

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



LIST OF DRAWINGS

Title Sheet	1
Lighting Details	2-12

PROSPECT/VERONA PENOBSCOT COUNTY PENOBSCOT NARROWS BRIDGE OVER PENOBSCOT RIVER U.S. ROUTE 1 PROJECT NO. 24595.00 BRIDGE NO. 6421

TRAFFIC DATA

Current (2023) AADT	8,750
Future (2043) AADT	9,630
DHV - % of AADT	11%
Heavy Trucks (% of AADT)	11%
Heavy Trucks (% of DHV)	6%
Directional Distribution (% of DHV)	53%
18 kip Equivalent P 2.0	684
18 kip Equivalent P 2.5	651
Design Speed (mph)	35 mph

MAINTENANCE OF TRAFFIC

Maintain one 12'- 0" wide Alternating One-way Traffic lane and one 4'-0" wide shoulder.

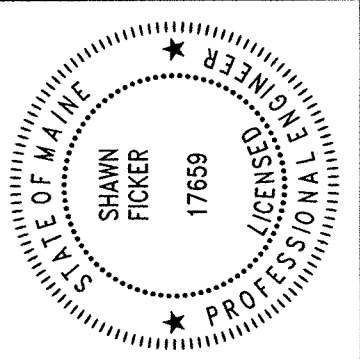
UTILITIES

Central Maine Power Company, Charter Communications, Consolidated Communications of Northern New England, Norway Wastewater, Norway Water District, Town of Norway, Revolution Networks (aka Necap).

TYLin

PROJECT LOCATION:	U.S. Route 1/Penobscot Narrows Bridge (#6421) over the Penobscot River. Located at the Prospect-Verona Town line.
PROGRAM AREA:	Bridge Program
OUTLINE OF WORK:	Replacement of Aesthetic Lighting

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED:
COMMISSIONER:
CHIEF ENGINEER:



SIGNATURE:
17659
P.E. NUMBER
8/29/2023
DATE

PROGRAM	BRIDGE
PROJECT MANAGER	
DESIGNER	
CONSULTANT	TY, LN INTERNATIONAL
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

PENOBSCOT NARROWS BRIDGE
OVER PENOBSCOT RIVER
PROSPECT/VERONA PENOBSCOT COUNTY
TITLE SHEET

E - 01

WIN 24595.00

ELECTRICAL LEGEND

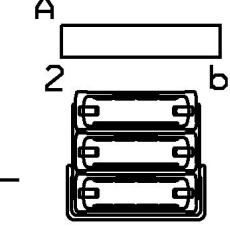
GENERAL:

- _____ DENOTES EXISTING TO REMAIN
- _____ DENOTES NEW WORK

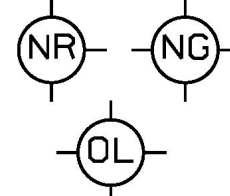
CONDUIT AND WIRE

- _____ CONDUCTORS RUN IN CONDUIT
- RACEWAY CONCEALED IN CEILING OR WALLS, OR EXPOSED IN UNFINISHED AREAS.

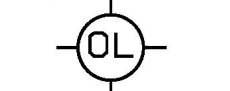
LIGHTING



LIGHTING FIXTURE 'A' DENOTES TYPE (REFER TO LIGHTING FIXTURE SCHEDULE), NUMERAL DENOTES CIRCUIT NUMBER, 'b' DENOTES FIXTURE CONTROLLED BY SWITCH/CIRCUIT b.



NAVIGATION LIGHTS: R = RED, G = GREEN



FAA OBSTRUCTION LIGHT

SWITCHING



PHOTOCELL CONTROL DEVICE

MISCELLANEOUS



JUNCTION BOX



DISCONNECT SWITCH

ABBREVIATIONS

WP	WEATHERPROOF
A.F.F.	ABOVE FINISHED FLOOR
N.T.S.	NOT TO SCALE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
LC	LIGHTING CONTACTOR
JB, J-BOX	JUNCTION BOX
O.C.	ON CENTER
TYP.	TYPICAL
C	CONDUIT

DEMOLITION NOTES:

- CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT UTILITIES AND STRUCTURES FROM DAMAGE. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE UTILITY OR STRUCTURE OWNER AT NO COST TO THE DEPARTMENT.
- IN GENERAL, DEMOLITION WORK INCLUDES THE FOLLOWING: REMOVAL OF ELECTRICAL FEEDS, LUMINAIRES, CONDUITS, LUMINAIRE MOUNTS, JUNCTION BOXES AND ASSOCIATED ITEMS RELATED TO THE EXISTING LIGHTING SYSTEM. REMOVED LUMINAIRES AND ASSOCIATED EQUIPMENT SHALL BE TURNED OVER TO OWNER.
- DEMOLITION WORK SHALL BE COMPLETED IN A PHASED MANNER SUCH THAT NIGHTTIME ROADWAY ILLUMINATION WILL BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION BY EITHER NEW OR EXISTING LIGHTING SYSTEM.
- EXISTING JUNCTION BOXES AND ASSOCIATED CONDUIT AND CONDUCTORS EXCEPT WHERE OTHERWISE NOTED FOR DEMOLITION SHALL RETAIN THEIR INTEGRITY FOR NEW OR CONTINUED USE IN NEW LIGHTING SYSTEM.
- ALL MATERIAL REMOVED AND NOT TURNED OVER TO OWNER SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS APPLICABLE TO CONSTRUCTION DEMOLITION DEBRIS.

LIGHTING FIXTURE SCHEDULE PENOBSCOT BRIDGE MDOT							
TAG	MFR	DISTRIBUTION	COLOR	WATTS	DESCRIPTION	CATALOG NUMBER	LIGHTING NOTES
A	COLORKINETICS	10° BEAM	4K	300W	PYLON UPLIGHTING	REACHELITE INTELLIHUE POWERCORE, 300W, 100-277V UL/CE/CQC 423-000303-02	300W LUMINAIRES ARE FOR PYLON LIGHTING ABOVE ROADWAY
B	COLORKINETICS	10° BEAM	4K	100W	STAY/PYLON LIGHTING	REACHELITE INTELLIHUE POWERCORE, 100W, 100-277V UL/CE/CQC 423-000103-02	100W TYPE 'B' LUMINAIRES ARE USED FOR BOTH STAY LIGHTS AND PYLON LIGHTING BELOW ROADWAY
C	COLORKINETICS	3° BEAM	4K	25W	RAIL LIGHTING	ARCHIPOINT ICOLOR POWERCORE, CLEAR FLAT LENS, 100-240V, UL/CE 123-000022-01	

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
626.28	CONDUIT REPAIR	25	EA
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.10	AIR COMPRESSOR (INC OPERATOR)	20	HR
631.11	AIR TOOL (INCLUDING OPERATOR)	20	HR
631.171	TRUCK - SMALL (INCLUDING OPERATOR)	20	HR
634.316	#10 AWG COPPER WIRE	750	LF
638.0211	FEATURE LIGHTS (TYPE 'A' - PYLON LIGHTS)	1	LS
638.0211	FEATURE LIGHTS (TYPE 'B' - STAY LIGHTS)	1	LS
638.04	BRIDGE WALKWAY LIGHTING (TYPE 'C' - RAIL LIGHTS)	1	LS
639.21	FIELD OFFICE, TYPE D	1	EA
652.34	CONE	100	EA
652.35	CONSTRUCTION SIGNS	300	SF
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	90	CD
652.38	FLAGGERS	2900	HR
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	3	EA
659.10	MOBILIZATION	1	LS

GENERAL NOTES:

- SPECIFICATIONS: 'STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS'.
- RADIOGRAPHY, OR OTHER MEANS APPROVED BY ENGINEER, SHALL BE USED TO VERIFY THE ABSENCE OF REINFORCING BARS AND PRESTRESSING STEEL CONFLICTS WITH WITH THE HOLE LOCATION PRIOR TO DRILLING OR CORING ANY HOLE DEEPER THAN 2.5 INCHES INTO THE CONCRETE.
- PAYMENTS FOR LUMINAIRES SHALL INCLUDE ALL INSTALLATION REQUIRED, AND ADJUSTMENT OF FIXTURE TO PROPER ALIGNMENT.
- PAYMENT OF ELECTRICAL SYSTEMS SHALL INCLUDE INSTALLATION OF CONDUITS AND WIRES.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC CODE (NEC); COUNTY OF HANCOCK AND LOCAL UTILITY COMPANY REQUIREMENTS; AND MOST RECENT MAINE DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR MISCELLANEOUS CONSTRUCTION SECTION 634 HIGHWAY LIGHTING; STANDARD DETAILS FOR DIVISION 600 MISCELLANEOUS CONSTRUCTION AND SECTION 715 LIGHTING MATERIALS, UNLESS NOTED OTHERWISE.
- SCOPE OF WORK: INSTALL BRIDGE LIGHTING IS SHOWN ON THESE PLANS.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO APPLICABLE PROVISIONS OF THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND STANDARD DETAILS. NATIONAL ELECTRIC CODE, AND ANY REQUIREMENTS OF THE POWER COMPANY.
- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO ENSURE AWARENESS OF SITE CONDITIONS THAT COULD AFFECT THE BID PERIOD.
- ALL LIGHTING CIRCUITS ARE TO BE CONTROLLED THROUGH EXISTING CONTROLS.
- LIGHTING FIXTURES SHALL BE IES FULL CUT OFF, LIGHT EMITTING DIODE (LED) FIXTURES. LED MODULES SHALL BE IP65 OR IP66 RATED PERIOD. ALL FIXTURES SHALL BE GASKETED AND HAVE SURGE PROTECTION AND A FUSE KIT PERIOD. REFER TO SPECIAL PROVISIONS. OTHER MANUFACTURERS AND MODELS MAY BE CONSIDERED FOR USE IN THIS PROJECT. EVALUATION BY MAINEDOT OF ALTERNATIVE LED LUMINAIRES THAT MAY BE PROPOSED BY THE CONTRACTOR FOR SUBSTITUTION WILL REQUIRE SUBMITTAL OF THE FOLLOWING AT A MINIMUM: IS LM79-19 ABSOLUTE TESTING REPORT FOR THE PROPOSED ALTERNATIVE LUMINAIRE, IES LM-80-20 TESTING REPORT FOR LED CHIPS TO BE USED IN THE ALTERNATIVE LUMINAIRE. DOCUMENTING, TESTING FOR A MINIMUM OF 8500 HOURS PERIOD, IES TM-21-19, REPORT FOR PROJECTED LONG TERM LUMEN MAINTENANCE PERIOD, INCLUDING INCREMENTAL LUMEN DEPRECIATION TABLE AT 25 DEGREES CELSIUS TO A MINIMUM OF 50,000 HOURS. IES PHOTOMETRIC FILE FROM THE MANUFACTURER FOR THE PROPOSED ALTERNATIVE LUMINAIRE; PHOTOMETRIC PLOT, OVERLAID ON THE LAYOUT OF THE LUMINAIRE LOCATIONS FOR THIS SPECIFIC PROJECT SHOWING LIGHT CONTOURS, ILLUMINATION STATISTICS FOR EACH OF THE LIGHTING GROUPS AND VALUE OF LIGHT LOSS FACTOR USED IN THE ANALYSIS; VALUES OF LLD, LDD, BALLAST FACTOR, AND OTHER FACTORS USED FOR CALCULATION OF THE ASSUMED LIGHT LOSS FACTOR PERIOD. SPECIFICATION DATA REGARDING OPTICS, CHROMATIC COLOR, TEMPERATURE, DRIVER, SURGE PROTECTION, HOUSING, AND GASKETING PERIOD REFER TO SPECIAL PROVISIONS.
- THE LUMINAIRES, INCLUDING LED'S AND DRIVERS AND ASSOCIATED COMPONENTS SHALL BE WARRANTIED FOR 10 YEARS FROM THE DATE OF INSTALLATION. ALL COSTS ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF DEFECTIVE EQUIPMENT DURING THIS PERIOD SHALL BECOME THE RESPONSIBILITY OF THE EQUIPMENT MANUFACTURER. SUCH COSTS MAY INCLUDE, BUT ARE NOT LIMITED TO LABOR COSTS, EQUIPMENT REPLACEMENT, CRANE OR LIFT EQUIPMENT RENTAL, REMOVAL AND REINSTALLATION OF GUARDRAIL IF REQUIRED FOR ACCESS.
- BUSHINGS SHALL BE INSTALLED ON ALL CONDUIT TERMINATIONS.
- PULL WIRE SHALL BE INSTALLED IN ALL CONDUIT.
- ALL CONDUIT THREADS ARE TO BE RED-HEADED.
- UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL FURNISH TO MAINEDOT A SET OF AS BUILT PLANS FOR FUTURE REFERENCE AND SYSTEM MAINTENANCE.
- PORTABLE CHANGEABLE MESSAGE BOARD LOCATIONS TO BE DETERMINED IN THE FIELD BY THE RESIDENT.

