GENERAL NOTES

1. Provide fender systems in accordance with Specifications Section 471.

2. Do not use the following materials for pile or wale members in the design of the fender system:
   Timber
   Concrete containing ferrous metal strands and reinforcing

3. Use the following information to complete the fender system design meeting the Specifications and the requirements stated herein:
   Maximum Allowable Fender System Deflection (ft) = 2.5
   Required EAC (k-ft) = 38
   ½ of 100-yr Scour Elevation (ft) = -15.0
   Channel Depth (ft) = 10.0
   MHW Elevation (ft) = 0.25
   MLW Elevation (ft) = -2.13

4. U.S. COAST GUARD NOTIFICATION: Notify the local office of the U.S. Coast Guard at least 30 days prior to beginning of construction of the Fender System.

5. PILES: Provide Reinforced Thermoplastic Structural Shapes for piles in accordance with Specifications Section 973. Install all piles plumb and in accordance with manufacturer's recommendations. Pile splices are not allowed.

6. WALES: Provide Reinforced Thermoplastic Structural Shapes for wales in accordance with Specifications Section 973. Provide continuous wales with splices only at locations shown on the plans.

7. FRP DECKING FOR CATWALKS: Provide 2" x 12" (nominal) Thermoplastic Structural Shapes for decking for catwalks in accordance with Specifications Section 973. Install decking according to manufacturer's recommendations using stainless steel #10 x 3" (minimum) deck screws.

8. FRP HANDRAILS: Provide Thermoplastic Structural Shapes for handrails in accordance with Specifications Section 973.

9. CLEARANCE GAUGES AND LIGHTS: Provide Clearance Gauges and Minimum Clearance Signs in accordance with Specifications Section 700 and that are a minimum of 0.08 inches thick. Include complete details of the Clearance Gauges, Minimum Clearance Signs and their associated support/attachment systems in the Shop Drawings. Provide and install Clearance Gauge Lights in accordance with Specifications Section 510 and Design Standards Index 21220.

10. NAVIGATION LIGHTS: Provide and install Navigation Lights in accordance with Specifications Section 510, Design Standards Index 21220, and/or if appropriate, project specific details.

11. BOLTS, THREADED BARS, NUTS, SCREWS AND WASHERS: Furnish stainless steel bolts in accordance with ASTM F593 Type 316. Furnish stainless steel Threaded Bars in accordance with ASTM A193 Grade B8M. Furnish stainless steel Nuts in accordance with ASTM F594 Type 316. Furnish stainless steel Screws in accordance with ASTM F593 Type 305. Furnish stainless steel Washers compatible with Bolts, Threaded Rods and Nuts under heads and nuts. Torque Nuts on 1" diameter Bolts and Threaded Bars to 150 lb-ft. Keep the threads on Bolts, Threaded Bars and Nuts free from dirt, coarse grime and sand to prevent galling and seizing during tightening. Recess hardware a minimum of ½" from front face of wales.

12. WALE SPLICE PLATES: Provide FRP or stainless steel wale splice plates. Stainless steel wale splice plates shall be in accordance with ASTM A240 Type 316. FRP wale splice plates shall be in accordance with Specifications Section 973.

BRIDGE NO. XXXXXX

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

STRUCTURES DESIGN OFFICE
CENTRAL OFFICE
605 Suwannee Street, MS 33
Tallahassee, Florida 32399-0450
PE NAME
PE NUMBER

DRAWN BY:
CHECKED BY:
DESIGNED BY:
CHECKED BY:

