

PROJECT No. 20230004

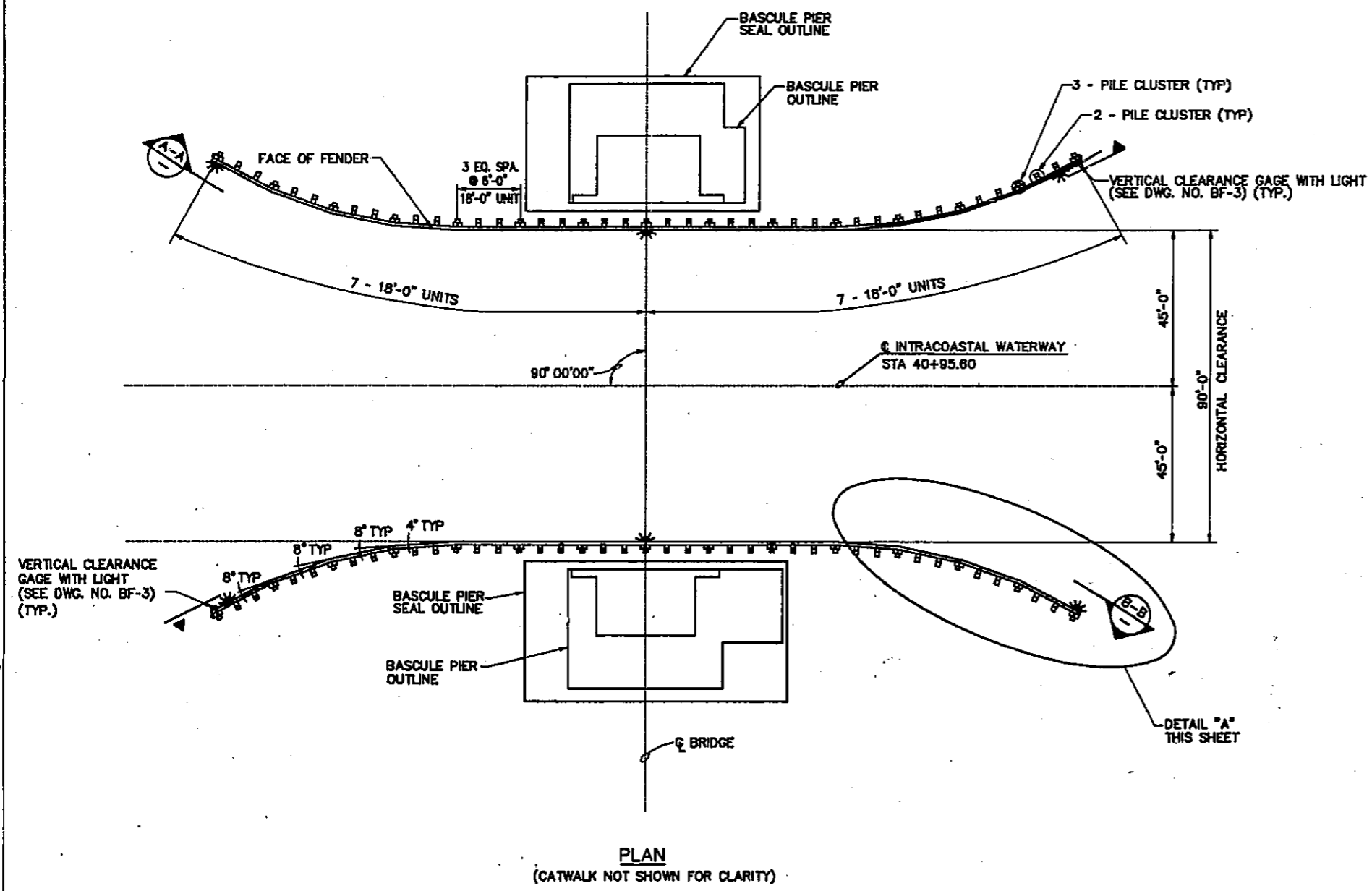
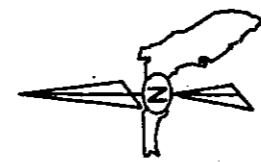
Venetian Causeway Bridges No. 874459 and No. 874474

