

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)L-2	MASSAC	17	1
		ILLINOIS	CONTRACT NO. 78589	

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- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 701101-05 OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
- 701106-02 OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
- 701400-09 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701401-11 LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701428-01 TRAFFIC CONTROL, SETUP AND REMOVAL, FREEWAY/EXPRESSWAY
- 701901-07 TRAFFIC CONTROL DEVICES
- 720006-04 SIGN PANEL ERECTION DETAILS
- 825016-03 LIGHTING CONTROLLER, PEDESTAL MOUNTED, 480V

# PROPOSED HIGHWAY PLANS

F.A.I. ROUTE 24 (I-24)  
SECTION (64-3B)L-2  
PROJECT NHPP-G4U1(940)  
NAVIGATION AND AVIATION OBSTRUCTION LIGHTING REPAIRS  
MASSAC COUNTY, IL AND McCRACKEN COUNTY, KY  
C-99-041-17



TOWNSHIP:  
COUNTY UNIT ROAD DISTRICT

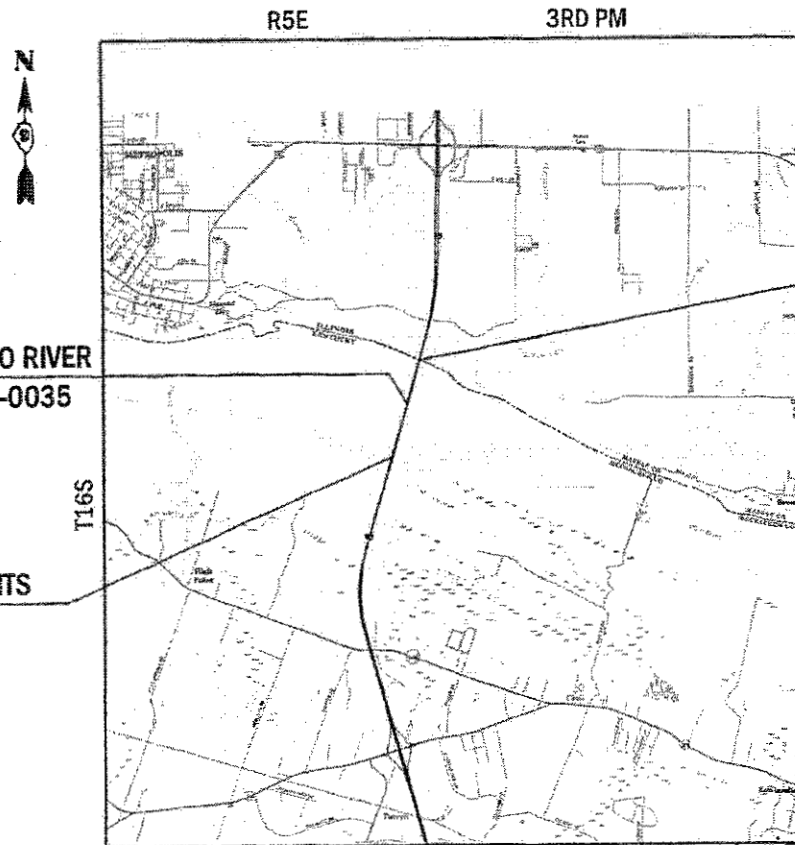
**PLANS PREPARED BY:**

#4 SUNSET HILLS PROFESSIONAL CENTER, EDWARDSVILLE, IL 62025  
PHONE (618) 659-9102  
PROJECT MANAGER:  
JERILYN M. HASSARD, P.E.  
www.modjeski.com

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

PROJECT ENGINEER: DAVID PICHE, P.E. (618) 351-5227

CONTRACT NO. 78589



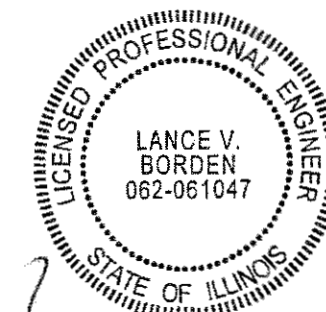
LOCATION MAP  
NOT TO SCALE

I-24 OVER THE OHIO RIVER  
EXISTING S.N. 064-0035

END IMPROVEMENTS  
STA. 487+01.75

BEGIN IMPROVEMENTS  
STA. 437+25.50

GROSS LENGTH = 4976.25 FT. = 0.94 MILE  
NET LENGTH = 4976.25 FT. = 0.94 MILE



*Lance V. Borden* 11/28/17  
LANCE V. BORDEN ILLINOIS P.E. DATE  
LICENSE EXPIRES 11/30/2019

FUNCTIONAL CLASSIFICATION  
INTERSTATE  
ADT: 31,700 (2016); 31,556(2032)  
ADTT: 26%  
POSTED SPEED = 70 MPH

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED *Dec 15 2017*

*Jeffrey R. Keim*  
REGION FIVE ENGINEER

*Feb 2 2018*  
ENGINEER OF DESIGN AND ENVIRONMENT

*Feb 9 2018*  
DIRECTOR OF PROGRAM DEVELOPMENT

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

**GENERAL NOTES:**

1. GENERAL

- 1.01 ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (2017 EDITION), IDOT STANDARD AND SPECIFICATIONS, AND ALL APPLICABLE STATE AND/OR LOCAL CODES.
- 1.02 ALL EQUIPMENT, RACEWAYS, WIRING, ETC. SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER IN ACCORDANCE WITH NECA 1 (STANDARD PRACTICE OF GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION), AND WITHOUT VIOLATING ANY REQUIRED CLEAR WORKING SPACE (NEC 110.26).
- 1.03 IN NO WAY SHALL THESE PLANS BE INTERPRETED AS REQUIRING A VIOLATION OF THE NATIONAL ELECTRICAL CODE, OR ANY OTHER APPLICABLE FEDERAL, STATE, OR LOCAL CODE OR REGULATION. IN ANY CASE OF DISPUTE BETWEEN THESE PLANS AND THE NATIONAL ELECTRICAL CODE, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
- 1.04 THE INSTALLATION OF ALL EQUIPMENT AND MATERIALS SHALL COMPLY WITH THEIR RESPECTIVE MANUFACTURERS' RECOMMENDATIONS AND INSTALLATION PROCEDURES.
- 1.05 THE CONTRACTOR IS REQUIRED TO DELIVER A COMPLETE, WORKING, AND SAFE ELECTRICAL SYSTEM.
- 1.06 VARIATIONS FROM THESE PLANS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL. ALL CHANGES SHALL BE REFLECTED IN THE AS-BUILT DRAWINGS.
- 1.07 IN ADDITION TO THE MATERIALS, COMPONENTS, AND EQUIPMENT SHOWN ON THE PLANS. PROVIDE ALL RACEWAYS, JUNCTION AND PULL BOXES, FITTINGS, CONDUCTORS, CONNECTORS, AND OTHER ITEMS REQUIRED TO PROVIDE A COMPLETE, FUNCTIONAL, AND SAFE INSTALLATION.
- 1.08 THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR VERIFICATION OF ALL RELEVANT DIMENSIONS, EQUIPMENT SPECIFICATIONS, ELECTRICAL LOADS, CIRCUIT LOADS, AND SIMILAR INFORMATION PRIOR TO PURCHASE AND/OR FABRICATION OF EQUIPMENT OR MATERIALS, EQUIPMENT RATINGS AND/OR WIRE SIZES SHOWN ON THE PLANS SHALL BE INCREASED WHERE REQUIRED BY THE LOADS SERVED.
- 1.09 THE CONTRACTOR SHALL INVESTIGATE AND/OR VERIFY THE LOCATIONS OF ALL EXISTING FACILITIES, ABOVE GROUND AND UNDERGROUND, PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.
- 1.10 THE CONTRACTOR SHALL CAREFULLY TRACE, LOCATE, IDENTIFY, AND DOCUMENT ALL EXISTING EQUIPMENT, CONDUCTORS, RACEWAYS, AND OTHER ITEMS WHICH ARE EXISTING AND TO REMAIN IN PLACE, BE RE-ROUTED, OR BE RELOCATED. THE CONTRACTOR SHALL EXERCISE CARE NOT TO DAMAGE ANY ITEMS WHICH ARE EXISTING AND TO REMAIN IN PLACE.
- 1.11 ALL EQUIPMENT, RACEWAYS, WIRING, ETC. SHOWN ON THESE PLANS, OR OTHERWISE REQUIRED, SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.
- 1.12 LOCATIONS OF RACEWAYS, CABLES, AND EQUIPMENT SHOWN ARE DIAGRAMMATIC ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND SUBJECT TO THE APPROVAL OF THE ENGINEER.
- 1.13 THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THE LOCAL ELECTRIC UTILITY COMPANY FOR ALL ELECTRIC SERVICE INTERRUPTIONS REQUIRED BY HIS WORK.
- 1.14 WHERE DETAILS ARE NOT PROVIDED OR FULLY DEVELOPED, THE CONTRACTOR SHALL PROVIDE THE ADDITIONAL DETAIL DEVELOPMENT NECESSARY TO PROVIDE AND SUBMIT LAYOUT DRAWINGS AND SHOP DRAWINGS FOR REVIEW.
- 1.15 NO FIELD WELDING IS PERMITTED EXCEPT AS SPECIFIED IN THE CONTRACT DOCUMENTS.

2. WIRING MATERIALS & METHODS

- 2.01 RIGID CONDUITS SHALL BE SUPPORTED WITHIN 18 INCHES OF ALL TERMINATIONS AND AT REGULAR INTERVALS NOT TO EXCEED 6 FEET. FLEXIBLE CONDUITS SHALL BE SUPPORTED WITHIN 12 INCHES OF ALL TERMINATIONS AND AT REGULAR INTERVALS NOT TO EXCEED 3 FEET.
- 2.02 ALL CONDUIT CONNECTIONS TO BOXES AND ENCLOSURES WHICH DO NOT HAVE INTEGRAL THREADED HUBS SHALL UTILIZE WEATHERPROOF GROUNDING TYPE HUBS OR CONNECTORS. ALL HUBS AND CONNECTORS SHALL HAVE INSULATED THROATS OR BE PROVIDED WITH INSULATED BUSHINGS.
- 2.03 ANY CONDUIT ROUTINGS SHOWN ON THESE PLANS ARE CONCEPTUAL ONLY. ACTUAL ROUTINGS SHALL BE DETERMINED BY THE CONTRACTOR BASED ON ACTUAL CONDITIONS AND SUBMITTED TO THE ENGINEER FOR APPROVAL.
- 2.04 ALL CONDUCTORS SHALL BE STRANDED COPPER TYPE RHW-2, EXCEPT WHERE SHOWN OTHERWISE ON THE PLANS. THE MINIMUM SIZE FOR FIELD POWER AND CONTROL WIRING SHALL BE 10 AWG. CONDUCTOR INSULATION SHALL HAVE A 600V MINIMUM RATING. SIZE AS SHOWN ON PLANS.
- 2.05 CONDUCTOR FILL IN RACEWAYS SHALL NOT EXCEED 40%. MINIMUM CONDUIT SIZE SHALL BE 3/4 INCH.
- 2.06 WIRING IN ENCLOSURES, CABINETS, BOXES, ETC. SHALL BE NEATLY ROUTED AND BUNDLED WITH PVC CABLE TIES OR PLACED IN NON-METALLIC WIRING TROUGHS.
- 2.07 SPARE AND UN-TERMINATED CONDUCTORS SHALL BE CAPPED, OR CONNECTED TO SPARE TERMINAL BLOCKS WHERE AVAILABLE, AND CLEARLY IDENTIFIED AS SPARES. ONE FULL TURN OF SLACK FOR ALL SPARE CONDUCTORS SHALL BE PROVIDED IN ALL ENCLOSURES, CABINET, BOXES, ETC.
- 2.08 ONE FULL TURN OF SLACK SHALL BE PROVIDED FOR ALL CONDUCTORS IN ALL PULL BOXES, AND JUNCTION BOXES.
- 2.09 CONDUCTOR SPLICES SHALL BE MADE ONLY IN JUNCTION BOXES, OUTLET OR DEVICE BOXES, AND EQUIPMENT ENCLOSURES. SPLICES SHALL BE MADE ONLY ON TERMINAL BLOCKS, EXCEPT FOR SPLICES AT LUMINAIRES AND WIRING DEVICES WHICH SHALL UTILIZE COMPRESSION TYPE, OR SIMILAR APPROVED, CONNECTORS. LIMIT USE OF SET-SCREW TYPE CONNECTORS TO DEVICES TO BE REPLACED DURING LONG TERM MAINTENANCE. TWIST-ON (WIRENUT) TYPE CONNECTORS SHALL NOT BE USED. TERMINAL BLOCKS SHALL NOT HAVE MORE THAN TWO CONDUCTORS PER TERMINAL.
- 2.10 LAYOUT OF TERMINAL BLOCKS IN JUNCTION BOXES SHALL COMPLY WITH THE REQUIREMENTS FOR WIRE BENDING SPACE GIVEN IN NEC 312.6, EXCEPT THAT THE MINIMUM SPACE PERMITTED SHALL BE 2 INCHES. PROPOSED LAYOUTS INCLUDING ANTICIPATED LOCATIONS AND SIZES OF KNOCKOUTS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
- 2.11 A CONDUIT BODY OR BOX SHALL BE PROVIDED ON AT LEAST ONE SIDE OF ALL FLEXIBLE CONDUITS.
- 2.12 ALL RACEWAYS SHALL BE ARRANGED TO DRAIN. CONDUIT DRAINS SHALL BE INSTALLED IN A CONDUIT BODY AT LOW POINT OF ALL RUNS.
- 2.13 UNLESS SPECIFICALLY INDICATED OTHERWISE, CONDUIT AND CABLE ENTRANCES IN DAMP AND WET LOCATIONS SHALL BE MADE IN THE BOTTOM OF CABINETS AND/OR ENCLOSURES.
- 2.14 CONDUCTORS WITH GREEN COLORED INSULATION SHALL BE USED ONLY FOR GROUNDING CONDUCTORS. RE-IDENTIFICATION OF CONDUCTORS WITH GREEN COLORED INSULATION, SUCH AS WITH COLORED TAPE, IS NOT PERMITTED.
- 2.15 ADDITIONAL PULL BOXES MAY BE INSTALLED AS APPROVED BY THE ENGINEER TO FACILITATE CABLE PULLING AT NO ADDITIONAL COST.

