ILU 2023-1		OGLE	
Marked Route N	umber		Municipality		
I-39 AT I-88			UNINCORPORATED		

### Roadway

12 2 N/A R3 0.07	

### Structure

Structure				Number of Luminaires
	Mounting Height	Arm Length	Set Back	(Highmast & Sign Lighting Only)
	40 FT	15 FT	20 FT	N/A

### Luminaire

Description		I.E.S. Lateral Distribution	n I.E.S. Vertical Distribution	
ROADWAY, OUTPUT DE	SIGNATION H	TYPE III	MEDIUM	
Total Light Loss Fac	tor (LLF) BUG Rating	Shields	Dimming Protocol	
0.7	U = 0	N/A	0-10V	

#### Layout

Spacing (to Nearest 5	<ol> <li>Configuration (Opposite,</li> </ol>	Staggered, 1 Sided, or Median)
155 FT	SINGLE SIDED	

#### Performance

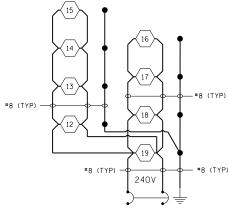
Average Illuminance, E <sub>AVE</sub> (fc)	Uniformity Ratio, E AVE/E MIN	
GREATER THAN OR EQUAL TO 1.3	LESS THAN OR EQUAL TO 3.0:1	
Average Luminance, L <sub>AVE</sub> (cd/m <sup>2</sup> )	Jniformity Ratio, L <sub>AVE</sub> /L <sub>MIN</sub> Uniformity Ratio, L <sub>MAX</sub> /L <sub>MIN</sub>	Veiling Luminance Ratio, L <sub>V</sub> /L <sub>MIN</sub>
GREATER THAN OR EQUAL TO 0.9	LESS THAN OR EQUAL TO 3.0:1 LESS THAN OR EQUAL TO 5.0:	LESS THAN OR EQUALT TO 0.3:1

#### Light Tresspass

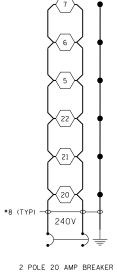
Distance to ROW (behind pole)	Max. Horizontal Illuminance at ROW, E	Max. Vertical Illuminance at ROW, E
N/A	N/A	N/A

#### Notes

- Set Back is from Edge of Pavement (white line) except for sign luminaires when it is vertical and horizontal distance from the sign to the luminaire.
- 2. Lighting calculations shall be performed with all luminaires oriented toward and perpendicular to roadway.
- Total Light Loss Factor (LLF) = the product of "Lumen Maintenance" (LLD) = 0.9, "Dirt Depreciation" (LDD) = 0.8, and "Equipment Factors" (EF) = 0.95.
- 4. Performance requirements shall be the minimum acceptable standards of photometric performance for the luminaire. based on the given conditions above.
- 5. Photometric calculations shall be performed on one direction only.
- 6. Compliance with performance criteria shall be held to one significant digit.
- 7. Luminaire performance table defines the luminaire does not necessarily reflect the roadway geometry, the mounting height, or the arm length of the equipment supplied with this project.



2 POLE 20 AMP BREAKER CKT 1

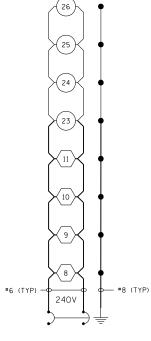




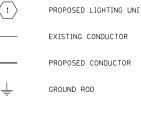
USER NAME = Michael.Poulter	DESIGNED	REVISED		L88 AT L39	F.A.I_ BTF	SECTION	COUNTY TOTAL SHEET
	DRAWN	REVISED	STATE OF ILLINOIS	PERF TAB & WIRING DIAGRAM	_391	ILU_2023-1	OGLE215_
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ALL NECESSARY REVISIONS TO THE WIRING SHOWN ON THIS SHEET SHALL BE MADE AT NO ADDTIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

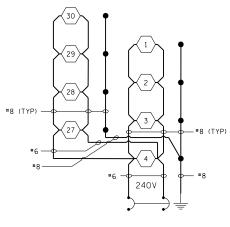
1	EXISTING LIGHTING UNIT
$\langle 1 \rangle$	PROPOSED LIGHTING UNIT
	EXISTING CONDUCTOR
	PROPOSED CONDUCTOR
Ť	GROUND ROD



