

PROJECT No. 20230004

Venetian Causeway Bridges No. 874459 and No. 874474

Hurricane Irma Repairs

ELECTRICAL PLANS

GENERAL NOTES

ELECTRICAL AND CONTROL SCOPE OF WORK.

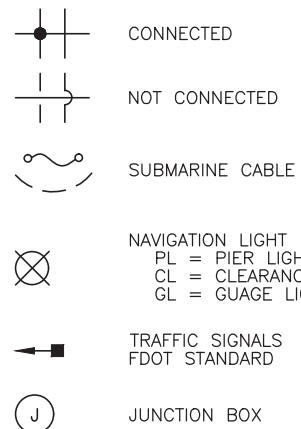
- NAVIGATION LIGHTS AND AIDS.
 - FURNISH AND INSTALL NEW FENDER NAVIGATIONAL LIGHTS AND CLEARANCE GAUGE LIGHTS. ALL LIGHTS SHALL BE LED.
 - FURNISH AND INSTALL NEW PVC COATED RIGID GALVANIZED STEEL CONDUIT AND J-BOXES FOR ALL NEW NAVIGATIONAL LIGHTING INSTALLATION.
- CONDUIT AND WIRING.
 - THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NEW CONDUIT, WIRES AND CABLES REQUIRED TO COMPLETE THE INSTALLATION AS INDICATED ON THE PLANS. ALL CONDUITS SHALL BE PVC COATED RIGID GALVANIZED METAL CONDUIT TYPE UNLESS OTHERWISE SPECIFIED. THE WIRING SHALL BE OF TYPE AND QUANTITY AS SHOWN ON THE PLANS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL REQUIRED CONDUIT AND CONDUIT SUPPORT IN ACCORDANCE WITH THE PLANS. THE COST FOR CONDUIT SUPPORT SHALL BE INCLUDED WITH THE COST OF THE CONDUIT SYSTEM. CONDUIT SUPPORT DETAILS AND LOCATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
- BRIDGE GROUNDING SYSTEM
 - THIS WORK CONSISTS OF REPAIRING, INSTALLING AND PLACE EXISTING BRIDGE PIER (NEAR AND FAR) (WEST VENETIAN). GROUNDING AND BONDING SYSTEM IN FULL OPERATING SERVICE. INCLUDE DOWNLEADS, MAIN CONDUCTORS, GROUND RODS, FLEXIBLE BONDING STRAPS, ETC. FOR A COMPLETE SYSTEM REHABILITATION.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM A SITE VISIT TO ACCESS BRIDGE GROUNDING SYSTEM ADJACENT TO THE FENDER SYSTEM PRIOR TO FURNISHING A BID PRICE.

ELECTRICAL GENERAL NOTES.

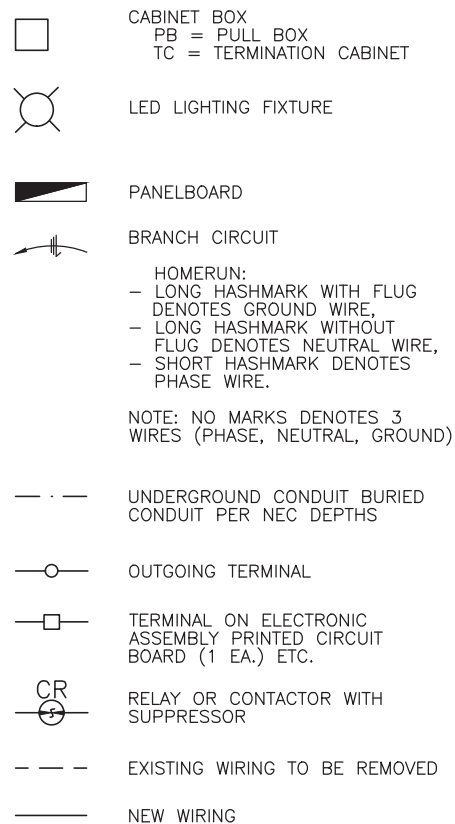
- CONFORM TO ALL NEC, NFPA, UL, IEEE AND NEMA STANDARDS AND PRACTICES.
- ELECTRICAL DEVICES AND EQUIPMENT ARE SHOWN SYMBOLICALLY ON THE PLANS. THE USE OF SYMBOLS AND NOTATIONS (OR THE OMISSION THEREOF) DO NOT RELIEVE THE CONTRACTOR FROM FURNISHING A SAFE, COMPLETE AND FULLY FUNCTIONAL SYSTEM. FIELD LOCATE DEVICES AND EQUIPMENT TO FACILITATE ACCESSIBILITY WITH RESPECT TO OPERATIONS AND MAINTENANCE CONDITIONS.
- ALL MOUNTING HARDWARE SHALL BE 316 SERIES STAINLESS STEEL AND/OR PVC COATED.
- MINIMUM CONDUIT SIZE IS 1". ALL WIRES SHALL BE THWN/MTW UNLESS OTHERWISE NOTED. MINIMUM WIRE SIZE IS #12 AWG FOR POWER.