**COMMITMENTS:**

NONE AS OF DECEMBER 15, 2017

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DISTRICT NINE

PREPARED BY: [Signature]  
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: [Signature]  
DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: [Signature]  
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: [Signature]  
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: [Signature]  
DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: [Signature]  
DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: [Signature]  
DISTRICT MATERIALS ENGINEER

	USER NAME =	DESIGNED - R.L. PETERS	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>I-24 OVER OHIO RIVER S.N. 064-0035 GENERAL NOTES - 1</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - R.L. REED	REVISED -	24			(64-3B)L-2	MASSAC	17	2	
	PLOT SCALE =	CHECKED - L.V. BORDEN	REVISED -			CONTRACT NO. 78589				
	PLOT DATE =	DATE - 11/28/2017	REVISED -			ILLINOIS FED. AID PROJECT				
					SCALE:	SHEET 1 OF 2 SHEETS		STA. TO STA.		

## GENERAL NOTES (CONTINUED)

### 3. MISCELLANEOUS MATERIALS & METHODS

- 3.01 ALL BOLTS, NUTS, WASHERS, CONCRETE ANCHORS, AND SIMILAR HARDWARE SHALL BE TYPE 316 STAINLESS STEEL. ALL CONCRETE ANCHORS SHALL BE EPOXY ADHESIVE TYPE.
- 3.02 ALL BOLTED AND SIMILAR CONNECTIONS SHALL UTILIZE LOCK WASHERS. CONNECTIONS WHICH DO NOT PERMIT THE USE OF LOCK WASHERS SHALL UTILIZE AN APPROVED MEDIUM STRENGTH THREADLOCKING ADHESIVE.
- 3.03 SUPPORTS FOR ELECTRICAL EQUIPMENT SHALL BE FABRICATED FROM TYPE 316 STAINLESS STEEL OR TYPE A36 STEEL HOT-DIP GALVANIZED AFTER FABRICATION.
- 3.04 EQUIPMENT ENCLOSURES, CABINETS, BOXES, AND SIMILAR ITEMS SHALL BE INSTALLED PLUMB AND SECURELY FASTENED IN PLACE.

### 4. IDENTIFICATION

- 4.01 ALL CONDUCTORS SHALL BE UNIQUELY IDENTIFIED AND CLEARLY LABELED WITH MACHINE PRINTED, WEATHERPROOF, NON-SHRINK SLEEVE TYPE LABELS.
- 4.02 ALL TERMINAL BLOCKS SHALL BE CLEARLY LABELED, AT EACH TERMINAL POSITION, WITH MACHINE PRINTED LABELS.
- 4.03 ALL ELECTRICAL EQUIPMENT ENCLOSURES, PULL AND JUNCTION BOXES, AND SIMILAR ITEMS SHALL BE CLEARLY LABELED WITH ENGRAVED PLASTIC WEATHERPROOF LABELS (WHITE TEXT ON BLACK BACKGROUND) ATTACHED WITH STAINLESS STEEL HARDWARE.
- 4.04 THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING A COMPREHENSIVE WIRE NUMBERING SYSTEM AND SHALL LABEL ALL WIRES, CABLES, AND TERMINAL BLOCKS. IDENTIFICATION NUMBERS SHALL BE COORDINATED FOR CONSISTENCY AND ACCURACY WITH NUMBERS SHOWN ON THE CONTRACTOR'S WIRING DIAGRAMS AND SHOP DRAWINGS, FIELD WIRING DIAGRAMS, AND ANY OTHER DIAGRAMS SHOWING THE SAME ITEM.

### 5. GROUNDING & BONDING

- 5.01 PROVIDE GROUNDING AND BONDING OF ALL SYSTEMS PER NEC ARTICLE 250.
- 5.02 ALL CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR. EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED EQUAL TO THE CIRCUIT CONDUCTORS, EXCEPT WHERE SHOWN OTHERWISE ON THE PLANS.
- 5.03 ALL GROUNDING TYPE HUBS AND CONNECTORS IN A BOX OR ENCLOSURE SHALL BE BONDED TOGETHER AND TO THE BOX OR ENCLOSURE WITH A STRANDED COPPER BONDING JUMPER SIZED EQUAL TO THE LARGEST EQUIPMENT GROUNDING CONDUCTOR IN THE BOX OR ENCLOSURE.
- 5.04 ALL GROUNDING CONDUCTORS WITHIN AN EQUIPMENT ENCLOSURE OR TERMINAL CABINET SHALL BE TERMINATED ON A COMMON UNINSULATED GROUNDING BAR.

### 6. REMOVALS, SALVAGE, & DISPOSAL

- 6.01 THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.
- 6.02 PERFORM ALL REMOVALS IN SUCH A MANNER AS TO AVOID DAMAGE TO EXISTING EQUIPMENT AND/OR CONDUCTORS WHICH ARE TO REMAIN.
- 6.03 THE CONTRACTOR SHALL PERFORM THE WORK WITH CARE, SO THAT ANY STRUCTURAL MATERIALS WHICH ARE TO REMAIN IN PLACE SHALL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY STRUCTURAL MATERIALS WHICH ARE TO REMAIN IN PLACE, THE DAMAGED MATERIALS SHALL BE REPLACED OR REPAIRED IN A MANNER SATISFACTORY TO THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.

### 7. WORKING DRAWINGS & SUBMITTALS

- 7.01 THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED WORKING DRAWINGS AND PRODUCT SUBMITTALS, WORKING IN COOPERATION AND COMMUNICATION WITH THE ENGINEER IN ORDER TO PROVIDE A COMPLETE, FUNCTIONAL, AND SAFE INSTALLATION IN ACCORDANCE WITH THE REQUIREMENTS AND INTENTS OF THESE PLANS, THE SPECIFICATIONS, THE CONTRACT DOCUMENTS, AND ALL APPLICABLE CODES.
- 7.02 ALL REQUIRED WORKING DRAWINGS AND PRODUCT DESCRIPTIVE DATA SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. SUCH ITEMS MUST BE APPROVED BY THE ENGINEER PRIOR TO PURCHASE OF THE RELATED MATERIALS AND/OR UNDERTAKING OF THE RELATED WORK.
- 7.03 SUBMIT COMPLETE DESCRIPTIVE DATA FOR EACH ITEM OF EQUIPMENT AND MATERIAL.
- 7.04 WIRING DIAGRAMS AND SCHEMATICS PROVIDED IN THESE PLANS ARE FOR ILLUSTRATING MINIMUM REQUIREMENTS ONLY. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR DEVELOPING ALL REQUIRED DIAGRAMS, INCLUDING FIELD INTERCONNECTION DIAGRAMS.
- 7.05 WIRING LAYOUTS AND TABULATIONS PROVIDED IN THESE PLANS ARE FOR ILLUSTRATING MINIMUM REQUIREMENTS ONLY. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR DEVELOPING THE ACTUAL LAYOUTS AND TABULATIONS.
- 7.06 THE CONTRACTOR SHALL DEVELOP ALL FINAL MOUNTING DETAILS FOR ALL EQUIPMENT. SUCH DETAILS SHALL COMPLY WITH TYPICAL DETAILS SHOWN ON THESE PLANS.

### 8. MAINTAINING NAVIGATIONAL OBSTRUCTION LIGHTS IN OPERATION DURING CONSTRUCTION

- 8.01 THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CALENDAR MONTH AS MAINTENANCE OF NAVIGATION LIGHTING SYSTEM. WATERWAY AND AERIAL OBSTRUCTION LIGHTING SHALL BE OPERATIONAL AT ALL TIMES. UNITED STATES COAST GUARD SHALL BE NOTIFIED OF ALL WORK TWO WEEKS PRIOR TO START OF CONSTRUCTION.
- 8.02 THE REQUIREMENT MAY BE ACCOMPLISHED BY ANY OF THE FOLLOWING METHODS: PROVIDING TEMPORARY WIRING AND EQUIPMENT AS A WORK AROUND CONDUIT/WIRING AND EQUIPMENT TAKEN OUT OF SERVICE, PROVIDING TEMPORARY POWER SOURCES (GENERATORS AND/OR BATTERIES), PROVIDING TEMPORARY SOLAR POWERED SELF-CONTAINED NAVIGATION AND AERIAL LIGHTS.
- 8.03 ANY TEMPORARY NAVIGATIONAL AND AERIAL OBSTRUCTION LIGHTS UTILIZED SHALL SATISFY THE REQUIREMENTS OF THE UNITED STATES COAST GUARD AND THE FEDERAL AVIATION ADMINISTRATION, RESPECTIVELY.
- 8.04 THE CONTRACTOR SHALL SUBMIT HIS PROPOSED PLAN/METHODOLOGY TO MAINTAIN THE NAVIGATIONAL AND AERIAL OBSTRUCTION LIGHTING IN SERVICE TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
- 8.05 THE CONTRACTOR SHALL ENSURE THAT NO INFRINGEMENT OF THE NAVIGATIONAL UNDERCLEARANCE OR CHANNEL OCCURS WHILE DOING WORK. ANY INFRINGEMENT SHALL BE APPROVED BY THE UNITED STATES COAST GUARD.

MR. ERIC WASHBURN,  
COAST GUARD 8TH DISTRICT  
1222 SPRUCE STREET, ST. LOUIS, MO 63013  
(314) 269-2378

EMERGENCY CONTACT U.S.C.G. 24-HOUR WATCH CENTER  
(502) 779-5422

	USER NAME =	DESIGNED - R.I. PETERS	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>I-24 OVER OHIO RIVER</b> <b>S.N. 064-0035</b> <b>GENERAL NOTES - 2</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - R.L. REED	REVISED -					24	(64-3B)JL-2	MASSAC	17	3
	PLOT SCALE =	CHECKED - L.V. BORDEN	REVISED -					CONTRACT NO. 78589				
	PLOT DATE =	DATE - 11/28/2017	REVISED -					SCALE:	SHEET 2	OF 2	SHEETS	STA.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				90% FEDERAL 10% STATE	50% ILLINOIS 50% KENTUCKY LIGHTING 0021 S.N. 064-0035
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6		6
67100100	MOBILIZATION	L SUM	1		1
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1		1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	25		25
81100200	CONDUIT ATTACHED TO STRUCTURE, 3/4" DIA., GALVANIZED STEEL	FOOT	1048		1048
81100600	CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	5507		5507
81300320	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 8" X 8" X 6"	EACH	6		6
81300530	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	8		8
81300915	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 20" X 20" X 8"	EACH	5		5
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	10307		10307
81702120	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8	FOOT	37300		37300
81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	200		200
82200605	WATERWAY OBSTRUCTION WARNING LUMINAIRE, LED	EACH	26		26
82200700	AVIATION OBSTRUCTION WARNING LUMINAIRE	EACH	2		2

14



USER NAME =	DESIGNED - R.J. PETERS	REVISED -
PLOT SCALE =	DRAWN - A.E. COOK	REVISED -
PLOT DATE =	CHECKED - J.M. HASSARD	REVISED -
	DATE - 11/28/2017	REVISED -

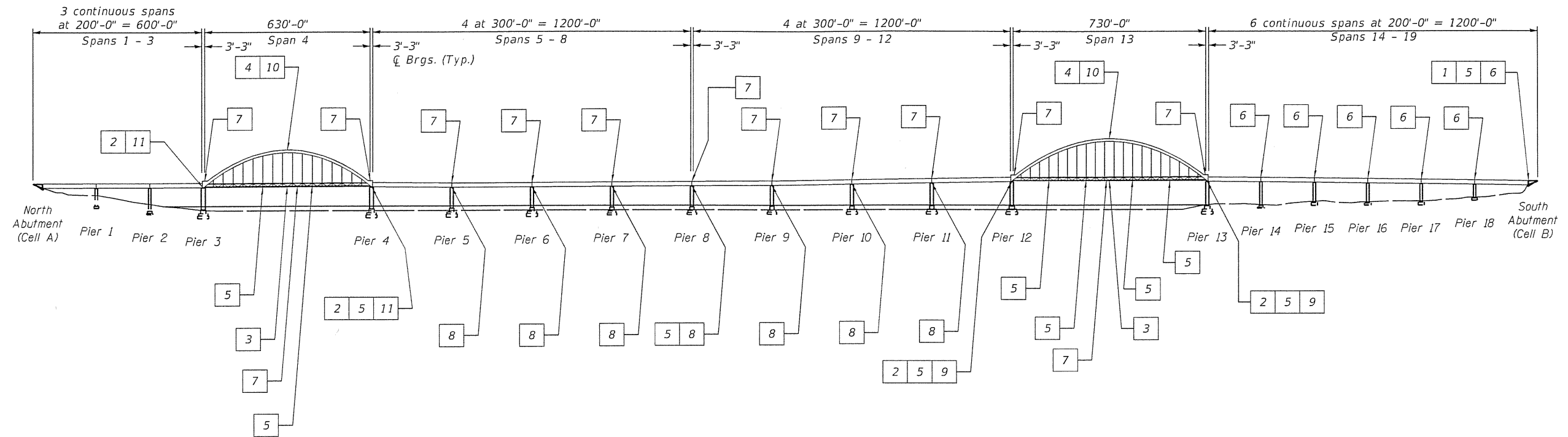
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>SUMMARY OF QUANTITIES</b>	
SCALE:	SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-38)-2	MASSAC	17	4
ILLINOIS FED. AID PROJECT CONTRACT NO. 78589				