Hurricane Irma Repairs

EXISTING PLANS BRIDGE No. 874459

2020094 BX1-1
FOR INFORMATION ONLY

874459 - WEST



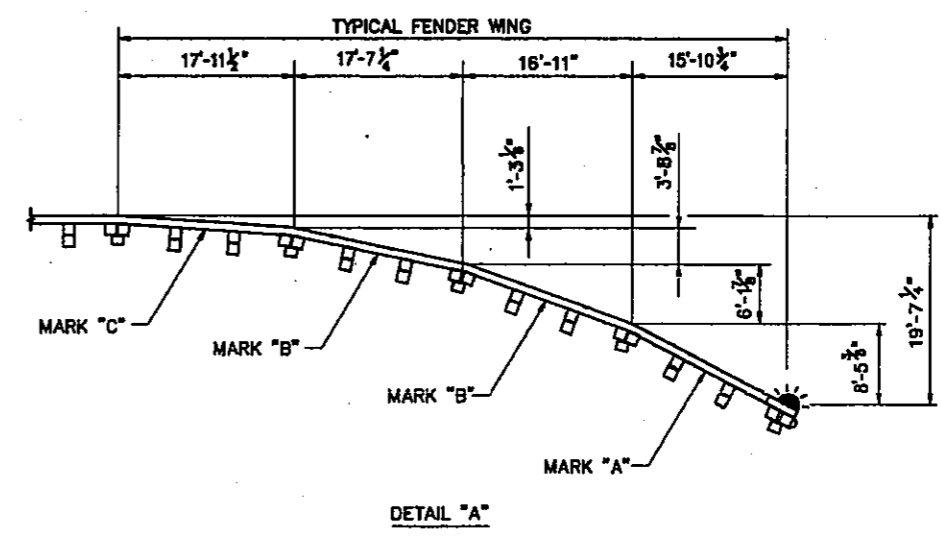
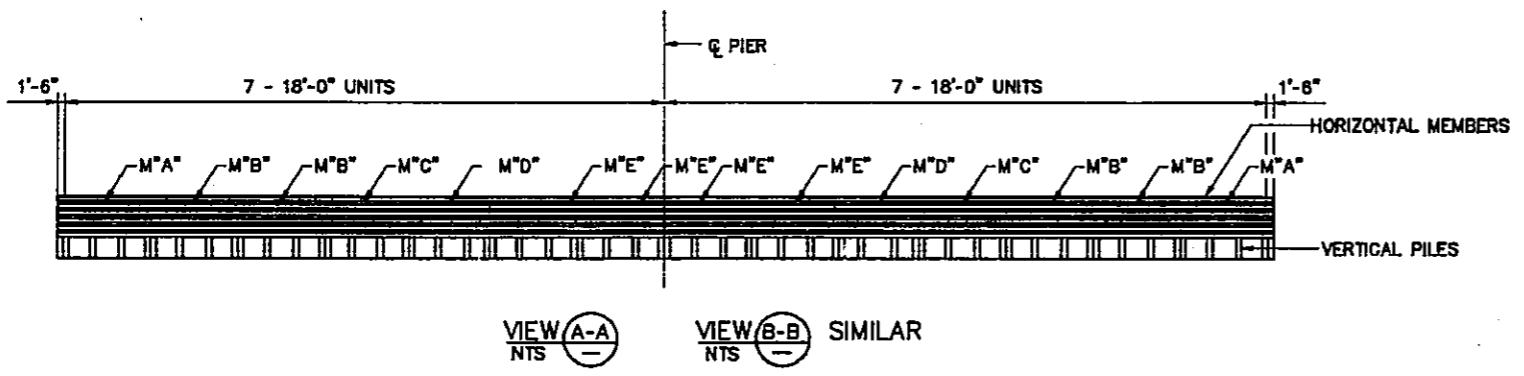
NOTES