Date: 8/28/2023

Username:

Division: HIGHWAY

Filename: ... \002_Lighting-Details_02-11.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2265(500)

WIN

024695.00

HIGHWAY PLANS

SIGNATURE

P.E. NUMBER

DATE

DATE

PROJ. MANAGER

CHECKED-REVIEWED

DESIGN-DETAILED

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

PENOBSCOT NARROWS BRIDGE
AESTHETIC LIGHTING

ELECTRICAL LEGEND, NOTES
& DETAILS - 02

SHEET NUMBER

E-02

OF 12

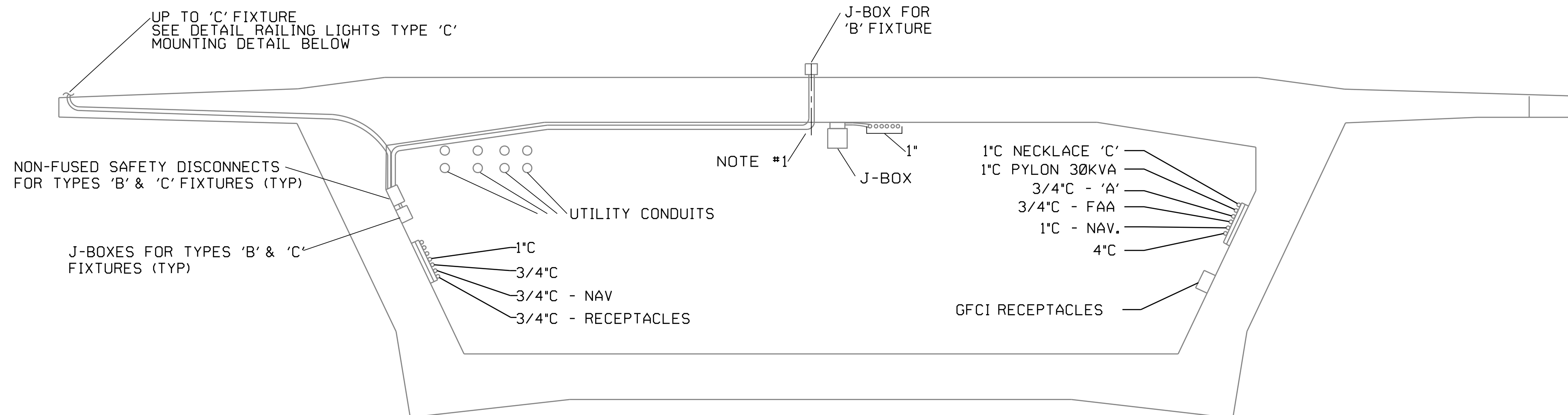
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Date: 8/28/2023

Username:

Division: HIGHWAY

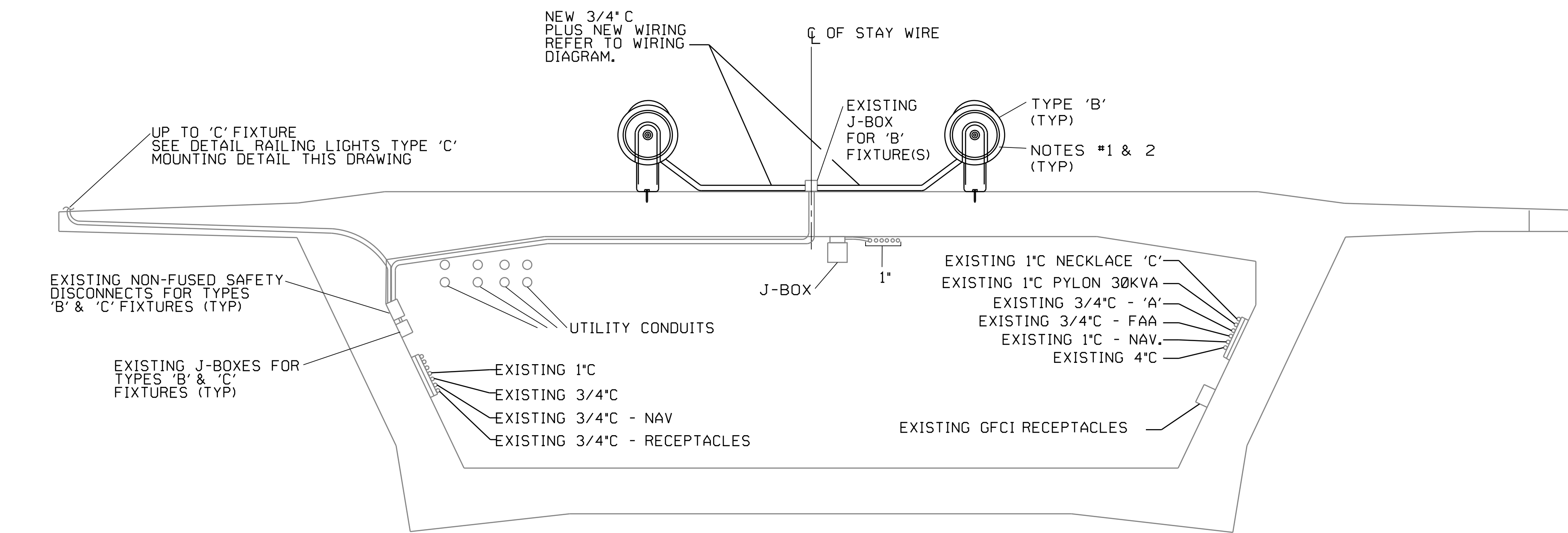
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EXISTING SECTION (FOR REFERENCE ONLY)

NO SCALE

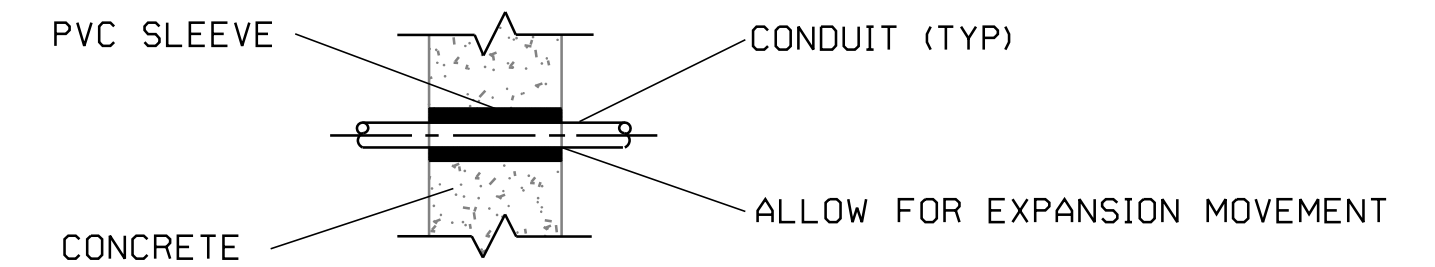
NOTES:
 1. MAINTAIN INTEGRITY OF CONDUIT AND CONDUCTOR FEEDS TO TYPE 'B' STAY LIGHTS FOR CONNECTION TO NEW LAYOUT.



NEW SECTION

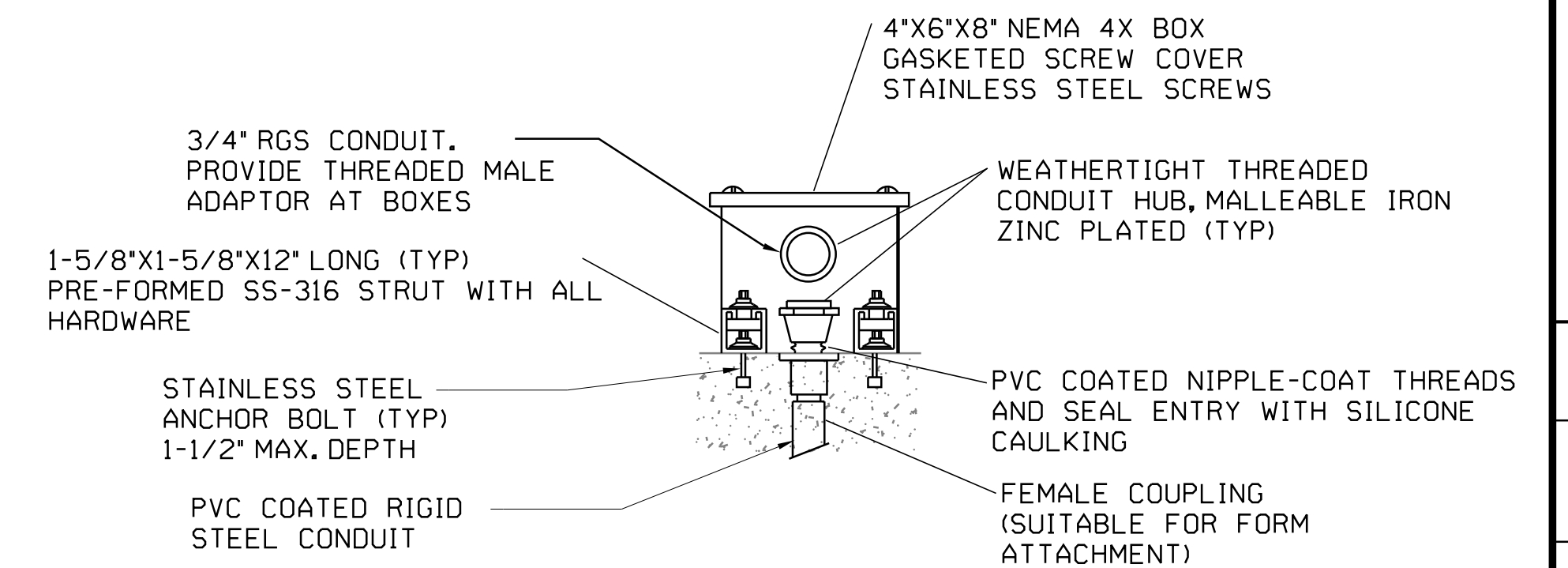
NO SCALE

NOTES:
 1. COORDINATE TYPE 'B' (STAY LIGHT) MOUNTING AND AIMING WITH MANUFACTURERS PLAN SHEET AND DETAILS.
 2. REFER TO BRIDGE LIGHTING DIAGRAM FOR CIRCUITING INFORMATION, DRAWING E-11.
 3. REFER TO LIGHTING FIXTURE TYPE 'B' MOUNTING DETAIL.



TYPICAL CONCRETE PENETRATION

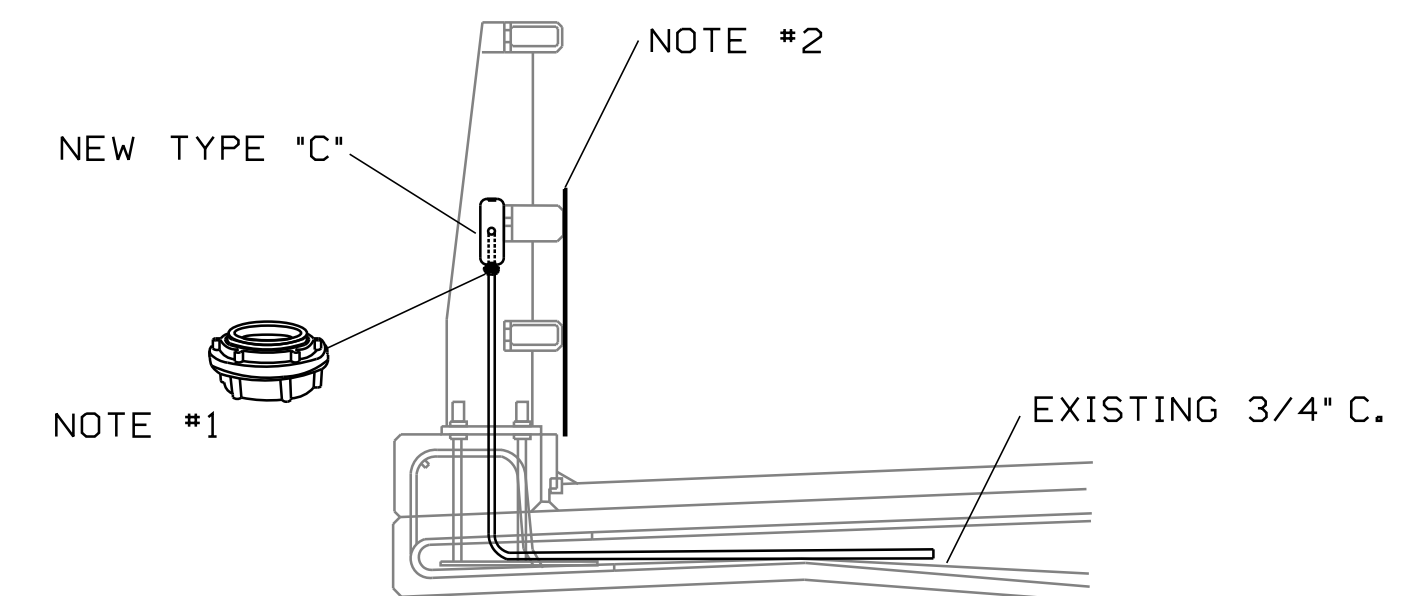
NO SCALE



PULLBOX DETAIL

NO SCALE

NOTE: JUNCTION BOX MOUNTED WITHIN BOX GIRDER



RAILING LIGHTS TYPE 'C' MOUNTING DETAIL

NO SCALE

NOTES:
 1. PROVIDE ALUMINUM, INSULATED WATERTIGHT CONDUIT HUB, SIMILAR TO APPLETON HUB100A. COORDINATE WITH CONDUIT SIZE PRIOR TO ORDERING.
 2. REFER TO STEEL DEFLECTOR PLATE LUMINAIRE PROTECTIVE DEVICE ON DRAWING E-12.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2265(500)