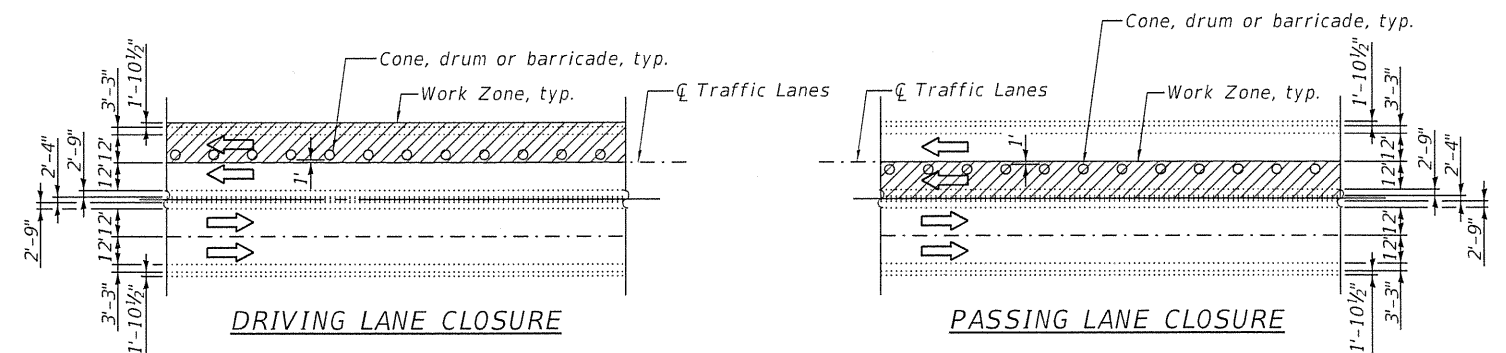






**SCOPE OF WORK LEGEND**

- 1 Replace existing Navigational Obstruction Lighting Controller with new Navigational Obstruction Lighting Controller
- 2 Replace existing Red Pier Navigational Obstruction Light with new LED Red Pier Navigational Obstruction Light (Upstream and Downstream)
- 3 Replace existing Green Span Navigational Obstruction Light with new LED Green Span Navigational Obstruction Light (Upstream and Downstream)
- 4 Replace existing Aviation Obstruction Light with new Aviation Obstruction Light
- 5 Replace existing expansion conduit with new 2" Dia. liquidtight flexible non-metallic conduit (LFNC). LFNC shall be terminated in a 8" x 8" x 6" NEMA 4X, Stainless Steel Junction Box at both the ends. (LFNC on Piers 4, 8, 12, and 13 shall terminate in 8" x 8" x 6" junction box on one end and 'JBP4E', 'JBP8E', 'JBP12E', and 'JBP13E' on other end respectively).
- 6 Install new 8" x 8" x 6" NEMA 4X Stainless Steel Pull Box
- 7 Replace existing Junction Box with new NEMA 4X Stainless Steel Junction Box (Junction Box at Piers 3, 4, 12, and 13 shall be 20" x 20" x 8", all other junction boxes shall be 12" x 10" x 6")
- 8 Replace existing Red Channel Margin Navigational Obstruction Light with new Red LED Channel Margin Navigational Obstruction Light (Upstream and Downstream)
- 9 Replace existing Reflector panels, with new 2' x 2' Red Reflector panels (Upstream and Downstream)
- 10 Install new Lightning Protection Bridge Grounding System
- 11 Replace existing Reflector panels, with new 2' x 2' Red Reflector panels (Downstream only)



**CONSTRUCTION STAGING DETAIL SKETCH**  
Eastbound shown, Westbound similar  
See Highway Standards 701401-10 for more information.

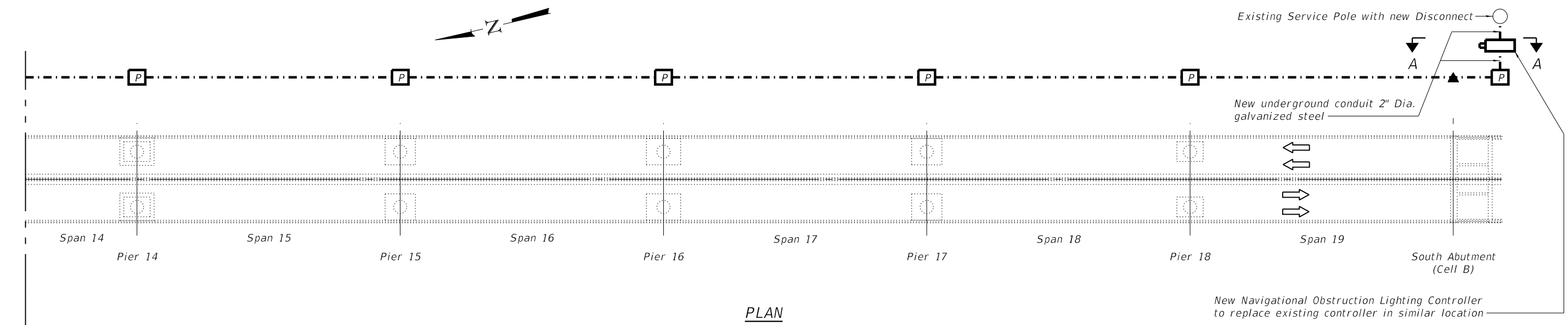


USER NAME =	DESIGNED - R.I. PETERS	REVISED
	CHECKED - L.V. BORDEN	REVISED
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PLOT DATE = 11/28/2017	CHECKED - N.K. BHINGE	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

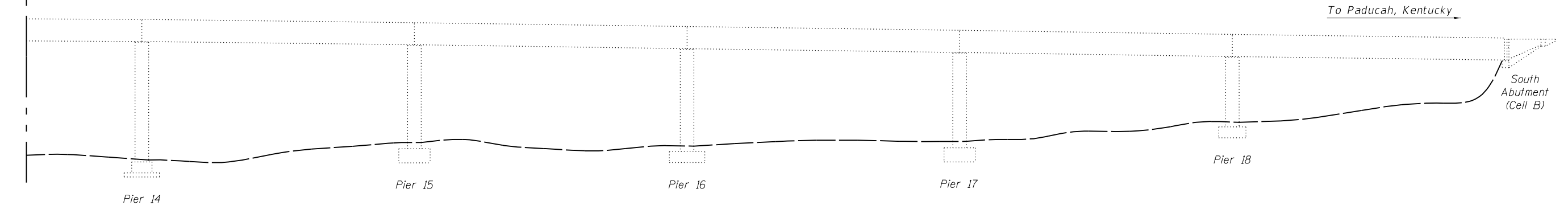
I-24 OVER OHIO RIVER  
S.N. 064-0035  
ELECTRICAL SCOPE OF WORK  
SHEET NO. E1 OF E12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)1-2	MASSAC	17	6
				CONTRACT NO. 78589
ILLINOIS FED. AID PROJECT				



PLAN

MATCH LINE A



ELEVATION

LEGEND

- Existing Conduit
- New conduit Attached to Structure to replace existing conduit in kind
- ..... New 3/4" Dia. Rigid Steel Conduit Attached to Structure
- . - . - New 2" Dia. Rigid Steel Conduit Attached to Structure to replace existing conduit in similar location
- ~ New 3C #10 S00W cord
- [J] New Junction Box, NEMA 4X stainless steel, to replace existing junction box (size as shown on sheet E10 Section B-B)
- [P] New Pull Box, NEMA 4X stainless steel, 8" x 8" x 6"
- New 2' x 2' Red Reflector Panel Assembly
- ▲ New 2" Dia. LFNC to replace existing expansion conduit at expansion joints
- ◆ New 2" Dia. LFNC
- [R] New 180° LED Red Pier Navigational Obstruction Light to replace existing Navigational Obstruction Light in similar location
- (R) New 180° LED Red Channel Margin Navigational Obstruction Light to replace existing Navigational Obstruction Light in similar location

- [G] New 360° LED Green Span Navigational Obstruction Light to replace existing Navigational Obstruction Light in similar location
- [A] New Aviation Obstruction Light to replace existing Aviation Obstruction Light
- E East
- JB Junction Box
- P Pier
- S Span

NOTES:

1. Contractor shall field verify all existing equipment. Not all existing equipment shown.
2. For Match Line A, see sheet E3.
3. For Section A-A, see sheet E9.
4. LFNC used as an expansion fitting shall be installed according to the latest IDOT Standards and specifications. All associated costs shall be included with the contract unit price per foot for Conduit Attached to Structure, 2" Dia., Galvanized Steel.
5. Expansion fittings shall be installed between Spans 5 - 12 and Spans 14 - 19 as required by NEC article 300.7 and cost shall be included with the contract unit price per foot for Conduit Attached to Structure, 2" Dia., Galvanized Steel.

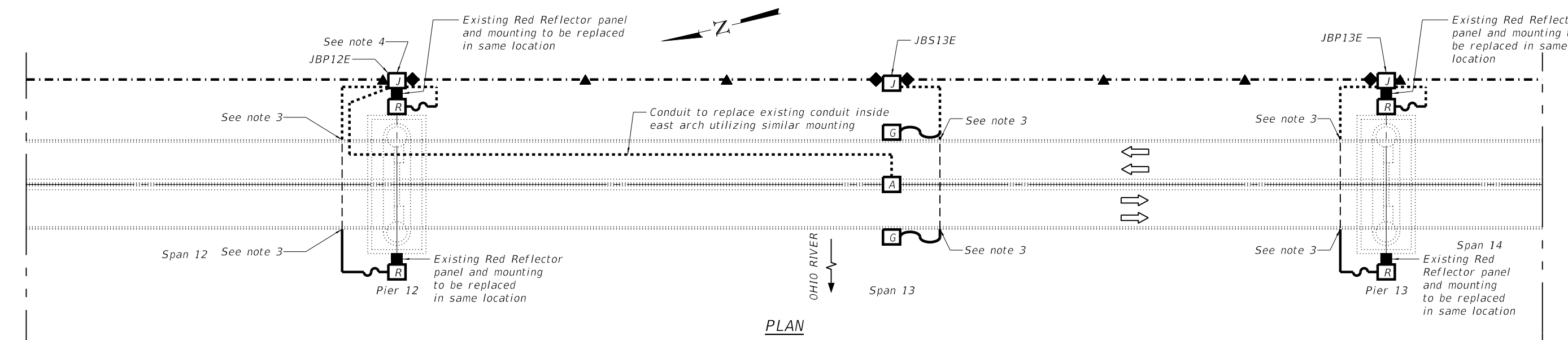


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	CHECKED - L.V. BORDEN	REVISED
PLOT SCALE =	DRAWN - R.L. REED	REVISED
PLOT DATE = 11/28/2017	CHECKED - N.K. BHINGE	REVISED

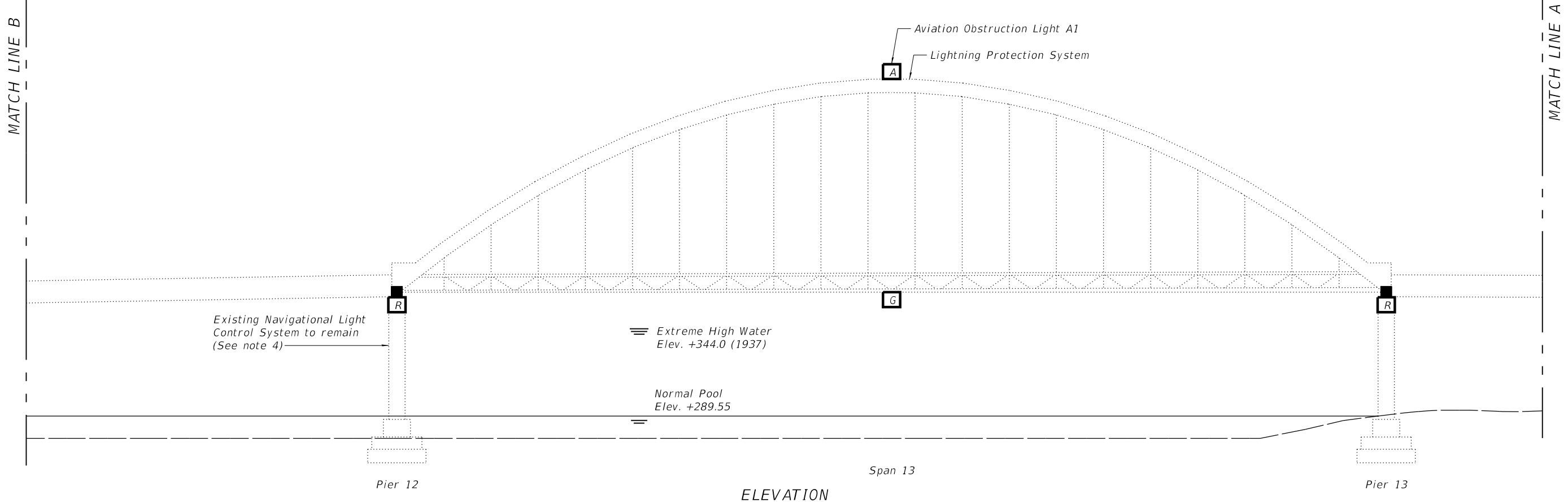
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