- DISTANCE BETWEEN ALL ADJACENT PILE CLUSTERS SHALL BE 6'-0" UNLESS OTHERWISE SHOWN.
- EXISTING PILES AND WALERS SHALL BE REMOVED.
- ALL PILES SHALL BE 14" SQ. PRESTRESSED CONCRETE PILES.
- PILE BATTER IS 4:12, UNLESS OTHERWISE SHOWN.
- DIMENSIONS ARE SYMMETRICAL ABOUT C ROADWAY AND C CHANNEL U.O.N.
- FOR NAVIGATION AND GAGE LIGHTING REFER TO ELECTRICAL DETAILS, DWG NO. BE-9.
- ALL BOLTS, ANCHORS SHALL BE ASTM A-307, UNLESS OTHERWISE NOTED.
- ALL BOLTS, ANCHORS, WASHERS, CLIPS, CABLES, AND NAILS TO BE GALVANIZED IN ACCORDANCE WITH SECTION 982-7 OF THE SPECIFICATIONS.
- THE STRANDS AT THE TOP OF THE PILE SHALL BE BURNED OFF ONE INCH INTO THE CONCRETE AND PATCHED WITH EPOXY GROUT.
- ANY DAMAGE TO THE HEAD OF THE PILES AFTER DRIVING MUST BE REPAIRED WITH EPOXY GROUT.
- ALL TIMBER TO BE ROUGH-CUT AND SHALL RECEIVE "SALT WATER" TREATMENT IN ACCORDANCE WITH SECTION 955 OF THE SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED.
- ALL TIMBER SHALL BE CUT TO DIMENSIONS SHOWN PRIOR TO TREATMENT.
- PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN INDIVIDUAL BID ITEMS SHALL BE INCLUDED IN THE CONTRACT PRICES FOR BID ITEMS.
- DOMEHOLE BOLTS SHALL HAVE SLOTS OR HOLES ON HEADS FOR 60d NAILS.
- THE COST OF ALL HARDWARE, CABLES, ERECTING CLEARANCE GAGE SIGNS, ETC, SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PAY ITEM 470-1, TREATED TIMBER STRUCTURAL.

LEGEND

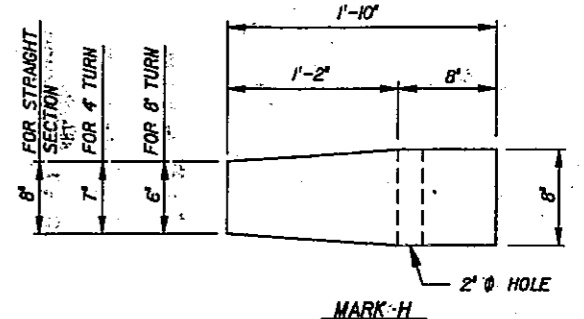
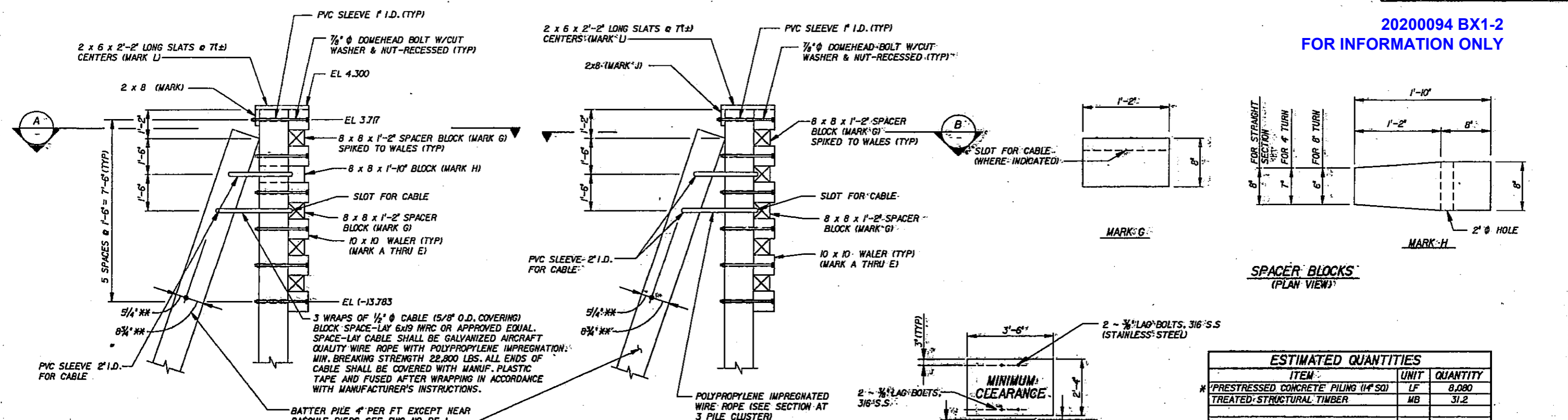
- RED NAVIGATIONAL LIGHT
- PILES DRIVEN AT A BATTER OF 1" PER FT.