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

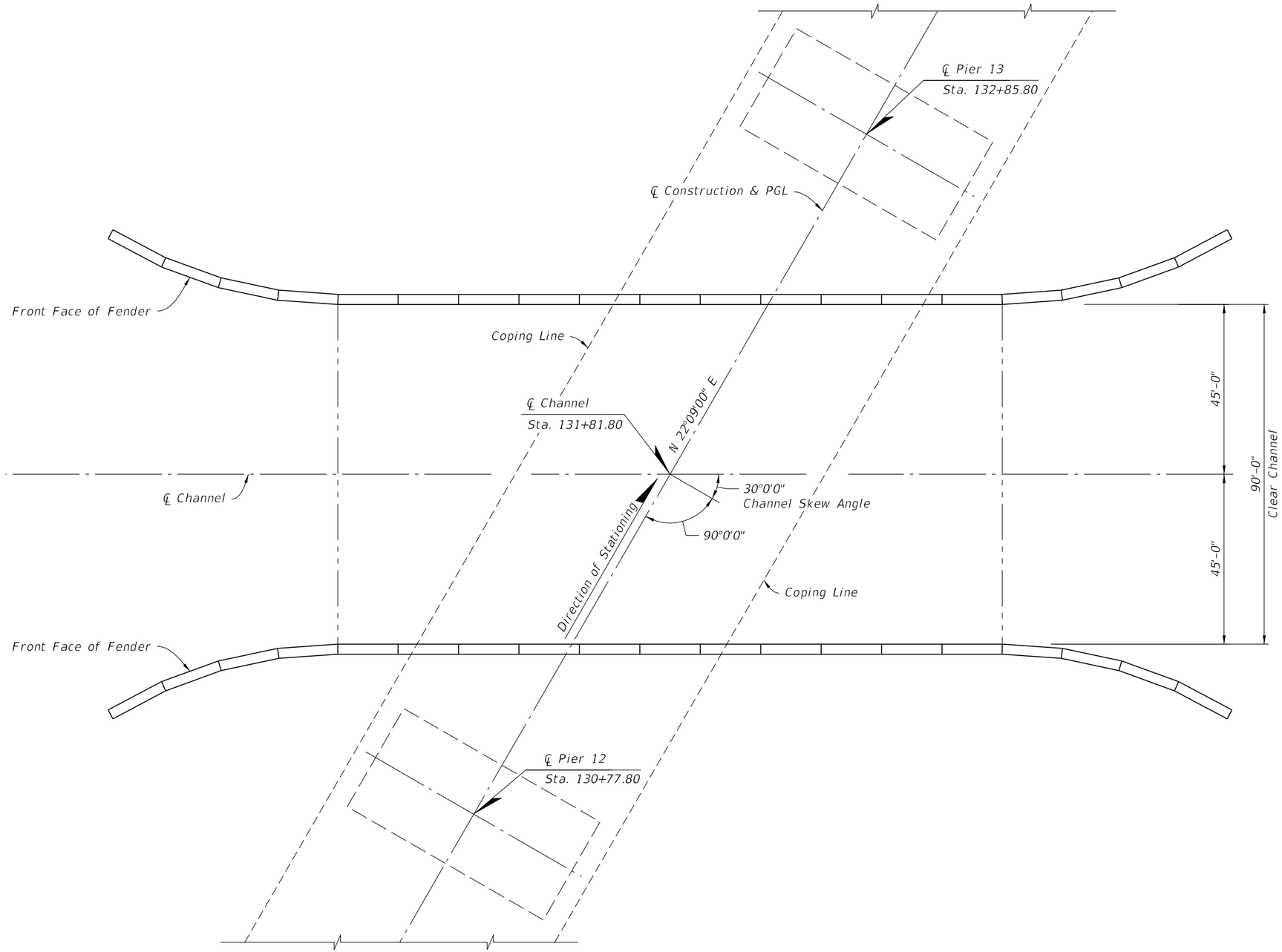
ROAD NO.	COUNTY	FINANCIAL PROJECT ID

SHEET TITLE: GENERAL NOTES

REF. DWG. NO.

PROJECT NAME: FENDER SYSTEM EXAMPLE 1
SHEET 1 OF 4

SHEET NO.