LEGEND

ONE-LINE DIAGRAM



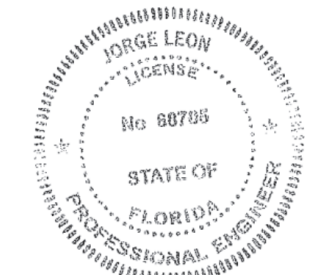
DEVICES



ABBREVIATIONS

ABBR.	ABBREVIATION	MACH.	MACHINERY
ADDR.	ADDRESS	MAN.	MANUAL
ADJ.	ADJACENT	MAX.	MAXIMUM
AFCI	ARC FAULT CIRCUIT INTERRUPTER	MCB	MOLDED CIRCUIT BREAKER
AFF	ABOVE FINISHED FLOOR	MCC	MOTOR CONTROL CENTER
ALT	ALTERNATOR	MD	MAIN DISCONNECT
AMP.	AMPERE	MEC	MASSACHUSETTS ELECTRIC CODE
AM	AUX.MOTOR	MHT	MOTOR STRIP HEATER
APP.	APPLICABLE	MHW	MEAN HIGH WATER
ATS	AUTOMATIC TRANSFER SWITCH	MIN.	MINIMUM
ATTN	ATTENTION	MLW	MEAN LOW WATER
AUTO.	AUTOMATIC	NA	NEAR ADJACENT
AUX.	AUXILIARY	NAV.	NAVIGATION
AWG	AMERICAN WIRE GAGE	NC	NORMALLY CLOSED
BC	BRIDGE CONTROL	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
BCR	BRIDGE CONTROL RELAY	NEWD	NEAR END WEDGE DOWN
BG	BARRIER GATE	NEWP	NEAR END WEDGE PULL
BRK.	BRAKE	NFPA	NATIONAL FIRE PREVENTION ASSOCIATION
BM	BUS MONITOR	NO.	NUMBER
C	CONDUIT	NO	NEAR OPPOSITE
CB	CIRCUIT BREAKER	NOC	NEAR ON-COMING
CC	CONTROL CONSOLE	NOG	NEAR OFF-GOING
CCTV	CLOSED-CIRCUIT TELEVISION	NSC	NEW SUBMARINE CABLE
cd	CANDELA	N.T.S	NOT TO SCALE
CMPT.	COMPARTMENT	NUM.	NUMBER
CP	CONTROL PANEL	OPP	OPPOSITE
CT	CURRENT TRANSFORMER	OL	OVERLOAD RELAY
CU	COMPRESSOR UNIT	OT	OVER-TRAVEL
DC	DIRECT CURRENT	P	PULLED
DIA.	DIAMETER	PA	PUBLIC ADDRESS
DISC.	DISCONNECT	PDP	POWER DISTRIBUTION PANEL
DISTR.	DISTRIBUTION	PLC	PROGRAMMABLE LOGIC CONTROLLER
DN.	DOWN	POT.	POTENTIOMETER
DPDT	DOUBLE POLE DOUBLE THROW	PT	POTENTIAL TRANSFORMER
DS	DISCONNECT SWITCH	PF	POWER FACTOR
DSL	DIGITAL SUBSCRIBER LINE	PP	POWER AND LIGHTING PANEL
DWG.	DRAWING	PRGS	PVC COATED RGS
DYN.	DYNAMIC	PVC	POLYVINYL CHLORIDE CONDUIT
ECOAST	EMERGENCY COAST	QTY.	QUANTITY
EF	EXHAUST FAN	RCP	REFLECTIVE CEILING PLAN
E.G.	ELECTRICAL GROUND	REC	RECEPTACLE
EH	ELECTRIC HORN	REL.	RELEASED
EMER.	EMERGENCY	RES	RESOLVER
ENCL.	ENCLOSURE	RLS	ROTARY LIMIT SWITCH
ENC.	ENCODER	RL	ROADWAY LIGHTING
E.O.L	END OF LINE	RNL	RED NAVIGATIONALL LIGHT
ETS	EMERGENCY TRAFFIC SIGNAL	RP	RECEPTACLES
EW	END WEDGE	RGS	RIGID GALVANIZED STEEL CONDUIT
FA	FAR ADJACENT	S	SPAN
FLC	FULL LOAD CURRENT	SC	SUBMARINE CABLE
FM	FACTORY MUTUAL	SEC.	SECOND
FOC	FAR ON-COMING	SHT	SHEET
FOG	FAR OFF-GOING	SPD	SURGE PROTECTION DEVICE
FU.	FUSE	SPEC.	SPECIFICATION
FVNR	FULL VOLTAGE NON-REVERSING STARTER	SS	STAINLESS STEEL
FVR	FULL-VOLTAGE REVERSING STARTER	SUB.	SUBMARINE
FC	FAR INCOMING	SUP	SUPPRESSOR
FO	FAR OPPOSITE	SW.	SWITCH
GALV.	GALVANIZED	TG	TRAFFIC GATE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	THK.	THICK
GND.	GROUND	TS	TRANSFER SWITCH
HDG	HOT DIPPED GALVANIZED	TSP	TWISTED SHIELDED PAIR
HP	HORSEPOWER	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
HZ	HERTZ	TYP.	TYPICAL
IND.	INDICATION	UL	UNDERWRITER'S LABORATORY
INDUS.	INDUSTRIAL	UPS	UNINTERRUPTIBLE POWER SUPPLY
JB	JUNCTION BOX	UVR	UNDER VOLTAGE RELAY
KVA	KILO-VOLT-AMPERE	V	VOLT
KW	KILOWATT	VENT.	VENTILATION
LC	LOCK CONTROL	VERT.	VERTICAL
LED	LIGHT EMITTING DIODES	VFD	VARIABLE FREQUENCY DRIVE
LS	LIMIT SWITCH	VM.	VOLTMETER
		W/	WITH
		W	WATT
		WH	WATT HOUR
		WM	WATT-HOUR METER
		WP	WATER PROTECTION COVER
		XFMR	TRANSFORMER CENTER LANE

NOTE NUMBER
 EXX-XX
 SHEET NUMBER



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 O=STV Inc., CN=JL
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 09:07:51-05'00'

