



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
4400 PGA BLVD. SUITE 500  
PALM BEACH GARDENS, FLORIDA 33410

January 12, 2021

REPLY TO  
ATTENTION OF

Regulatory Division  
North Permits Branch

Panama City Permits Section  
SAJ-2020-00177 (NW-MMT)

Florida Department of Transportation  
Attn: Mr. Wilord Mettelus  
3400 Commercial Blvd.  
Ft. Lauderdale, Florida 33309

Dear Mr. Mettelus:

The U.S. Army Corps of Engineers (Corps) assigned your application for a Department of the Army permit, which the Corps received on January 13, 2020, the file number SAJ-2020-00177. The project includes the installation of scour countermeasures (articulating block) and a submarine conduit under the SR A1A Hillsboro Bridge. A review of the information and drawings provided indicates that the proposed work would result in permanent fill impacts to 0.206-acre of waters of the United States. The project site is located at Hillsboro Inlet Bridge, within the IWW in Section 29, Township 48S, Range 43E, in Pompano Beach, Broward County, Florida (Latitude: 26.1541.07°N; Longitude: - 80.0459.70°W).

Your project, as depicted on the enclosed drawings, is authorized by Nationwide Permit (NWP) Number 14. In addition, project specific conditions have been enclosed. This verification is valid until **March 18, 2022**. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit. Please access the U.S. Army Corps of Engineers' (Corps) Jacksonville District's Regulatory Internet page to access Internet links to view the Final Nationwide Permits, Federal Register Vol. 82, dated January 6, 2017, specifically pages 1983 to 2008, and the table of Regional Conditions. The Internet page address is:

<http://www.saj.usace.army.mil/Missions/Regulatory.aspx>

Please be aware this Internet address is case sensitive and should be entered as it appears above. Once there you will need to click on "Source Book"; and, then click on

“Nationwide Permits.” These files contain the description of the Nationwide Permit authorization, the Nationwide Permit general conditions, and the regional conditions, which apply specifically to this verification for NWP# 14. Enclosed is a list of the fifteen General Conditions, which apply to all Department of the Army authorizations. You must comply with all of the special and general conditions and any project specific condition of this authorization or you may be subject to enforcement action. In the event you have not completed construction of your project within the specified time limit, a separate application or re-verification may be required.

The following special conditions are included with this verification:

1. **Reporting Address:** The Permittee shall submit all reports, notifications, documentation and correspondence required by the general and special conditions of this permit to either (not both) of the following addresses:
  - a. For electronic mail (preferred): [SAJ-RD-Enforcement@usace.army.mil](mailto:SAJ-RD-Enforcement@usace.army.mil) (not to exceed 15 MB).
  - b. For standard mail: U.S. Army Corps of Engineers, Regulatory Division, Enforcement Section, P.O. Box 4970, Jacksonville, FL 32232-0019.
  - c. The Permittee shall reference this permit number, SAJ-2020-00177 (NWP-MMT), on all submittals.
2. **Commencement Notification:** Within 10 days from the date of initiating the work authorized by this permit the Permittee shall submit a completed “Commencement Notification” Form.
3. **As-Built Certification:** Within 60 days of completion of the work authorized by this permit, the Permittee shall submit as-built drawings of the authorized work and a completed “As-Built Certification By Professional Engineer” form (Attachment A) to the Corps. The as-built drawings shall be signed and sealed by a registered professional engineer and include the following:
  - a. A plan view drawing of the location of the authorized work footprint, as shown on the permit drawings, with transparent overlay of the work as constructed in the same scale as the permit drawings on 8½-inch by 11-inch sheets. The plan view drawing should show all "earth disturbance," including wetland impacts and water management structures.
  - b. A list of any deviations between the work authorized by this permit and the work as constructed. In the event that the completed work deviates, in any manner, from the authorized work, describe on the attached “As-Built

Certification By Professional Engineer”\_form the deviations between the work authorized by this permit and the work as constructed. Clearly indicate on the as-built drawings any deviations that have been listed. Please note that the depiction and/or description of any deviations on the drawings and/or “As-Built Certification By Professional Engineer” form does not constitute approval of any deviations by the Corps.

- c. Include the Department of the Army permit number on all sheets submitted.
4. **Agency Changes/Approvals:** Should any other agency require and/or approve changes to the work authorized or obligated by this permit, the permittee is advised a modification to this permit instrument is required prior to initiation of those changes. It is the permittee’s responsibility to request a modification of this permit from the Panama City Permits Section. The Corps reserves the right to fully evaluate, amend, and approve or deny the request for modification of this permit.
5. **Posting of Permit:** The permittee shall have available and maintain for review a copy of this permit and approved plans at the construction site.
6. **Erosion Control:** Prior to the initiation of any work authorized by this permit, the Permittee shall install erosion control measures along the perimeter of all work areas to prevent the displacement of fill material outside the work area into waters of the United States. Immediately after completion of the final grading of the land surface, all slopes, land surfaces, and filled areas shall be stabilized using sod, degradable mats, barriers, or a combination of similar stabilizing materials to prevent erosion. The erosion control measures shall remain in place and be maintained until all authorized work is completed and the work areas are stabilized.
7. **Fill Material:** The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.
8. **Section 408 Approval:** Corps authorization under Section 14 of the Rivers and Harbors Act (33 USC 408) was granted on November 4, 2020. This authorization is subject to the following condition:

The applicant shall comply with Engineering Circular 1165-2-220, dated 10 September 2018, Policy and Procedural Guidance for Processing Requests to Alter US Army Corps of Engineers Civil Works Projects Pursuant to 33 USC 408, Appendix K, paragraphs 1. to 16 (attached). (and the time limit for completing the work authorized in Department of Army Permit SAJ-2020-00451. The applicant is responsible for the quality control for performance of the work and for ensuring these actions do not interfere with the functioning of the IWW. Documentation of the completed

work must be furnished to the Corps within 30 days after completion of the work for our records. This documentation will need to include a certification that the work was completed in accordance with the approved plans and specifications, GPS readings for the limits of the work performed, as-built drawings, and the date the work started and was completed.

9. **Manatee Conditions:** The Permittee shall comply with the “Standard Manatee Conditions for In-Water Work – 2011” (Attached).
10. **Sea Turtle and Smalltooth Sawfish Conditions:** The Permittee shall comply with National Marine Fisheries Service’s “Sea Turtle and Smalltooth Sawfish Construction Conditions” dated March 23, 2006, (Attached).
11. **Horizontal Direction Drill: In the Event of a Frac-Out:** Should a frac-out and release of drilling fluids occur within navigable waters of the U.S., and in-water work is required to remediate the action, the permittee shall comply with the frac-out contingency plan (attached).

This letter of authorization does not obviate the necessity to obtain any other Federal, State, or local permits, which may be required. Prior to the initiation of any construction, projects qualifying for this Nationwide permit must qualify for an exemption under section 403.813(1), Florida Statutes or 373.406, Florida Statutes, or otherwise be authorized by the applicable permit required under Part IV of Chapter 373, Florida Statutes, by the Department of Environmental Protection, a water management district under section 373.069, Florida Statutes, or a local government with delegated authority under section 373.441, Florida Statutes, and receive Water Quality Certification and applicable Coastal Zone Consistency Concurrence or waiver thereto, as well as any authorizations required for the use of state-owned submerged lands under Chapter 253, Florida Statutes, and, as applicable, Chapter 258, Florida Statutes. You should check State-permitting requirements with the Florida Department of Environmental Protection or the appropriate water management district.

This letter of authorization does not include conditions that would prevent the ‘take’ of a state-listed fish or wildlife species. These species are protected under sec. 379.411, Florida Statutes, and listed under Rule 68A-27, Florida Administrative Code. With regard to fish and wildlife species designated as species of special concern or threatened by the State of Florida, you are responsible for coordinating directly with the Florida Fish and Wildlife Conservation Commission (FWC). You can visit the FWC license and permitting webpage (<http://www.myfwc.com/license/wildlife/>) for more information, including a list of those fish and wildlife species designated as species of special concern or threatened. The Florida Natural Areas Inventory (<http://www.fnai.org/>) also maintains updated lists, by county, of documented occurrences of those species.

This letter of authorization does not give absolute Federal authority to perform the work as specified on your application. The proposed work may be subject to local building restrictions mandated by the National Flood Insurance Program. You should

contact your local office that issues building permits to determine if your site is located in a flood-prone area, and if you must comply with the local building requirements mandated by the National Flood Insurance Program.

If you are unable to access the internet or require a hardcopy of any of the conditions, limitations, or expiration date for the above referenced NWP, please contact Mr. Mark M. Tamblyn at the address above, by telephone at 561-472-3519, or by email at [mark.m.tamblyn@usace.army.mil](mailto:mark.m.tamblyn@usace.army.mil)

Thank you for your cooperation with our permit program. The Corps Jacksonville District Regulatory Division is committed to improving service to our customers. We strive to perform our duty in a friendly and timely manner while working to preserve our environment. We invite you to complete our automated Customer Service Survey at [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=regulatory\\_survey](http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey). Please be aware this Internet address is case sensitive; and, you will need to enter it exactly as it appears above. Your input is appreciated – favorable or otherwise.

Sincerely,

Andrew A. Kizlauskas  
Chief, Panama City Permits Section

Enclosures  
Plans  
As-Built Certification  
Commencement Notification  
EC 1165-2-220  
Manatee Conditions  
Sea Turtle & Sawfish Condition  
HDD-Frac-Out Plan

GENERAL CONDITIONS  
33 CFR PART 320-330

1. The time limit for completing the work authorized ends on **March 18, 2022**.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow a representative from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**DEPARTMENT OF THE ARMY PERMIT TRANSFER REQUEST**

**PERMIT NUMBER: SAJ-2020-00177 (NW-MMT)**

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. Although the construction period for works authorized by Department of the Army permits is finite, the permit itself, with its limitations, does not expire.

To validate the transfer of this permit and the associated responsibilities associated with compliance with its terms and conditions, have the transferee sign and date below and mail to the U.S. Army Corps of Engineers, Enforcement Section, Post Office Box 4970, Jacksonville, FL 32232-0019 or electronic mail at [saj-rd-enforcement@usace.army.mil](mailto:saj-rd-enforcement@usace.army.mil).

\_\_\_\_\_  
(TRANSFEEE-SIGNATURE) (SUBDIVISION)

\_\_\_\_\_  
(DATE) (LOT) (BLOCK)

\_\_\_\_\_  
(NAME-PRINTED) (STREET ADDRESS)

\_\_\_\_\_  
(MAILING ADDRESS)

\_\_\_\_\_  
(CITY, STATE)

\_\_\_\_\_  
(ZIP CODE)

CONTRACT PLANS

FINANCIAL PROJECT ID 441458-1-52-01  
BROWARD COUNTY (86050)  
STATE ROAD NO. A1A  
SR A1A OVER HILLSBORO INLET  
BRIDGE NO. 860011 SCOUR COUNTERMEASURE

INDEX OF STRUCTURE PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SIGNATURE SHEET
3	SUMMARY OF PAY ITEMS
BQ-1	SUMMARY OF QUANTITIES
BQ-2	TABULATION OF QUANTITIES
BQ1-1	SUMMARY OF STRUCTURE QUANTITIES
4	GENERAL NOTES
5	EROSION CONTROL PLAN
6	TEMPORARY TRAFFIC CONTROL PLANS (1 OF 3)
7	TEMPORARY TRAFFIC CONTROL PLANS (2 OF 3)
8	TEMPORARY TRAFFIC CONTROL PLANS (3 OF 3)
9	PLAN AND ELEVATION (1 OF 2)
10	PLAN AND ELEVATION (2 OF 2)
11	ARTICULATED CONCRETE BLOCK DETAILS
12	SEAL CONCRETE DETAILS
13	DIRECTIONAL DRILLING DETAILS
14	GENERAL ELECTRICAL PLAN
15	PULL BOX DETAIL
16	BICYCLE PLATE GENERAL NOTES
17	BICYCLE PLATE LOCATION PLAN
18	BICYCLE PLATE PANEL AND ANCHOR PLATE DETAIL
19	BICYCLE PLATE PANELS A, B, C, AND D WITH GRATING
20	BICYCLE PLATE PANELS A, B, C, AND D WITHOUT GRATING
21	BICYCLE PLATE PANELS E, F, G, AND H WITH GRATING
22	BICYCLE PLATE PANELS E, F, G, AND H WITHOUT GRATING

BX1-1 THRU BX1-30\* EXISTING BRIDGE PLANS

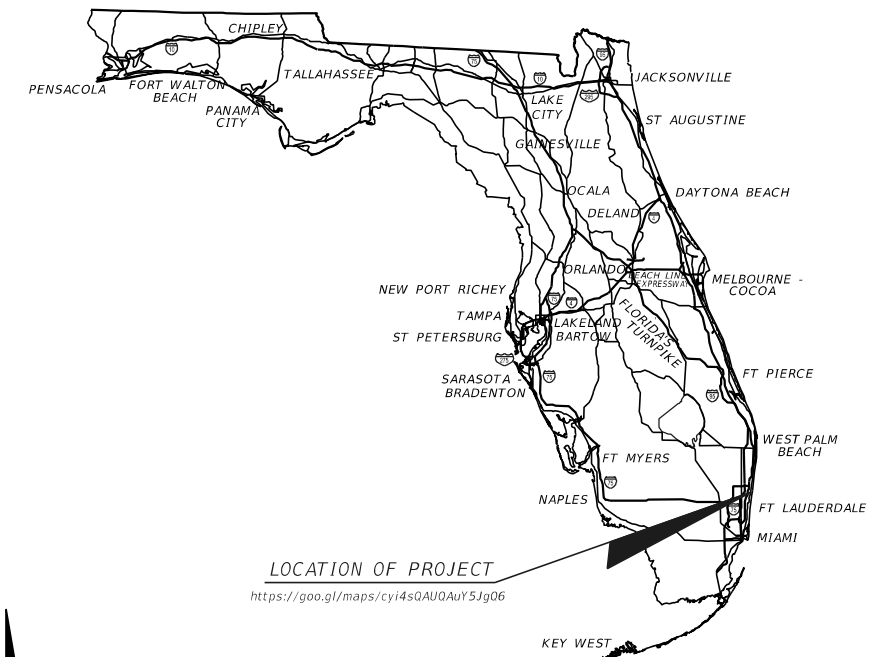
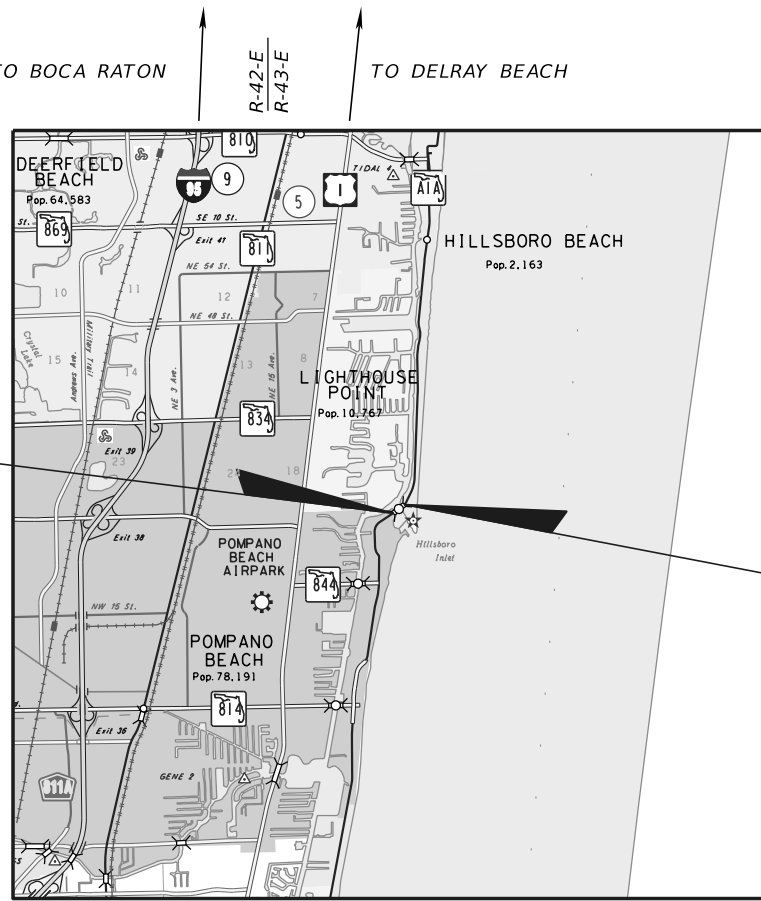
\* These sheets are included in the Index of Structures Plans only to indicate that they are part of the Structure Plans. These sheets are contained in a separate document.

BEGIN PROJECT  
BEGIN BRIDGE #860011  
STA. 548+85.92  
MP 12.045

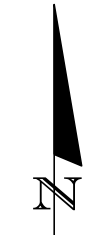
END PROJECT  
END BRIDGE #860011  
STA. 552+37.25  
MP 12.108

T-48-S  
T-49-S

T-48-S  
T-49-S



LOCATION OF PROJECT  
<https://goo.gl/maps/cyi4sQAU0AuY5Jg06>



GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2020-21 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road and Bridge Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

APPLICABLE IR: IR102-600

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, January 2021 Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/implemented/SpecBooks>

STRUCTURE PLANS  
ENGINEER OF RECORD:

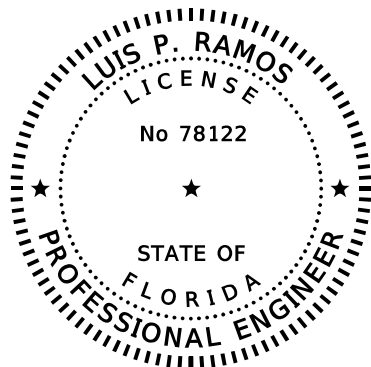
LUIS P. RAMOS, P.E.  
P.E. NO.: 78122  
HNTB CORPORATION  
5900 N. ANDREWS AVENUE, SUITE 400  
FORT LAUDERDALE, FL 33309  
P: (954) 903-1785  
CONTRACT NO.: C9W31  
VENDOR NO.: F431623092

FDOT PROJECT MANAGER:

DONOVAN PESSOA, P.E.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
E4U49	21	1





THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

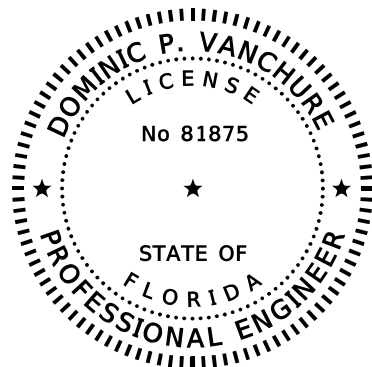
ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

HNTB CORPORATION  
5900 N. ANDREWS AVE., SUITE 400  
FORT LAUDERDALE, FL. 33309  
P: (954) 903-1785  
LUIS P. RAMOS P.E. LIC. NO. 78122

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SIGNATURE SHEET
3	SUMMARY OF PAY ITEMS
BQ-1	SUMMARY OF QUANTITIES
BQ-2	TABULATION OF QUANTITIES
BQ1-1	SUMMARY OF STRUCTURE QUANTITIES
4	GENERAL NOTES
9	PLAN AND ELEVATION (1 OF 2)
10	PLAN AND ELEVATION (2 OF 2)
11	ARTICULATED CONCRETE BLOCK DETAILS
12	SEAL CONCRETE DETAILS



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

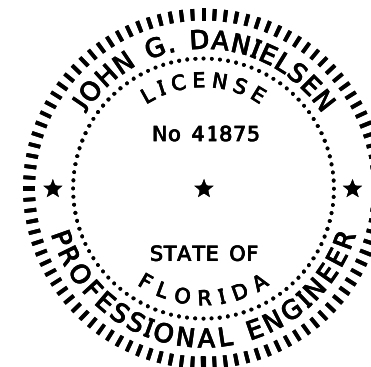
ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

HNTB CORPORATION  
5900 N. ANDREWS AVE., SUITE 400  
FORT LAUDERDALE, FL. 33309  
P: (954) 903-1785  
DOMINIC P. VANCHURE P.E. LIC. NO. 81875

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

SHEET NO.	SHEET DESCRIPTION
2	SIGNATURE SHEET
5	EROSION CONTROL PLAN
6	TEMPORARY TRAFFIC CONTROL PLANS (1 OF 3)
7	TEMPORARY TRAFFIC CONTROL PLANS (2 OF 3)
8	TEMPORARY TRAFFIC CONTROL PLANS (3 OF 3)



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

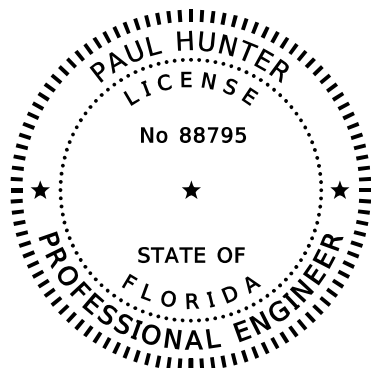
ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC COPIES.

HDR ENGINEERING INC.  
3250 WEST COMMERCIAL BLVD. SUITE 100  
FORT LAUDERDALE, FL. 33309-3459  
P: (954) 331-0915  
JOHN G. DANIELSEN, P.E. NO. 41875

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

SHEET NO.	SHEET DESCRIPTION
2	SIGNATURE SHEET
16	BICYCLE PLATE GENERAL NOTES
17	BICYCLE PLATE LOCATION PLAN
18	BICYCLE PLATE PANEL AND ANCHOR PLATE DETAIL
19	BICYCLE PLATE PANELS A, B, C, AND D WITH GRATING
20	BICYCLE PLATE PANELS A, B, C, AND D WITHOUT GRATING
21	BICYCLE PLATE PANELS E, F, G, AND H WITH GRATING
22	BICYCLE PLATE PANELS E, F, G, AND H WITHOUT GRATING



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

HNTB CORPORATION  
715 KIRK DRIVE  
KANSAS CITY, MO 64105  
P: (816) 472-1201  
PAUL HUNTER P.E. LIC. NO. 88795

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004 F.A.C.

SHEET NO.	SHEET DESCRIPTION
2	SIGNATURE SHEET
13	DIRECTIONAL DRILLING DETAILS
14	GENERAL ELECTRICAL PLAN
15	PULL BOX DETAIL

BRIDGE NO. 860011

REVISIONS						ENGINEER OR RECORD:		DRAWN BY:			STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	HNTB CORPORATION 5900 N. ANDREWS AVE., SUITE 400 FORT LAUDERDALE, FL. 33309 P: (954) 903-1785 LUIS P. RAMOS P.E. LIC. NO. 78122		XSD 01-04 CHECKED BY: LPR 08-26			ROAD NO. COUNTY FINANCIAL PROJECT ID			SIGNATURE SHEET		
						LUIS P. RAMOS P.E. LIC. NO. 78122		SR A1A BROWARD 441458-1-52-01			PROJECT NAME:		SR A1A OVER HILLSBORO INLET		SHEET NO.	
															2	

09/17/2020 11:53:16 AM

FLORIDA DEPARTMENT OF TRANSPORTATION PROPOSAL SUMMARY OF PAY ITEMS FOR PROPOSAL: E4U49						
LEAD PROJECT : 441458-1-52-01		DISTRICT : 04		COUNTY/SECTION : 86050000		
PROJECT(S) : 44145815201		COUNTY : BROWARD				
0001 SUMMARY OF STRUCTURES						
SPC	ALT	ITEM NUMBER	ITEM DESCRIPTION	UNIT	44145815201	QUANTITY TOTAL
		0460- 1- 13	STRUCTURAL STEEL REHAB- BOLTS, NUTS, WASHERS & PLATES	LB		3402.000
T		0465- 3- 50	MOVABLE BRIDGE COUNTERWEIGHT, ADJUST	EA		1.000
T		0465- 20-	MOVABLE BRIDGE- PREVENTATIVE MAINTENANCE & ROUTINE REPAIR 44145815201	(LS)		1.000
T		0465- 21-	MOVABLE BRIDGE OPERATOR	DA		147.000
T		0508- 73- 1	SUBMARINE CABLE ASSEMBLY, FURNISH & INSTALL 44145815201	(LS)		1.000
T		0508- 73- 4	SUBMARINE CABLE ASSEMBLY, REMOVE 44145815201	(LS)		1.000
		0530- 4- 9	ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, THICKNESS 9"	SY		994.000
		0530- 74-	BEDDING STONE	TN		1660.700

09/17/2020 11:53:16 AM

FLORIDA DEPARTMENT OF TRANSPORTATION PROPOSAL SUMMARY OF PAY ITEMS FOR PROPOSAL: E4U49						
LEAD PROJECT : 441458-1-52-01		DISTRICT : 04		COUNTY/SECTION : 86050000		
PROJECT(S) : 44145815201		COUNTY : BROWARD				
0002 SUMMARY OF ROADWAY						
SPC	ALT	ITEM NUMBER	ITEM DESCRIPTION	UNIT	44145815201	QUANTITY TOTAL
		0101- 1-	MOBILIZATION 44145815201	LS	1.000	1.000
		0102- 1-	MAINTENANCE OF TRAFFIC 44145815201	(LS)	1.000	1.000
		0102- 60-	WORK ZONE SIGN	ED	3236.000	3236.000
		0102- 61-	BUSINESS SIGN	EA	1.000	1.000
		0102- 74- 1	CHANNELIZING DEVICE- TYPES I, II, DI, VP, DRUM, OR LCD	ED	1056.000	1056.000
		0102- 74- 8	CHANNELIZING DEVICE- PEDESTRIAN LCD (LONGITUDINAL CHANNELIZING DEVICE)	FD	1236.000	1236.000
		0102- 76-	ARROW BOARD / ADVANCE WARNING ARROW PANEL	ED	44.000	44.000
		0102- 99-	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	322.000	322.000
		0102-115-	TYPE III BARRICADE	ED	309.000	309.000
		0104- 11-	FLOATING TURBIDITY BARRIER	LF	686.000	686.000
		0999- 25-	INITIAL CONTINGENCY AMOUNT, DO NOT BID 44145815201	LS	1.000 N	1.000

09/17/2020 11:53:16 AM

FLORIDA DEPARTMENT OF TRANSPORTATION PROPOSAL SUMMARY OF PAY ITEMS FOR PROPOSAL: E4U49						
LEAD PROJECT : 441458-1-52-01		DISTRICT : 04		COUNTY/SECTION : 86050000		
PROJECT(S) : 44145815201		COUNTY : BROWARD				
0003 SUMMARY OF SIGNING						
SPC	ALT	ITEM NUMBER	ITEM DESCRIPTION	UNIT	44145815201	QUANTITY TOTAL
		0713-103-101	PERMANENT TAPE, WHITE, SOLID, 6" FOR CONCRETE BRIDGES	GM	0.030	0.030

BRIDGE NO. 860011

REVISIONS						ENGINEER OF RECORD:		DRAWN BY:			STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	HNTB CORPORATION 5900 N. ANDREWS AVE., SUITE 400 FORT LAUDERDALE, FL. 33309 P: (954) 903-1785 LUIS P. RAMOS P.E. LIC. NO. 78122		XSD 01-04 CHECKED BY: LPR 08-26			ROAD NO. COUNTY FINANCIAL PROJECT ID			SUMMARY OF PAY ITEMS		
								SR A1A	BROWARD	441458-1-52-01	PROJECT NAME:		SR A1A OVER HILLSBORO INLET		SHEET NO.	
															3	

