

1-20-2012 LETTING ITEM 098

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAI ROUTE 24 (I-24)
SECTION (64-3B)L-1

NAVIGATIONAL LIGHTING REPAIRS
MASSAC COUNTY

C-99-061-11

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-24	(64-3B)L-1	MASSAC	7	1
		ILLINOIS	CONTRACT NO. 78273	

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 2

TRAFFIC DATA

I-24 TRAFFIC DATA

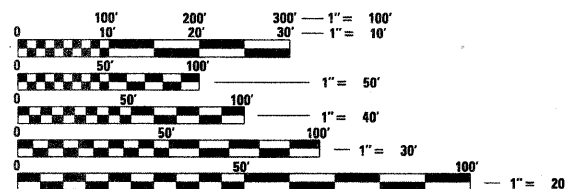
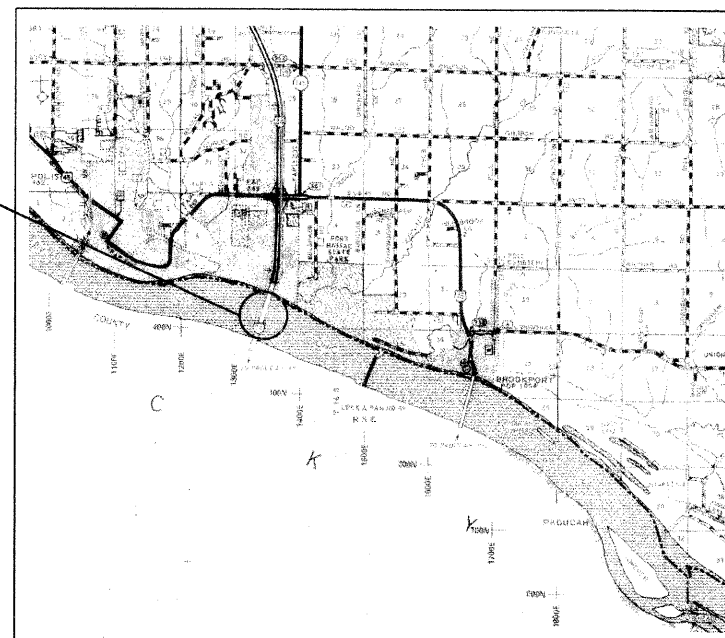
2009 ADT = 30,360
20% TRUCKS

TOWNSHIPS:

COUNTY UNIT ROAD DISTRICT



EXISTING STRUCTURE NO. 064-0035
FAI 24



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: T. WAYNE HALSTEAD (618) 351-5228
PROJECT MANAGER: DAVID PICHE (618) 351-5227

CONTRACT NO. 78273

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Oct 27th 20 11

Jerry [Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 9 20 11
Scott E. Stitt P.E. /s/
acting ENGINEER OF DESIGN AND ENVIRONMENT

December 9 20 11
William R. Fowler
interim DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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GENERAL NOTES

- 1) IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.16 REGARDLESS IF TRACK MOUNTED OR WHEELED.
- 2) COMMITMENTS: NONE AS OF AUGUST 26, 2011.

SUMMARY OF QUANTITIES

		STATE FUNDING	
		50% ILLINOIS; 50% KENTUCKY	
		CONSTRUCTION TYPE CODE	
		0021	
		MASSAC	
		SN 064-0035	
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2
67100100	MOBILIZATION	L SUM	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1
X8260110	NAVIGATION LIGHTING SYSTEM	L SUM	1

STANDARDS

- 000001-06
- 701101-02
- 701400-05
- 701406-06
- 701901-02

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX OF SHEETS, GENERAL NOTES, STANDARDS, SUMMARY OF QUANTITIES
- 3-7 NAVIGATIONAL LIGHTING PLAN DETAILS

Prepared By: Joe Zdanewicz
DISTRICT STUDIES & PLANS ENGINEER

Examined By: James Louis Erving
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Carrie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