PLAN
(CATWALK NOT SHOWN FOR CLARITY)



REVISIONS				Names		Dates		ENGINEER OF RECORD: DAVID VOLKERT & ASSOCIATES, INC. 4060 S.W. 72nd Avenue Suite 201 Miami, Florida 33155	LOGO: VOLKERT DAVID ASSOCIATES, INC. <small>DAVID, HENRI, ALEXANDRA, BRUNNEN, RETINA, TARA</small>	SEAL:	FLORIDA DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN OFFICE			SHEET TITLE: FENDER SYSTEM LAYOUT		Drawing No. BF-1		
Date	By	Description	Date	By	Description	Drawn by	Checked by				Designed by	Checked by	Approved by	ROAD NO.	COUNTY	PROJECT NO.	PROJECT NAME: VENETIAN CAUSEWAY HISTORICAL BRIDGE RENOVATION	Index No.
						LGA	REP.				REP.	DR.	RR. RWAS, P.E.	N/A	DADE	87000-3601		
						22 JUN 96	22 JUN 96				22 JUN 96	22 JUN 96						

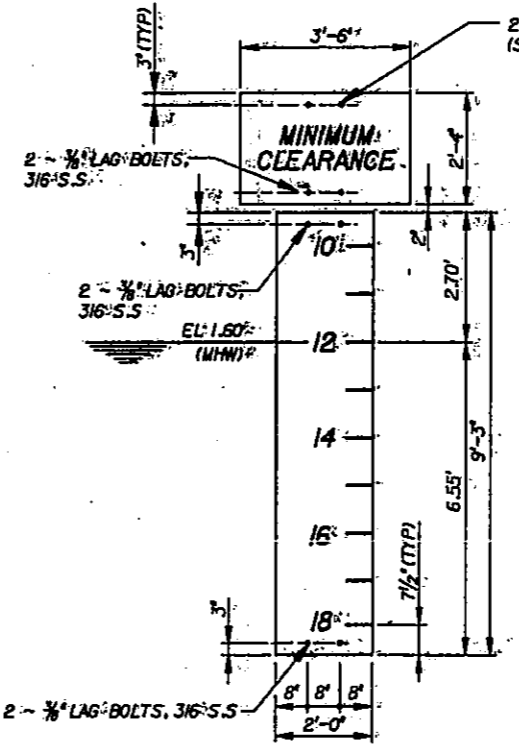
2020094 BX1-2
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ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
* PRESTRESSED CONCRETE PILING (14" SQ)	LF	8,080
TREATED STRUCTURAL TIMBER	MB	31.2