WIN

024595.00

HIGHWAY PLANS

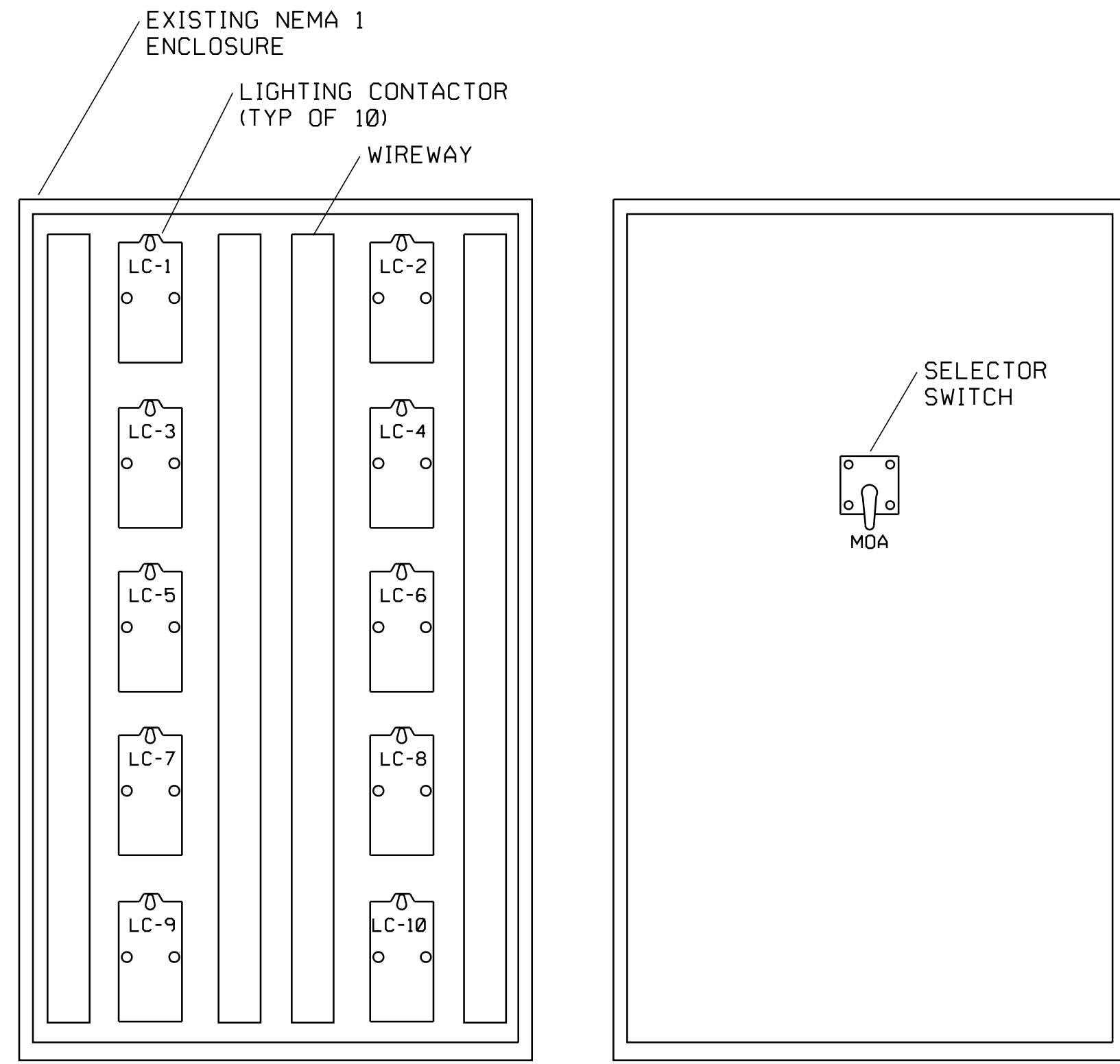
DATE	BY	PROJ. MANAGER	SIGNATURE	P.E. NUMBER	DATE

PENOBSCOT NARROWS BRIDGE
 AESTHETIC LIGHTING
 ELECTRICAL SECTIONS AND
 ELEVATIONS - 03

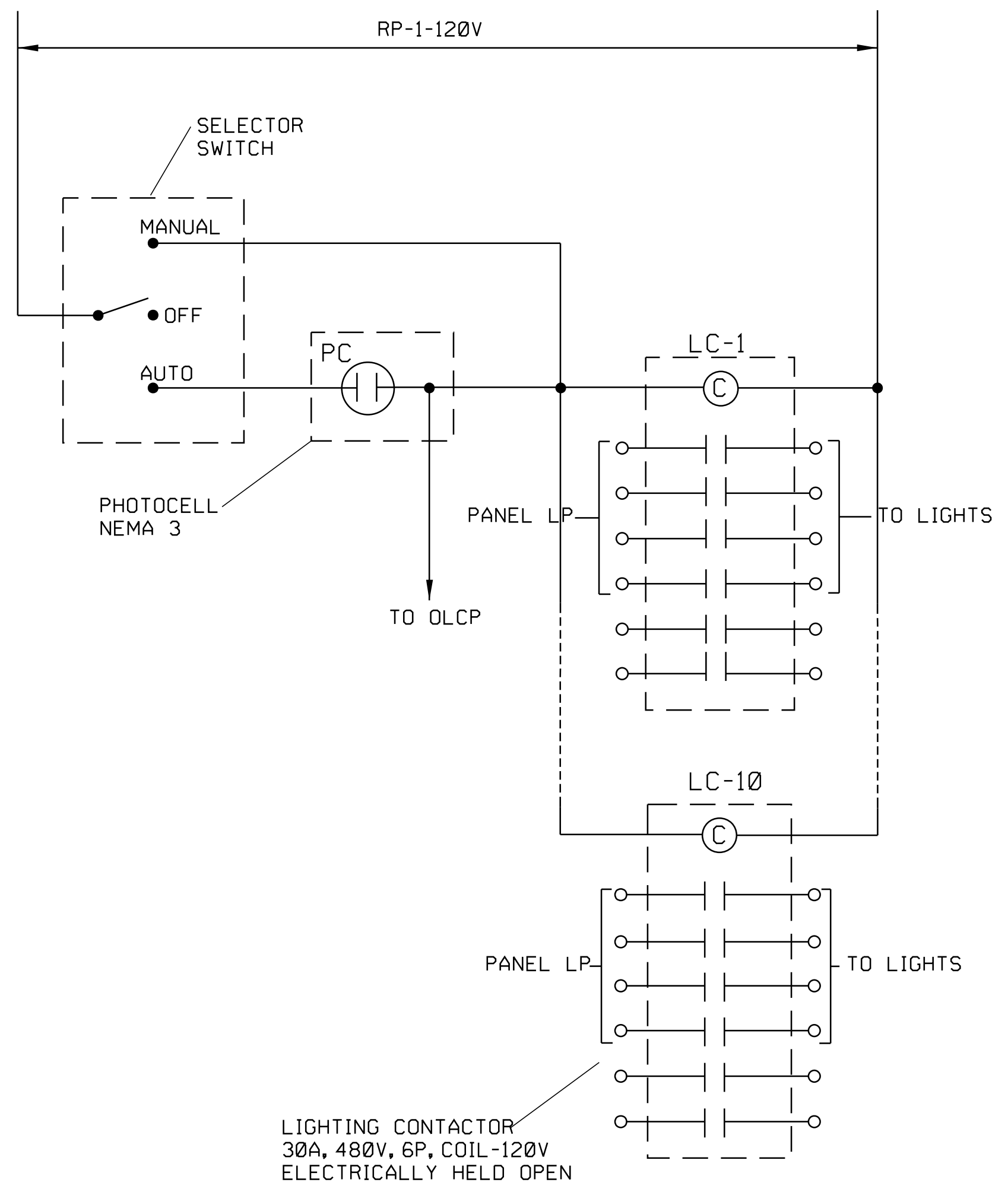
SHEET NUMBER

E-03

OF 12



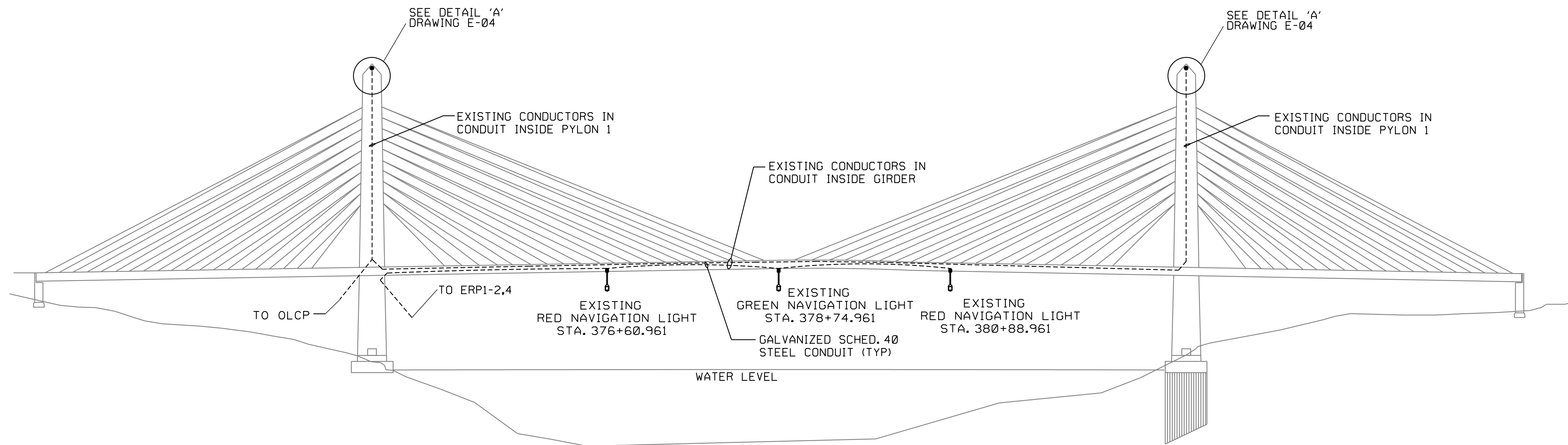
PANEL LAYOUT
FRONT DOOR
EXISTING BRIDGE LIGHTING CONTROL PANEL (LCP)
 NO SCALE



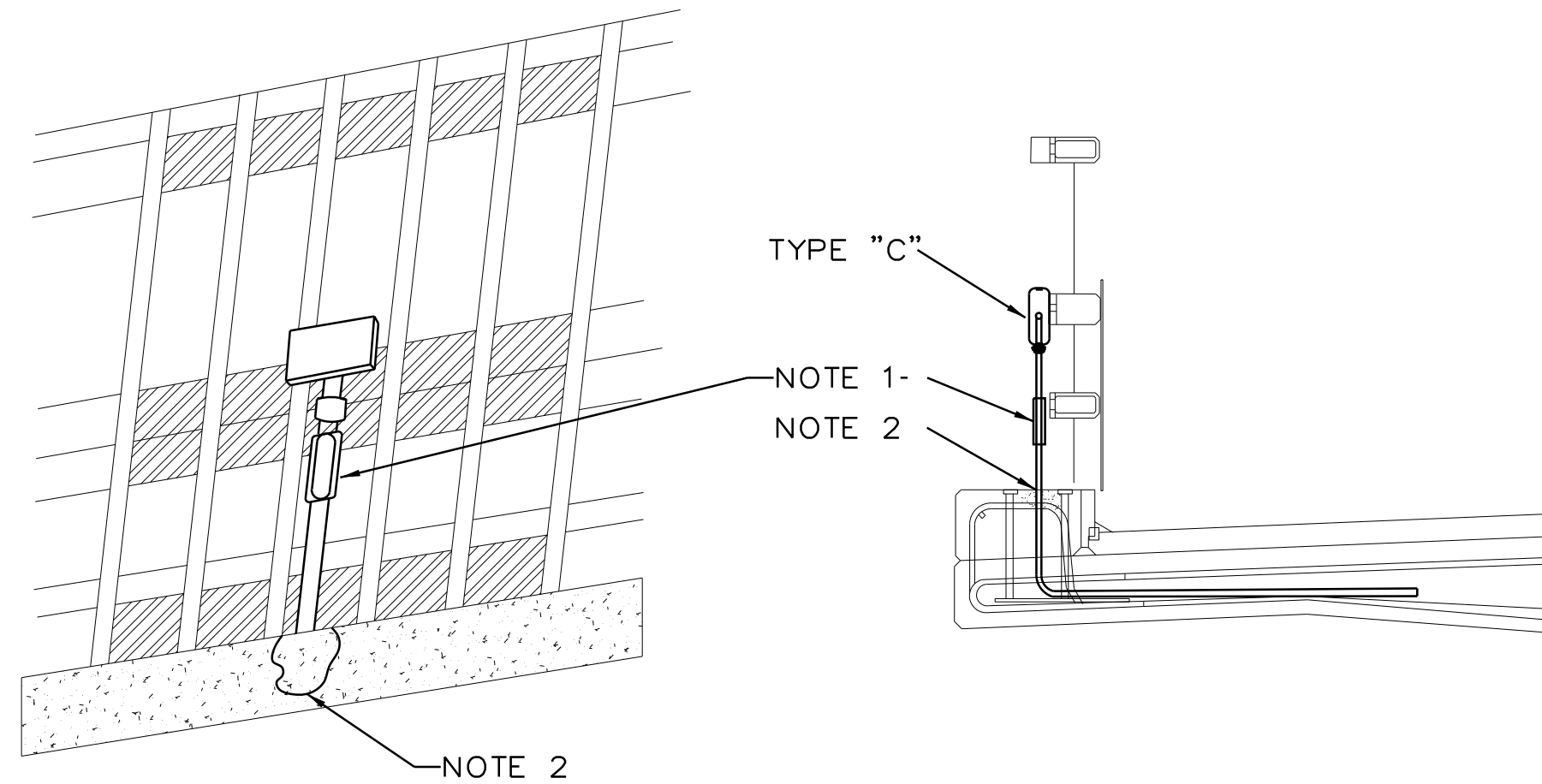
EXISTING BRIDGE LIGHTS CONTROL DETAIL
 NO SCALE

FOR REFERENCE ONLY

STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP-2265(500)		HIGHWAY PLANS WIN 024595.00	
PROJ. MANAGER	DESIGN-REVIEWED	BY	DATE
CHECKED-REVIEWED	DESIGN-REVIEWED	BY	DATE
DESIGN-REVIEWED	DESIGN-REVIEWED	BY	DATE
REVISIONS 1	REVISIONS 1	SIGNATURE	
REVISIONS 2	REVISIONS 2	P.E. NUMBER	
REVISIONS 3	REVISIONS 3	DATE	
REVISIONS 4	REVISIONS 4		
FIELD CHANGES	FIELD CHANGES		
PENOBSCOT NARROWS BRIDGE AESTHETIC LIGHTING		LIGHTING CONTROL DETAILS - 05	
SHEET NUMBER		E-05	
		OF 12	



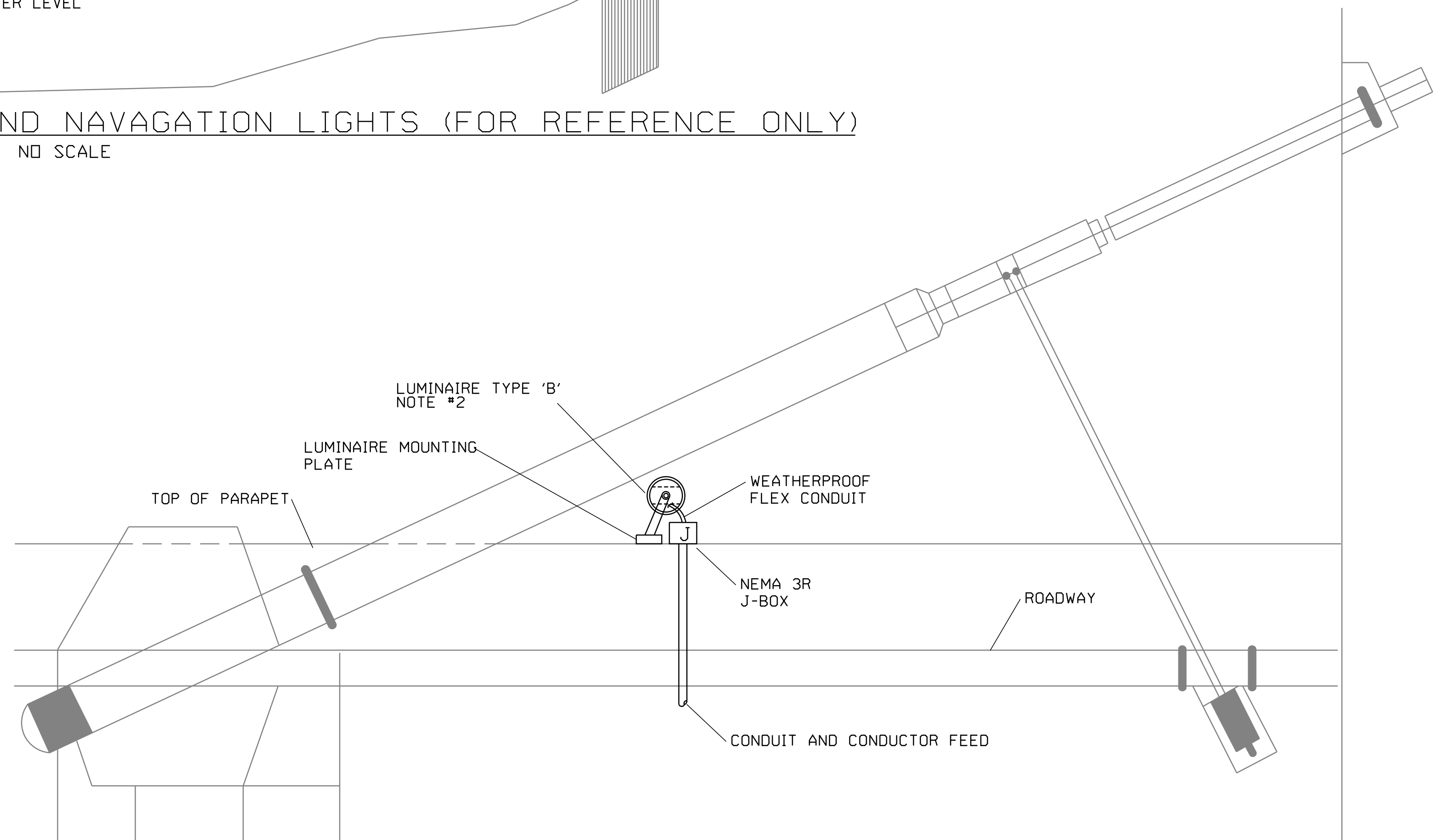
ELEVATION - EXISTING OBSTRUCTION AND NAVIGATION LIGHTS (FOR REFERENCE ONLY)
NO SCALE



RAILING LIGHTS TYPE 'C' CONDUIT REPAIR DETAIL
NO SCALE

NOTES:

1. THE PROCEDURE FOR REPAIR OF DAMAGED PVC CONDUIT WILL CONSIST OF CUTTING OFF CONDUIT ONLY TO THE EXTENT REQUIRED TO REMOVE DAMAGED SECTION AND INSTALLING NEW FITTING SUITABLE FOR INSTALLATION OF A NON METALLIC FLEXIBLE CONDUIT CONNECTOR AT THE END OF THE EXISTING CONDUIT AND EXTEND FLEXIBLE CONDUIT UP TO FIXTURE.
2. IF THE CONDUIT IS BROKEN TO THE SURFACE OF THE CONCRETE CURB INSTALL A NON METALLIC CONNECTOR AND EXTEND FLEXIBLE NON METALLIC CONDUIT AS REQUIRED UP TO THE FIXTURE. USING THE CARLON PVC CONDUIT REPAIR SYSTEM, PART NUMBER E910REAME 3/4" REAMER, REAM THE END OF THE CONDUIT, INSTALL CARLON E910E OR E920E FITTING AND EXTEND CONDUIT TO FIXTURE WITH NON METALLIC FLEXIBLE CONDUIT. IF THE CONDUIT IS DAMAGED TO AND BELOW THE SURFACE OF THE CONCRETE COORDINATE REPAIR WITH RESIDENT ENGINEER BEFORE PROCEEDING.
3. NOT ALL CONNECTIONS TO THE RAIL LIGHTING NEED REPAIR. THE CONTRACTOR AND RESIDENT ENGINEER WILL INVENTORY CONNECTIONS AND DETERMINE THOSE REQUIRING REPAIR. PAYMENT TO BE MADE UNDER THE APPROPRIATE CONTRACT ITEM."



LIGHTING FIXTURE TYPE 'B' MOUNTING DETAIL
NO SCALE

NOTES:

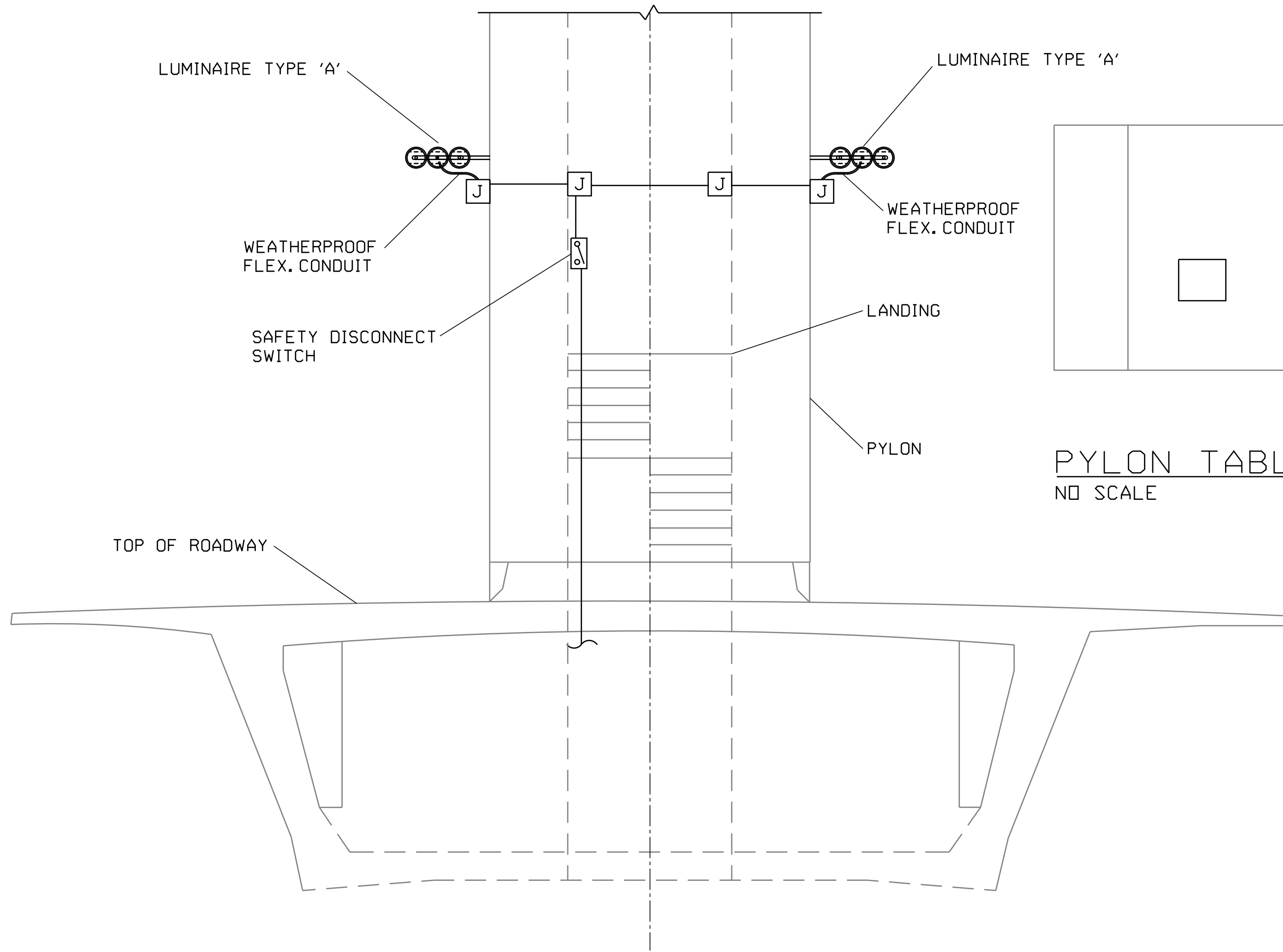
1. COORDINATE LUMINAIRE MOUNTING AND AIMING WITH MANUFACTURERS PLAN SHEET AND DETAILS.
2. REFER ALSO TO "NEW SECTION" DRAWING E-03.

PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES	DATE	SIGNATURE	P.E. NUMBER	DATE

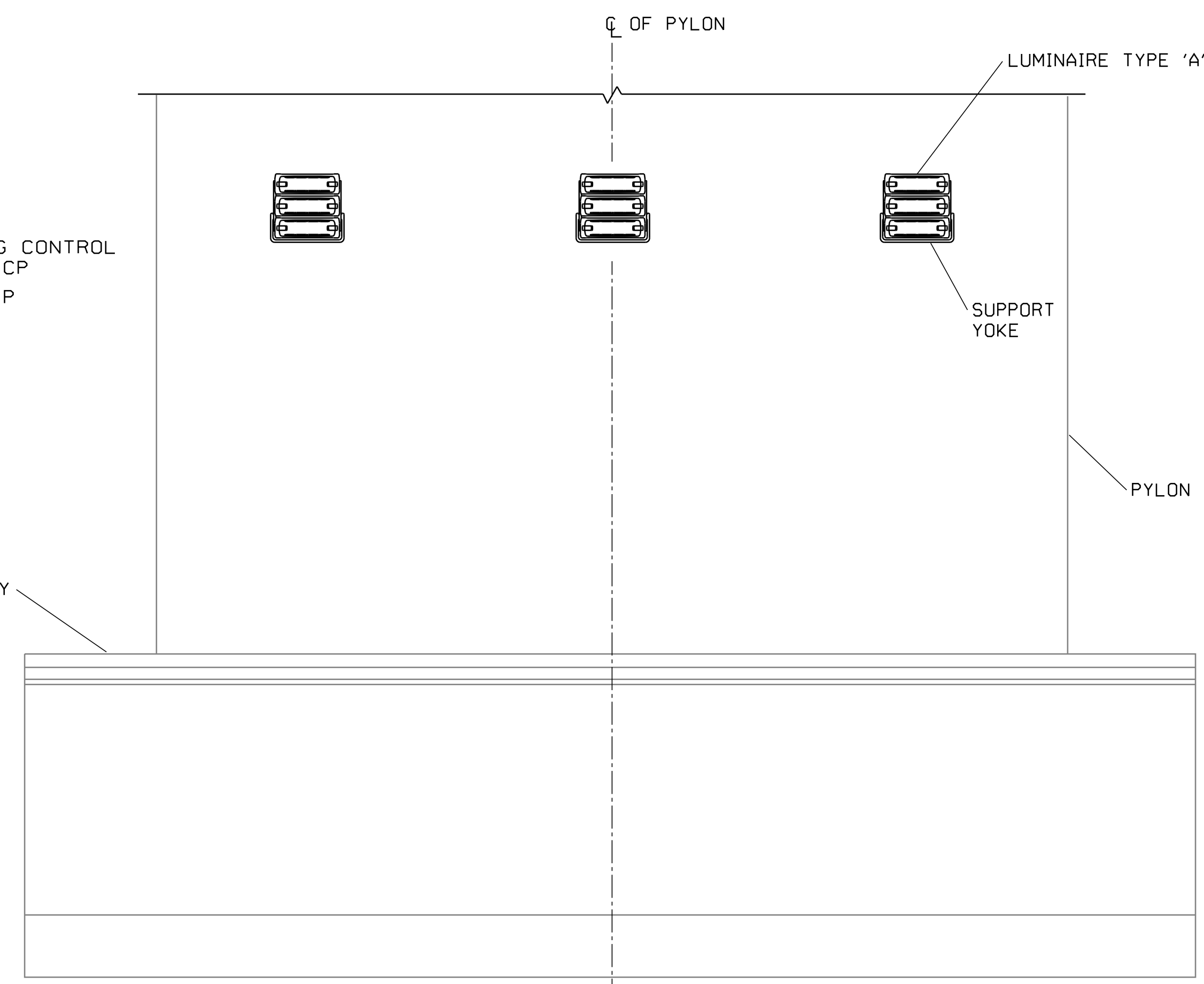
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Username: Highway

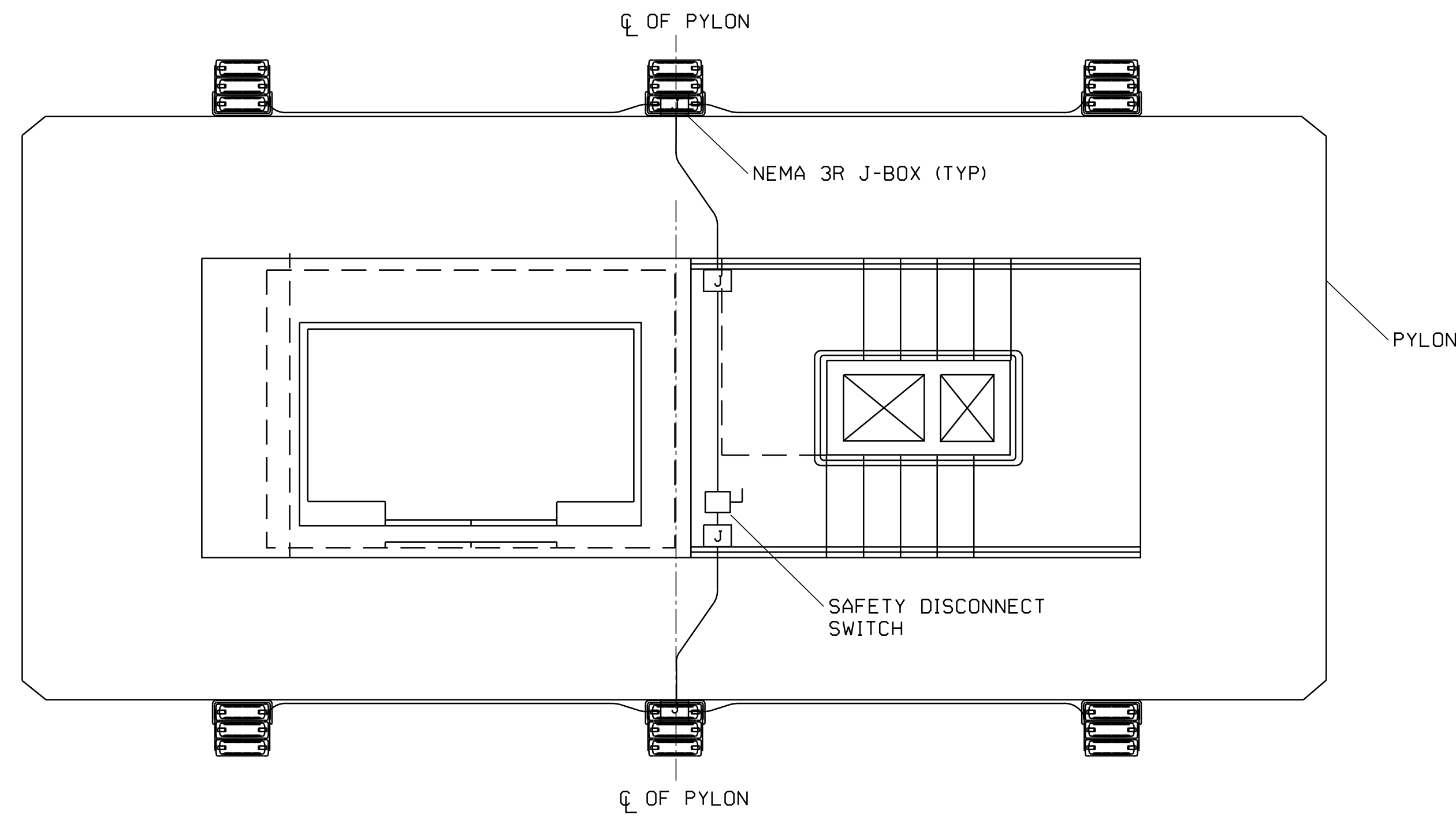
Date: 8/28/2023



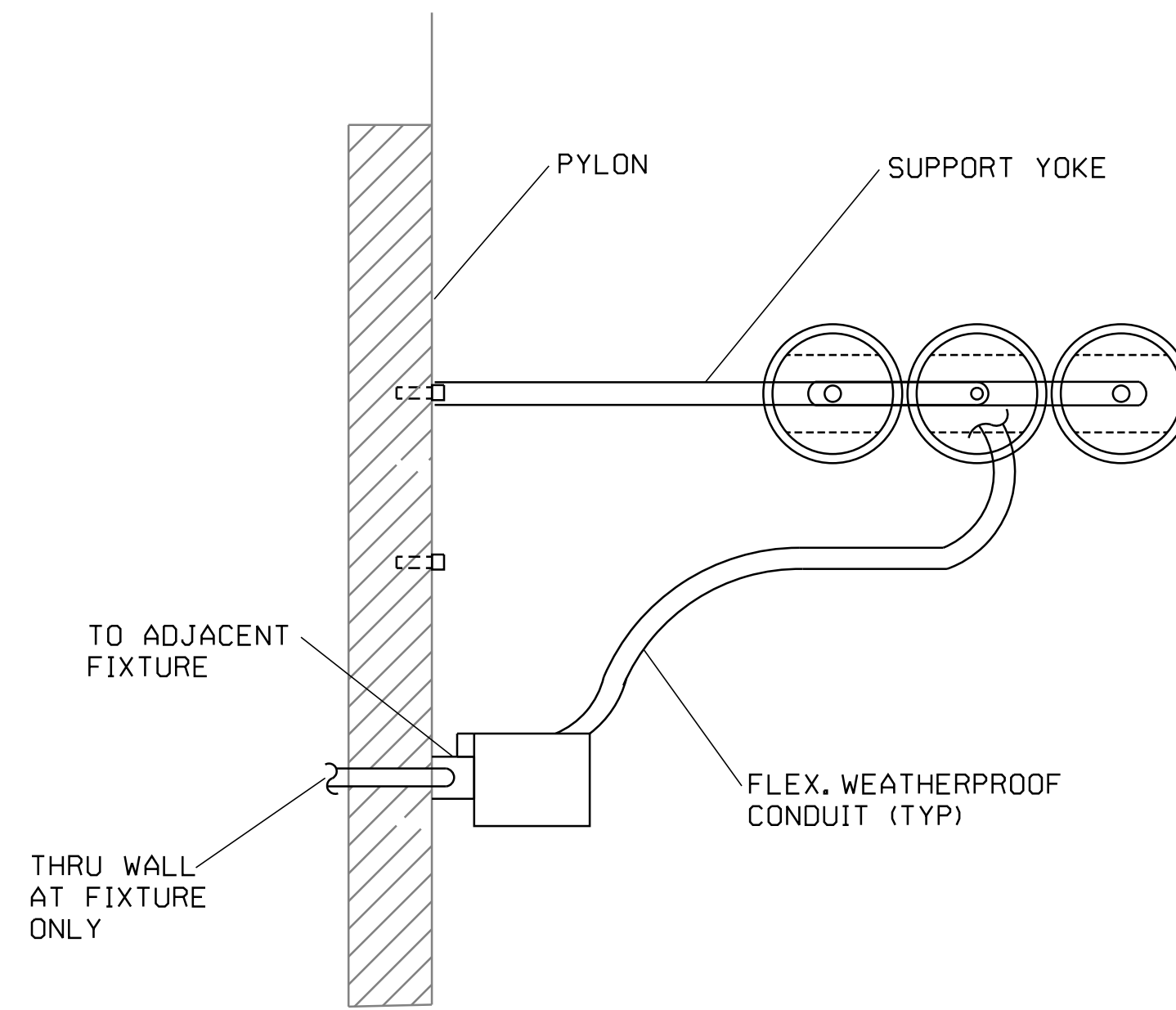
ELEVATION: UPPER PYLON LIGHTING
NO SCALE



ELEVATION: UPPER PYLON LIGHTING
NO SCALE

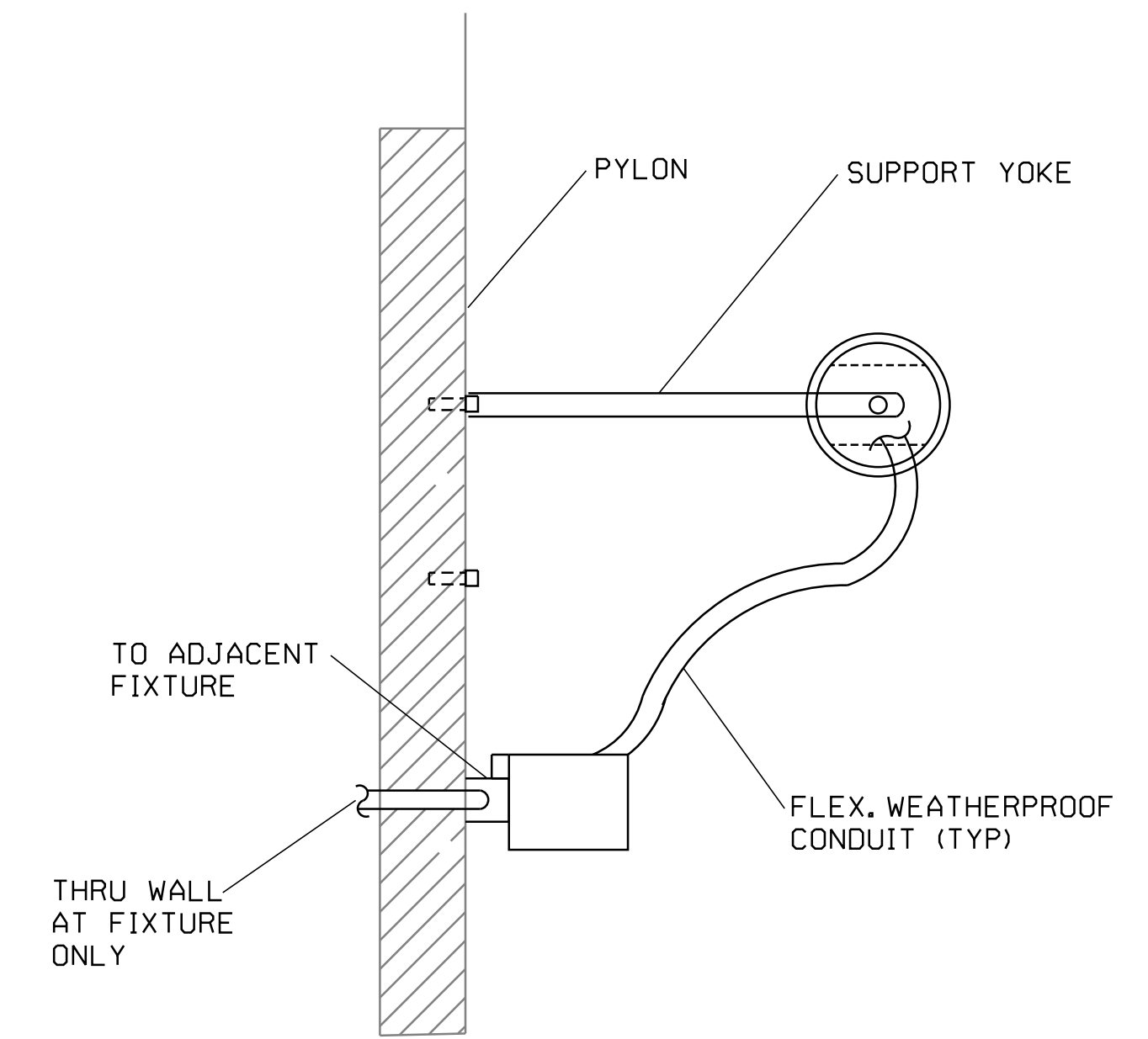


SECTION: PYLON LIGHTING
NO SCALE



DETAIL: UPPER PYLON LIGHTING
NO SCALE

NOTE: COORDINATE LUMINAIRE MOUNTING AND AIMING WITH MANUFACTURERS PLAN SHEET AND DETAILS.