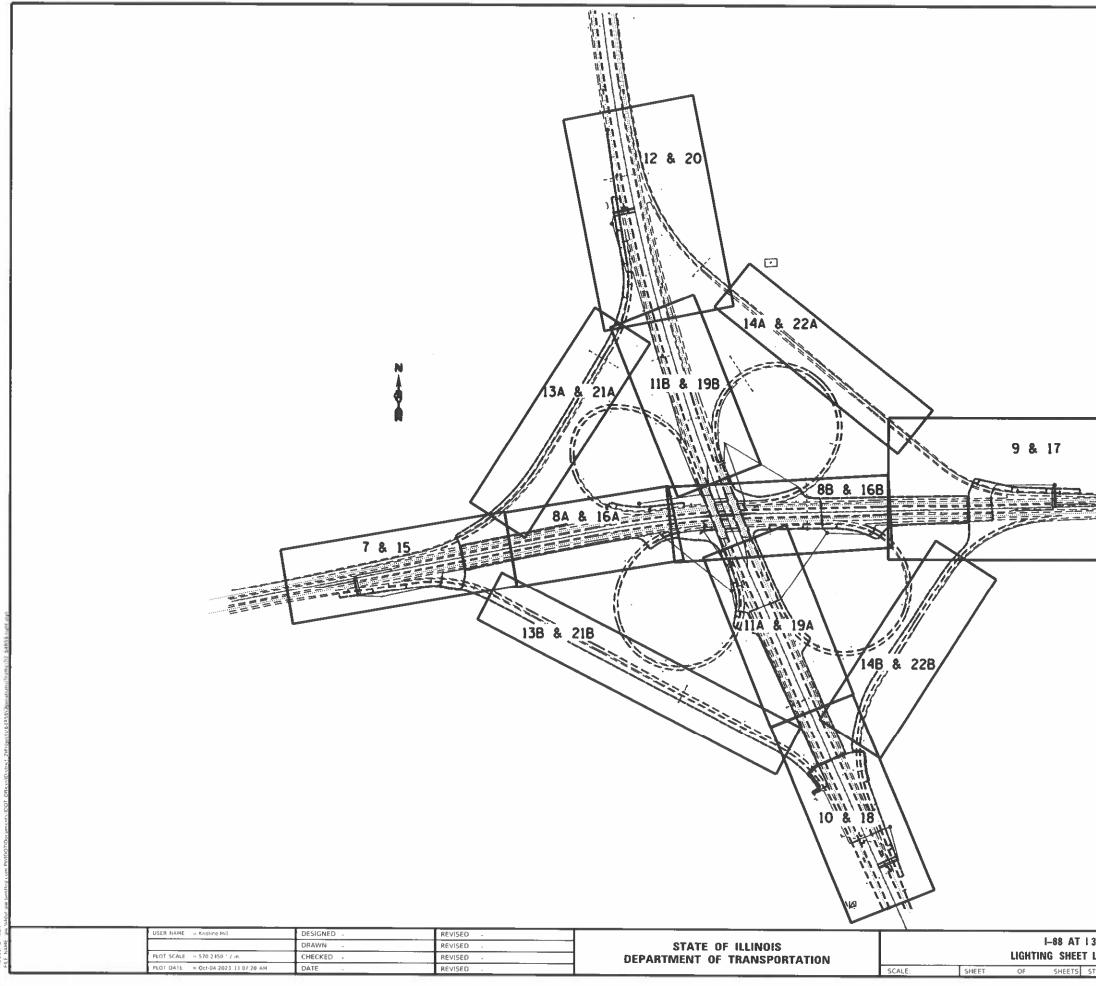
2 POLE 20 AMP BREAKER CKT 2



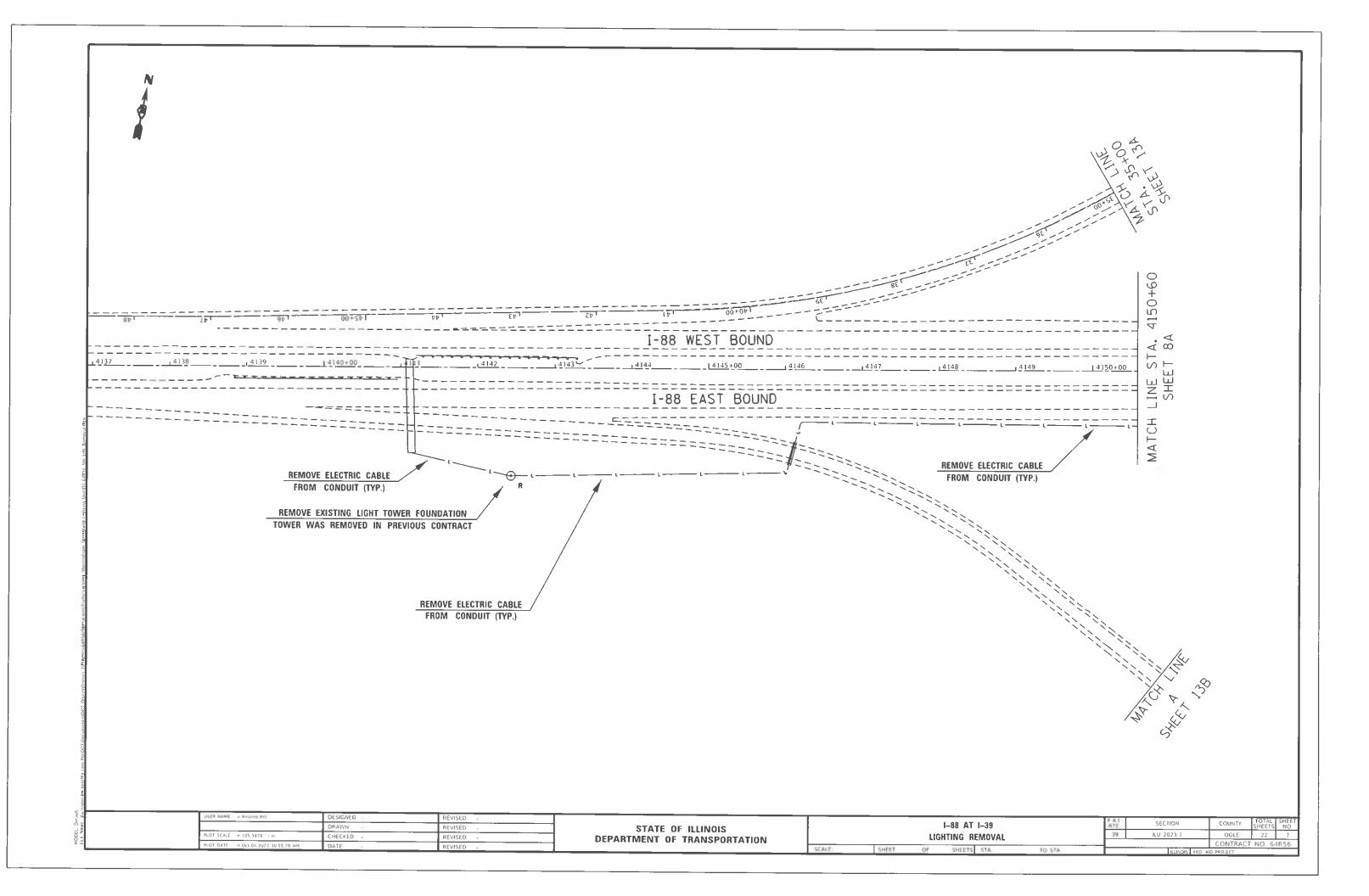