SCHEMATIC PLAN VIEW OF FENDER SYSTEM

BRIDGE NO. XXXXXX

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

STRUCTURES DESIGN OFFICE
CENTRAL OFFICE
605 Suwannee Street, MS 33
Tallahassee, Florida 32399-0450
PE NAME
PE NUMBER

DRAWN BY:
CHECKED BY:
DESIGNED BY:
CHECKED BY:

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

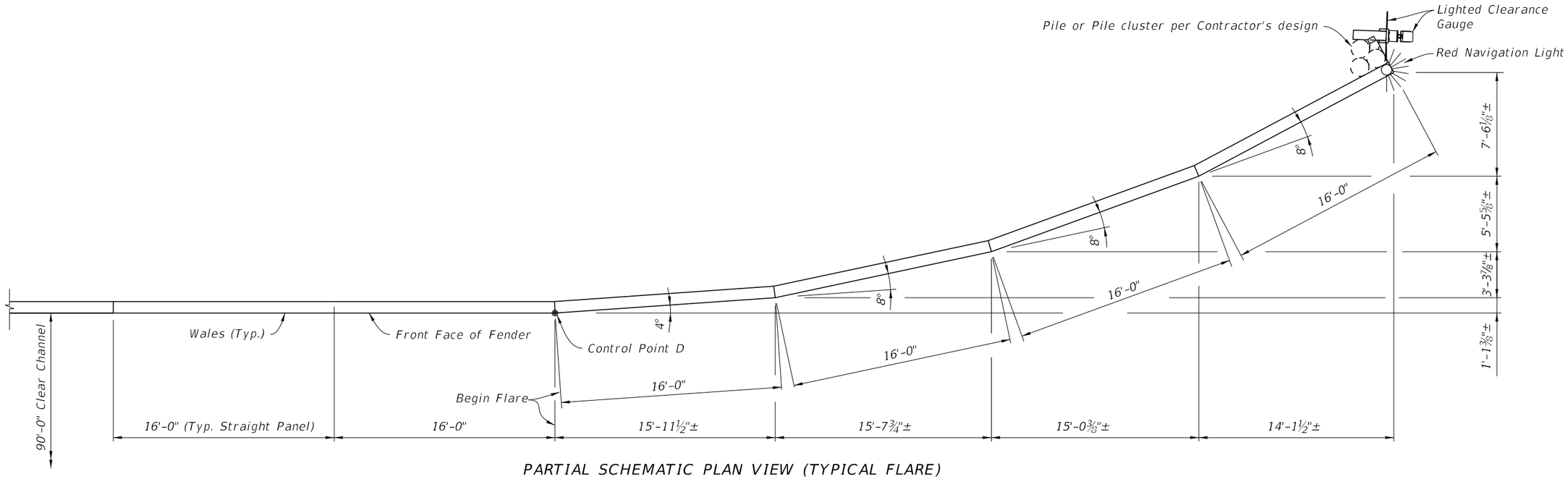
ROAD NO.	COUNTY	FINANCIAL PROJECT ID

SHEET TITLE: SCHEMATIC PLAN VIEW OF FENDER SYSTEM

REF. DWG. NO.

PROJECT NAME: FENDER SYSTEM EXAMPLE 1
SHEET 2 OF 4

SHEET NO.



PARTIAL SCHEMATIC PLAN VIEW (TYPICAL FLARE)
(FLARE AT CONTROL POINT D SHOWN, CONTROL POINTS A, B & C SIMILAR)
(PILES, CATWALK AND HANDRAIL NOT SHOWN FOR CLARITY)

BRIDGE NO. XXXXXX

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

STRUCTURES DESIGN OFFICE
CENTRAL OFFICE
605 Suwannee Street, MS 33
Tallahassee, Florida 32399-0450
PE NAME
PE NUMBER

DRAWN BY:
CHECKED BY:
DESIGNED BY:
CHECKED BY:

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

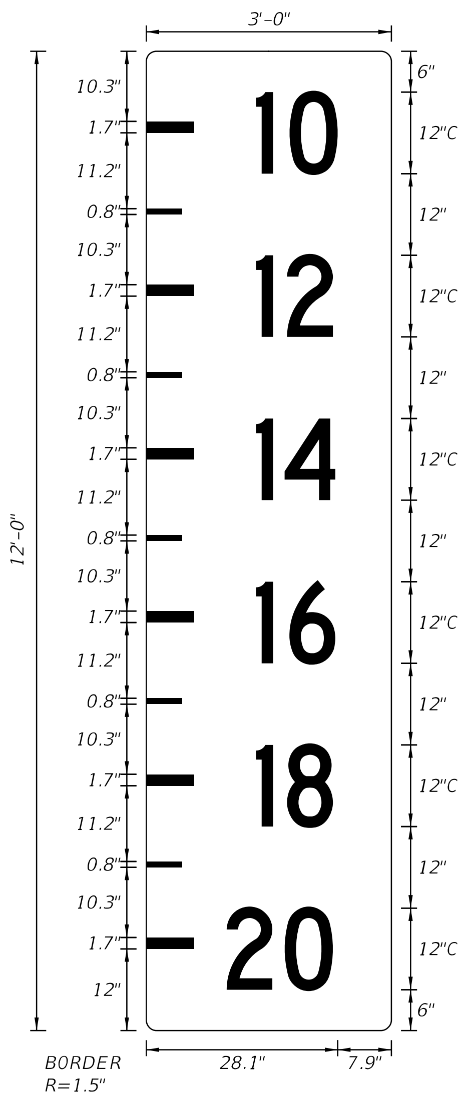
ROAD NO.	COUNTY	FINANCIAL PROJECT ID

SHEET TITLE: *PARTIAL SCHEMATIC PLAN VIEW DETAILS*

REF. DWG. NO.:

PROJECT NAME: *FENDER SYSTEM EXAMPLE 1*

SHEET NO.: *SHEET 3 OF 4*



SIGN NAME	VCGS12		QTY	I	
PANEL			BORDER		
WIDTH	3'-0"		WIDTH	0"	
HEIGHT	12'-0"		RADII	1.5"	
LEGEND	Black		COLOR	RGB[240,240,240]	
COLOR	White				
FOOT MARK	ANGLE	X	Y	WID	HT

COPY	1	0		L	
SPACE	16.1	21.1		12	
COPY	1	2		L	
SPACE	16.1	20.7		11.3	
COPY	1	4		L	
SPACE	16.1	20.3		11.6	
COPY	1	6		L	
SPACE	16.1	21.1		11.6	
COPY	1	8		L	
SPACE	16.1	20.7		11.3	
COPY	2	0		L	
SPACE	11.8	20.3		15.6	
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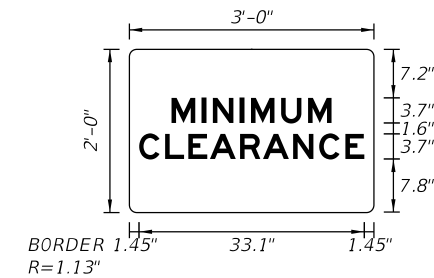

	NO. OF LIGHT FIXTURES		FIXTURE SPACING		PHOTOMETRIC CURVE		WATT		VOLTAGE		

SIGN NAME	MVC
PANEL	
WIDTH	3'-0"
HEIGHT	2'-0"
LEGEND	Black
COLOR	White
QTY	I
BORDER	
WIDTH	0"
RADII	1.13"
COLOR	RGB[240,240,240]

COPY	M	I	N	I	M	U	M		L				
SPACE	6.2	10.7	12.3	16.3	17.9	22.3	26.3		23.5				
COPY	C	L	E	A	R	A	N	C	E		L		
SPACE	1.4	5.3	8.7	11.9	16.3	19.7	24.1	27.9	31.8		33.1		
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GENERAL NOTES:

BRIDGE NO. XXXXXX

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

STRUCTURES DESIGN OFFICE
CENTRAL OFFICE
605 Suwannee Street, MS 33
Tallahassee, Florida 32399-0450
PE NAME
PE NUMBER

DRAWN BY:
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CHECKED BY:

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

SHEET TITLE:
SIGN PANEL DETAILS

PROJECT NAME:
FENDER SYSTEM EXAMPLE 1
SHEET 4 OF 4

REF. DWG. NO.

SHEET NO.