DETAIL: LOWER PYLON LIGHTING
NO SCALE

NOTE: COORDINATE LUMINAIRE MOUNTING AND AIMING WITH MANUFACTURERS PLAN SHEET AND DETAILS.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-2265(500)
WIN 024595.00
HIGHWAY PLANS

PROJ. MANAGER	DESIGN DETAILED	CHECKED/REVIEWED	DESIGN DETAILED	DESIGN DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES

PENOBSCOT NARROWS BRIDGE
AESTHETIC LIGHTING
PYLON LIGHTING DETAILS - 07

SHEET NUMBER

E-07

OF 12

TYLIN INTERNATIONAL

PANEL NAME- EXISTING ERP1														
MAIN CIRCUIT BREAKER: 125A					PROJECT NAME: PENOBSCOT BRIDGE									
MAIN BUS: 125A					FED FROM: PANEL EDP									
VOLTAGE: 120/208v-3P-4W					LOCATION: ELECTRICAL ROOM									
DESCRIPTION	PHASE WATTAGE			BREAKER			BUS	BREAKER			PHASE WATTAGE			DESCRIPTION
	ØA	ØB	ØC	POLE	AMP	CKT		ØA	ØB	ØC	ØA	ØB	ØC	
EXIST. PANEL ERP2	6000			3	60A	1	2	20A	1	300				(3) NAVIGATON LIGHTS
/		1800		/	/	3	4	20A	1	300				(3) NAVIGATON LIGHTS
/			3360	/	/	5	6	20A	1	250				DLCP, FAA LIGHTS
EXIST. OBSERVATION DECK PANEL (DDP)	5730			3	60A	7	8	20A	1	-				SPARE
/		4770		/	/	9	10	20A	1	1000				GEN. BATTERY CHARGER
/			4770	/	/	11	12	20A	1	1500				GEN. JACKET HEATER
SPARE	-	-	-	1	20A	13	14	20A	1	100				FACP
SPARE	-	-	-	1	20A	15	16	20A	1	100				FA EXTENDER PANEL
NEW RAIL LIGHTING			650	2	20A	17	18	20A	1	-				SPARE
NEW RAIL LIGHTING	650			-	-	19	20	20A	1	-				SPARE
NEW RAIL LIGHTING		650		2	20A	21	22	20A	1	-				SPARE
			650	-	-	23	24							
						25	26							
						27	28							
						29	30							
	12380	7220	9430							400	1400	1750		
PANEL PHASE TOTALS					CALCULATED LOAD VALUES									
					TOTAL CONNECTED kw					32.58kw				
					TOTAL CONNECTED A					91A				

NOTE: PANEL SPACES 17/19 & 21/23 ARE THE RAIL LIGHTING CIRCUITS THAT HAVE BEEN RELOCATED FROM PANEL 'LP'. PROVIDE NEW 2ØA/2P CIRCUIT BREAKERS IN THESE SPACES.

PANEL NAME- EXISTING LP														
MAIN CIRCUIT BREAKER: 100A					PROJECT NAME: PENOBSCOT BRIDGE									
MAIN BUS: 100A					FED FROM: PANEL DP									
VOLTAGE: 277/480v-3P-4W					LOCATION: ELECTRICAL ROOM									
DESCRIPTION	PHASE WATTAGE			BREAKER			BUS	BREAKER			PHASE WATTAGE			DESCRIPTION
	ØA	ØB	ØC	POLE	AMP	CKT		ØA	ØB	ØC	ØA	ØB	ØC	
NEW STAY LIGHTING	500			1	20A	1	2	20A	1	600				NEW STAY LIGHTING
NEW STAY LIGHTING		500		1	20A	3	4	20A	1	600				NEW STAY LIGHTING
NEW STAY LIGHTING			600	1	20A	5	6	20A	1	600				NEW STAY LIGHTING
NEW STAY LIGHTING	700			1	20A	7	8	20A	1	700				NEW STAY LIGHTING
NEW STAY LIGHTING		600		1	20A	9	10	20A	1	600				NEW STAY LIGHTING
NEW STAY LIGHTING			700	1	20A	11	12	20A	1	700				NEW STAY LIGHTING
NEW STAY LIGHTING	600			1	20A	13	14	20A	1	600				NEW STAY LIGHTING
NEW STAY LIGHTING		500		1	20A	15	16	20A	1	500				NEW STAY LIGHTING
SPARE/SPACE			-	1	20A	17	18	20A	1	-				SPARE/SPACE
SPARE/SPACE	-	-	-	1	20A	19	20	20A	1	-				SPARE/SPACE
SPARE/SPACE	-	-	-	1	20A	21	22	20A	1	-				SPARE/SPACE
SPARE/SPACE	-	-	-	1	20A	23	24	20A	1	-				SPARE/SPACE
NEW PYLON LIGHTING	1200			2	20A	25	26	20A	1	-				SPARE/SPACE
/		1200		/	/	27	28	20A	1	-				SPARE/SPACE
NEW PYLON LIGHTING			1200	2	20A	29	30	20A	1	-				SPARE/SPACE
/	1200			/	/	31	32	20A	1	-				SPARE/SPACE
SPARE/SPACE	-	-	-	1	20A	33	34	20A	1	/				SPARE
SPARE/SPACE	-	-	-	1	20A	35	36	20A	1	/				SPARE
SPARE/SPACE	-	-	-	1	20A	37	38	20A	1	/				SPARE
SPARE/SPACE	-	-	-	1	20A	39	40	20A	1	/				SPARE
SPARE		/		1	20A	41	42	20A	1	/				SPARE
	4200	2800	2500							1900	1700	1300		
PANEL PHASE TOTALS					CALCULATED LOAD VALUES									
					TOTAL CONNECTED kw					14.40kw				
					TOTAL CONNECTED A					17A				

NOTE: PANEL SPACES NOTED AS SPARE/SPACE ARE THE FORMER RAIL LIGHTING CIRCUITS WHICH HAVE BEEN RELOCATED TO PANEL ERP1.

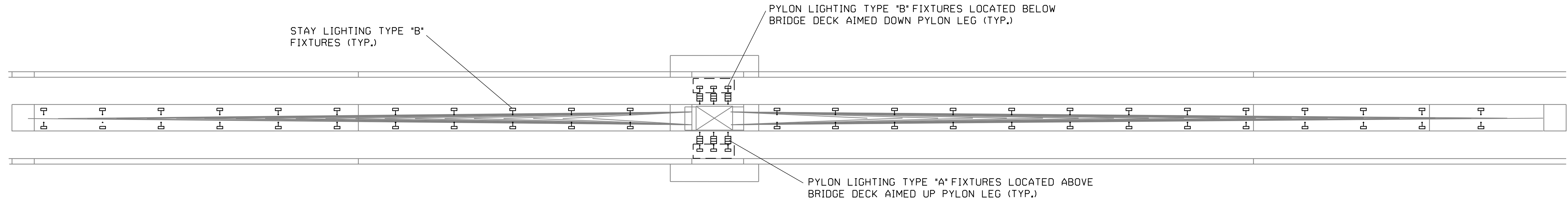
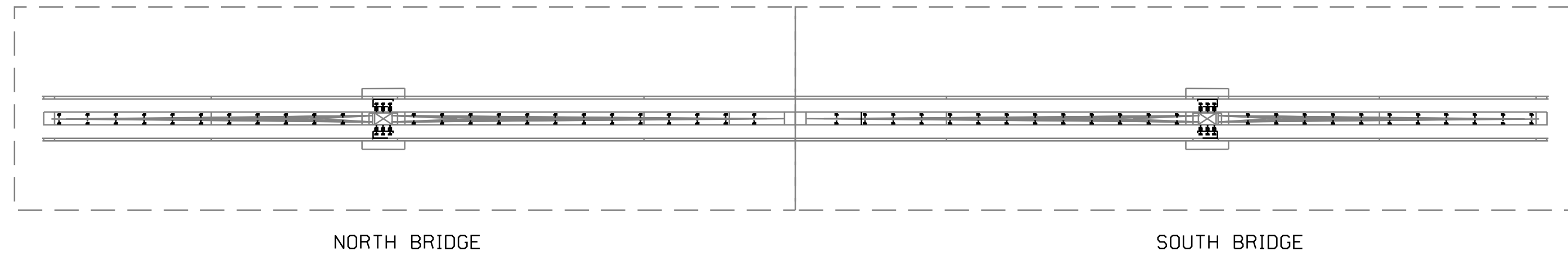
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PENOBSCOT NARROWS BRIDGE				AESTHETIC LIGHTING				ELECTRICAL PANEL SCHEDULES - 08			
SHEET NUMBER				E - 08				OF 12			
PROJ. MANAGER		\$PROJ.MANAGER		BY		DATE		SIGNATURE		P.E. NUMBER	
DESIGN-DETAILED		CHECKED-REVIEWED		DESIGN-DETAILED		DESIGN-DETAILED		REVISIONS 1		REVISIONS 2	
DESIGN-DETAILED		DESIGN-DETAILED		DESIGN-DETAILED		DESIGN-DETAILED		REVISIONS 3		REVISIONS 4	
DESIGN-DETAILED		DESIGN-DETAILED		DESIGN-DETAILED		DESIGN-DETAILED		REVISIONS 4		FIELD CHANGES	

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Username: Highway

Division: Highway

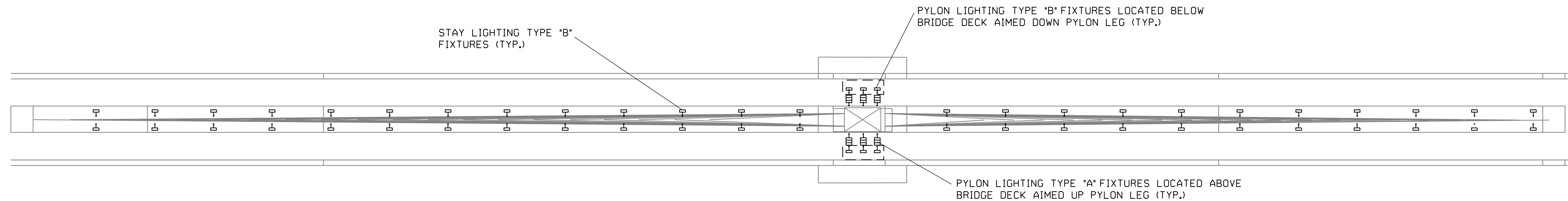
Date: 8/28/2023



NEW STAY AND PYLON LIGHTING LAYOUT NORTH BRIDGE (PROSPECT SIDE)
NO SCALE

NOTES:

- 1. STAY LIGHTING TYPE "B" FIXTURE SPACING IS 40'-0" O.C. (TYP.)