SUMMARY OF LUMP SUM ITEMS					
PAY ITEM NO.	PAY ITEM DESCRIPTION	QUANTITY		DESIGN NOTES	CONSTRUCTION REMARKS
		P	F		
0101 1	MOBILIZATION	1			

SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS												
PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	PHASE I			PHASE II			TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
			DURATION	QUANTITY	TOTAL	DURATION	QUANTITY	TOTAL	P	F		
			DAYS	P	P	DAYS	P	P				
0102 1	MAINTENANCE OF TRAFFIC	LS	75			28			1		147 DAYS	
0102 60	WORK ZONE SIGN	ED	75	28	2100	28	28	784	2884			
0102 61	BUSINESS SIGN	EA		1	1		1	1	1		DETOUR PLAN - PHASE I/II	
0102 74 1	CHANNELIZING DEVICE - TYPES I, II, DI, VP, DRUM, OR LCD	ED	75			28						
0102 76	ARROW BOARD/ADVANCE WARNING ARROW PANEL	ED	75			28						
0102 99	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	89	2	178	28	2	56	234		14 DAYS PRIOR TO CONST.	
0102 115	TYPE III BARRICADE	ED	75	3	225	28	3	84	309			

SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS														
PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	PHASE III			PHASE IV			TOTAL		GRAND TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
			DURATION	QUANTITY	TOTAL	DURATION	QUANTITY	TOTAL	P	F	P	F		
			DAYS	P	P	DAYS	P	P						
0102 1	MAINTENANCE OF TRAFFIC	LS	16			28			1		1		147 DAYS	
0102 60	WORK ZONE SIGN	ED	16	8	128	28	8	224	352		3236			
0102 61	BUSINESS SIGN	EA									1		DETOUR PLAN - PHASE I/II	
0102 74 1	CHANNELIZING DEVICE - TYPES I, II, DI, VP, DRUM, OR LCD	ED	16	24	384	28	24	672	1056		1056			
0102 76	ARROW BOARD/ADVANCE WARNING ARROW PANEL	ED	16	1	16	28	1	28	44		44			
0102 99	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	16	2	32	28	2	56	88		322			
0102 115	TYPE III BARRICADE	ED	16			28					309			

SUMMARY OF PEDESTRIAN LONGITUDINAL CHANNELIZING DEVICES								
CONST. PHASE	LOCATION STA. TO STA.	SIDE	LENGTH	DAYS	QUANTITY		DESIGN NOTES	CONSTRUCTION REMARKS
					0102 74 8			
					P	F		
I		LT	12	75	900		N RIVERSIDE DR DETOUR, SIDEWALK CLOSURE	
II		LT	12	28	336		N RIVERSIDE DR DETOUR, SIDEWALK CLOSURE	
SUB-TOTAL:					1236			
TOTAL:					1236			

SUMMARY OF EROSION AND SEDIMENT CONTROL DEVICES						
LOCATION STA. TO STA.	SIDE	AREA ID	FLOATING TURBIDITY BARRIER		DESIGN NOTES	CONSTRUCTION REMARKS
			0104 11			
			LF			
			P	F		
1+40.00 to 2+80.00	LT		343.1		PHASE I	
1+20.00 to 3+00.00	RT		343.1		PHASE II	
SUB-TOTAL:			686.3			
TOTAL:			686			

BRIDGE NO. 860011

REVISIONS						ENGINEER OF RECORD:		DRAWN BY:			STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	HNTB CORPORATION 5900 N. ANDREWS AVE., SUITE 400 FORT LAUDERDALE, FL. 33309 P: (954) 903-1785 LUIS P. RAMOS P.E. LIC. NO. 78122		XSD 01-04 CHECKED BY: LPR 08-26 DESIGNED BY: XSD 01-04 CHECKED BY: LPR 02-04			ROAD NO. COUNTY FINANCIAL PROJECT ID SR A1A BROWARD 441458-1-52-01			SUMMARY OF QUANTITIES  SR A1A OVER HILLSBORO INLET		SHEET NO. BQ-1

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



**SUMMARY OF STRUCTURE QUANTITIES - BRIDGE 860011**

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
					P	F	P	F		
SUBSTRUCTURE	0530 4 9	ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM, THICKNESS 9"		SY	994.36		994			
	0530 74	BEDDING STONE		TN	1660.71		1660.7		TOE DOWN BACKFILL	
SUPERSTRUCTURE	0460 1 13	STRUCTURAL STEEL REHAB- BOLTS, NUTS, WASHERS & PLATES		LB	3402.00		3402		BIKE PLATES AND SCREWS	
MOVABLE BRIDGE / ARCHITECTURAL	0465 3 50	MOVABLE BRIDGE COUNTERWEIGHT, ADJUST		EA	1.00		1			
	0465 20	MOVABLE BRIDGE- PREVENTATIVE MAINTENANCE & ROUTINE REPAIR (44145815201)		LS/DA	1.00		1		147 DAYS	
	0465 21	MOVABLE BRIDGE OPERATOR		DA	147.00		147			
	0508 73 1	SUBMARINE CABLE ASSEMBLY, FURNISH & INSTALL (4414585201)		LS/LF	1.00		1		460 LF	
	0508 73 4	SUBMARINE CABLE ASSEMBLY, REMOVE (4414585201)		LS/LF	1.00		1		165 LF	

BRIDGE NO. 860011

<b>REVISIONS</b>						<b>ENGINEER OF RECORD:</b>			<b>DRAWN BY:</b>			<b>STATE OF FLORIDA</b>			<b>SHEET TITLE:</b>			<b>REF. DWG. NO.</b>
DATE	BY	DESCRIPTION				HNTB CORPORATION 5900 N. ANDREWS AVE., SUITE 400 FORT LAUDERDALE, FL. 33309 P: (954) 903-1785 LUIS P. RAMOS P.E. LIC. NO. 78122			XSD 01-04 CHECKED BY: LPR 08-26			DEPARTMENT OF TRANSPORTATION			SUMMARY OF STRUCTURE QUANTITIES			
						DESIGNED BY: XSD 01-04 CHECKED BY: LPR 02-04			ROAD NO. COUNTY FINANCIAL PROJECT ID SR A1A BROWARD 441458-1-52-01			PROJECT NAME: SR A1A OVER HILLSBORO INLET			<b>SHEET NO.</b>			

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

GENERAL NOTES:

A. DESIGN SPECIFICATIONS:

1. FDOT STRUCTURES MANUAL DATED JANUARY 2020 AND ALL SUBSEQUENT STRUCTURES DESIGN BULLETINS.
2. FDOT DRAINAGE MANUAL DATED JANUARY 2020 AND ALL SUBSEQUENT DRAINAGE DESIGN BULLETINS.
3. FEDERAL HIGHWAY ADMINISTRATION (FHWA) BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES: EXPERIENCE, SELECTION, AND DESIGN GUIDANCE, THIRD EDITION, VOLUMES 1 & 2.
4. FDOT DESIGN MANUAL DATED JANUARY 2020 AND ALL SUBSEQUENT ROADWAY DESIGN BULLETINS.

B. BENCHMARK ELEVATIONS AND SURVEY INFORMATION:

1. BENCHMARK ELEVATIONS SHOWN IN THE PLANS ARE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. ALL SURVEY INFORMATION WAS OBTAINED FROM A LICENSED FLORIDA PROFESSIONAL SURVEYOR AND MAPPER AND UTILIZED AS SUPPORTING DATA IN THE PRODUCTION OF DESIGN PLANS AND FOR CONSTRUCTION ON SUBJECT PROJECT. THE PROFESSIONAL SURVEYOR AND MAPPER OF RECORD IS:

ROBERT H HUGHAN JR., P.S.M.  
 LS 3570  
 FDOT SURVEY AND MAPPING  
 3400 W. COMMERCIAL BLVD,  
 FORT LAUDERDALE, FL 33309

C. ENVIRONMENT:

SUPERSTRUCTURE - EXTREMELY AGGRESSIVE  
 SUBSTRUCTURE - CONCRETE: EXTREMELY AGGRESSIVE  
 STEEL: EXTREMELY AGGRESSIVE

D. DESIGN METHODOLOGY:

DESIGN GUIDELINE 8 - ARTICULATING CONCRETE BLOCK SYSTEMS FOR BED ARMOR AND PIER PROTECTION, FEDERAL HIGHWAY ADMINISTRATION (FHWA) BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES: EXPERIENCE, SELECTION, AND DESIGN GUIDANCE, THIRD EDITION, VOLUME 2.

E. MATERIALS:

1. GEOTEXTILE FILTER FABRIC:  
 MINIMUM GRAB STRENGTH = 315 LBS, MINIMUM PUNCTURE STRENGTH = 618 LBS, MINIMUM TEAR STRENGTH = 113 LBS.
2. CONCRETE:

CONCRETE CLASS	MIN. 28-DAY COMPRESSIVE STRENGTH (PSI)	LOCATION OF CONCRETE IN STRUCTURE
III (SEAL)	3000	AROUND FENDER PILES

3. ACB CABLE, SLEEVE AND CRIMP MATERIAL:  
 TYPE 316 STAINLESS STEEL

F. PLAN DIMENSIONS:

ALL DIMENSIONS IN THESE PLANS ARE MEASURED IN FEET EITHER HORIZONTALLY OR VERTICALLY UNLESS OTHERWISE NOTED.

G. UTILITIES:

FOR PLAN LOCATIONS OF EXISTING UTILITIES, SEE PLAN AND ELEVATION SHEET(S). THE LOCATIONS OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED VV, VH, AND VVH) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.

H. UTILITY/AGENCY OWNERS:

COMPANY	CONTACT	TELEPHONE NUMBERS
AT&T DISTRIBUTION	OTIS KEEVE	(954) 723-2540
BROWARD COUNTY	ROBERT BLOUNT	(954) 847-2745
CITY OF LIGHTHOUSE POINT	WAYNE STAMBAUGH	(954) 943-6500
CITY OF POMPANO BEACH	JOHN SFIROPOULOS	(954) 786-4060
COMCAST	LEONARD MAXWELL-NEWBOLD	(954) 444-5113
CROWN CASTLE	DANNY HASKETT	(786) 610-7073
FPL DISTRIBUTION	BYRON SAMPLE	(954) 321-2056

I. EXISTING BRIDGE CONSTRUCTION CONSIDERATIONS:

DIMENSION VERIFICATION UNLESS OTHERWISE NOTED, THE DIMENSIONS, ELEVATIONS, AND INTERSECTING ANGLES SHOWN ARE BASED ON THE INFORMATION AS DETAILED IN THE ORIGINAL CONSTRUCTION PLANS OF THE EXISTING BRIDGES AND MAY NOT REPRESENT AS-BUILT CONDITIONS. VERIFY THIS DATA BEFORE BEGINNING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

J. NAVIGATION CONSIDERATIONS/NAVIGABLE WATERWAY:

1. THE PROPER AUTHORITY FOR THE NAVIGABLE WATERWAY IS THE U.S. COAST GUARD (USCG).
2. MAKE ALL USCG NOTIFICATIONS AND SUBMITTALS REQUIRED BY THE SPECIFICATIONS TO:  
 U.S. COAST GUARD DISTRICT SEVEN BRIDGE ADMINISTRATION BRANCH:  
 MS. JENNIFER ZERCHER, TELEPHONE NUMBER: (305) 415-6740,  
 E-MAIL: JENNIFER.N.ZERCHER@USCG.MIL  
 MR. EDDIE LAWRENCE, TELEPHONE NUMBER: (305) 415-6946,  
 E-MAIL: EDDIE.H.LAWRENCE@USCG.MIL  
 U.S. COAST GUARD SECTOR MIAMI WATERWAYS MANAGEMENT DIVISION, TELEPHONE NUMBER: (305) 535-4317,  
 E-MAIL: D07-PF-SECMIAMI-MARINE-PERMITS@USCG.MIL  
 IN EVENT OF EMERGENCY, CONTACT THE COAST GUARD EMERGENCY TELEPHONE NUMBER: (305) 415-6800.

K. ENVIRONMENTAL NOTES:

1. REFER TO THE CONTRACTOR'S ENVIRONMENTAL CONTROL PLAN FOR ASSURANCE OF THE WATER QUALITY DURING IN-WATER WORKS OR CHANNEL BASE TRENCHING.
2. THERE ARE HARD BOTTOM RESOURCES ADJACENT TO THE PROJECT. STAGE, STORE, AND MOVE BARGES AND VESSELS IN A MANNER THAT DOES NOT IMPACT THE HARD BOTTOM RESOURCES OR DISPLACE BOTTOM MATERIALS.
3. BASED ON THE JUNE 2020 BENTHIC SURVEY, THE PROTECTED SPECIES, JOHNSON'S SEAGRASS (H. JOHNSONII), WAS DOCUMENTED IN A SHALLOW AREA AROUND A PRIVATE DOCK AND SEAWALL LOCATED NEAR THE NORTHEAST QUADRANT OF THE SURVEY. THIS SEAGRASS IS LOCATED OVER 150-FT FROM THE PROPOSED SCOUR COUNTERMEASURES. IN ORDER TO AVOID UNNECESSARY IMPACTS TO THIS PROTECTED SEAGRASS, BARGE STAGING IN THIS AREA WILL BE PROHIBITED.

L. FAA NOTE:

THIS PROJECT LIES WITHIN 10 NAUTICAL MILES OF AN AIRPORT. ALL PERMANENT FEATURES OF THE PROJECT HAVE BEEN FOUND IN COMPLIANCE WITH FEDERAL AVIATION ADMINISTRATION (FAA) 14 CFR PART 77 (JJ 77.7). COMPLY WITH FAA 14 CFR PART 77 (JJ 77.7). CONTACT APPROPRIATE FAA PERSONNEL TO COORDINATE SUCH COMPLIANCE FOR CONSTRUCTION OPERATIONS AND EQUIPMENT TO BE USED ON THE PROJECT SITE. BE AWARE THAT FAA 14 CFR PART 77 (JJ 77.7) ESTABLISHES THAT NOTIFICATION MUST BE SUBMITTED 45-DAYS PRIOR TO CONSTRUCTION ACTIVITIES WHICH MAY IMPACT AIRPORT-CONTROLLED AIRSPACE OR FACILITIES. GIVEN THE TIME REQUIRED TO CONDUCT AN AERONAUTICAL STUDY, A 40-60 DAY ADVANCE FILING IS RECOMMENDED TO ACCOMMODATE THE REVIEW PROCESS AND ALLOW TIMELY ISSUANCE OF THE FAA DETERMINATION LETTER. SEE <http://faa.gov/airports/central/engineering/part77/> FOR ADDITIONAL INFORMATION. FILE THE REQUIRED NOTICE OF CONSTRUCTION COMMENCEMENT FOR (7460-2 PART 1) PRIOR TO STARTING WORK. FILE THE REQUIRED FORM (7460-2 PART 2) WITHIN 5 DAYS OF COMPLETION OF THE HIGHEST ELEMENT OF PERMANENT CONSTRUCTION. PROVIDE A COPY OF FAA FILINGS AND DETERMINATIONS TO THE DEPARTMENT.

M. PHASING OF WORK:

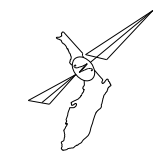
WORK PHASING AND PROGRESSION OF THE WORK SHALL CONFORM TO THE EROSION CONTROL PLAN AND TEMPORARY TRAFFIC CONTROL PLANS SHEETS.

N. FDOT ASSET MAINTENANCE CONTRACT PROJECT MANAGER INFORMATION:

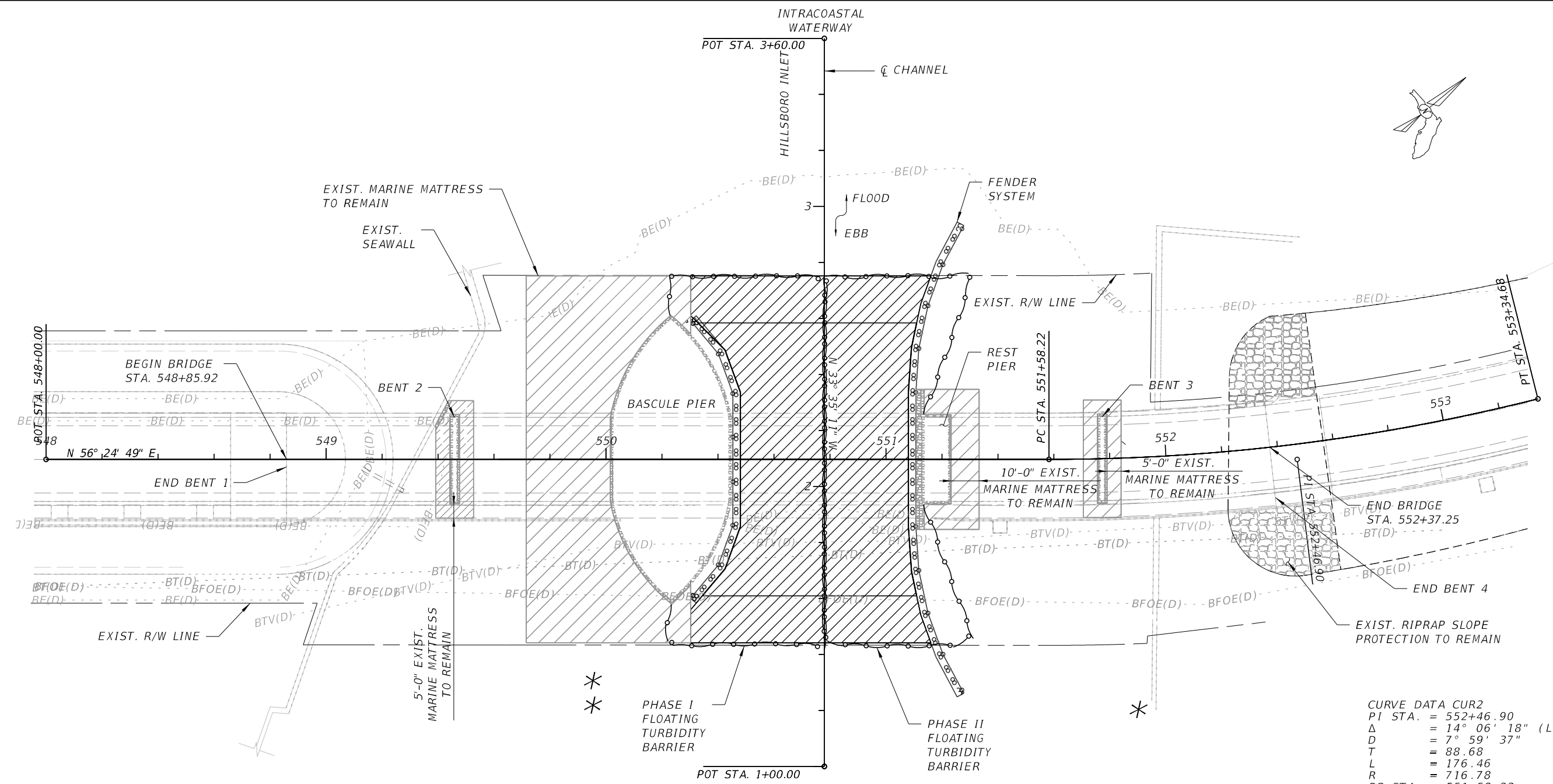
JOHN DEEMER  
 ADDRESS: FDOT DISTRICT 4, 3400 W COMMERCIAL BLVD,  
 FORT LAUDERDALE, FL 33309  
 PHONE: (954) 777-4450  
 EMAIL: JOHN.DEEMER@DOT.STATE.FL.US

BRIDGE NO. 860011

REVISIONS						ENGINEER OF RECORD:	DRAWN BY: DEJ 01-04 CHECKED BY: LPR 08-26 DESIGNED BY: DPV 01-04 CHECKED BY: LPR 02-04	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE:  GENERAL NOTES	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						HNTB CORPORATION 5900 N. ANDREWS AVE., SUITE 400 FORT LAUDERDALE, FL. 33309 P: (954) 903-1785 LUIS P. RAMOS P.E. LIC. NO. 78122	SR A1A	BROWARD	441458-1-52-01	SR A1A OVER HILLSBORO INLET		
											SHEET NO. 4	



THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



CURVE DATA CUR2

PI STA.	= 552+46.90
Δ	= 14° 06' 18" (LT)
D	= 7° 59' 37"
T	= 88.68
L	= 176.46
R	= 716.78
PC STA.	= 551+58.22
PT STA.	= 553+34.68

**PLAN**  
SCALE 1"=40'

- LEGEND**
- FLOATING TURBIDITY BARRIER
  - 9" ARTICULATED CONCRETE BLOCK
  - EXISTING MARINE MATTRESS, TO REMAIN
  - CORAL (S. RADIANS), < 10 CM DIAMETER

- NOTES**
- HALF OF THE CHANNEL MUST REMAIN OPEN AND FREE OF THE FLOATING TURBIDITY BARRIER AT ALL TIMES. THE FLOATING TURBIDITY BARRIER MUST BE ANCHORED TO REMAIN IN POSITION AND KEEP THE CHANNEL OPEN DURING CONSTRUCTION.
  - ADJUST EROSION CONTROL MEASURES TO ACCOMMODATE ANY VESSEL REQUIRING GREATER THAN 1/2 CHANNEL WIDTH ON AN AS-NEEDED BASIS.

**BRIDGE NO. 860011**

REVISIONS						ENGINEER OF RECORD:	DRAWN BY:	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	SHEET TITLE:	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					
						HNTB CORPORATION 5900 N. ANDREWS AVE., SUITE 400 FORT LAUDERDALE, FL. 33309 P: (954) 903-1785 DOMINIC P. VANCHURE, P.E. LIC. NO. 81875	DPV 01-04 CHECKED BY: LPR 08-26 DESIGNED BY: DPV 01-04 CHECKED BY: LPR 02-04	ROAD NO. COUNTY FINANCIAL PROJECT ID SR A1A BROWARD 441458-1-52-01	EROSION CONTROL PLAN  SR A1A OVER HILLSBORO INLET	

TRAFFIC CONTROL PLAN GENERAL NOTES

1. THE REGULATORY SPEED DURING CONSTRUCTION FOR ALL PHASES OF WORK SHALL BE THE EXISTING POSTED SPEED FOR ARTERIAL ROADWAYS WITHIN THE PROJECT LIMITS UNLESS OTHERWISE APPROVED BY THE ENGINEER.

SR A1A POSTED SPEED = 35 MPH  
N RIVERSIDE DR POSTED SPEED = 25 MPH.

2. LANE CLOSURES ARE ONLY PERMITTED FOR THE FOLLOWING TIME PERIODS:

- A. SR A1A
  - i. WEEKDAYS (MONDAY-FRIDAY)
    - SINGLE LANE CLOSURE ALLOWED AT ANY TIME
  - ii. WEEKENDS (SATURDAY-SUNDAY)
    - NO LANE CLOSURES ALLOWED AT ANY TIME

- B. N RIVERSIDE DR (UNDER THE BRIDGE)
  - i. WEEKDAYS (MONDAY-FRIDAY)
    - SINGLE LANE CLOSURE ALLOWED AT ANY TIME
  - ii. WEEKENDS (SATURDAY-SUNDAY)
    - NO LANE CLOSURES ALLOWED AT ANY TIME

3. LANE CLOSURE ON N RIVERSIDE DRIVE IS INTENDED SOLELY FOR THE PURPOSE OF DELIVERING MATERIALS TO THE PROJECT SITE AND CAN NOT BE CLOSED FOR THE DURATION OF THE PROJECT. THE LANE CLOSURE AND RELATED DETOUR, WHEN REQUIRED, CAN BE IN PLACE NO LONGER THAN ONE EIGHT-HOUR PERIOD PER 24-HOUR WORK PERIOD UNLESS APPROVED BY THE ENGINEER.

4. MAINTAIN SINGLE LANE CLOSURES AND SIDEWALK CLOSURES IN ACCORDANCE WITH FDOT STANDARD PLANS INDICES 102-603 & 102-660.

5. FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) ALONG SR A1A IN EACH DIRECTION OF TRAVEL AND PLACE OUTSIDE THE CLEAR ZONE. THE PCMS SHALL BE IN PLACE FOURTEEN (14) CALENDAR DAYS PRIOR TO THE START OF ANY WORK ITEMS AFFECTING EXISTING VEHICULAR AND PEDESTRIAN TRAFFIC. PCMS SHALL READ:

PCMS 14 DAYS PRIOR TO CONSTRUCTION

MESSAGE 1	MESSAGE 2
R O A D W O R K	- E X P E C T -
- B E G I N S -	- D E L A Y S -
M M / D D / Y Y	- - - - -

PCMS DURING LANE CLOSURE

MESSAGE 1	MESSAGE 2
F L A G G E R -	P R E P A R E -
A H E A D - - -	T O - S T O P -
- - - - -	- - - - -

BRIDGE NO. 860011

REVISIONS						ENGINEER OF RECORD:	DRAWN BY: DEJ 01-04	STATE OF FLORIDA			SHEET TITLE:	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			DEPARTMENT OF TRANSPORTATION				
						HNTB CORPORATION 5900 N. ANDREWS AVE., SUITE 400 FORT LAUDERDALE, FL. 33309 P: (954) 903-1785 DOMINIC P. VANCHURE P.E. LIC. NO. 81875	CHECKED BY: KKC 08-26	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	TEMPORARY TRAFFIC CONTROL PLANS (1 OF 3)  SR A1A OVER HILLSBORO INLET	SHEET NO. 6
								SR A1A	BROWARD	441458-1-52-01		

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



TRAFFIC CONTROL PLAN - PHASE I

1. INSTALL EROSION CONTROL DEVICES.
2. INSTALL SCOUR COUNTERMEASURES.

TRAFFIC CONTROL PLAN - PHASE II

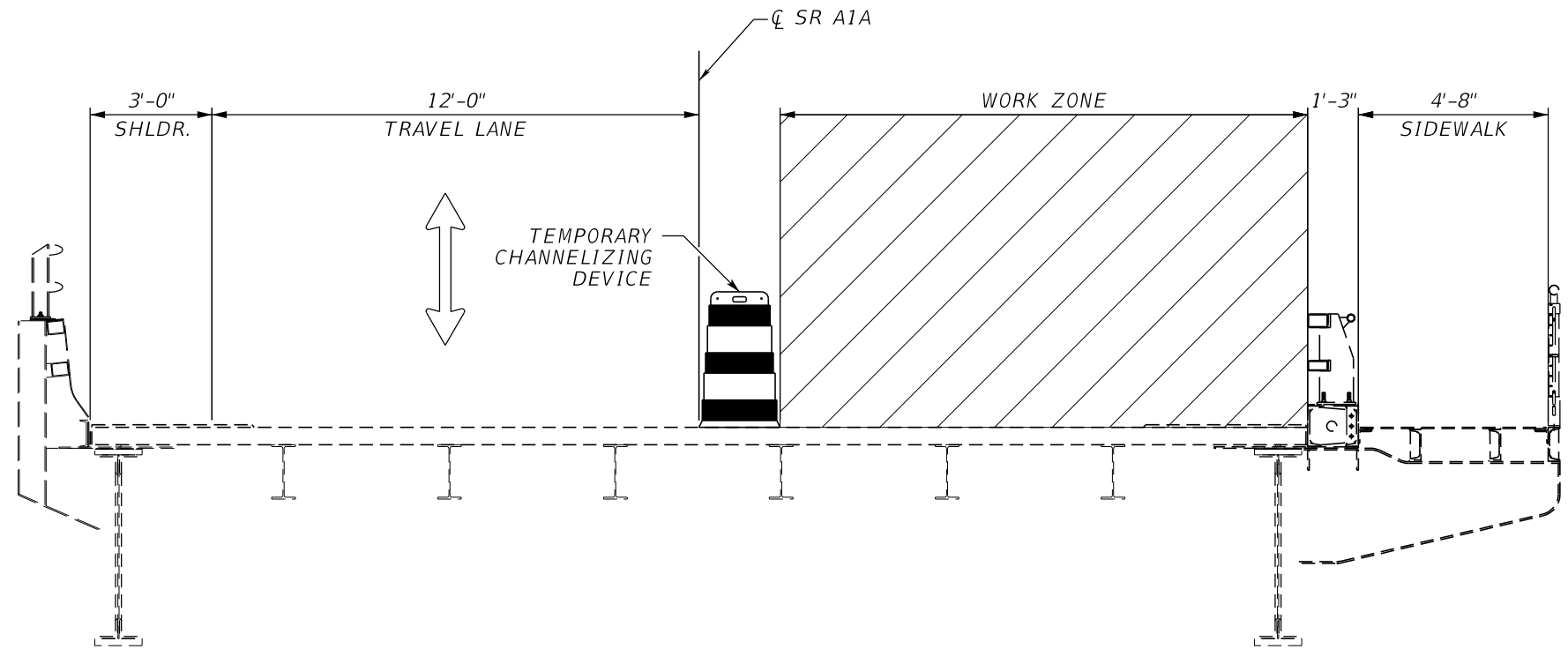
1. SHIFT/RELOCATE EROSION CONTROL DEVICES.
2. INSTALL SCOUR COUNTERMEASURES.