I-24 OVER OHIO RIVER  
S.N. 064-0035  
ELECTRICAL PLAN AND ELEVATION - 1  
SHEET NO. E2 OF E12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)I-2	MASSAC	17	7
CONTRACT NO. 78589				
ILLINOIS FED. AID PROJECT				



PLAN



ELEVATION

NOTES:

1. Remove all existing transformers and connected conductors and conduit at all Navigational Obstruction Light locations.
2. All concrete encased conduit and conductors shall remain.
3. Reuse existing concrete encased conduit.
4. Replace all existing junction boxes size as shown on Section B-B New Junction Box Installation Detail on sheet E10. Reconnect all wiring and components for unhindered operation of all electrical systems. Relocate manual override switches to JBP12E. Remove all unused conduit and conductors located at Pier 12.
5. Remove all reflector panels at Span 13.
6. Contractor shall field verify all existing equipment. Not all existing equipment shown.
7. The existing mounting holes shall be reused when installing the new LED Span Navigational Obstruction Lights.
8. Each Red Light shall show a horizontal arc of 180°, and shall be securely fastened at the end of the pier not lower than 2 feet above navigable high water to show 90° on either side of a line parallel to the axis of the channel so as to be visible from an approaching vessel.
9. Each Green Light shall show through a horizontal arc of 360°, and shall be mounted just below the outermost edge of the bridge span structure so as to be visible from an approaching vessel.
10. For Match Line A, see sheet E2.
11. For Match Line B, see sheet E4.
12. For Legend, see sheet E2.
13. LFNC used as an expansion fitting shall be installed according to the latest IDOT Standards and specifications. All associated costs shall be included with the contract unit price per foot for Conduit Attached to Structure, 2" Dia., Galvanized Steel.



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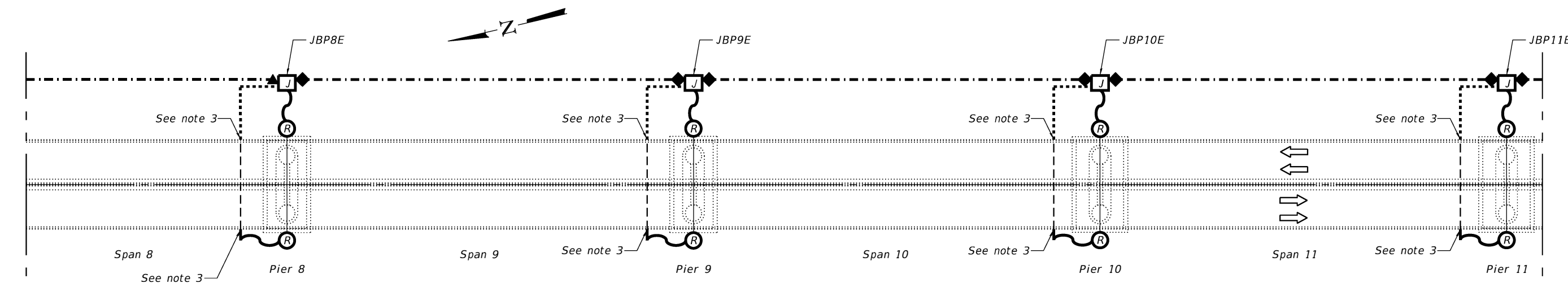
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

I-24 OVER OHIO RIVER  
S.N. 064-0035  
ELECTRICAL PLAN AND ELEVATION - 2  
SHEET NO. E3 OF E12 SHEETS

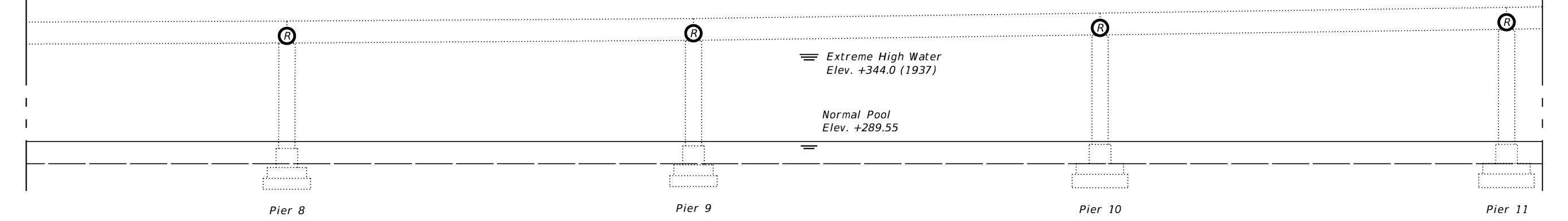
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)I-2	MASSAC	17	8
CONTRACT NO. 78589				

ILLINOIS FED. AID PROJECT





PLAN



ELEVATION

NOTES:

- Remove all existing transformers and connected conductors and conduit at all Navigational Obstruction Light locations.
- All concrete encased conduit and conductors shall remain.
- Reuse existing concrete encased conduit.
- Remove all reflective panels from Piers 8 through 11.
- Contractor shall field verify all existing equipment. Not all existing equipment shown.
- The existing mounting holes shall be reused when installing the new LED Channel Margin Navigational Obstruction Lights.
- Each Red Light shall show a horizontal arc of 180°, and shall be securely fastened at the end of the pier not lower than 2 feet above navigable high water to show 90° on either side of a line parallel to the axis of the channel so as to be visible from an approaching vessel.
- For Match Line B, see sheet E3.
- For Match Line C, see sheet E5.
- For Legend, see sheet E2.
- LFNC used as an expansion fitting shall be installed according to the latest IDOT Standards and specifications. All associated costs shall be included with the contract unit price per foot for Conduit Attached to Structure, 2" Dia., Galvanized Steel.
- Expansion fittings shall be installed between Spans 5 - 12 and Spans 14 - 19 as required by NEC article 300.7 and cost shall be included with the contract unit price per foot for Conduit Attached to Structure, 2" Dia., Galvanized Steel.

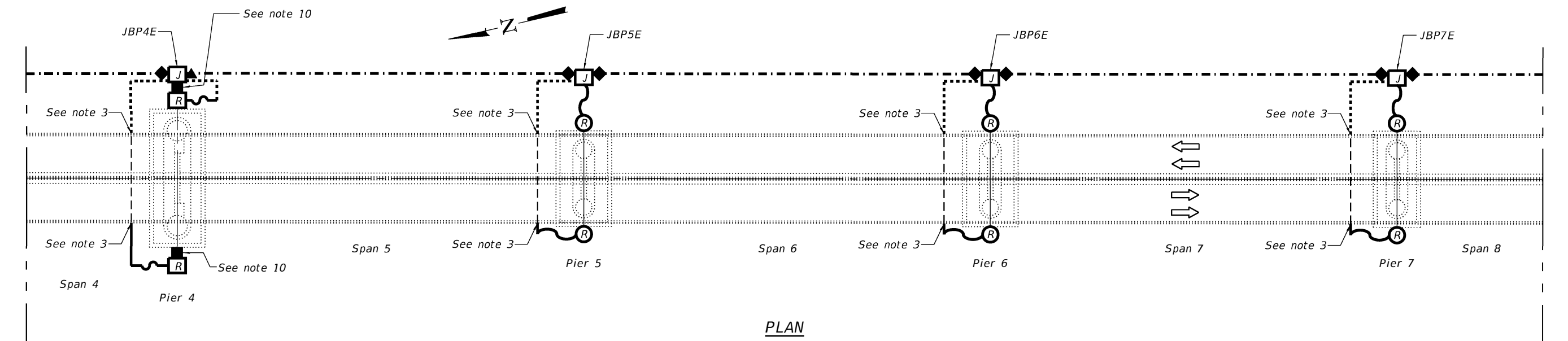


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PLOT DATE = 11/28/2017	CHECKED - N.K. BHINGE	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

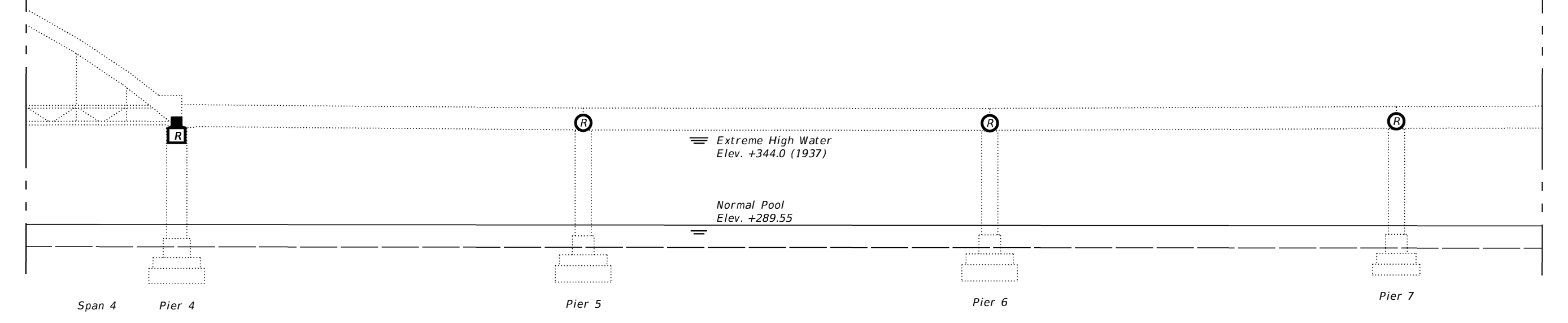
I-24 OVER OHIO RIVER  
S.N. 064-0035  
ELECTRICAL PLAN AND ELEVATION - 3  
SHEET NO. E4 OF E12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)JL-2	MASSAC	17	9
CONTRACT NO. 78589				
ILLINOIS FED. AID PROJECT				



MATCH LINE D

MATCH LINE C



**NOTES:**

1. Remove all existing transformers and connected conductors and conduit at all Navigational Obstruction Light locations.
2. All concrete encased conduit and conductors shall remain.
3. Reuse existing concrete encased conduit.
4. Remove all reflector panels from Piers 5 through 7.
5. Contractor shall field verify all existing equipment. Not all existing equipment shown.
6. The existing mounting holes shall be reused when installing the new LED Channel Margin Navigational Obstruction Lights.
7. For Match Line C, see sheet E4.
8. For Match Line D, see sheet E6.
9. For Legend, see sheet E2.
10. Existing upstream 4' x 4' red reflector panel to remain. Existing downstream 1' x 1' red reflector panel to be replaced by new 2' x 2' red reflector panel.
11. Each Red Light shall show a horizontal arc of 180°, and shall be securely fastened at the end of the pier not lower than 2 feet above navigable high water to show 90° on either side of a line parallel to the axis of the channel so as to be visible from an approaching vessel.
12. LFNC used as an expansion fitting shall be installed according to the latest IDOT Standards and specifications. All associated costs shall be included with the contract unit price per foot for Conduit Attached to Structure, 2" Dia., Galvanized Steel.
13. Expansion fittings shall be installed between Spans 5 - 12 and Spans 14 - 19 as required by NEC article 300.7 and cost shall be included with the contract unit price per foot for Conduit Attached to Structure, 2" Dia., Galvanized Steel.



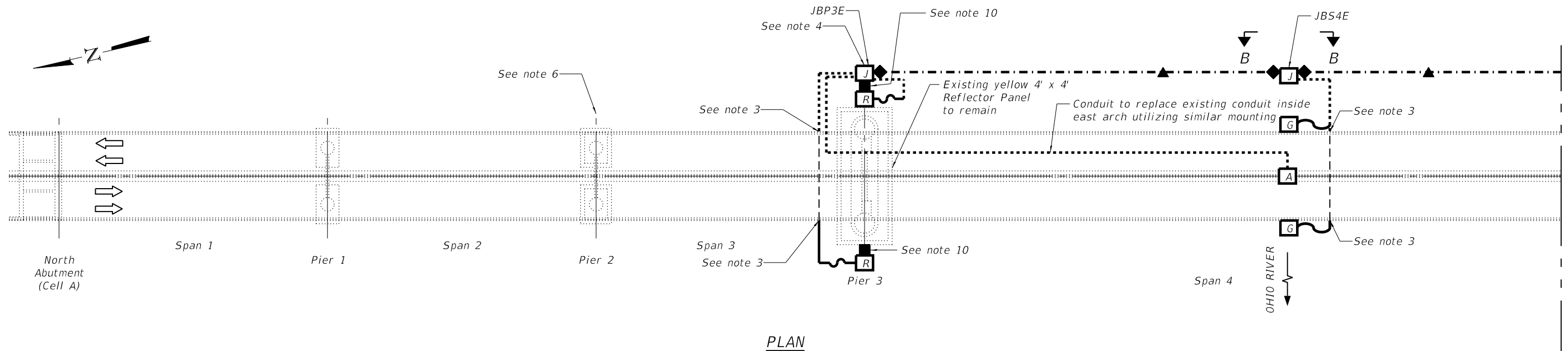
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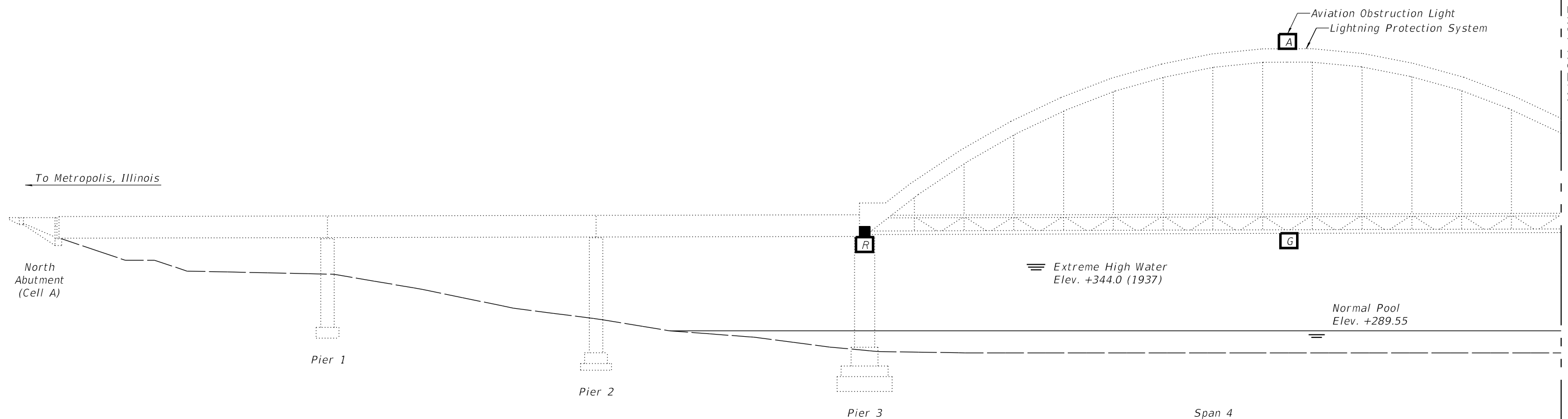
**I-24 OVER OHIO RIVER  
S.N. 064-0035  
ELECTRICAL PLAN AND ELEVATION - 4**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)1-2	MASSAC	17	10
CONTRACT NO. 78589				
ILLINOIS FED. AID PROJECT				