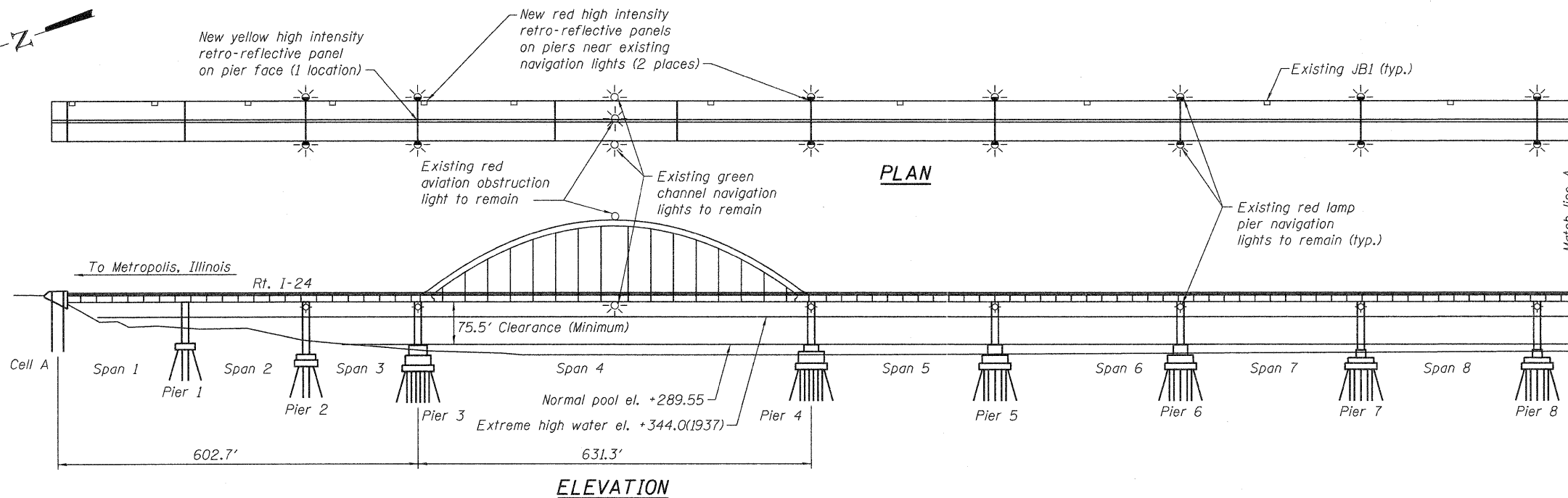
Examined By: Colt Kelly et
DISTRICT OPERATIONS ENGINEER

Examined By: K. L. [Signature]
DISTRICT CONSTRUCTION ENGINEER

Examined By: Thomas W. [Signature]
DISTRICT MATERIALS ENGINEER

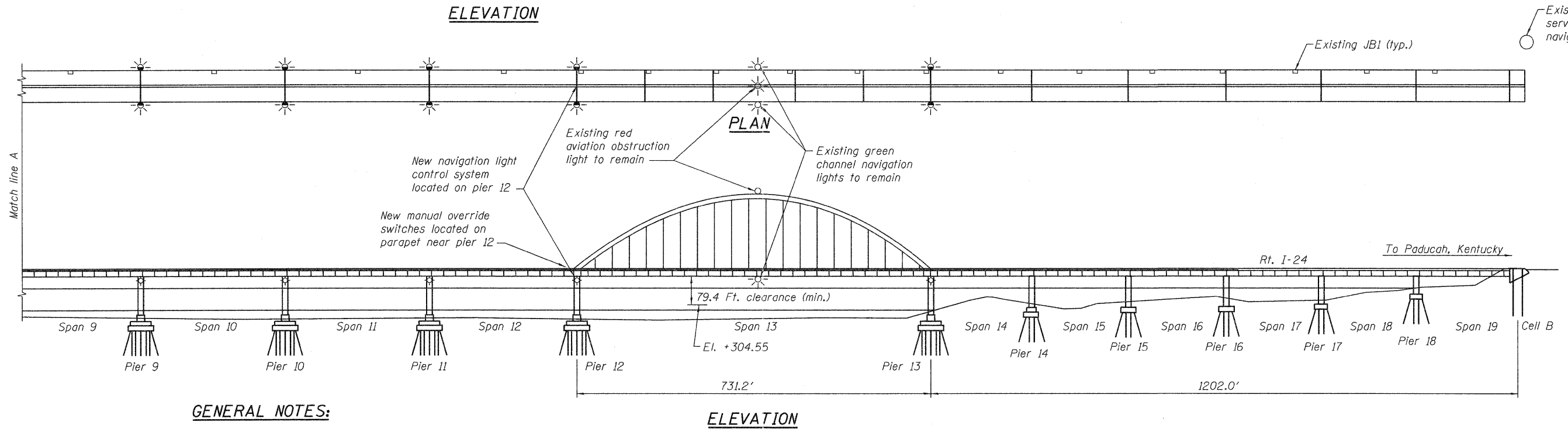
Approved By: Adam [Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