TRAFFIC CONTROL PLAN - PHASE III

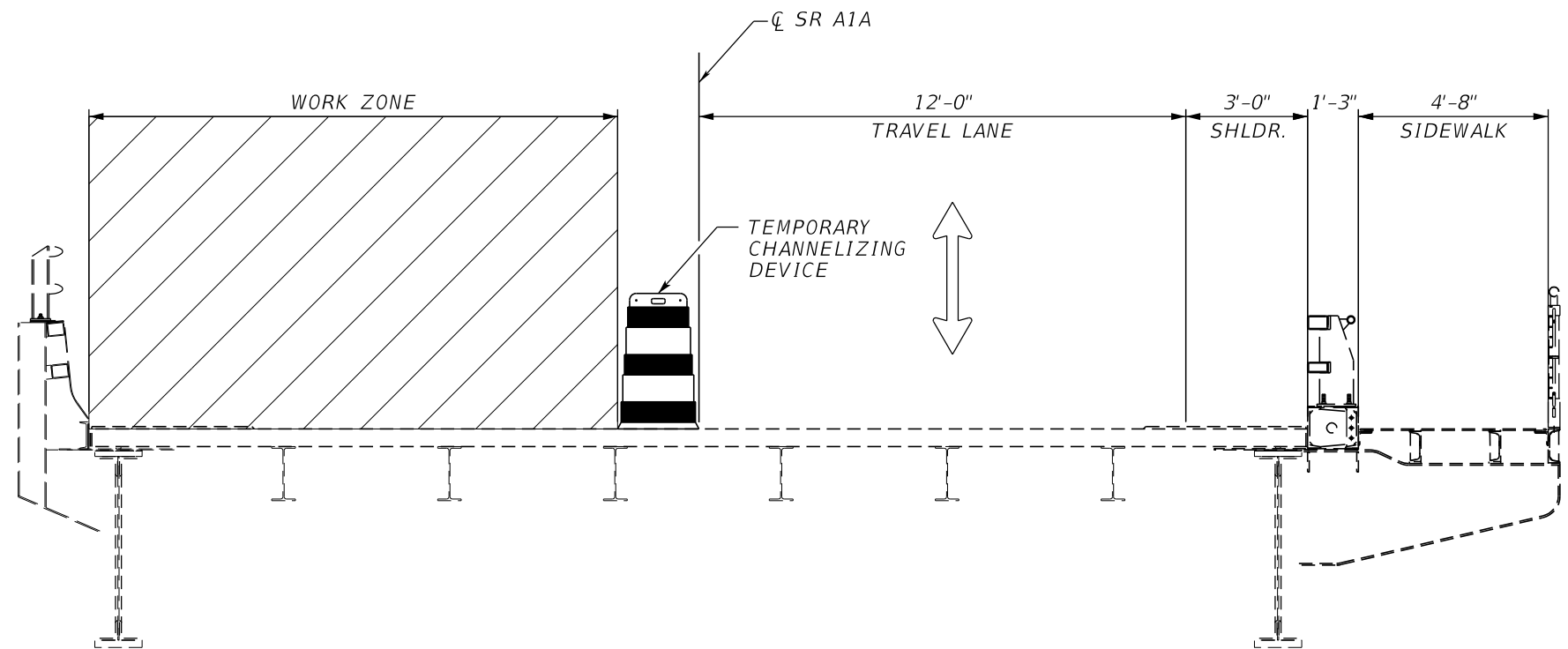
1. INSTALL TRAFFIC CONTROL SIGNS AND DEVICES PER FDOT STANDARD PLANS INDEX 102-603.
2. REMOVE EXISTING BICYCLE TREAD PLATES.
3. INSTALL NEW BICYCLE PLATE PANELS.
4. APPLY 6" WHITE SOLID PAVEMENT MARKING TO NORTHBOUND PLATES (MATCH EXISTING PAVEMENT MARKING) BEFORE OPENING LANE TO TRAFFIC.

TRAFFIC CONTROL PLAN - PHASE IV

1. INSTALL TRAFFIC CONTROL SIGNS AND DEVICES PER FDOT STANDARD PLANS INDEX 102-603.
2. REMOVE EXISTING BICYCLE TREAD PLATES.
3. INSTALL NEW BICYCLE PLATE PANELS.
4. APPLY 6" WHITE SOLID PAVEMENT MARKING TO SOUTHBOUND PLATES (MATCH EXISTING PAVEMENT MARKING) BEFORE OPENING LANE TO TRAFFIC.



SR A1A BASCULE BRIDGE - PHASE III

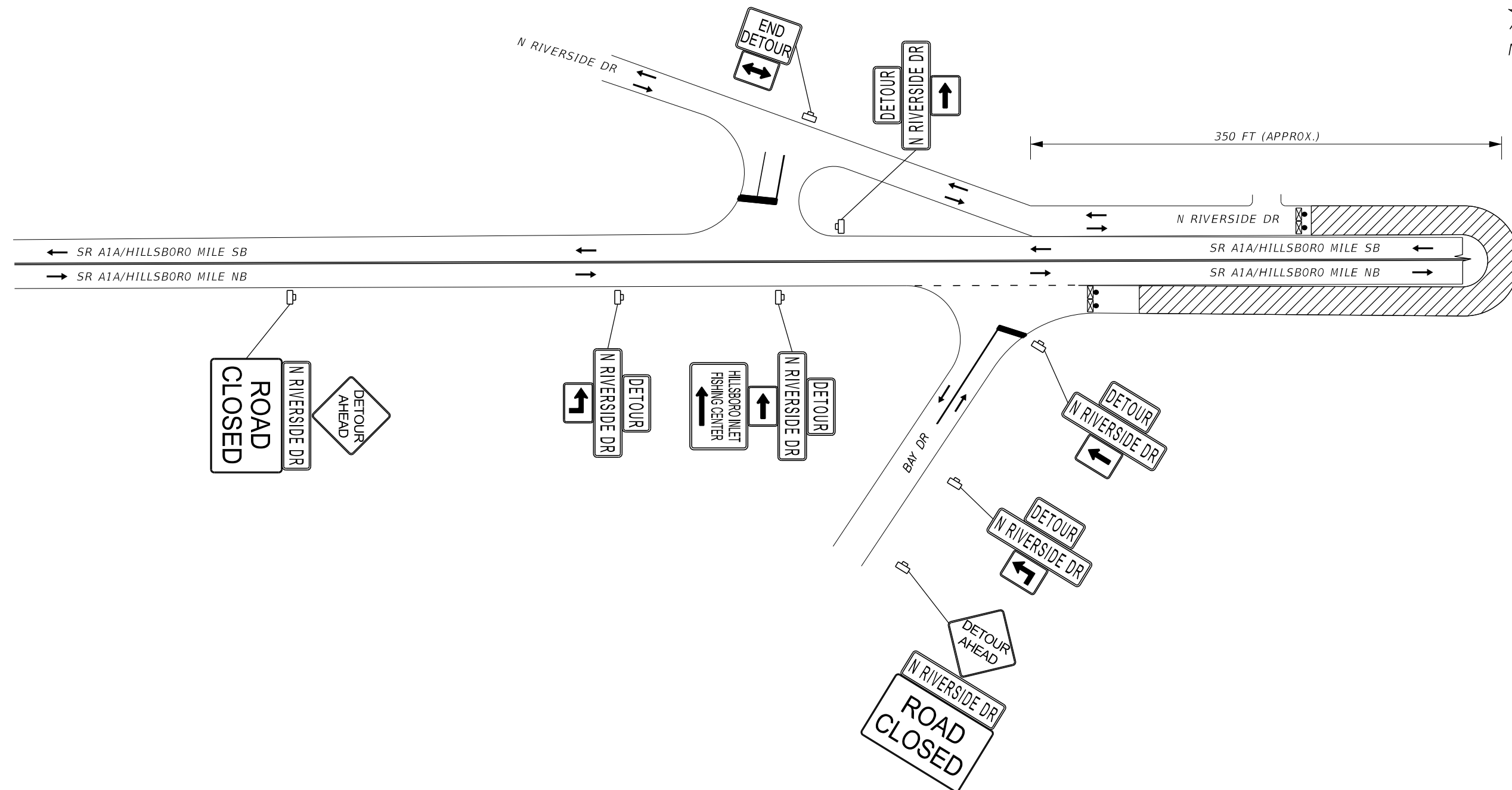






SR A1A BASCULE BRIDGE - PHASE IV

BRIDGE NO. 860011

REVISIONS						ENGINEER OF RECORD:		DRAWN BY:			STATE OF FLORIDA			SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	HNTB CORPORATION		DPV 01-04			DEPARTMENT OF TRANSPORTATION			TEMPORARY TRAFFIC CONTROL PLANS (2 OF 3)		
						5900 N. ANDREWS AVE., SUITE 400 FORT LAUDERDALE, FL. 33309 P: (954) 903-1785 DOMINIC P. VANCHURE P.E. LIC. NO. 81875		JEF 08-26			ROAD NO. COUNTY FINANCIAL PROJECT ID			PROJECT NAME:		SHEET NO.
								DPV 01-04			SR A1A BROWARD 441458-1-52-01			SR A1A OVER HILLSBORO INLET		7
								JEF 02-04								

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



-  WORK ZONE SIGN
-  TYPE III BARRICADE (WITH HIGH INTENSITY FLASHING LIGHT)
-  LANE IDENTIFICATION AND DIRECTION OF TRAFFIC
-  WORK AREA

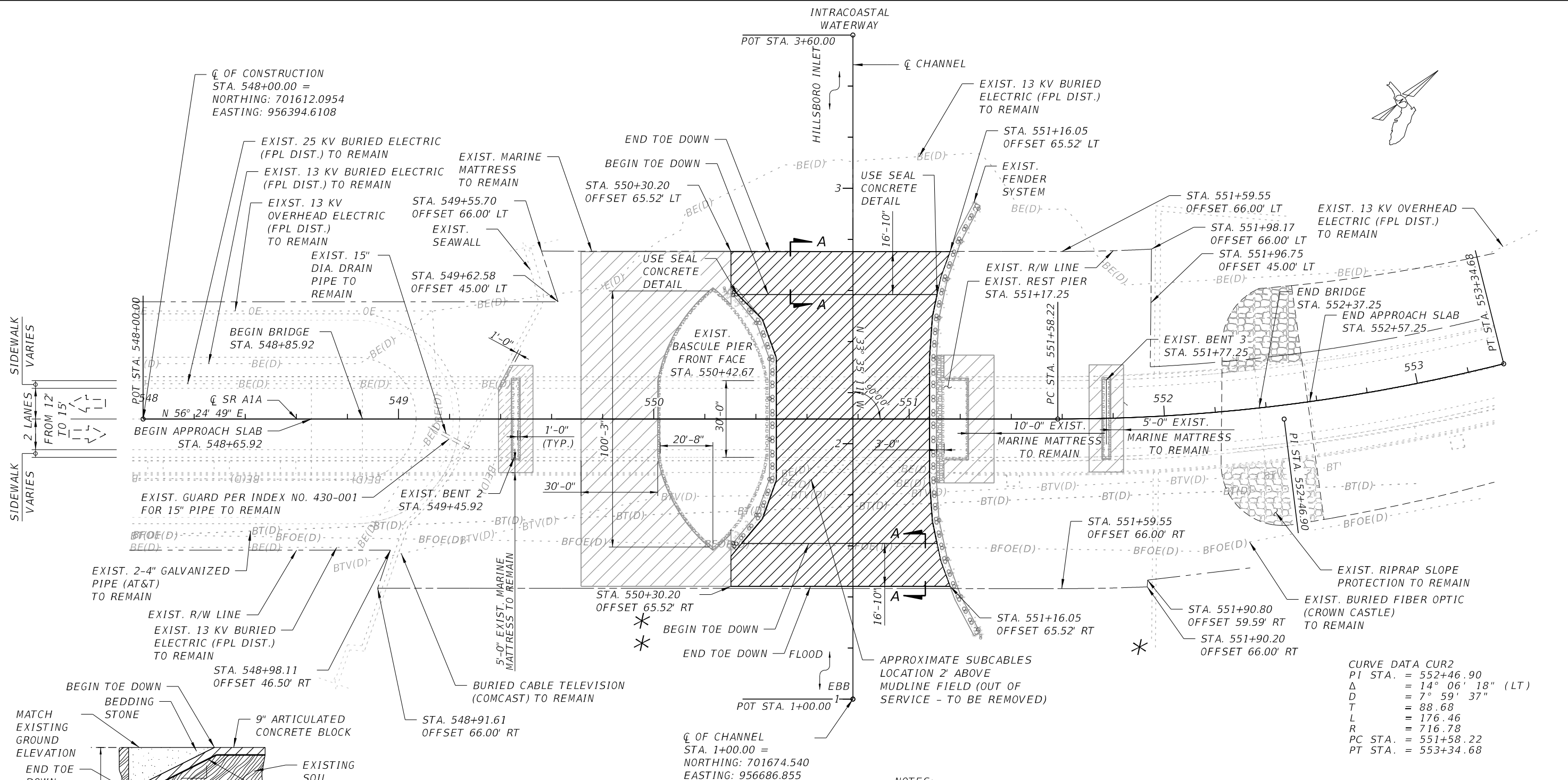
**DETOUR PLAN - N RIVERSIDE DRIVE CLOSURE  
SR A-1-A OVER HILLSBORO INLET**

NOTE: THIS DETOUR IS INTENDED SOLELY FOR THE PURPOSE OF DELIVERING MATERIALS TO THE PROJECT SITE. THE WORK ZONE SHOWN MAY NOT BE USED FOR STAGING OR STORAGE OF MATERIALS.

**BRIDGE NO. 860011**

REVISIONS						ENGINEER OF RECORD:	DRAWN BY: DPV 01-04 CHECKED BY: KCC 08-26 DESIGNED BY: DPV 01-04 CHECKED BY: KCC 02-04	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE:	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME:	SHEET NO.
						HNTB CORPORATION 5900 N. ANDREWS AVE., SUITE 400 FORT LAUDERDALE, FL. 33309 P: (954) 903-1785 DOMINIC P. VANCHURE P.E. LIC. NO. 81875	SR A1A	BROWARD	441458-1-52-01	TEMPORARY TRAFFIC CONTROL PLANS (3 OF 3)		
										SR A1A OVER HILLSBORO INLET	8	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



**PLAN**  
SCALE 1"=40'

CURVE DATA CUR2

PI STA.	= 552+46.90
Δ	= 14° 06' 18" (LT)
D	= 7° 59' 37"
T	= 88.68
L	= 176.46
R	= 716.78
PC STA.	= 551+58.22
PT STA.	= 553+34.68

- NOTES:
1. EACH ARTICULATING CONCRETE BLOCK SHALL BE INSTALLED UNDERWATER AND SHALL HAVE A TOE DOWN TO 8'-5" WITH A MAXIMUM SLOPE OF 2:1.
  2. FILL ALL AREAS THAT HAVE BEEN UNDERMINED ON EITHER THE BASCULE PIER OR THE REST PIER WITH SEAL CONCRETE.
  3. HARD GROUND MATERIAL MAY NECESSITATE A SPECIAL ANCHORING SYSTEM IN LIEU OF TOE DOWN. ANCHORS ARE ONLY PERMITTED WHERE TOE DOWN DEPTH CANNOT BE ACHIEVED. FOR EXAMPLE WHERE BEDROCK IS ENCOUNTERED AT SHALLOW DEPTH. INSTALL ANCHORS WITH AN ULTIMATE LOAD RESISTANCE OF MINIMUM 4.4 KIPS AT A SPACING OF 2 FEET MAXIMUM. ANCHORS ARE NOT TO BE USED TO AVOID TOEING THE SYSTEM DOWN.
  4. ACCORDING TO THE SCOUR EVALUATION REPORT - PHASE 2 (HYDRAULIC/HYDROLOGIC ASSESSMENT), PREPARED BY OEA AND DATED 04-12-12, THE 100-YEAR VELOCITY OF THE WATER IS 14.2 FEET PER SECOND AND THE 500-YEAR VELOCITY OF THE WATER IS 18.4 FEET PER SECOND. THE 100-YEAR MAXIMUM WATER SURFACE ELEVATIONS IS +9.6 FEET AND THE 500-YEAR MAXIMUM WATER SURFACE ELEVATION IS +12.8 FEET, NAVD. WATER FLOW IS TIDAL.
  5. MINIMUM DEPTH OF CROWN CASTLE LINE UNDER ACBS IS 71'-3", PER SONDE LOG DATED 05/2020.

BRIDGE NO. 86001

- LEGEND
- 9" ARTICULATED CONCRETE BLOCK
  - EXISTING MARINE MATTRESS, TO REMAIN
  - \* CORAL (S. RADIIANS), < 10 CM DIAMETER

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ENGINEER OF RECORD:  
 HNTB CORPORATION  
 5900 N. ANDREWS AVE., SUITE 400  
 FORT LAUDERDALE, FL. 33309  
 P: (954) 903-1785  
 LUIS P. RAMOS P.E. LIC. NO. 78122

DRAWN BY: DEJ 01-04  
 CHECKED BY: LPR 08-26  
 DESIGNED BY: DPV 01-04  
 CHECKED BY: LPR 02-04

STATE OF FLORIDA  
 DEPARTMENT OF TRANSPORTATION

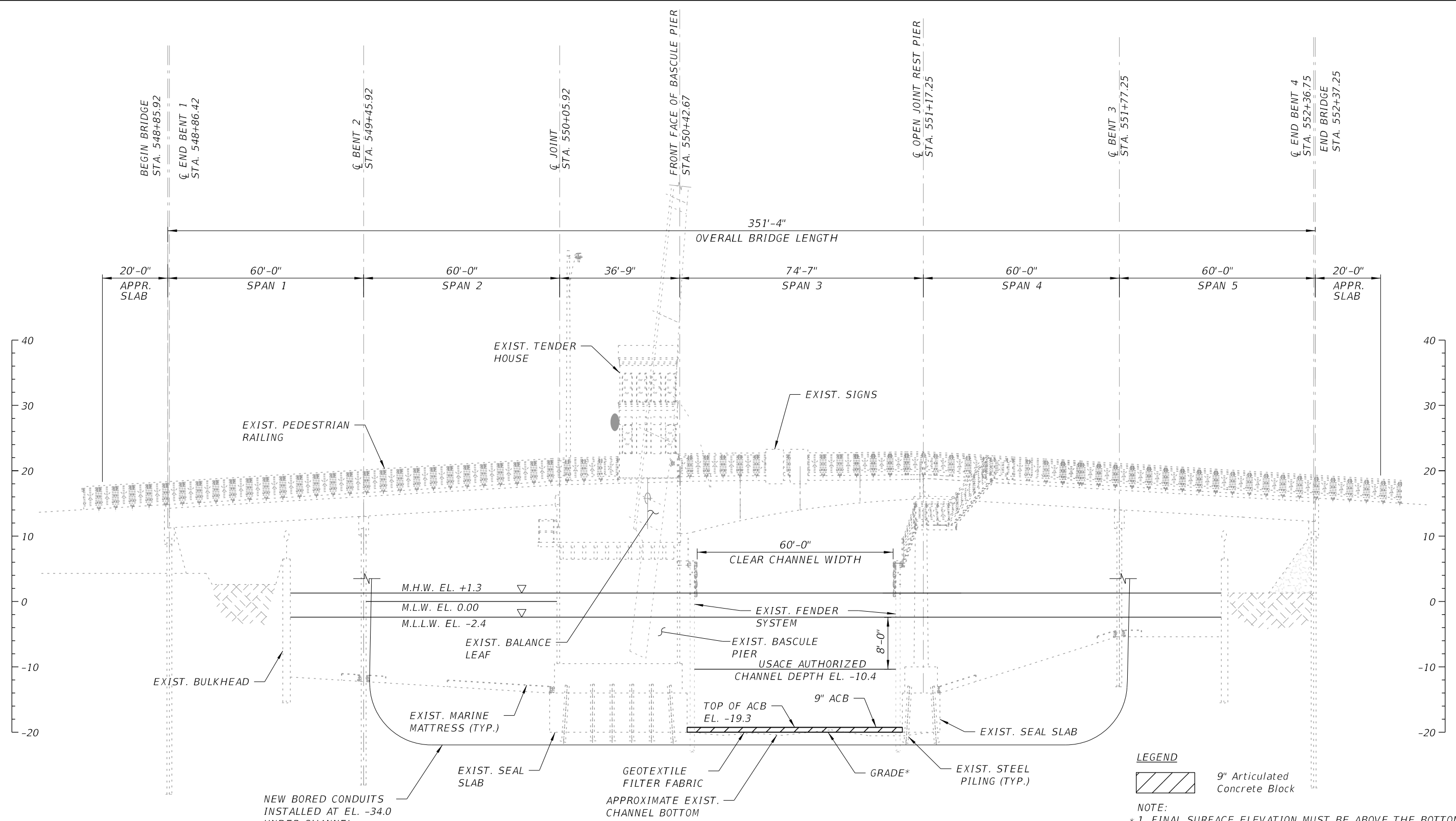
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR A1A	BROWARD	441458-1-52-01

SHEET TITLE: PLAN AND ELEVATION (1 OF 2)

PROJECT NAME: SR A1A OVER HILLSBORO INLET

REF. DWG. NO. SHEET NO. 9

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



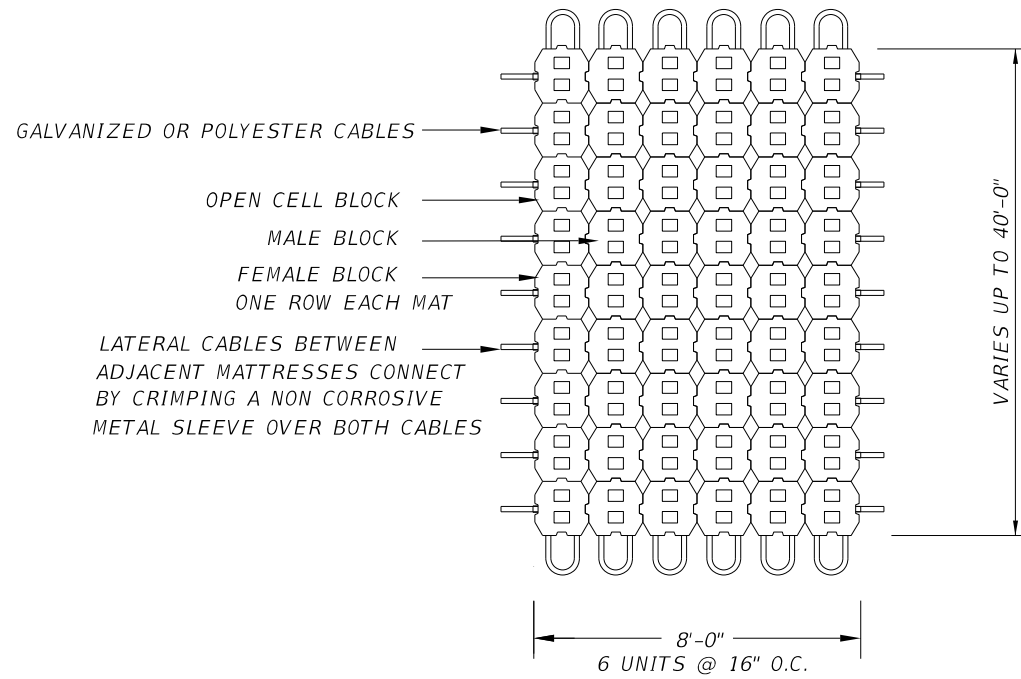
**LEGEND**  
 9" Articulated Concrete Block

**NOTE:**  
 \* 1. FINAL SURFACE ELEVATION MUST BE ABOVE THE BOTTOM OF SEAL SLAB. BOTTOM OF THE SEAL SLAB IS AT -20 FEET ± ELEVATION (NAVD88). VERIFY ELEVATION.  
 2. BACKFILL ALL AREAS BELOW THE REQUIRED FINAL SURFACE ELEVATION WITH BEDDING STONE TO PRODUCE A SMOOTH SUBGRADE. AREAS ABOVE THE REQUIRED FINAL SURFACE ELEVATION ARE TO REMAIN  
 3. THE ELEVATION IS CUT ALONG ROADWAY CENTERLINE.