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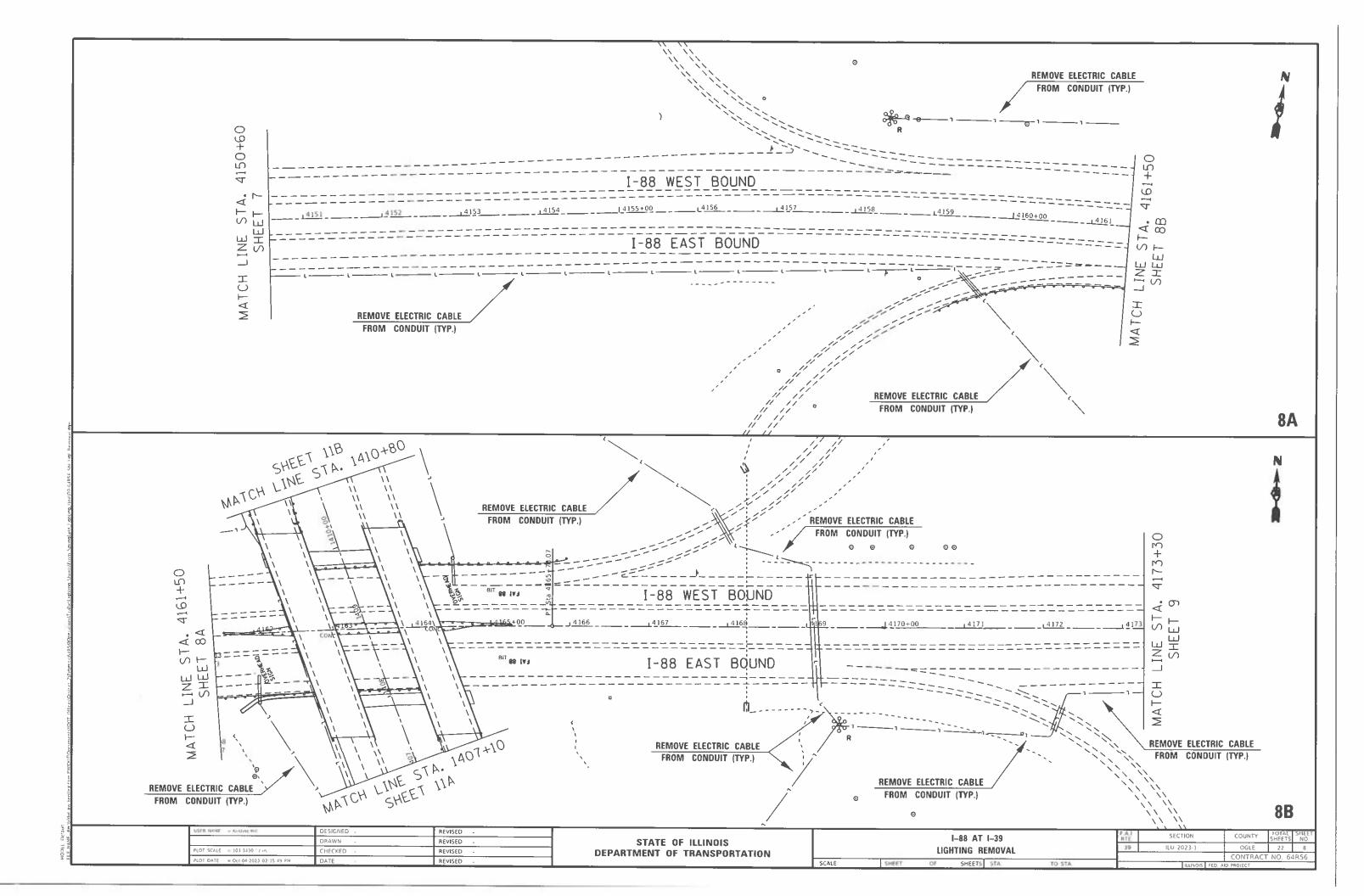