SHEET NO. E5 OF E12 SHEETS



PLAN



ELEVATION

**NOTES:**

1. Remove all existing transformers with connected conductors and conduit at all Navigational Obstruction Light locations.
2. All concrete encased conduit and conductors shall remain.
3. Reuse existing concrete encased conduit.
4. Replace all existing junction boxes size as shown on Section B-B New Junction Box Installation Detail on sheet E10. Reconnect all wiring and components for unhindered operation of all electrical systems. Remove all unused conduit and conductors located on Pier 3.
5. Contractor shall field verify all existing equipment. Not all existing equipment shown.
6. Remove all equipment used for the navigation lighting at Pier 2.
7. For Match Line D, see sheet E5.
8. For Section B-B, see sheet E10.
9. The existing mounting holes shall be reused when installing the new LED Span Navigational Obstruction Lights.
10. Existing upstream 4' x 4' red reflector panel to remain. Existing downstream 1' x 1' red reflector panel to be replaced by new 2' x 2' red reflector panel.
11. Each Red Light shall show a horizontal arc of 180°, and shall be securely fastened at the end of the pier not lower than 2 feet above navigable high water to show 90° on either side of a line parallel to the axis of the channel so as to be visible from an approaching vessel.
12. Each Green Light shall show through a horizontal arc of 360°, and shall be mounted just below the outermost edge of the bridge span structure so as to be visible from an approaching vessel.
13. LFNC used as an expansion fitting shall be installed according to the latest IDOT Standards and specifications and cost shall be included with the contract unit price per foot for Conduit Attached to Structure, 2" Dia., Galvanized Steel.



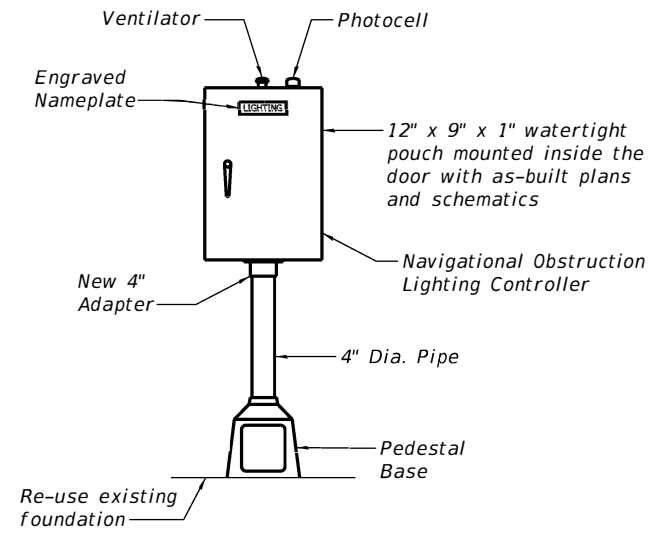
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STATE OF ILLINOIS  
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I-24 OVER OHIO RIVER  
S.N. 064-0035  
ELECTRICAL PLAN AND ELEVATION - 5  
SHEET NO. E6 OF E12 SHEETS

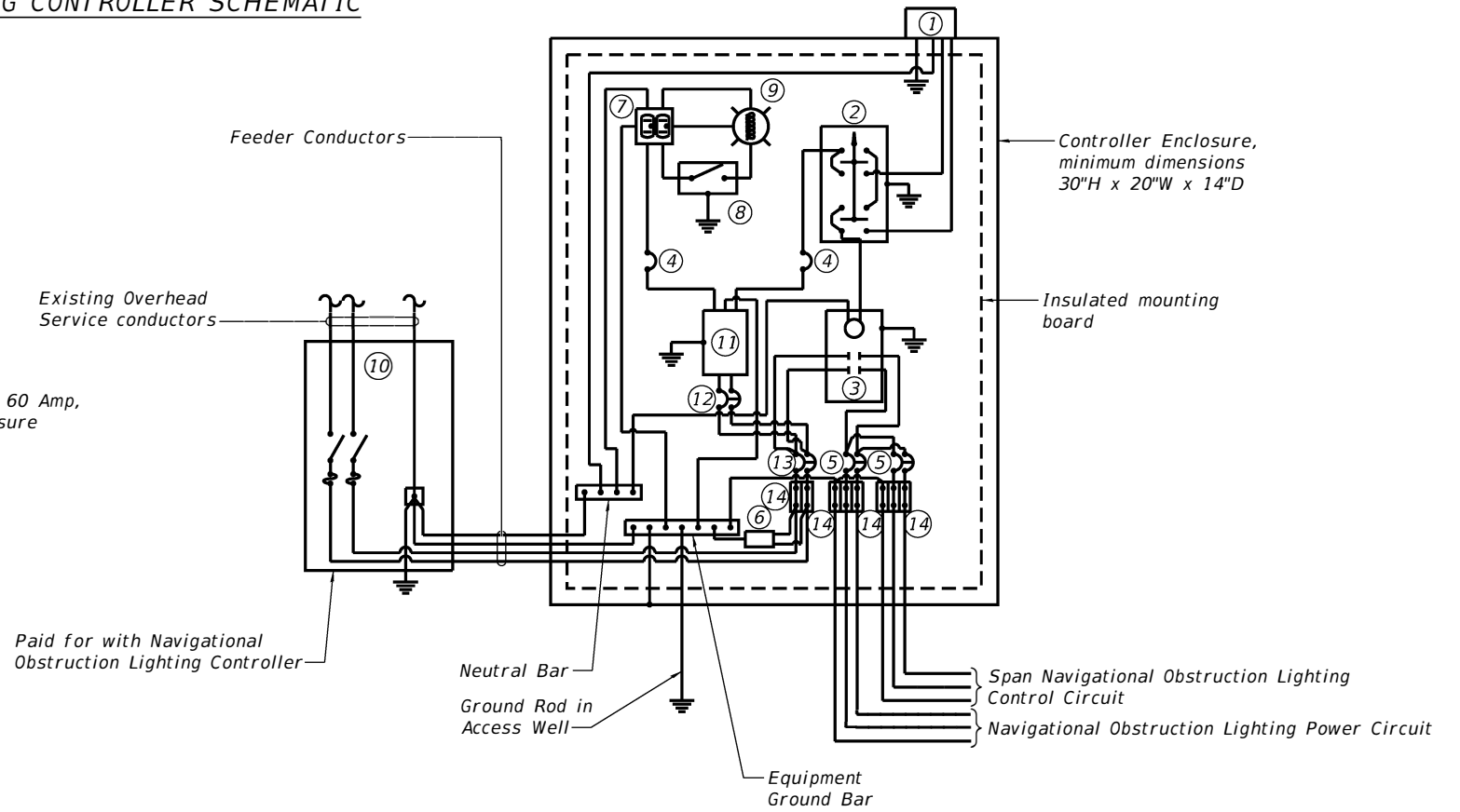
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)I-2	MASSAC	17	11
CONTRACT NO. 78589				
ILLINOIS FED. AID PROJECT				

**NEW NAVIGATIONAL OBSTRUCTION LIGHTING CONTROLLER SCHEMATIC**

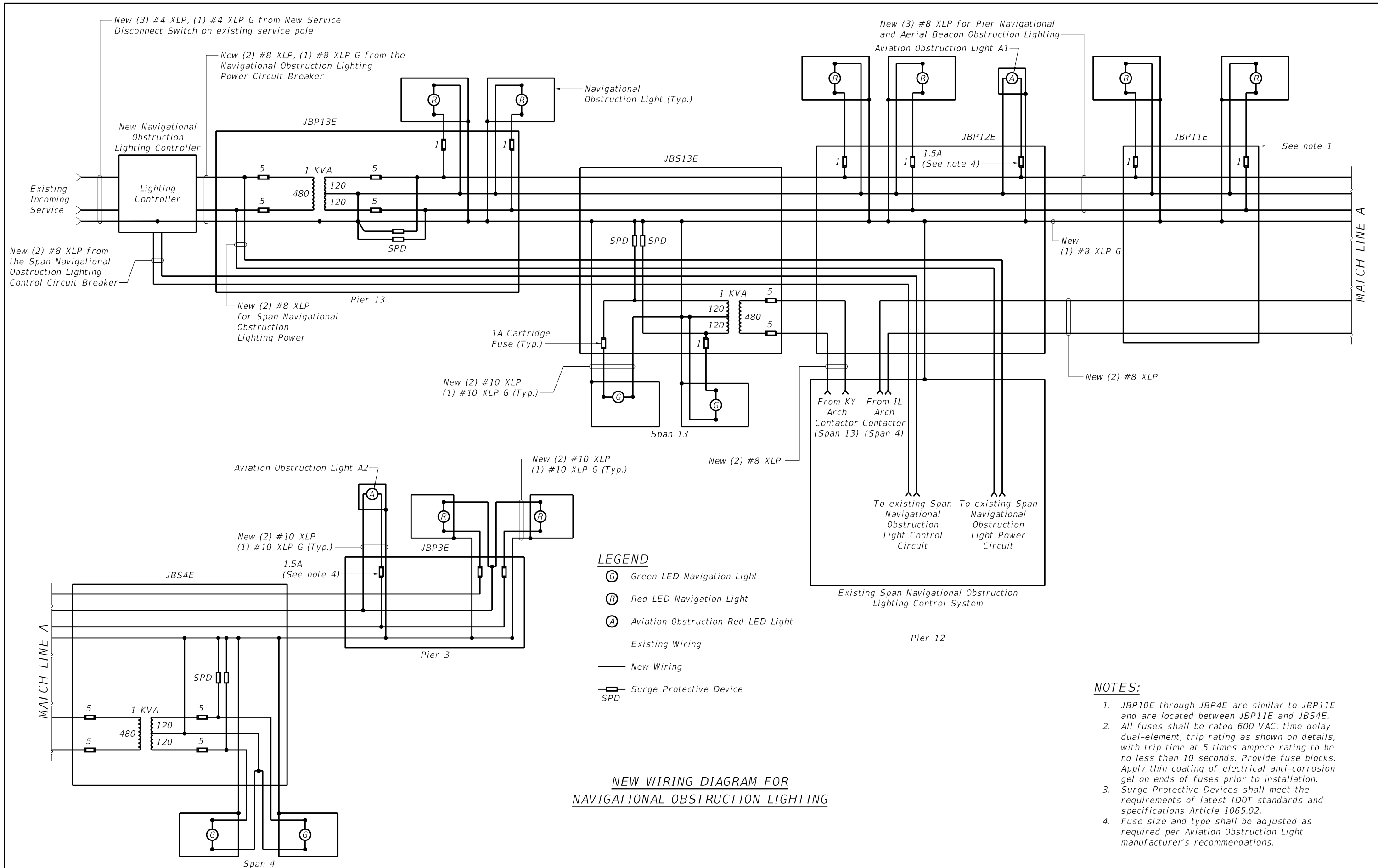


**NEW NAVIGATIONAL OBSTRUCTION LIGHTING CONTROLLER**

- ① Photocell with Integral Surge Arrester
- ② Hand-Auto Selector Switch
- ③ 100 Amp, Electrically held Switch
- ④ 15 Amp, 1 Pole Circuit Breaker
- ⑤ 20 Amp, 2 Pole Circuit Breaker (Two spares required but not shown)
- ⑥ Surge Arrester
- ⑦ GFCI Duplex Receptacle
- ⑧ Single Pole, Single Throw Switch
- ⑨ Worklight, enclosed and gasketed with LED Lamp
- ⑩ Service Disconnect Switch - 2 Pole, 3-Wire, 480V, 60 Amp, Fused at 60 Amp, Solid Neutral in NEMA 4X Enclosure having lockable external handle
- ⑪ Transformer - 1 KVA, 480V Primary 120/240V Secondary, Single Phase, 60 HZ
- ⑫ 15 Amp, 2 Pole Circuit Breaker
- ⑬ 60 Amp, 2 Pole Circuit Breaker
- ⑭ Terminal Block sized for Conductors as shown on plans.