BRIDGE NO. 874459 & 874474

BE-01 SYMBOLS, ABBREVIATIONS AND GENERAL NOTES

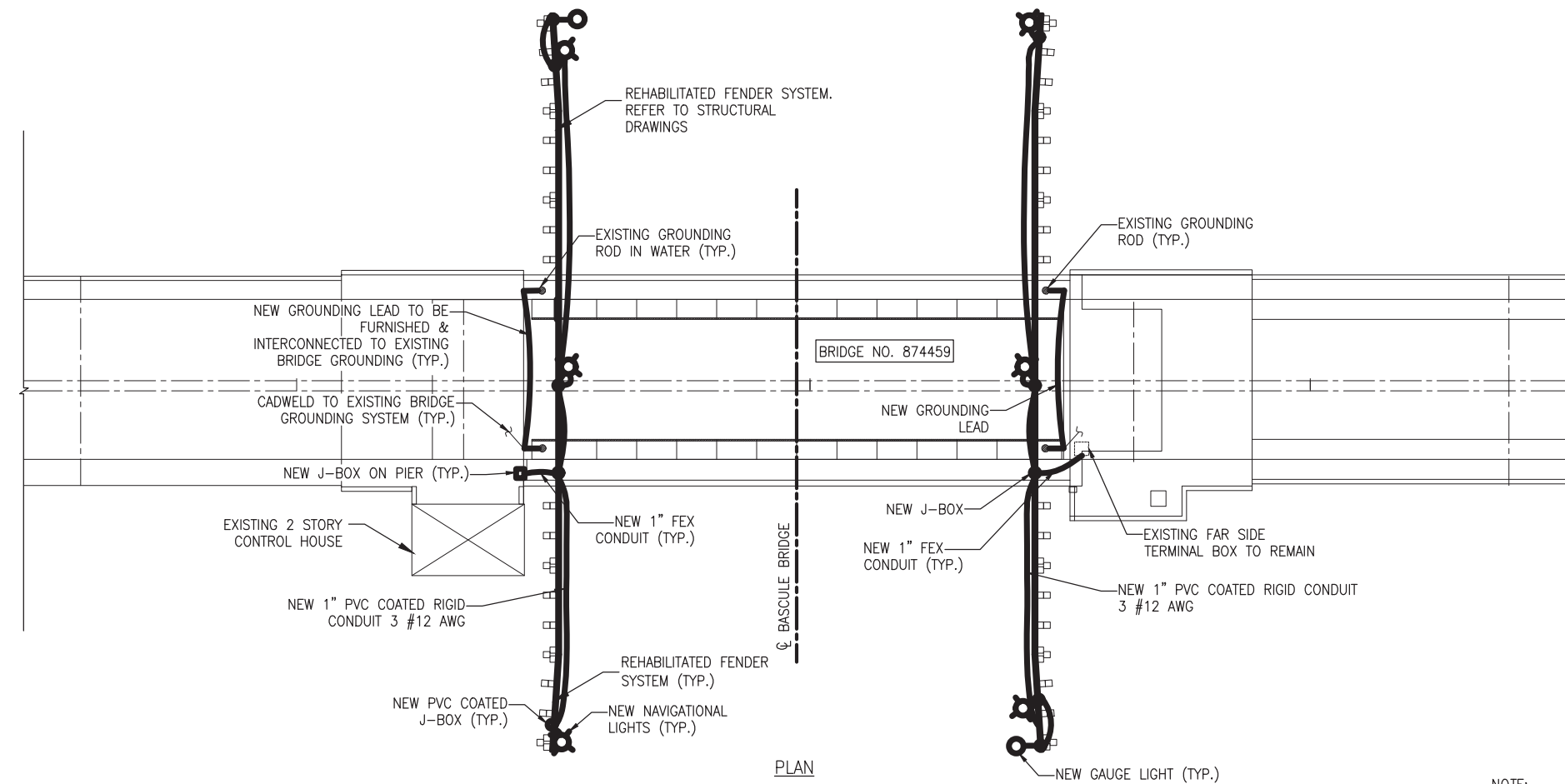
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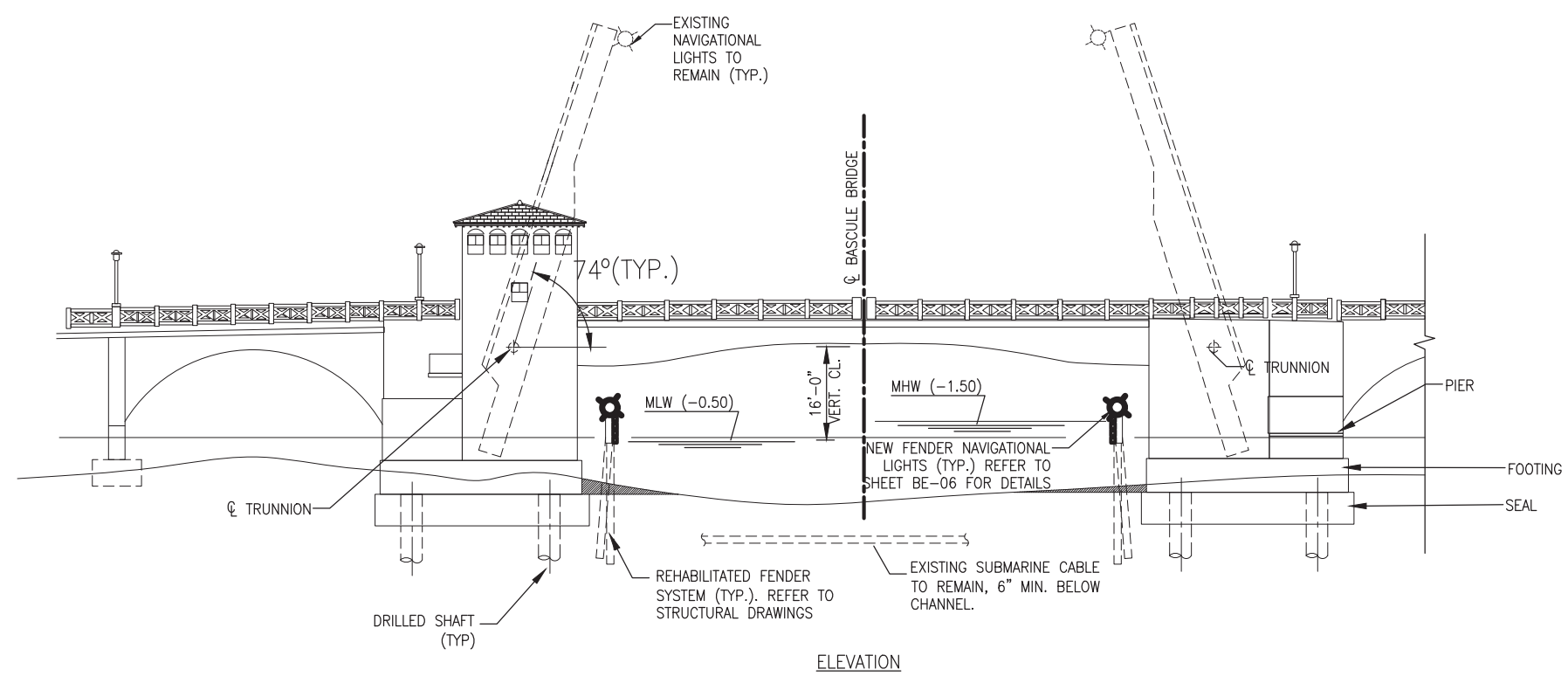
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 (305)537-4673 FAX: (305)751-5311
 JORGE LEON
 FL. LICENSE # 68705