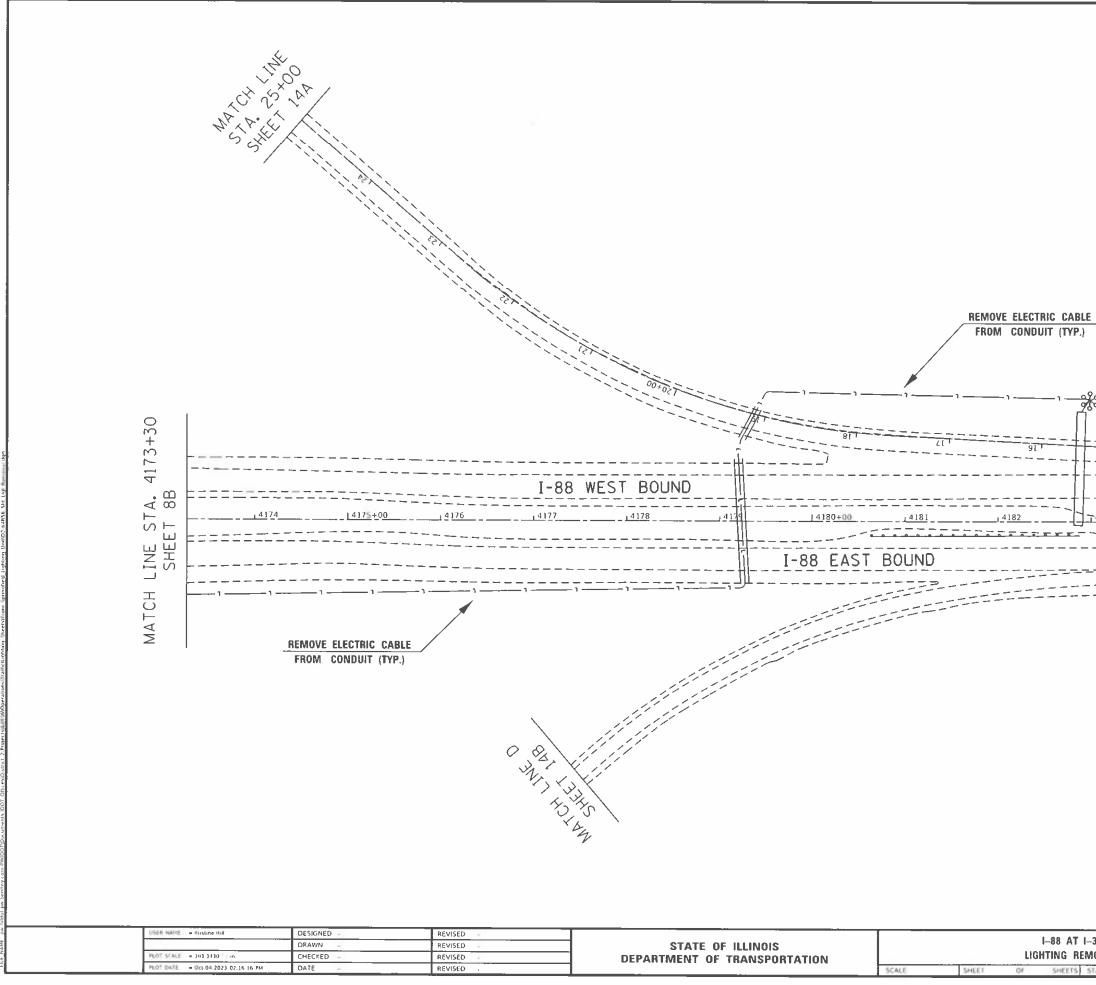
2 POLE 20 AMP BREAKER CKT 4



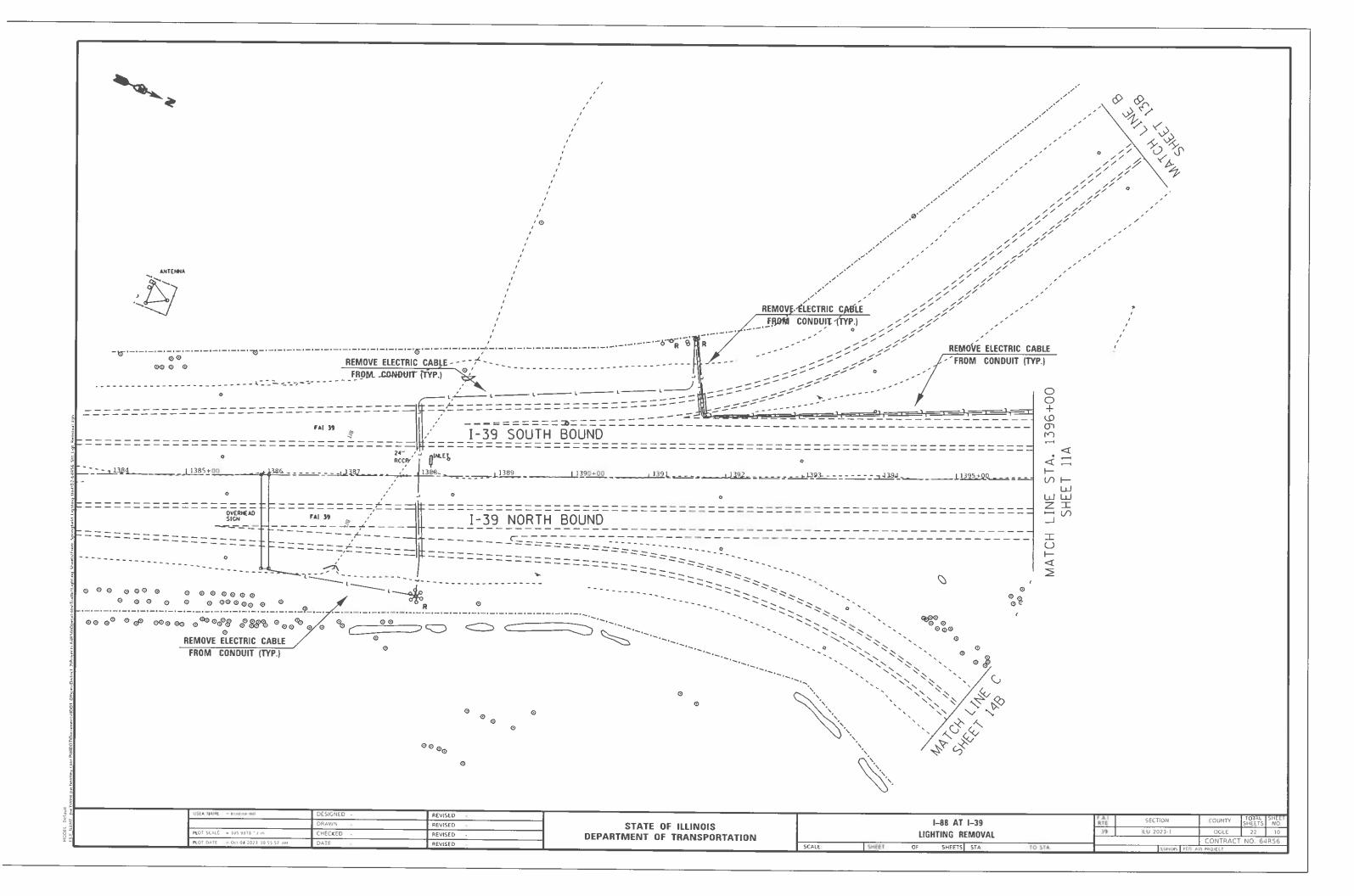
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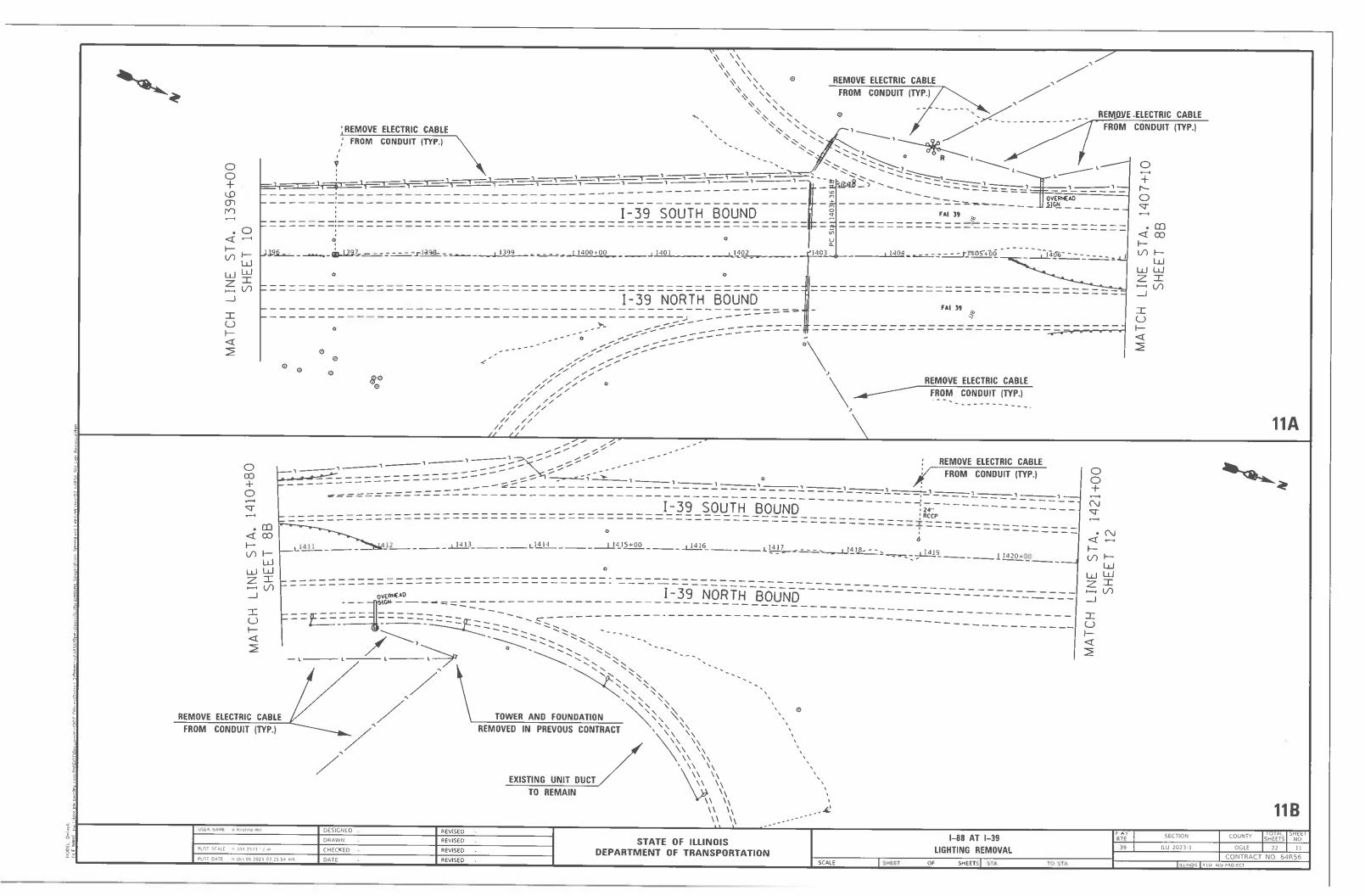