**NEW NAVIGATIONAL OBSTRUCTION LIGHTING CONTROLLER WIRING DIAGRAM**



**NEW WIRING DIAGRAM FOR  
NAVIGATIONAL OBSTRUCTION LIGHTING**

- NOTES:**
- JBP10E through JBP4E are similar to JBP11E and are located between JBP11E and JBS4E.
  - All fuses shall be rated 600 VAC, time delay dual-element, trip rating as shown on details, with trip time at 5 times ampere rating to be no less than 10 seconds. Provide fuse blocks. Apply thin coating of electrical anti-corrosion gel on ends of fuses prior to installation.
  - Surge Protective Devices shall meet the requirements of latest IDOT standards and specifications Article 1065.02.
  - Fuse size and type shall be adjusted as required per Aviation Obstruction Light manufacturer's recommendations.



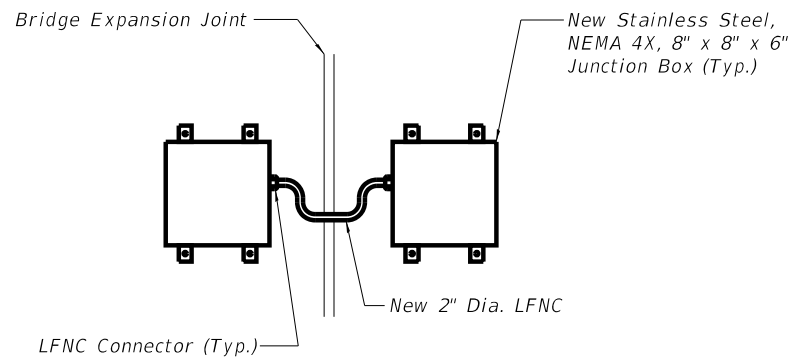
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-24 OVER OHIO RIVER  
S.N. 064-0035  
NAVIGATIONAL OBSTRUCTION LIGHTING WIRING DIAGRAM**

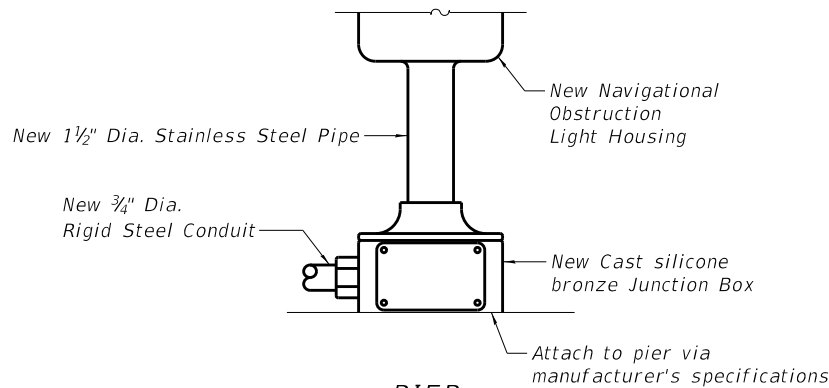
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)I-2	MASSAC	17	13
CONTRACT NO. 78589				

ILLINOIS FED. AID PROJECT

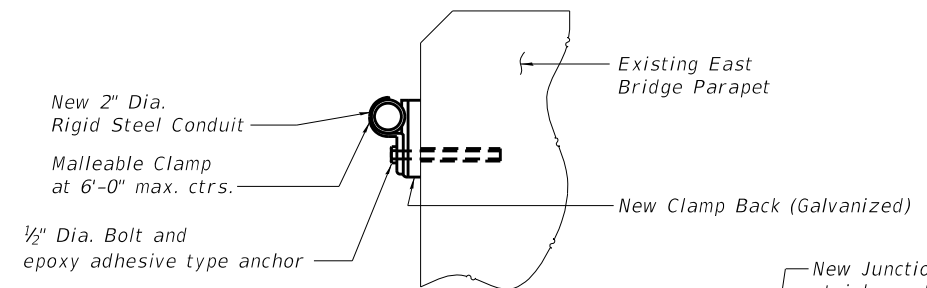


**EXPANSION JOINT DETAIL**

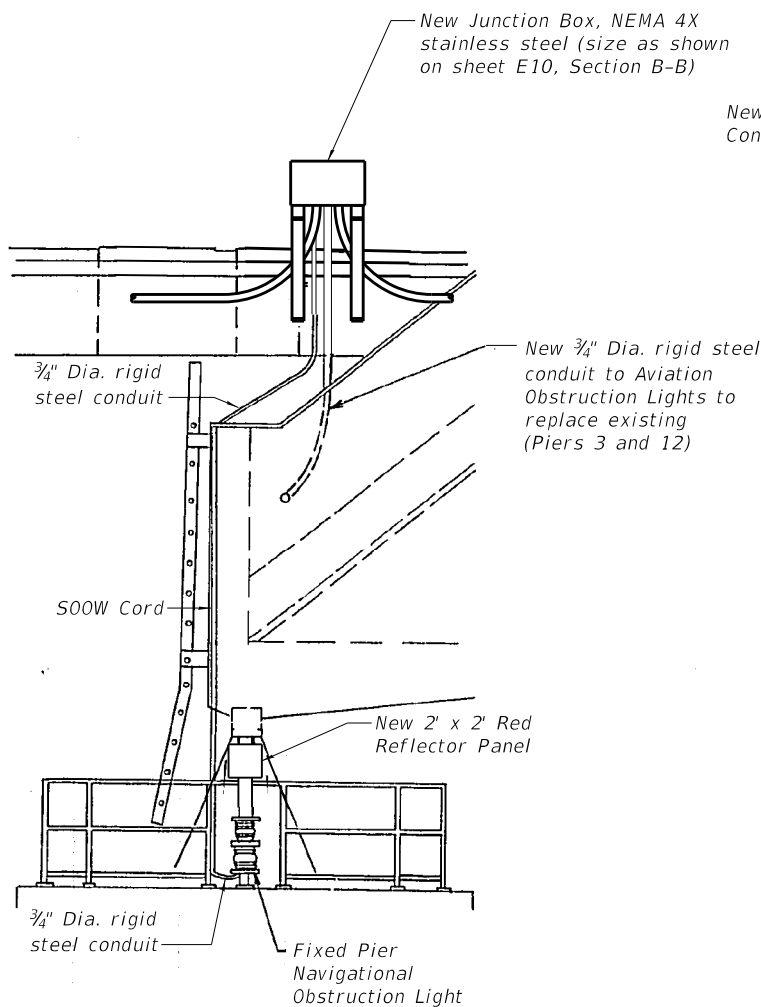
\* Use same method to bypass other obstructions (See note 6)



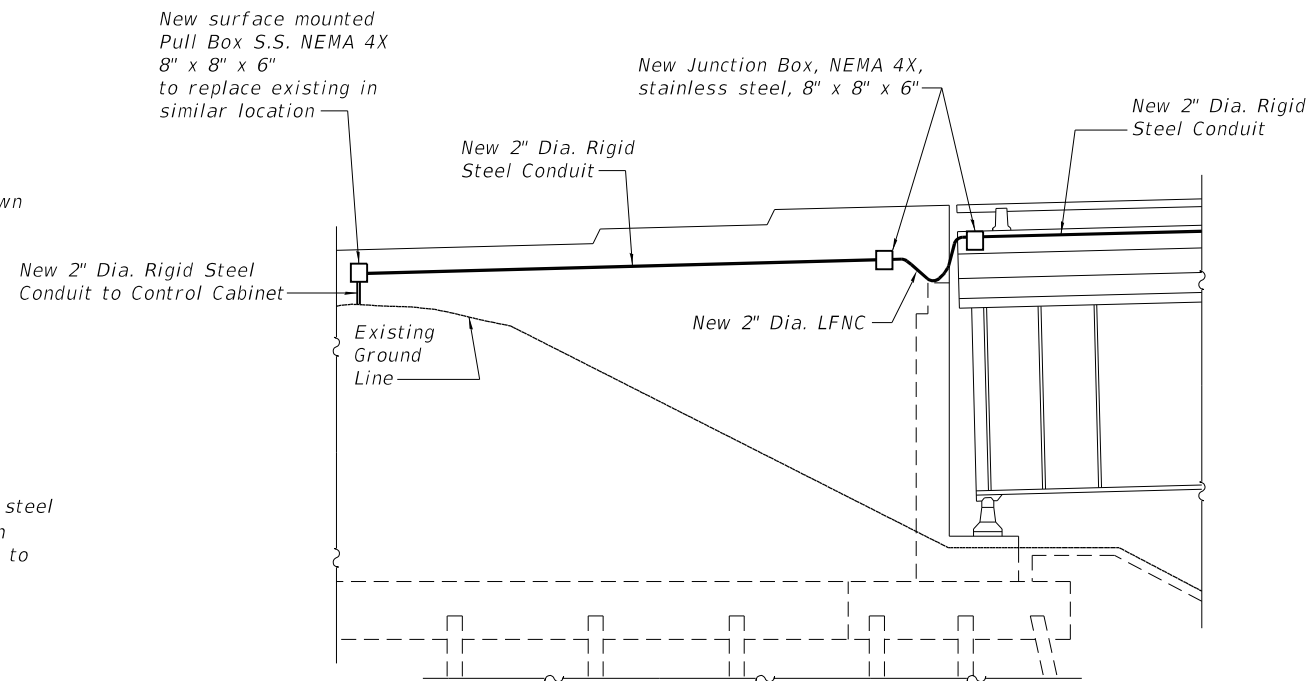
**PIER NAVIGATIONAL OBSTRUCTION LIGHT DETAIL**



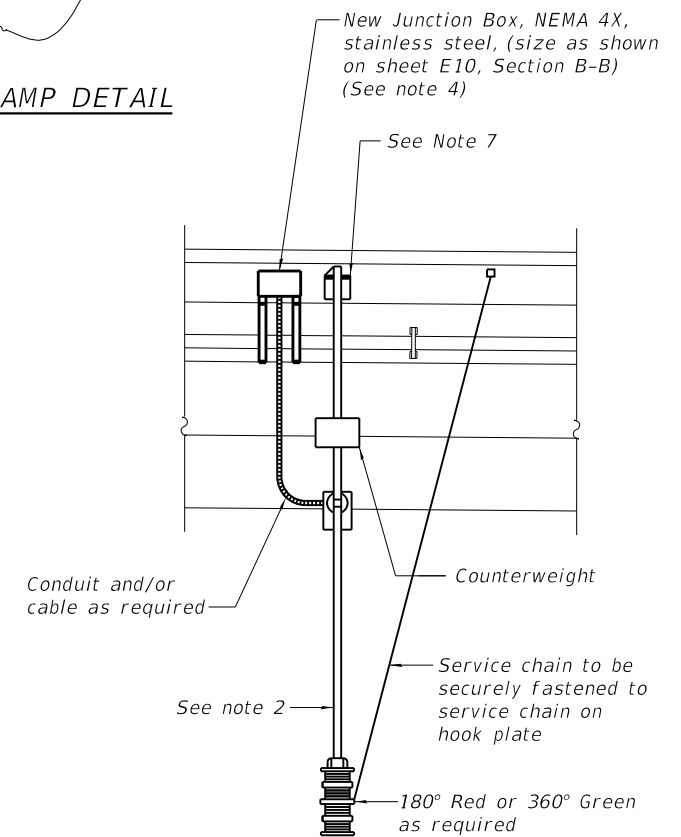
**CONDUIT CLAMP DETAIL**



**NEW CONDUITS AT EAST SIDE PIERS**  
(Piers 3, 4, 12, and 13)



**SECTION A-A**



**EAST SIDE SPAN AND CHANNEL MARGIN NAVIGATIONAL OBSTRUCTION LIGHT**  
(West Side Navigational Obstruction Light is similar)

**NOTES:**

1. The existing mounting holes shall be reused when installing the new LED Span and Channel Margin Obstruction Lights.
2. The Span and Channel Margin Navigational Obstruction Light stem lengths are to be field verified so the Navigational Obstruction luminaires satisfy requirements of notes 8 and 9 as described on sheet E3.
3. Remove all existing Span and Channel Margin Navigational Obstruction Lighting locking systems.
4. Field verify the mounting location with respect to the Navigational Obstruction Light mounting location to ensure unhindered swivel operation of the Navigational Obstruction Light. Potential conflicts with the inspection access system exist. If encountered, the Contractor shall submit a proposed resolution for approval by the Engineer. Cost included in the contract unit price per each for the Waterway Obstruction Warning Luminaire, LED.
5. For Section A-A, see sheet E2.
6. LFNC used as an expansion fitting shall be installed according to the latest IDOT Standards and specifications and cost shall be included with the contract unit price per foot for Conduit Attached to Structure, 2" Dia., Galvanized Steel.
7. The contractor shall make provisions for securing and padlocking the luminaire in the operating position according to the latest IDOT Standards and specifications Article 1067.07.