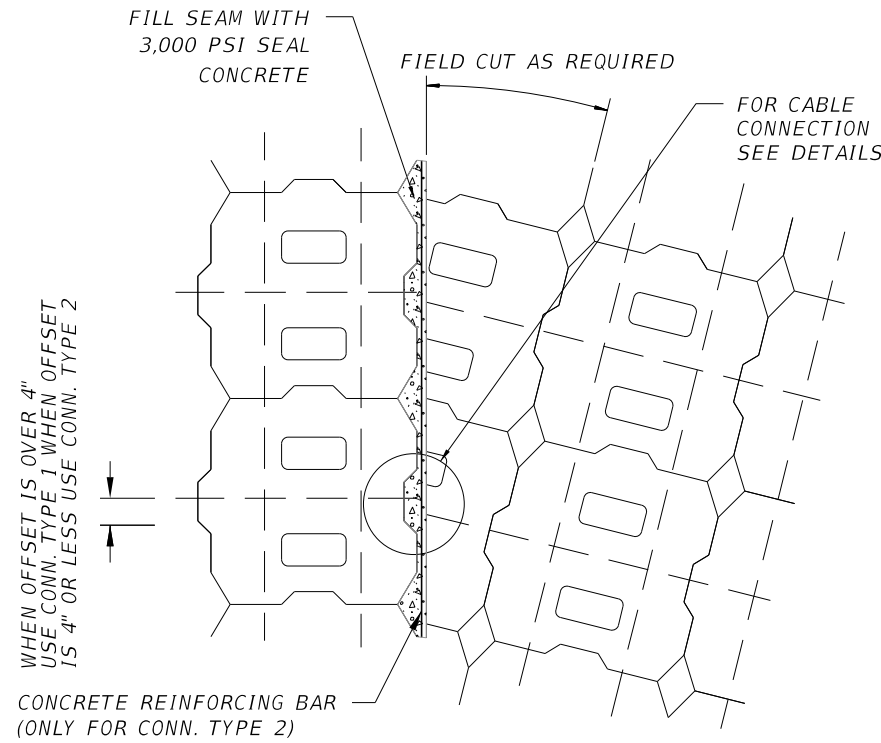
**BRIDGE NO. 860011**

REVISIONS						ENGINEER OF RECORD:			DRAWN BY:			STATE OF FLORIDA			SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	HNTB CORPORATION 5900 N. ANDREWS AVE., SUITE 400 FORT LAUDERDALE, FL. 33309 P: (954) 903-1785 LUIS P. RAMOS P.E. LIC. NO. 78122			XSD 01-04 LPR 08-26 DESIGNED BY: DPV 01-04 CHECKED BY: LPR 02-04			DEPARTMENT OF TRANSPORTATION			PLAN AND ELEVATION (2 OF 2)		
									ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME:		SHEET NO.			
									SR A1A	BROWARD	441458-1-52-01	SR A1A OVER HILLSBORO INLET		10			

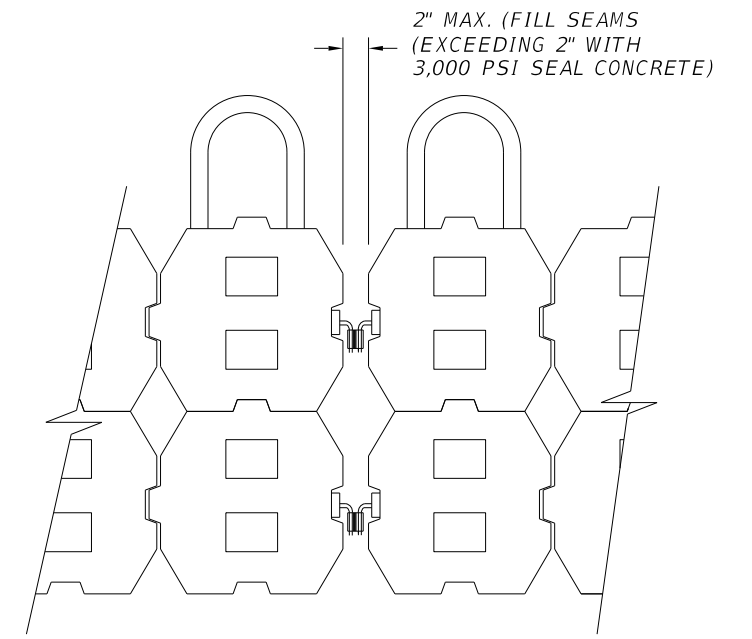
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



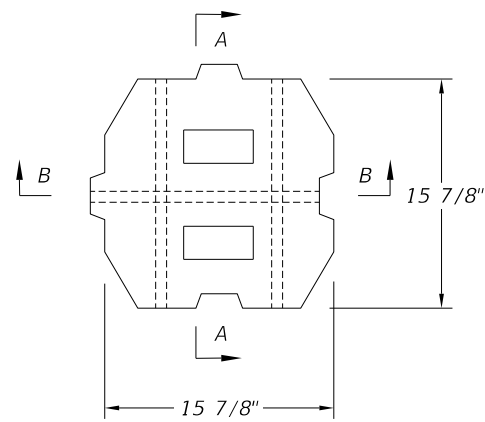
**MAT ASSEMBLY DETAIL**  
N.T.S.



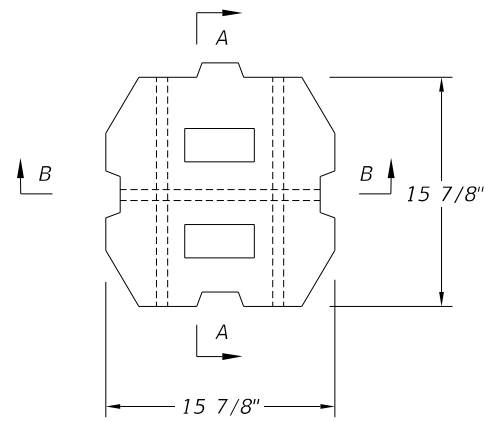
**ANGLE MAT CONNECTION**  
N.T.S.



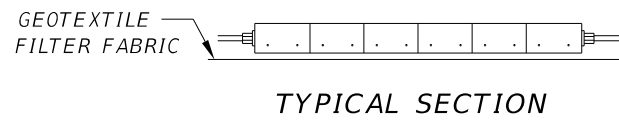
**TYPICAL CONNECTION OF TWO MATS**  
N.T.S.



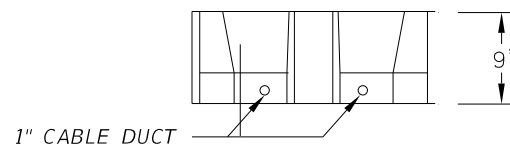
**OPEN CELL UNIT (MALE)**



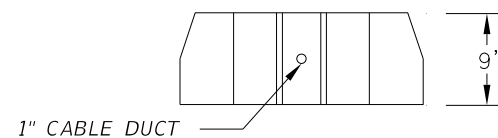
**OPEN CELL UNIT (FEMALE)**



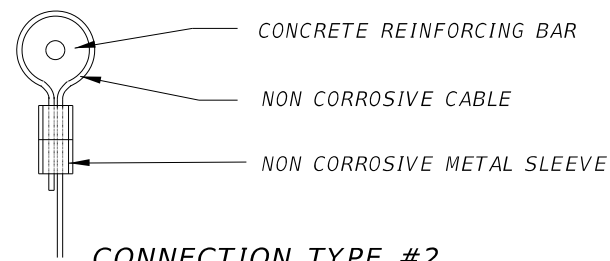
**TYPICAL SECTION**



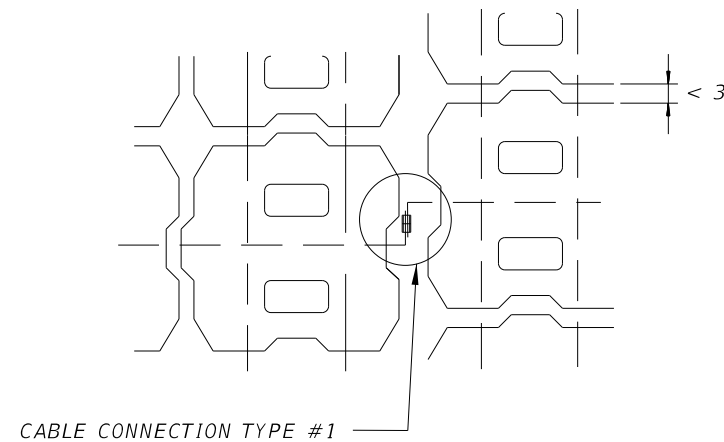
**TYPICAL SECTION B**



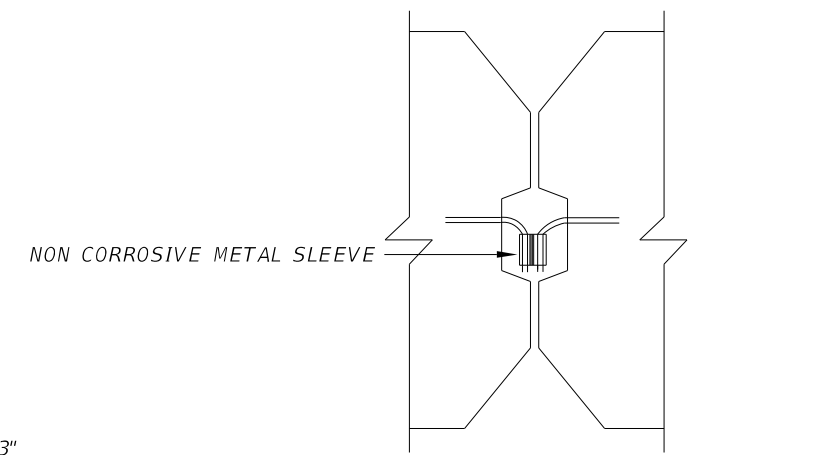
**TYPICAL SECTION A**



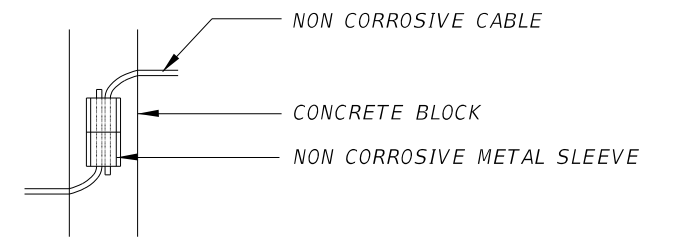
**CONNECTION TYPE #2**  
N.T.S.



**CLAMP DETAIL**  
N.T.S.



**TYPICAL SECTION OF CONNECTOR**  
N.T.S.



**CONNECTION TYPE #1**  
N.T.S.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ENGINEER OF RECORD:  
**HNTB CORPORATION**  
 5900 N. ANDREWS AVE., SUITE 400  
 FORT LAUDERDALE, FL. 33309  
 P: (954) 903-1785  
 LUIS P. RAMOS P.E. LIC. NO. 78122

DRAWN BY: **DEJ 01-04**  
 CHECKED BY: **LPR 08-26**  
 DESIGNED BY: **DPV 01-04**  
 CHECKED BY: **LPR 02-04**

STATE OF FLORIDA  
 DEPARTMENT OF TRANSPORTATION

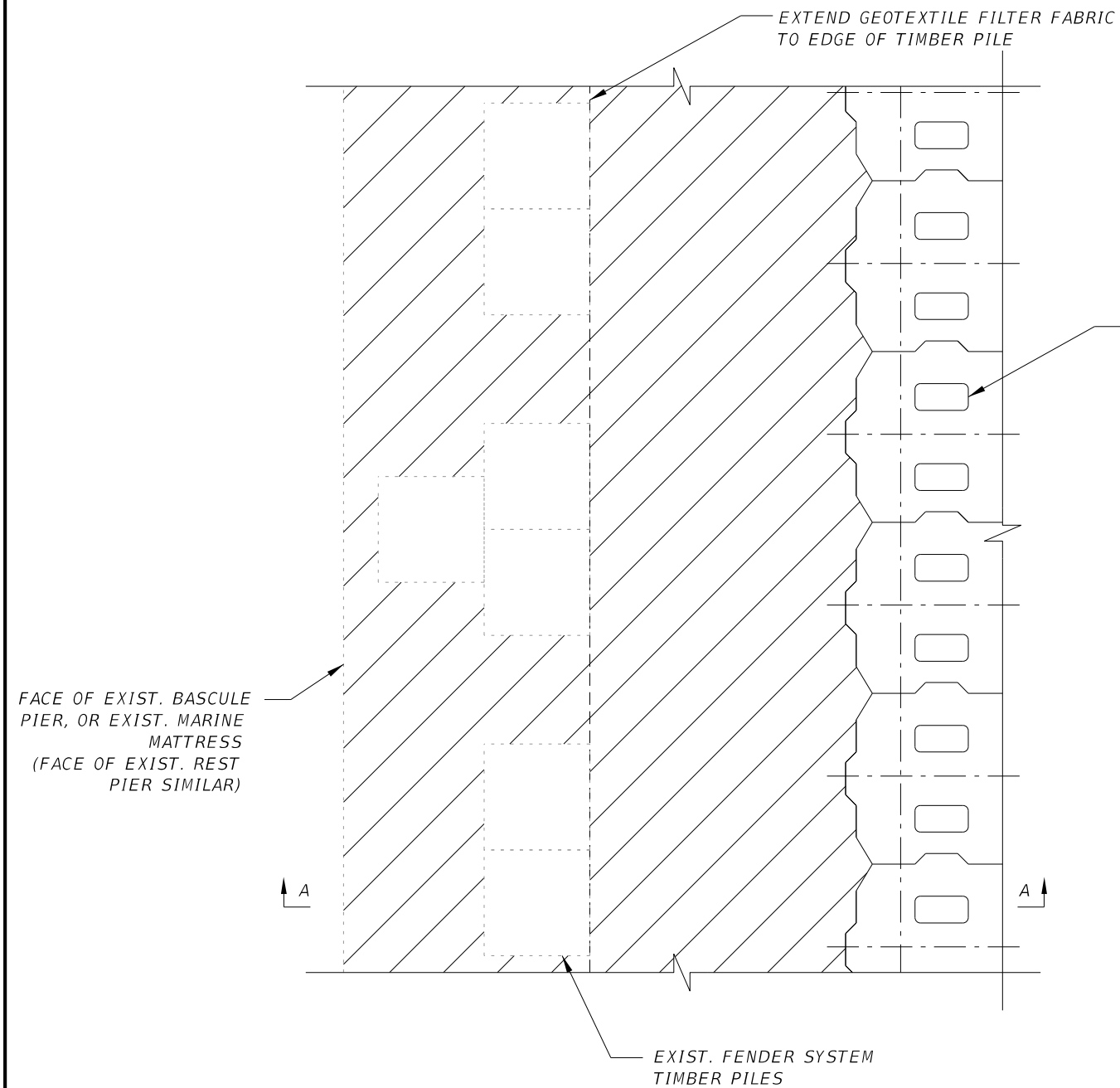
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR A1A	BROWARD	441458-1-52-01

SHEET TITLE: **ARTICULATED CONCRETE BLOCK DETAILS**

PROJECT NAME: **SR A1A OVER HILLSBORO INLET**

REF. DWG. NO.

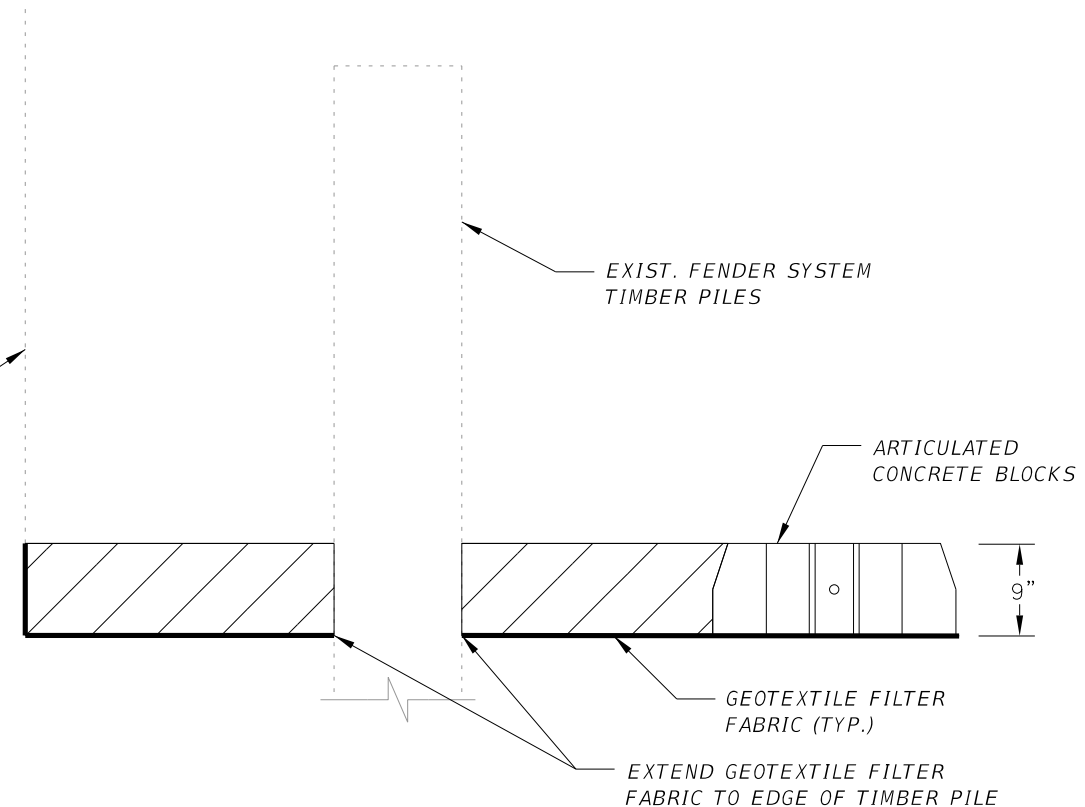
SHEET NO. **11**



**SEAL CONCRETE DETAIL - PLAN**  
N.T.S.

ARTICULATED CONCRETE BLOCKS

FACE OF EXIST. BASCULE PIER, OR EXIST. MARINE MATTRESS (FACE OF EXIST. REST PIER SIMILAR)



**SECTION A-A**  
**SEAL CONCRETE DETAIL - ELEVATION**  
N.T.S.

**LEGEND**

 SEAL CONCRETE

**BRIDGE NO. 860011**

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**ENGINEER OF RECORD:**  
 HNTB CORPORATION  
 5900 N. ANDREWS AVE., SUITE 400  
 FORT LAUDERDALE, FL. 33309  
 P: (954) 903-1785  
 LUIS P. RAMOS P.E. LIC. NO. 78122

**DRAWN BY:** DEJ 01-04  
**CHECKED BY:** LPR 08-26  
**DESIGNED BY:** DPV 01-04  
**CHECKED BY:** LPR 02-04

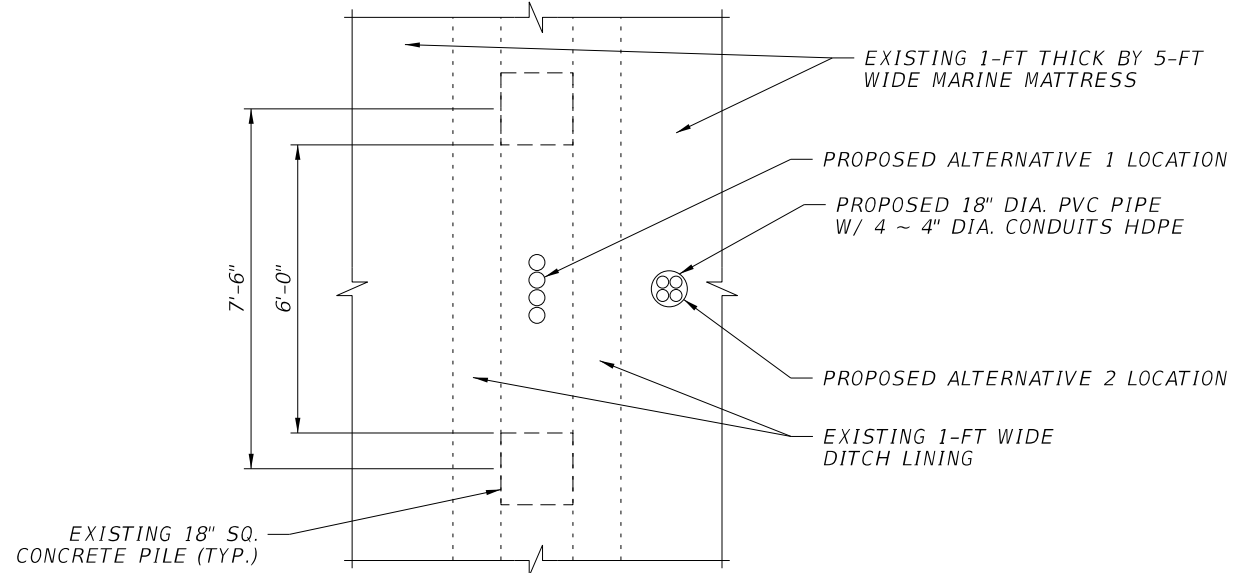
**STATE OF FLORIDA**  
**DEPARTMENT OF TRANSPORTATION**

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR A1A	BROWARD	441458-1-52-01

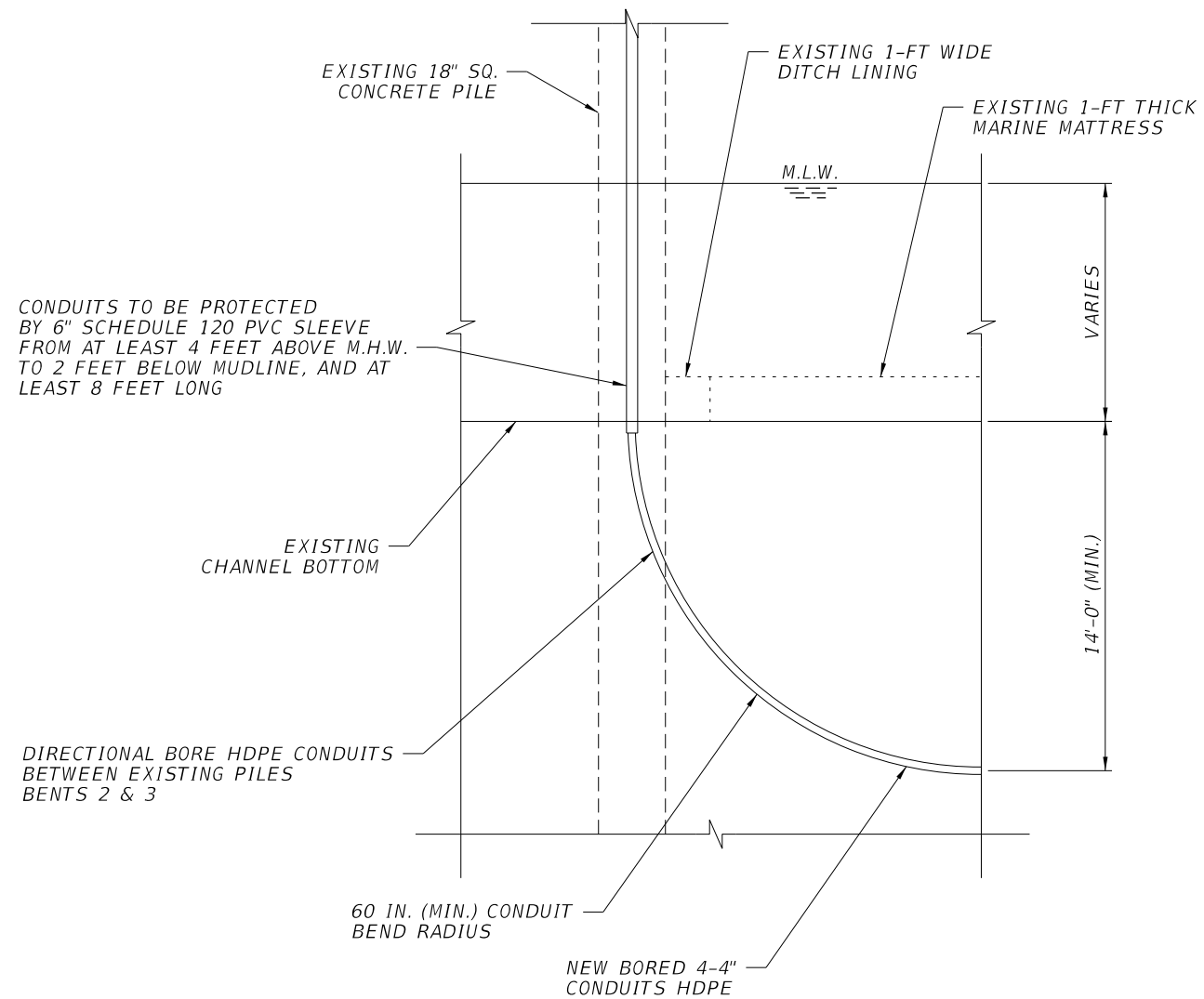
**SHEET TITLE:** SEAL CONCRETE DETAILS

**PROJECT NAME:** SR A1A OVER HILLSBORO INLET

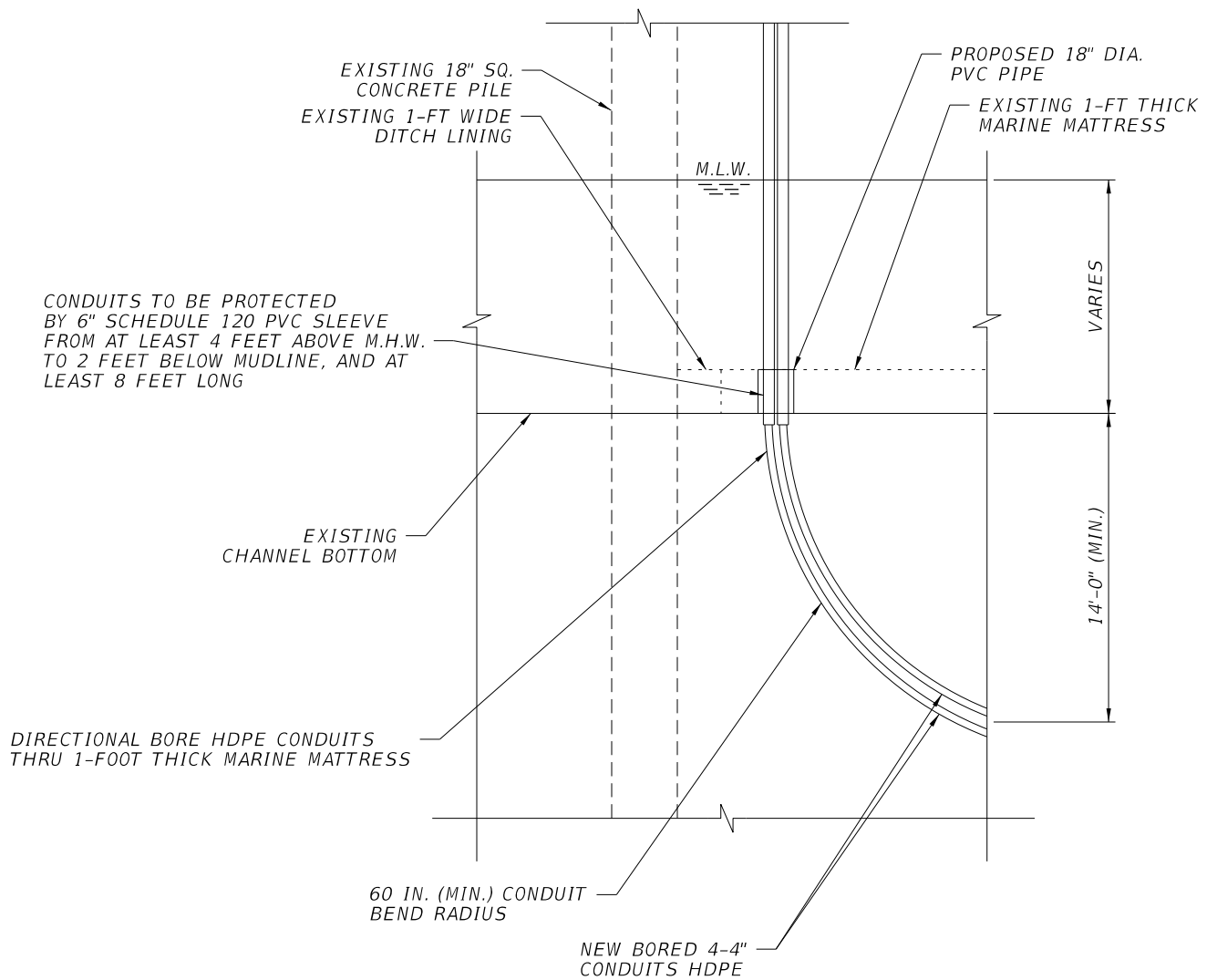
**REF. DWG. NO.:**      **SHEET NO.:** 12