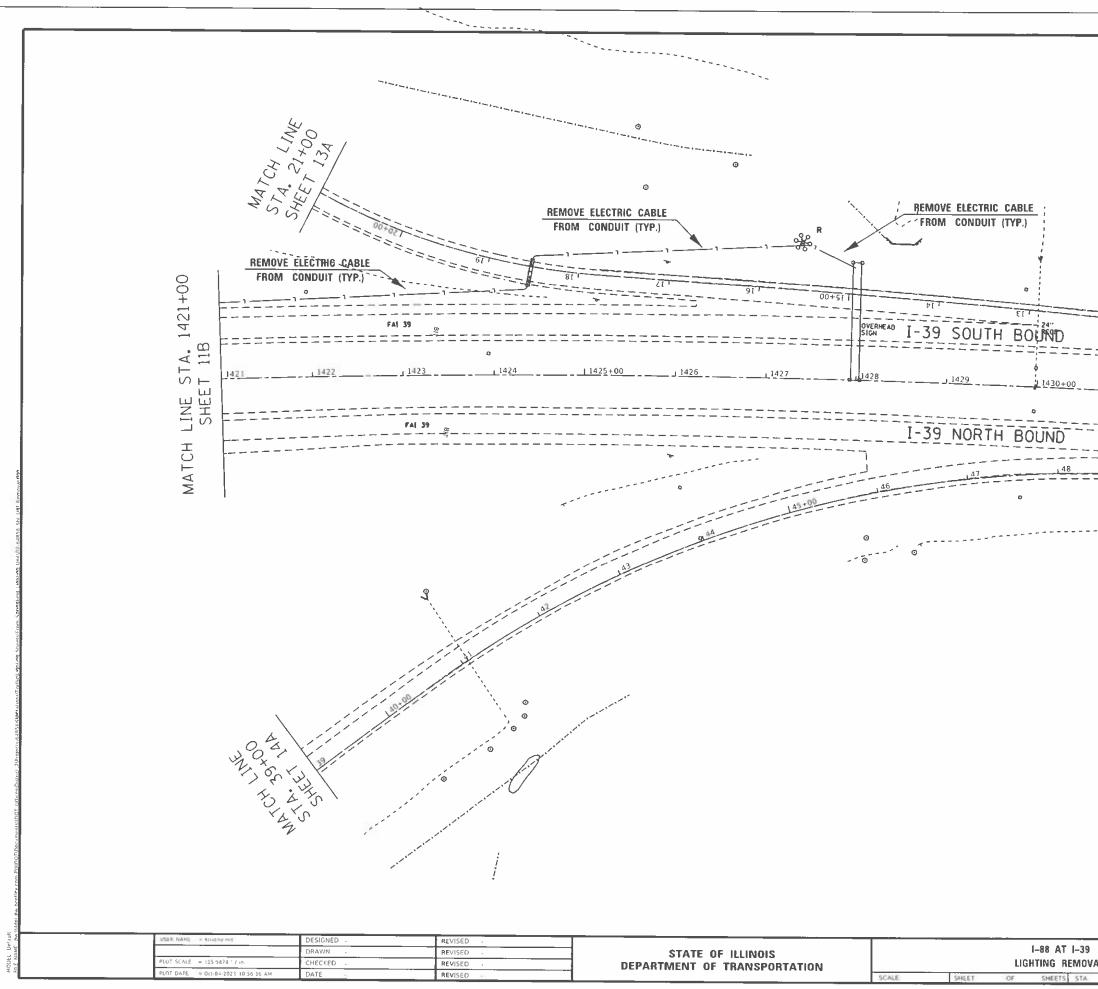




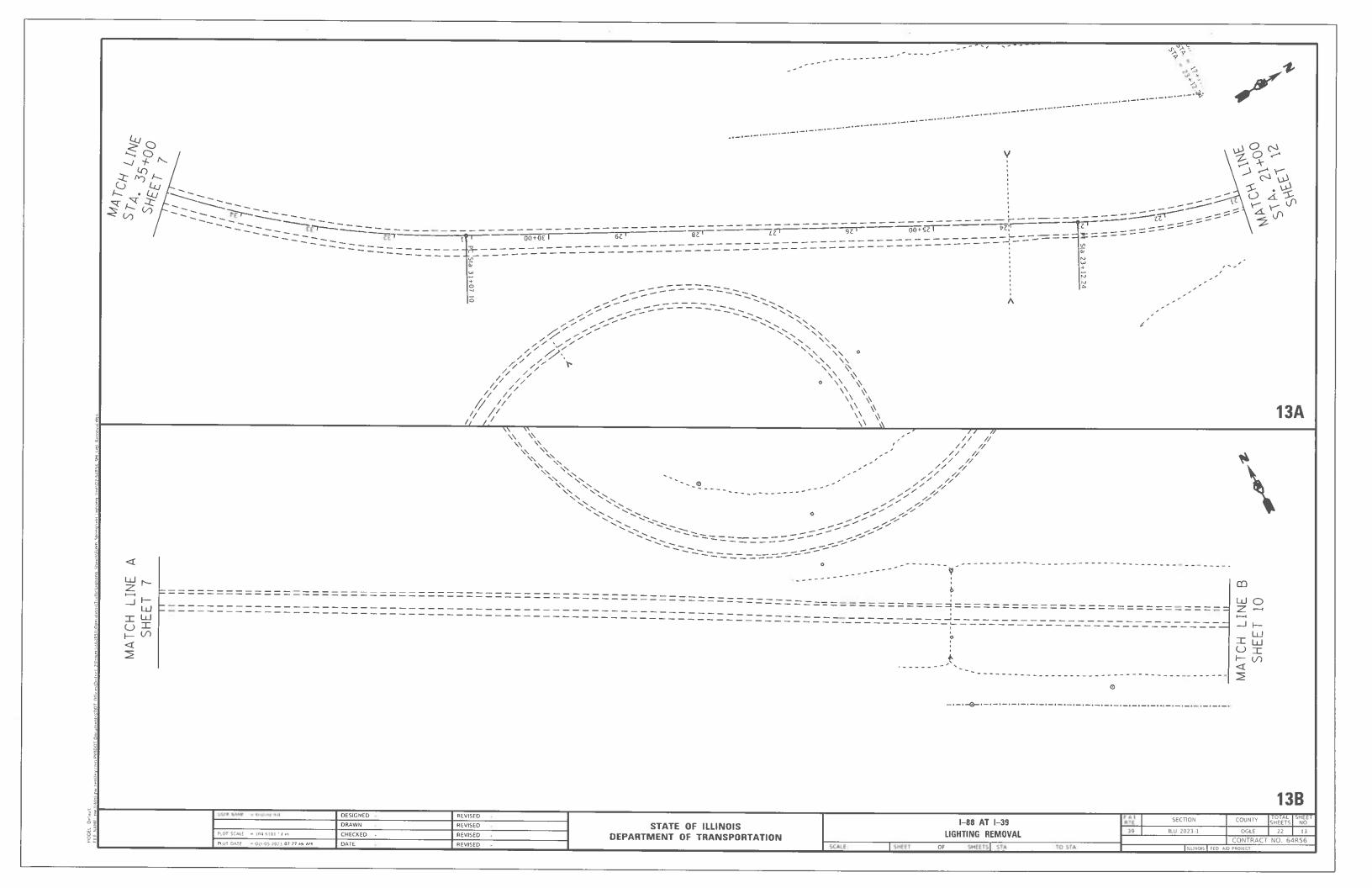
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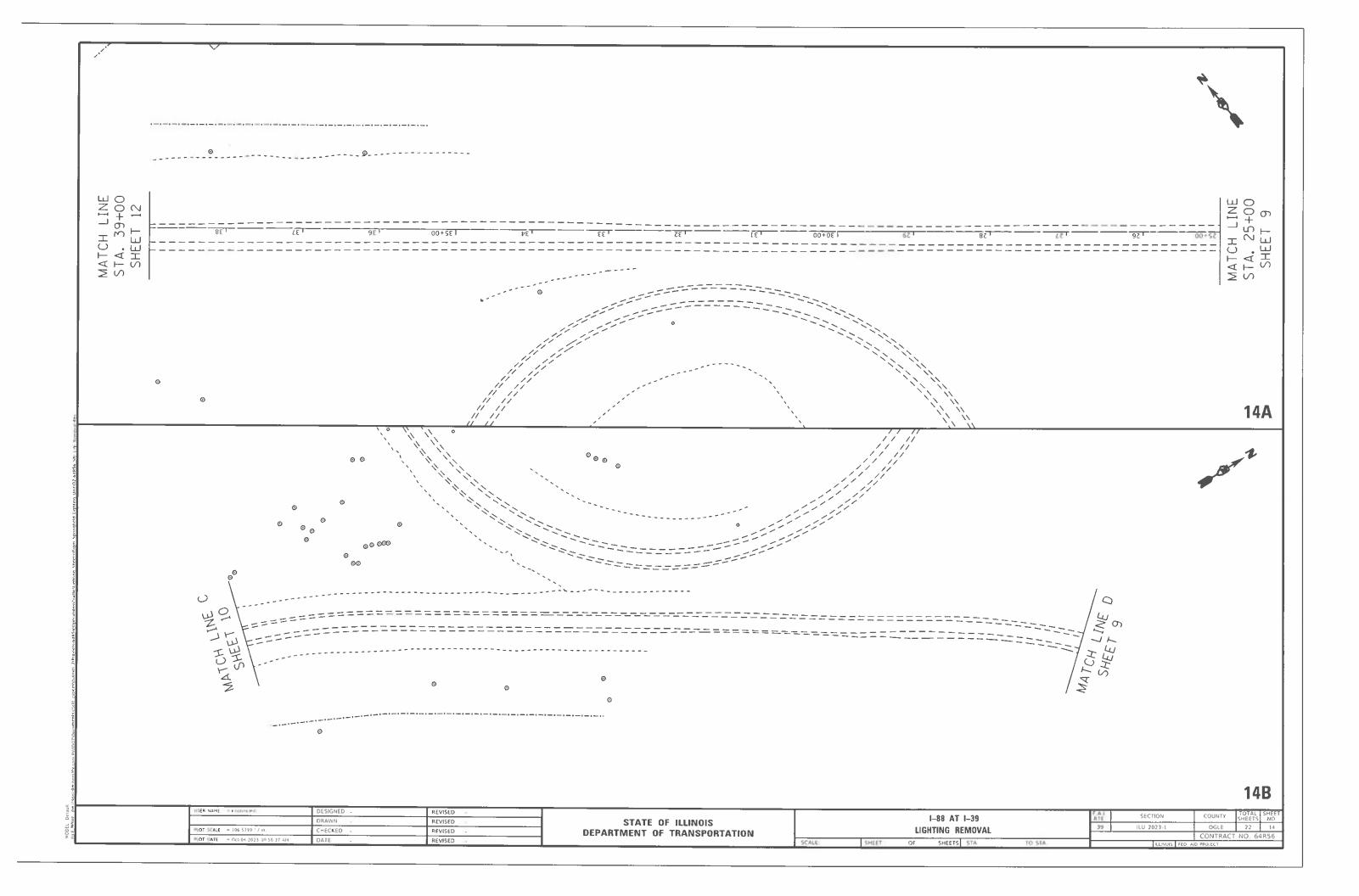