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
JL	JL	06/22/2020	MPS	MPS	06/24/2020
MPS	MPS	06/30/2020	JL	JL	06/30/2020

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PLAN



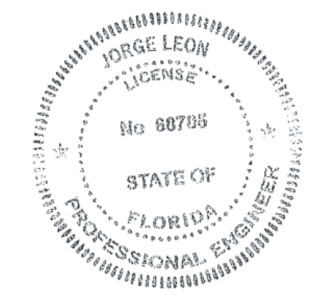
ELEVATION

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ABBREVIATION:

F.F. = FRONT FACE



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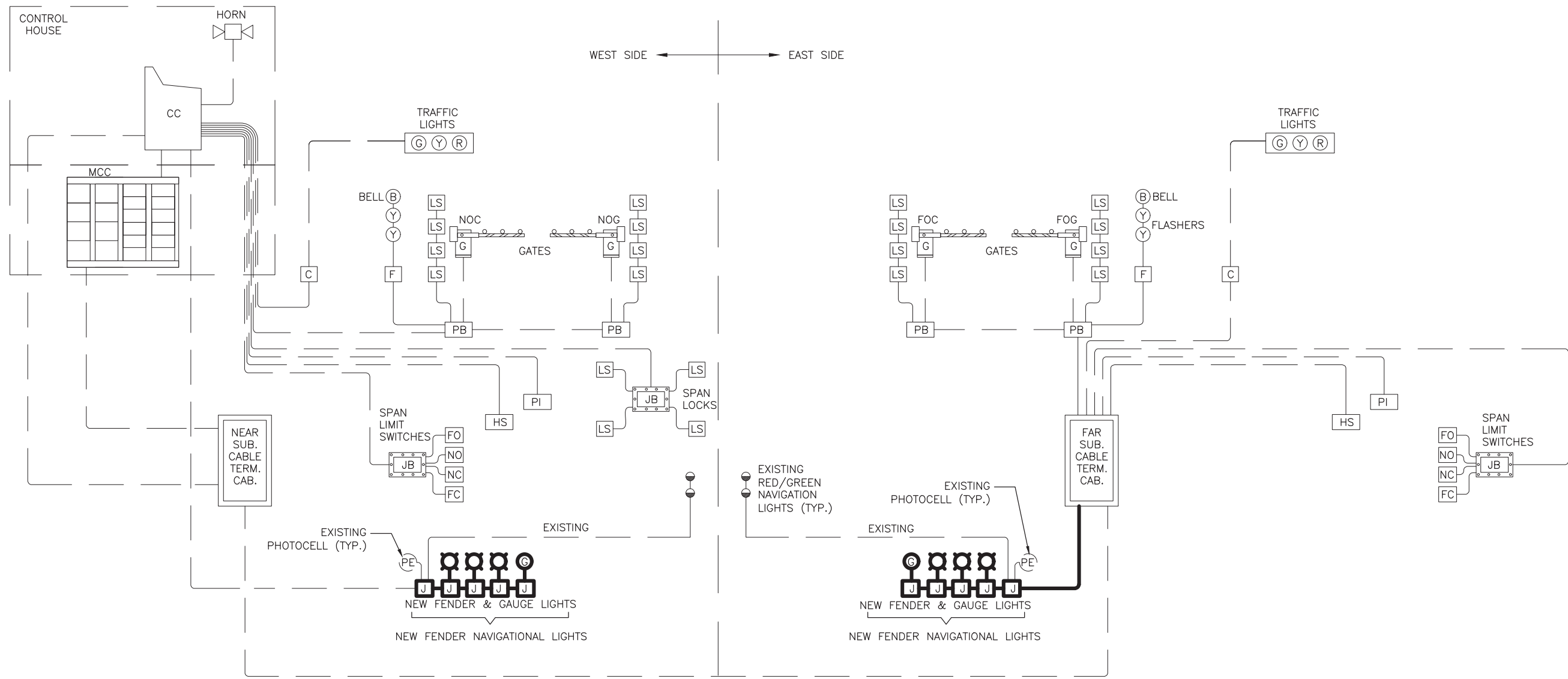
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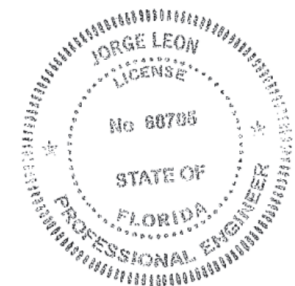
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BE-02
 PLAN AND ELEVATION
 WEST VENETIAN BRIDGE