PLAN VIEW



ALTERNATIVE 1 SECTION VIEW

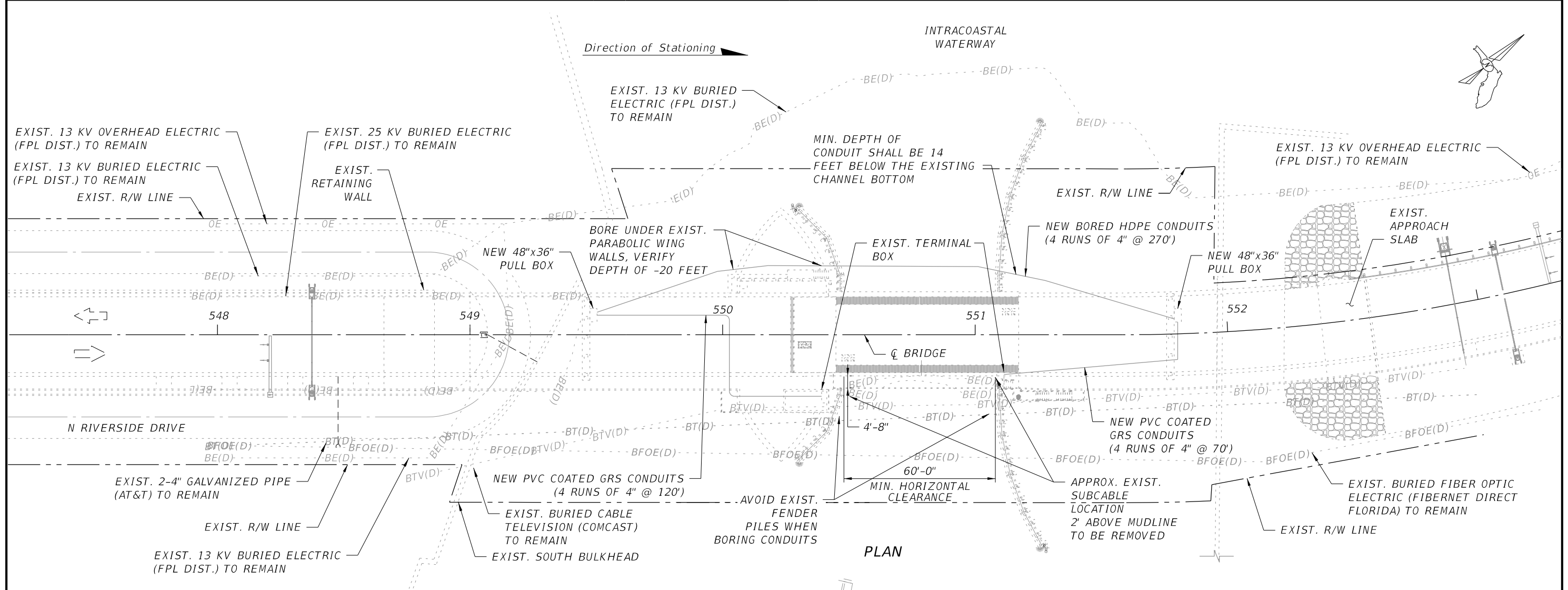


ALTERNATIVE 2 SECTION VIEW

BRIDGE NO. 860011

REVISIONS						ENGINEER OF RECORD:			DRAWN BY:			STATE OF FLORIDA			SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	HNTB CORPORATION 715 KIRK DRIVE KANSAS CITY, MO. 64105 P: (816) 472-1201 PAUL HUNTER P.E. LIC. NO. 88795			DEPARTMENT OF TRANSPORTATION			DIRECTIONAL DRILLING DETAILS					
									ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME:			SHEET NO.		
									SR A1A	BROWARD	441458-1-52-01	SR A1A OVER HILLSBORO INLET			13		

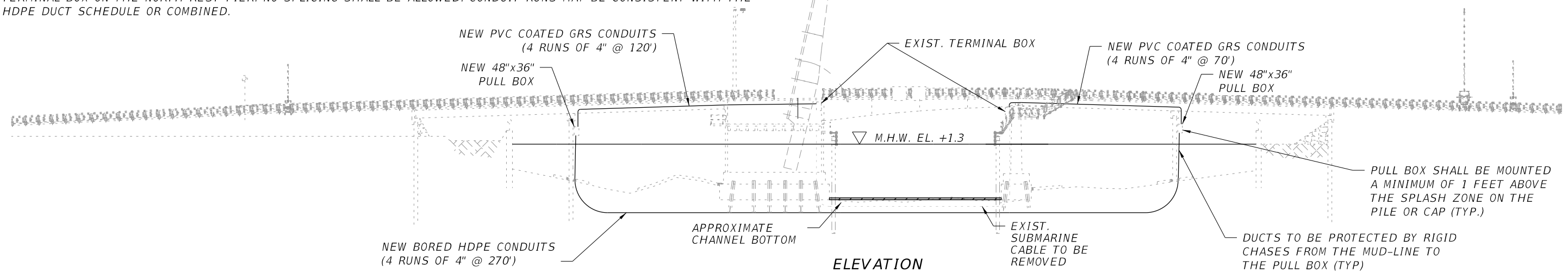
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



PLAN

- NOTES:
1. FURNISH AND INSTALL TWO SUBMARINE DUCT PULL BOXES. EACH PULL BOX SHALL BE 48" X 36" X 10" (MINIMUM). SEE SHEET 15 FOR ADDITIONAL INFORMATION ON SUPPORTS AND HDPE DUCT PROTECTION.
  2. FURNISH AND INSTALL PVC COATED RIGID CONDUIT TO RUN NEW CABLES FROM NEW PULL BOXES TO EXISTING SUBMARINE CABLE TERMINAL CABINETS INSIDE BRIDGE BASCULE PIER AND REST PIER. CABLES RUN THROUGH THE DUCTS SHALL BE CONTINUOUS THROUGHOUT THE ENTIRE RUN, FROM EXISTING TERMINAL BOX IN THE SOUTH BASCULE PIER TO THE EXISTING TERMINAL BOX ON THE NORTH REST PIER. NO SPLICING SHALL BE ALLOWED. CONDUIT RUNS MAY BE CONSISTENT WITH THE HDPE DUCT SCHEDULE OR COMBINED.

- NOTES:
3. BEFORE REMOVING EXISTING SUBMARINE CABLES, VERIFY THE CABLES TO BE REMOVED ARE IN FACT THE ONES BEING REPLACED. IF EXISTING CABLES ARE LAID ON THE FLOOR, REMOVE THE CABLES COMPLETELY.
  4. PIER OPENINGS SHALL BE SEALED WITH FOAM INSULATION BITUMINOUS SEALER.
  5. CHANGE OVER FROM EXISTING SUBMARINE CABLE SYSTEM TO NEW SUBMARINE CABLE SYSTEM SHALL BE PERFORMED WITHOUT DISTURBANCE TO MARINE OR ROADWAY TRAFFIC.



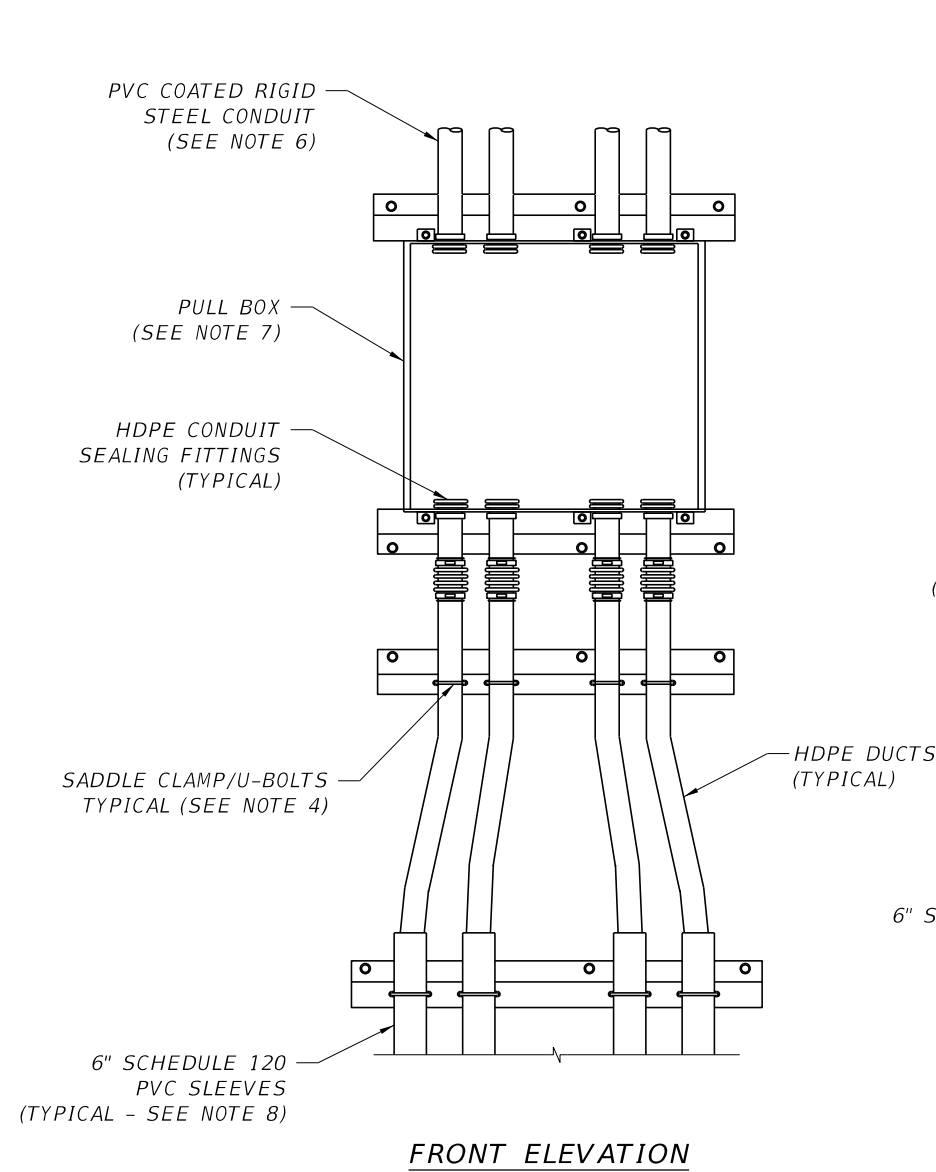
ELEVATION

BRIDGE NO. 860011

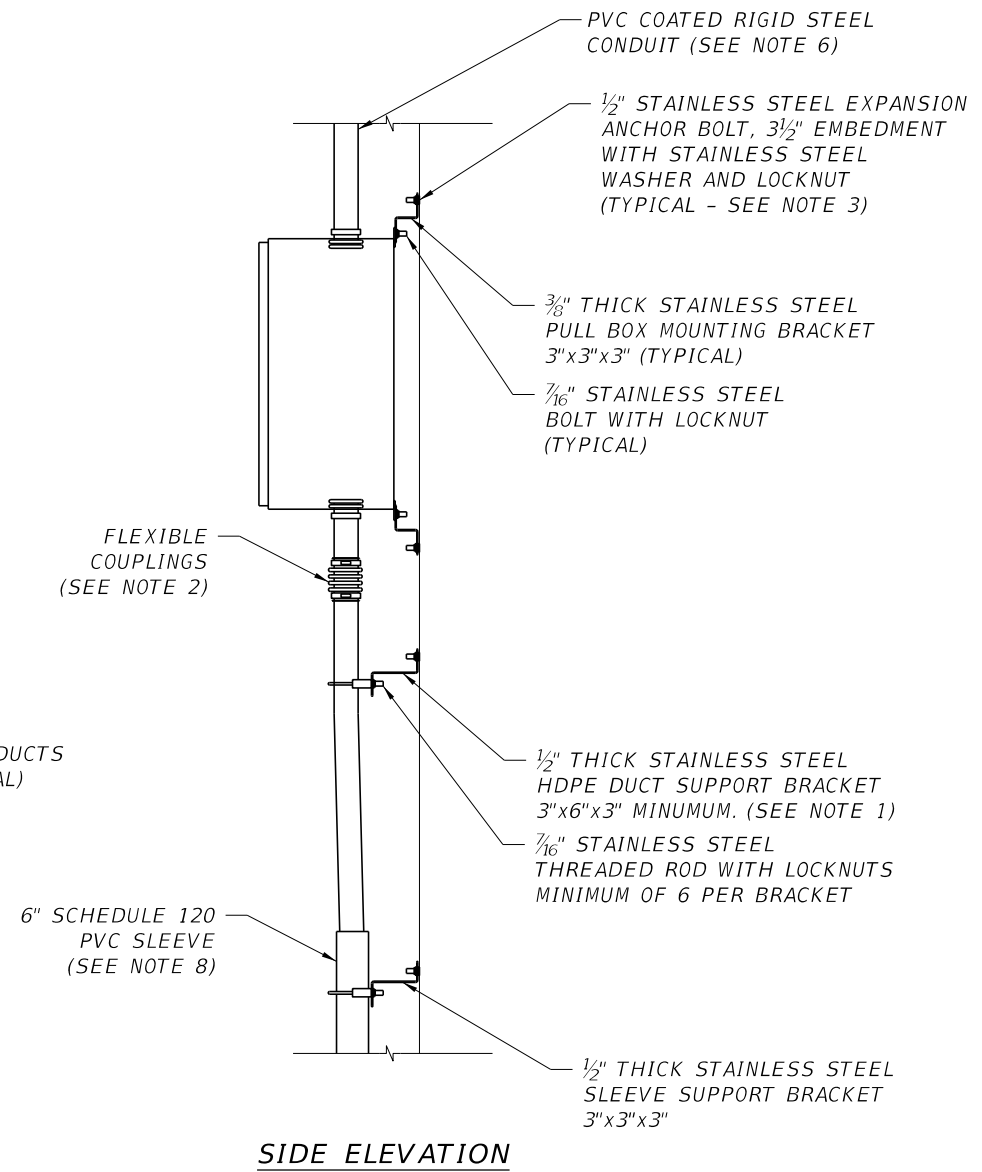
REVISIONS						ENGINEER OF RECORD:	DRAWN BY:	CHECKED BY:	STATE OF FLORIDA			SHEET TITLE:	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				DEPARTMENT OF TRANSPORTATION	ROAD NO.	COUNTY		
						HNTB CORPORATION 715 KIRK DRIVE KANSAS CITY, MO. 64105 P: (816) 472-1201 PAUL HUNTER P.E. LIC. NO. 88795	XSD 01-04 LPR 08-26 PH 01-04 LPR 02-04	SR A1A	BROWARD	441458-1-52-01	GENERAL ELECTRICAL PLAN  SR A1A OVER HILLSBORO INLET	SHEET NO. 14	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.





**FRONT ELEVATION**



**SIDE ELEVATION**

**PIER WALL MOUNTED PULL BOX**

**NOTES:**

1. FIRST HDPE DUCT MOUNTING BRACKET FROM PULL BOX AND MOUNTING BRACKETS BEFORE AND AFTER SECTIONS WITH EXPANSION FITTINGS SHALL BE SIZED SO THAT HDPE SECTION IS VERTICAL.
2. NEOPRENE FLEXIBLE COUPLING SHALL BE ABLE TO EXTEND 1 1/2" MINIMUM AND DEFLECT 10 DEGREES. ADJUST COUPLINGS SO THAT FULL EXPANSION OF DUCT FALLS WITHIN RANGE. EXPANSION FITTINGS SHALL BE MOUNTED AS CLOSE TO THE PULL BOX AS POSSIBLE, BUT NOT LESS THAN 6".
3. HDPE DUCT SUPPORT BRACKET ANCHORS SHALL BE SPACED AT 10" APART MAXIMUM. EACH BRACKET SHALL HAVE A MINIMUM OF 3 ANCHORS.
4. SADDLE CLAMPS SHALL BE MADE OF 1/2" STAINLESS STEEL U-BOLTS AND PVC SADDLES.
5. ALL HARDWARE INCLUDING BUT NOT LIMITED TO CLAMPS, SPACERS, U-BOLTS, BOLTS AND ANCHORS SHALL BE TYPE 316 STAINLESS STEEL.
6. CONDUIT LEAVING TOP OF PULL BOX SHALL BE SUPPORTED WITH SUPPORTS AND HARDWARE SUCH AS THE SUPPORTS AND HARDWARE SHOWN SUPPORTING THE HDPE DUCTS BELOW THE PULL BOX AND SPACED AS PER THE NEC.
7. PULL BOX SHALL HAVE CONTINUOUS HINGE WITH CLAMPS, QUARTER TURN LATCHES OR 3 POINT LATCH WITH LOCKABLE HANDLE.
8. PROVIDE 6" SCHEDULE 120 PVC SLEEVES FOR HDPE DUCTS. SLEEVES SHALL BE SMOOTHED AT THE ENDS, EXTEND AT LEAST 4 FEET ABOVE M.H.W. TO 2 FEET BELOW MUDLINE, AND AT LEAST 8 FEET LONG. SLEEVES SHALL BE SUPPORTED AT LEAST 1 FOOT BELOW M.L.W., AND UPPER SUPPORT SHALL BE AT LEAST 3 FEET ABOVE M.H.W. NO SUPPORT SHALL BE WITHIN 1 FOOT OF THE TIDE ZONE.
9. ALL SUPPORT AND MOUNTING BRACKETS SHALL BE SIZED TO ACCOMODATE ALL CONDUITS, SLEEVES, AND PULL BOXES AS SHOWN. AT A MINIMUM BRACKETS SHALL BE 48" LONG.
10. PROVIDE THE FOLLOWING WIRES IN THE SUBMARINE CONDUITS:  
 CONDUIT 1 - 30 - #10, 4/0 GROUND CABLE, USE THIS CONDUIT FOR POWER CIRCUITS.  
 CONDUIT 2 - 80 - #12, 4-#14 TWISTED SHIELD PAIR, USE THIS CONDUIT FOR CONTROL CIRCUITS.  
 CONDUIT 3 - SPARE.  
 CONDUIT 4 - SPARE.
11. PROVIDE LABELED TERMINAL STRIPS FOR ALL WIRES INCLUDING SPARES.

**BRIDGE NO. 860011**

REVISIONS						ENGINEER OF RECORD:	DRAWN BY: XSD 01-04 CHECKED BY: LPR 08-26 DESIGNED BY: PH 01-04 CHECKED BY: LPR 02-04	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE:	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME:	SHEET NO.
						HNTB CORPORATION 715 KIRK DRIVE KANSAS CITY, MO. 64105 P: (816) 472-1201 PAUL HUNTER P.E. LIC. NO. 88795	SR A1A	BROWARD	441458-1-52-01	PULL BOX DETAIL  SR A1A OVER HILLSBORO INLET	15	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

**GENERAL NOTES**

**PLATE INSTALLATION:**

PROVIDE AN INSTALLATION PLAN FOR REVIEW TO THE ENGINEER THAT MAINTAINS CORRECT BRIDGE BALANCE UNTIL ALL EXISTING BICYCLE PLATES ARE REMOVED AND NEW BICYCLE PLATES ARE INSTALLED. AT NO TIME SHALL THE BRIDGE BE RAISED OUT OF BALANCE AND WITHOUT FULLY SECURING BICYCLE PLATES.

VERIFY BOTH PLATE DIMENSIONS AND INSTALLATION FIT-UP (BOLT PLACEMENTS, ETC.) PRIOR TO FABRICATION OF PLATES. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

STAINLESS STEEL SCREWS SHALL BE TIGHTENED FROM THE DECK TO SNUG CONDITION AS DEFINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER WITH AN ORDINARY SPUD WRENCH. ALL PLATES SHALL HAVE FULL CONTACT WITH THE OPEN DECK GRATING THROUGHOUT THE PLATE SURFACE. PEEN THREADS ONCE ALL SCREWS ARE TIGHTENED ON ONE PLATE.

INSTALL NEW PLATES ON THE SAME DAY EXISTING PLATES ARE REMOVED.

**PAVEMENT MARKINGS:**

MATCH THE EXISTING PAVEMENT MARKINGS ON THE NEW BICYCLE PLATES.

**BRIDGE BALANCING:**

PROPERLY BALANCE THE BRIDGE FOR ALL ANGLES OF OPERATION. CONSIDER THE PROPERLY BALANCED CONDITION FOR THE BASCULE LEAFS AS FOLLOWS:  
MAINTAIN EXISTING BALANCE CONDITION.

WHEN THE BRIDGE WAS BALANCED ON 02/09/2016 THE CURRENT BALANCE CONDITION WAS FOUND TO BE AS FOLLOWS, ALPHA IN DEGREES, ALL OTHER DATA IN KIP-FT:

LEAF	WLCOS(ALPHA)	WL	ALPHA	AVTF
NEAR	98.8	205.4	61.2	42.4

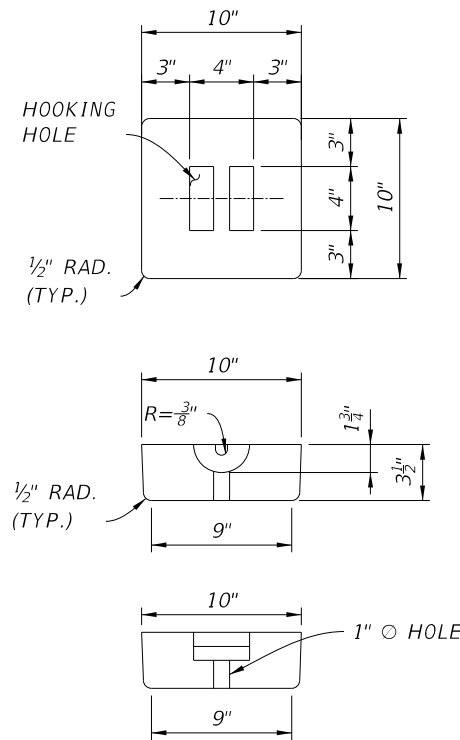
**COUNTERWEIGHT BLOCKS:**

-PROVIDE BALANCE BLOCKS AS NECESSARY TO PRODUCE THE SPECIFIED BALANCE CONDITION (DURING CONSTRUCTION AND FINAL BALANCE) IF NOT AVAILABLE AT THE BRIDGE SITE.

-FABRICATE COUNTERWEIGHT ADJUSTING BLOCKS BASED ON THE DETAILS ON THIS SHEET.

-PLACE AND ARRANGE BLOCKS THROUGHOUT THE COURSE OF THE WORK AS REQUIRED FOR ACHIEVING OR MAINTAINING ACCEPTABLE BALANCE STATES.

-THE FINAL BRIDGE BALANCE STATE WILL REQUIRE AN APPROXIMATE 660 LBS. OF COUNTERWEIGHT BLOCK PLACED IN THE BRIDGE'S COUNTERWEIGHT AREA.



CAST IRON BALANCE BLOCK

Theoretical Weight: 77 LB Approx.