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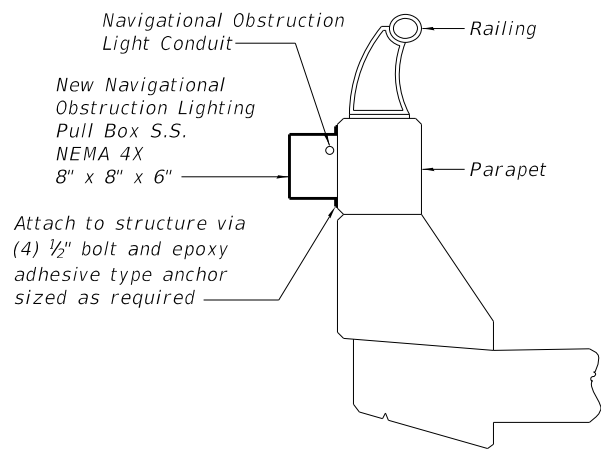
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

I-24 OVER OHIO RIVER  
S.N. 064-0035  
ELECTRICAL MISCELLANEOUS DETAILS - 1  
SHEET NO. E9 OF E12 SHEETS

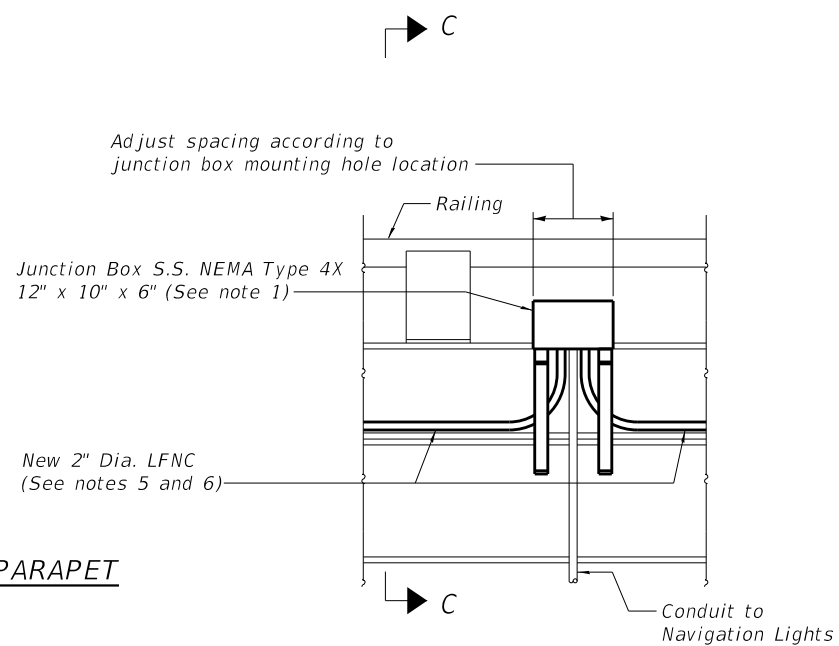
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)JL-2	MASSAC	17	14
CONTRACT NO. 78589				

ILLINOIS FED. AID PROJECT

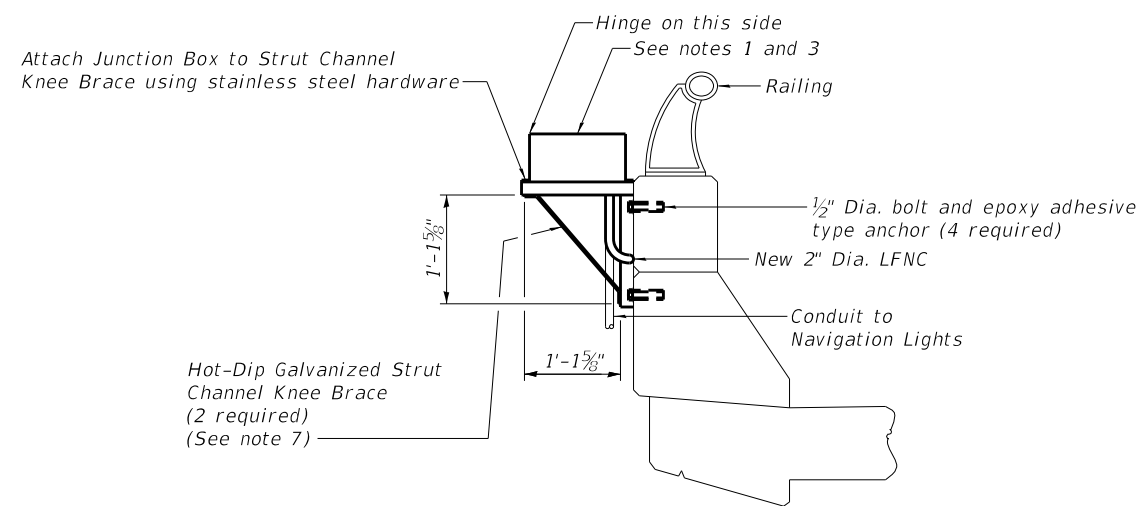




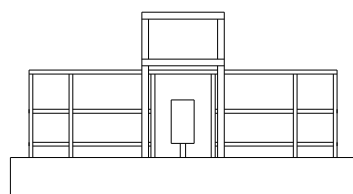
**TYPICAL SECTION THROUGH EAST PARAPET  
AT PULL BOX LOCATIONS**



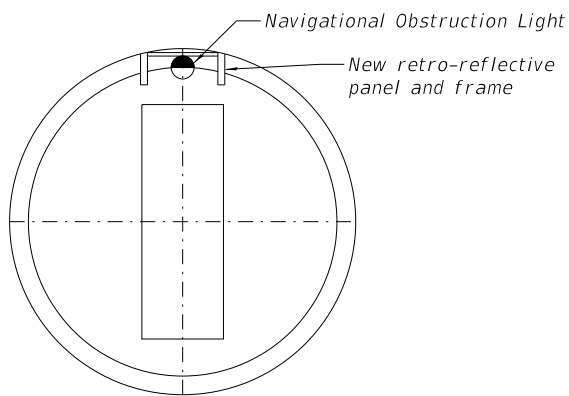
**SECTION B-B  
NEW JUNCTION BOX  
INSTALLATION DETAIL**  
(Typical for Piers 3 through 13, and spans 4 and 13)



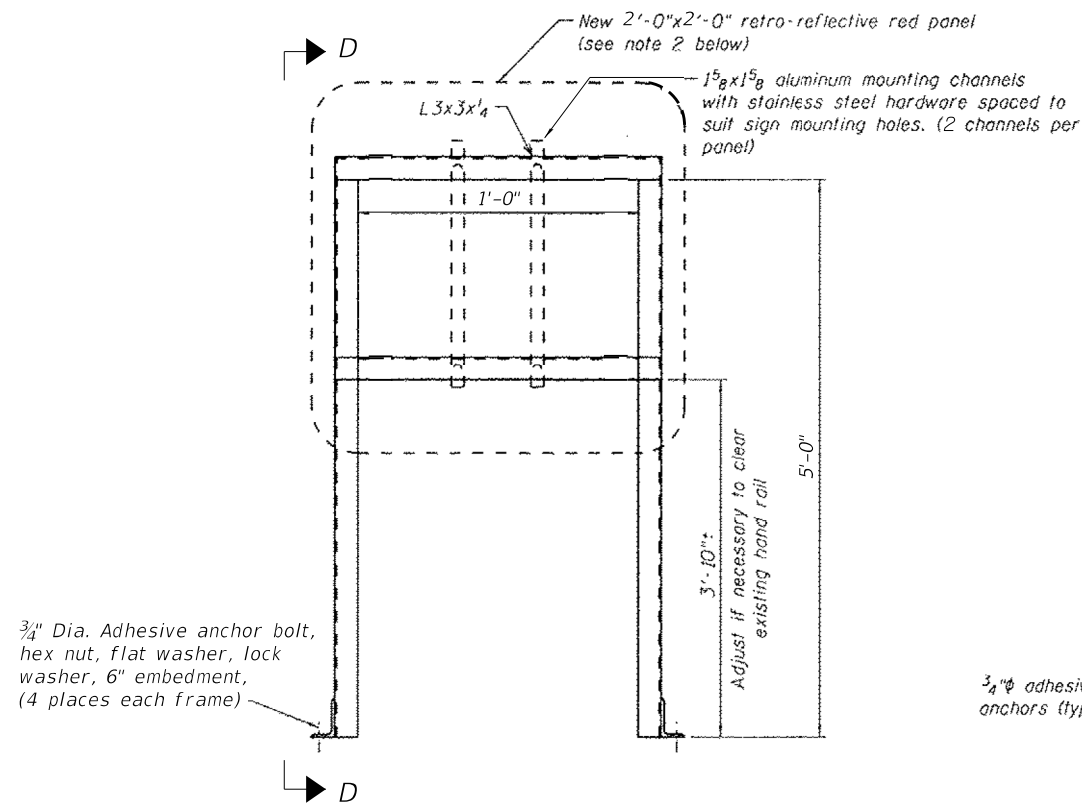
**SECTION C-C**



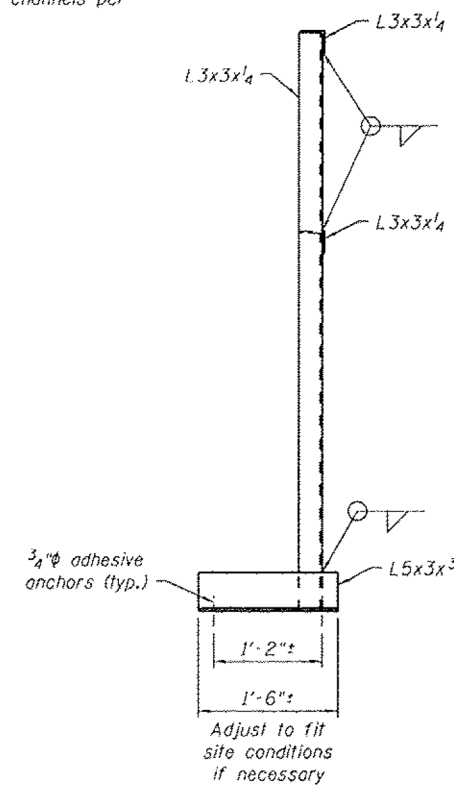
**ELEVATION  
PIER MOUNTED NAVIGATIONAL OBSTRUCTION LIGHT**  
(At Piers 3, 4, 12, and 13)



**PLAN  
PIER MOUNTED NAVIGATIONAL OBSTRUCTION LIGHT**  
(At Piers 3, 4, 12, and 13)



**NEW STEEL SUPPORT FRAME**



**SECTION D-D**

**NOTES:**

- See special provisions for additional requirements not shown.
- Panels shall be attached with 1/2" Dia. stainless steel fasteners, spaced per panel manufacturer's recommendations.
- The Junction Box at Piers 3, 12, and 13, and Spans 4 and 13 shall be 20" x 20" x 8". Mounting brackets shall be spaced and sized accordingly for installation and accessibility.
- For Section B-B, see sheet E6.
- Expansion fittings at Piers 4, 8, 12 and 13 shall be installed such that LFNC will terminate on a 8" x 8" x 6" junction box on one end and on JBP4E, JBP8E, JBP12E and JBP13E on the other end respectively.
- LFNC and 8" x 8" x 6" junction box used as an expansion fitting at Piers 4, 8, 12 and 13 will be paid for under item Conduit Attached to Structure, 2" Dia., Galvanized Steel. All other LFNC from JBP4E, JBP8E, JBP12E and JBP13E will be paid for under item Junction Box, Stainless Steel, Attached to Structure, 12" x 10" x 6" and Junction Box Stainless Steel, Attached to Structure, 20" x 20" x 8" respectively.
- Strut Channel Knee Brace shown is "B261-16 by Cooper Industries". Contractor can modify the support and submit to Engineer for approval.

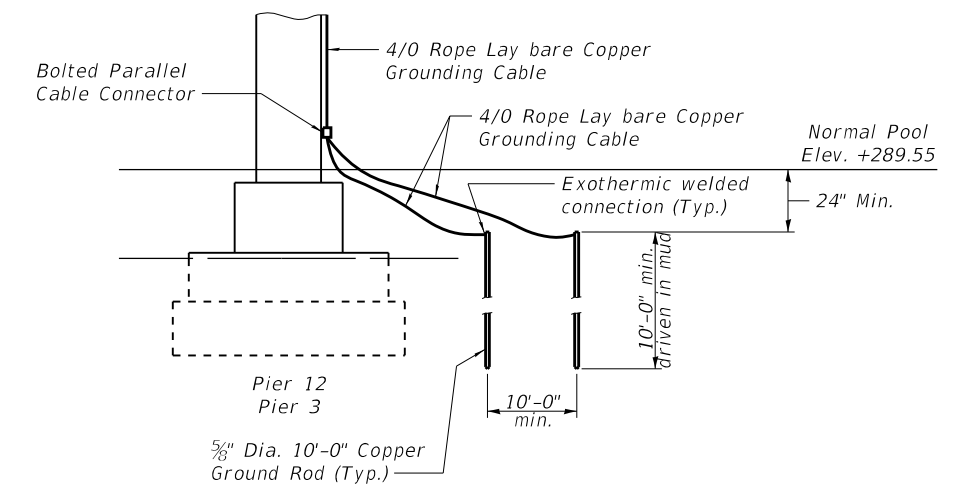
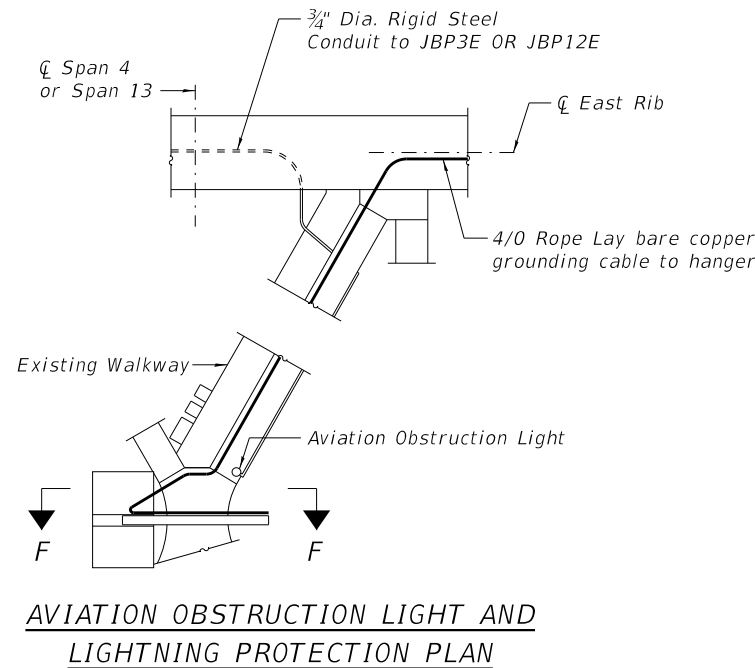
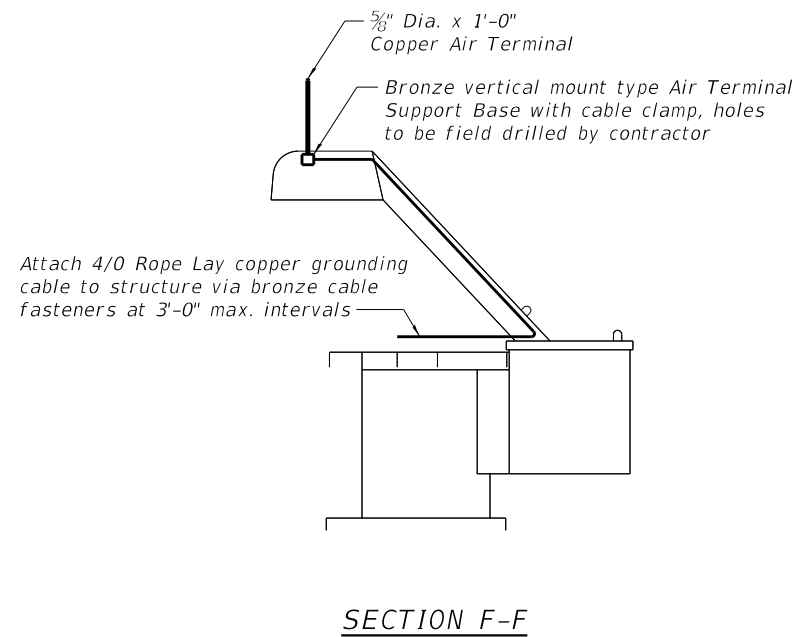
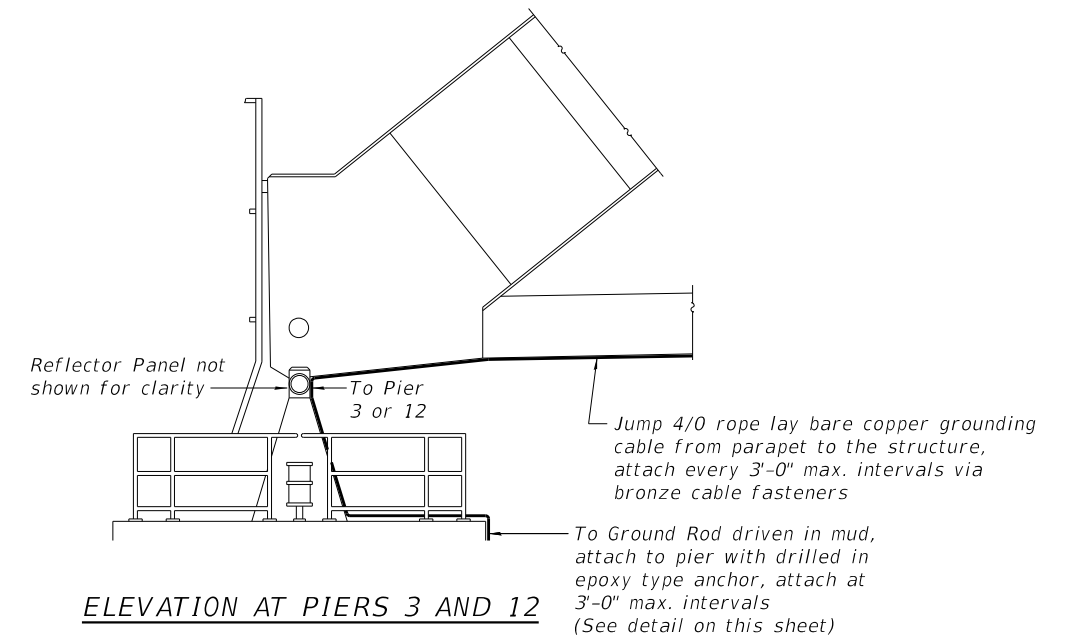
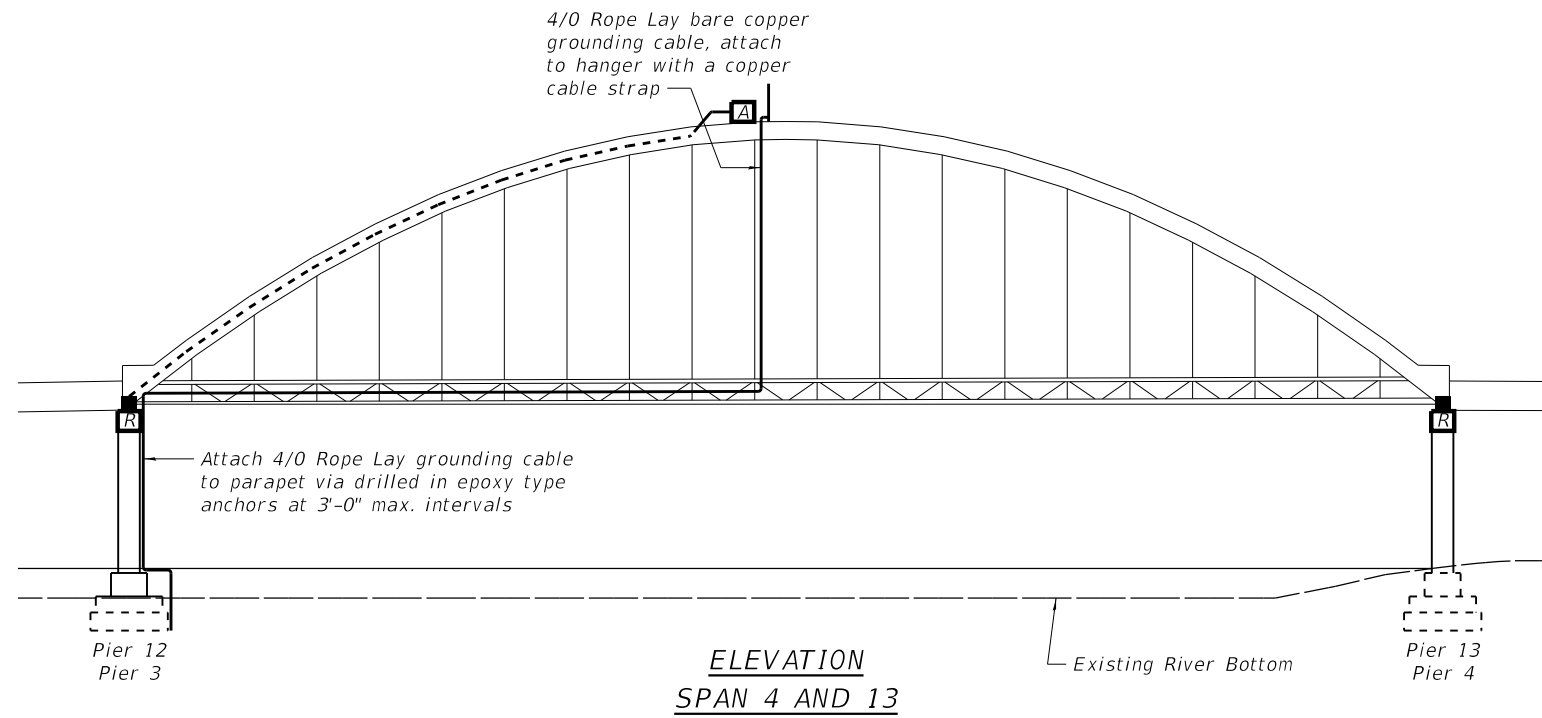


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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-24 OVER OHIO RIVER  
S.N. 064-0035  
ELECTRICAL MISCELLANEOUS DETAILS - 2**  
SHEET NO. E10 OF E12 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-38)JL-2	MASSAC	17	15
CONTRACT NO. 78589				
ILLINOIS FED. AID PROJECT				



**NOTES:**

- All costs for lightning protection and grounding work shown shall be included with the contract lump sum price for Bridge Grounding System.

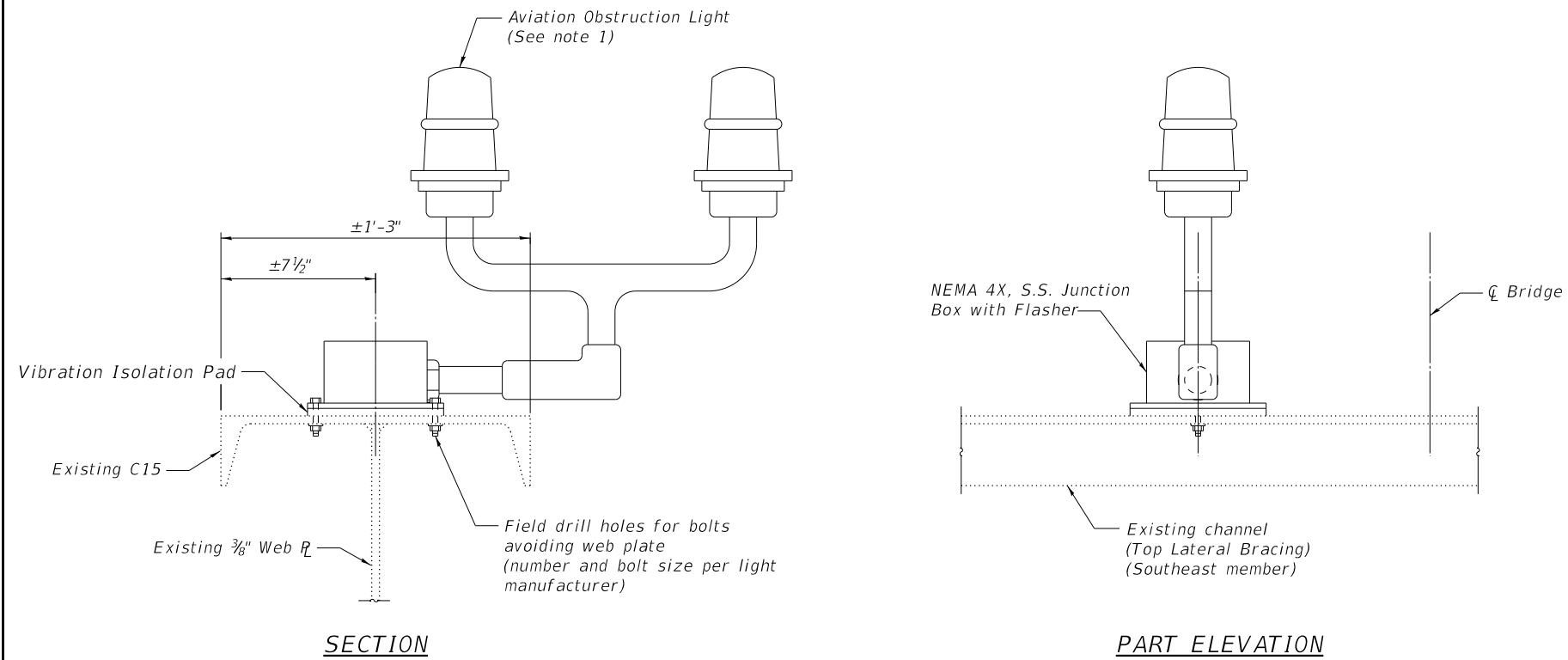


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PLOT SCALE =	DRAWN - R.L. REED	REVISED
PLOT DATE = 11/28/2017	CHECKED - N.K. BHINGE	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

I-24 OVER OHIO RIVER  
S.N. 064-0035  
LIGHTNING PROTECTION AND AVIATION OBSTRUCTION LIGHT DETAILS  
SHEET NO. E11 OF E12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)1-2	MASSAC	17	16
CONTRACT NO. 78589				
ILLINOIS FED. AID PROJECT				



**AVIATION OBSTRUCTION LIGHT DETAIL**  
Spans 4 and 13

**NOTES:**

1. Aviation Obstruction Light shown for bidding purposes only. The type and number of Aviation Obstruction Lights required is pending approval from F.A.A.

	USER NAME =	DESIGNED - J.M. HASSARD	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>I-24 OVER OHIO RIVER</b> <b>S.N. 064-0035</b> <b>AVIATION OBSTRUCTION LIGHT ATTACHMENT</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	CHECKED - D.W. PETERMEIER	REVISED			24	(64-3B)L-2	MASSAC	17	17
PLOT DATE = 11/28/2017	DRAWN - P.R. COOPER	REVISED	CONTRACT NO. 78589							
	CHECKED - J.M. HASSARD	REVISED	ILLINOIS FED. AID PROJECT							