LEGEND

- CONTROL CONSOLE
- MOTOR CONTROL CENTER
- LIMIT SWITCH
- EXISTING PULL BOX
- EXISTING CONDUIT
- NEW CONDUIT
- POSITION INDICATOR
- NEW JUNCTION BOX
- EXISTING PHOTOELECTRIC CELL



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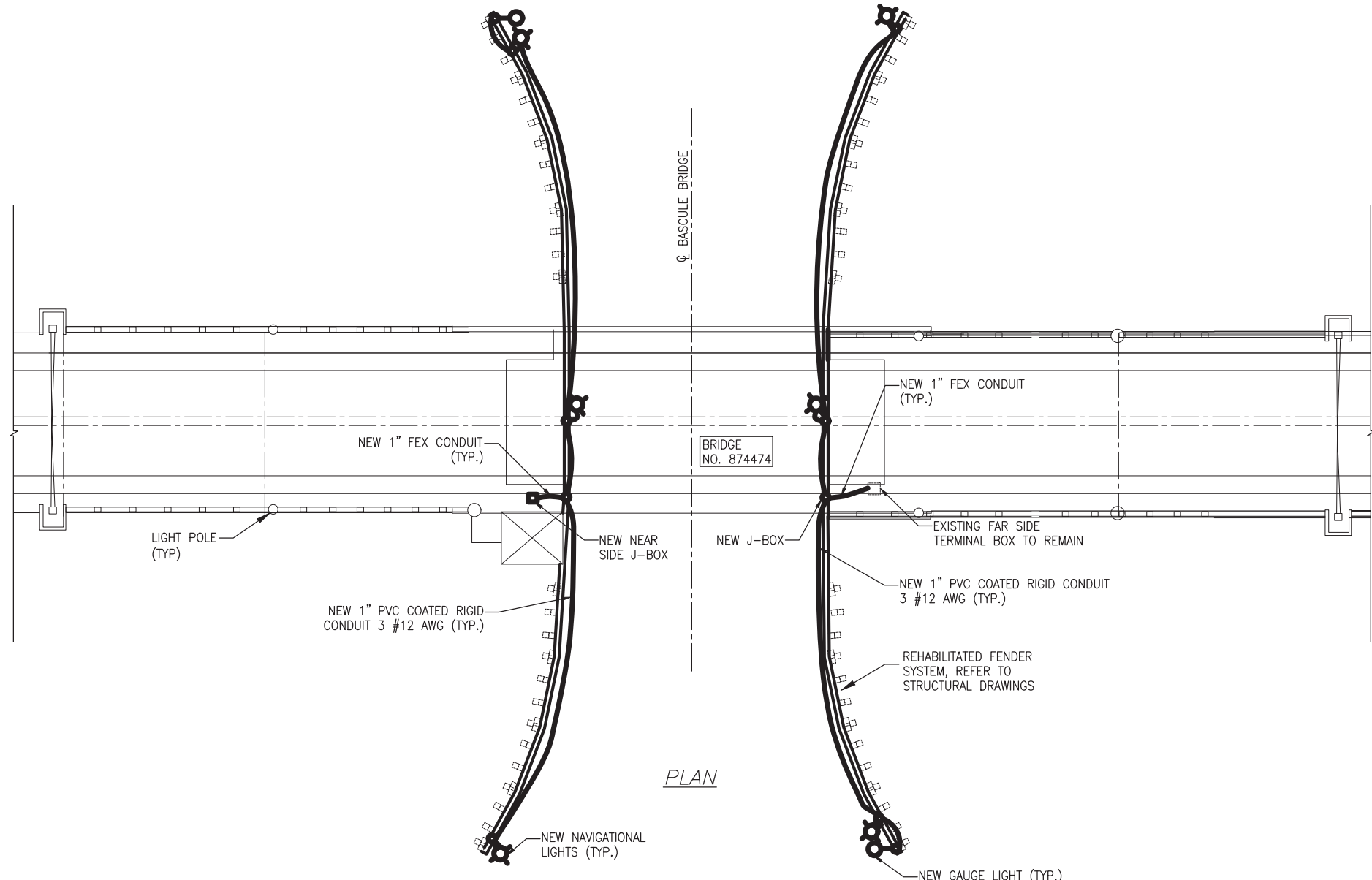
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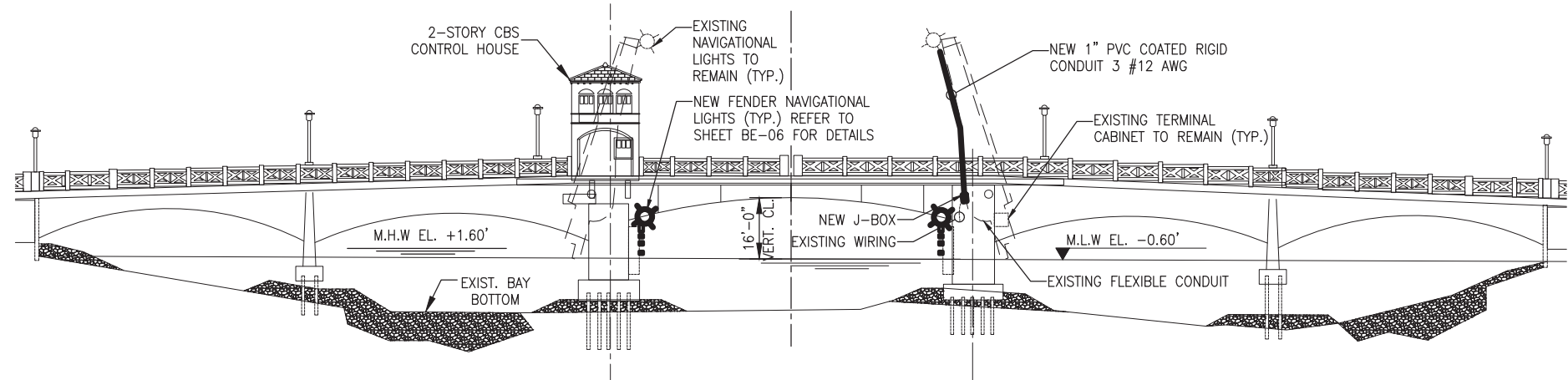
BE-03 BRIDGE CONDUIT DIAGRAM
 WEST VENETIAN