Material: ASTM A48 Class 30

Bridge No. 860011

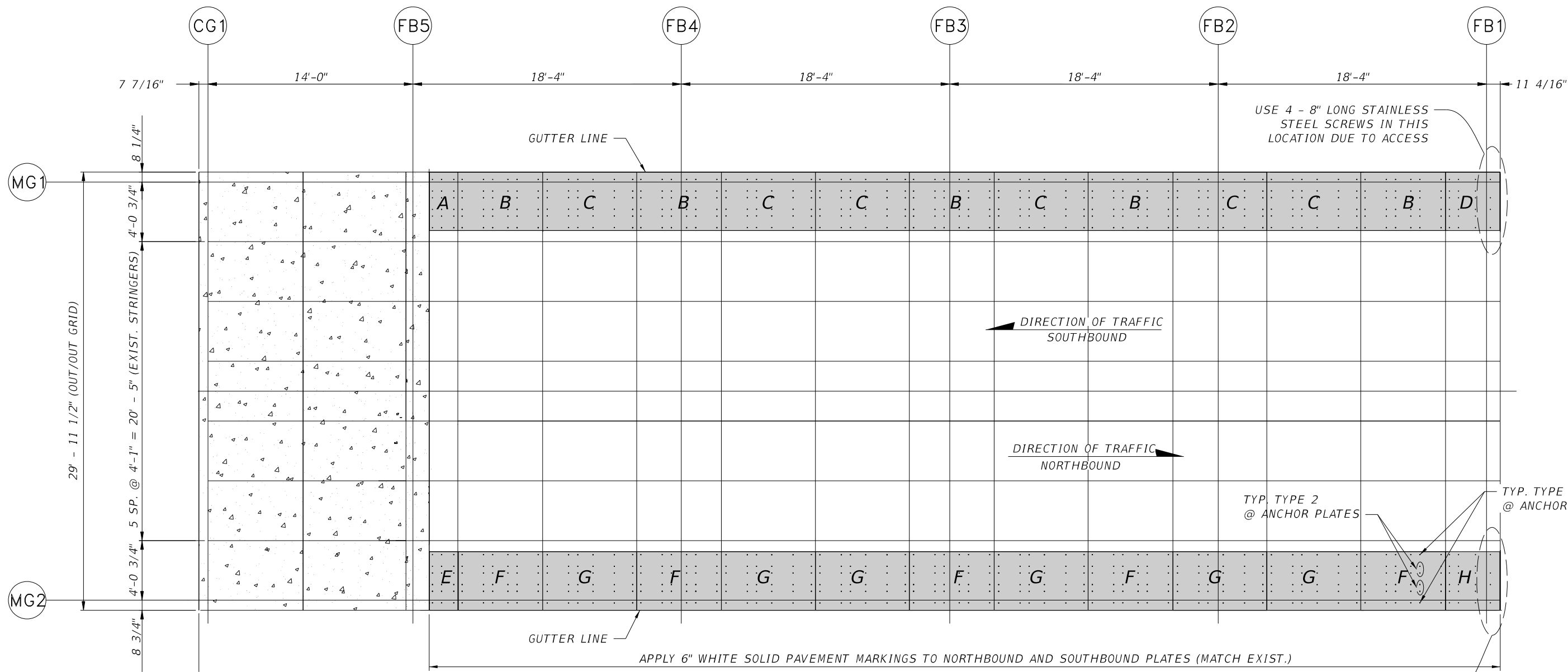
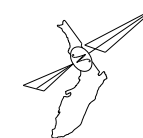
REVISIONS						DRAWN BY: RTC 09-19	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE:  BICYCLE PLATE GENERAL NOTES	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
										SR A1A OVER HILLSBORO INLET	SHEET NO. 16

John G. Daniels, P.E.  
PE License Number 41875  
HDR Engineering, Inc.  
3250 West Commercial Blvd, Suite 100  
Fort Lauderdale, FL 33309-3459

CHECKED BY:  
DAR 09-19  
DESIGNED BY:  
JGD 09-19  
CHECKED BY:  
MJA 09-19

SR A1A BROWARD 441458-1-52-01

PROJECT NAME:



PLAN VIEW KEY OF MOVABLE SPAN

Bridge No. 860011

REVISIONS						John G. Daniels, P.E. PE License Number 41875 HDR Engineering, Inc. 3250 West Commercial Blvd, Suite 100 Fort Lauderdale, FL 33309-3459	DRAWN BY: RTC 09-19 CHECKED BY: DAR 09-19 DESIGNED BY: JGD 09-19 CHECKED BY: MJA 09-19	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE:  BICYCLE PLATE LOCATION PLAN	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
							SR A1A	BROWARD	441458-1-52-01	SR A1A OVER HILLSBORO INLET	17	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

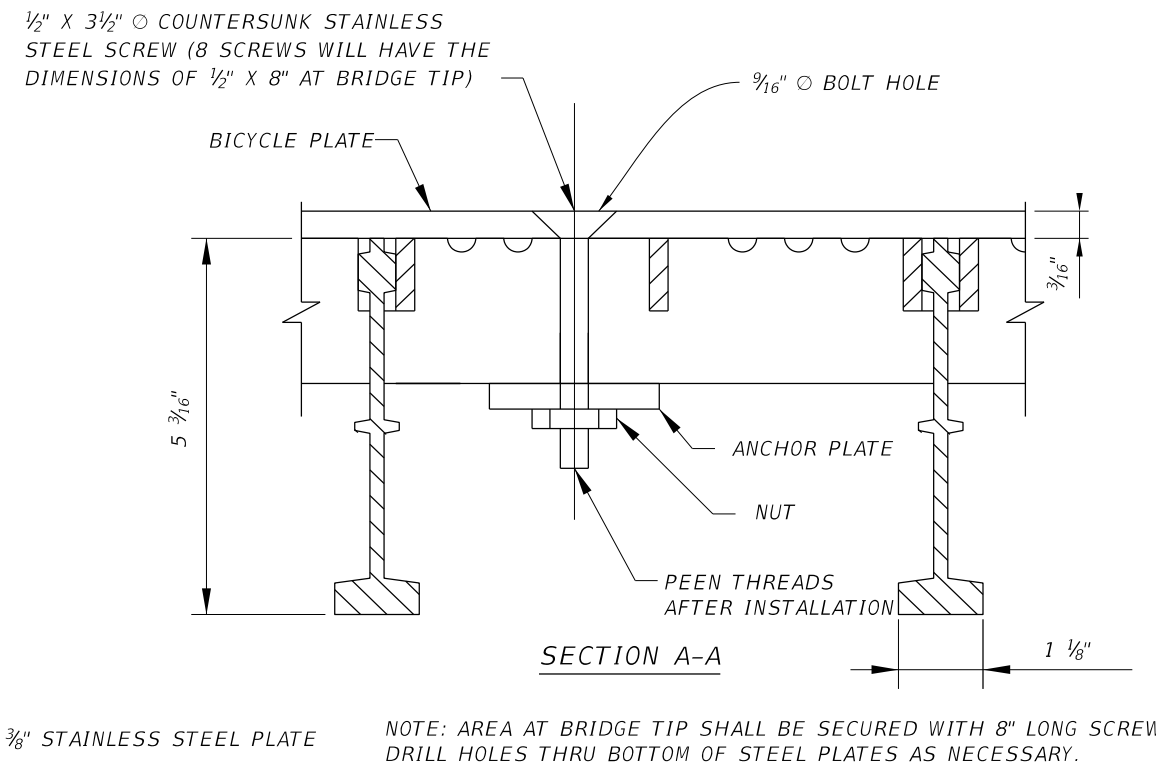
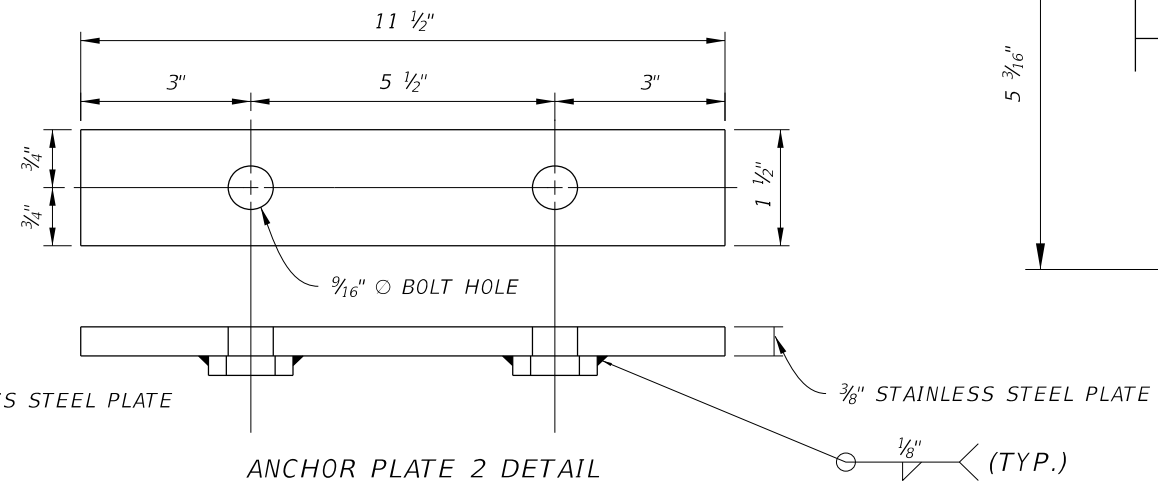
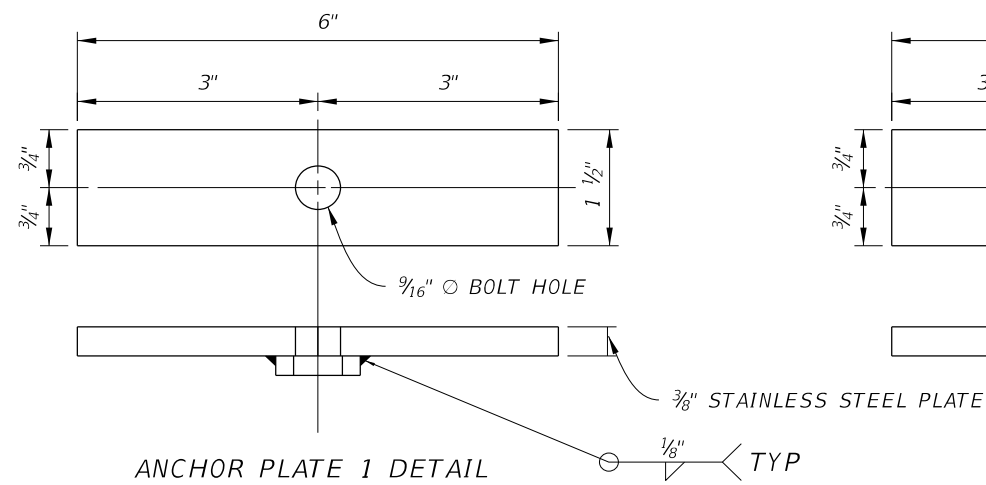
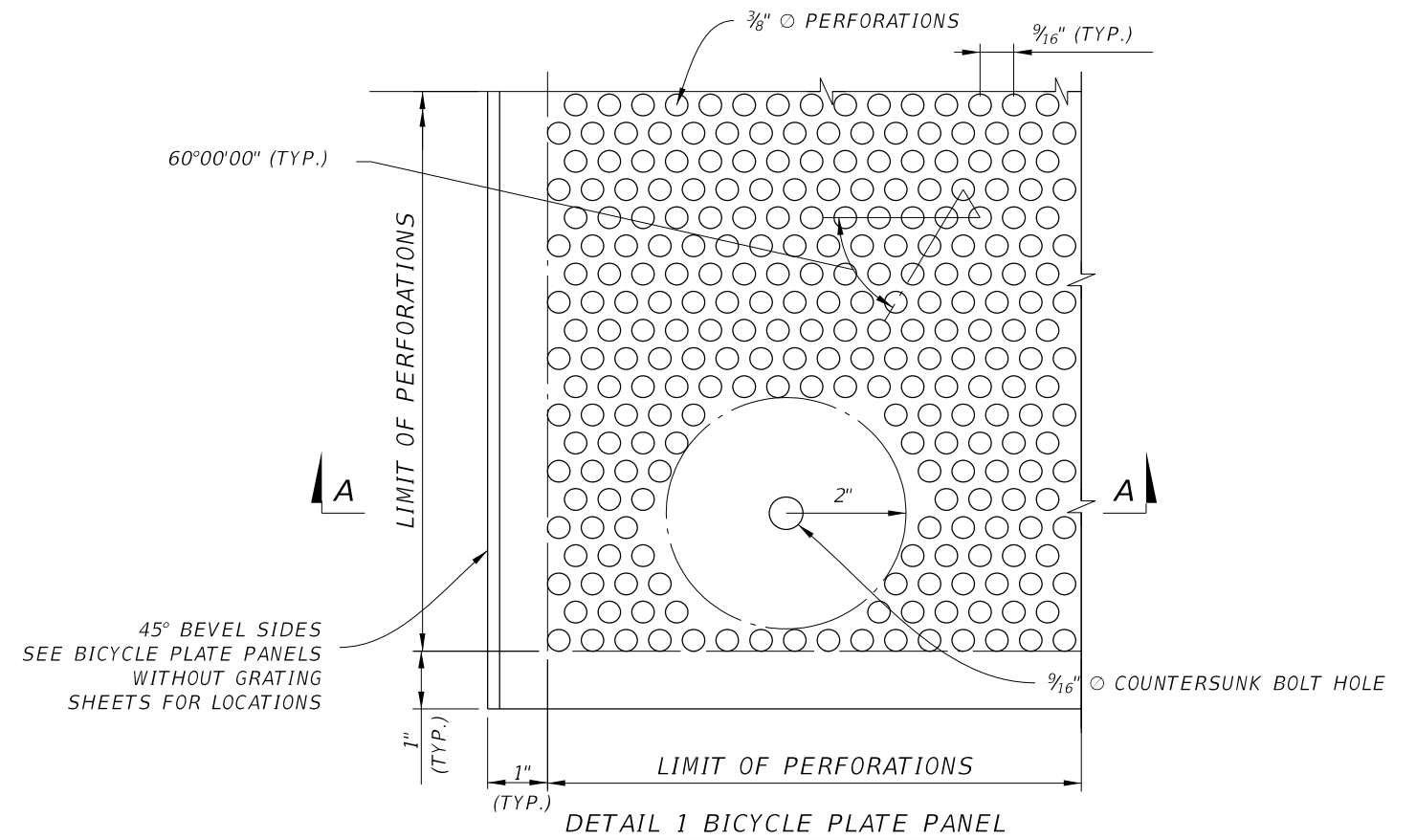
**NOTES:**

**BICYCLE PLATE:**

1. THE BICYCLE PLATE SHALL BE ASTM A36.
2. SURFACE: ANTI-SLIP PRIMARILY MARTENISTIC STEEL SURFACE COVERING ALL OF THE SUBSTRATE CONSISTING OF A RANDOM HATCH MATRIX. 100% SURFACE COVERAGE ON PLATE SURFACE EXPOSED TO TRAFFIC EXCEPT FOR COUNTERSUNK BOLT HOLES.
3. SURFACE HARDNESS, ROCKWELL C SCALE, ASTM E 140 AND E 384: MINIMUM OF 55.
4. BOND STRENGTH, SURFACE TO SUBSTRATE, ASTM C 633: MINIMUM OF 4,000 PSI.
5. COEFFICIENT OF FRICTION, ANTI-SLIP SURFACE: MINIMUM OF 0.6.
6. UL LISTED: UL 410 SLIP RESISTANT.
7. HOT-DIP GALVANIZED: ASTM A123
8. BICYCLE PLATE SHALL BE GALVANIZED AFTER FABRICATION AND SLIP RESISTANT TEXTURE IS APPLIED.
9. ANTI-SLIP SURFACE QUALIFICATION - THE ANTI-SLIP COATING WITH GALVANIZATION SHALL BE THE MANUFACTURER'S STANDARD COMMERCIAL PRODUCT. A STANDARD COMMERCIAL PRODUCT IS A PRODUCT THAT HAS BEEN SOLD, OR IS BEING CURRENTLY OFFERED FOR SALE, ON THE COMMERCIAL MARKET THROUGH ADVERTISEMENTS OR MANUFACTURER'S CATALOGS OR BROCHURES, AND REPRESENT THE LATEST PRODUCT MODEL.
10. SUBMIT PLATE SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

**HARDWARE:**

1. SCREWS SHALL BE FLAT HEAD SOCKET CAP ASTM F593, TYPE 316
2. NUTS AND WASHERS SHALL BE ASTM F594, TYPE 316
3. ANCHOR PLATES SHALL BE ASTM A240, TYPE 316.
4. CHASE THREADS OF NUT AFTER WELDING.

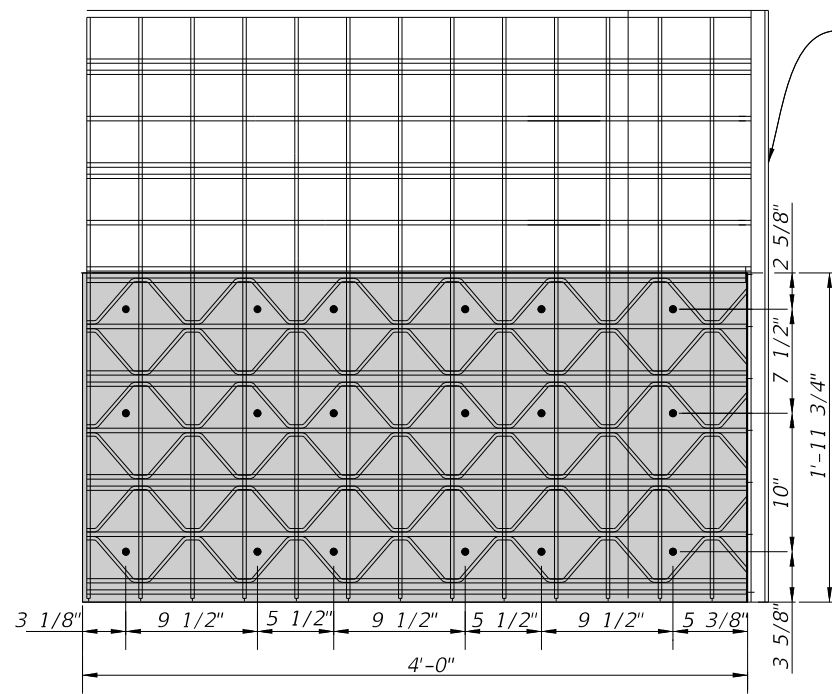


NOTE: AREA AT BRIDGE TIP SHALL BE SECURED WITH 8" LONG SCREWS. DRILL HOLES THRU BOTTOM OF STEEL PLATES AS NECESSARY.

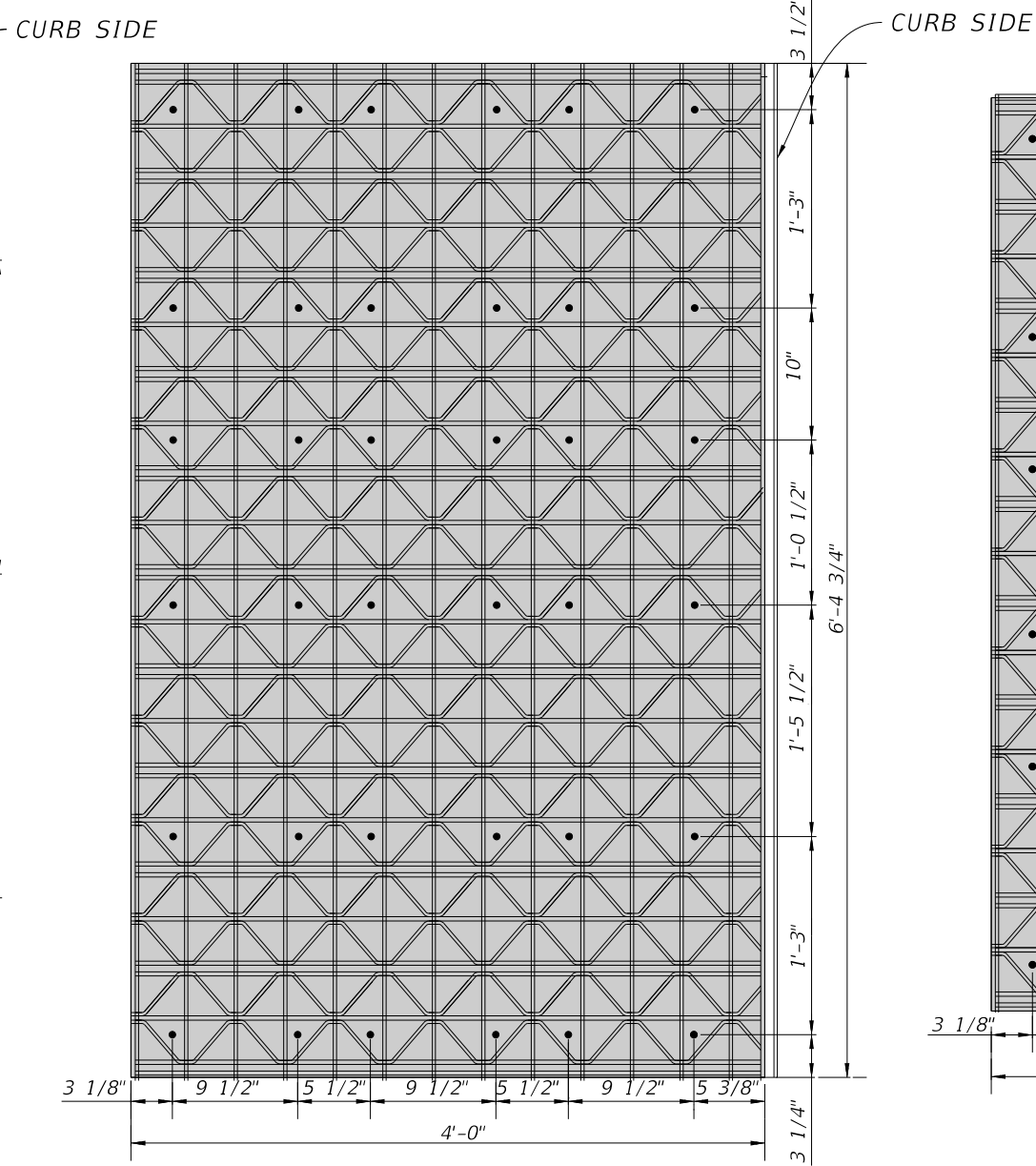
Bridge No. 860011

REVISIONS						John G. Danielsen, P.E. PE License Number 41875 HDR Engineering, Inc. 3250 West Commercial Blvd, Suite 100 Fort Lauderdale, FL 33309-3459	DRAWN BY: RTC 09-19 CHECKED BY: DAR 09-19 DESIGNED BY: JGD 09-19 CHECKED BY: MJA 09-19	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE: BICYCLE PLATE PANEL AND ANCHOR PLATE DETAIL	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						SR A1A	BROWARD	441458-1-52-01	SR A1A OVER HILLSBORO INLET	18		

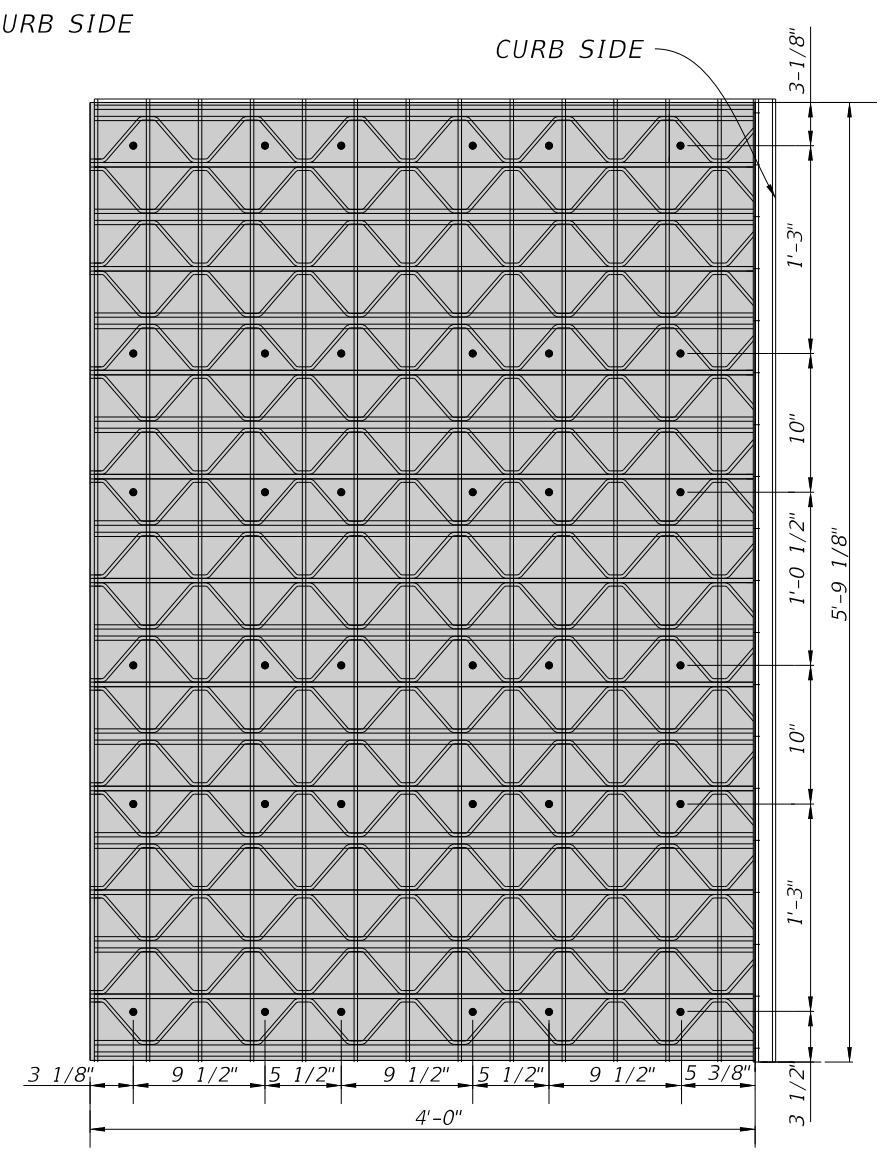
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



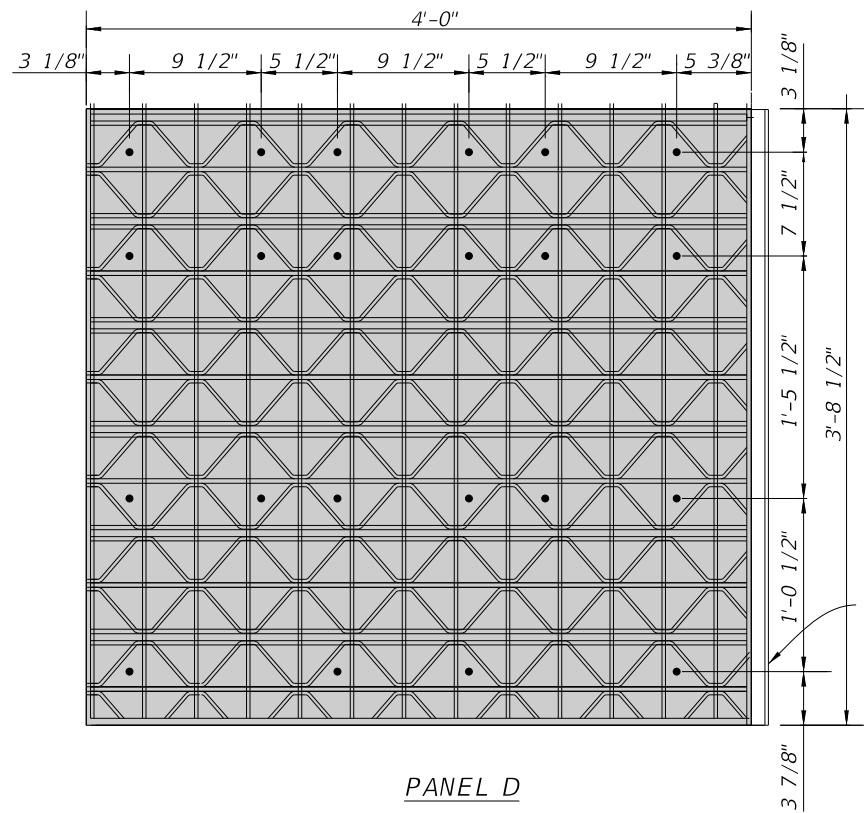
PANEL A



PANEL C



PANEL B



PANEL D

SOUTHBOUND TRAFFIC PLATES

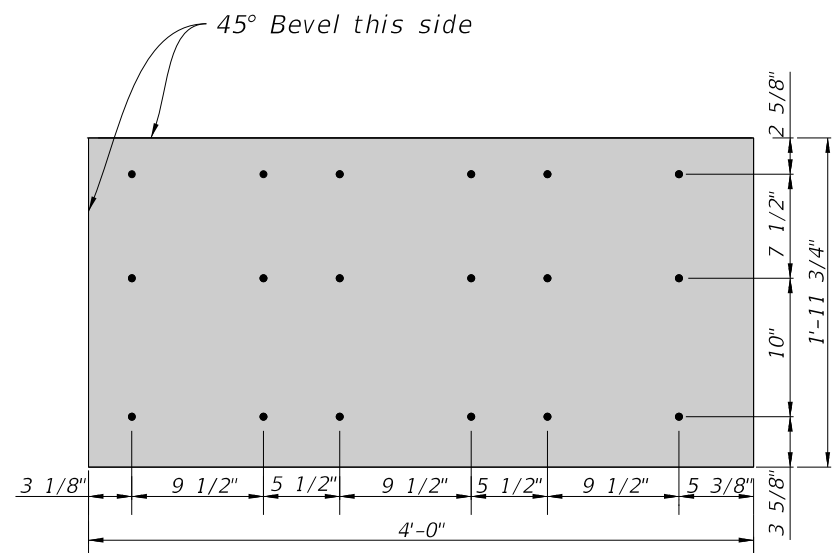
Bridge No. 860011

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

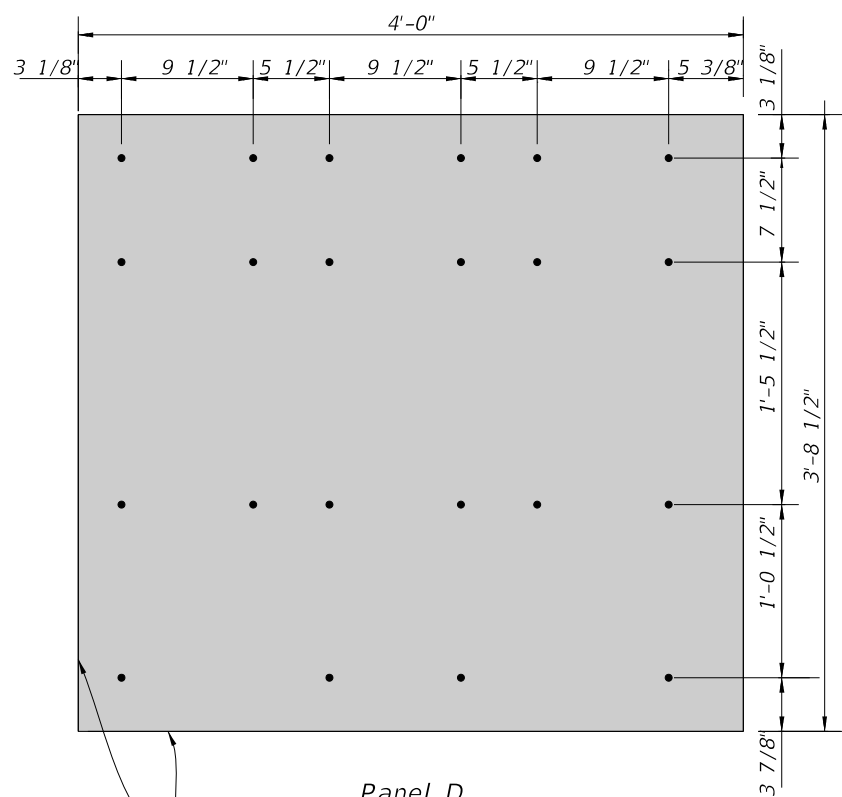
John G. Daniels, P.E.  
 PE License Number 41875  
 HDR Engineering, Inc.  
 3250 West Commercial Blvd, Suite 100  
 Fort Lauderdale, FL 33309-3459