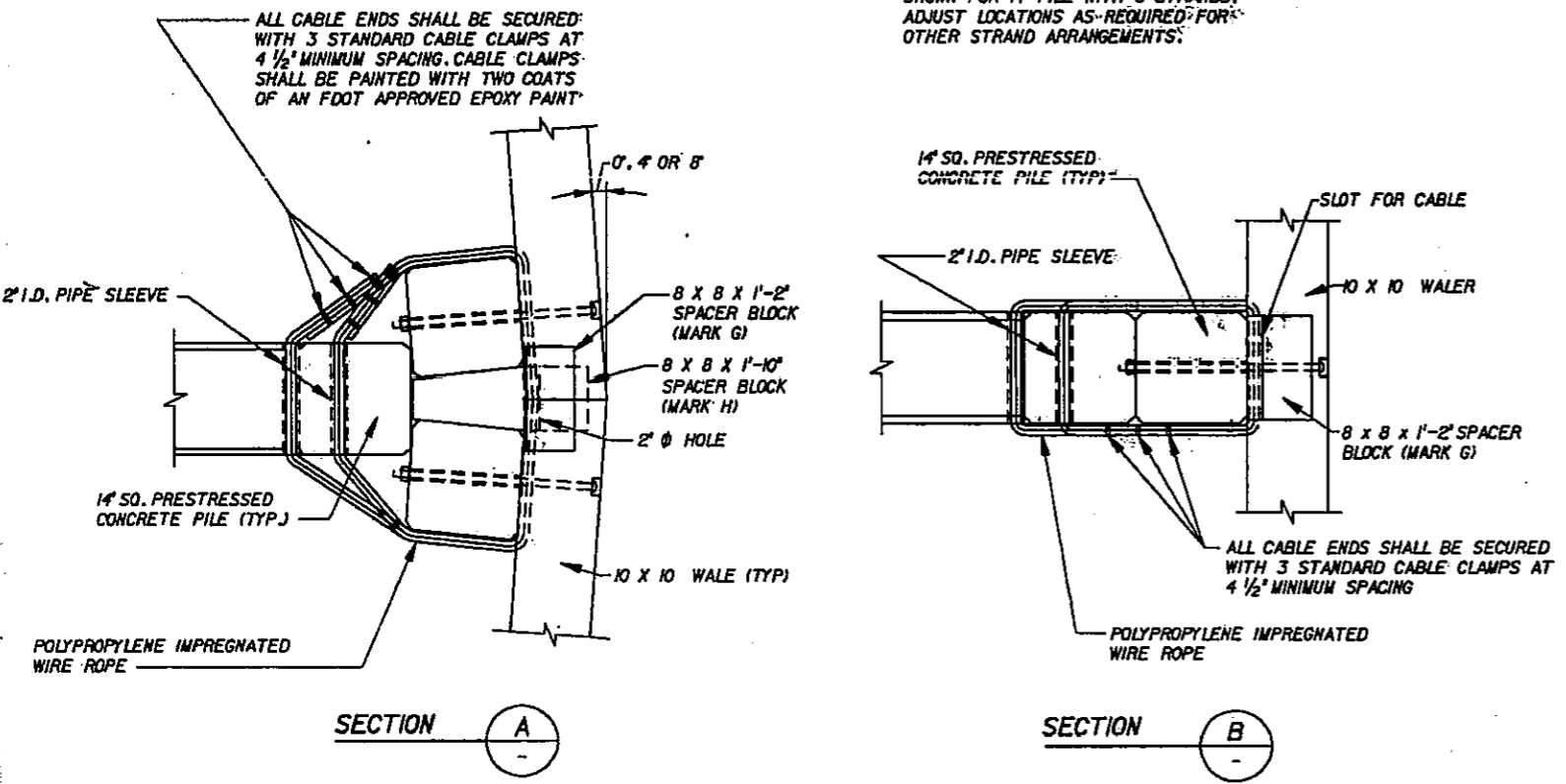
* FURNISHED LENGTHS OF 14" SQUARE PRESTRESSED CONCRETE PILING SHALL BE 40 FEET.

BILL OF TREATED STRUCTURAL TIMBER					
MARK	SIZE	LENGTH	NO. REQD.	MB	CUTTING DIAGRAM
A	10' x 10'	19'-6"	24	3.90	4V 19'-6"
B	10' x 10'	18'-0"	48	7.20	4V 18'-0"
C	10' x 10'	18'-0"	24	3.60	4V 18'-0"
D	10' x 10'	18'-0"	24	3.60	2V 18'-0"
E	10' x 10'	18'-0"	48	10.8	18'-0"
G	8' x 8'	1'-2"	400	2.49	SEE DETAIL
H	8' x 8'	1'-10"	30	0.293	SEE DETAIL
J	2' x 8'	18'-0"	28	0.672	18'-0"
L	2' x 6'	2'-2"	876	2.184	2'-2"
M	12' x 10'	14'-10"	2	0.296	MOUNTING TIMBER FOR GAGE-CUT TO FIT



CLEARANCE GAGE DETAIL
(TO BE MOUNTED ON FENDER IN TWO LOCATIONS, SEE PLAN)

- CLEARANCE GAGE NOTES:**
1. SET GAGE TO READ 12 AT EL 1.50. CONTRACTOR SHALL VERIFY IN THE FIELD THAT THE CLEARANCE OF THE BRIDGE AGREES WITH READING OF THE GAGE. IF NOT, THE GAGE SHALL BE RE-SET.
 2. SIGNS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. TYPE II-A REFLECTIVE SHEETING SHALL BE APPLIED TO THE SIGN FACE. LETTERS SHALL BE 6 INCHES. BLACK ON WHITE BACKGROUND.
 3. MOUNTING TIMBER TO BE 10' x 10' x 14'-0" (MARK M) CUT TO FIT.