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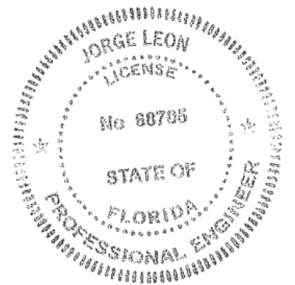
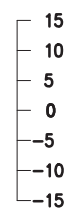


PLAN

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ELEVATION



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BRIDGE NO. 874474

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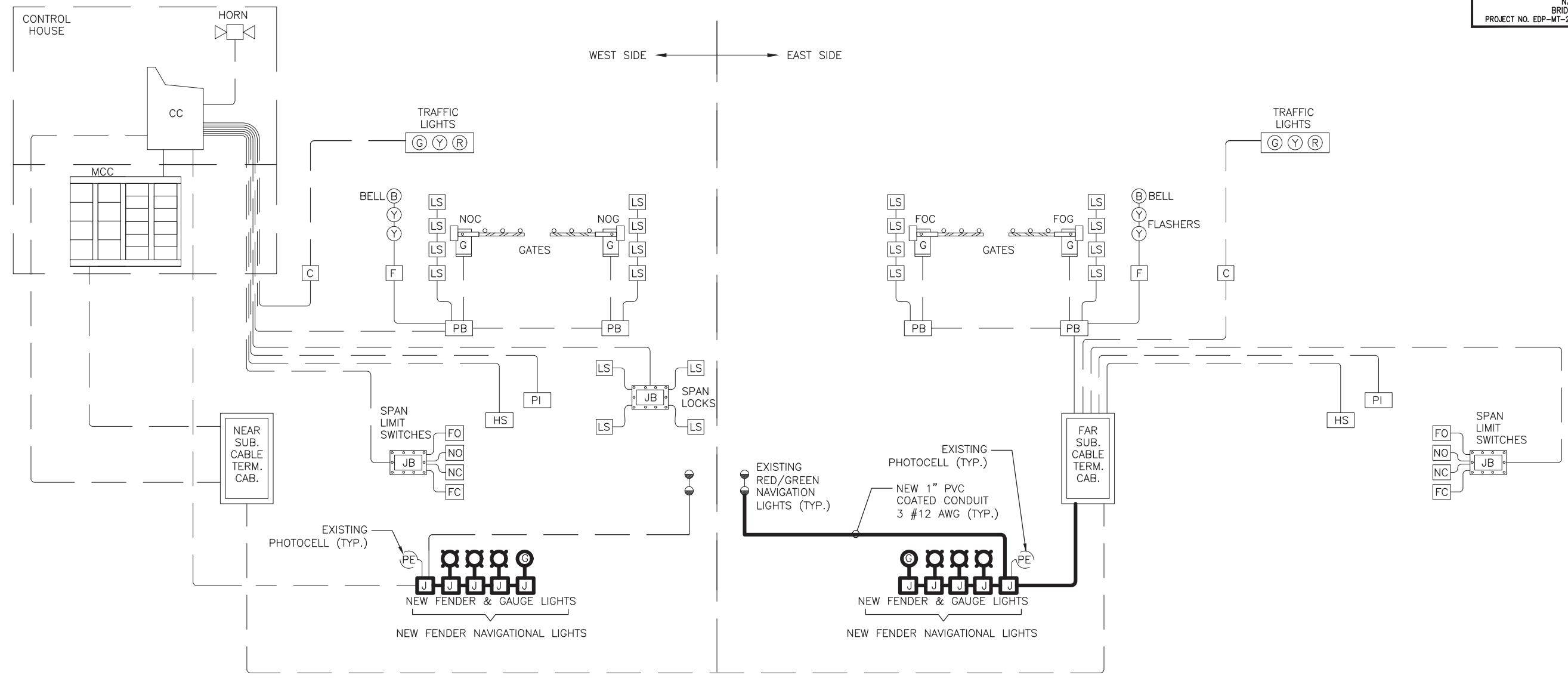
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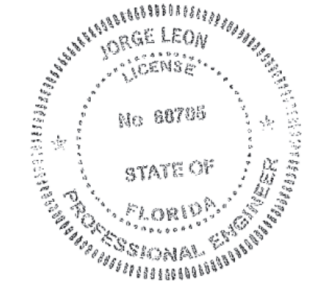
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BE-04
 PLAN AND ELEVATION
 EAST VENETIAN BRIDGE



LEGEND

- CONTROL CONSOLE
- MOTOR CONTROL CENTER
- LIMIT SWITCH
- EXISTING PULL BOX
- NEW CONDUIT
- JUNCTION BOX
- EXISTING PHOTOELECTRIC CELL
- EXISTING CONDUIT
- POSITION INDICATOR