DATE: Oct 27th 2011



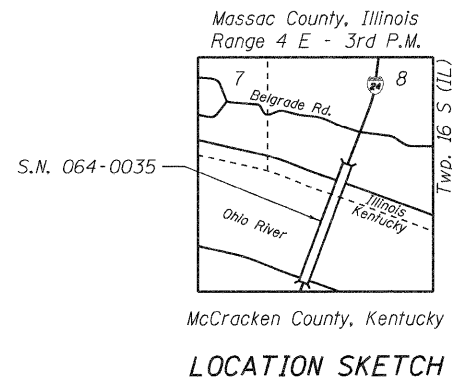
INDEX OF SHEETS

- 1. Plan and Elevation
- 2. Wiring Details
- 3. Mounting Details
- 4. Retro-Reflective Panel Details - Red Panels
- 5. Retro-Reflective Panel Details - Yellow Panel



GENERAL NOTES:

1. See special provisions for additional requirements not shown.
2. All work over or in the navigable waterway must be coordinated with the U.S. Coast Guard 45 days in advance of the activity.
3. All elevations are in feet and refer to USCOE Ohio River datum.
4. The Organic Zinc Rich Primer/Epoxy/Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all steel surfaces shall be Gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures".
5. The Contractor shall maintain the existing navigation obstruction warning lighting system such that it remains operational at all times.
6. This work, as herein specified, will be paid for at the contract lump sum price for NAVIGATION OBSTRUCTION WARNING LIGHTING SYSTEM.



Lance V. Borden
 LANCE V. BORDEN
 CARISLE, PENNSYLVANIA
 ILLINOIS LICENSED ELECTRICAL
 ENGINEER NO. 062-061047
 EXPIRES 11/30/2013

NAVIGATION LIGHT AUTOMATIC CONTROLS
F.A.I. ROUTE 24 SEC. (64-3B)I-1
MASSAC COUNTY
PLAN AND ELEVATION
STRUCTURE NO. 064-0035



USER NAME =	DESIGNED - CDV	REVISED -
PLOT SCALE =	CHECKED - LVB	REVISED -
PLOT DATE = DECEMBER, 2011	DRAWN - RSJ	REVISED -
	CHECKED - CDV	REVISED -

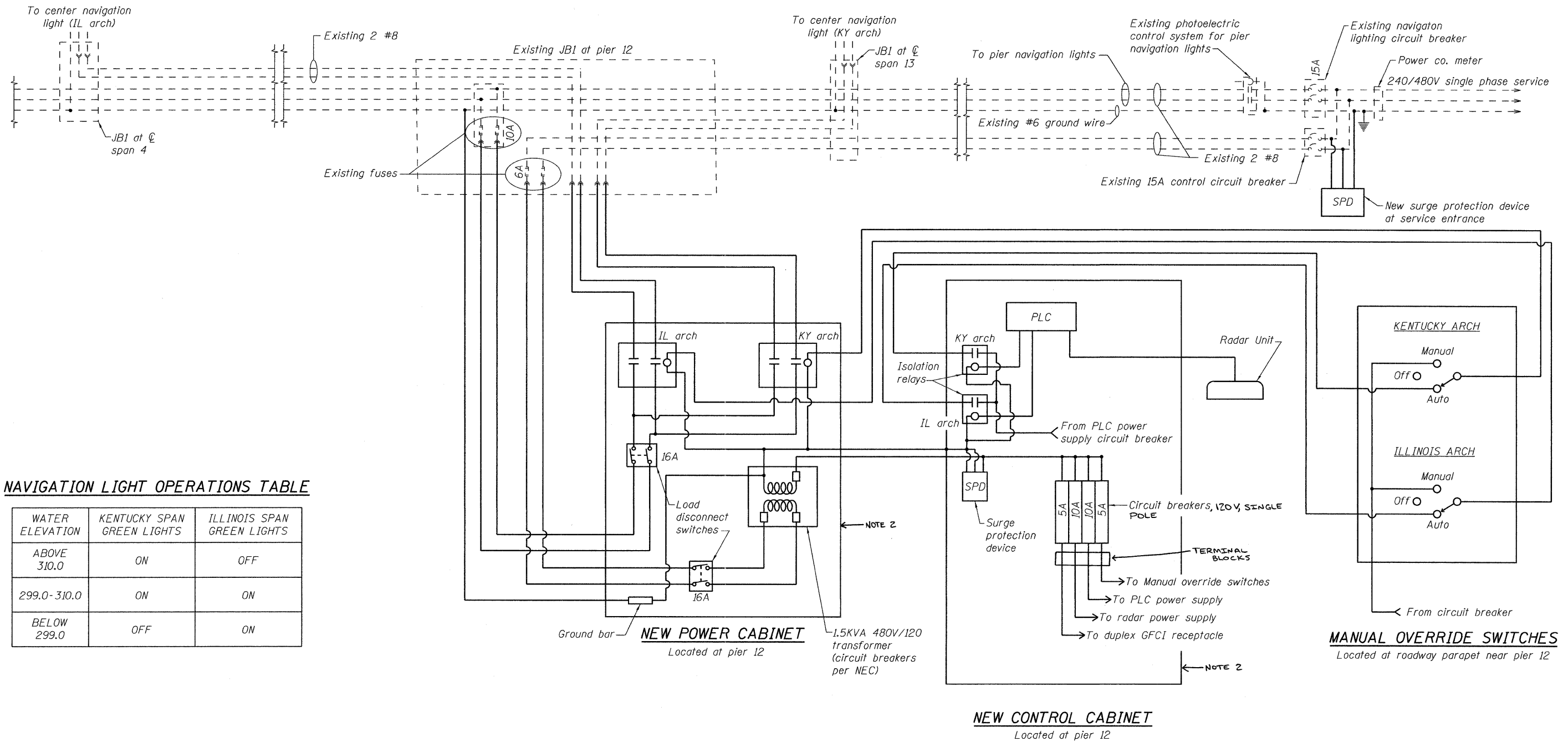
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)I-1	MASSAC	7	3
			CONTRACT NO. 78273	
ILLINOIS FED. AID PROJECT				