** DIMENSIONS FOR PVC SLEEVE ARE SHOWN FOR 14" PILE WITH 8 STRANDS. ADJUST LOCATIONS AS REQUIRED FOR OTHER STRAND ARRANGEMENTS.

REVISIONS

Date	By	Description	Date	By	Description
25 MAY 95	D.R.	REVISED BILL OF TREATED STRUCTURAL TIMBER			

Name	Date
Drawn by R.L.	22 JAN 96
Checked by P.R.	22 JAN 96
Designed by P.R.	22 JAN 96
Checked by R.F.P.	22 JAN 96
Approved by R.R. RIVAS, P.E.	

ENGINEER OF RECORD:
DAVID VOLKERT & ASSOCIATES, INC.
4960 S.W. 72nd Avenue
Suite 201
Miami, Florida 33155

LOGO:
DAVID VOLKERT & ASSOCIATES, INC.
MIAMI, MOBILE, ALEXANDRIA, BIRMINGHAM, METairie, TAMPA

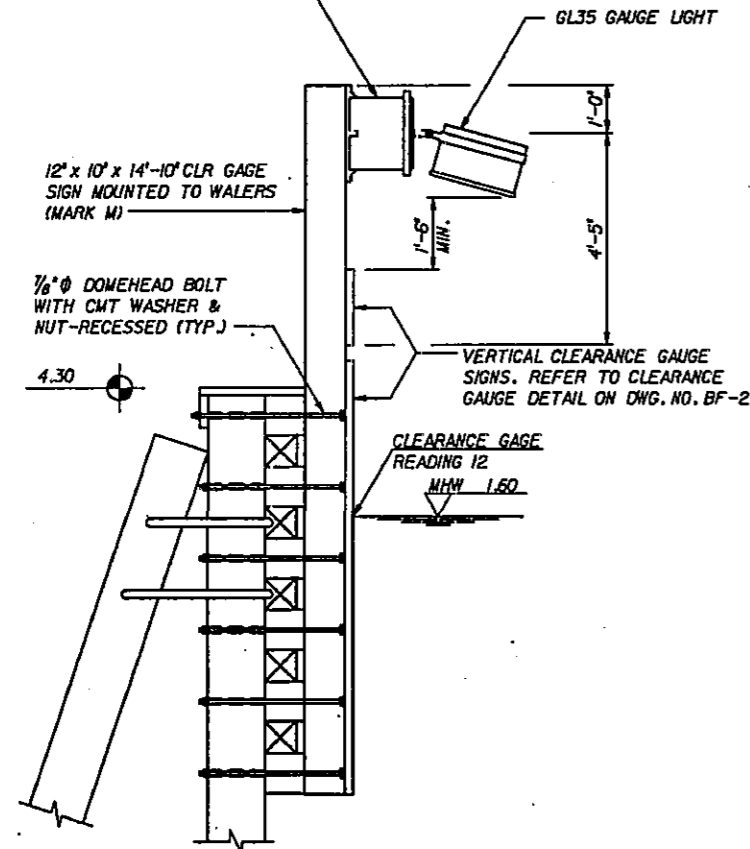
SEAL:

FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN OFFICE

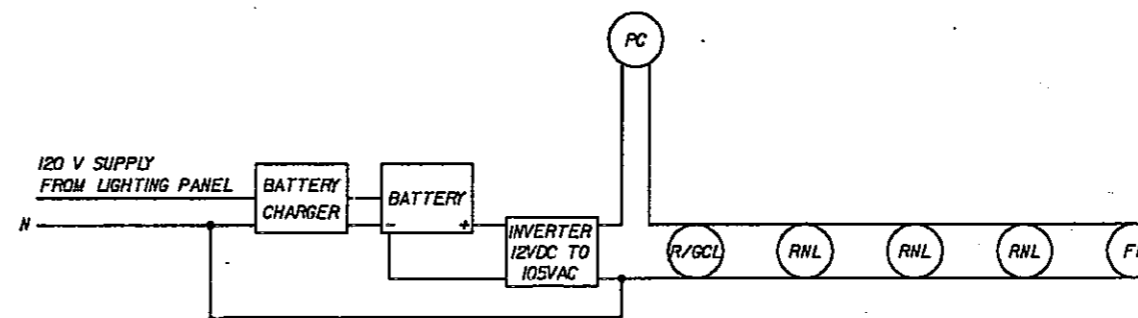
SHEET TITLE:
FENDER SYSTEM DETAILS (1 OF 2)
PROJECT NAME:
VENETIAN CAUSEWAY HISTORICAL BRIDGE RENOVATIONS
Drawing No.: BF-22
Index No.:

2020094 BX1-3
FOR INFORMATION ONLY

NEW NAV. LIGHT TO BE MOUNTED ON TOP OF NEW GAUGE TIMBER AS SHOWN



CLEARANCE GAGE MOUNTING DETAIL



1. OUTPUT VOLTAGE SHALL BE ADJUSTABLE BETWEEN 100 & 115 VOLTS.
2. BATTERY SHALL BE SIZED FOR 12 HOURS OF FULL, CONTINUOUS LOAD.
3. INVERTER SHALL BE SIZED FOR 2 TIMES THE CALCULATED LOAD.
4. BATTERY CHARGER SHALL BE RATED TO FULLY RECHARGE BATTERIES IN 12 HOURS.
5. EQUIP EACH NAV. LIGHT CIRCUIT WITH A LAMP-OUT INDICATOR.

R/GCL - RED/GREEN CHANNEL LIGHT RNL - RED NAVIGATION LIGHT
FL - CLEARANCE GAUGE FLOODLIGHT PC - PHOTOCELL

TYPICAL LAYOUT OF NAVIGATION LIGHTS
FOR BASCULE BRIDGE

NAVIGATIONAL LIGHTING NOTES FOR BASCULE BRIDGE

RED NAVIGATION LIGHT: 180°, 120 volt, 60 watt, minimum 155 mm fresnel lens, vandal proof. Luminous intensity for horizontal beam 30 candela (min.). Vertical divergence at 15 CD intensity, 6' maximum. Shall be equipped with a dual lamp and transfer relay option and bulbs rated minimum 32,000 hours extended life @ 110 volts. Lantern shall be mounted on a stainless steel post including fittings with a total height of 24' above fender.

RED/GREEN CHANNEL LIGHT: Red 180° lens, Green 180° lens, 120 volt, 60 watt, minimum 155 mm fresnel lens. Luminous intensity for horizontal beam 30 candela (min.). Vertical divergence at 15 CD intensity, 6' maximum. Shall be equipped with a dual lamp and transfer relay option and bulbs rated minimum 32,000 hours extended life @ 110 volts. Equip with a pivot mount and retrieval chain so that the base can be mounted outside of bridge barrier and lantern can be serviced by reaching over the barrier from inside. Hanger stem shall be long enough so that lantern does not extend below the bottom of the girder.

CLEARANCE GAUGE LIGHT: Angle of illumination 15° to 30° depending on fixture contour. Ballast with high power factor using a 35 watt high pressure sodium lamp. Enclosure to be NEMA 3R cast aluminum housing with epoxy finish enamel. Voltage shall be 110 volts, 60 Hz.

Navigation Light system shall comply with the latest edition of the Code of Federal Regulations, Navigation and Navigable Waters, CFR 33 Part 118, Bridge Lighting and Other Signals.

REVISIONS

Date	By	Description	Date	By	Description
25MAY95	D.R.	MODIFIED PIER SUPPORT AND ADDED WALER DETAIL			

Drawn by	Names	Date
Checked by	R.V.A.	22 JAN 96
Designed by	P.R.	22 JAN 96
Checked by	P.R.	22 JAN 96
Approved by	R.F.P.	22 JAN 96
	R.R.RIVAS, P.E.	

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SEAL:

FLORIDA DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN OFFICE

ROAD NO.	COUNTY	PROJECT NO.
N/A	DADE	87000-3601

SHEET TITLE:
FENDER SYSTEM DETAILS (2 OF 2)
Drawing No. BF-3

PROJECT NAME:
VENETIAN CAUSEWAY
HISTORICAL BRIDGE RENOVATIONS
Index No.