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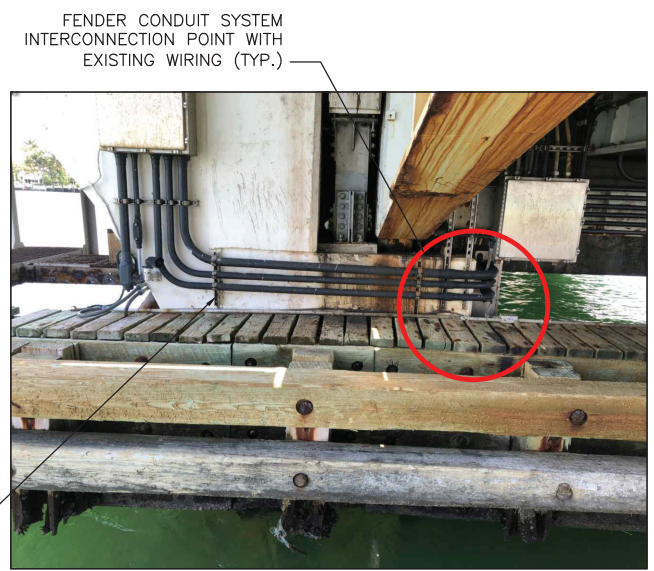
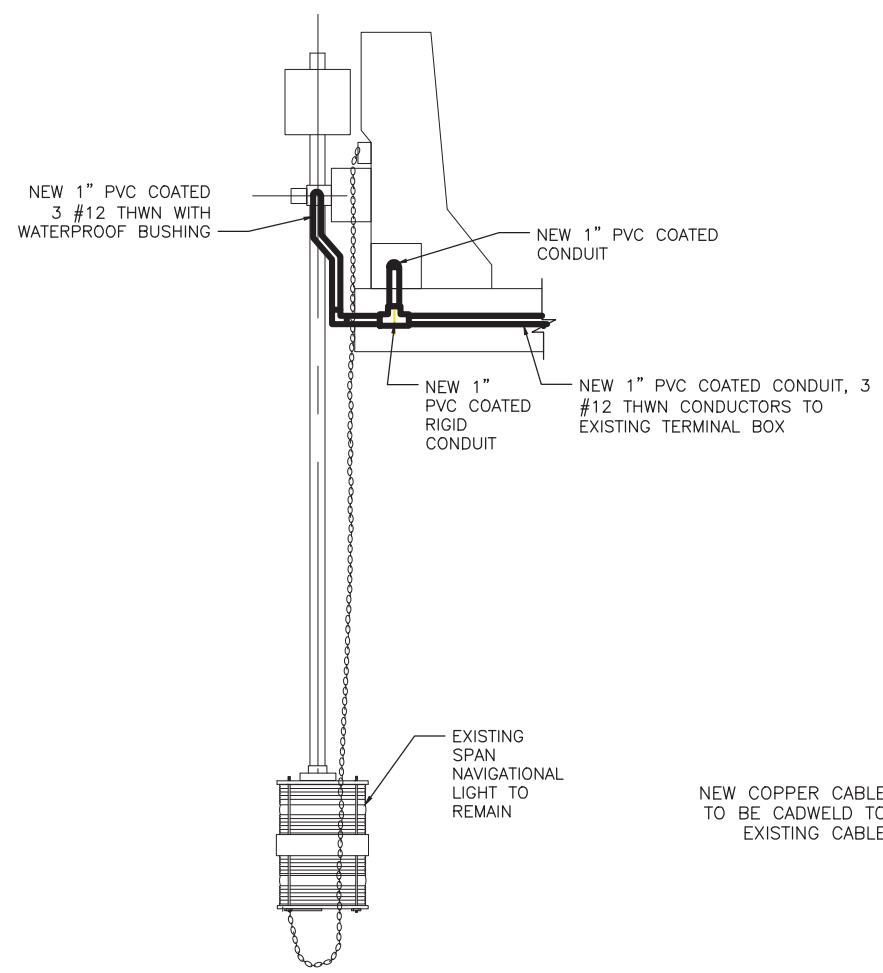
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BE-05 BRIDGE CONDUIT DIAGRAM EAST VENETIAN

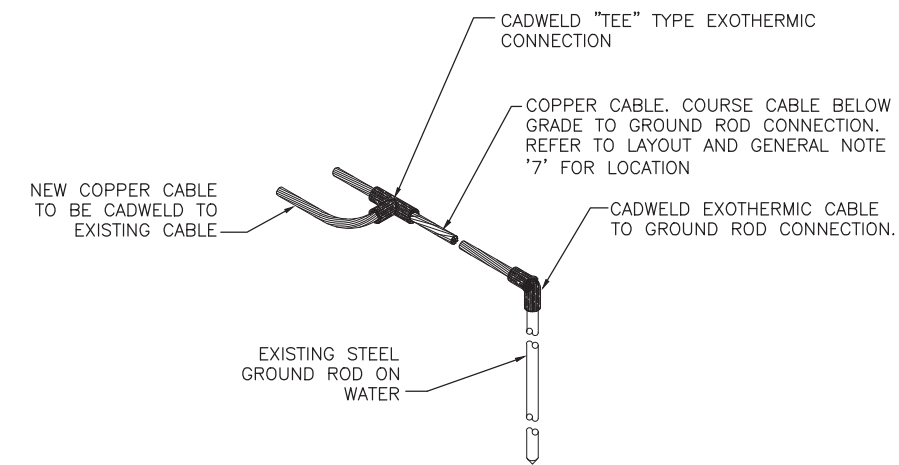
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EAST VENETIAN (BRIDGE No. 874474)