LEGEND

- Existing wiring, conduits and junction boxes
- New wiring, conduits and cabinets



NAVIGATION LIGHT OPERATIONS TABLE

WATER ELEVATION	KENTUCKY SPAN GREEN LIGHTS	ILLINOIS SPAN GREEN LIGHTS
ABOVE 310.0	ON	OFF
299.0-310.0	ON	ON
BELOW 299.0	OFF	ON

NOTES:

1. See special provisions for additional requirements not shown.
2. CABINET SIZE SHALL MATCH EXISTING AS A MINIMUM. SIZE LARGER AS NEEDED.



USER NAME =
 PLOT SCALE =
 PLOT DATE = DECEMBER, 2011

DESIGNED - CDV
 CHECKED - LVB
 DRAWN - RSJ
 CHECKED - CDV

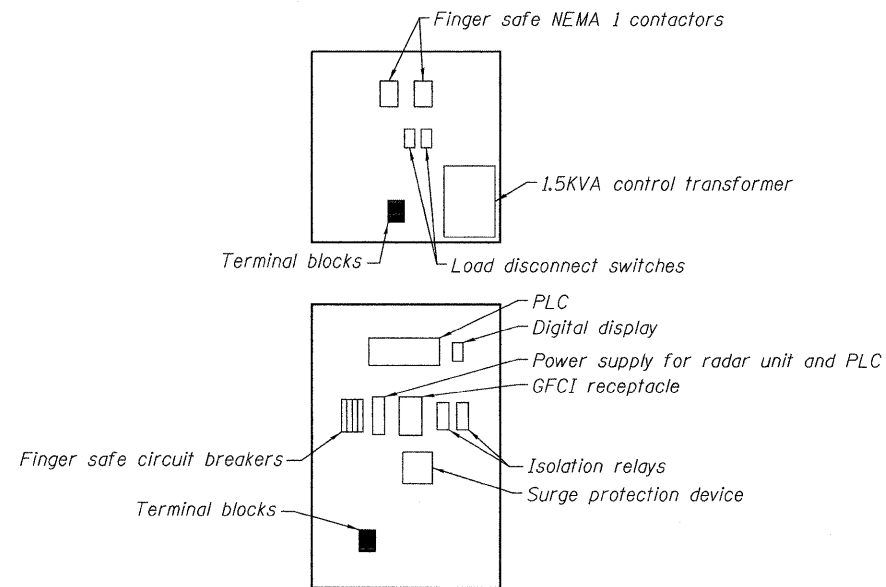
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

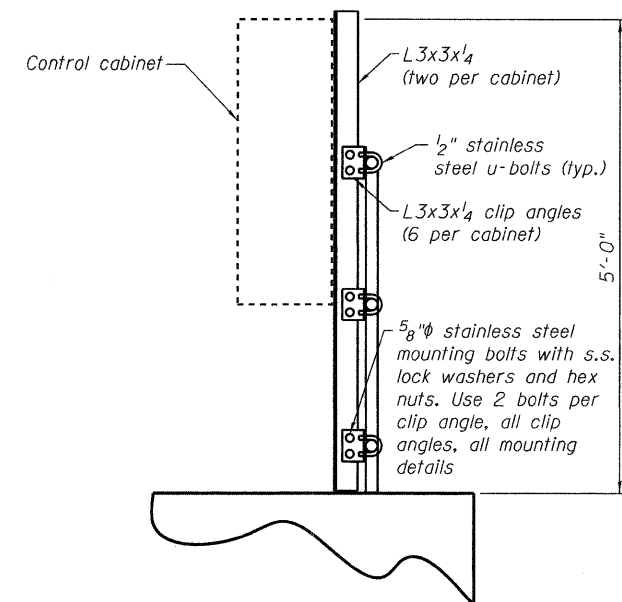
**NAVIGATION LIGHT AUTOMATIC CONTROLS
 WIRING DETAILS**

SHEET NO. 2 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)L-1	MASSAC	7	4
CONTRACT NO. 78273				
ILLINOIS FED. AID PROJECT				

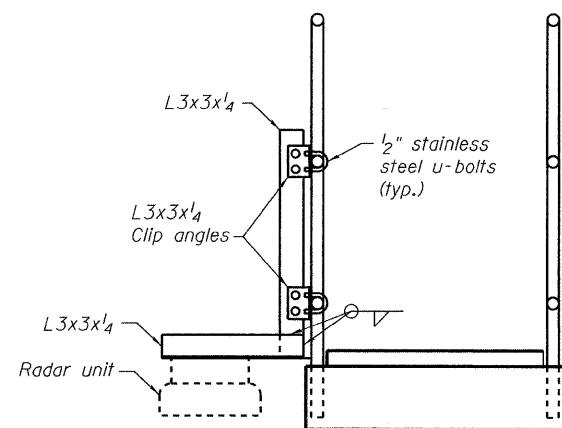


CONTROL AND POWER CABINET LAYOUTS



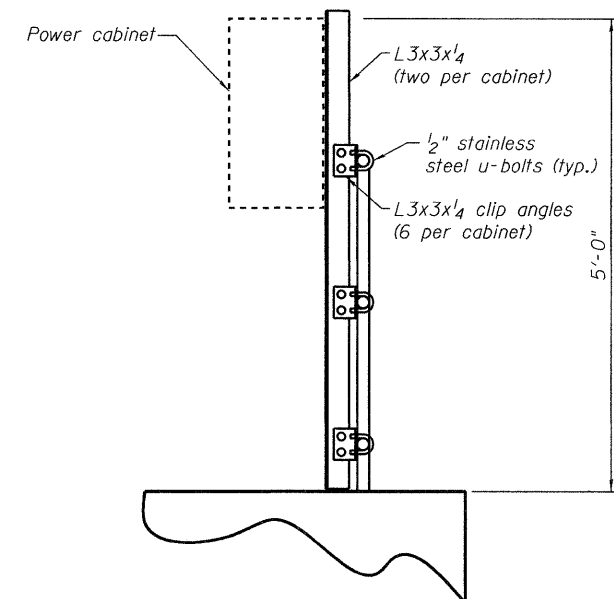
CONTROL CABINET MOUNTING DETAILS ON PIER 12

NEW CABINETS SHALL BE MOUNTED IN SAME LOCATION AS EXISTING SYSTEM (SEE NOTES)



RADAR MOUNTING DETAIL

RADAR UNIT MOUNTED TO LONGITUDINAL WALKWAY NEAR PIER 12 (SEE NOTES)



POWER CABINET MOUNTING DETAILS ON PIER 12

NEW CABINETS SHALL BE MOUNTED IN SAME LOCATION AS EXISTING SYSTEM (SEE NOTES)

NOTES:

1. See special provisions for additional requirements not shown.
2. Verify any component dimensions and field fit prior to purchasing and installing.
3. Radar unit shall be mounted per the manufacturers recommendation.



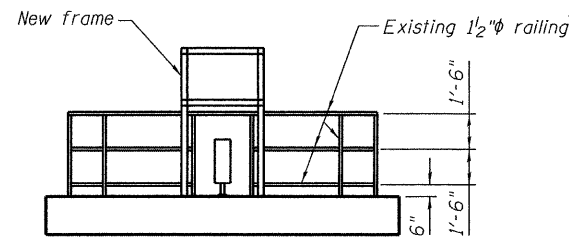
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

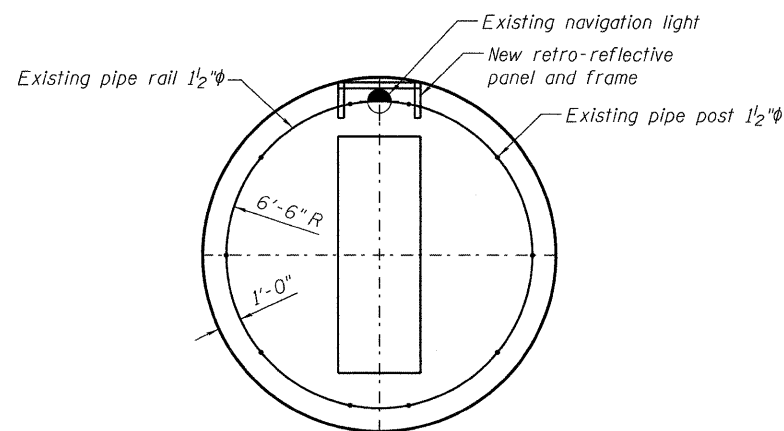
**NAVIGATION LIGHT AUTOMATIC CONTROLS
MOUNTING DETAILS**

SHEET NO. 3 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)1-1	MASSAC	7	5
CONTRACT NO. 78273			ILLINOIS FED. AID PROJECT	

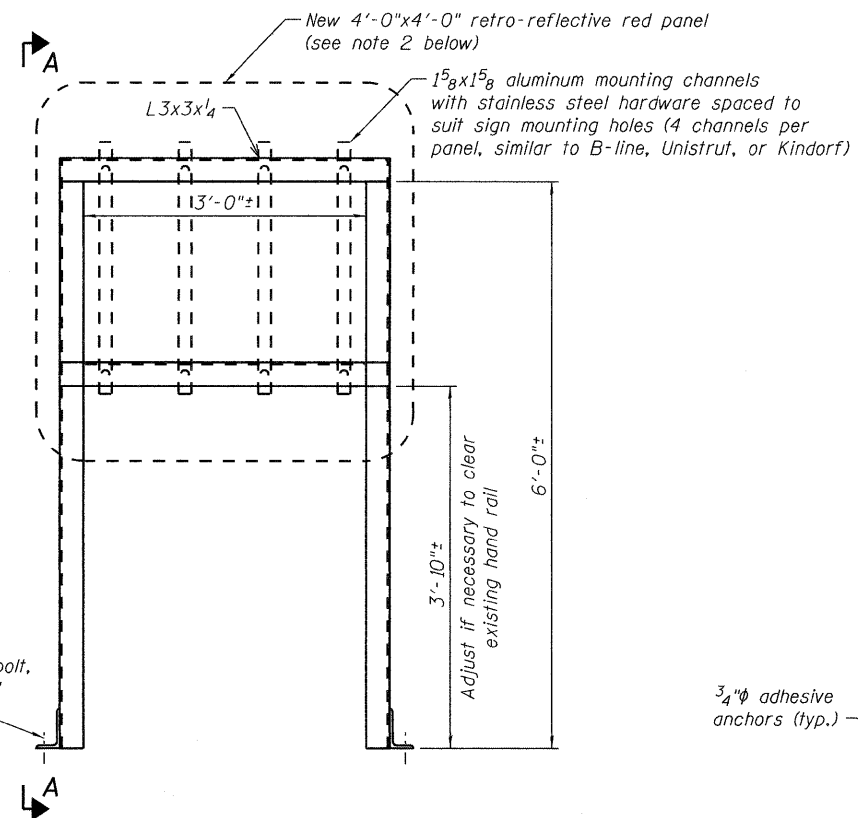


ELEVATION



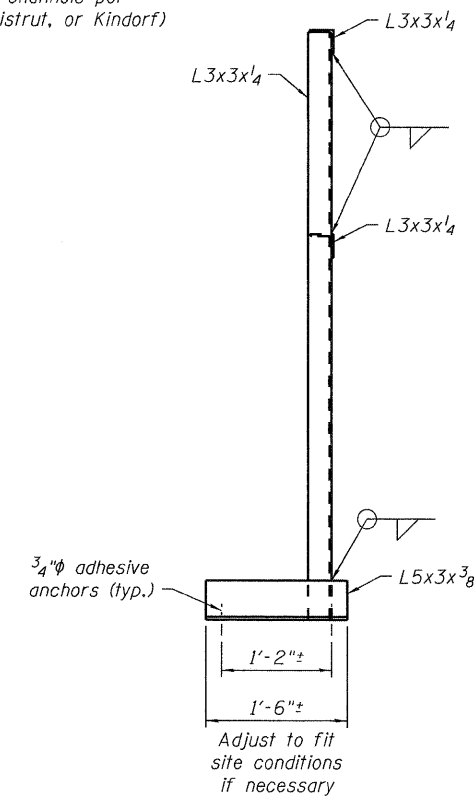
PLAN

TWO LOCATIONS - PIER 3 AND PIER 4



STEEL SUPPORT FRAME

3/4" stainless steel adhesive anchor bolt, hex nut, flat washer, lock washer, 6" embedment. (4 places each frame)



VIEW A-A

NOTES:

1. See special provisions for additional requirements not shown.
2. Panels shall be attached with 1/2" stainless steel fasteners, spaced per panel manufacturers recommendations.



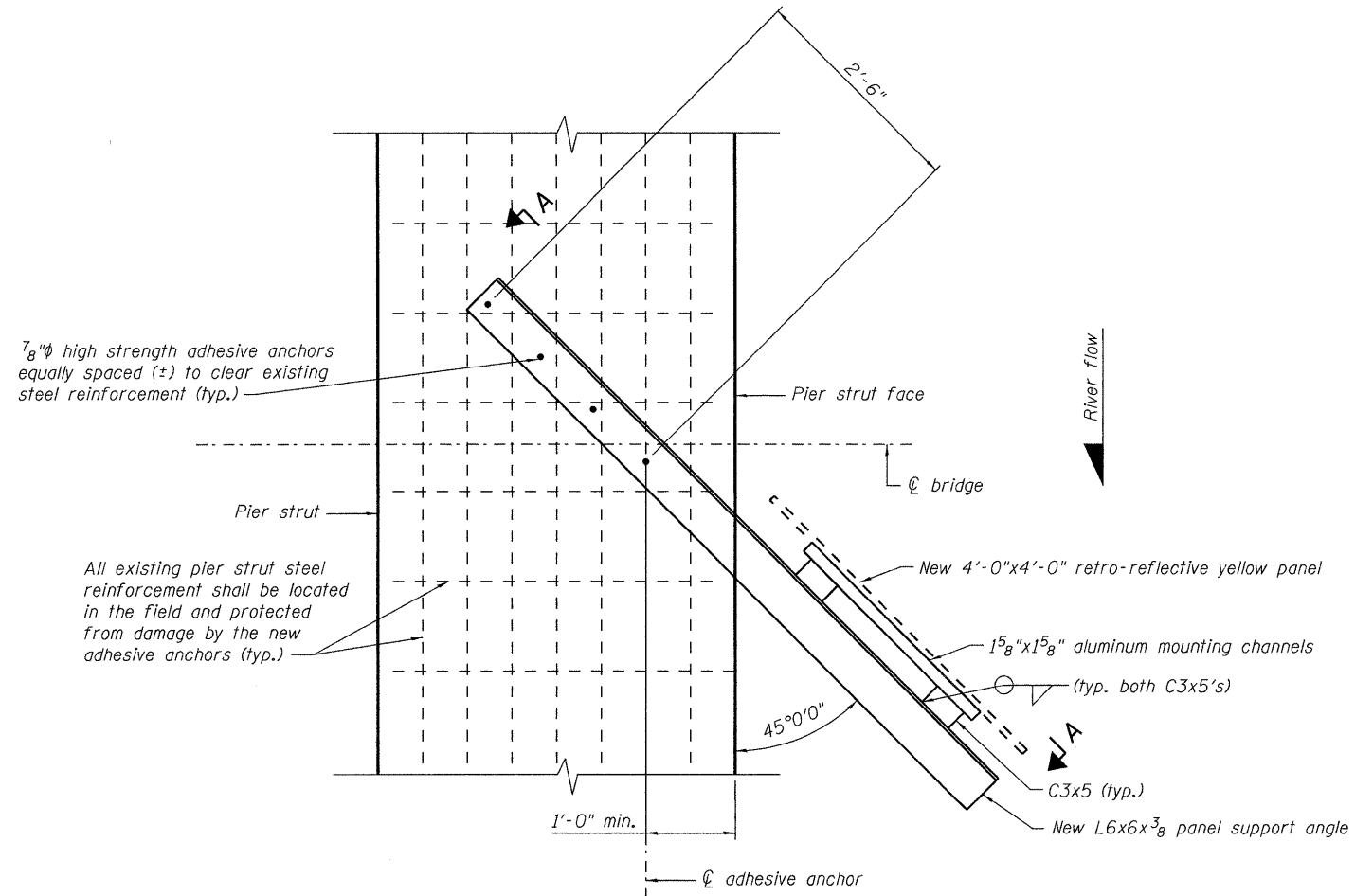
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PLOT DATE = DECEMBER, 2011	DRAWN - RSJ	REVISED -
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STATE OF ILLINOIS
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NAVIGATION LIGHT AUTOMATIC CONTROLS
RETRO-REFLECTIVE PANEL DETAILS - RED PANELS

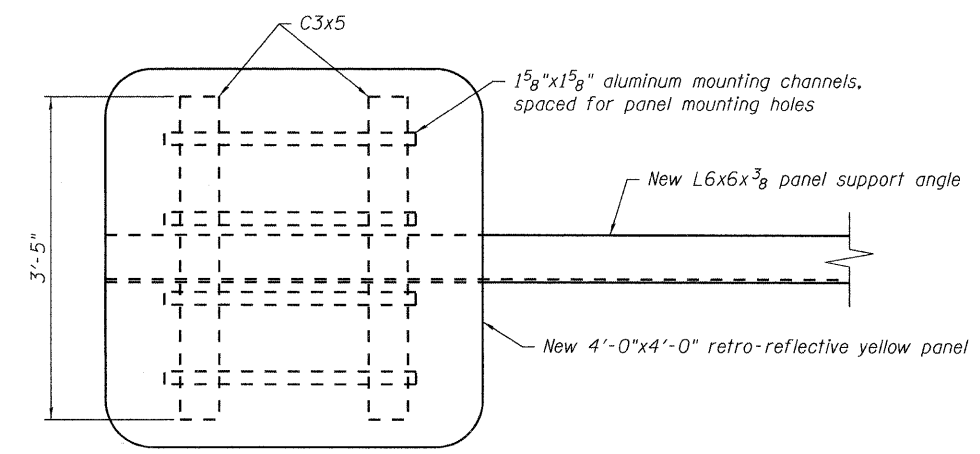
SHEET NO. 4 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)I-1	MASSAC	7	4
CONTRACT NO. 78273				
ILLINOIS FED. AID PROJECT				



PARTIAL PLAN PIER 3
SEE DRAWING 1 FOR MOUNTING LOCATION

Provide panel support and adhesive system anchor, as specifically required elsewhere in these Plans and Specifications. Otherwise use the following: ASTM A709 Grade 50 sign support, ASTM F1554 Grade 36 anchor, and the Hilti HIT-RE 500 epoxy adhesive anchoring system, or another approved panel support, anchor, and adhesive system. Follow manufacturer's recommendations. Minimum anchor embedment to be 8 inches or per manufacturer's recommendations, whichever is larger. Yellow retro-reflective panel shall be located as shown on plans and shall face upstream.



VIEW A-A

NOTES:

1. See special provisions for additional requirements not shown.
2. Panels shall be attached with 1/2" diameter stainless steel fasteners, spaced per panel manufacturer's recommendations.



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	CHECKED - LVB	REVISED -
PLOT SCALE =	DRAWN - RSJ	REVISED -
PLOT DATE = DECEMBER, 2011	CHECKED - CDV	REVISED -

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DEPARTMENT OF TRANSPORTATION

NAVIGATION LIGHT AUTOMATIC CONTROLS
RETRO-REFLECTIVE PANEL DETAILS - YELLOW PANEL

SHEET NO. 5 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	(64-3B)1-1	MASSAC	7	7
CONTRACT NO. 78273				
ILLINOIS FED. AID PROJECT				