DRAWN BY: RTC 09-19	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
CHECKED BY: DAR 09-19	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
DESIGNED BY: JGD 09-19	SR A1A	BROWARD	441458-1-52-01
CHECKED BY: MJA 09-19			

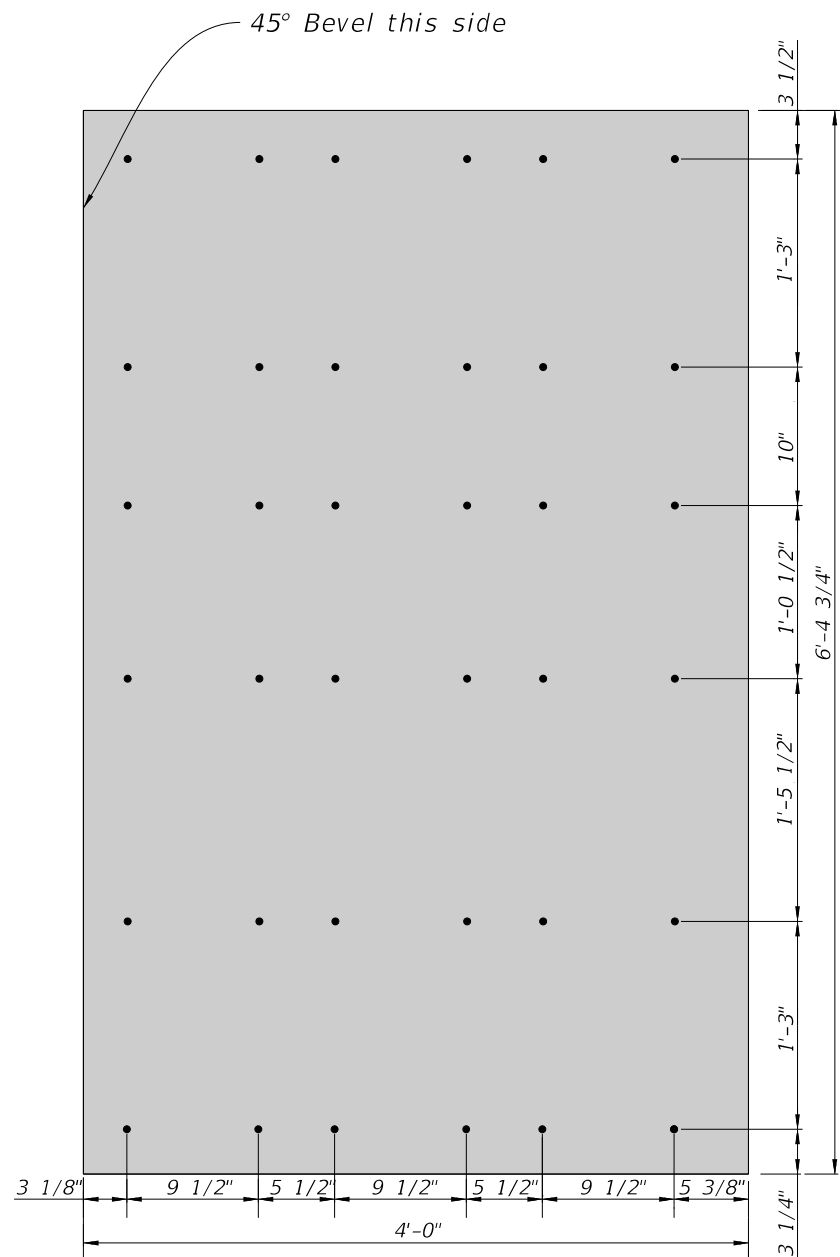
SHEET TITLE: BICYCLE PLATE PANELS A, B, C, AND D WITH GRATING	REF. DWG. NO.
PROJECT NAME: SR A1A OVER HILLSBORO INLET	SHEET NO. 19



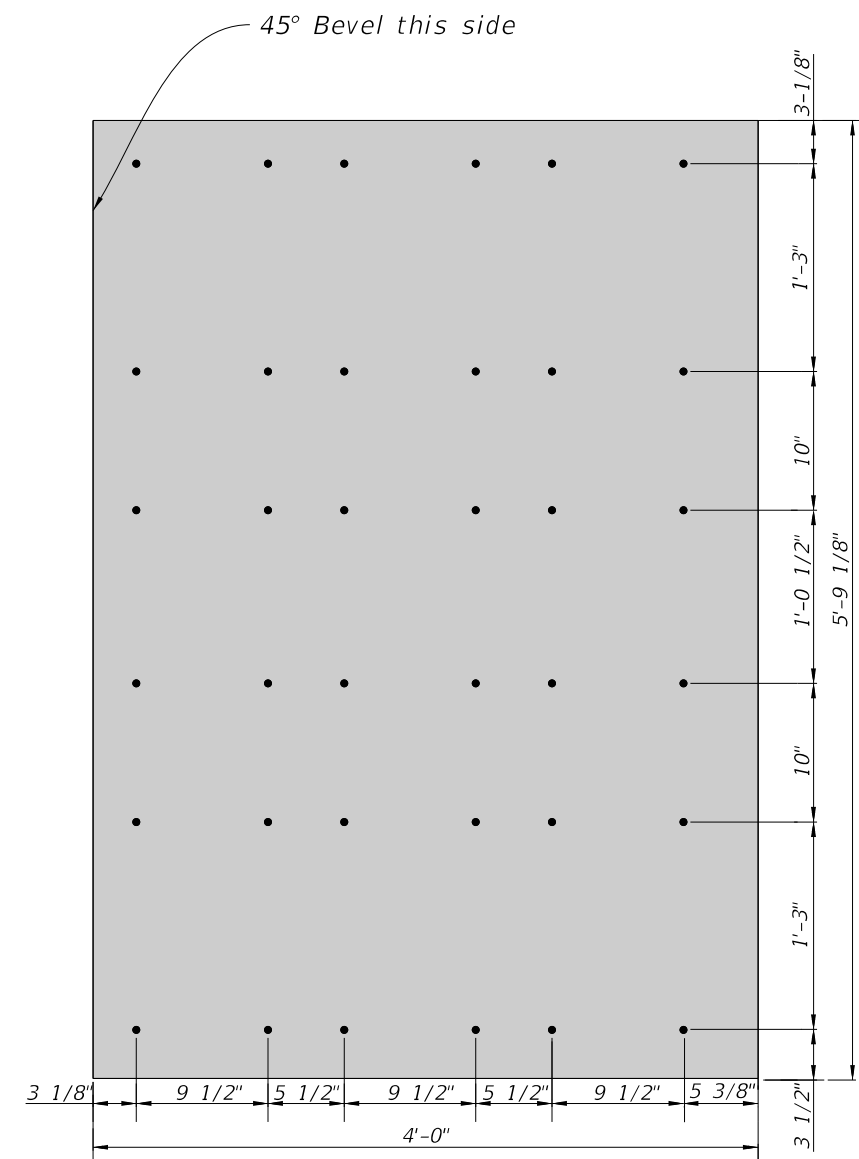
Panel A



Panel D



Panel C



Panel B

Southbound Traffic Plates

SUMMARY OF PANELS, PLATES AND SCREWS	
ITEM	NUMBER REQUIRED
PANEL A	1
PANEL B	5
PANEL C	6
PANEL D	1
3 1/2" SCREWS	432
8" SCREWS	4
ANCHOR PLATE 1	148
ANCHOR PLATE 2	144

Bridge No. 860011

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

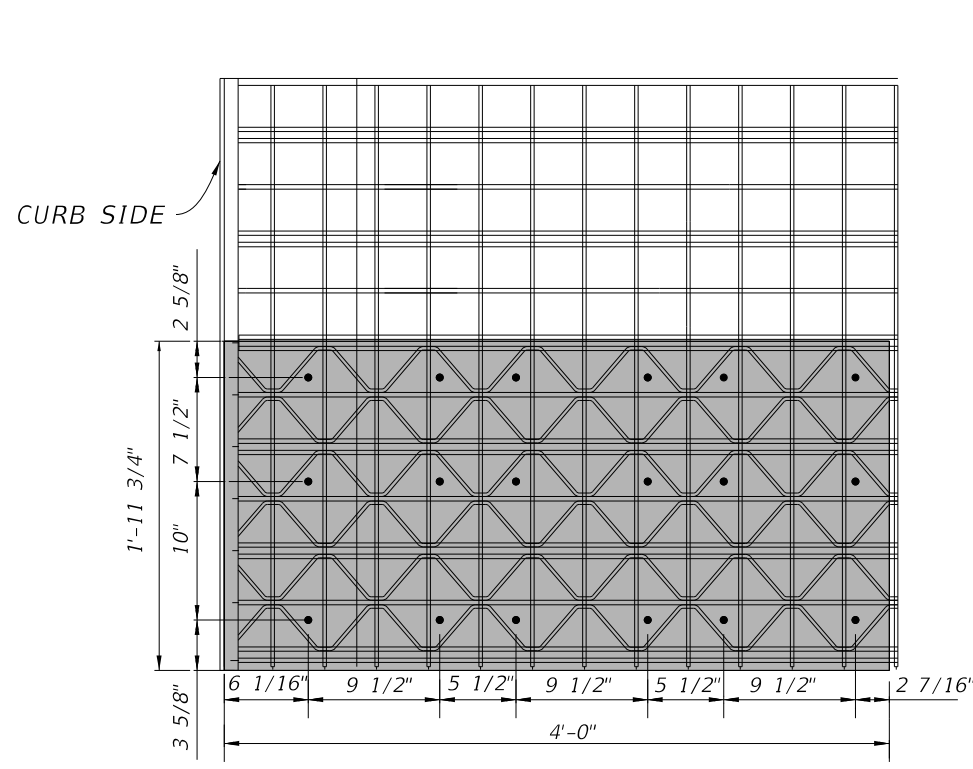
John G. Daniels, P.E.  
 PE License Number 41875  
 HDR Engineering, Inc.  
 3250 West Commercial Blvd, Suite 100  
 Fort Lauderdale, FL 33309-3459

DRAWN BY:  
 RTC 09-19  
 CHECKED BY:  
 DAR 09-19  
 DESIGNED BY:  
 JGD 09-19  
 CHECKED BY:  
 MJA 09-19

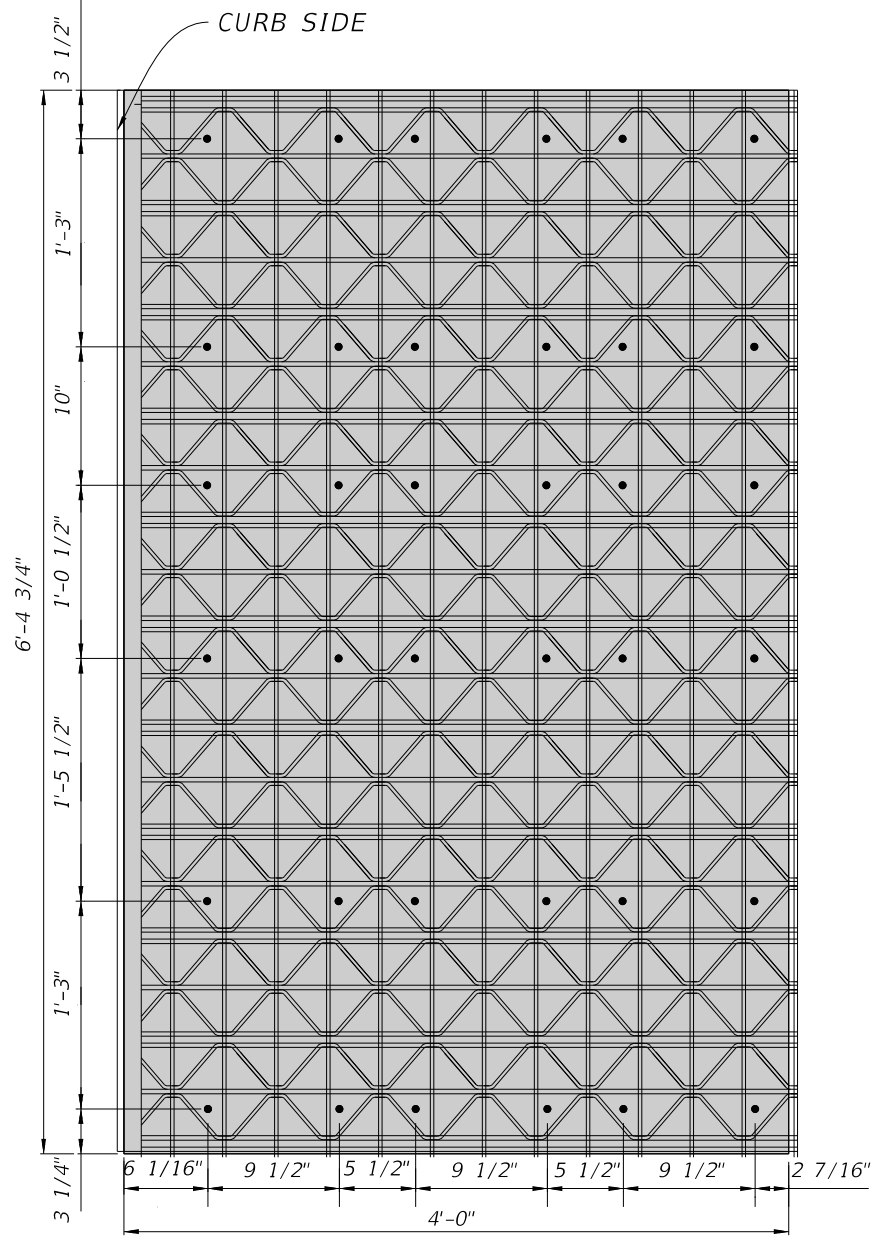
STATE OF FLORIDA  
 DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR A1A	BROWARD	441458-1-52-01

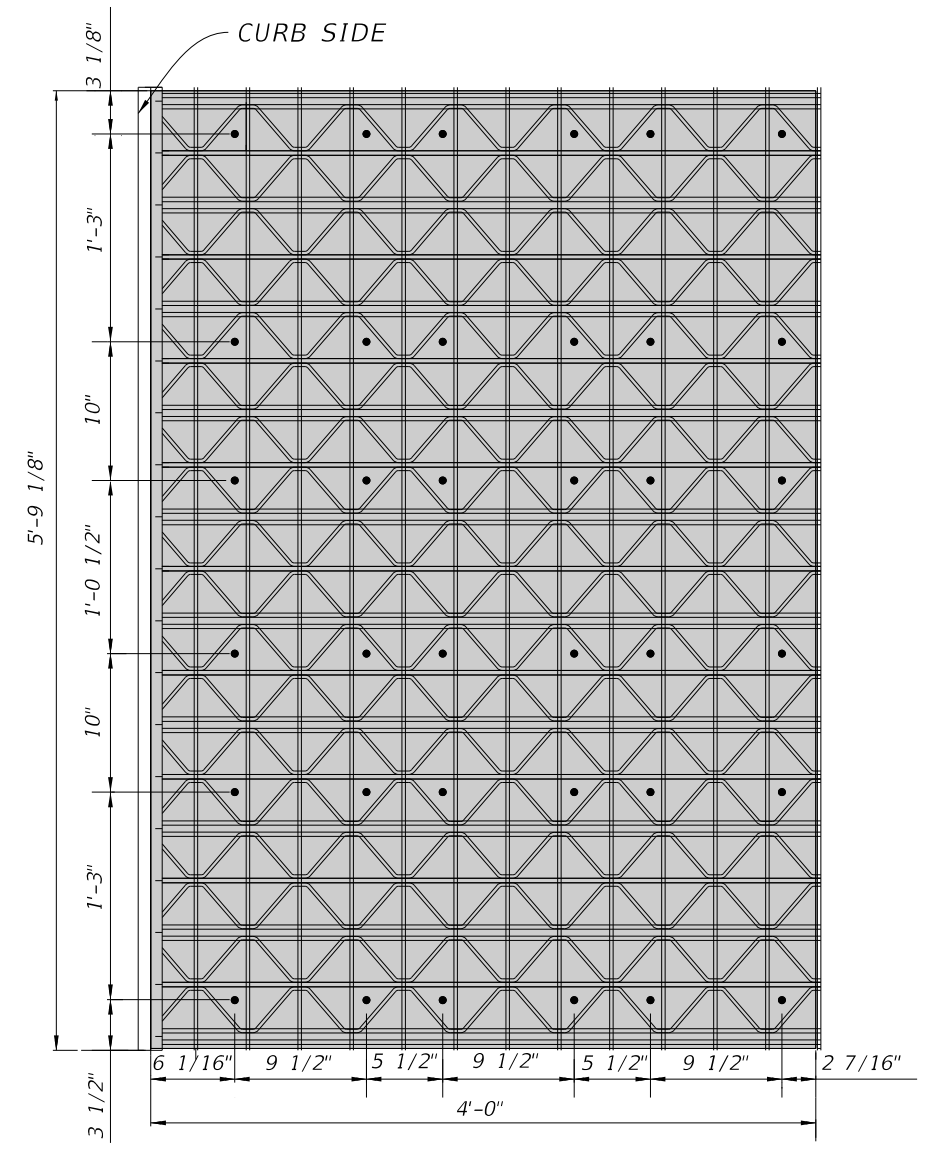
SHEET TITLE:		REF. DWG. NO.
BICYCLE PLATE PANELS A, B, C, AND D WITHOUT GRATING		
PROJECT NAME:		SHEET NO.
SR A1A OVER HILLSBORO INLET		20



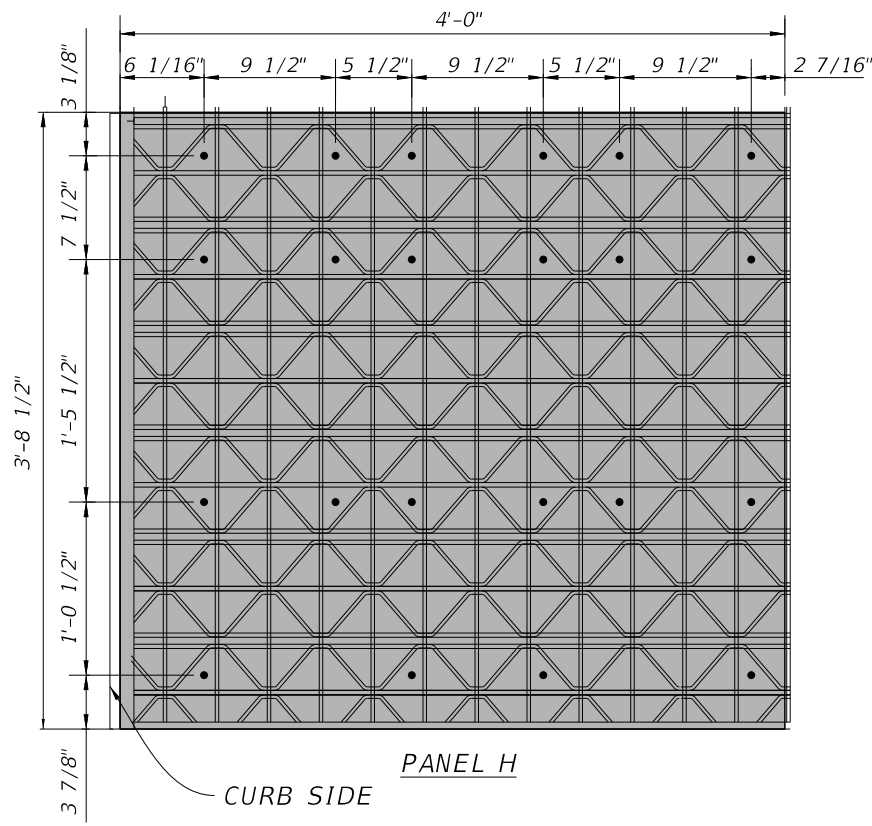
PANEL E



PANEL G



PANEL F



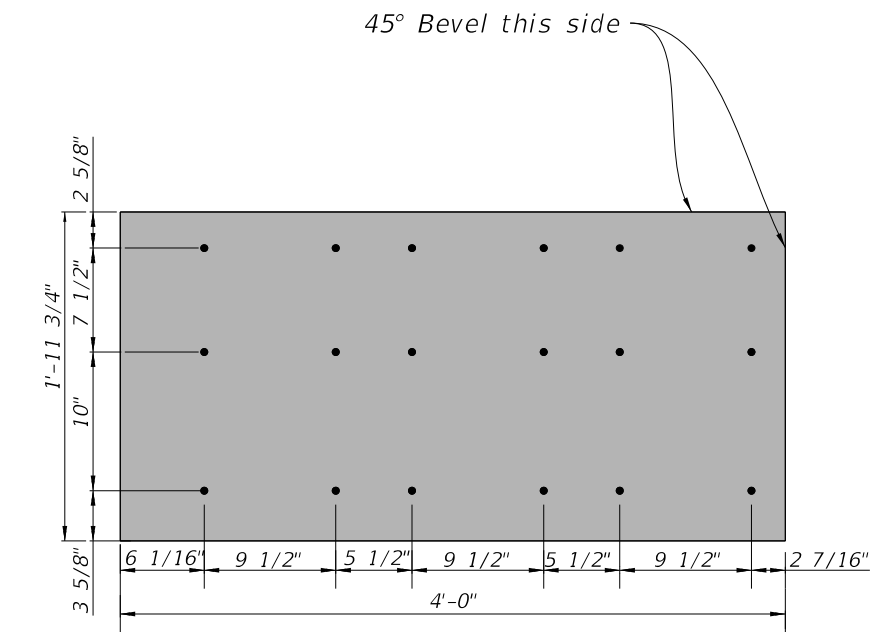
PANEL H

NORTHBOUND TRAFFIC PLATES

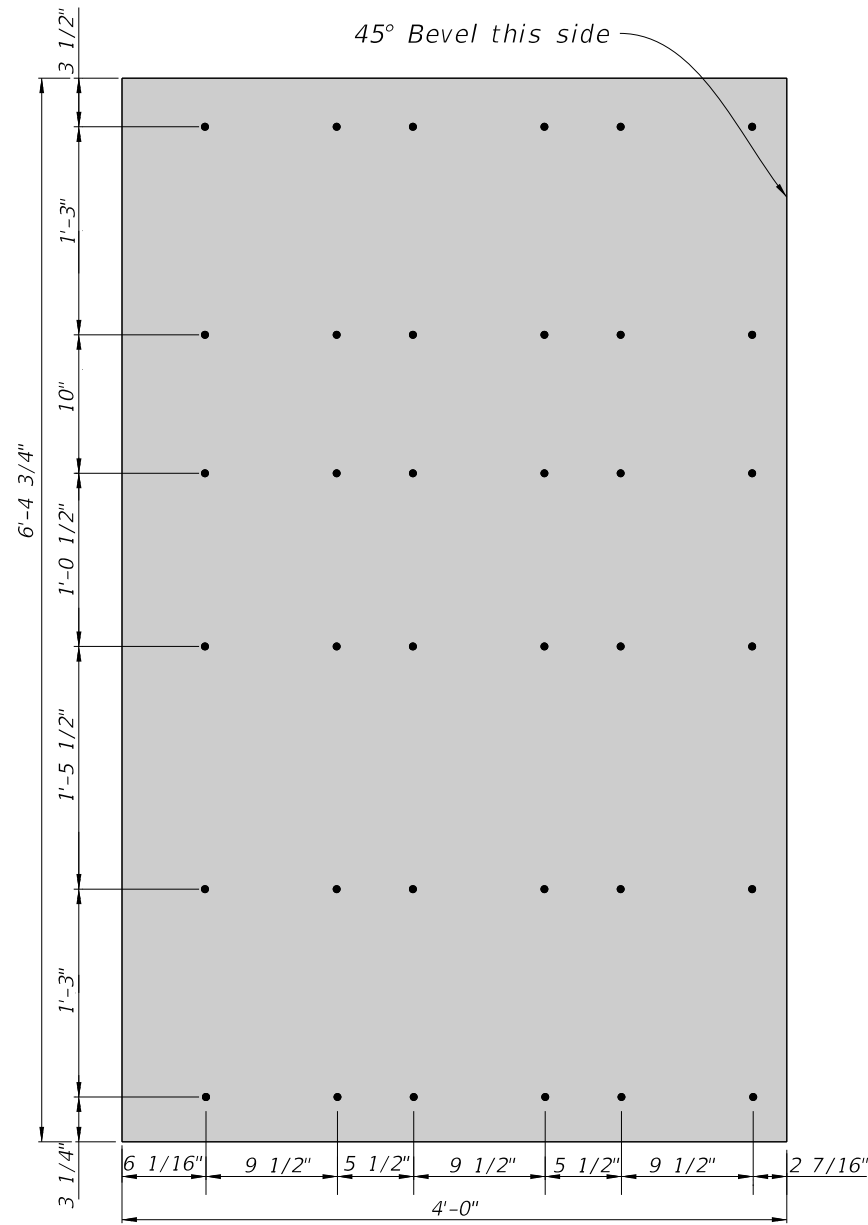
Bridge No. 860011

REVISIONS						John G. Daniels, P.E. PE License Number 41875 HDR Engineering, Inc. 3250 West Commercial Blvd, Suite 100 Fort Lauderdale, FL 33309-3459	DRAWN BY: RTC 09-19 CHECKED BY: DAR 09-19 DESIGNED BY: JGD 09-19 CHECKED BY: MJA 09-19	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE: <b>BICYCLE PLATE PANELS E, F, G, AND H WITH GRATING</b>	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID		PROJECT NAME:
						SR A1A	BROWARD	441458-1-52-01	SR A1A OVER HILLSBORO INLET	21		