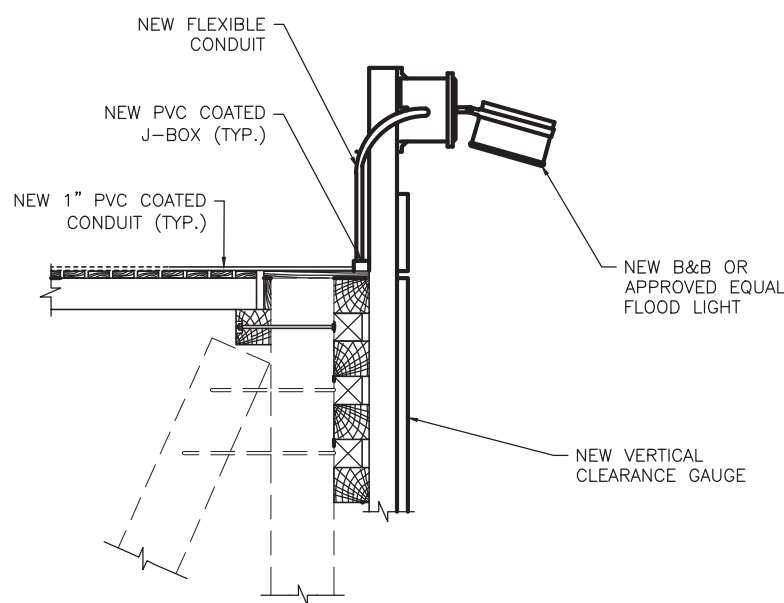
EXISTING CENTER CHANNEL MARKET NAVIGATION LIGHT FOR BASCULE BRIDGES

N.T.S.
 NOTE: THIS CONDUIT DETAIL APPLIES ONLY TO EAST VENETIAN (BRIDGE No. 874474) FAR SIDE



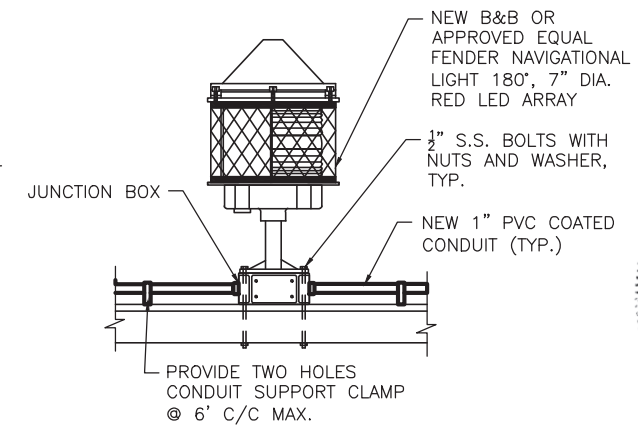
TYPICAL DOWNLOAD TO GROUNDING CONNECTION

N.T.S.
 NOTE: REFER TO PHOTO BELOW



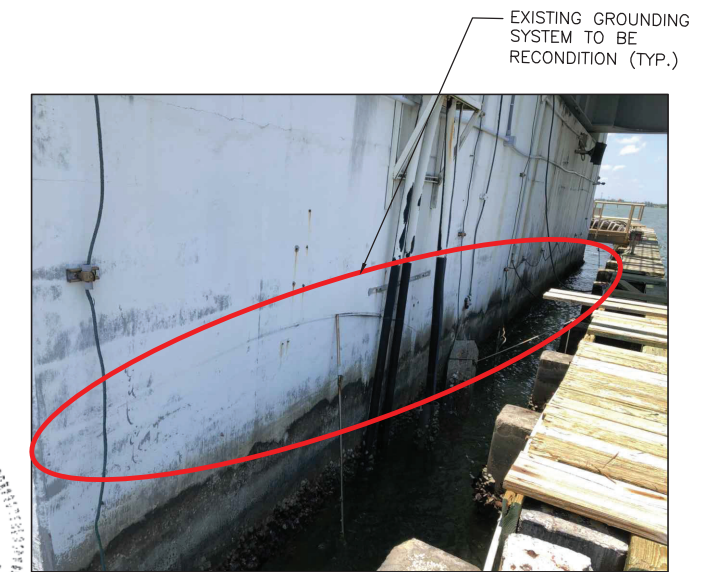
NEW TYPICAL CLEARANCE GAUGE LIGHT DETAIL

N.T.S.



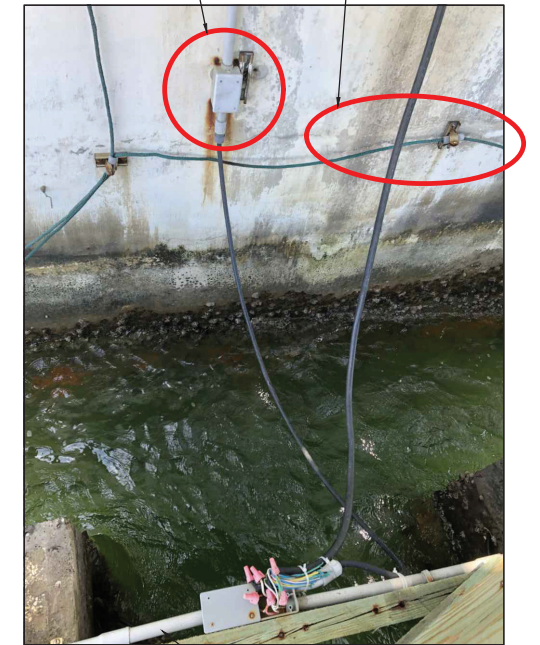
NEW TYPICAL FENDER LIGHT DETAIL

N.T.S.



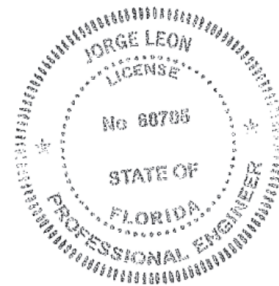
EXISTING J-BOX TO BE REPLACED WITH NEW J-BOX TO FENDER SYSTEM

EXISTING GROUNDING SYSTEM TO BE REPLACED (TYP.)



WEST VENETIAN (BRIDGE No. 874459)

BRIDGE NO. 874459 & 874474



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CHECKED BY	MPS	DATE	06/30/2020	CHECKED BY	JL
SUPERVISED BY		DATE	06/30/2020		

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