NEW STAY AND PYLON LIGHTING LAYOUT SOUTH BRIDGE (VERONA SIDE)
NO SCALE

NOTES:

- 1. STAY LIGHTING TYPE "B" FIXTURE SPACING IS 40'-0" O.C. (TYP.)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-2265(500)
WIN 024595.00
HIGHWAY PLANS

PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES

PROJ. MANAGER	BY	DATE

SIGNATURE	P.E. NUMBER	DATE

PENOBSCOT NARROWS BRIDGE
AESTHETIC LIGHTING
LIGHTING LAYOUT - 10

SHEET NUMBER
E-10

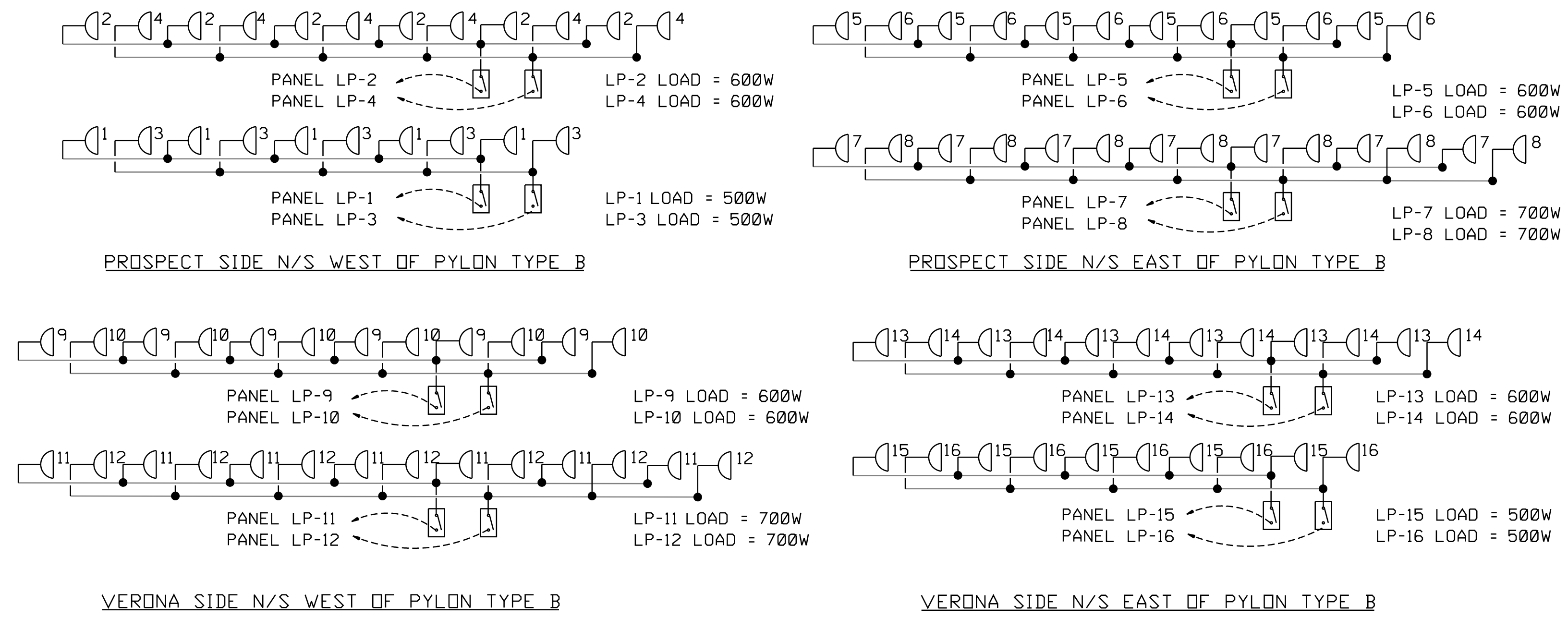
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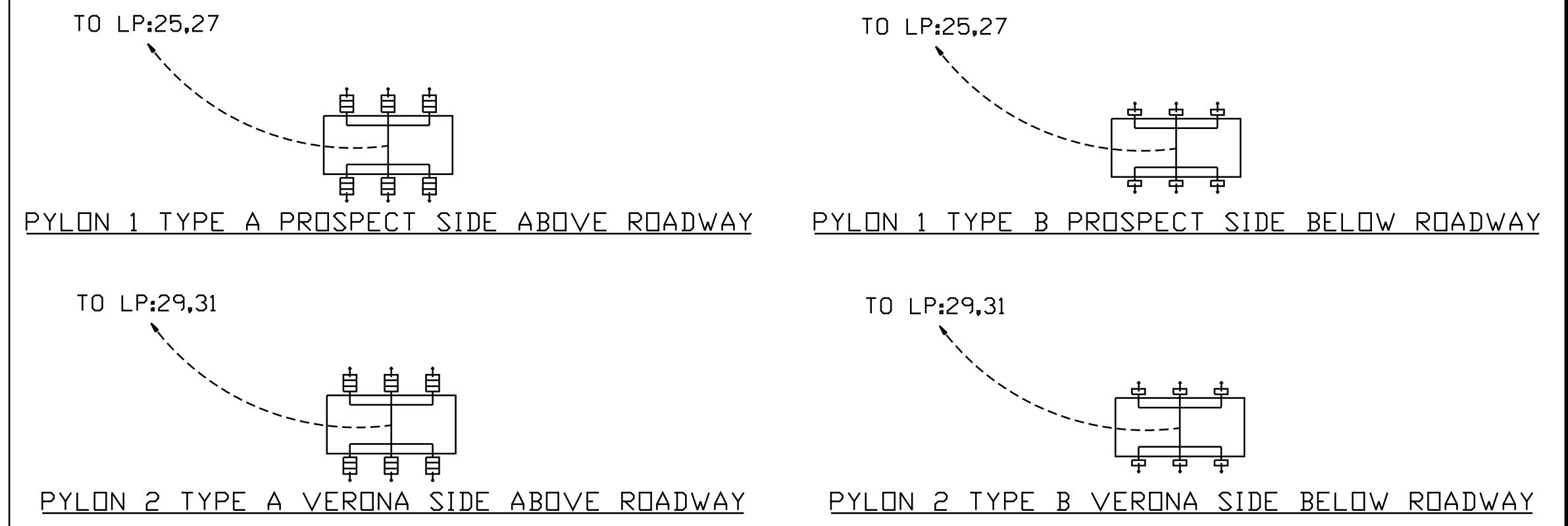
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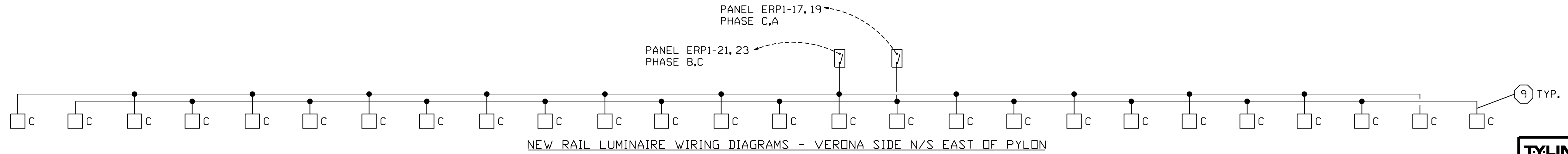
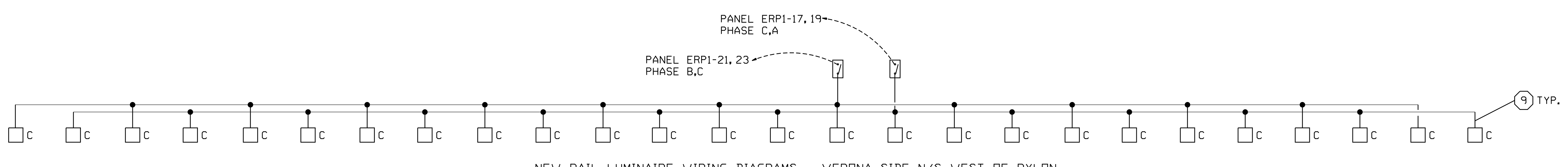
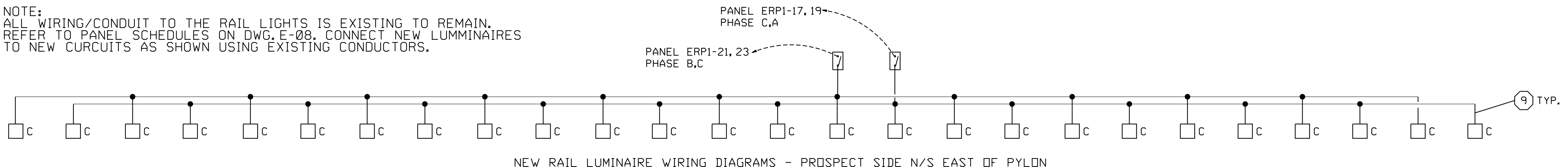
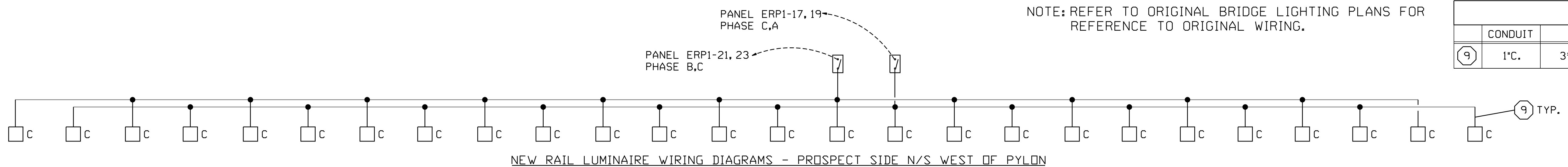
NEW STAY LUMINAIRE WIRING DIAGRAMS
NO SCALE

NOTE:
ALL WIRING/CONDUIT TO STAY LIGHTS IS EXISTING TO REMAIN. CONNECT NEW LUMINAIRE TO EXISTING WIRING/CIRCUITS. REFER TO "NEW SECTION" ON DWG. E-03 FOR NEW CONDUIT AND WIRING BETWEEN NEW STAY LIGHTS. EXTEND CONDUIT AND CONDUCTORS AS NECESSARY. MATCH TYPE AND SIZE USED. REFER TO PANEL SCHEDULES ON DWG. E-08.



NEW PYLON LUMINAIRE WIRING DIAGRAMS
NO SCALE

NOTE:
ALL WIRING/CONDUIT IS EXISTING TO REMAIN. REFER TO PANEL SCHEDULES ON DWG. E-08 FOR NEW CIRCUIT DESIGNATIONS. CONNECT NEW LUMINAIRE TO THE CIRCUITS SHOWN.

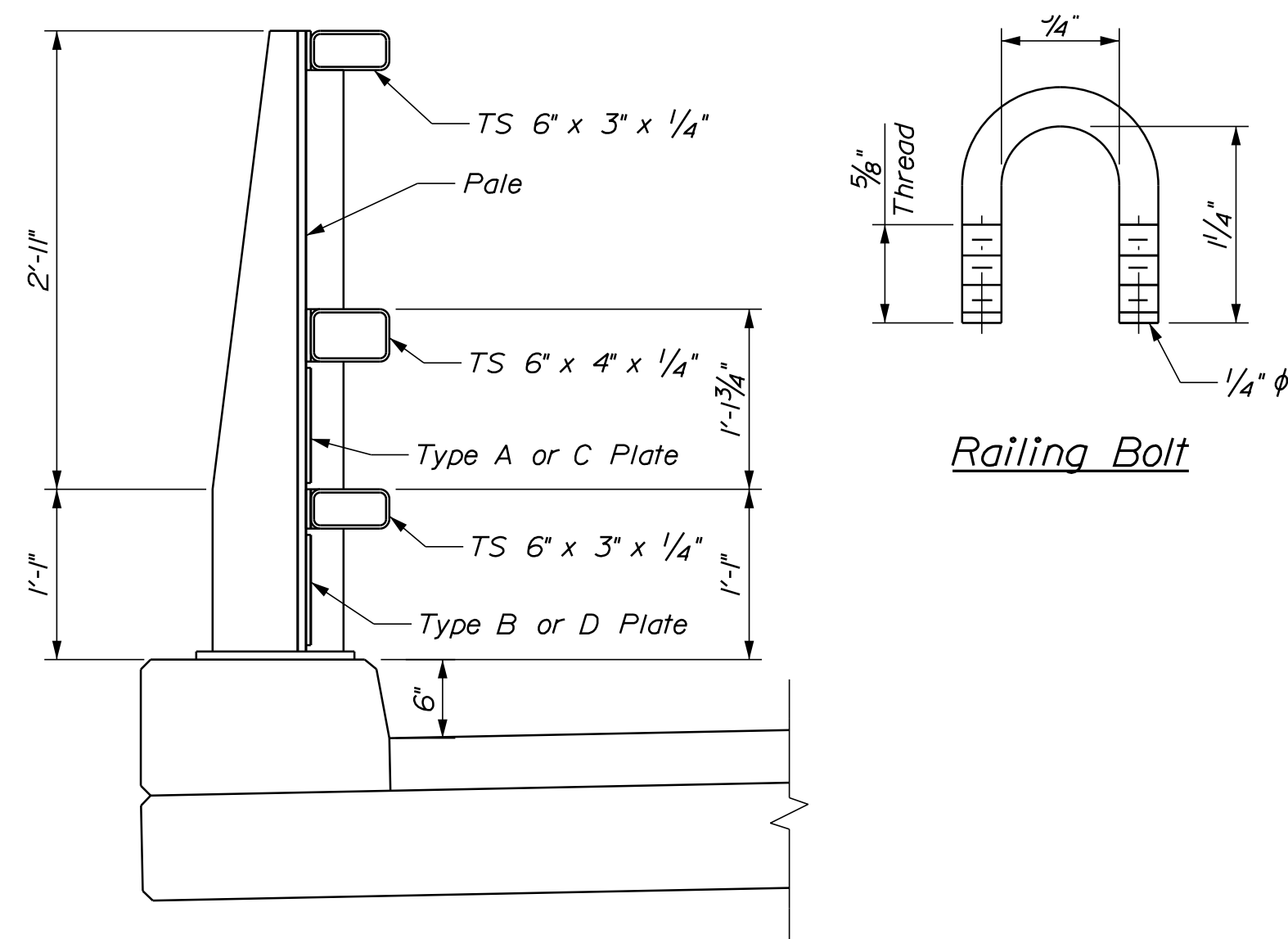


STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-2265(500)
WIN 024595.00
HIGHWAY PLANS