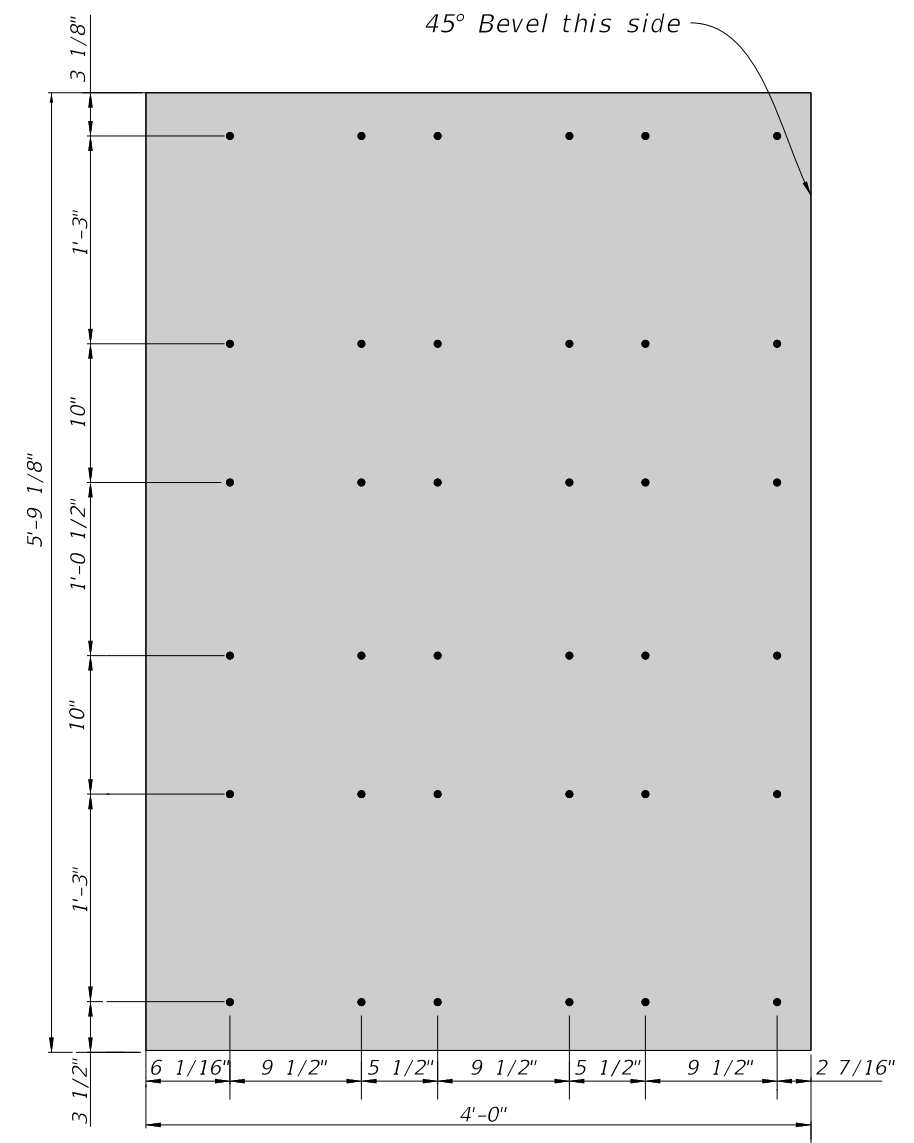
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



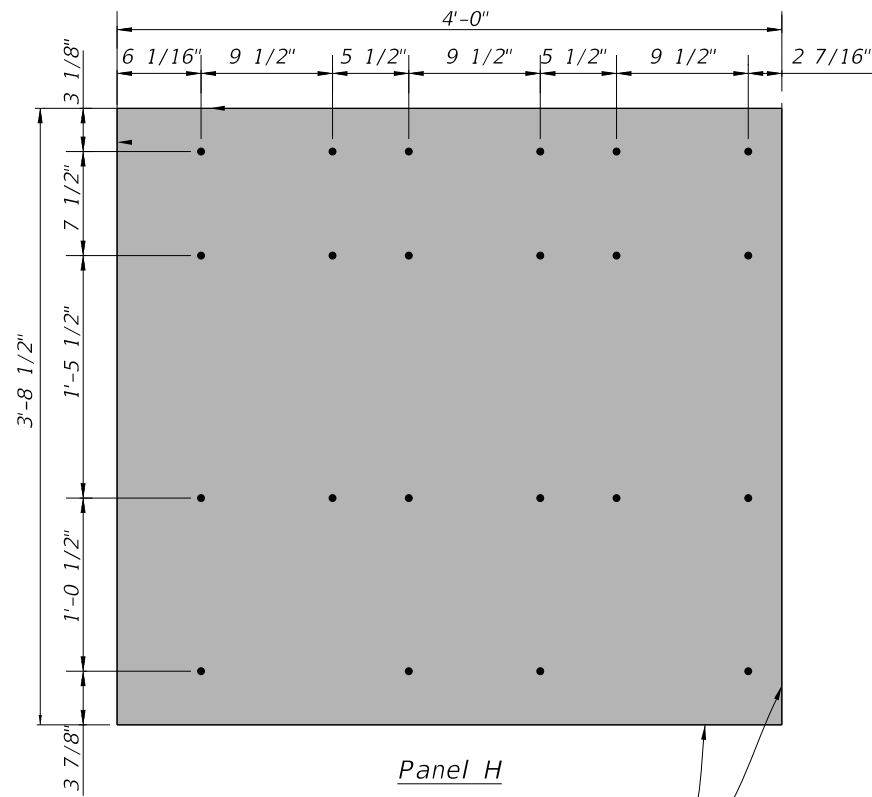
Panel E



Panel G



Panel F



Panel H

Northbound Traffic Plates

SUMMARY OF PANELS, PLATES AND SCREWS	
ITEM	NUMBER REQUIRED
PANEL E	1
PANEL F	5
PANEL G	6
PANEL H	1
3 1/2" SCREWS	432
8" SCREWS	4
ANCHOR PLATE 1	148
ANCHOR PLATE 2	144

Bridge No. 860011

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

John G. Daniels, P.E.  
 PE License Number 41875  
 HDR Engineering, Inc.  
 3250 West Commercial Blvd, Suite 100  
 Fort Lauderdale, FL 33309-3459

DRAWN BY:  
 RTC 09-19  
 CHECKED BY:  
 DAR 09-19  
 DESIGNED BY:  
 JGD 09-19  
 CHECKED BY:  
 MJA 09-19

STATE OF FLORIDA  
 DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR A1A	BROWARD	441458-1-52-01

SHEET TITLE:

BICYCLE PLATE PANELS E, F, G, AND H  
 WITHOUT GRATING

PROJECT NAME:

SR A1A OVER HILLSBORO INLET

REF. DWG. NO.

SHEET NO.

22



## APPENDIX K

### Standard Terms and Conditions

This appendix includes the standard conditions that must be included in all Section 408 approval notifications, except where marked as optional. Use of optional conditions should be based on scope and scale of the approved activity:

#### LIMITS OF THE AUTHORIZATION

1. This permission only authorizes you, the requester, to undertake the activity described herein under the authority provided in Section 14 of the Rivers and Harbors Act of 1899, as amended (33 USC 408). This permission does not obviate the need to obtain other federal, state, or local authorizations required by law. This permission does not grant any property rights or exclusive privileges, and you must have appropriate real estate instruments in place prior to construction and/or installation.
2. The time limit for completing the work authorized ends on \_\_\_\_\_. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
3. Without prior written approval of the USACE, you must neither transfer nor assign this permission nor sublet the premises or any part thereof, nor grant any interest, privilege or license whatsoever in connection with this permission. Failure to comply with this condition will constitute noncompliance for which the permission may be revoked immediately by USACE.
4. The requester understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration of the work herein authorized, or if, in the opinion of the Secretary of the Army or an authorized representative, said work will cause unreasonable conditions and/or obstruction of USACE project authorized design, the requester will be required upon due notice from the USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim can be made against the United States on account of any such removal or alteration.

#### INDEMNIFICATION AND HOLD HARMLESS

5. The United States will in no case be liable for:
  - a. any damage or injury to the structures or work authorized by this permission that may be caused or result from future operations undertaken by the United States, and no claim or right to compensation will accrue from any damage; or
  - b. damage claims associated with any future modification, suspension or revocation of this permission.

10 Sep 18

6. The United States will not be responsible for damages or injuries which may arise from or be incident to the construction, maintenance, and use of the project requested by you, nor for damages to the property or injuries to your officers, agents, servants, or employees, or others who may be on your premises or project work areas or the federal project(s) rights-of-way. By accepting this permission, you hereby agree to fully defend, **indemnify**, and **hold harmless** the United States and USACE from any and all such claims, subject to any limitations in law.
7. Any damage to the water resources development project or other portions of any federal project(s) resulting from your activities must be repaired at your expense.

#### REEVALUATION OF PERMISSION

8. The determination that the activity authorized by this permission would not impair the usefulness of the federal project and would not be injurious to the public interest was made in reliance on the information you provided.
9. This office, at its sole discretion, may reevaluate its decision to issue this permission at any time circumstances warrant, which may result in a determination that it is appropriate or necessary to modify or revoke this permission. Circumstances that could require a reevaluation include, but are not limited to, the following:
  - a. you fail to comply with the terms and conditions of this permission;
  - b. the information provided in support of your application for permission proves to have been inaccurate or incomplete; or
  - c. significant new information surfaces which this office did not consider in reaching the original decision that the activity would not impair the usefulness of the water resources development project and would not be injurious to the public interest.

#### CONDUCT OF WORK UNDER THIS PERMISSION

10. You are responsible for implementing any requirements for mitigation, reasonable and prudent alternatives, or other conditions or requirements imposed as a result of environmental compliance.
11. Work/usage allowed under this permission must proceed in a manner that avoids interference with the inspection, operation, and maintenance of the federal project.
12. In the event of any deficiency in the design or construction of the requested activity, you are solely responsible for taking remedial action to correct the deficiency.
13. The right is reserved to the USACE to enter upon the premises at any time and for any purpose necessary or convenient in connection with government purposes, to make inspections, to operate and/or to make any other use of the lands as may be necessary in connection with government purposes, and you will have no claim for damages on account thereof against the United States or any officer, agent or employee thereof.

10 Sep 18

14. You must provide copies of pertinent design, construction, and/or usage submittals/documents. USACE may request that survey and photographic documentation of the alteration work and the impacted project area be provided before, during, and after construction and/or installation.
15. You may be required to perform an inspection of the federal project with the USACE, prior to your use of the structure, to document existing conditions.
16. USACE shall not be responsible for the technical sufficiency of the alteration design nor for the construction and/or installation work.
17. (optional, at the discretion of the district) Once permission is granted, you must notify the USACE District at least ( ) days before work/usage is started so that post- permission oversight can be performed by USACE.
18. (optional, at the discretion of the district) You must schedule a final inspection with the USACE within ( ) days after completion of the work/usage.
19. (optional, at the discretion of the district) You must submit a copy of "as-built" drawings within ( ) days of completion of work showing the new work as it relates to identifiable features of the federal project.

**AS-BUILT CERTIFICATION BY PROFESSIONAL ENGINEER**

*Submit this form and one set of as-built engineering drawings to the U.S. Army Corps of Engineers, Enforcement Section, address of Enforcement PM, City, State, zipcode. If you have questions regarding this requirement, please contact the Enforcement Branch at 904-232-3131.*

1. Department of the Army Permit Number: SAJ-       -       (       -       )

2. Permittee Information:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

3. Project Site Identification (physical location/address):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. As-Built Certification: I hereby certify that the authorized work, including any mitigation required by Special Conditions to the permit, has been accomplished in accordance with the Department of the Army permit with any deviations noted below. This determination is based upon on-site observation, scheduled, and conducted by me or by a project representative under my direct supervision. I have enclosed one set of as-built engineering drawings.

\_\_\_\_\_  
Signature of Engineer

\_\_\_\_\_  
Name (*Please type*)

\_\_\_\_\_  
(FL, PR, or VI) Reg. Number

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
City

\_\_\_\_\_  
State

\_\_\_\_\_  
ZIP

(Affix Seal)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Telephone Number



## COMMENCEMENT NOTIFICATION

*Within ten (10) days of initiating the authorized work, submit this form via electronic mail to [saj-rd-enforcement@usace.army.mil](mailto:saj-rd-enforcement@usace.army.mil) (preferred, not to exceed 15 MB) **or** by standard mail to U.S. Army Corps of Engineers, Enforcement Section, P.O. Box 4970, Jacksonville, FL 32232-0019.*

1. **Department of the Army Permit Number:** SAJ-       -       (       -       )

2. **Permittee Information:**

Name: \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

3. **Construction Start Date:** \_\_\_\_\_

4. **Contact to Schedule Inspection:**

Name: \_\_\_\_\_

Email: \_\_\_\_\_

Phone: \_\_\_\_\_

\_\_\_\_\_  
Signature of Permittee

\_\_\_\_\_  
Printed Name of Permittee

\_\_\_\_\_  
Date

## STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at [ImperiledSpecies@myFWC.com](mailto:ImperiledSpecies@myFWC.com)
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at [MyFWC.com/manatee](http://MyFWC.com/manatee). Questions concerning these signs can be sent to the email address listed above.

# CAUTION: MANATEE HABITAT

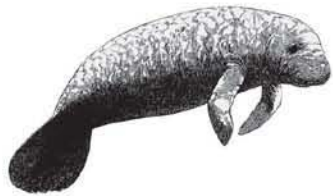
All project vessels

**IDLE SPEED / NO WAKE**

When a manatee is within 50 feet of work  
all in-water activities must

**SHUT DOWN**

Report any collision with or injury to a manatee:



**Wildlife Alert:**

**1-888-404-FWCC(3922)**

cell \*FWC or #FWC





**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL MARINE FISHERIES SERVICE**  
Southeast Regional Office  
263 13th Avenue South  
St. Petersburg, FL 33701

## **SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS**

The permittee shall comply with the following protected species construction conditions:

- a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.
- b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.
- c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.
- d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.
- f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.
- g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

Revised: March 23, 2006

O:\forms\Sea Turtle and Smalltooth Sawfish Construction Conditions.doc



## Introduction

Maintaining the flow of drilling fluids within the Hydraulic Directional Drilling (HDD) bore pit during the installation stages is critical to the overall success of an HDD conduit or casing installation. While the HDD method is a proven technology, there are certain impacts that could occur as a result of the drilling, such as the inadvertent release of drilling fluid, which consists of slurry made with bentonite clay and water which is classified as a non-toxic and non-hazardous substance. This scenario, identified by the Florida Department of Environmental Protection (FDEP) as a “Frac-Out,” is defined as any release of drilling fluid or slurry, which results in above-grade discharge of drilling fluid or slurry or significant loss of such fluid or slurry into the surrounding parent material. Drilling fluids that could be released into the surface environment typically contain a lower concentration of bentonite because of the filtering action of the existing sediments. However, if the slurry is released directly into water, the bentonite has the potential to adversely impact fish and invertebrates.

Drilling fluid seepage associated with an inadvertent return is most likely to occur near the entry and exit points of the HDD bore pits, where the drill head is at or near the surface. Inadvertent unintentional returns can occur anywhere along the path of a directional bore. This HDD Frac-Out/Spill Plan establishes specific operational procedures and responsibilities for the prevention, containment, and clean-up of inadvertent returns associated with each installation. The HDD Contractor is responsible for each stage of the installation and shall adhere to this Plan during any HDD related work. The HDD contractor shall perform the project specific work in accordance with the Florida Department of Transportation Standard Specifications, agency permits, and the Contract Documents. Each drilling fluid component will be approved by the Engineer prior to their use on the HDD conduit installation.

The overall objectives of this Plan are to:

- 1) Minimize the potential for a Frac-Out/spill associated with the HDD activities;
- 2) Provide BMPs consistent with FDEP and applicable guidelines;
- 3) Provide methods to identify a Frac-Out/spill in a timely manner;
- 4) Ensure that a response is taken in a timely manner and utilizing methodology which exhibits minimal impact;
- 5) Ensure notifications are made to appropriate personnel and management.

## BEST MANAGEMENT PRACTICES

The HDD Contractor will implement the following Best Management Practices (BMPs) to minimize the potential for adverse environmental impacts during HDD activities.

- 1) A minimum of cover depth equal or greater than either, five feet or five times the maximum encased diameter of the utility line to be installed, shall be maintained between the top of the utility line casing and the soil surface or submerged bottom of

- any wetland or waterbody being crossed.
- 2) Limit drill mud pressures to 10 psi at the midpoint of the bore.
  - 3) Work areas associated with HDD or similar activities, including entrance and exit pits, drill rigs, tanks, pumps, drilling fluid mixing and settling pits, dewatering systems and staging areas for pipe, cables, and drill string, and potential recovery efforts, shall be identified before work begins and located within uplands.
  - 4) The permittee shall submit to the applicable agency (s), the name as registered with the Florida Department of State, the all-hours telephone contact information for all contracted Contractors responsible for drilling and for containment and cleanup in the event of a drilling fluid Frac-Out or spill, at least 48 hours prior to commencement of any HDD or similar activities.
  - 5) The permittee or the permittee's contractor shall ensure the on-site presence of appropriately-trained personnel to monitor downhole equipment positions, drilling fluid circulation and pressures, and actively monitor the entire utility line route for surface Frac-Out of drilling fluids.
  - 6) The Contractor shall maintain the appropriate equipment and materials in a ready condition, in a readily-accessible location, to effectively contain and clean up a drilling fluid Frac-Out or spill.
  - 7) Within the staging area, the Contractor shall establish an erosion control plan staging area as part of the Contractor mobilization effort. This plan and activities shall be maintained at all times during the drilling and related processes. The plan intends to prevent any off-site siltation and turbid discharges in excess of State Water Quality Standards pursuant to Rule 62- 302, F.A.C. The methods used may include the use of turbidity screens, silt fencing, hay bales, sand bags, temporary swales, etc. to contain the drilling fluid. Earthen berms or swales shall not be utilized where they could impact wetlands or other surface waters.
  - 8) HDD drilling fluids and additives shall be a pre-approved by the applicable Agency and made up of a homogenous mixture of non-toxic and non-environmentally hazardous, bentonite clay, potable water and polymer additives.

## Prevention of Frac-Out/Spill

For additional protection for the surrounding areas, the Contractor shall follow these measures to monitor the potential releases of drilling fluid.

Maintain the proper boring depth along the actual drilling route for the specific soil conditions along with proper management of drilling fluids and pressures with constant visual inspection of entry and exit pits for the duration of each drilling event.

The HDD rig operator shall continuously monitor the annular pressure during the entire operation. Where a reduction in volume is suspected, the Contractor shall immediately conduct a visual inspection of the entire HDD corridor. Additionally visual inspections of the project area, adjacent waterbodies, storm and sanitary sewer systems shall be conducted.

Drilling fluids associated with an HDD operation, shall be contained on-site. The volume of the drilling fluids settlement pit, on-site storage/Frac-Out tanks, and watertight roll-off containers shall be determined by the HDD Contractor during the pre- construction meeting. During the HDD process and when drilling operations are completed, drilling fluid remaining in the pit will be settled, removed completely from the pit, and hauled to a disposal site of the HDD Contractor's choice in accordance with applicable regulations within 48 hours of the pipe pull-in. The pit(s) shall be backfilled in 8-inch lifts of acceptably clean material and compacted in accordance with FDOT Standard Specifications. Any vegetated areas around the disturbed pit area shall be restored.

The avoidance of adverse impacts to environmental resources shall be inforce at all times prior to and during the HDD process including but limited to stopping the installation or placement of turbidity devices.

A pump tanker truck shall be on-site and available throughout the HDD process. The Contractor shall demonstrate the availability of additional pump tankers for as-needed surplus or Frac-Out drilling fluids.

The Contractor shall maintain a spill kit with the appropriate tools, absorbent pads, and personal protection on-site at all times.

## Release Response Procedure

If the bore pit pressure is abnormally high or fluid loss is apparent and a release has occurred, the HDD Contractor has the following options (or any combination of these options) to remedy the situation:

- Temporarily stop drilling operations and shut down the mud pump delivering drilling fluids downhole;
- Restart pump and stroke bore pit in 30-foot (+/-) lengths to restore circulation (“swab” the hole) as many as six times but no fewer than two times;
- Introduce additional flow along the bore pit starting at the entry/exit using “weeper” subs; and
- Modify the drilling mud with a change in viscosity and/or lost circulation additives.

If the return drilling fluid is less than the projected amount to be recovered, the HDD Contractor shall immediately begin its search for the missing material in accordance with this document. Once the drilling fluid and Frac-Out is located, then the drilling mud containment plan shall be immediately implemented.

If a Frac-Out is confirmed, all construction activity associated with the drilling shall cease immediately and the Contractor shall notify the Engineer of the confirmed occurrence. The notification shall include a description and time of the Frac-Out, location, and the current environmental conditions of any impacted area.

If the Frac-Out is observed during pull-back of the cable, the following procedures will be followed:

- The HDD Contractor shall implement the drilling fluid containment measures before moving forward with the pull-back; and
- The HDD Contractor will ensure all reasonable measures have been taken to re-establish circulation; and
- Continue the HDD utilizing a minimal amount of drilling fluid as required to penetrate the formation or to maintain a successful cable pipe pull back.

If the loss of drilling fluid or excess fluid pressure results in the caving and/or settlement of other infrastructure such as curbs, walls, pavement, or roads the HDD Contractor shall immediately mobilize all equipment, manpower and devices to recover the drilling fluid, relieve the fluid pressure, stop any caving or settlement of affected infrastructure and protect the public. The HDD Contractor shall prepare a remediation plan to repair, replace, or restore the affected infrastructure in this event.

Before continuing the drilling, the HDD Contractor shall prepare and submit a revised plan for successful completion of the job to the Engineer. The plan shall identify the manpower, equipment, drilling fluid, additives, pump pressures, sealing of the

bore pit, and modifications to the routing path that may be required.

## Containment of Drilling & Materials

The released drilling fluid and materials shall be contained utilizing methods in the BMPs. The materials shall be removed by a pump or vacuum truck.

The suction hose of the vacuum or pump shall be moved to minimize the removal of natural bottom material and the disturbance of aquatic life and vegetation in any impacted body of water. In the event that drilling fluids/materials are discharge to a surface water, containment and clean-up with a vacuum or pumping system shall commence immediately and be completed within a 24-hour period. The collected fluid/material shall be disposed of by the HDD Contractor at an approved disposal site. In this event, the HDD Contractor shall prepare a written report to be submitted to the Engineer and regulatory agencies, within 10 business days, which summarizes the events that occurred. This summary shall include the following:

- Details on the event, including an estimate of the amount of bentonite released;
- Time, date, and location of the release;
- The size of the area impacted
- The level of success of the clean-up activities;
- Name, company, address and telephone number of HDD Contractor;
- Photo/video of Frac-Out area and impacts;
- The type of activity that was occurring around the area of the inadvertent release;
- Description of any environmentally sensitive areas and their location in relation to the inadvertent release;
- Description of the methods used to clean up or secure site;
- Changes to the drilling fluid properties or drilling process (if any); and the mitigation of any public utility infrastructure and water bodies from the inadvertent release.

## Job Completion & Clean-Up

After completion of the cable(s) installation, clean-up measures will be developed by the HDD Contractor for approval by the Engineer. The potential for secondary impacts from the clean-up process will be evaluated during this time.

The following measures shall be considered:

- All materials and construction debris shall be removed at the end of each workday;
- Drilling mud will be removed using shovels, buckets, and soft bristled brooms to minimize damage to existing vegetation;
- Freshwater washes may be utilized if determined to be necessary;

- Containment structures will be pumped out and the ground surface scraped to bare topsoil to minimize the loss of topsoil or negative effects to adjacent vegetation;
- The recovered drilling fluid shall be recycled or disposed of at an approved location or facility;
- All protective BMP measures (hay bale, silt fence, etc.) will be removed unless otherwise specified by the Engineer; and
- All containment structures, containers and tanks shall be removed.

## Failed HDD Cable(s) Installation

While not anticipated, in the event that the HDD of the cable(s) is unsuccessful, the proposed HDD alignment may be modified using the same general location to accommodate an additional HDD attempt, depending on the conditions that resulted in the HDD failure. This new location should be as close to the planned HDD bore pit as possible and located only in the uplands.

Prior to attempting a second HDD installation, a meeting shall be held with the Engineer to determine the cause of initial failure and any mitigation measures that could be adopted to reduce the risk(s) during the second HDD installation.

Potential causes that may lead to a failed HDD installation include:

- 1) Damaged or stuck cable(s) piping during pullback operations. This potential risk can be mitigated by the following:
  - Swabbing to gauge the condition of the HDD bore pit by evaluating the drill rig effort required to pull tooling through the HDD bore pit;
  - Minimizing the amount of downtime associated with delays during pullback operations.; and
  - Commencing pullback operations only after verification that the bore pit is adequately conditioned.
- 2) The collapse or general instability of a bore pit. This risk may be mitigated by the following:
  - Confirming that the alignment of the HDD profile is in favorable ground materials which are not prone to raveling which could contribute to the collapse of the bore pit.
- 3) The excess loss of drilling fluids and the inability to remove cuttings from the bore pit. This risk is mitigated by the following:
  - Confirmation the alignment of the HDD profile is in favorable ground materials along the entire cable(s) alignment;
  - Evaluating the required and allowable drilling fluid pressures for the installation and providing sufficient separation between the required and allowable drilling fluid

- pressures; and
- Incorporating temporary casing pipe to support shallow soils (if applicable).

If the HDD bore pit could not be advanced and the bore pit must be abandoned, an approved cement-based or bentonite material shall be grouted to fill the excavation. This action will minimize the risk of a potential groundwater intrusion at the low point or end of the drill hole in accordance with [FDEP Rules 62-532.500(4)].

If the installed cable(s) pipe(s) are damaged during installation and to a point beyond use for the intended project, the inside of the utility pipe(s) shall be grouted with a cement based grout and the annular space around the pipe grouted for a distance of approximately 200 feet at each HDD entry/exit location. The above approach is outlined in the US Army Corps of Engineers' "Guidelines for Installation of Utilities Beneath Corps of Engineers Levees Using Horizontal Directional Drilling" (Latorre et al. 2002) that requires backfilling with grout or bentonite. Furthermore, any additional requirements set forth in applicable agency permits for this project shall be met.