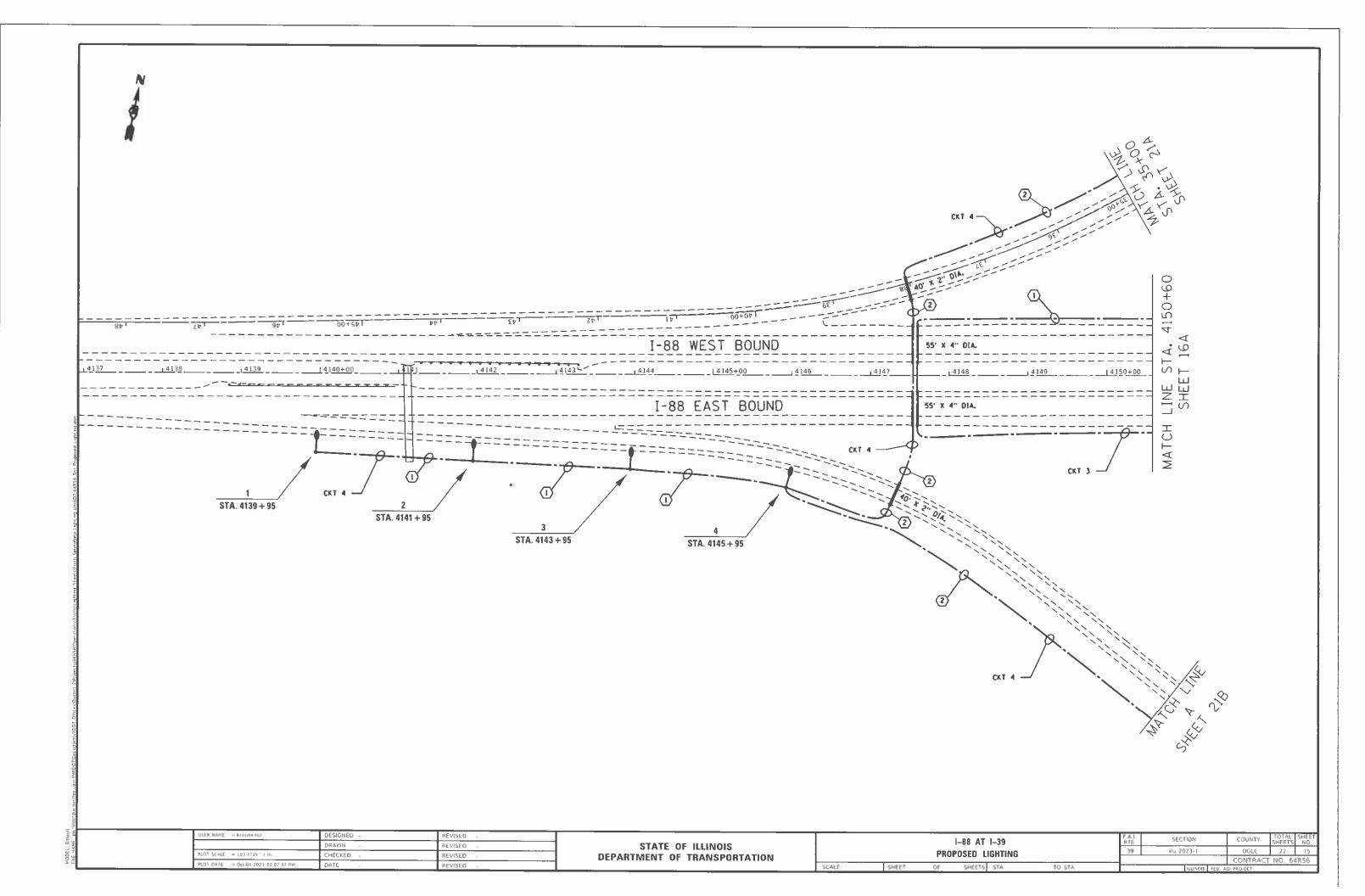


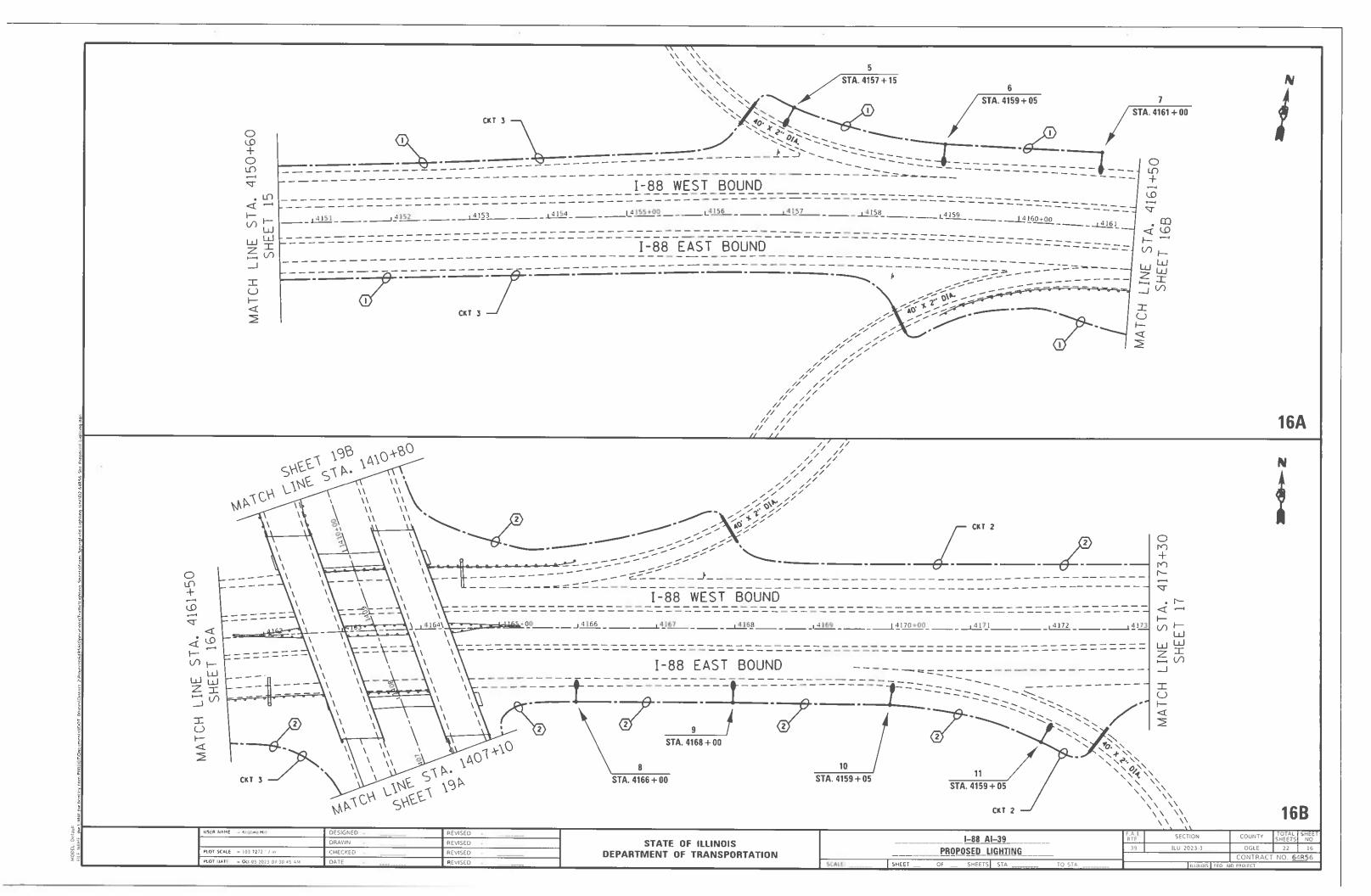


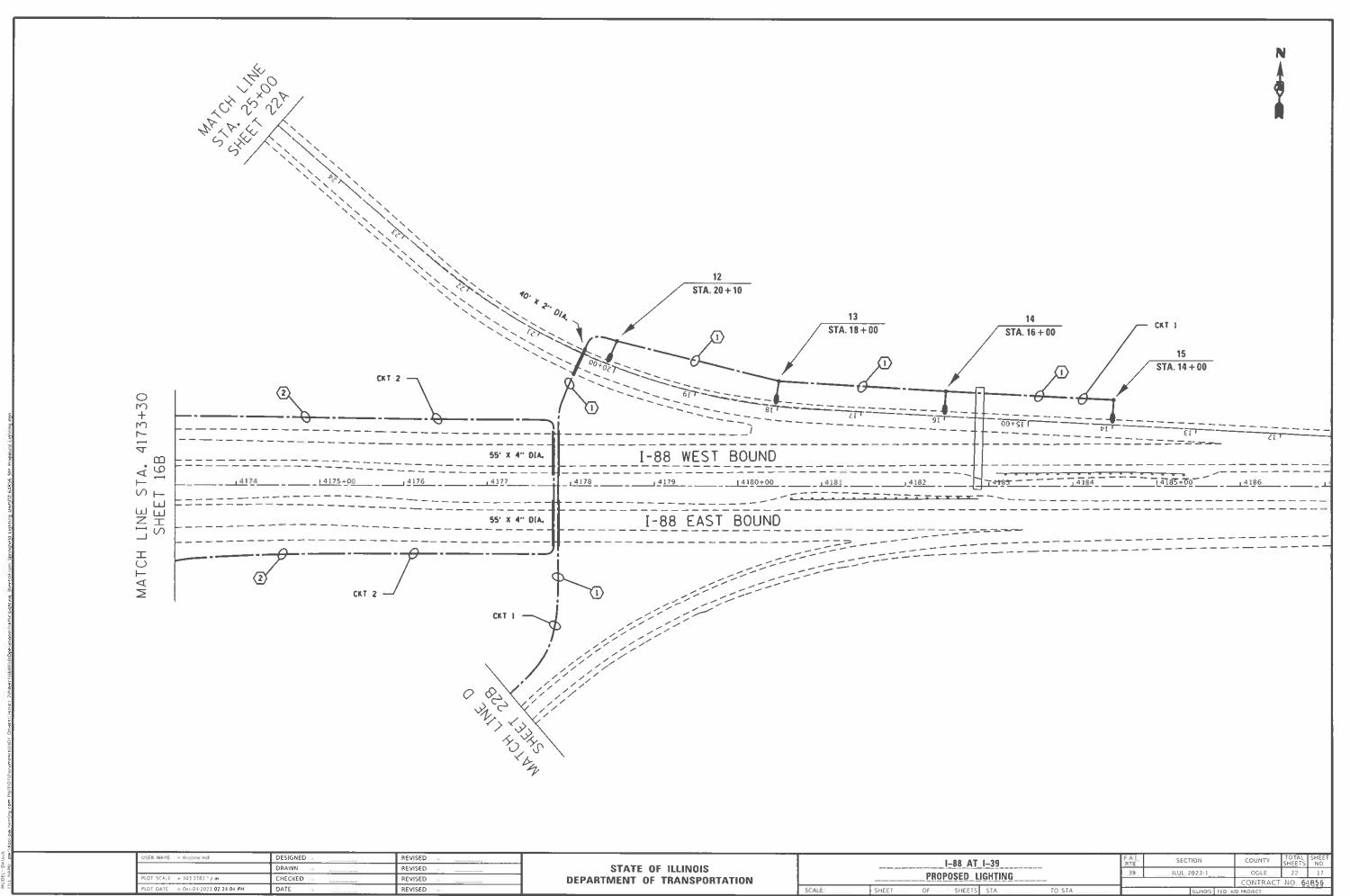
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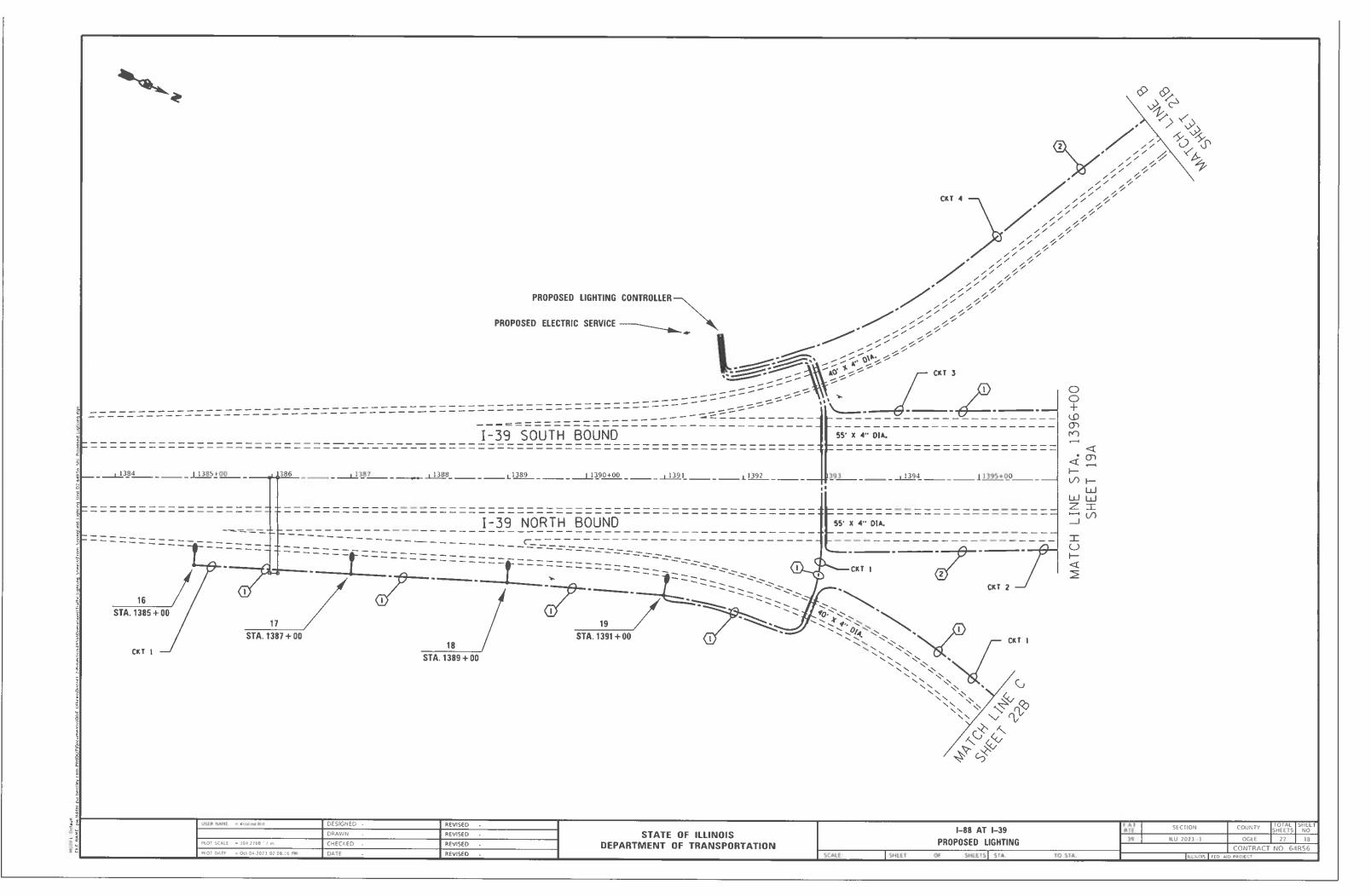


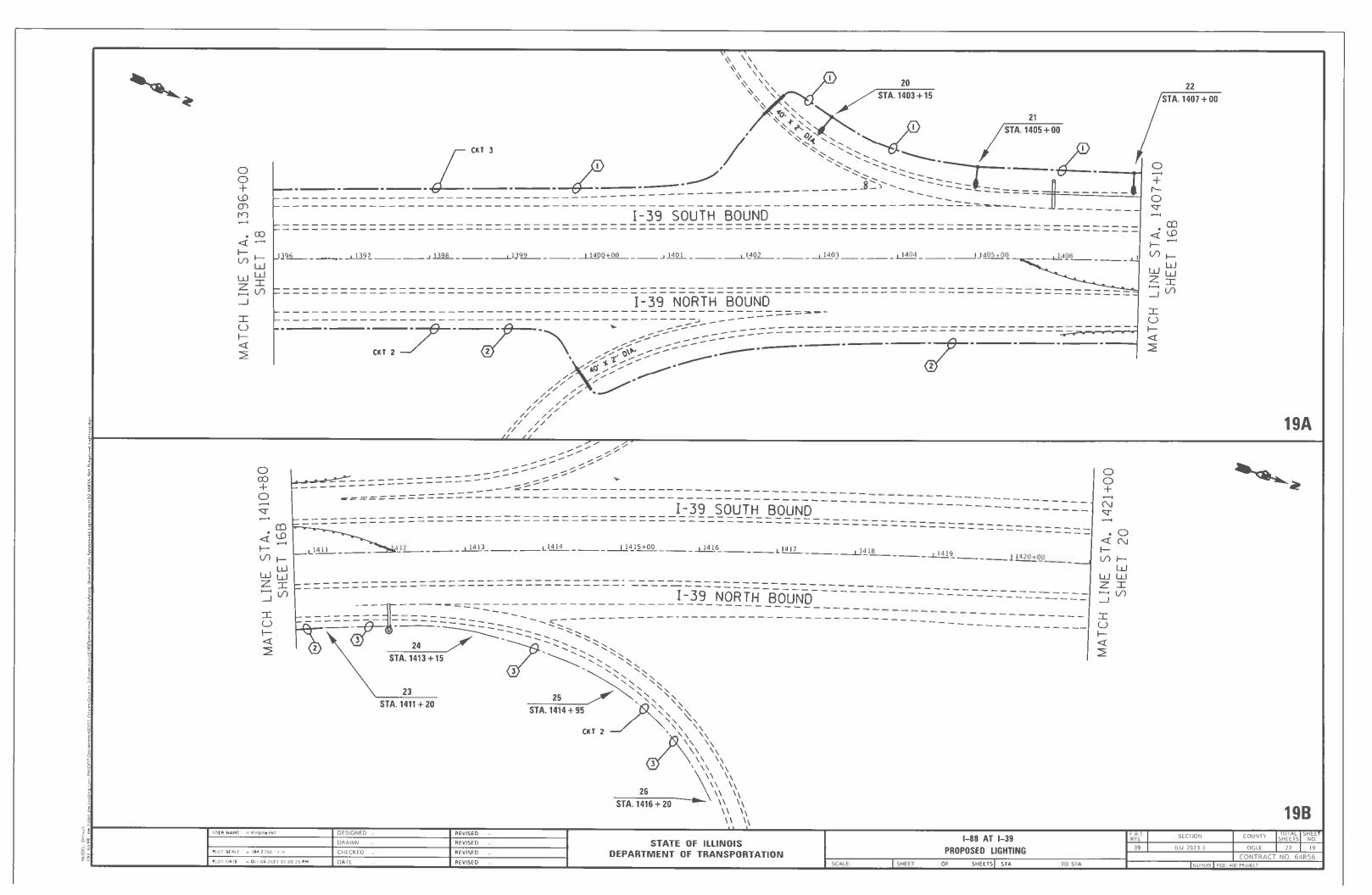


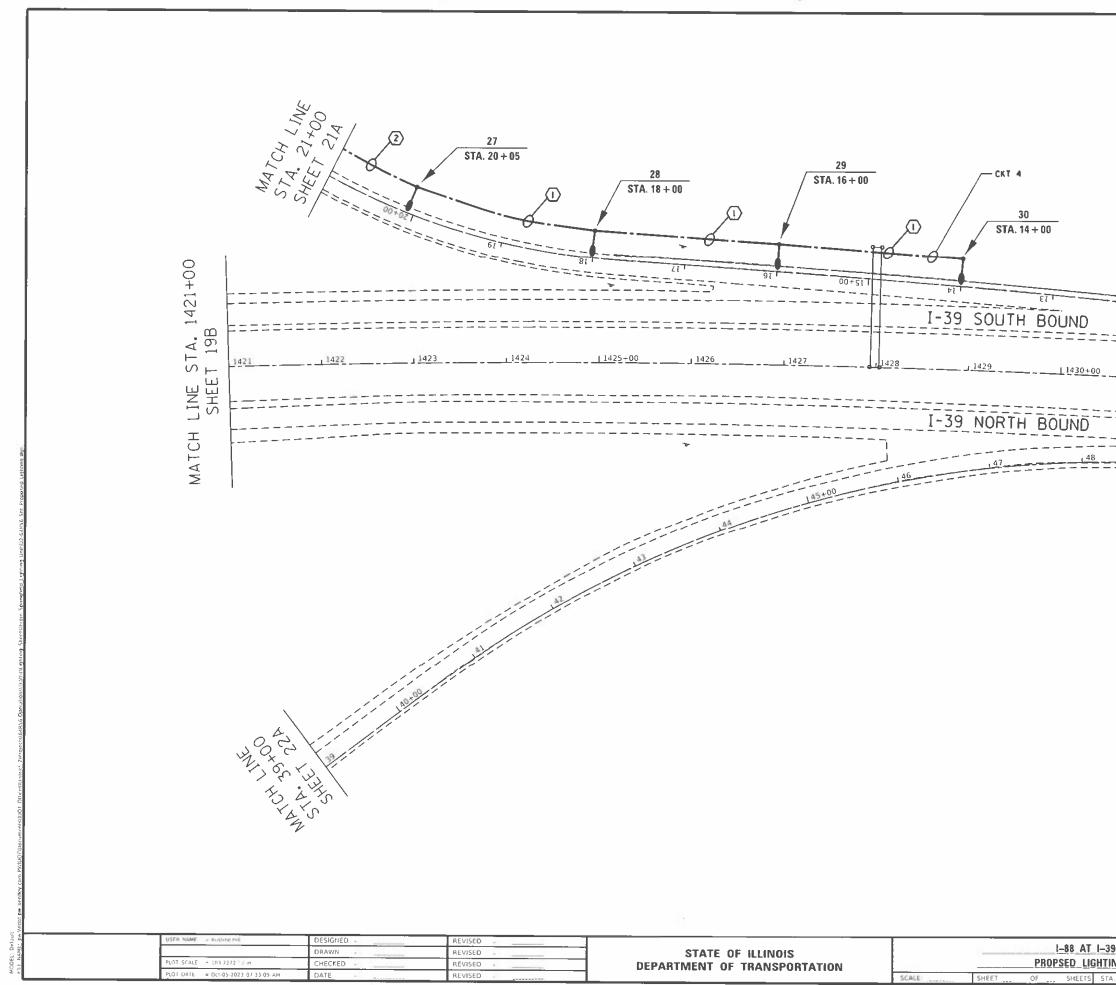












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