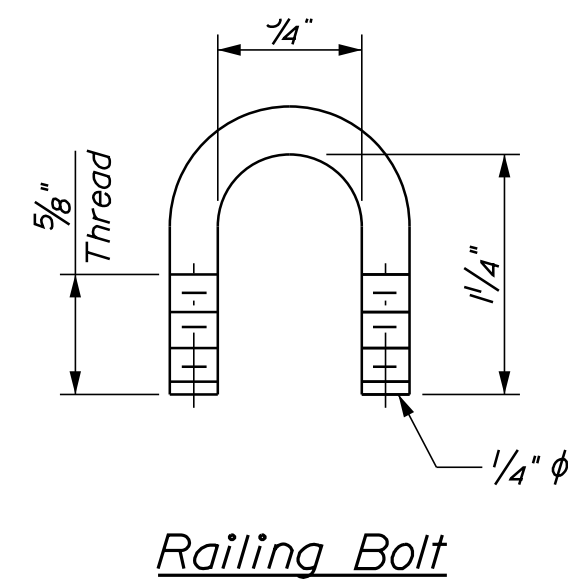
PROJ. MANAGER	DATE	SIGNATURE	P.E. NUMBER	DATE

PENOBSCOT NARROWS BRIDGE
AESTHETIC LIGHTING
LUMINAIRE WIRING DIAGRAMS - 11

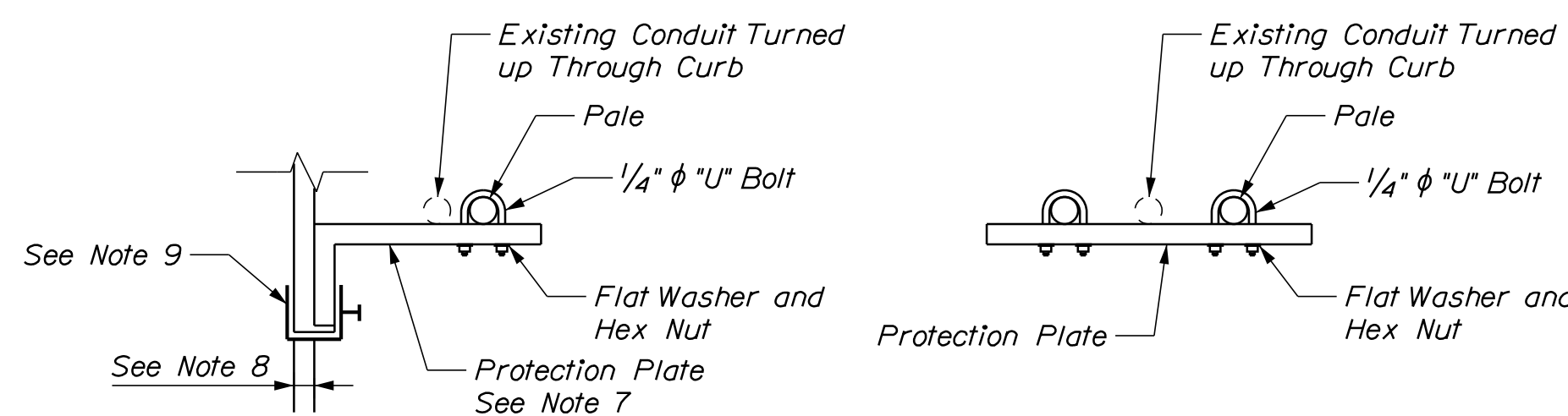
SHEET NUMBER
E-11
OF 12



Typical Rail Section

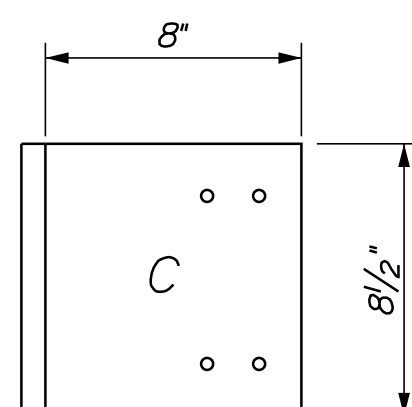


Railing Bolt

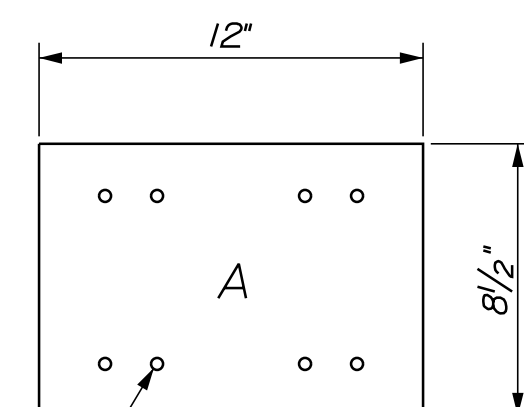


Section B-B

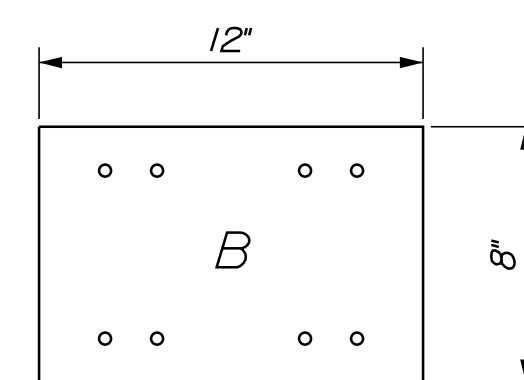
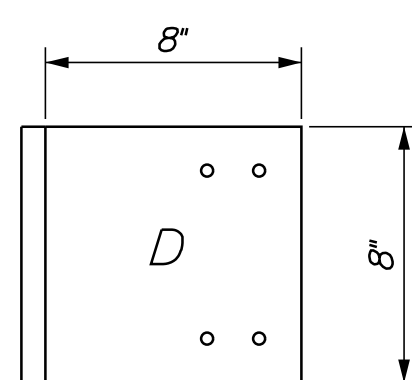
Section A-A



See Note 6

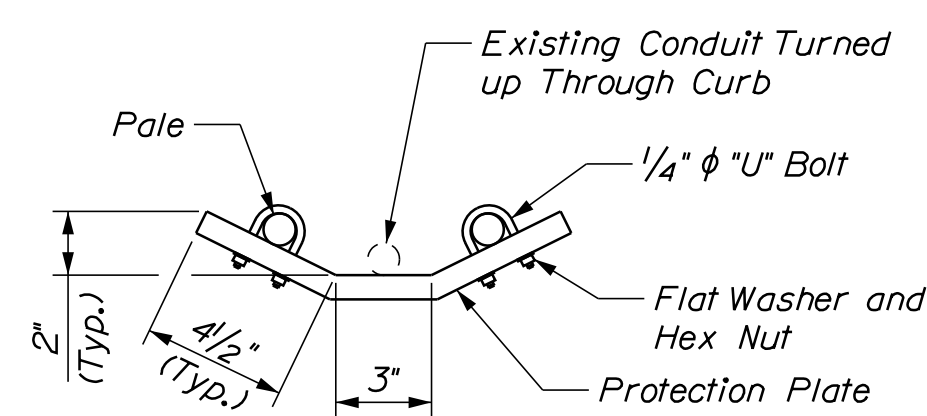


See Note 4

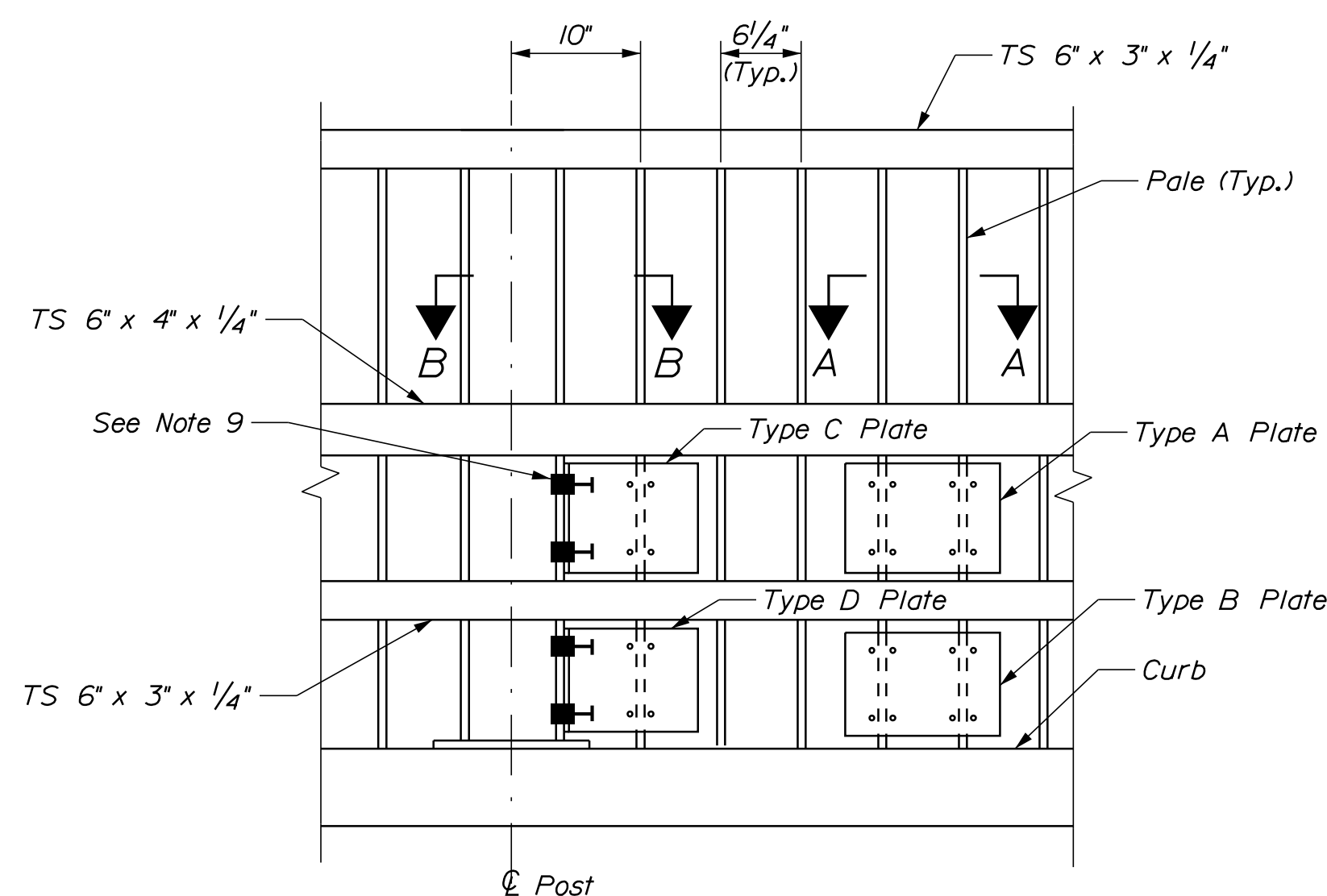


See Note 5

Conduit Protection Plate Details



Conduit Protection Plate Bend Detail



Rail Elevation

Conduit Protection Plate Notes

1. Conduit Protection Plates Shall be Installed at Each Rail Light Location to Protect Conduits from Damage during snow and ice Removal Operations on the Bridge. Plates are Required at 104 Locations. Provide 2 Extra sets (Type A, B, C, & D) of Plates and Deliver to the Department as Directed by the Resident.
2. Plates shall be Fabricated from 10 Gauge Sheet Steel, Hot Dip Galvanized after Fabrication. Contractor shall Field Measure Rail on Site Prior to Ordering Material, and Observe Conditions under Which Plates Must be Installed.
3. Types A & B Plates Shall be Fastened to 2 Pales with 4 Railing ("U") Bolts per Plate, Types C & D Plates Shall be Fastened to One Pale with 2 Railing Bolts and to Post with 2 Beam Clamps.
4. Drill Holes in Plate to Match Rail ("U") Bolts Provided for Mounting Plate to Pales, Typical.
5. Type A & B Plates for use where Existing Conduit Exits Concrete Curb Between 2 Pales.
6. Type C & D Plates for use where Existing Conduit Exits Concrete Between Pale and a Post.
7. For Type C & D Plates Slots may be Provided in Lieu of 3/8-Inch Clearance Holes to Accommodate "U" Bolt to Allow for Field Conditions.
8. This Dimension Shall Match Thickness of Post.
9. For Each Type C & D Protection Plate, Provide (2) B-Line Part No. B3034 Beam Clamps for Fastening One end of Protection Plate to Rail Post.
10. Beam Clamps Shall be Hot Dip Galvanized. "U" Bolts shall be 316 Stainless Steel.
11. Any areas where Galvanizing has been Damaged shall be Repaired by Application of Two Coats of ZRC Zinc Rich Coating.
12. Protection plates shall be incidental to item 638.04 - Bridge Walkway Lighting (Type 'C' - Rail Lights).

PROJ. MANAGER	DESIGN-REVIEWED	DESIGN-CHECKED	DESIGN-APPROVED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES