INDEX OF SHEETS

MIAMI-DADE COUNTY

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS HIGHWAY DIVISION

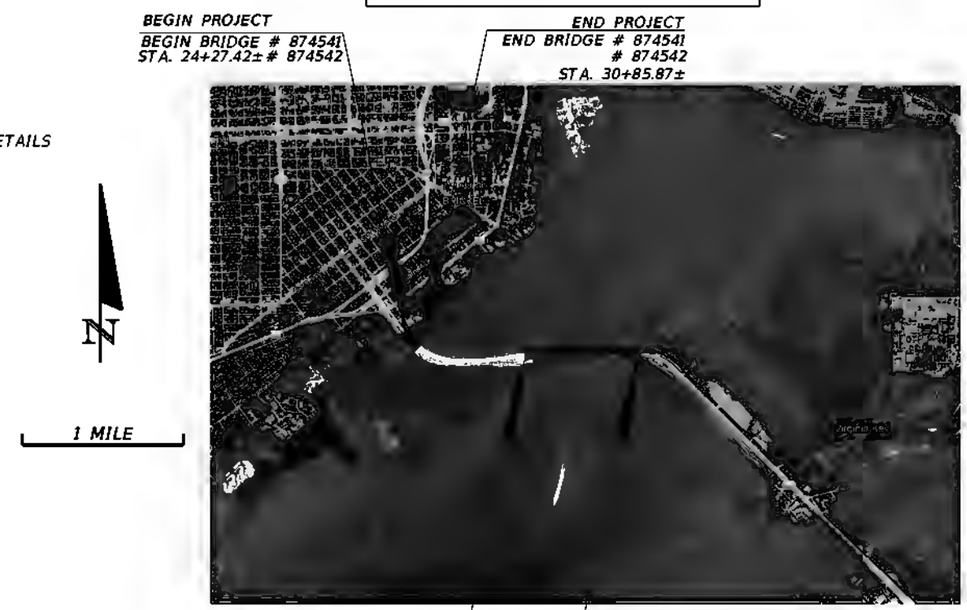
CONTRACT PLANS

PW PROJECT NO. EDP-MT-20230087
WORK ORDER #1
MIAMI-DADE COUNTY
REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

BRIDGE REHABILITATION PLANS

BRIDGE NO. 874541, 874542 & 874545

100% PLANS SUBMITTAL
NOVEMBER 2024



PREPARED FOR

MIAMI-DADE COUNTY

MIAMI-DADE COUNTY DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS HIGHWAY DIVISION
STEPHEN P. CLARK CENTER
111 NW 1 ST
MIAMI, FLORIDA 33128

HOWARD N. GOTSCHALL
LICENSE
No 79639
STATE OF FLORIDA
PROFESSIONAL ENGINEER

BRIDGE REHABILITATION PLANS
ENGINEER OF RECORD:

HOWARD GOTSCHALL P.E.
P.E. NO.: 79639
HANSON PROFESSIONAL SERVICES INC.
9850 NW 41ST STREET, SUITE 160
DORAL, FLORIDA 33178
PHONE: 305-428-4350

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
S-1	COVER SHEET
S-2 - S-3	SUMMARY OF QUANTITIES
S-4 - S-7	GENERAL NOTES
S-8 - S-11	TEMPORARY TRAFFIC CONTROL PLANS
S-12	874541 GENERAL PLAN & ELEVATION
S-13 - S-14	874541 JOINT REPLACEMENT LOCATION & DETAILS
S-15	874541 EXPANSION JOINT REPAIR
S-16	874541 PILE JACKET DETAILS
S-17 - S-18	874541 LOCATIONS OF SUBSTRUCTURE REPAIRS
S-19	874541 CONCRETE REPAIR & CRACK INJECT/SEAL DETAILS
S-20	874541 MSE WALL REPAIRS
S-21	874541 FENCING REPLACEMENT
S-22	874541 TYPICAL BRIDGE SECTION KEY FOR REPAIRS
S-23	874541 BEAM DEFICIENCIES
S-24	874541 DECK DEFICIENCIES
S-25 - S-27	874541 SUBSTRUCTURE DEFICIENCIES
S-28	874541 BULKHEAD DEFICIENCIES
S-29	874542 GENERAL PLAN & ELEVATION
S-30	874542 JOINT REPLACEMENT LOCATION & DETAILS
S-31	874542 EXPANSION JOINT REPAIR
S-32	874542 PILE JACKET DETAILS
S-33 - S-34	874542 LOCATIONS OF SUBSTRUCTURE REPAIR
S-35	874542 CONCRETE REPAIR & CRACK INIJECT/SEAL DETAILS
S-36	874542 FENCING REPLACEMENT
S-37	874542 TYPICAL BRIDGE SECTION KEY FOR REPAIRS
S-38	874542 BEAM & BEARING DEFICIENCIES
S-39	874542 DECK DEFICIENCIES
S-40 - S-41	874542 SUBSTRUCTURE DEFICIENCIES
S-42	874542 BULKHEAD DEFICIENCIES & CONCRETE SLOPE REPLACEMENT
S-43	874542 EXISTING BULKHEAD PLAN
S-44	874542 TIE BACK REPAIR OPTIONS
S-45 - S-49	874545 GENERAL PLAN & ELEVATION
S-50	874545 JOINT REPLACEMENT LOCATION & DETAILS
S-51 - S-55	874545 EXPANSION JOINT REPAIR
S-56	874545 CONCRETE REPAIR & CRACK INJECT/SEAL DETAILS
S-57	874545 FENDER DEFICIENCIES
S-58	874545 FENCING REPLACEMENT
S-59	874545 TYPICAL BRIDGE SECTION KEY FOR REPAIRS
S-60	874545 DECK & BEARING DEFICIENCIES
S-61	874545 SUBSTRUCTURE DEFICIENCIES
S-62 - S-63	874545 BEAM DEFICIENCIES
S-64	874545 BULKHEAD DEFICIENCIES

AUSTIN THOMPSON
LICENSE
No 92053
STATE OF FLORIDA
PROFESSIONAL ENGINEER

FENDER LIGHTING PLANS
ENGINEER OF RECORD:

AUSTIN THOMPSON P.E.
P.E. NO.: 92053
HANSON PROFESSIONAL SERVICES INC.
9850 NW 41ST STREET, SUITE 160
DORAL, FLORIDA 33178
PHONE: 305-428-4350

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
S-65	874545 FENDER LIGHTING
S-66	874545 NAVIGATION LIGHTING

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

SHEET NO.
S-1

$USER$ $DATE$ $TIME$ $MODELNAME$ $FILE$

BRIDGE NO. 874541	SUMMARY OF BRIDGE PAY ITEMS		
PAY ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
101-1-A	MOBILIZATION	LS	1
350-99	CLEANING AND SEALING CRACKS IN ASPHALT PAVEMENT	LF	244*
400-143-1	CLEANING AND COATING CONCRETE SURFACE, CLASS V	SF	13354
400-145A	CLEANING CONCRETE SURFACE	SF	734*
400-4-8	CONCRETE CLASS IV, BULKHEAD	CY	1
401-70-4	RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT	CF	176*
411-1	EPOXY MATERIAL FOR CRACK INJECTION - STRUCTURES REHAB	GA	52
411-2	CRACKS INJECT & SEAL - STRUCTURES REHAB	LF	514*
450-82	BEAM REPAIR	LF	36*
457-1-22	STANDARD INTEGRAL PILE JACKET, STRUCTURAL, SIZE 16.1"-30"	LF	114*
458-1-21	BRIDGE DECK EXPANSION JT., REHAB, POURED JOINT W BACKER ROD	LF	588*
458-1-25	BRIDGE DECK EXPANSION JT., REHAB, COMPRESSION ELASTOMERIC	LF	584*
458-2	POLYMER NOSING FOR BRIDGE EXPANSION JOINT	CF	8*
524-2-1	CONCRETE SLOPE PAVEMENT REPAIR	CY	2*
524-4-2	CLEANING & SEALING JOINTS IN EXISTING CONCRETE SLOPE PAVEMENT	LF	322*
550-60-211	FENCE GATE, TYPE B, SINGLE, 0.0-6.0'	EA	2
914-550-4	FENCING - PEDESTRIAN BARRIER STEEL PROPRIETARY ALTERNATIVE FENCE	LF	270

BRIDGE NO. 874542	SUMMARY OF BRIDGE PAY ITEMS		
PAY ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
101-1-A	MOBILIZATION	LS	1
125-1-A	EXCAVATION FOR STRUCTURES	CY	90
110-3A-1	REMOVAL OF EXISTING CONCRETE	SY	451*
350-99	CLEANING AND SEALING CRACKS IN ASPHALT PAVEMENT	LF	210*
400-143-1	CLEANING AND COATING CONCRETE SURFACE, CLASS V	SF	8979
400-145A	CLEANING CONCRETE SURFACE	SF	672*
400-4-8	CONCRETE CLASS IV, BULKHEAD	CY	1
401-70-4	RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT	CF	20*
411-1	EPOXY MATERIAL FOR CRACK INJECTION - STRUCTURES REHAB	GA	145
411-2	CRACKS INJECT & SEAL - STRUCTURES REHAB	LF	1442*
415-1-8	REINFORCING STEEL - BULKHEAD	LB	459
450-82	BEAM REPAIR	LF	20*
457-1-22	STANDARD INTEGRAL PILE JACKET, STRUCTURAL, SIZE 16.1"-30"	LF	152*
458-1-25	BRIDGE DECK EXPANSION JT., REHAB, COMPRESSION ELASTOMERIC	LF	192*
458-2	POLYMER NOSING FOR BRIDGE DECK EXPANSION JOINT	CF	1
524-2-1	CONCRETE SLOPE PAVEMENT REPAIR	CY	8*
524-2-29	CONCRETE SLOPE PAVEMENT, 4", REINFORCED	SY	451*
550-60-211	FENCE GATE, TYPE B, SINGLE, 0.0-6.0'	EA	2
630-2-14	CONDUIT, FURNISH & INSTALL, ABOVE GROUND	LF	60*
914-550-4	FENCING - PEDESTRIAN BARRIER STEEL PROPRIETARY ALTERNATIVE FENCE	LF	160
E350-72-1	CLEANING AND RESEALING JOINTS (EXPANSION)	LF	288*
E561-1-1	COATING EXISTING STRUCTURAL STEEL, BEARING	EA	308*

BRIDGE NO. 874545	SUMMARY OF BRIDGE PAY ITEMS		
PAY ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
101-1-A	MOBILIZATION	LS	1
110-71-1	BRIDGE FENDER	LF	25
400-145A	CLEANING CONCRETE SURFACE	SF	1482*
400-4-8	CONCRETE CLASS IV, BULKHEAD	CY	1
401-70-4	RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT	CF	286*
403-2-A	RESTORE SPALLED AREAS FOR CONCRETE BRIDGE DECKS	CF	60*
411-1	EPOXY MATERIAL FOR CRACK INJECTION - STRUCTURES REHAB	GA	89
411-2	CRACKS INJECT & SEAL - STRUCTURES REHAB	LF	890*
450-82	BEAM REPAIR	LF	144*
458-1-25	BRIDGE DECK EXPANSION JT., REHAB, COMPRESSION ELASTOMERIC	LF	1190*
458-1-30	BRIDGE DECK EXPANSION, CLEAN JOINT	LF	578
460-112-101	ANCHOR BOLT REPLACEMENT, ANCHOR BOLT NUT	EA	136*
471-1-1	FENDER SYSTEM, PLASTIC MARINE LUMBER, REINFORCED	MB	0.1
506-72	BRIDGE DRAINS-POWER CLEAN	EA	1
510-1	NAVIGATION LIGHTS - FIXED BRIDGE, SYSTEM	LS	1
550-60-211	FENCE GATE, TYPE B, SINGLE, 0.0-6.0'	EA	2
914-550-4	FENCING - PEDESTRIAN BARRIER STEEL PROPRIETARY ALTERNATIVE FENCE	LF	280
E561-1-1	COATING EXISTING STRUCTURAL STEEL, BEARING	EA	136*

PAY ITEM NOTES:

1. PAY ITEM DESCRIPTIONS ARE PROVIDED IN THE CONTRACT DOCUMENTS.
2. PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL PAY ITEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICES FOR PAY ITEMS.
3. PAY ITEM NO. 101-1-A MOBILIZATION SHALL INCLUDE THE COST OF ITEMS AND EQUIPMENT ETC. REQUIRED TO PROVIDE SAFE ACCESS FOR INSPECTION AND MATERIALS TESTING, INCLUDING BUT NOT LIMITED TO SCAFFOLDING, PLATFORMS, BARGES, DEBRIS CONTAINMENT DEVICES, ETC.
4. FOR ACCEPTABLE PROCEDURES FOR PAY ITEM 400-145A, CLEANING CONCRETE SURFACE, SEE SHEET S-6, SUPERSTRUCTURE/SUBSTRUCTURE REPAIRS, NOTE 2, SURFACE PREPARATION.
5. ALL COSTS ASSOCIATED WITH PILE SPALLS, DELAMINATIONS AND CONCRETE REPAIRS INCLUDING BUT NOT LIMITED TO SHORING, STABILIZATION OF THE EXISTING STRUCTURE AS REQUIRED, SOUND TESTING, SURFACE PREPARATION, FORMING, SHOP DRAWINGS AND CALCULATIONS, AND ALL INCIDENTAL (ANCILLARY) WORK NECESSARY TO COMPLETE ALL CONCRETE REPAIRS IN ACCORDANCE WITH THE RECOMMENDED REPAIR PROCEDURES AND REQUIREMENTS OF THE ENGINEER SHALL BE INCLUDED IN PAY ITEM NO. 401-70-4, RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT.
6. REINFORCING STEEL: PILE REPAIRS/CAP REPAIR (IE.: CONCRETE PILE REPAIRS/ REINFORCING STEEL (SPLICING, REPLACEMENT, MECHANICAL COUPLERS, DOWELING, ETC.) SHALL BE INCLUDED IN PAY ITEM NO. 401-70-4 RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING ANY REBAR NEEDED TO THE ENGINEER (SIZE/LENGTH) FOR REPLACING REBAR WITH EXTREME SECTION LOSS FOUND DURING REMOVING DAMAGED AREAS. PAYMENT FOR THE REBAR WILL BE INCIDENTAL TO PAY ITEM 401-70-4, RESTORE SPALLED AREAS. PAYMENT FOR REINFORCING IN THE PILE JACKETS SHALL BE INCLUDED IN PAY ITEM NO. 457-1-22 STANDARD INTEGRAL PILE JACKET, STRUCTURAL AND PILE SIZE 16.1 TO 30".
7. ALL COST ASSOCIATED WITH ENVIRONMENTAL AND PERMITTING COMPLIANCE INCLUDING BUT NOT LIMITED TO THE PROPER MONITORING, OBSERVATION, PROTECTION OF MANATEES, ENDANGERED SPECIES, AMERICAN CROCODILE, AMERICAN ALLIGATOR, ETC. INCLUDING BUT NOT LIMITED TO MANATEE PLACARDS, MANATEE OBSERVER, POLARIZED SUNGLASSES, BINOCULARS, INCIDENT LOGGING AND REPORTS, AGENCY COORDINATION PER THE ENVIRONMENTAL NOTES, WRITTEN NOTIFICATIONS AND MEETINGS, "NO-WAKE/IDLE SPEED" MAINTENANCE AND ENFORCEMENT, ETC. SHALL BE INCLUDED IN THE INDIVIDUAL UNIT PRICES FOR THE PAY ITEMS. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ENVIRONMENTAL AND PERMIT COMPLIANCE.
8. PAY ITEM 510-1 NAVIGATION LIGHTS FIXED BRIDGE SYSTEM. THIS PAY ITEM INCLUDES RUNNING A NEW LINE ON THE BARRIER WALLS OF THE BRIDGE FROM THE EXISTING WEST FENDER LIGHTING SYSTEM TO THE EXISTING EAST FENDER LIGHTING SYSTEM.

*DUE TO POSSIBLE FURTHER DETERIORATION BEFORE CONSTRUCTION, A CONSERVATIVE CONDITION FACTOR HAS BEEN BUILT INTO SOME QUANTITIES TO COVER DECLINING DEFICIENCIES & ANY NEW DEFICIENCIES DISCOVERED DURING REPAIR

BRIDGE NO. 874541
BRIDGE NO. 874542
BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
5/16/23	MNG	ADDITION, DELETION, AND REVISION OF PAY ITEMS.			

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: SUMMARY OF QUANTITIES (1 of 2)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-2

$USERS $DATES $TIMES $FILES

SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS

PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	PHASE I			PHASE II			SHEET TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
			DURATION	QUANTITY	TOTAL	DURATION	QUANTITY	TOTAL				
			DAYS	P	P	DAYS	P	P	P	F		
0102-1-A	MAINTENANCE OF TRAFFIC	LS						0	1		20 CONSTRUCTION DAYS	
0102-10A	OFF-DUTY LAW ENFORCEMENT OFFICER	LS							1		20 CONSTRUCTION DAYS	
0102-60A	WORK ZONE SIGNS	ED	10	27	270	10	28	280	550			
0102-74-1	BARRICADES (TEMPORARY - TYPE I, II, VP & DRUM)	ED	10	168	1680	10	179	1790	3470			
0102-74-1C	BARRICADES (TEMPORARY - TYPE I, II, VP & DRUM)(WITH PCMS)	ED	24	4	96	10	4	40	136		14 DAYS PRIOR TO CONSTRUCTION	
0102-74-6	CHANNELIZING DEVICE-PEDESTRIAN LCD (LONGITUDINAL CHANNELIZING DEVICE)	FD	10	1665	16650	10	1660	16600	33250			
0102-76B	FLASHING ARROW BOARD (TEMPORARY MULTI-MODEL)/ADVANCED WARNING ARROW PANEL	ED	10	2	20	10	3	30	50			
0102-99A	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	24	1	24	10	1	10	34		14 DAYS PRIOR TO CONSTRUCTION	

Bridges 874541 & 874542

SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS

PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	PHASE I			PHASE II			SHEET TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
			DURATION	QUANTITY	TOTAL	DURATION	QUANTITY	TOTAL				
			DAYS	P	P	DAYS	P	P	P	F		
0102-1-A	MAINTENANCE OF TRAFFIC	LS						0	1		20 CONSTRUCTION DAYS	
0102-10A	OFF-DUTY LAW ENFORCEMENT OFFICER	LS							1		20 CONSTRUCTION DAYS	
0102-60A	WORK ZONE SIGNS	ED	10	24	240	10	24	240	480			
0102-74-1	BARRICADES (TEMPORARY - TYPE I, II, VP & DRUM)	ED	10	273	2730	10	282	2820	5550			
0102-74-1C	BARRICADES (TEMPORARY - TYPE I, II, VP & DRUM)(WITH PCMS)	ED	24	8	192	10	8	80	272		14 DAYS PRIOR TO CONSTRUCTION	
0102-74-6	CHANNELIZING DEVICE-PEDESTRIAN LCD (LONGITUDINAL CHANNELIZING DEVICE)	FD	10	4231	42310	10		0	42310			
0102-76B	FLASHING ARROW BOARD (TEMPORARY MULTI-MODEL)/ADVANCED WARNING ARROW PANEL	ED	10	3	30	10	3	30	60			
0102-99A	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	24	2	48	10	2	20	68		14 DAYS PRIOR TO CONSTRUCTION	

Bridge 874545

CONCRETE REPAIR NOTES:

1. QUANTITIES: DUE TO THE NATURE OF THE DETERIORATION PRESENT ON THIS BRIDGE, MIAMI-DADE COUNTY HAS THE AUTHORITY TO INCREASE, DECREASE, OR DELETE THE QUANTITIES OF WORK TO BE PERFORMED IN EXCESS OR BELOW THE PERCENTAGES ALLOWED BY FDOT SECTION 4-3.1 OF THE STANDARD SPECIFICATIONS AND REVISIONS THERETO WITH NO ADJUSTMENT TO THE CONTRACT UNIT PRICES AS STATED UNDER DTPW, GENERAL REQUIREMENTS, ARTICLE 1.02,B. THE WORK WILL BE ASSIGNED BY THE ENGINEER FOR A SPECIFIC GROUP OF LOCATIONS AT A TIME. IN ADDITION TO THE LOCATIONS OF CONCRETE/SPALL REPAIRS SHOWN IN THE PLANS, THE CONTRACTOR WILL PERFORM A SOUNDING SURVEY OF THE BRIDGE SUBSTRUCTURE AND IDENTIFY ALL LOCATIONS IN NEED OF REPAIR. THE SURVEY WILL BE PERFORMED IN THE PRESENCE OF THE ENGINEER PRIOR TO COMMENCING ANY WORK. NO CONCRETE REMOVAL WILL BE PERFORMED WITHOUT THE ENGINEER'S APPROVAL. THE MIAMI-DADE COUNTY WILL BE ALLOWED TO STOP WORK DUE TO POOR WORKMANSHIP, UNAPPROVED MATERIALS OR UNAPPROVED WORK PROCEDURE AT ANY TIME WITHOUT CONSEQUENCE TO MIAMI-DADE COUNTY.
2. TRACKING REPAIR QUANTITIES: CONTRACTOR WILL PREPARE A DETAILED REPORT DOCUMENTING THE ADDITIONAL LOCATIONS REQUIRING CONCRETE/SPALL REPAIRS. THE REPORT WILL BE FORMATTED TO INDICATE PRECISE LOCATION OF EACH REPAIR AREA AND AN ESTIMATED QUANTITY FOR THE TOTAL CONCRETE/SPALL REPAIRS REQUIRED. THE REPORT WILL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THIS DOCUMENT WILL BE USED BY THE ENGINEER FOR PREPARING THE AUTHORIZATION TO PROCEED WITH REPAIRS AND BY THE CONTRACTOR TO TRACK QUANTITIES. THE CONTRACTOR WILL UPDATE THE REPORT ON A MONTHLY BASIS TO INCLUDE ACTUAL QUANTITIES OF REPAIRS AND REMAINING BUDGET AVAILABLE TO CONTINUE WITH REPAIRS. REPAIRS PERFORMED AFTER EXHAUSTION OF BUDGET DUE TO CONTRACTOR'S FAILURE TO TRACK QUANTITIES WILL BE AT THE CONTRACTOR'S EXPENSE. MIAMI-DADE COUNTY WILL DETERMINE THE SIZE OF THE WORK ASSIGNMENTS. NO WORK SHALL COMMENCE ON ANY NEW WORK ASSIGNMENT UNTIL THE SATISFACTORY COMPLETION OR SUBSTANTIAL PROGRESS (MORE THAN 40% COMPLETION) OF PREVIOUSLY ISSUED ASSIGNMENTS HAS BEEN CONFIRMED, EXCEPT WHEN THE ENGINEER DETERMINES THAT SUCH OTHER WORK IS IN THE BEST INTEREST OF THE COUNTY AND GIVES WRITTEN INSTRUCTIONS TO PROCEED.
3. THE CONTRACTOR WILL ADHERE TO THE REQUIREMENTS OF THE SPECIFICATIONS FOR CONCRETE SPALL REPAIRS WITH POLYMER MODIFIED PORTLAND CEMENT MORTAR. PLACE THE POLYMER MODIFIED PORTLAND CEMENT MORTAR WITH CORROSION INHIBITORS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. IN THE EVENT THAT MORE THAN 20% OF THE CROSS SECTIONAL AREA OF ANY STRUCTURAL MEMBER NEEDS TO BE REMOVED, PRIOR TO THE REMOVAL OF MORE THAN 20% OF THE MEMBER CROSS SECTIONAL AREA, THE CONTRACTOR WILL STOP WORK AND NOTIFY THE ENGINEER FOR FURTHER INSTRUCTIONS.

BRIDGE NO. 874541
BRIDGE NO. 874542
BRIDGE NO. 874545

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
5/18/23	HNG	ADDITION, DELETION, AND REVISION OF PAY ITEMS.			

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: SUMMARY OF QUANTITIES (2 of 2)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-3

$USER$ $DATE$ $TIME$ $FILE$

874541 SCOPE OF WORK:

REHABILITATION WORK AT WEST BRIDGE SB (874541) IS TO INCLUDE JOINT REPLACEMENT, SUPERSTRUCTURE REPAIRS, CIP SUBSTRUCTURE REPAIR, BULKHEAD REPAIR, SLOPEWALL REPAIR AND PILE REPAIR AS SHOWN IN THE PLANS.

THE PRIMARY TASKS TO BE COMPLETED BY THE CONTRACTOR ARE AS FOLLOWS:

1. DAILY PLACING AND REMOVING MAINTENANCE OF TRAFFIC DEVICES WHEN CONSTRUCTION IS IN PROGRESS, INCLUDING, BUT NOT LIMITED TO BARRICADES, CONSTRUCTION SIGNS AND DIRECTIONAL ARROWS PLACED ALONG THE NEW ALIGNMENT.
2. REMOVE AND REPLACE THE EXISTING EXPANSION JOINTS AS INDICATED IN THE PLANS.
3. REPAIR CONCRETE SPALLS AND POPOUTS ON THE CONCRETE HEADERS AT ALL JOINTS.
4. RESTORE AND/OR REPAIR CONCRETE SPALL AREAS LOCATED IN SPECIFIED AREAS INDICATED IN THE PLANS.
5. REPAIR EXISTING CONCRETE BEAM DAMAGE AS INDICATED IN THE PLANS.
6. INJECT AND SEAL CRACKS AS INDICATED IN THE PLANS.
7. REPAIR EXISTING PILES WITH STRUCTURAL JACKETS AS INDICATED IN THE PLANS.
8. REPAIR BULKHEAD CAP AND REPAIR CRACKS AS INDICATED IN THE PLANS.
9. INJECT EXISTING SLOPE PROTECTION AND WALKWAY AT ABUTMENT 1 WITH FILL MATERIAL TO RAISE EXISTING PANELS AND WALKWAY TO THEIR ORIGINAL POSITION.
10. REPLACE CHAIN LINK FENCING WITH ENHANCED FENCING.

874542 SCOPE OF WORK:

REHABILITATION WORK AT WEST BRIDGE NB (874542) IS TO INCLUDE JOINT REPLACEMENT, SUPERSTRUCTURE REPAIRS, CIP SUBSTRUCTURE REPAIR, BULKHEAD REPAIR, SLOPEWALL REPAIR AND PILE REPAIR AS SHOWN IN THE PLANS.

THE PRIMARY TASKS TO BE COMPLETED BY THE CONTRACTOR ARE AS FOLLOWS:

1. DAILY PLACING AND REMOVING MAINTENANCE OF TRAFFIC DEVICES WHEN CONSTRUCTION IS IN PROGRESS, INCLUDING, BUT NOT LIMITED TO BARRICADES, CONSTRUCTION SIGNS AND DIRECTIONAL ARROWS PLACED ALONG THE NEW ALIGNMENT.
2. REMOVE AND REPLACE THE EXISTING EXPANSION JOINTS AS INDICATED IN THE PLANS.
3. REPAIR CONCRETE SPALLS AND POPOUTS ON THE CONCRETE HEADERS AT ALL JOINTS.
4. RESTORE AND/OR REPAIR CONCRETE SPALL AREAS LOCATED IN SPECIFIED AREAS INDICATED IN THE PLANS.
5. REPAIR EXISTING CONCRETE BEAM DAMAGE AS INDICATED IN THE PLANS.
6. INJECT AND SEAL CRACKS AS INDICATED IN THE PLANS.
7. REPAIR EXISTING PILES WITH STRUCTURAL JACKETS AS INDICATED IN THE PLANS.
8. REPAIR BULKHEAD CAP AND REPAIR CRACKS AS INDICATED IN THE PLANS.
9. INJECT EXISTING SLOPE PROTECTION WITH FILL MATERIAL TO RAISE EXISTING PANELS TO THEIR ORIGINAL POSITION.
10. REPLACE CHAIN LINK FENCING WITH ENHANCED FENCING.
11. CLEAN AND COAT BEARINGS AS NEEDED.
12. REMOVE AND REPLACE CONCRETE SLOPEWALL AS INDICATED IN THE PLANS.

DESIGN SPECIFICATIONS:

1. FLORIDA DEPARTMENT OF TRANSPORTATION STRUCTURES MANUAL DATED JANUARY 2024 AND SUBSEQUENT STRUCTURES DESIGN BULLETINS.
2. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LOAD AND RESISTANCE FACTOR (LRFD) BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION.
3. FDOT DESIGN MANUAL DATED JANUARY, 2024.

COMPLY WITH THE REPAIR PROCEDURES, MATERIALS, MANUFACTURER RECOMMENDATIONS, ETC. AND THE FOLLOWING:

1. AMERICAN ASSOCIATION OF STATE HIGHWAYS AND TRANSPORTATION OFFICIALS (ASSHTO) CRITERIA
2. FDOT STANDARD SPECIFICATIONS AND CRITERIA
3. MIAMI-DADE COUNTY PWWMD SPECIFICATIONS

GOVERNING STANDARDS AND CONSTRUCTION SPECIFICATIONS:

1. FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2023-24 STANDARD PLANS AND REVISED INDEX DRAWINGS AS APPENDED HEREIN, AND JANUARY 2024 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY CONTRACT DOCUMENTS.

VERTICAL DATUM:

1. ALL ELEVATIONS REFER TO NGVD 29 UNLESS OTHERWISE NOTED.

EXISTING PLANS:

1. EXISTING PLANS ARE AVAILABLE UPON REQUEST. LIMITED PLANS EXIST FOR THE EXISTING PLANS.

874545 SCOPE OF WORK:

REHABILITATION WORK AT WILLIAM POWELL BRIDGE (874545) IS TO INCLUDE JOINT REPLACEMENT, SUPERSTRUCTURE REPAIRS, CIP SUBSTRUCTURE REPAIR, AND BULKHEAD REPAIR AS SHOWN IN THE PLANS.

THE PRIMARY TASKS TO BE COMPLETED BY THE CONTRACTOR ARE AS FOLLOWS:

1. DAILY PLACING AND REMOVING MAINTENANCE OF TRAFFIC DEVICES WHEN CONSTRUCTION IS IN PROGRESS, INCLUDING, BUT NOT LIMITED TO BARRICADES, CONSTRUCTION SIGNS AND DIRECTIONAL ARROWS PLACED ALONG THE NEW ALIGNMENT.
2. REMOVE AND REPLACE THE EXISTING EXPANSION JOINTS AS INDICATED IN THE PLANS.
3. REPAIR CONCRETE SPALLS AND POPOUTS ON THE CONCRETE HEADERS AT ALL JOINTS.
4. RESTORE AND/OR REPAIR CONCRETE SPALL AREAS LOCATED IN SPECIFIED AREAS INDICATED IN THE PLANS.
5. REPAIR EXISTING CONCRETE BEAM DAMAGE AS INDICATED IN THE PLANS.
6. INJECT AND SEAL CRACKS AS INDICATED IN THE PLANS.
7. REPAIR BULKHEAD CAP AND REPAIR CRACKS AS INDICATED IN THE PLANS.
8. REPLACE CHAIN LINK FENCING WITH ENHANCED FENCING.
9. REPLACE MISSING FENDER PLANKS.
10. CLEAN AND COAT BEARINGS AS NEEDED.
11. REPLACE ACNCHOR NUTS AND ANCHOR BOLTS AS NEEDED.
12. CLEAN OUT SCUPPER HOLES ALONG NORTH BARRIER AS NEEDED.
13. REPAIR EXISTING EAST FENDER NAVIGATIONAL LIGHTING AS INDICATED IN THE PLANS.

PILE JACKETS:

1. PILE JACKET FILLER SHALL BE IN ACCORDANCE WITH CONTRACT DOCUMENTS.
2. SHOULD HIGH WATER AFFECT PILE JACKET INSTALLATION, SUBMIT FOR ENGINEER'S APPROVAL A DEWATERING PLAN OR ALTERNATIVE INSTALLATION METHOD SUITABLE FOR UNDERWATER USAGE. PAYMENT FOR DEWATERING WORK SHALL BE INCLUDED UNDER THE COST OF PAY ITEM STANDARD INTEGRAL PILE JACKET, STRUCTURAL.
3. DETERMINE THE MEAN HIGH WATER (MHW), MEAN LOW WATER (MLW) AND MUDLINE AT EACH BENT LOCATION.
4. PERFORM AN INSPECTION OF ALL PILES BELOW AND ABOVE WATER LOCATING ALL DETERIORATED CONCRETE AND CORROSION BLEED-OUT ON THE PILINGS TO VERIFY SPECIFIED JACKET LENGTHS WILL ENCOMPASS ALL PILE DEFICIENCIES AND ANY ADDITIONAL PILES WITH DEFICIENCIES. PROVIDE SHOP DRAWINGS TO INCLUDE PILE JACKET AND EXTENSION LENGTHS FOR EACH PILE.

CONCRETE COVER:

1. CONCRETE COVER DIMENSIONS SHOWN IN THE PLANS DO NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER". SEE SPECIFICATIONS SECTION 415 FOR ALLOWABLE TOLERANCES. ALL DIMENSIONS PERTAINING TO THE LOCATION OF REINFORCING STEEL ARE TO CENTERLINE OF BAR EXCEPT WHERE CLEAR DIMENSION IS NOTED TO FACE OF CONCRETE.

2" - CAST-IN-PLACE (CIP) SUPERSTRUCTURE (TOP OF DECK)
2" - CIP SUPERSTRUCTURE
2" - PRECAST PRESTRESSED BEAMS (EXCEPT TOP SURFACE)
1" - TOP SURFACE OF BEAM TOP FLANGE
4½" - CIP SUBSTRUCTURE (CAST AGAINST EARTH)
4" - CIP SUBSTRUCTURE (FORMED SURFACES)
2" - CIP SUBSTRUCTURE (TOP OF BEAM PEDESTALS)*
*UNLESS NOTED OTHERWISE ON PLANS

STRUCTURAL DAMAGE:

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES BY HIS OPERATION TO EXISTING STRUCTURES WHICH ARE NOT INCLUDED AS PART OF THE INTENDED WORK. ALL DAMAGE TO EXISTING STRUCTURES WHICH IS NOT PART OF THE INTENDED WORK SHALL BE REPAIRED/REPLACED/RESTORED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITHOUT COST TO THE COUNTY.

BONDING COMPOUND:

1. USE BONDING COMPOUND ONLY IF RECOMMENDED BY THE REPAIR MORTAR MANUFACTURER. APPLY BONDING COMPOUND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. REPAIR MORTAR AND BONDING COMPOUND ARE TO BE SELECTED FROM THE FDOT APL OR APPROVED EQUAL.

BRIDGE NO. 874541
BRIDGE NO. 874542
BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: GENERAL NOTES (1 OF 4)
REF. DWG. NO.:
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY
SHEET NO.: S-4

$USER$ $DATE$ $TIME$ $FILE$

UTILITIES:

1. THE LOCATIONS OF UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE.

2. EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.

3. TWO FULL BUSINESS DAYS PRIOR TO DIGGING THE CONTRACTOR SHALL CALL SUNSHINE STATE ONE CALL OF FLORIDA, TELEPHONE NUMBER 811, AND THE UTILITY OWNERS AND REQUEST UTILITY LOCATIONS. A CONTRACTOR'S REPRESENTATIVE MUST BE PRESENT WHEN UTILITY COMPANIES LOCATE THEIR FACILITIES. FOR UTILITY ADJUSTMENT SYMBOLS, SEE FDOT STANDARD INDEX NO. 002.

4. THE CONTRACTOR IS ADVISED THAT PROPERTIES ADJACENT TO THE PROJECT HAVE ELECTRIC, TELEPHONE, GAS, WATER, AND/OR SEWER SERVICE LATERALS WHICH MAY NOT BE SHOWN IN PLANS. THE CONTRACTOR MUST REQUEST THE LOCATION OF THESE LATERAL SERVICES FROM THE UTILITY COMPANIES. THE ADDITIONAL COST OF EXCAVATING, INSTALLING, BACKFILLING AND COMPACTING AROUND THESE LATERALS MUST BE INCLUDED IN THE BID RELATED ITEM FOR THE WORK BEING DONE.

UTILITIES OWNERS:

COMPANIES	CONTACT	PHONE NUMBER/EMAIL
COMCAST CABLE	RICARDO DAVIDSON	786-586-5805
DADE COUNTY PUBLIC WORKS & TRAFFIC	OCTAVIO VIDAL	305-412-0891 X 102
FLORIDA POWER & LIGHT - DISTRIBUTION	JOHN GIRALDO	John.Giraldo@fpl.com
FLORIDA POWER & LIGHT - SUBAQUEOUS	JOEL BRAY	386-586-6403
FLORIDA POWER & LIGHT - TRANSMISSION	MICHAEL VILLEGAS	305-442-5128
HOTWIRE COMMUNICATIONS	WALTER DAVILA	954-699-0900
MIAMI-DADE WATER & SEWER	MARIA CAPOTE	786-268-5329
CROWN CASTLE NG	----	fiber.dig@crowncastle.com
AT&T DISTRIBUTION	JOSUE OCANDO	jo240e@att.com

811 KNOW WHAT'S BELOW ALWAYS CALL 811 BEFORE YOU DIG
It's real. It's free. It's the law.
www.callsunshine.com

MATERIALS:

1. REINFORCING STEEL: GRADE 60 CARBON STEEL PER SPECIFICATIONS SECTION 931

2.

CONCRETE STRENGTH		
CLASS	LOCATION	MINIMUM 28 DAY COMPRESSIVE STRENGTH (PSI)
IV	CIP SUPERSTRUCTURE	5500
IV	CIP SUBSTRUCTURE	5500
VI	PPC BEAMS	8500
IV	STRUCTURAL JACKETS	5500
V (SPECIAL)	PPC PILES	6000

NAVIGATION:

1. THE WATERS WITHIN THE PROJECT AREA ARE FREQUENTED BY BOAT TRAFFIC. NOTIFY THE UNITED STATES COAST GUARD MARINE COORDINATOR AT THE SAFETY OFFICE, (305) 415-6744, THIRTY (30) DAYS PRIOR TO BEGINNING CONSTRUCTION AND SUBMIT A PLAN FOR CLEARING THE CHANNEL IN THE EVENT OF A HURRICANE WATCH/WARNING.

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRIC CODE, THE NATIONAL ELECTRICAL SAFETY CODE, AND THE STATE FLORIDA D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS WILL BE PROPERLY GROUNDED AND BONDED PER THE NATIONAL ELECTRIC CODE REQUIREMENTS.

2. PRIOR TO ANY NAVIGATION LIGHTING EQUIPMENT ORDER, THE CONTRACTOR WILL VERIFY THAT THE PROPOSED FENDER LIGHTING FIXTURES ARE COMPATIBLE WITH THE EXISTING NAVIGATION LIGHTING CONTROL SYSTEM.

3. FOR ADDITIONAL ELECTRICAL DETAILS, REFER TO THE EXISTING PLANS.

4. FURNISH AND INSTALL NATIONAL ELECTRIC ASSOCIATION (NEMA) TYPE 4X, STAINLESS STEEL SURFACE BOXES SIZED AS SHOWN IN THE PLANS.

5. ALL FENDER MOUNTED CONDUIT SHALL BE SECURED WITH TWO HOLE STAINLESS STEEL CONDUIT STRAPS SIZED FOR AN 1" DIAMETER CONDUIT.

6. INSTALL AN UNDERWRITERS LABORATORIES (UL) LABELED EXPANSION COUPLING BETWEEN EACH FENDER MOUNTED JUNCTION BOX.

7. FURNISH ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED FOR A COMPLETE AND FUNCTIONAL INSTALLATION.

8. USE ONLY NEW, UNUSED AND UNDERWRITERS LABORATORIES (UL) LISTED EQUIPMENT AND MATERIALS APPROVED FOR OUTDOOR USE.

9. PROVIDED ENOUGH SLACK IN ALL INTERIOR CONDUCTORS TO ALLOW MINOR SHIFTING OF THE STRUCTURE AND FENDER SYSTEM.

10. FURNISH AND INSTALL NO. 10 A.W.G. COPPER CONDUCTORS, TYPE XHHW.

DESIGN LOADING:

1. LIVE LOADS: HL-93 WITH IMPACT
LFD: HS20 OR MILITARY LOAD WITH IMPACT

DEAD LOADS:

REINFORCED CONCRETE	150 PCF
TRAFFIC RAILING	420 PLF
PEDESTRIAN RAILING	235 PLF
MEDIAN TRAFFIC RAILING	486 PLF
FUTURE WEARING SURFACE	15 PSF
UTILITY LOAD	111 PSF

JOINTS IN CONCRETE:

1. CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT THE LOCATIONS INDICATED IN THE PLANS. ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN SHALL REQUIRE APPROVAL OF THE ENGINEER.

PLAN DIMENSIONS:

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

2. TAKE ALL FIELD MEASUREMENTS NECESSARY TO ENSURE PROPER FIT OF THE FINISHED WORK AND ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY.

EXISTING BRIDGE CONSTRUCTION CONSIDERATIONS:

1. 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. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THIS DATA BEFORE BEGINNING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

SITE CONDITIONS:

1. HABITAT BEYOND THE LIMITS OF CONSTRUCTION SHALL NOT BE DISTURBED.

REPAIRS TO EXISTING BRIDGE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING THE DISCHARGE OF ANY FOREIGN MATERIAL INTO THE WATER. ERECT THE BEST AVAILABLE MEANS OF EROSION CONTROL MEASURES TO ISOLATE THE WORK AREA AT ALL TIMES.

2. DURING ALL CONSTRUCTION OPERATIONS, DO NOT ALLOW WASTE CONCRETE, DEBRIS, OR OTHER MATTER TO DROP INTO THE WATERWAY BELOW THE BRIDGE. PLATFORMS, NETS, SCREENS, OR OTHER PROTECTIVE DEVICES SHALL BE USED TO CATCH FALLING MATERIALS. IF AT ANY TIME, THE ENGINEER DETERMINES THAT ADEQUATE PROTECTIVE DEVICES ARE NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

3. ALL SPOIL MATERIAL (STRUCTURAL CONCRETE, REINFORCING STEEL, ETC.) REMOVED FROM THE JOB SITE SHALL BE DISPOSED OF BY THE CONTRACTOR OFF OF THE COUNTY'S PROPERTY. THE CONTRACTOR SHALL COMPLY WITH LOCAL AND STATE REGULATIONS THAT APPLY TO THE AREA CHOSEN FOR DISPOSAL OF THIS SPOIL MATERIAL.

SHOP DRAWINGS:

1. SHOP DRAWINGS, DESIGN CALCULATIONS, ETC., WHEN REQUIRED BY THE ENGINEER OF RECORD, SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.

TEMPORARY SHORING:

1. BRIDGE PIERS: SHOULD THE PIER CONCRETE REPAIR DEPTH EXCEED 12", PROVIDE A TEMPORARY BRACING/SHORING SYSTEM TO SUPPORT THE PIER. SUBMIT TEMPORARY BRACING/SHORING SYSTEM SHOP DRAWINGS AND SUPPORTING DESIGN CALCULATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. THE SHOP DRAWINGS MUST BE APPROVED BEFORE PROCEEDING WITH THE REPAIR WORK FOR THE PIER EXHIBITING A REPAIR DEPTH IN EXCESS OF 12". ALL COST ASSOCIATED WITH THE TEMPORARY BRACING/SHORING SYSTEM, INCLUDED BUT NOT LIMITED TO SHOP DRAWINGS, MATERIAL, ERECTION, REMOVAL, STORAGE, ETC. SHALL BE INCIDENTAL TO THE CONCRETE REPAIRS AND COVERED BY PAY ITEM 401-70-4.

ENVIRONMENT:

1. SUPERSTRUCTURE: EXTREMELY AGGRESSIVE - COASTAL ENVIRONMENT
SUBSTRUCTURE: EXTREMELY AGGRESSIVE - COASTAL ENVIRONMENT

BRIDGE NO. 874541
BRIDGE NO. 874542
BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

$USER$ $DATE$ $TIME$ $FILE$

SHEET TITLE: GENERAL NOTES (2 OF 4)

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-5

POLLUTION CONTROL:

1. MATERIALS OR DEBRIS, SOLID OR LIQUID, SHALL NOT BE DISCHARGED INTO SURFACE WATERS OR WETLANDS, EXCEPT AS ALLOWED BY PERMIT. ANY NON-PERMITTED MATERIALS DISCHARGED INTO SURFACE WATER OR WETLANDS SHALL BE RETRIEVED AS REQUIRED BY APPLICABLE FEDERAL AND STATE LAWS.

2. FULL DEPTH TURBIDITY CONTAINMENT SYSTEM IS REQUIRED AROUND EACH BENT UNTIL ALL REPAIR WORK AROUND THE INDIVIDUAL BENT IS COMPLETED.

MAINTENANCE OF TRAFFIC:

FOR MAINTENANCE OF TRAFFIC NOTES, SEE TRAFFIC CONTROL PLAN SHEETS.

TRAFFIC CONTROL OFFICER ALLOWANCE:

A. THE COUNTY WILL REIMBURSE CONTRACTOR FOR THE SERVICES OF UNIFORMED LAW ENFORCEMENT OFFICERS AUTHORIZED TO SERVE AS TRAFFIC CONTROL OFFICERS FOR THE PURPOSE OF CONTROLLING OR DIRECTING TRAFFIC ON THE WORK ZONE AS PART OF THE COUNTY APPROVED TRAFFIC CONTROL PLAN AND MAINTENANCE OF TRAFFIC PROVIDED BY CONTRACTOR PURSUANT TO THE CONTRACT DOCUMENTS.
B. THE QUANTITY TO BE PAID FOR WILL BE THE INVOICE UNIT PRICE PER HOUR FOR THE ACTUAL NUMBER OF OFFICERS CERTIFIED TO BE ON THE PROJECT SITE, INCLUDING ANY LAW ENFORCEMENT VEHICLES AND ALL OTHER DIRECT AND INDIRECT COST.
C. PAYMENT WILL BE MADE AT INVOICE COST FROM AN APPROPRIATE DEDICATED ALLOWANCE ESTABLISHED BY THE COUNTY.
D. PAYMENT WILL BE MADE ONLY FOR THOSE TRAFFIC CONTROL OFFICERS SPECIFIED IN THE PLANS AND AUTHORIZED BY THE ENGINEER. THE NECESSARY INVOICES AND DOCUMENTATION MUST BE SUBMITTED TO THE ENGINEER ALONG WITH THE PAYMENT REQUEST.

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL PROVIDE SAFE ACCESS FOR THE ENGINEER AT ALL TIMES FOR HIS INSPECTION OF THE PROJECT. THIS INCLUDES (BUT IS NOT LIMITED TO) SCAFFOLDING, AND/OR INSPECTION BOAT WITH OPERATOR REMAINING IN PLACE UNTIL THE ENGINEER CAN PERFORM ALL NECESSARY INSPECTIONS AMONG THE VARIOUS SCHEDULED ITEMS ON THE CONTRACT.

PLAN DIMENSIONS:

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT, DUE TO THE NATURE OF REHABILITATION/REPAIR PROJECTS, THE EXACT EXTENT OF REHABILITATION/REPAIR WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO THE COMMENCEMENT OF WORK. THESE PLANS WERE DETAILED TO AGREE WITH THE EXISTING PLANS AND THE RESULTS OF A LIMITED FIELD INVESTIGATION. THE CONTRACTOR SHALL FIELD VERIFY PLAN DIMENSIONS AND ELEVATIONS PRIOR TO START OF WORK.

THE DETAILS ON THE DRAWINGS INDICATE THE LIMITS OF REMOVAL AND REPAIR BASED ON THE BRIDGE INSPECTION REPORT DATED, (BRIDGE 874541) JULY 21, 2023, (BRIDGE 874542) OCTOBER 31, 2022, (BRIDGE 874545) JUNE 30, 2022. THE REMOVAL AND REPAIR UNITS SHOWN ON THE CONTRACT DRAWINGS INDICATE APPROXIMATE REMOVAL AND REPAIR LIMITS BASED ON THE CONDITION OF THE STRUCTURE AT THE TIME OF THE INSPECTIONS.

THE CONTRACTOR SHALL TAKE ALL SUCH FIELD MEASUREMENTS AS ARE NECESSARY TO ENSURE PROPER FIT OF THE FINISHED WORK, AND THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY.

WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS MADE SHALL BE INCLUDED IN THE SHOP DRAWINGS AND SUBMITTED TO THE ENGINEER. THE CONTRACTOR SHALL USE AN ASTERISK(*) OR SIMILAR MEANS TO INDICATE A FIELD MEASUREMENT ON SHOP DRAWINGS.

THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE FOLLOWING INDIVIDUALS AND/OR ENTITIES:

GENERAL CONTACTS:

COORDINATION:

ENGINEER OF RECORD
HOWARD GOTSCHALL, P.E.
P.E. NO. 79639
HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
305-428-4350
hgotschall@hanson-inc.com

MIAMI-DADE COUNTY
HIGHWAY BRIDGE ENGINEER MANAGER
RYAN FISHER, P.E.
MIAMI-DADE COUNTY DEPARTMENT
OF TRANSPORTATION AND PUBLIC WORKS
STEPHEN P. CLARK CENTER
111 NW 1 ST
MIAMI, FL 33128
786-469-5264
ryan.fisher@miamidade.gov

MIAMI-DADE COUNTY
FELIX ALVAREZ
DEPARTMENT OF REGULATORY AND
ECONOMIC RESOURCES (RER)
ENVIRONMENTAL RESOURCE
MANAGEMENT
701 NW 1ST COURT, 6TH FLOOR
MIAMI, FL 33136
305-372-6593
felix.alvarez@miamidade.gov

UNITED STATES COAST GUARD
LT. PAUL STEINER
100 MACARTHUR CSWY
MIAMI BEACH, FL. 33139
305-535-8724

CITY OF MIAMI PUBLIC
WORKS DEPARTMENT
444 SW 2ND AVENUE
MIAMI, FL. 33130
305-416-1200

PROCEDURE NOTES:

SUPERSTRUCTURE/SUBSTRUCTURE REPAIRS:

1. THE SPALLED, DELAMINATED, ETC. AREAS NOTED AS REQUIRING REPAIR IN THESE PLANS REPRESENT KNOWN DEFICIENCIES AT THE TIME THAT THE PLANS WERE PREPARED, VERIFIED BY VISUAL INSPECTION AND SOUNDING HAMMER. SPALLS OR DELAMINATIONS THAT WERE LOCATED IN CLOSE PROXIMITY OR EXHIBIT SIGNIFICANT CRACKING HAVE BEEN GROUPED AND MAPPED AS A SINGLE REPAIR. THE REPAIR QUANTITIES SHOWN ARE AN ESTIMATE OF THE WORK REQUIRED TO REPAIR THE KNOWN DEFICIENCIES AT THE TIME THAT THE PLANS WERE PREPARED, THE ENTIRE PROJECT SHALL BE SURVEYED AND MARKED BY THE CONTRACTOR AND THE ENGINEER'S REPRESENTATIVE. SUBMIT THE SURVEY AND MARKING RESULTS, INCLUDING PROJECTED QUANTITIES TO THE ENGINEER PRIOR TO THE START OF THE CONCRETE REPAIR WORK. STOP WORK IMMEDIATELY AND NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK WHEN:

   - ADDITIONAL DEFICIENCIES NOT APPEARING IN THESE PLANS THAT ARE PRESENT AT THE TIME OF THE REPAIRS. NOTIFY THE ENGINEER REGARDING THE EXTENT OF DAMAGED CONCRETE ADDITIONAL TO THAT SHOWN IN THESE PLANS PRIOR TO BEGINNING WORK OF THE REPAIRS CONSIDERED ADDITIONAL.

   - REPAIR AREAS EXTEND MORE THAN TWELVE (12) INCHES BEYOND THE REPAIR AREA INITIALLY IDENTIFIED.

   REMOVAL DOWN TO SOUND CONCRETE SHALL BE ACCOMPLISHED USING METHODS THAT DO NOT DAMAGE THE SOUND PORTION OF THE STRUCTURE THAT IS TO REMAIN. IN ADDITION TO DAMAGED CONCRETE, ALL CONCRETE ADJACENT TO CORRODED REINFORCEMENT SHALL BE REMOVED UNTIL A MINIMUM OF TWO (2) INCHES AND A MAXIMUM OF FOUR (4) INCHES OF UNCORRODED REINFORCING STEEL IS UNDERCUT AND EXPOSED ALONG THE LENGTH OF THE BAR IN EACH DIRECTION. THIS IS TO BE DONE ONLY AFTER APPROVAL BY THE ENGINEER WHO AT HIS DISCRETION CAN ALLOW FOR SOME DEGREE OF CORROSION TO REMAIN AND SHALL STOP THE CONCRETE REMOVAL IN ORDER TO KEEP THE CONCRETE REPAIR QUANTITIES WITHIN THE SCOPE OF WORK.

   IN ALL CASES WHERE REINFORCING STEEL IS EXPOSED, CONCRETE SHALL BE REMOVED TO PROVIDE A MINIMUM OF ¾" CLEARANCE AROUND THE CIRCUMFERENCE OF THE BARS WHICH WILL PERMIT UNIFORM SURFACE PREPARATION OF THE BARS AND ADEQUATE CONCRETE BOND TO THE BAR SURFACE.

   ALL DEFICIENCIES SHALL BE RESTORED SUCH THAT THERE IS A UNIFORM TRANSITION FROM RESTORED SURFACES TO ADJACENT UNRESTORED SURFACES. DO NOT FEATHER THE EDGES.

2. SURFACE PREPARATION:

   REMOVE HEAVY OXIDES, SCALE, OR OTHER BOND INHIBITING MATERIALS FROM THE ENTIRE CIRCUMFERENCE OF EXPOSED REINFORCING STEEL BY USING A HAND HELD GRINDER OR BRUSH TO THE SATISFACTION OF THE ENGINEER PRIOR TO THE PLACEMENT OF CONCRETE.

   PRELIMINARY CLEANING: THOROUGHLY CLEAN CONCRETE SURFACES OF ALL DIRT, GREASE, OIL, SHELL CHIPS OF PARTIALLY LOOSENED CONCRETE, OR OTHER FOREIGN MATTER BY USING A HAND HELD GRINDER OR BRUSH TO THE SATISFACTION OF THE ENGINEER PRIOR TO THE PLACEMENT OF CONCRETE.

   FINAL CLEANING: AFTER THE ABOVE SURFACE PREPARATION STEPS HAVE BEEN COMPLETED AND IMMEDIATELY PRIOR TO REPAIR, WASH ALL AREAS CLEAN WITH FRESH WATER AND AIR BLAST, OR WITH A STIFF NOSE STREAM OF FRESH WATER UNTIL ALL LOOSENED MATERIALS AND SALT WATER SPRAY ARE REMOVED. THE CONCRETE SUBSTRATE SHALL BE FREE OF STANDING WATER PRIOR TO THE REPAIR.

   AFTER THE ABOVE SURFACE PREPARATION STEPS ARE COMPLETE, OBTAIN FINAL APPROVAL TO PROCEED WITH THE REPAIR FROM THE ENGINEER PRIOR TO PERFORMING THE REPAIR.

PERMIT AGENCIES:

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
JENNIFER SMITH
400 N. CONGRESS AVENUE
SUITE 200
WEST PALM BEACH, FL. 33401
561-681-6642

USACE
AUDREY SIU
MIAMI REGULATIONS FIELD OFFICE
9900 SOUTHWEST 107TH AVENUE
SUITE 203
MIAMI, FL 33176
305-779-6051

BRIDGE NO. 874541
BRIDGE NO. 874542
BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

$USER$ $DATE$ $TIME$ $FILE$

SHEET TITLE: GENERAL NOTES (3 OF 4)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-6

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK:

1. WEST INDIAN MANATEE (TRICHECHUS MANATUS LATIROSTRIS), A FEDERAL AND STATE LISTED ENDANGERED SPECIES, MAY MIGRATE THROUGH THE PROJECT AREA. THE PERMITTEE SHALL ADVISE ALL CONSTRUCTION PERSONNEL THAT 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.

1. THE PERMITTEE SHALL COMPLY AND INSTRUCT ALL PERSONNEL ASSOCIATED WITH THE PROJECT OF THE POTENTIAL PRESENCE OF MANATEES. ALL CONSTRUCTION PERSONNEL ARE RESPONSIBLE FOR OBSERVING WATER-RELATED ACTIVITIES FOR THE PRESENCE OF MANATEE(S).

3. SILTATION BARRIERS SHALL BE MADE OF MATERIAL IN WHICH MANATEES CANNOT BECOME ENTANGLED, ARE PROPERLY SECURED, AND ARE REGULARLY MONITORED TO AVOID MANATEE ENTRAPMENT. BARRIERS MUST NOT BLOCK MANATEE ENTRY TO OR EXIT FROM ESSENTIAL HABITAT. MANATEES CAN GET ENTANGLED IN TURBIDITY BARRIERS, AND MANATEES CAN ALSO GET PAST THE BARRIERS. THEREFORE, TURBIDITY BARRIERS BE MONITORED EACH MORNING AND EACH EVENING AT THE END OF THE WORK SHIFT TO CHECK FOR ENTANGLEMENT IN THE BARRIERS, AND ENTRAPMENT IN THE CONSTRUCTION AREA IF A MANATEE CROSSES A BARRIER. IF A MANATEE BECOMES ENTANGLED IN A BARRIER THE FWC MUST BE NOTIFIED IMMEDIATELY AT 1-888-404-FWCC. IF A MANATEE BECOMES ENTRAPPED WITHIN THE CONSTRUCTION AREA, THE BARRIER NEEDS TO BE REMOVED AND ONLY BE REPLACED ONCE THE ANIMAL LEAVES THE AREA UPON ITS OWN VOLITION.

4. ALL VESSELS ASSOCIATED WITH THE CONSTRUCTION SHALL OPERATE AT "IDLE SPEED/NO WAKE" AT ALL TIMES. SIGNAGE WILL BE DISPLAYED NEXT TO THE CONTROLS ON ALL CONSTRUCTION RELATED VESSELS, MEASURE AT LEAST 8.5 BY 11 INCHES, AND READ "CAUTION: MANATEE HABITAT" AND 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.

5. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A DESIGNATED, TRAINED MANATEE OBSERVER DURING ALL WATER RELATED ACTIVITIES. THAT PERSON TO BE EQUIPPED WITH POLARIZED SUNGLASSES TO AID IN OBSERVATION. THAT MANATEE OBSERVER BE ON SITE DURING ALL IN-WATER CONSTRUCTION ACTIVITIES AND ADVISED PERSONNEL TO CEASE OPERATION UPON SIGHTING A MANATEE WITH 50 FEET OF ANY IN-WATER CONSTRUCTION ACTIVITY. 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 OPERATION. ANIMALS MUST NOT BE HERDED AWAY OR HARASSED INTO LEAVING. IF MANATEE(S) ARE SEEN WITHIN 100 YARDS OF THE ACTIVE DAILY CONSTRUCTION OPERATION OR VESSEL MOVEMENT, ALL APPROPRIATE PRECAUTIONS SHALL BE IMPLEMENTED TO ENSURE PROTECTION OF THE MANATEE. THESE PRECAUTIONS SHALL INCLUDE THE OPERATION OF ALL MOVING EQUIPMENT NO CLOSER THAN 50 FEET OF A MANATEE. OPERATION OF ANY EQUIPMENT CLOSER THAN 50 FEET TO A MANATEE SHALL NECESSITATE IMMEDIATE SHUTDOWN OF THAT EQUIPMENT. ACTIVITIES WILL NOT RESUME UNTIL THE MANATEE(S) HAS DEPARTED THE PROJECT AREA OF ITS OWN VOLITION.

6. ANY COLLISION WITH OR INJURY TO A MANATEE SHALL BE REPORTED IMMEDIATELY TO THE FISH AND WILDLIFE CONSERVATION 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.

7. TEMPORARY SIGNS CONCERNING MANATEES SHALL BE POSTED PRIOR TO AND DURING ALL CONSTRUCTION ACTIVITIES. ALL SIGNS ARE TO BE REMOVED BY THE PERMITTEE UPON COMPLETION OF THE PROJECT. A SIGN MEASURING AT LEAST 3FT. BY 4FT. WHICH READS CAUTION: MANATEE AREA WILL BE POSTED IN A LOCATION PROMINENTLY VISIBLE TO WATER RELATED CONSTRUCTION CREWS. A SECOND SIGN SHOULD BE POSTED IF VESSELS ARE ASSOCIATED WITH THE CONSTRUCTION AND SHOULD BE PLACED VISIBLE TO THE VESSEL OPERATOR. THE SECOND SIGN SHOULD BE AT LEAST 8½" X 11" WHICH READS CAUTION: MANATEE HABITAT. IDLE SPEED IS REQUIRED IF OPERATING A VESSEL IN THE CONSTRUCTION AREA. ALL EQUIPMENT MUST BE SHUT DOWN IF A MANATEE COMES WITHIN 50 FEET OF OPERATION.

8. OTHER STIPULATIONS AND CONDITIONS MAY BE ATTACHED TO THE PERMITS BY THE AGENCIES UPON AUTHORIZATION.

9. THE COST OF ALL ITEMS REQUIRED FOR THE MONITORING AND PROTECTION OF MANATEE SUCH AS, BUT NOT LIMITED TO MANATEE SIGNS, OBSERVERS, POLARIZED GLASSES, AND BINOCULARS, SHALL BE INCLUDED IN THE COST UNIT PRICE OF MOBILIZATION PAY ITEM NO. 101-1-A.

ENVIRONMENTAL NOTES:

1. THE FOLLOWING FEDERALLY AND STATE LISTED ANIMAL SPECIES COULD INHABIT OR MIGRATE THROUGH THE CONSTRUCTION AREA: WEST INDIAN MANATEE AND SEA TURTLES. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL AND STATE REQUIREMENTS REGARDING ENDANGERED AND THREATENED SPECIES AND STATE LISTED SPECIES OF SPECIAL CONCERN. SHOULD THESE SPECIES BE ENCOUNTERED; THE CONTRACTOR SHALL CONTACT THE MIAMI-DADE COUNTY ENVIRONMENTAL OFFICE WITHIN 24 HOURS OF EACH ENCOUNTER.

2. BASED ON DISCUSSIONS WITH MIAMI-DADE COUNTY DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER), SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD) AND UNITED STATES COAST GUARD (USCG), AN RER CLASS 1 CONSTRUCTION PERMIT IS REQUIRED AND IT WAS OBTAINED. HOWEVER, SHOULD THE CONTRACTOR INTEND TO USE BARGES OR MARINE VESSELS OUT OF THE STAGING AREA, ADDITIONAL PERMITS AND/OR COORDINATION WITH MIAMI-DADE COUNTY RER WILL BE REQUIRED AND IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE ENVIRONMENTAL COMPLIANCE FOR THE MONITORING OF ACTIVITY TO PROTECT MANGROVES, SEA TURTLES, MANATEES AND OTHER SPECIES. THE RER ENVIRONMENTAL LIASON FOR THIS PROJECT IS FELIX ALVAREZ, (305) 372-5593, felix.alvarez@miamidade.gov.

3. SEAGRASS BEDS AND OTHER BENTHIC COMMUNITIES EXIST IN THE PROJECT AREA. THE CONTRACTOR SHALL PREVENT CONTACT WITH THE SEABED IN THESE AREAS AND ANY DISTURBANCE OF BOTTOM SEDIMENTS (E.G., FROM MOVING OR ANCHORING BARGES AND OTHER STRUCTURES). THE CONTRACTOR SHALL NOT SHADE ANY BENTHIC COMMUNITY FROM DIRECT SUNLIGHT FOR MORE THAN TWO WEEKS. ANCHORING LOCATIONS SHALL BE APPROVED BY THE ENGINEER WHO SHALL COORDINATE WITH FELIX ALVAREZ WITH MIAMI-DADE COUNTY OF DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) AT (305) 372-6593 AND felix.alvarez@miamidade.gov.

4. THE CONTRACTOR SHALL REVIEW ENVIRONMENTAL REQUIREMENTS OF ANY PROPOSED STAGING AREAS WITH MIAMI-DADE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS AT LEAST SEVENTY TWO (72) HOURS PRIOR TO USE.

5. THE STAGING AREA SHALL NOT BE WITHIN THE LIMITS OF THE WETLANDS. THE ACCESS FOR BOAT AND BARGE FROM BEACH AND WATER MUST AVOID IMPACT ON SEA TURTLES (DURING SEA TURTLE SEASON) AND SEAGRASS. THE CONTRACTOR WILL BE REQUIRED TO GET PROPER AUTHORIZATION/APPROVAL FROM RER BEFORE THEY CAN USE THIS BEACH AND WATER ACCESS FOR ITS BOATS AND BARGES.

6. ANY MATERIAL TO BE STOCKPILED FOR PERIODS GREATER THAN 24 HOURS SHALL BE PROTECTED BY APPROPRIATE EROSION CONTROL DEVICES AT NO ADDITIONAL COMPENSATION.

MANATEE SIGN

BRIDGE NO. 874541
BRIDGE NO. 874542
BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: GENERAL NOTES (4 OF 4)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-7

$USERS $DATES $TIMES $FILES

TEMPORARY TRAFFIC CONTROL GENERAL NOTES

1. THESE TEMPORARY TRAFFIC CONTROL PLANS ARE PRELIMINARY AND TO BE USED AS REFERENCE AND/OR GUIDANCE ONLY. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE FINAL TEMPORARY TRAFFIC CONTROL DESIGN AND OBTAIN APPROVAL BY MIAMI-DADE COUNTY.
2. THE CONTRACTOR IS RESPONSIBLE FOR LANE CLOSURE ANALYSIS. NO LANE CLOSURES ALLOWED DURING DAYTIME, WEEKENDS, OR HOLIDAYS.
3. POSTED SPEED LIMITS TO BE MAINTAINED DURING CONSTRUCTION:
   25 MPH FOR WEST BRIDGE EASTBOUND
   35 MPH FOR WEST BRIDGE WESTBOUND
   40 MPH FOR WILLIAM POWELL BRIDGE
4. ALL CHANELIZING DEVICE SPACING SHOWN IN THE TEMPORARY TRAFFIC CONTROL PLAN SHEETS ARE NOT DRAWN TO SCALE. SEE FDOT STANDARD PLANS INDEX 102-600 FOR SPACING STANDARDS.
5. SEE FDOT STANDARD PLANS INDEX 102-613 FOR MULTILANE ROADWAY LANE CLOSURES.
6. SEE FDOT STANDARD PLANS INDEX 102-660 AND 102-661 FOR PEDESTRIAN AND BICYCLE DETOURS.
7. THE LOCATION FOR THE CONSTRUCTION STAGING AREA IS AT THE NORTHWEST CORNER OF THE BRIDGE, THE ACCESS GATE TO THIS AREA IS LOCATED APPROXIMATELY AT 25°44'01" N, 80°09'42" W. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH MIAMI-DADE DEPARTMENT OF PARKS, RECREATION AND OPEN SPACES.

TWO WEEKS PRIOR TO CONSTRUCTION PCMS MESSAGE SHALL DISPLAY:

R	O	A	D				
W	O	R	K				

PCMS MESSAGE 1

B	E	G	I	N	S		
X	X	-	X	X	-	X	X

PCMS MESSAGE 2

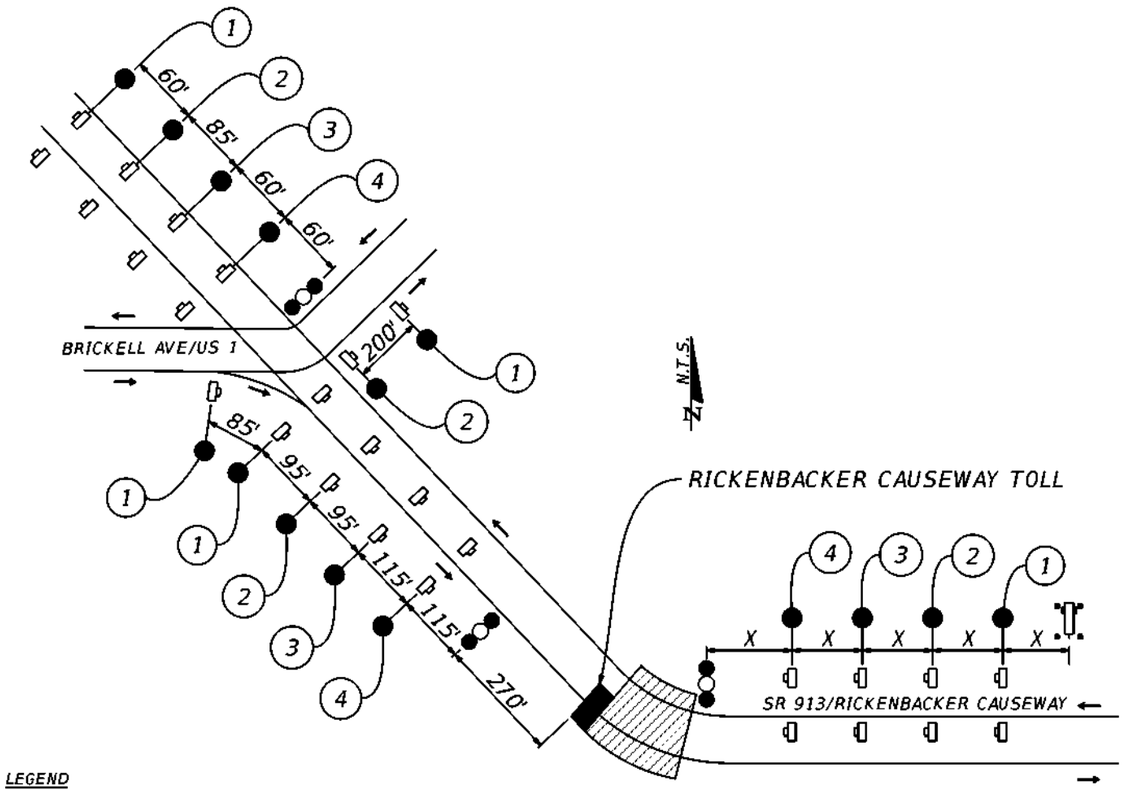
DURING CONSTRUCTION, PCMS MESSAGE SHALL DISPLAY THE FOLLOWING:

R	O	A	D				
W	O	R	K				
A	H	E	A	D			

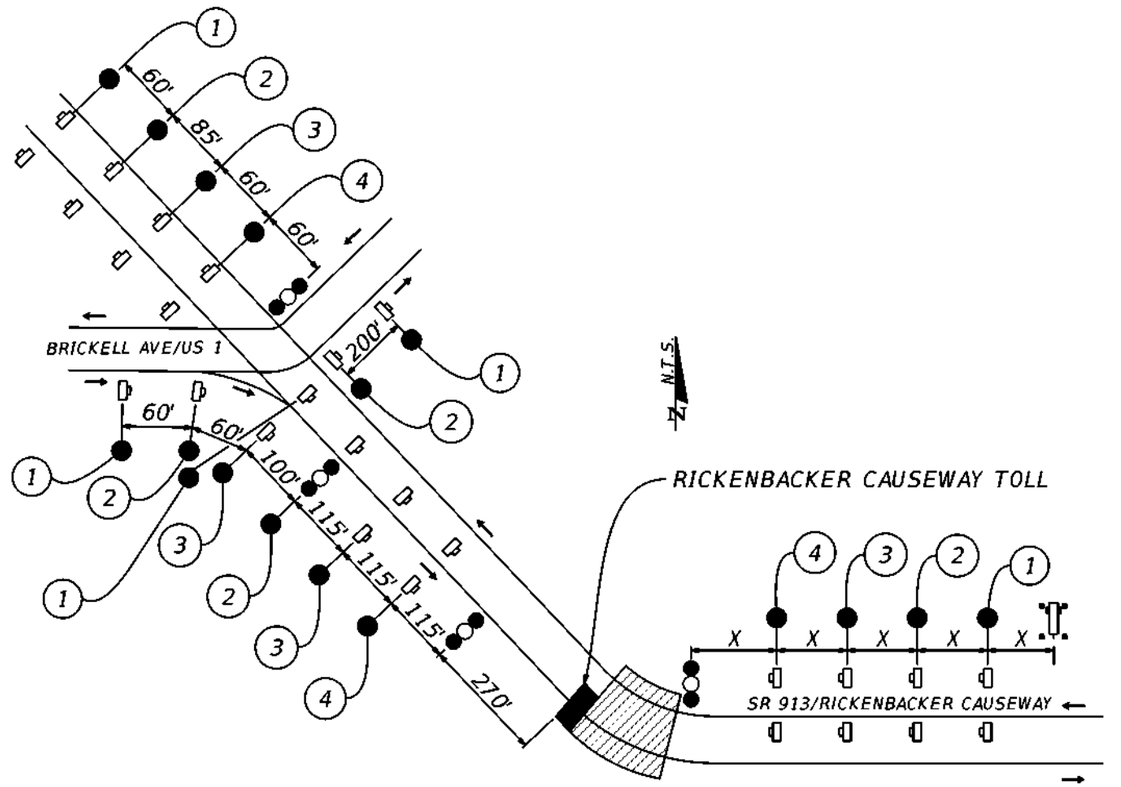
PCMS MESSAGE 1

U	S	E					
C	A	U	T	I	O	N	

PCMS MESSAGE 2



PHASE I



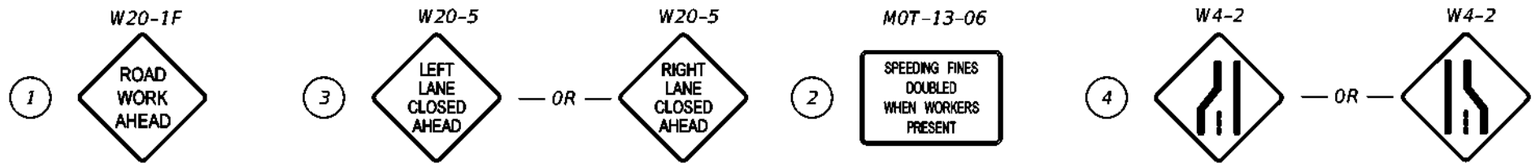
PHASE II

LEGEND

- WORK AREA (SEE INDEX 102-613 AND 102-615)
- WORK ZONE SIGN
- CHANNELIZING DEVICE (SEE INDEX 102-600)
- PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN (PCMS)
- DIRECTION OF TRAFFIC
- ARROW BOARD MODE: MERGE (SEE FDOT STANDARD PLANS FOR LOCATION)

X = SEE FDOT STANDARD PLANS INDEX 102-600 FOR SPACING VALUES.

ADVANCED SIGNING FOR WORK ON WEST BRIDGES



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: GABRIEL GONZALEZ P.E. NO. 86473

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
GG	TB	GG	TB

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

$USERS $DATES $TIMES $FILES

SHEET TITLE: TEMPORARY TRAFFIC CONTROL PLANS (1 OF 4)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-8

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

TEMPORARY TRAFFIC CONTROL GENERAL NOTES

1. THESE TEMPORARY TRAFFIC CONTROL PLANS ARE PRELIMINARY AND TO BE USED AS REFERENCE AND/OR GUIDANCE ONLY. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE FINAL TEMPORARY TRAFFIC CONTROL DESIGN AND OBTAIN APPROVAL BY MIAMI-DADE COUNTY.
2. THE CONTRACTOR IS RESPONSIBLE FOR LANE CLOSURE ANALYSIS. NO LANE CLOSURES ALLOWED DURING DAYTIME, WEEKENDS, OR HOLIDAYS.
3. POSTED SPEED LIMITS TO BE MAINTAINED DURING CONSTRUCTION:
   25 MPH FOR WEST BRIDGE EASTBOUND
   35 MPH FOR WEST BRIDGE WESTBOUND
   40 MPH FOR WILLIAM POWELL BRIDGE
4. ALL CHANELIZING DEVICE SPACING SHOWN IN THE TEMPORARY TRAFFIC CONTROL PLAN SHEETS ARE NOT DRAWN TO SCALE. SEE FDOT STANDARD PLANS INDEX 102-600 FOR SPACING STANDARDS.
5. SEE FDOT STANDARD PLANS INDEX 102-613 FOR MULTILANE ROADWAY LANE CLOSURES.
6. SEE FDOT STANDARD PLANS INDEX 102-660 AND 102-661 FOR PEDESTRIAN AND BICYCLE DETOURS.
7. THE LOCATION FOR THE CONSTRUCTION STAGING AREA IS AT THE NORTHWEST CORNER OF THE BRIDGE, THE ACCESS GATE TO THIS AREA IS LOCATED APPROXIMATELY AT 25°44'01" N, 80°09'42" W. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH MIAMI-DADE DEPARTMENT OF PARKS, RECREATION AND OPEN SPACES.

TWO WEEKS PRIOR TO CONSTRUCTION PCMS MESSAGE SHALL DISPLAY:

R	O	A	D				
W	O	R	K				

PCMS MESSAGE 1

B	E	G	I	N	S		
X	X	-	X	X	-	X	X

PCMS MESSAGE 2

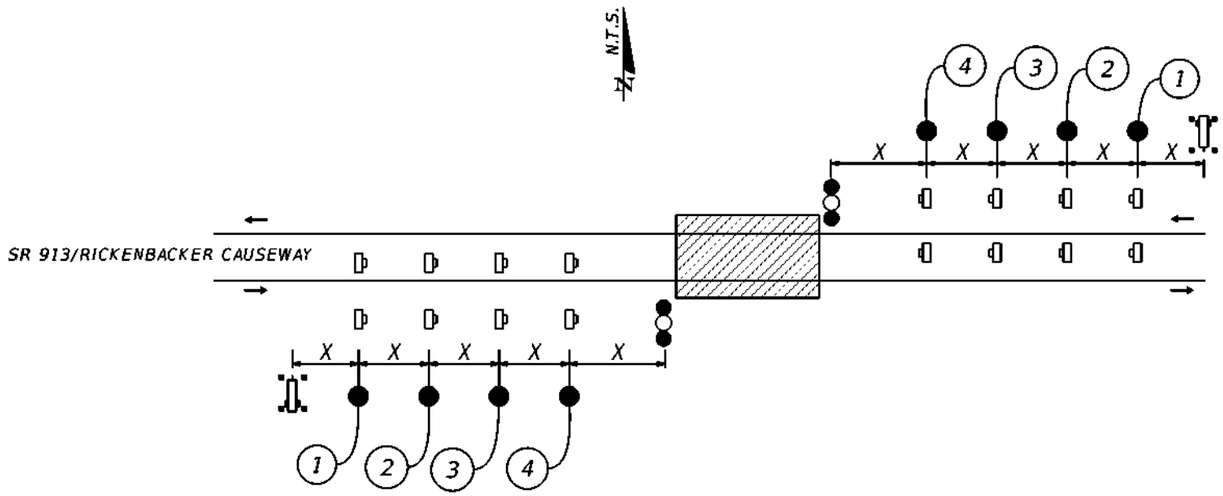
DURING CONSTRUCTION, PCMS MESSAGE SHALL DISPLAY THE FOLLOWING:

R	O	A	D				
W	O	R	K				
A	H	E	A	D			

PCMS MESSAGE 1

U	S	E					
C	A	U	T	I	O	N	

PCMS MESSAGE 2

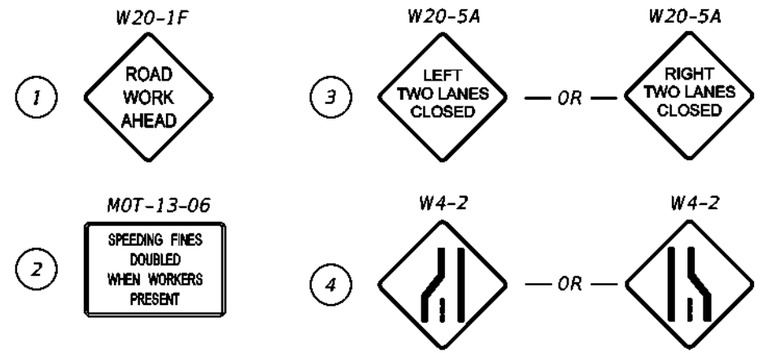


LEGEND

- WORK AREA (SEE INDEX 102-613 AND 102-615)
- WORK ZONE SIGN
- CHANNELIZING DEVICE (SEE INDEX 102-600)
- PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGN (PCMS)
- DIRECTION OF TRAFFIC
- ARROW BOARD MODE: MERGE (SEE FDOT STANDARD PLANS FOR LOCATION)

X = SEE FDOT STANDARD PLANS INDEX 102-600 FOR SPACING VALUES.

ADVANCED SIGNING FOR WILLIAM POWELL BRIDGE



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: GABRIEL GONZALEZ P.E. NO. 86473

DRAWN BY:	GG
CHECKED BY:	TB
DESIGNED BY:	GG
CHECKED BY:	TB

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: TEMPORARY TRAFFIC CONTROL PLANS (2 OF 4)

REF. DWG. NO.:

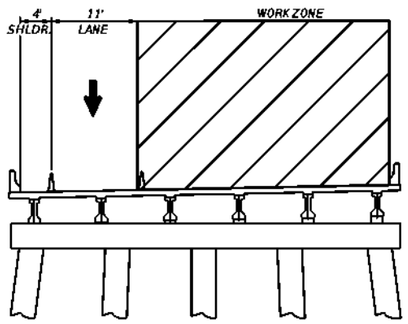
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-9

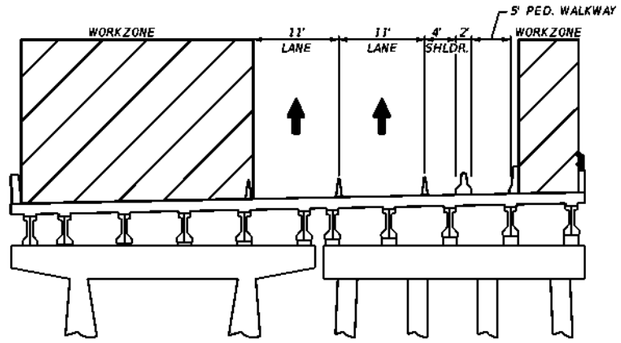
$USERS $DATE$ $TIME$ $FILE$

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

WESTBOUND



EASTBOUND



PHASE I

PHASING NOTES FOR WEST BRIDGES

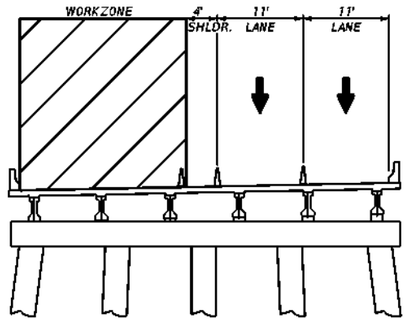
PHASE I (EASTBOUND BRIDGE)

1. INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) ONE WEEK IN ADVANCE OF TRAFFIC CONTROL OPERATIONS.
2. INSTALL ADVANCE WARNING SIGNS, DEVICES, MAINTAIN TRAFFIC PER TTC PLANS AND FDOT STANDARD PLANS INDEX 102-600, 102-602, 102-613, 102-615, 102-660, & 102-661.
3. SHIFT TRAFFIC TO THE OUTSIDE LANES AS SHOWN IN THE TTC TYPICAL.
4. DETOUR PEDESTRIANS TO THE TEMPORARY 5-FOOT PEDESTRIAN WALKWAY AS SHOWN IN THE TTC TYPICAL.
5. DETOUR BICYCLISTS TO THE TEMPORARY 4-FOOT SHOULDER AS SHOWN IN THE TTC TYPICAL.
6. WORK OPERATION ON INSIDE LANES, INSIDE SHOULDER, AND 8-FOOT PEDESTRIAN WALKWAY.

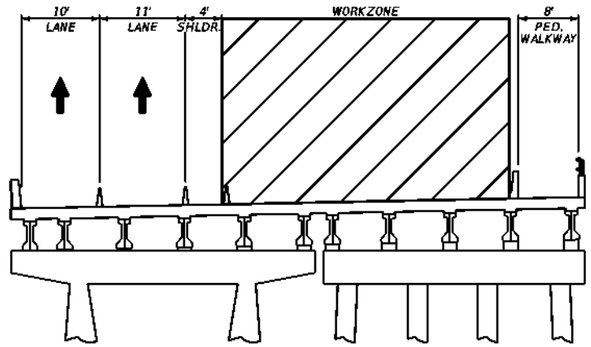
PHASE I (WESTBOUND BRIDGE)

1. INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) ONE WEEK IN ADVANCE OF TRAFFIC CONTROL OPERATIONS.
2. INSTALL ADVANCE WARNING SIGNS, DEVICES, MAINTAIN TRAFFIC PER TTC PLANS AND FDOT STANDARD PLANS INDEX 102-600, 102-602, 102-613, 102-615, 102-660, & 102-661.
3. SHIFT TRAFFIC TO THE OUTSIDE LANE AS SHOWN IN THE TTC TYPICAL.
4. DETOUR BICYCLISTS TO THE TERMPORARY 4-FOOT SHOULDER AS SHOWN IN THE TTC TYPICAL.
5. WORK OPERATION ON INSIDE LANES AND INSIDE SHOULDER.

WESTBOUND



EASTBOUND



PHASE II

PHASE II (EASTBOUND BRIDGE)

1. INSTALL ADVANCE WARNING SIGNS, DEVICES, MAINTAIN TRAFFIC PER TTC PLANS AND FDOT STANDARD PLANS INDEX 102-600, 102-602, 102-613, 102-615, 102-660, & 102-661.
2. SHIFT TRAFFIC TO THE INSIDE LANES AS SHOWN IN THE TTC TYPICAL.
3. SHIFT PEDESTRIANS BACK TO THE 8-FOOT PEDESTRIAN WALKWAY.
4. DETOUR BICYCLISTS TO THE TERMPORARY 4-FOOT SHOULDER AS SHOWN IN THE TTC TYPICAL.
5. WORK OPERATION ON OUTSIDE LANES AND OUTSIDE SHOULDER.

PHASE II (WESTBOUND BRIDGE)

1. INSTALL ADVANCE WARNING SIGNS, DEVICES, MAINTAIN TRAFFIC PER TTC PLANS AND FDOT STANDARD PLANS INDEX 102-600, 102-602, 102-613, 102-615, 102-660, & 102-661.
2. SHIFT TRAFFIC TO THE INSIDE LANES AS SHOWN IN THE TTC TYPICAL.
3. DETOUR BICYCLISTS TO THE TEMPORARY 4-FOOT SHOULDER AS SHOWN IN THE TTC TYPICAL.
4. WORK OPERATION ON OUTSIDE LANES AND OUTSIDE SHOULDER.

LEGEND

CHANNELIZING DEVICE

PEDESTRIAN LCD

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: GABRIEL GONZALEZ P.E. NO. 86473

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
GG	TB	GG	TB

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

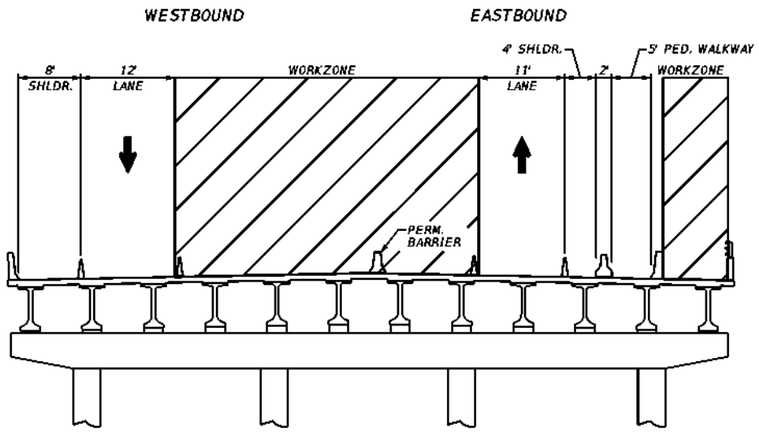
SHEET TITLE: TEMPORARY TRAFFIC CONTROL PLANS (3 OF 4)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-10

$USERS $DATE$ $TIME$ $FILE$

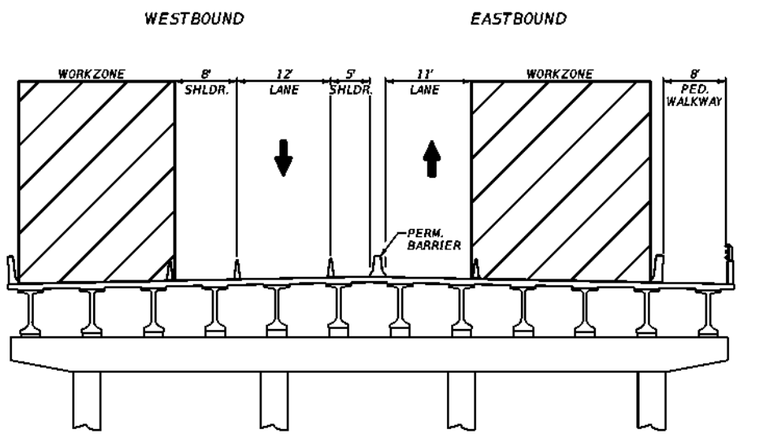


PHASE I

PHASING NOTES FOR WILLIAM POWELL BRIDGE

PHASE I

1. INSTALL PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) ONE WEEK IN ADVANCE OF TRAFFIC CONTROL OPERATIONS.
2. INSTALL ADVANCE WARNING SIGNS, DEVICES, MAINTAIN TRAFFIC PER TTC PLANS AND FDOT STANDARD PLANS INDEX 102-600, 102-602, 102-613, 102-660, & 102-661.
3. SHIFT TRAFFIC TO THE OUTSIDE LANES AS SHOWN IN THE TTC TYPICAL.
4. DETOUR PEDESTRIANS TO THE TEMPORARY 5-FOOT PEDESTRIAN WALKWAY AS SHOWN IN THE TTC TYPICAL.
5. DETOUR BICYCLISTS TO THE TEMPORARY EASTBOUND 4-FOOT SHOULDER AND TEMPORARY WESTBOUND 8-FOOT SHOULDER AS SHOWN IN THE TTC TYPICAL.
6. WORK OPERATION ON INSIDE LANES, INSIDE SHOULDERS, AND 8-FOOT PEDESTRIAN WALKWAY.



PHASE II

PHASE II

1. INSTALL ADVANCE WARNING SIGNS, DEVICES, MAINTAIN TRAFFIC PER TTC PLANS AND FDOT STANDARD PLANS INDEX 102-600, 102-602, 102-613, 102-660, & 102-661.
2. SHIFT TRAFFIC TO THE INSIDE LANES AS SHOWN IN THE TTC TYPICAL.
3. SHIFT PEDESTRIANS BACK TO THE 8-FOOT PEDESTRIAN WALKWAY.
4. DETOUR BICYCLISTS TO THE 8-FOOT PEDESTRIAN WALKWAY (TO BE USED AS SHARED-USE PATH (SUP) FOR WESTBOUND) AND TO THE TEMPORARY WESTBOUND 8-FOOT SHOULDER AS SHOWN IN THE TTC TYPICAL.
5. WORK OPERATION ON OUTSIDE LANES AND OUTSIDE SHOULDERS.

LEGEND

CHANNELIZING DEVICE

PEDESTRIAN LCD

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: GABRIEL GONZALEZ P.E. NO. 86473

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
GG	TB	GG	TB

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

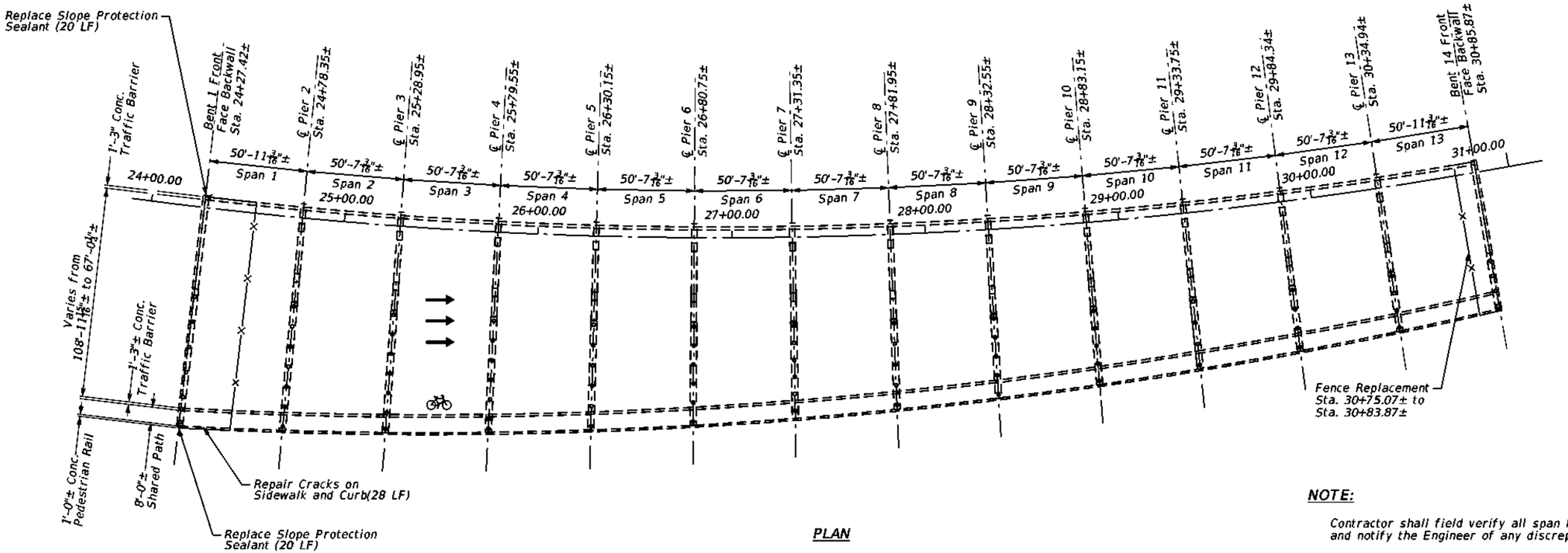
SHEET TITLE: TEMPORARY TRAFFIC CONTROL PLANS (4 OF 4)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-11

$USERS $DATE$ $TIME$ $FILE$



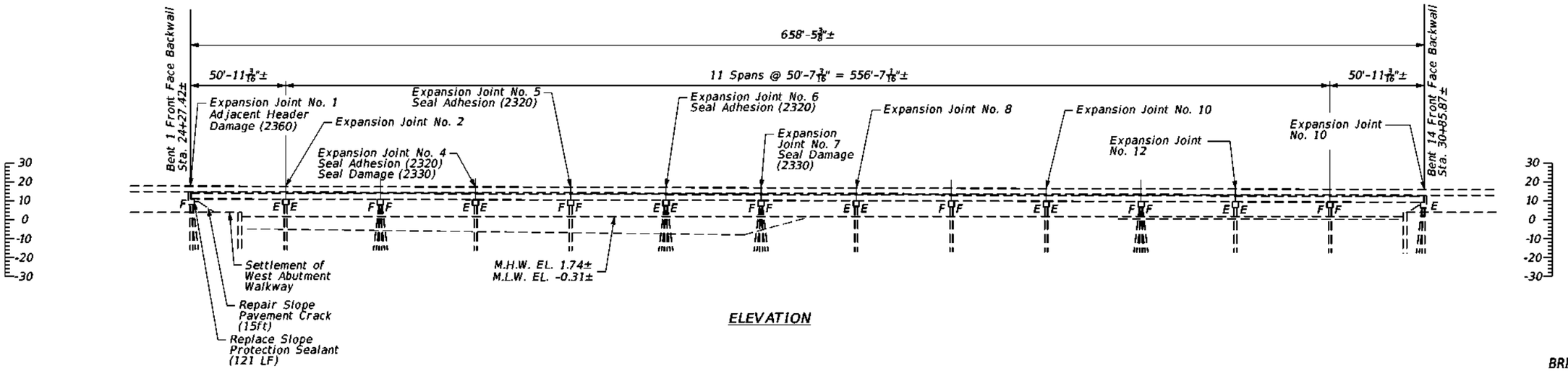
PLAN

0 15 30 45 60

Feet

NOTE:

Contractor shall field verify all span lengths and skew angles and notify the Engineer of any discrepancies.



ELEVATION

BRIDGE NO. 874541

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY:	CGP
CHECKED BY:	BWC
DESIGNED BY:	CGP
CHECKED BY:	BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

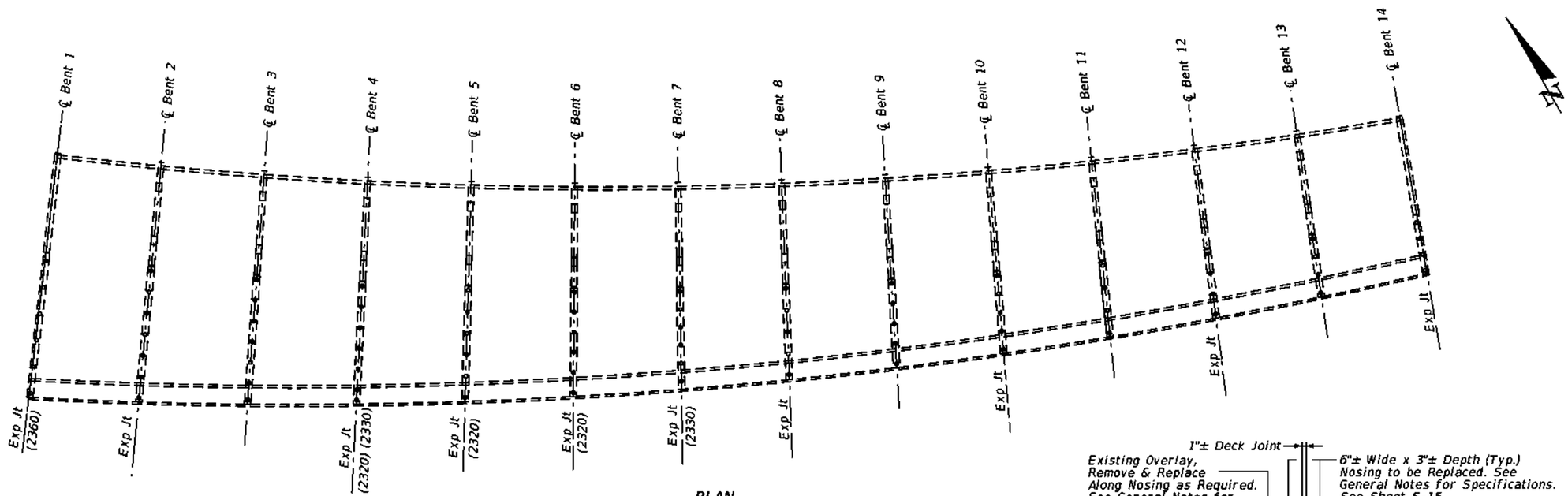
SHEET TITLE: GENERAL PLAN & ELEVATION

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-12

SUBSETS | DATES | TIMES | FILES



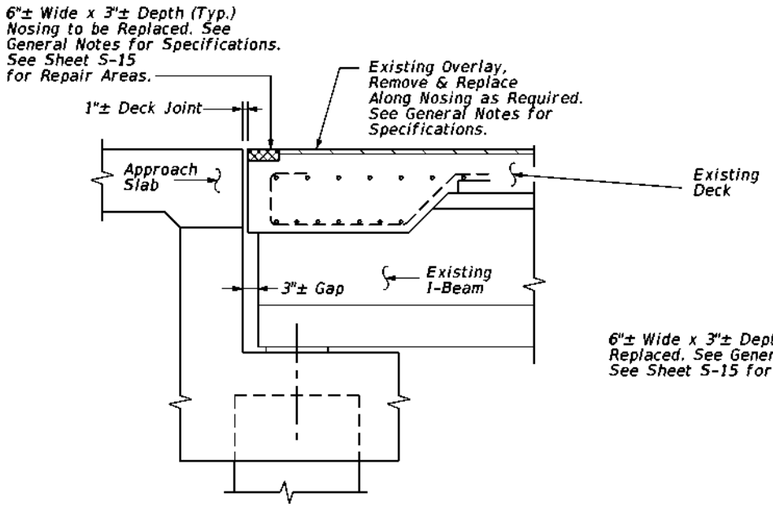
PLAN

0 15 30 45 60
Feet

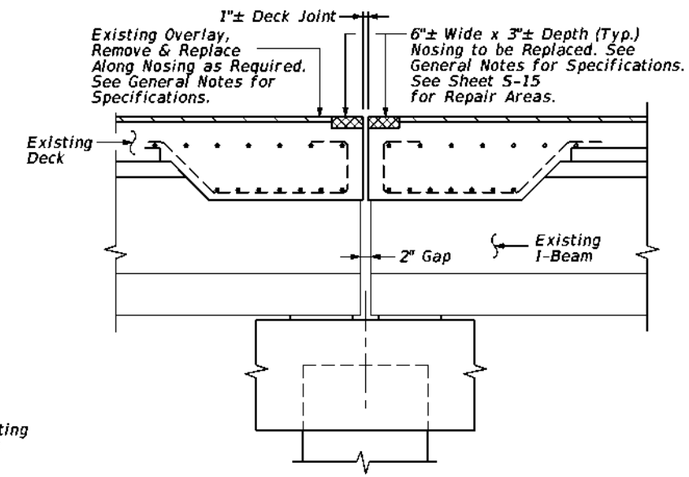
NOTES FOR REPAIR OF JOINTS:

1. THE WORK TO BE COMPLETED INCLUDES CLEANING AND INSTALLATION OF A NEW WATER TIGHT JOINT AT ALL BENTS.
2. THE JOINT SHALL BE AIR BLASTED TO REMOVE ALL LOOSE MATERIAL THE CONTRACTOR SHALL SUBMIT A DEBRIS CONTAINMENT PLAN TO THE ENGINEER FOR APPROVAL.
3. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING REINFORCEMENT, UNLESS OTHERWISE NOTED.
4. THE WIDTH OF REMOVAL OF EXISTING DECK CONCRETE SHALL REMAIN CONSTANT THROUGHOUT THE REPAIR AREA OF THE JOINT.
5. EXISTING JOINT WIDTH FROM EXISTING PLANS, CONTRACTOR TO FIELD VERIFY, JOINT WIDTH VARIES WITH TEMPERATURE.
6. 2" CLEAR COVER SHALL BE MAINTAINED FOR ALL BARS.
7. A CLEAN SAWCUT LINE IS REQUIRED FOR CONCRETE REMOVAL AROUND JOINTS.
8. ALL JOINTS ARE TO BE REMOVED AND REPLACED. REMOVAL OF THE FOAM BACKER ROD AND POURED JOINT MATERIAL IS INCIDENTAL TO THE "BRIDGE DECK EXPANSION JT., REHAB, POURED JOINT WITH BACKER ROD".
9. SEE SHEET S-15 FOR AREAS OF NOSING REPAIR.
10. EXISTING REINFORCEMENT WITHIN REPAIR AREA TO REMAIN IN PLACE.
11. EXISTING REINFORCEMENT THAT IS DAMAGED/NON-SALVAGEABLE SHALL BE REPLACED WITH DRILLED OR EPOXY GROUTED BARS AT NO ADDITIONAL COST.

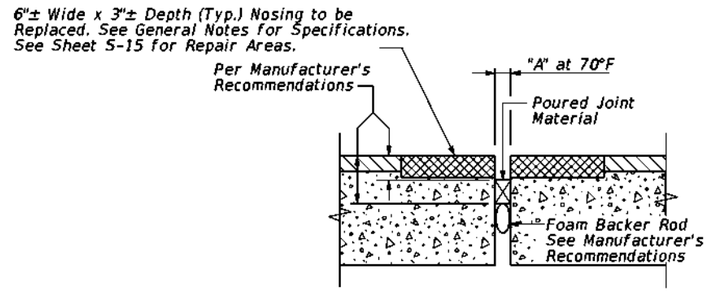
EXPANSION JOINT DATA TABLE			
LOCATION	DIMENSION "A" AT 70°F	DIMENSION "A" ADJUSTMENT PER 10°F	TOTAL DESIGN MOVEMENT
ALL	1"	0.017"	0.06"



SUPERSTRUCTURE
SECTION AT END BENT 1



SUPERSTRUCTURE
SECTION AT INTERMEDIATE BENTS



TYPICAL SECTION THRU JOINT

BRIDGE NO. 874541

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: JOINT REPLACEMENT LOCATION & DETAILS (1 OF 2)

REF. DWG. NO.:

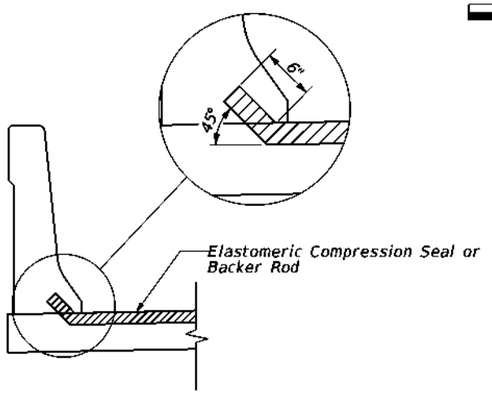
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-13

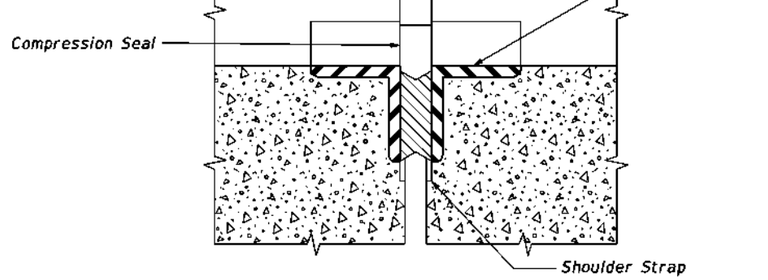
$USERS $DATE$ $TIME$ $FILE$

PLAN

0 15 30 45 60
Feet



SECTION THROUGH BARRIER



EXISTING ELASTROMERIC COMPRESSION SEAL JOINTS OVER SIDEWALK

EXPANSION JOINT DATA TABLE				
LOCATION	END BENTS	EXP. BENTS	FIXED BENTS	END BENT 14
TOTAL MOVEMENT	0	$\frac{3}{4}$"	0	$\frac{3}{8}$"
RANGE OF "Y"	0	$1\frac{1}{4}$"-2"	0	$1\frac{3}{8}$"-$1\frac{3}{4}$"
"X"	0	$\frac{1}{16}$"	0	$\frac{1}{32}$"
"Y" AT 70°	$1\frac{1}{2}$"	$1\frac{1}{2}$"	$1\frac{1}{2}$"	$1\frac{1}{2}$"
"Z" AT 70°	$\frac{3}{4}$"	$\frac{3}{4}$"	$\frac{3}{4}$"	$\frac{3}{4}$"

BRIDGE NO. 874541

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

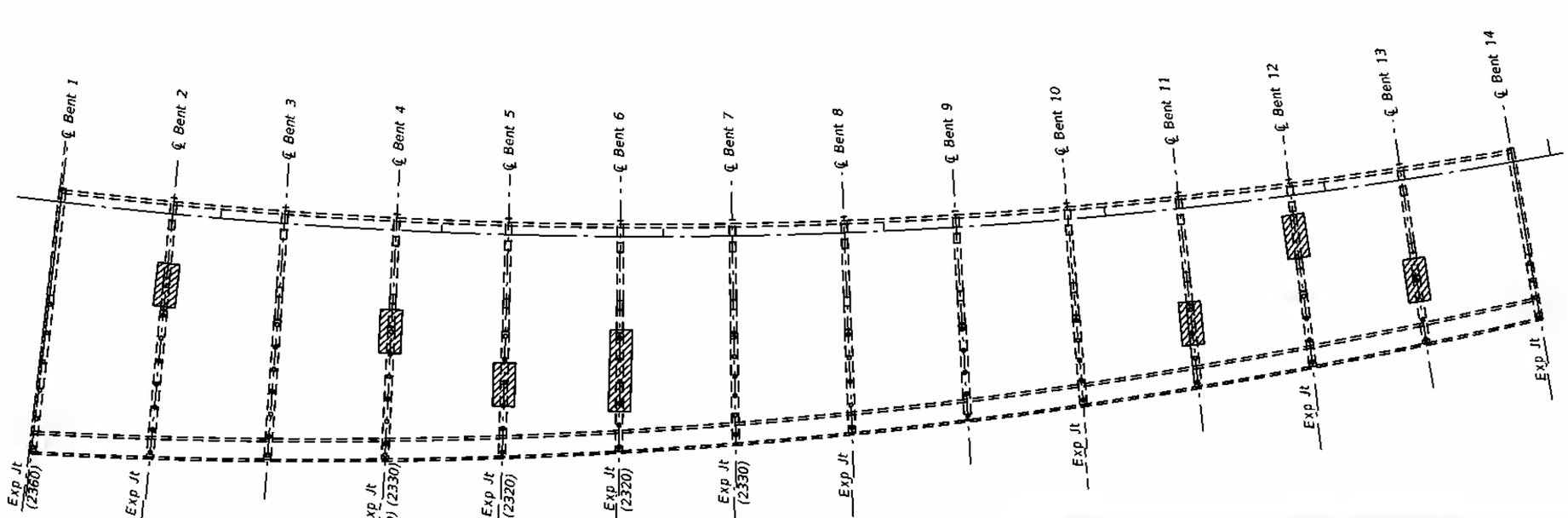
MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: JOINT REPLACEMENT LOCATION & DETAILS (2 OF 2)
REF. DWG. NO.:
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY
SHEET NO.: S-14

$USERS $DATES $TIMES $FILES

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



PLAN

0 15 30 45 60

Feet

2360	ADJACENT HEADER DAMAGE - NOSING REPAIR

EXPANSION JT. DEFICIENCIES		
		NOSING REPAIR QUANTITY
JOINT	2360	(ASSUME .083'D x 0.5'W x L)(CF)
	(FT)	
VARIOUS	70	2.9050
2	2	0.0830
4	4	0.1660
5	6	0.2490
6	4	0.1660
6	7	0.2905

Note: Various joint deficiencies have not been shown in plan view above

LEGEND

Expansion Joints to be Repaired

2320	SEAL ADHESION

EXPANSION JT. DEFICIENCIES	
JOINT	2320
	(FT)
4	63.50
5	60.17
6	56.92
11	40.92
12	37.75
13	34.67

2330	SEAL DAMAGE

COMPRESSION JT. DEFICIENCIES	
JOINT	2330
	(FT)
VARIOUS	100.00
VARIOUS	100.00
8	50.50
11	40.92

Note: Compression joint deficiencies have not been shown in plan view above. Cost for cleaning and painting joint armor angles shall be included in the cost for Bridge Deck Expansion Jt., Rehab, Compression Elastomeric

BRIDGE NO. 874541

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

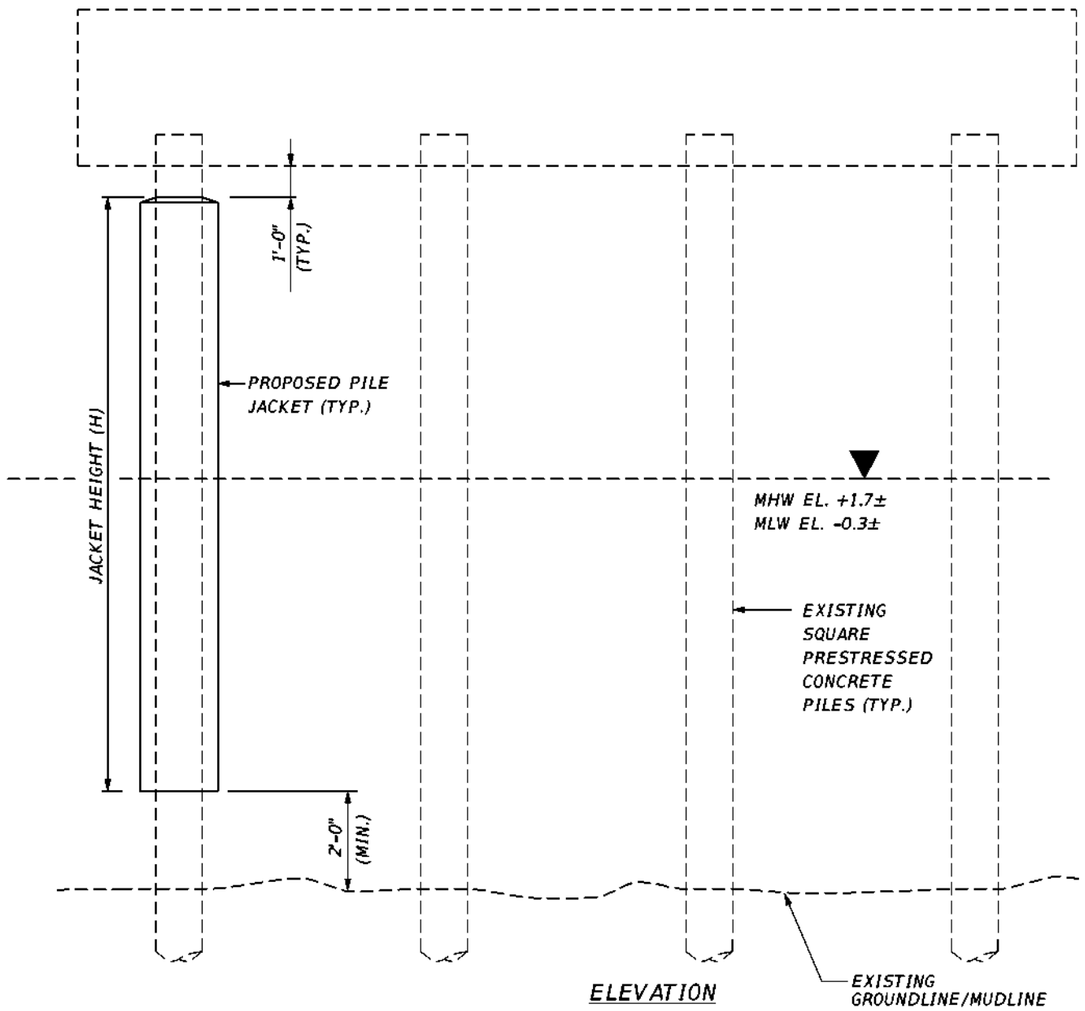
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	[illegible]

EXPANSION JOINT REPAIR

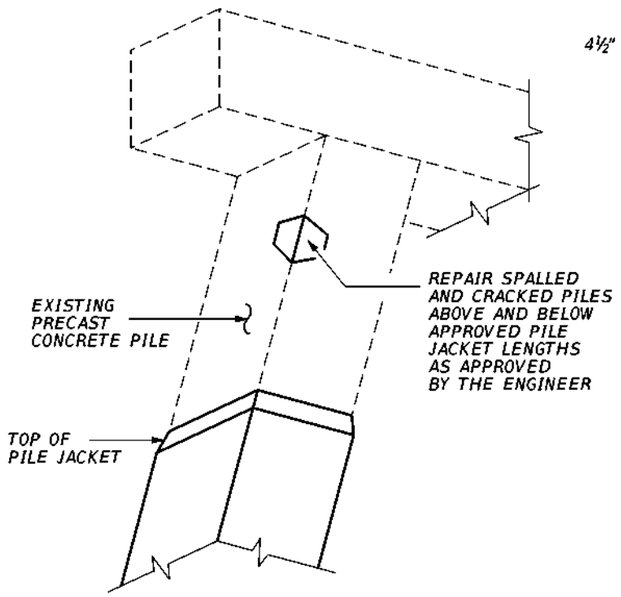
REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

REF. DWG. NO.

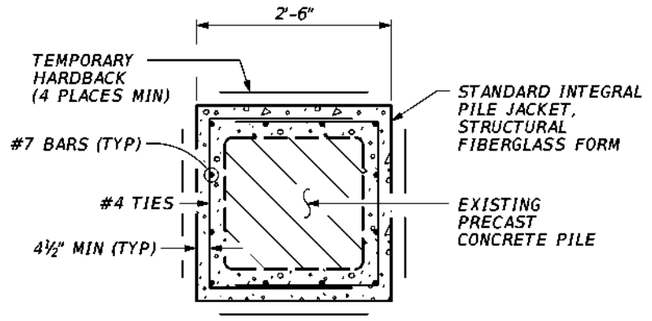
SHEET NO. S-15



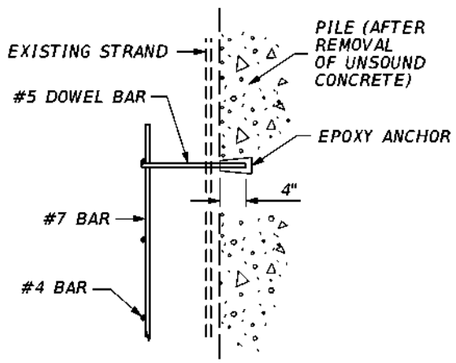
ELEVATION



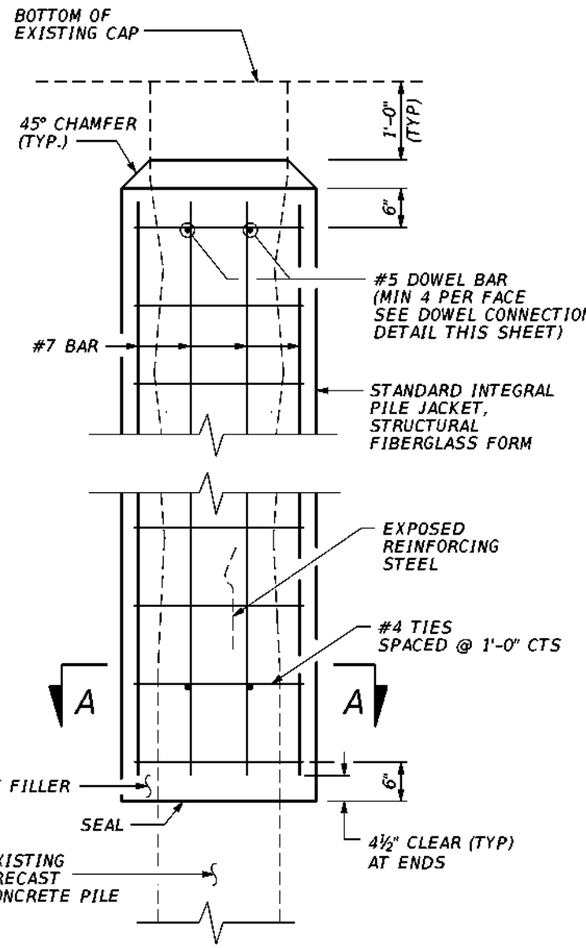
CONCRETE PILE DEFICIENCES



SECTION A-A THRU PILE JACKET



DOWEL CONNECTION



STANDARD INTEGRAL PILE JACKET

WORK IDENTIFICATION

1. CLEAN ALL PILES OF ALL MARINE GROWTH.
2. INSTALL STRUCTURAL PILE JACKET ON THE PILE AS DETAILED ON PILE JACKET DETAIL SHEETS.
3. STRUCTURAL JACKETS SHALL BE CONSTRUCTED USING REBAR AND CONCRETE FILLER.
4. PILE NUMBERING IS BASED ON LOOKING STATIONS AHEAD AND COUNTING LEFT TO RIGHT FOR ALL BENTS (BENT-PILE).
5. REPAIR SPALLS OUTSIDE THE LIMITS OF THE APPROVED JACKET LENGTHS IN ACCORDANCE WITH CONCRETE RESTORATION DETAILS SHEET.
6. THE CONTRACTOR SHALL CONFIRM EXISTING GROUNDLINE/MUDLINE ELEVATIONS WITH THE ENGINEER PRIOR TO ORDERING MATERIAL. MINOR ADJUSTMENTS MAY BECOME NECESSARY DUE TO FIELD AND CONSTRUCTION CONDITIONS.
7. WORK ON A MAXIMUM OF TWO PILES PER BENT AT ONE TIME. THE TWO PILES CANNOT BE ADJACENT TO EACH OTHER DURING WORK. BENTS MAY NOT BE ADJACENT TO EACH OTHER DURING WORK.

BRIDGE NO. 874541

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
CGP	BWC	CGP	BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

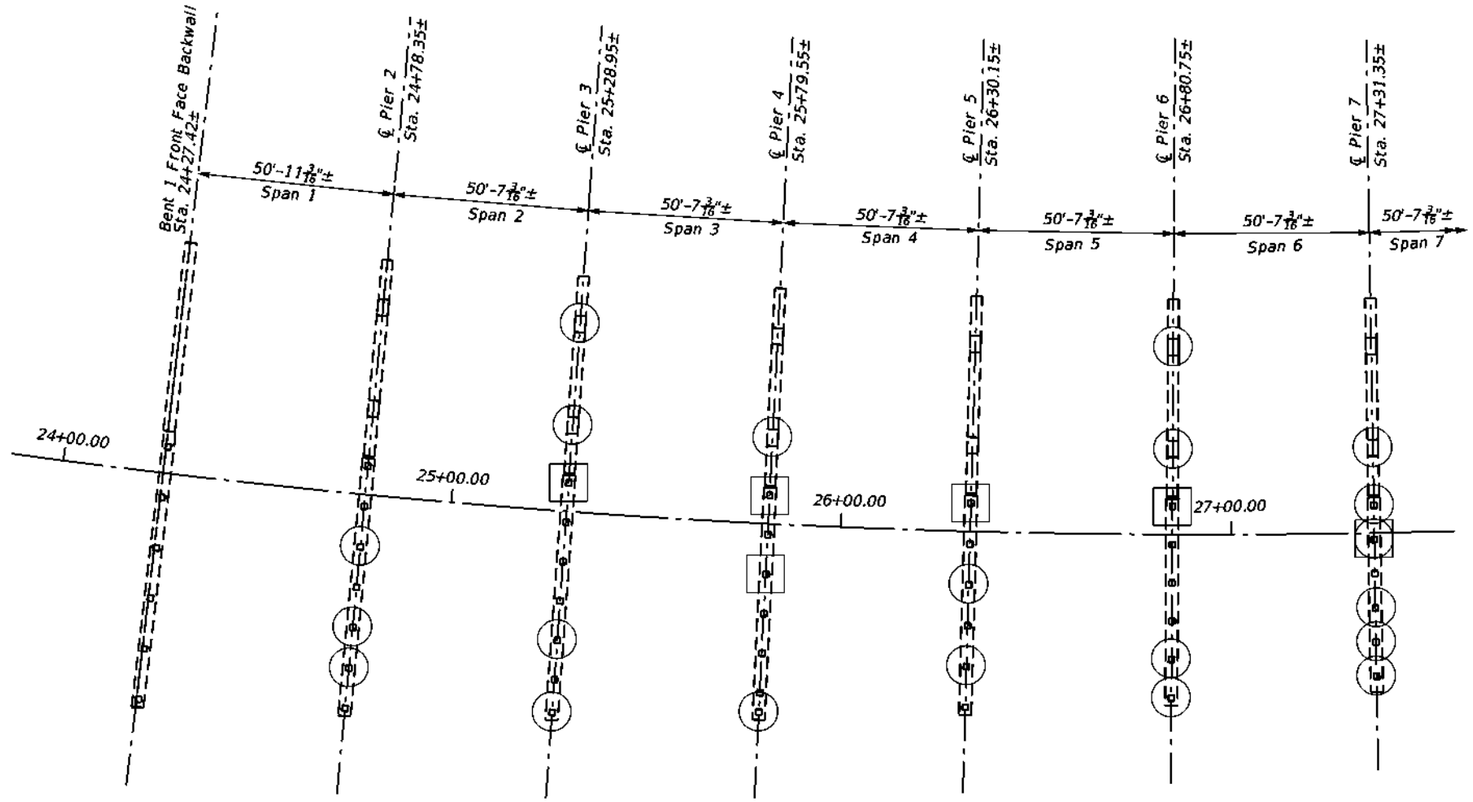
SHEET TITLE: PILE JACKET DETAILS

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

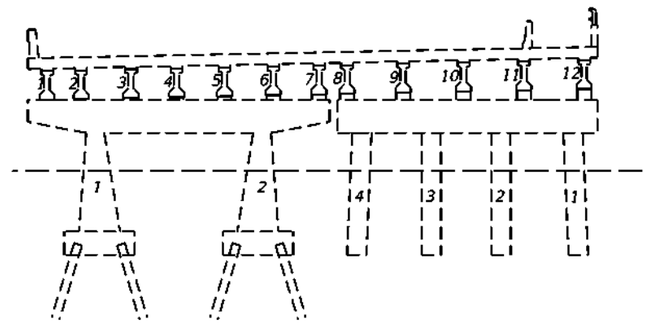
SHEET NO.: S-16

$USER$ $DATE$ $TIME$ $FILE$



PLAN

0 15 30 45 60
Feet



SECTION LOOKING EAST

Note: Number of beams decreases from 16 to 12 downstation
Number of piles under west cap varies from 7 to 4 downstation

LEGEND

Pile/Column Repair
See Details, General Notes
& Consult Field Engineer for
Extent of Reconstruction

Pile Jacket Protection Required
See Details, General Notes
& Consult Filed Engineer for
Extent of Reconstruction

ESTIMATE OF QUANTITIES (1 OF 2)
See Details & General Notes

PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	COLUMN #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	411-2 CRACKS INJECT & SEAL - STRUCTURES REHAB (LF)
2-2	0.003	-	5-6	-	6.0	3-1	0.125	-
2-3	0.005	-	6-1	0.002	-	3-2	0.139	-
2-5	0.009	-	6-2	0.076	-	4-2	0.833	-
3-1	0.003	-	6-6	-	9.0	6-1	0.556	-
3-3	0.002	-	7-1	0.019	-	6-2	1.250	-
3-7	-	3.5	7-2	0.003	-	7-2	0.833	-
4-1	0.005	-	7-3	0.004	-			
4-5	-	11.0	7-5	0.042	0.833			
4-7	-	2.5	7-6	0.005	-			
5-2	0.030	-						
5-4	0.005	-						
SUB-TOTAL	0.062	17.0	SUB-TOTAL	0.151	49.8	SUB-TOTAL	3.736	0

BRIDGE NO. 874541

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: LOCATIONS OF SUBSTRUCTURE REPAIRS (1 OF 2)

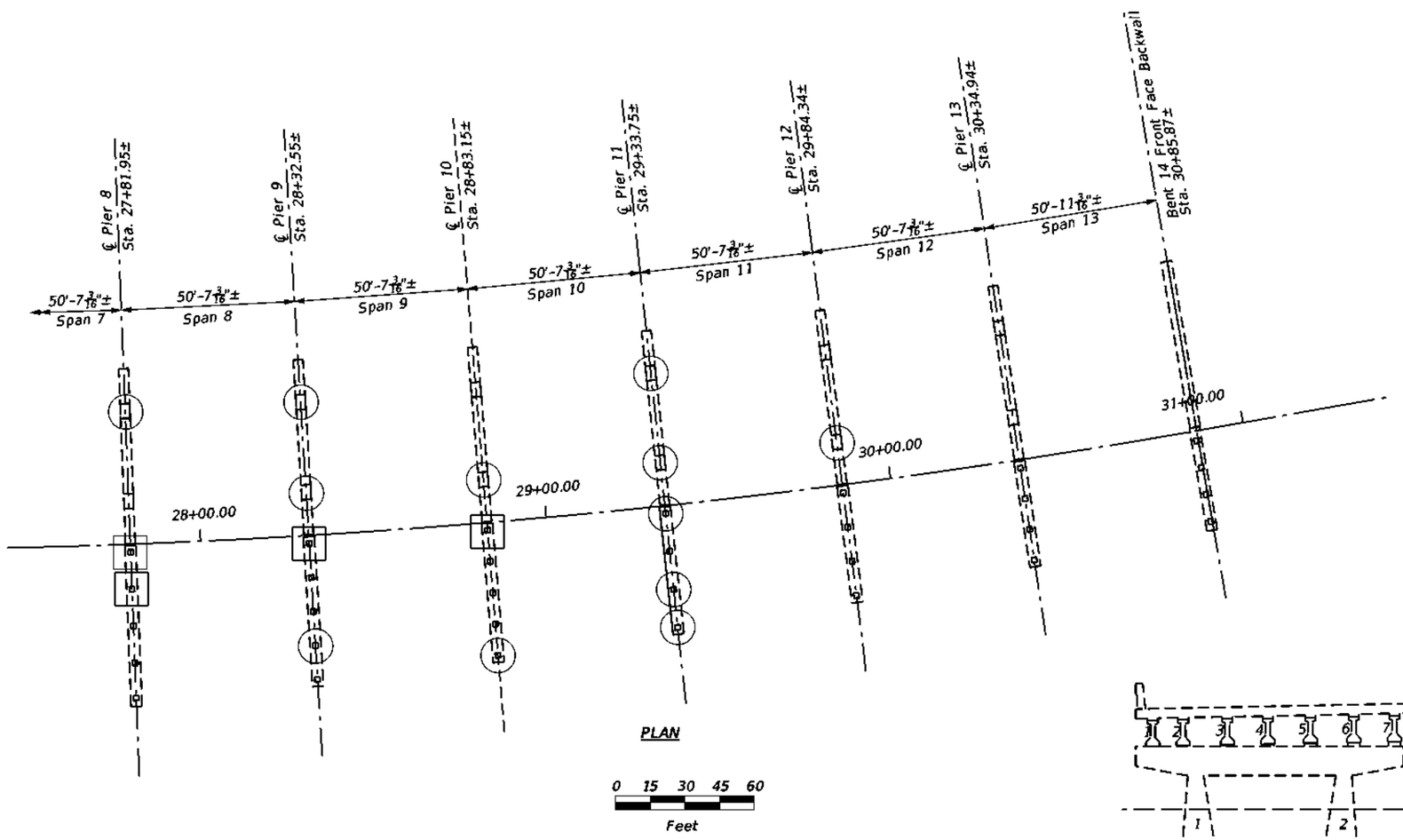
REF. DWG. NO.

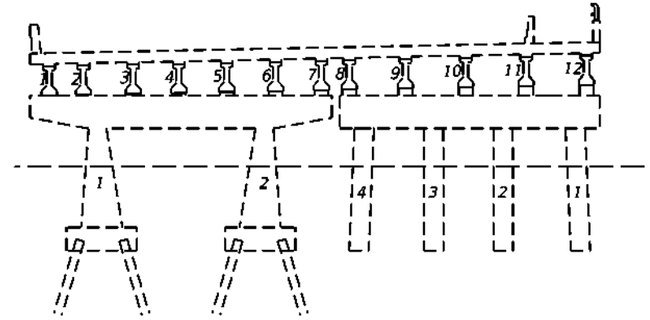
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-17

$USERS $DATES $TIMES $FILES

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





SECTION LOOKING EAST

Note: Number of beams decreases from 16 to 12 downstation
Number of piles under west cap varies from 7 to 4 downstation

LEGEND

- Pile/Column Repair See Details, General Notes & Consult Field Engineer for Extent of Reconstruction
- Pile Jacket Protection Required See Details, General Notes & Consult Filed Engineer for Extent of Reconstruction

ESTIMATE OF QUANTITIES (2 OF 2)
See Details & General Notes

PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	COLUMN #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	411-2 CRACKS INJECT & SEAL - STRUCTURES REHAB (LF)
8-4	-	3.0	8-1	3.000	-
8-5	-	5.0	9-1	-	1.5
9-2	0.006	-	9-2	0.046	-
9-5	-	8.0	10-2	-	4.0
10-1	0.023	-	11-1	4.500	-
10-5	-	8.0	11-2	-	3.0
11-1	0.009	-	12-2	0.375	-
11-2	0.014	-			
11-4	0.004	-			
SUB-TOTAL	0.056	24.0	SUB-TOTAL	7.921	9.0

BRIDGE NO. 874541

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

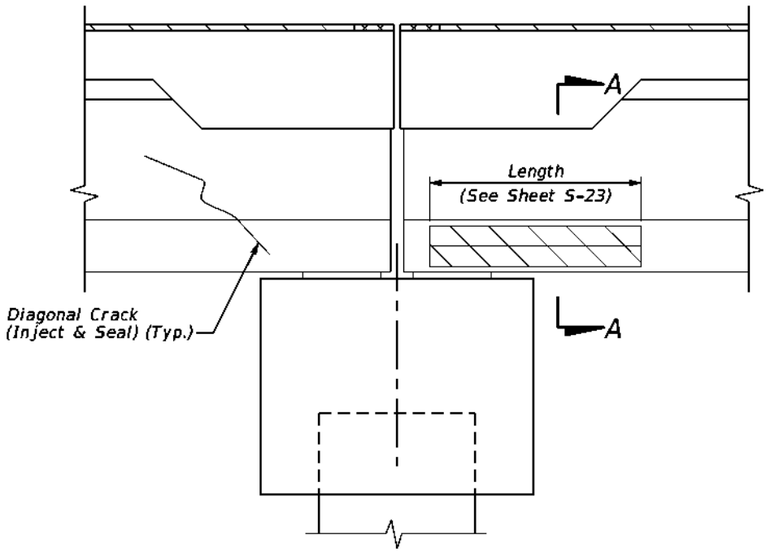
SHEET TITLE: LOCATIONS OF SUBSTRUCTURE REPAIRS (2 OF 2)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

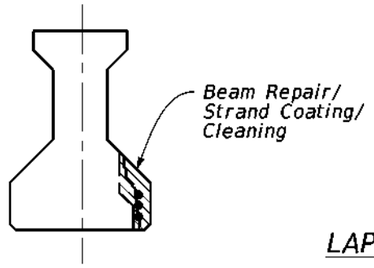
SHEET NO. S-18

SUBFAS DATES STIMES SFILES



TYPICAL BEAM SHOWING EXPOSED REBAR/STRANDS

Concrete Beams with cracks shown on Sheet S-23 to be injected and sealed. Use Type F-1 compound epoxy for sealing crack surfaces in preparation for injection. Refer to Section 411 of standard specifications for additional information.



SECTION A-A

LAP SPLICE TABLE

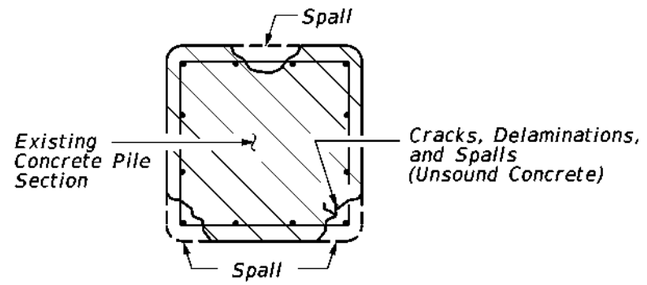
Rebar Size	Lap Splice Length
4	1'-0"
5	1'-3"
6	1'-6"
7	2'-1"
8	2'-8"
9	3'-5"
10	4'-4"
11	5'-4"

TYPICAL CRACK REPAIR METHOD

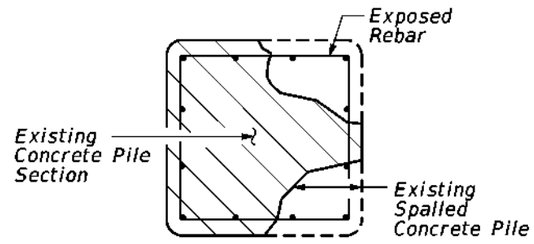
1. Cracks to be Repaired as Directed by the Engineer.
2. Remove Unsound Concrete from Crack Area.
3. Obtain Engineer's Approval to Carry Out Crack Repair (in Lieu of Spall Repair) for Cases Where Adjacent Concrete is Otherwise Unsound and Cracking is not a Result of Corroding Reinforcement.
4. For Cracks 1/32" to 1/8" use an Epoxy Resin with Minimum Viscosity of 325 cps, 28 day Compressive Strength of 13000 psi. for Cracks 1/8" to 1/4" use an Injection Gel or Equal Non-Sag Paste with 28 day Compressive Strength of 10000 psi.
5. For Cap Seal, use Injection Gel with Minimum 28 Day Compressive Strength of 12000 psi.
6. Engineer to Approve Crack and Cap Seal Material Prior to Beginning of Construction.
7. Apply Class II Finish at Completion of Crack Repair to Remove Fins or Knobs.

TYPICAL SPALL REPAIR

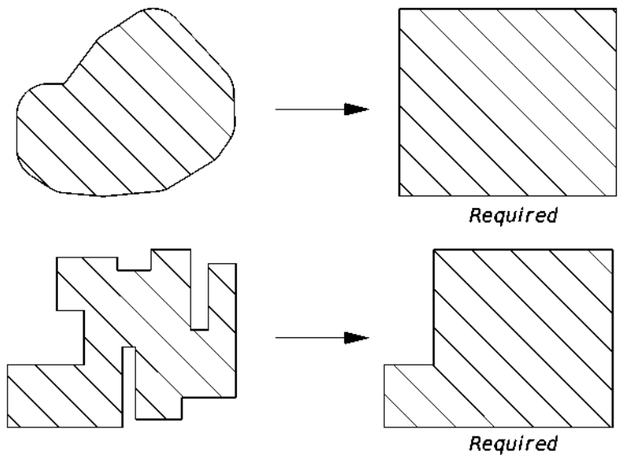
1. For Concrete Restoration, Remove and Repair Unsound Concrete from Areas to be Repaired in Accordance with this Sheet and the Technical Special Provisions. Areas Well Adhered to Existing Strand or Reinforcement Shall Remain.
2. Any Reinforcement Which is Loose shall be Secured in Place by Tying to other Secured Bars or by other Approved Methods. Lap Splices shall be Installed in Accordance with the Table.
3. Clean Exposed Rebar and Any Loose Concrete or Abrasives by Sandblasting.
4. Perform all sand blasting in accordance with the containment procedures as specified in Section 561 of the FDOT Standard Specifications. The containment system must comply with all applicable Federal, State, and Local regulations.
5. Fill Voids with Repair Material in Accordance with the Technical Special Provisions and FDOT Specifications.
6. Apply primer to area then apply epoxy coating. Coating shall extend 6" from the edge of the spall in every direction. Check coating thickness and inspect for defects.



TYPICAL DELAMINATIONS AND SPALLS

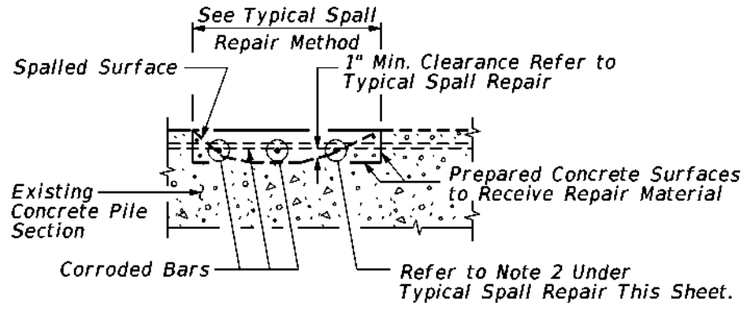


TYPICAL SPALL WITH EXPOSED REBAR



SIMPLE PATCH CONFIGURATION

At Corner Location Provide Right Angle Cuts.
Patch Configuration Shall be Kept as Simple as Possible.
Individual Repair Areas Within 2 Feet Shall be Joined at the Direction of the Engineer.



EXPOSING AND UNDERCUTTING REINFORCING STEEL

Applicable to Horizontal, Vertical, and Overhead Locations

BRIDGE NO. 874541

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

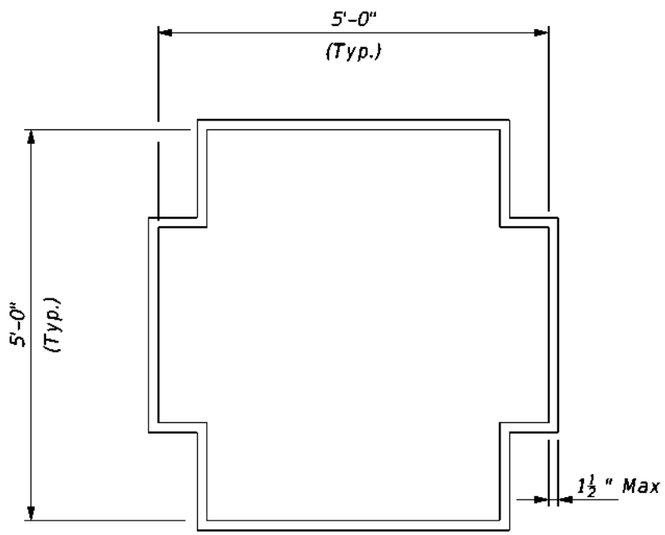
SHEET TITLE: CONCRETE REPAIR & CRACK INJECT/SEAL DETAILS

REF. DWG. NO.:

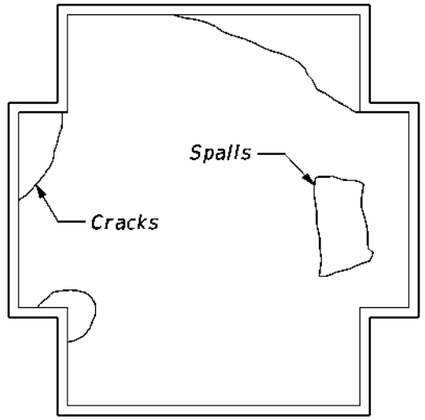
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-19

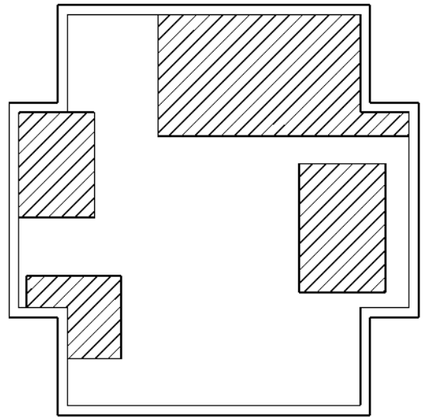
$USERS $DATES $TIMES $FILES



TYPICAL PANEL



TYPICAL PANEL W/ CRACKING AND SPALLS



TYPICAL REMOVAL AREAS

LOCATION	DEFECT	DEFICIENCY	QTY (EA)	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
NORTHWEST MSE WALL	1080	Spall/Delam (Various sizes) w/ Exposed Rebar	1	2.583	0.667	0.250	0.431	0.016

MSE WALL DEFICIENCIES

NOTES:

Contractor shall saw-cut no greater than 1½", use hand methods to remove concrete.

Contractor shall monitor the condition of the separation fabric and take care not to damage.

LEGEND:

Removal Areas

BRIDGE NO. 874541

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

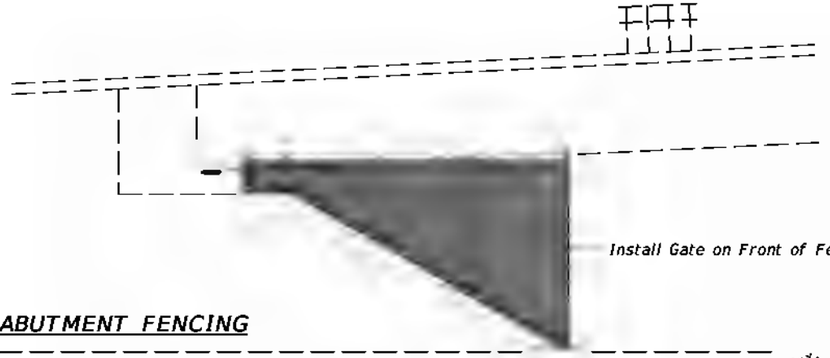
SHEET TITLE: MSE WALL REPAIR

REF. DWG. NO.:

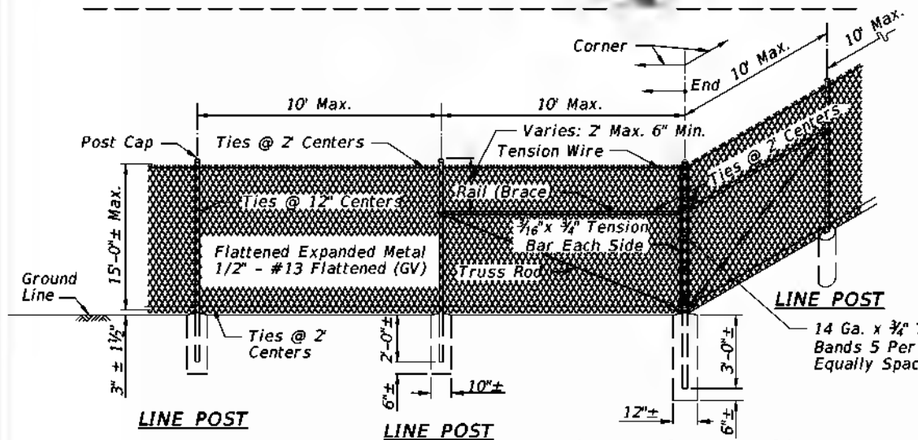
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-20

$USERS $DATES $TIMES $FILES



WEST ABUTMENT FENCING



CORNER OR END POST

CENTER OR END POST

NOTE: Tubular Post Illustrated

GENERAL NOTES:

1. For supplemental information refer to Spec. 550.
2. Post, truss rods, tension wires, tie wires, stretcher bars, gates and all miscellaneous hardware shall meet the requirements of AASHTO and ASTM signify current reference.
3. Fence Component Options:

A. Line post options:

(1) Galvanized steel pipe, Schedule 40- 1½" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².: ASTM A53 Table 2 (Grade A or B), ASTM F1083, and AASHTO M111.

(2) Aluminum coated steel pipe: ASTM A53, Table 2 (Grade A or B): Schedule 40- 1½" nominal dia., 1.90" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.

(3) Aluminum alloy pipe- 2" nominal dia.: ASTM B241 or B221, Alloy 6063, T6.

(4) Steel H-Beam- 1⅞"x 1⅝": Zinc Galv. 1.8 oz./ft.: AASHTO M111 and Detail.

(5) Aluminum alloy H-Beam- 1⅞"X 1⅝" Detail.

(6) Steel C- 1⅞"X 1⅝": Galv.: 1.8 oz/ft. zinc: AASHTO M111; OR , 0.9 oz./ft². zinc-5% aluminum-mischmetal: ASTM F1043 and Detail.

(7) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2" OD, 1½" NPS, 1.900" dec. equiv., 0.120" min. wall thick. and min. wt. 2.28 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

B. Corner, end, and pull post options:

(1) Galvanized steel pipe, Schedule 40- 2" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².: ASTM A53 Table X 2, ASTM F1083, and AASHTO M111.

(2) Aluminum coated steel pipe: ASTM A53 steel, X 2 Tables: Schedule 40; 2" nominal dia., 2.375" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.

(3) Aluminum alloy pipe- 2½" nominal dia.: ASTM B241 or B221, Alloy 6063,T6.

(4) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2½" OD, 2" NPS, 2.375" dec. equiv., 0.130"min. wall thick. and min. wt. 3.117 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in² min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

C. Tension wire options:

(1) Steel wire No. 7 gage zinc galvanized at the rate of 1.2 oz./ft².: AASHTO M181.

(2) Aluminum alloy wire with a diameter of 0.1875" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.

(3) Aluminum coated steel wire No.7 gage coated at the rate of 0.040 oz./ft².: AASHTO M181.

D. Tie wire and hog ring options:

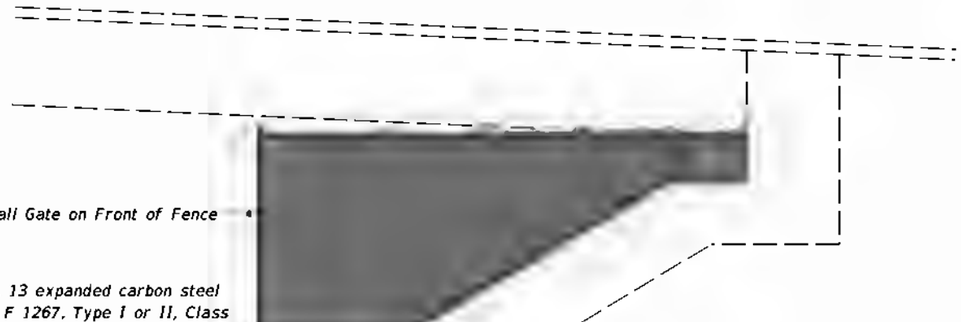
(1) Steel wire No.9 gage zinc galvanized at the rate of 1.2 oz./ft².

(2) Aluminum alloy wire with a diameter of 0.1443" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.

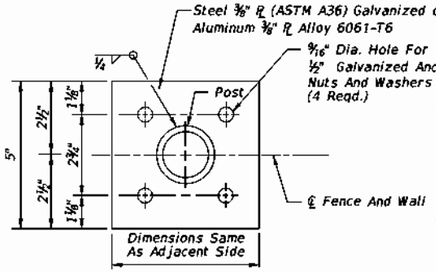
(3) Aluminum coated steel wire No. 7 gage coated at the rate of 0.040 oz./ft².

NOTES:

1. Expanded metal mesh shall be ½" No. 13 expanded carbon steel metal mesh in accordance with ASTM F 1267, Type I or II, Class 2, Grade A.
2. Equip access doors with a Master Lock 770LHC Hidden Shackle Padlock with Hasp, or approved equal. Require that all padlocks on an individual bridge be keyed alike. The cost of the lock is included in pay item 550-60-211 of each bridge.



EAST ABUTMENT FENCING

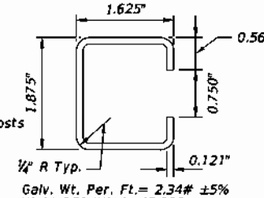


TOP VIEW ANCHOR PLATE

BASE PLATE AND ANCHOR NOTES:

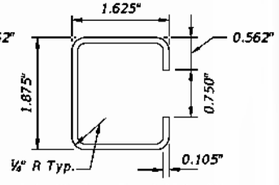
1. Base plate identical for line, pull, end and corner posts and shall be considered an integral part of the respective posts for basis of payment.
2. Post to be plumbed by grout shim under base plate.
3. Anchors (Galvanized Steel):
   12" Cast In Place, 10½" Embedment; Headed Bolts, U-Bolts or Cluster Plates.
   8" Adhesive Anchors, 6" Min. Embedment.*
   *Adhesive anchors shall be headless anchor bolts set in drilled holes with an Adhesive Material System in accordance with Specs. 416 and 937; drilled holes shall be ⅛" larger in diameter than the anchor bolt.
   Expansion Bolts Not Permitted.

FENCE MOUNTING ON CONCRETE SLOPE PROTECTION



Galv. Wt. Per. Ft.= 2.34# ±5%
Yield PSI (Min.) 45,000

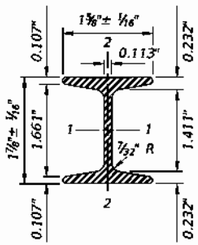
STANDARD WALL



Galv. Wt. Per. Ft.= 1.85# ±5%
Yield PSI (Min.) 45,000

THINWALL

OPTIONAL "C" LINE POST



	STEEL	ALUMINUM
Area (Sq. In.)	724	724
Weight (Lb./Ft.)	2.72 ± 5% (Galv.)	0.91 ± 5%
Surface Area (SF/Ft.)	0.776	0.776
Tensile Strength (psi Min.)	80,000	30,000
Yielding Point (psi Min.)	48,000	25,000

	Axes 1-1	Axes 2-2	Axes 1-1	Axes 2-2
Moment Of Inertia	0.428	0.101	0.428	0.101
Section Modulus	0.456	0.124	0.456	0.124
Rad. Of Gyration	0.779	0.373	0.779	0.373

OPTIONAL 1⅞"x 1⅝" H-BEAM LINE POST

BRIDGE NO. 874541

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

REVISIONS

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DESIGNED BY: CGI
DETAILED BY: CGI
CHECKED BY: [illegible]

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

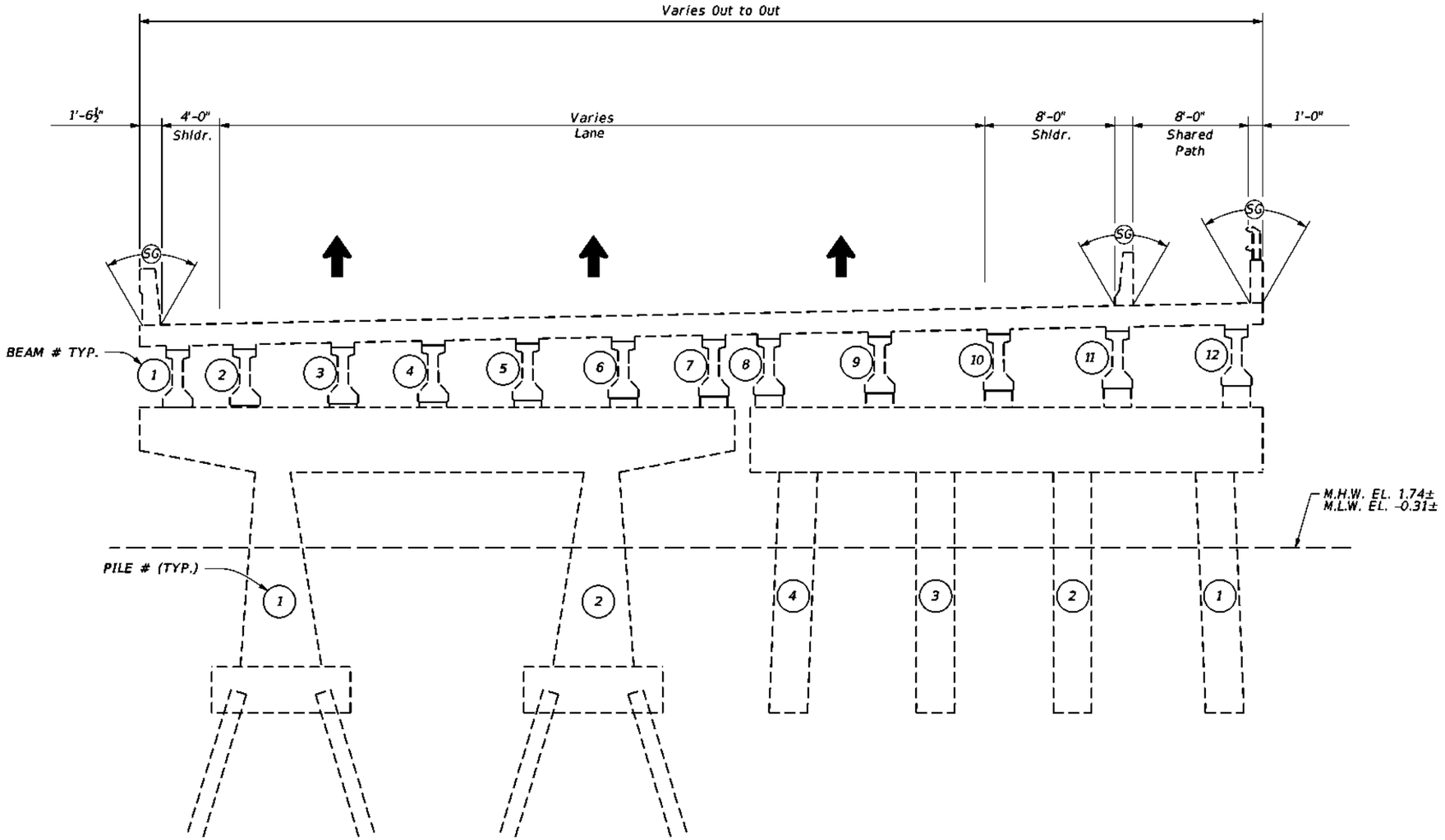
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	[illegible]

FENCING REPLACEMENT

REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-21



NOTE:

Number of beams decreases from 16 to 12 downstation
Number of piles under west cap varies from 7 to 4 downstation

TYPICAL SECTION

KEY FOR REPAIR DESCRIPTIONS
LOOKING EAST

LEGEND:

Class 5 finish, color shall be federal standard 595B (July 1994) color 36622 (Standard Concrete Gray)

BRIDGE NO. 874541

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: TYPICAL BRIDGE SECTION KEY FOR REPAIRS

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-22

$USERS $DATE$ $TIME$ $FILE$

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

BEAM	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
3-14	1080	BOTTOM WEST FLANGE, 6 FT FROM BENT 3	DELAMINATION (36IN X 10IN)	1	3.000	0.833	0.250	0.625
4-8	1080	OVER BENT 3	DELAMINATION (12IN X 5IN)	1	1.000	0.417	0.250	0.104
4-14	1080	BOTTOM WEST FLANGE, 6 FT FROM BENT 3	DELAMINATION (40IN X 10IN)	1	3.333	0.833	0.250	0.694
4-14	1100	EAST BOTTOM FLANGE	SPALL W/ EXPOSED STRANDS (20IN X 3IN X 3IN)	1	1.667	0.250	0.250	0.104
6-13	1110	BOTTOM EAST FLANGE, 8 FT FROM BENT 7	LONGITUDINAL CRACK (3FT)	1	3.000	-	-	-
9-8	1100	EAST BOTTOM FLANGE	SPALL W/ EXPOSED STRAND (3FT X 4IN X 2IN)	1	3.000	0.333	0.167	0.167
10-13	1080	WEST BOTTOM FLANGE ALONG MIDSPAN	SPALL (8IN X 8IN X 2IN)	1	1.333	0.667	0.167	0.148
10-13	1080	BOTTOM FLANGE AT 2/3 PT.	SPALL (6IN X 5IN X 2IN)	1	1.000	0.417	0.167	0.069

BEAM DEFICIENCIES

1080 - SPALL/DELAMINATION

1100 - EXPOSED PRESTRESSING

1110 - PRESTRESSED CONCRETE CRACKING

BRIDGE NO. 874541

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: BEAM DEFICIENCIES

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-23

$USERS $DATES $TIMES $FILES

SPAN	DEFECT	LOCATION	DEFICIENCY	L (FT)
9	1130	1FT FROM CONCRETE PARAPET	LONG. CRACK (SPAN LENGTH)	53.000
12	1130	1FT FROM TRAFFIC BARRIER	LONG. CRACK (10FT)	10.000

DECK SURFACE DEFICIENCIES

BAY	DEFECT	LOCATION	DEFICIENCY	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
12-10	1080	DECK UNDERSIDE AT MIDSPAN	DELAMINATION	2.000	2.000	0.083	0.332	0.012
VARIOUS	1130	DECK UNDERSIDE	HORIZ. & LONG. CRACKS	50.000	-	-	-	-

DECK UNDERSIDE DEFICIENCIES

SPAN	DEFECT	LOCATION	DEFICIENCY	L (FT)
SOUTH APPROACH	3220	TRANSITION	TRANSVERSE CRACKS	73.000
SOUTH APPROACH	3220	CENTER OF GORE	LONG. CRACK	20.000
NORTH APPROACH	3220	ROADWAY TRANSITION FROM LANE 2 THROUGH BIKE PATH	TRANSVERSE CRACKS	29.000

OVERLAY DEFICIENCIES

1080 - SPALL/DELAMINATION 1130 - REINFORCED CONCRETE CRACKING 3320 - WEARING SURFACE CRACKING

BRIDGE NO. 874541

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: DECK DEFICIENCIES

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-24

$USERS $DATES $TIMES $FILES

PILE	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
2-2	1080	NE CORNER, 7 FT BELOW CAP	SPALL (4IN X 3IN X 1/2IN)	1	0.333	0.250	0.042	0.003
2-3	1080	NE CORNER, 7 FT BELOW CAP	SPALL (8IN X 2IN X 1/2IN)	1	0.667	0.167	0.042	0.005
2-5	1080	SW CORNER, 7 FT BELOW CAP	SPALL (8IN X 4IN X 1/2IN)	1	0.667	0.333	0.042	0.009
3-1	1080	NE CORNER, 8 FT BELOW CAP	SPALL (5IN X 2IN X 1/2IN)	1	0.417	0.167	0.042	0.003
3-3	1080	NE CORNER, 7 FT BELOW CAP	SPALL (4IN X 2IN X 1/2IN)	1	0.333	0.167	0.042	0.002
3-7	1100	NE CORNER, 30 IN BELOW CAP	SPALL (42IN X 15IN X 4IN) W/ EXPOSED STRAND	1	3.500	1.250	0.333	1.458
4-1	1080	SE CORNER, 8 FT BELOW CAP	SPALL (6IN X 3IN X 1/2IN)	1	0.500	0.250	0.042	0.005
4-5	1100	SW CORNER, SE CORNER, AND NORTH FACE, 4 FT BELOW CAP	SPALL (11FT X 18IN X 4IN), SPALL/DELAM. (66IN X 6IN X 4IN) W/ EXPOSED STRAND, DELAM. (48IN X 18IN)	1	20.500	1.500	0.333	10.250
4-7	1100	SE CORNER, 30 IN BELOW CAP	SPALL (30IN X 15IN X 4IN)	1	2.500	1.250	0.333	1.042
5-2	1080	SE CORNER, 1 FT BELOW WATERMARK	SPALL (17IN X 3IN X 1IN)	1	1.417	0.250	0.083	0.030
5-4	1080	NW CORNER, 8 FT BELOW CAP	SPALL (6IN X 3IN X 1/2IN)	1	0.500	0.250	0.042	0.005
5-6	1080	NE CORNER, AT THE CAP	DELAM. (6FT X 18IN)	1	6.000	1.500	0.042	0.375
6-1	1080	SE CORNER, 8 FT BELOW CAP	SPALL (4IN X 2IN X 1/2IN)	1	0.333	0.167	0.042	0.002
6-2	1080	NE CORNER, 6 FT BELOW CAP	SPALL ON EXISTING PATCH (33IN X 4IN X 1IN)	1	2.750	0.333	0.083	0.076
6-6	1080	SW CORNER, 1 FT BELOW CAP	SPALL (108IN X 15IN X 2IN)	1	9.000	1.250	0.167	1.875
7-1	1110	WEST FACE AND SW CORNER, 6 AND 9 FT BELOW CAP	CRACK (32IN X 1/64IN) AND SPALL (6IN X 2IN X 1/2IN)	1	2.667	0.167	0.042	0.019
7-2	1080	SE CORNER, 8 FT BELOW CAP	SPALL (3IN X 3IN X 1/2IN)	1	0.250	0.250	0.042	0.003
7-3	1080	SW CORNER, 7 FT BELOW CAP	SPALL (5IN X 3IN X 1/2IN)	1	0.417	0.250	0.042	0.004
7-5	1080	SE AND NE CORNER, 8 FT BELOW CAP	SPALL (12IN X 6IN X 1/2IN)	2	1.000	0.500	0.042	0.042
7-5	1100	NORTH FACE, 2 FT BELOW HIGH WATERMARK	SPALL (10IN X 2IN X 2IN) W/ EXPOSED STRAND	1	0.833	0.167	0.167	0.023
7-6	1080	SE CORNER, 8 FT BELOW CAP	SPALL (6IN X 3IN X 1/2IN)	1	0.500	0.250	0.042	0.005
8-4	1080	NW AND NE CORNER, 4 FT BELOW CAP	SPALL/DELAM. (36IN X 13IN X 2IN)	2	0.500	0.417	0.167	0.069
8-5	1100	NW CORNER, WEST FACE AND EAST FACE	SPALL (60IN X 20IN X 4IN) W/ EXPOSED STRANDS AND SPALL/DELAM. (60IN X 18IN X 3IN) W/ EXPOSED STRANDS	2	5.000	1.667	0.333	5.556
9-2	1080	SW CORNER, 6 FT BELOW CAP	SPALL (10IN X 2IN X 1/2IN)	1	0.833	0.167	0.042	0.006
9-5	1080	NE CORNER, AT CAP	SPALL (8FT X 18IN X 3IN) W/ EXPOSED STRAND	1	8.000	1.500	0.250	3.000
10-1	1080	SW AND NW CORNER, 8 FT BELOW CAP	SPALL (10IN X 4IN X 1/2IN)	2	0.833	0.333	0.042	0.023
10-5	1100	SE CORNER, FROM CAP TO 29 IN BELOW WATER LINE	SPALL (8FT X 15IN X 3IN) W/ EXPOSED STRAND AND CRACKING	1	8.000	1.250	0.250	2.500
11-1	1080	SW CORNER, 8 FT BELOW CAP	SPALL (10IN X 3IN X 1/2IN)	1	0.833	0.250	0.042	0.009
11-2	1080	NW CORNER, 18 IN BELOW CAP	SPALL (8IN X 3IN X 1IN)	1	0.667	0.250	0.083	0.014
11-4	1080	NW CORNER, 2 FT BELOW CAP	SPALL (5IN X 3IN X 1/2IN)	1	0.417	0.250	0.042	0.004

PIER PILE DEFICIENCIES

1080 - SPALL/DELAMINATION 1100 - Cracking and Exposed Prestressing

BRIDGE NO. 874541

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: SUBSTRUCTURE DEFICIENCIES (1 OF 3)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-25

SIGNED $DATE$ $TIME$ $FILE$

COLUMN	DEFECT	LOCATION	DEFICIENCY	QTY (EA)	L (FT)	W (FT)	D (FT)
3-1	1080	SE CORNER	DELAM. (2FT X 9IN)	1	2.000	0.750	0.083
3-2	1080	NW CORNER	DELAM (40IN X 6IN)	1	3.333	0.500	0.083
4-2	1080	NE & NW CORNER	DELAM. (2.5FT X 1FT)	1	5.000	2.000	0.083
6-1	1080	SW CORNER	DELAM (5FT X 16IN)	1	5.000	1.333	0.083
6-2	1080	EAST FACE	DELAM. (5FT X 3FT)	1	5.000	3.000	0.083
7-2	1080	NE CORNER	DELAM. (5FT X 2FT)	1	5.000	2.000	0.083
8-1	1080	ALL CORNERS	DELAM. (3FT X 3FT)	4	12.000	12.000	0.083
9-1	1130	NE CORNER	VERTICAL CRACK (1.5FT X 1/64IN)	1	1.500	-	-
9-2	1080	SE CORNER	SPALL (16IN X 10IN X 1/2IN)	1	1.333	0.833	0.042
9-2	1130	WEST FACE	VERTICAL CRACKS (25IN X 1/32IN)	1	2.083	-	-
10-2	1130	ALL FACES	VERTICAL CRACKS (4FT X 1/16IN)	1	4.000	-	-
11-1	1080	SW CORNER	SPALL/DELAM. (6FT X 3FT X 3IN)	1	6.000	3.000	0.250
11-2	1130	SW CORNER	VERTICAL CRACK (3FT X 1/16IN)	1	3.000	-	-
12-2	1080	SW CORNER	DELAM. (3FT X 1.5FT)	1	3.000	1.500	0.083

PIER COLUMN DEFICIENCIES

FOOTER	DEFECT	LOCATION	DEFICIENCY	QTY (EA)	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
3-2	1080	TOP NE CORNER	SPALL/DELAM. (4FT X 3FT X 5IN)	1	4.000	3.000	0.417	5.000	-
7-2	1090	TOP EDGE, EAST AND SOUTH FACES	SPALL/DELAM. (4FT X 2.5FT X 5IN) W/ EXPOSED REBAR	2	4.000	2.500	0.417	8.333	0.309
8-1	1080	TOP CORNERS	SPALL/DELAM. (2FT X 1FT X 2.5IN)	4	2.000	1.000	0.208	1.667	0.062
8-2	1090	TOP SE AND NE CORNERS	SPALL/DELAM. (3FT X 3FT X 4IN) W/ EXPOSED REBAR	2	3.000	3.000	0.333	6.000	0.222
8-2	1130	NE CORNER	VERTICAL CRACK (2FT X 1/32IN)	1	2.000	-	-	-	-
9-1	1080	TOP SE CORNER	SPALL/DELAM. (3FT X 4IN X 4IN)	1	3.000	0.333	0.333	0.333	0.012
9-2	1080	TOP SE CORNER	SPALL/DELAM. (3FT X 1.5FT X 3IN)	1	3.000	1.500	0.250	1.125	0.042
10-1	1080	TOP NE CORNER	SPALL/DELAM. (4FT X 9IN X 2.5IN)	1	4.000	0.750	0.208	0.625	0.023
10-2	1080	SOUTH FACE	SPALL/DELAM. (1.5FT X 10IN X 2IN)	1	1.500	0.833	0.167	0.208	0.008
11-2	1080	TOP CORNERS	SPALL/DELAM. (2FT X 1FT X 2.5IN)	4	2.000	1.000	0.208	1.667	0.062

PIER FOOTER DEFICIENCIES

NOTE:

REMOVAL DOWN TO SOUND CONCRETE SHALL BE ACCOMPLISHED USING METHODS THAT DO NOT DAMAGE THE SOUND PORTION OF THE STRUCTURE THAT IS TO REMAIN. IN ADDITION TO DAMAGED CONCRETE, ALL CONCRETE ADJACENT TO CORRODED REINFORCEMENT SHALL BE REMOVED UNTIL A MINIMUM OF TWO (2) INCHES AND A MAXIMUM OF FOUR (4) INCHES OF UNCORRODED REINFORCING STEEL IS UNDERCUT AND EXPOSED ALONG THE LENGTH OF THE BAR IN EACH DIRECTION. THIS IS TO BE DONE ONLY AFTER APPROVAL BY THE ENGINEER WHO AT HIS DISCRETION CAN ALLOW FOR SOME DEGREE OF CORROSION TO REMAIN AND SHALL STOP THE CONCRETE REMOVAL IN ORDER TO KEEP THE CONCRETE REPAIR QUANTITIES WITHIN THE SCOPE OF WORK.

IN ALL CASES WHERE REINFORCING STEEL IS EXPOSED, CONCRETE SHALL BE REMOVED TO PROVIDE A MINIMUM OF ¾" CLEARANCE AROUND THE CIRCUMFERENCE OF THE BARS WHICH WILL PERMIT UNIFORM SURFACE PREPARATION OF THE BARS AND ADEQUATE CONCRETE BOND TO THE BAR SURFACE.

THE CONTRACTOR MUST DEVISE A PLAN TO REPLACE ALL DEFICIENT CONCRETE AT A MINIMUM OF 4" CLR. ON TOP OF THE EXISTING REBAR MAT (TOP OF THE FOOTING) AND FORM UP 18" (MIN.) BELOW THE TOP OF THE FOOTING ALONG THE OUTSIDE OF THE EXISTING FOOTING WITHOUT DISTURBING THE EXISTING MUDLINE. THE PLAN MUST BE SUBMITTED AND APPROVED BY THE ENGINEER.

1080 - SPALL/DELAMINATION 1130 - REINFORCED CONCRETE CRACKING 4000 - SETTLEMENT

BRIDGE NO. 874541

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: SUBSTRUCTURE DEFICIENCIES (2 OF 3)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-26

$USERS $DATE$ $TIME$ $FILE$

CAP	DEFECT	LOCATION	DEFICIENCY	QTY (EA)	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
1	1080	Bay 1-11 South Face	DELAM. (54IN X 3IN X 3IN)	1	4.50	0.25	0.250	0.281	0.010
2	1080	South Bottom Edge between Columns	SPALL/DELAM. (12FT X 2FT X 2IN)	1	12.00	2.00	0.167	4.008	0.148
3	1080	South Face over Column 1	DELAM. (7FT X 1FT)	1	7.00	1.00	0.083	0.581	0.022
3	1080	North Face over Column 2	DELAM. (3FT X 3FT)	1	3.00	3.00	0.083	0.747	0.028
4	1080	North Bottom Edge of East Cantilever	DELAM. (3FT X 8IN)	1	3.00	0.67	0.083	0.166	0.006
4	1080	South Top Edge under Bay 2	DELAM. (40IN X 24IN)	1	3.33	2.00	0.083	0.553	0.020
4	1080	South Top Edge under Bay 5	DELAM. (5FT X 20IN)	1	5.00	1.67	0.083	0.692	0.026
7	1130	Top Edge, Both Faces below Beam 4 and 5	HORIZ. CRACKS (28IN X 1/32IN)	1	2.33	–	–	–	–
8	1080	South Face, West Cantilever	SPALL/DELAM. (8FT X 1FT X 2FT)	1	8.00	1.00	2.000	16.000	0.593
8	1080	North Face, East Cantilever	SPALL/DELAM. (8FT X 1FT X 2FT)	1	8.00	1.00	2.000	16.000	0.593
8	1080	North Face above Column 1	DELAM. (7FT X 3FT)	1	7.00	3.00	0.083	1.743	0.065
8	1080	North Face under Beam 7	DELAM. (2FT X 1FT)	1	2.00	1.00	0.083	0.166	0.006
8	1130	South Face, Top Edge below Beam 5 and 6	HORIZ. CRACK (20IN X 1/16IN)	1	1.67	-		-	-
8	1130	North Face, Top Edge below Beam 4 and 5	HORIZ. CRACKS (30IN X 1/16IN)	1	2.50	-		-	-
8	1130	North Face, Top Edge below Beam 1 and 2	HORIZ. CRACK (48IN X 1/16IN)	1	4.00	–		–	–
9	1130	South Top Edge below Beams 1-3	HORIZ. CRACK (15FT X 1/16IN)	1	15.00	–		–	–
10	1080	Bottom Face of East Cantilever	DELAM. (50IN X 24IN) W/ CRACKING	1	4.17	2.00	0.083	0.692	0.026
10	1080	North Face	DELAM. (5FT X 28IN)	1	5.00	2.33	0.083	0.968	0.036
10	1130	South Face below Beam 2 and 3	HORIZ. CRACK (4FT X 1/16IN)	1	4.00	–		–	–
11	1080	North Bottom Edge, Between Columns	DELAM. (42IN X 6IN)	1	3.50	0.50	0.083	0.145	0.005
11	1090	South Bottom Edge at Column 1	SPALL/DELAM. (75IN X 12IN X 8IN) W/ EXPOSED REBAR	1	6.25	1.00	0.083	0.519	0.019
11	1130	Bottom North Edge	HORIZ. CRACK (4FT X 1/32IN)	1	4.00	–		–	–
13	1090	Northwest Corner	SPALL/DELAM. (9IN X 9IN X 3IN) W/ EXPOSED REBAR	1	0.75	0.75	0.250	0.141	0.005
Various	1120	Existing Repair Locations	MULTI-DIRECTIONAL HAIRLINE CRACKING	1	12.00	–		–	–

ABUTMENT AND PIER CAP DEFICIENCIES

LOCATION	DEFECT	DEFICIENCY	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
SOUTH ABUTMENT BELOW BAY 11	1130	HORIZ. CRACK	3.000	–	–	–	–
SOUTH ABUTMENT BETWEEN PANELS	4000	VERTICAL MISALIGNMENT UP TO 3IN	20.000	1.000	0.250	5.000	0.185

SLOPE PROTECTION DEFICIENCIES

1080 - SPALL/DELAMINATION 1090 - EXPOSED REBAR 1120 - EFFLORESCENCE/STAINING 1130 - REINFORCED CONCRETE CRACKING

BRIDGE NO. 874541

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

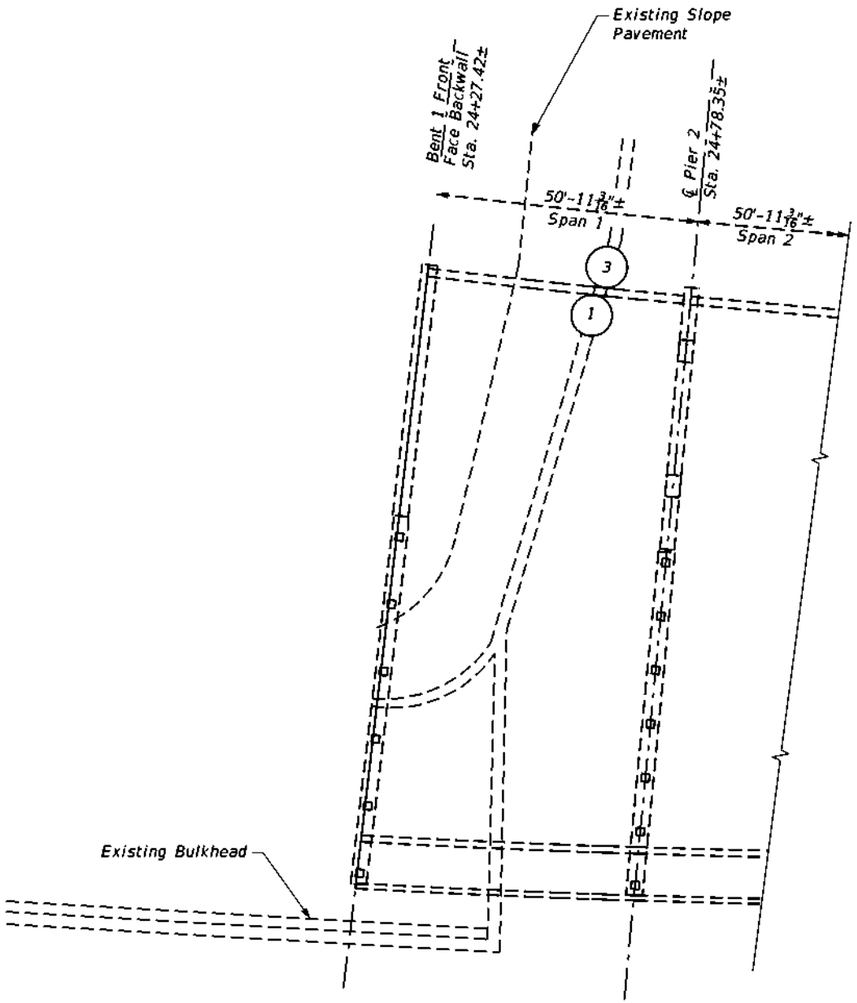
SHEET TITLE: SUBSTRUCTURE DEFICIENCIES (3 OF 3)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

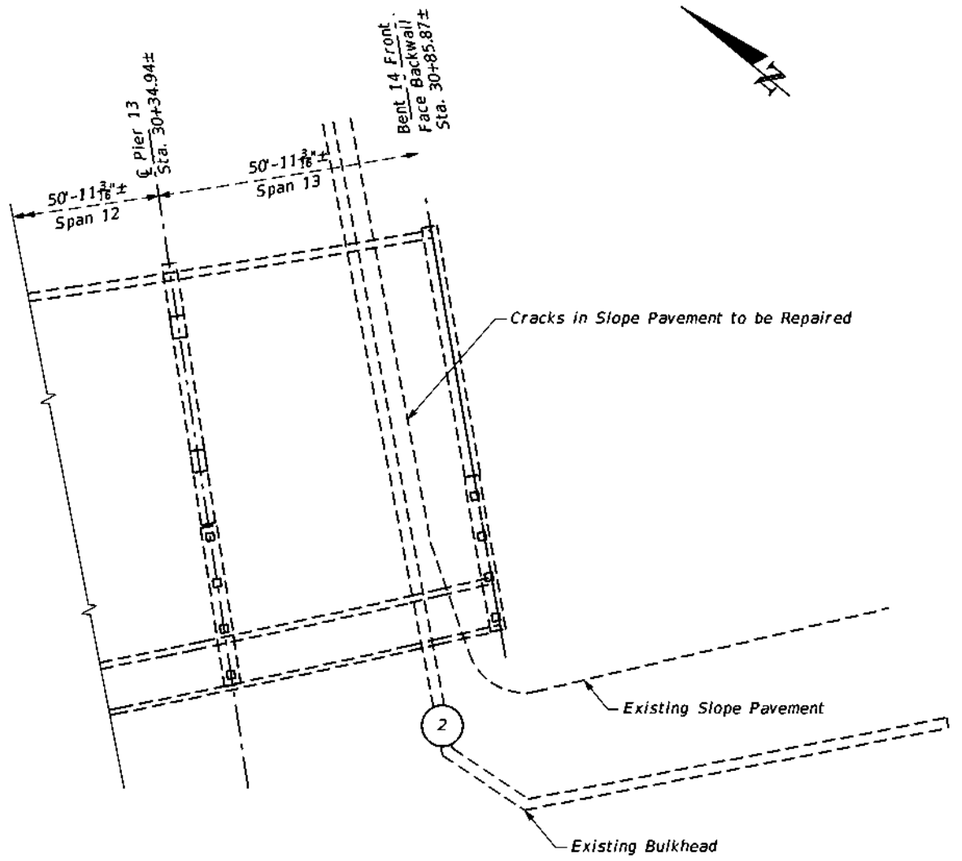
SHEET NO.: S-27

$USERS $DATES $TIMES $FILES



WEST ABUTMENT

NOTE:
Beams not shown for clarity



EAST ABUTMENT

LOCATION		DEFECT	DEFICIENCY	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
NORTH SEAWALL BETWEEN BEAMS 2-2 & 2-1	1	1090	SPALL/DELAM (3FT X 2FT X 1IN) W/ EXPOSED REBAR	3.000	2.000	0.083	0.500	0.019
SOUTH SEAWALL CAP, SW CORNER	2	1090	SPALL (2FT X 12IN X 2IN) W/ EXPOSED REBAR	2.000	1.000	0.167	0.333	0.012
NORTH SEAWALL AT ABUTMENT 1	3	1130	HORIZ. CRACKS	90.000	-	-	-	-

LEGEND

(#) Bulkhead to be Repaired

1080 - SPALL/DELAMINATION 1090 - ABRASION (PSC/RC) 1130 - REINFORCED CONCRETE CRACKING

BRIDGE NO. 874541

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

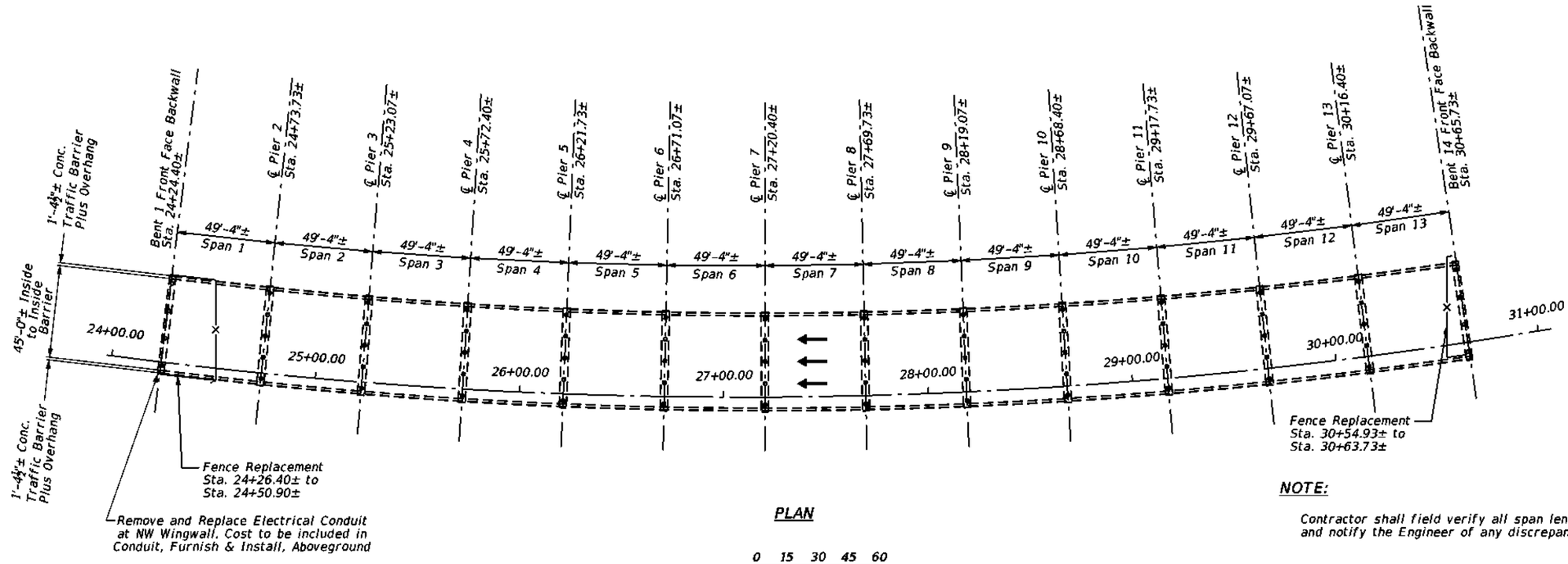
SHEET TITLE: BULKHEAD DEFICIENCIES

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-28

SUBSETS DATES TIMES FILES

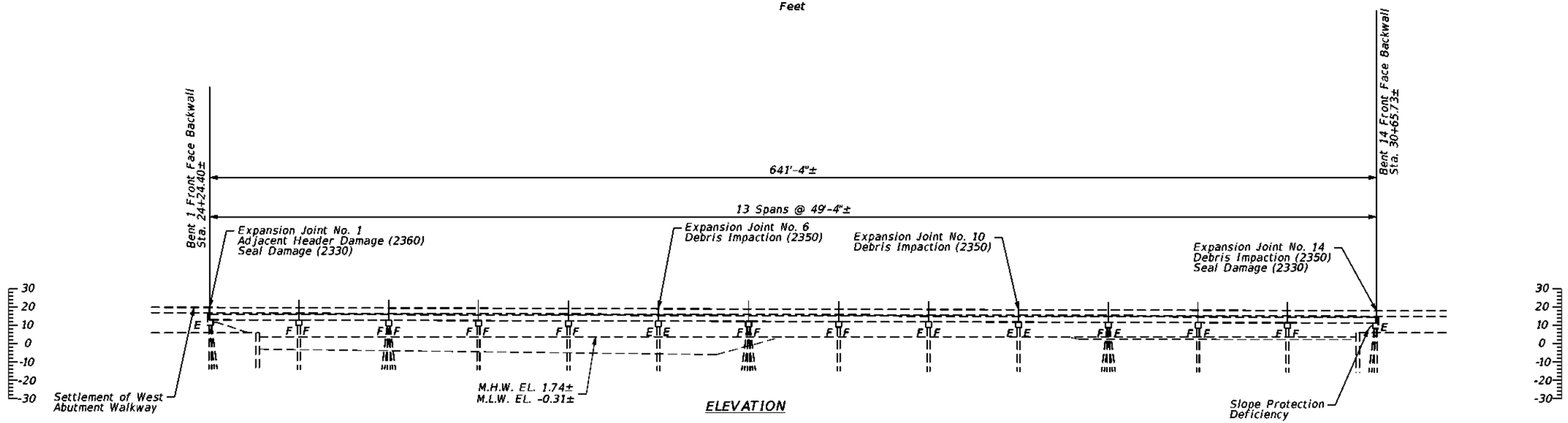


PLAN

0 15 30 45 60
Feet

NOTE:

Contractor shall field verify all span lengths and skew angles and notify the Engineer of any discrepancies.



ELEVATION

BRIDGE NO. 874542

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

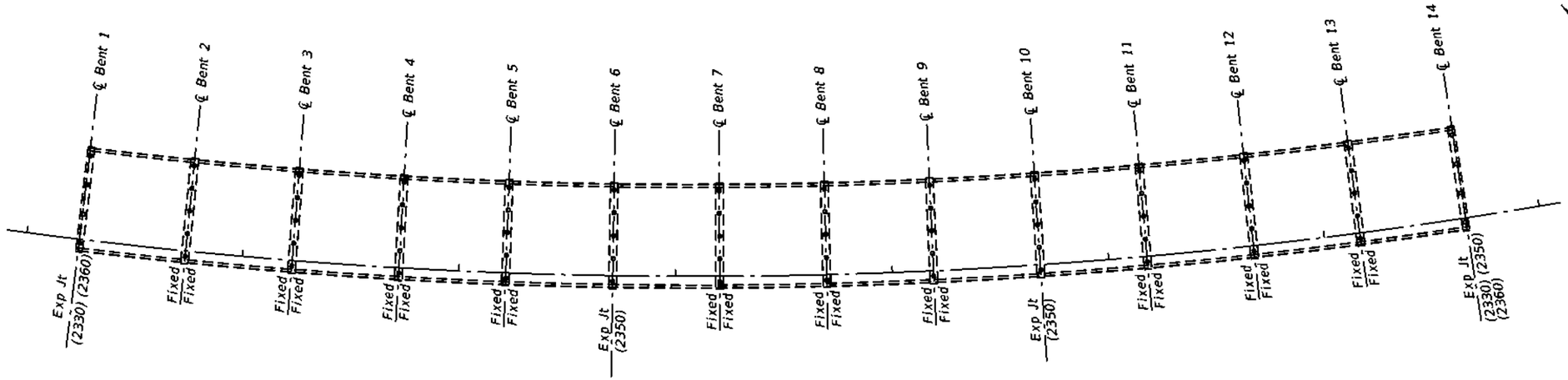
SHEET TITLE: GENERAL PLAN & ELEVATION

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-29

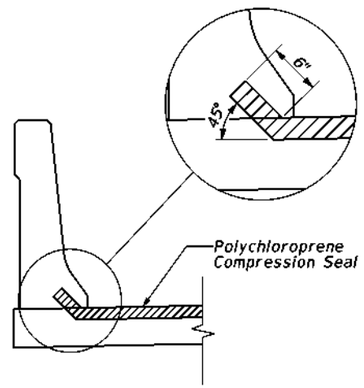
$USERS $DATES $TIMES $FILES



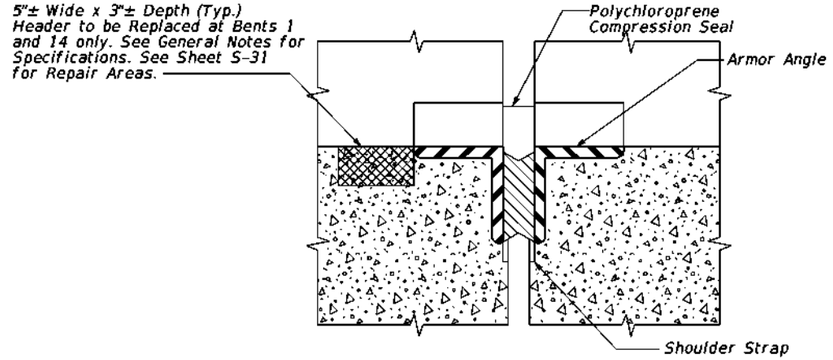
PLAN

0 15 30 45 60

Feet



SECTION THROUGH BARRIER



EXISTING ELASTROMERIC COMPRESSION SEAL JOINTS

NOTES FOR REPAIR OF JOINTS:

1. THE WORK TO BE COMPLETED INCLUDES CLEANING AND INSTALLATION OF A NEW WATER TIGHT JOINT AT SPECIFIED JOINTS.
2. THE JOINT SHALL BE AIR BLASTED TO REMOVE ALL LOOSE MATERIAL THE CONTRACTOR SHALL SUBMIT A DEBRIS CONTAINMENT PLAN TO THE ENGINEER FOR APPROVAL.
3. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING REINFORCEMENT, UNLESS OTHERWISE NOTED.
4. THE WIDTH OF REMOVAL OF EXISTING DECK CONCRETE SHALL REMAIN CONSTANT THROUGHOUT THE REPAIR AREA OF THE JOINT.
5. EXISTING JOINT WIDTH FROM EXISTING PLANS, CONTRACTOR TO FIELD VERIFY, JOINT WIDTH VARIES WITH TEMPERATURE.
6. 2" CLEAR COVER SHALL BE MAINTAINED FOR ALL BARS.
7. A CLEAN SAWCUT LINE IS REQUIRED FOR CONCRETE REMOVAL AROUND JOINTS.
8. SEE SHEET S-31 FOR AREAS OF HEADER REPAIR.
9. EXISTING REINFORCEMENT WITHIN REPAIR AREA TO REMAIN IN PLACE.
10. EXISTING REINFORCEMENT THAT IS DAMAGED/NON-SALVAGEABLE SHALL BE REPLACED WITH DRILLED OR EPOXY GROUTED BARS AT NO ADDITIONAL COST.

EXPANSION JOINT DATA TABLE				
LOCATION	END BENT 1	INT. BENT 6	INT. BENT 10	END BENT 14
TOTAL MOVEMENT	1"	$1\frac{3}{4}$"	$1\frac{1}{2}$"	$\frac{3}{4}$"
RANGE OF "Y"	$1\frac{1}{8}$" - $2\frac{1}{8}$"	$1\frac{7}{8}$"-$3\frac{5}{8}$"	2"-$3\frac{1}{2}$"	$1\frac{1}{4}$"-2"
"X"	$\frac{3}{32}$"	$\frac{5}{32}$"	$\frac{5}{32}$"	$\frac{1}{16}$"
"Y" AT 70°	$1\frac{1}{2}$"	$2\frac{1}{2}$"	$2\frac{1}{2}$"	$1\frac{1}{2}$"
"Z" AT 70°	$\frac{3}{4}$"	$1\frac{3}{4}$"	$1\frac{3}{4}$"	$\frac{3}{4}$"
ARMOR ANGLE	4x3x$\frac{3}{8}$	5x3x$\frac{3}{8}$	5x3x$\frac{3}{8}$	4x3x$\frac{3}{8}$

BRIDGE NO. 874542

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

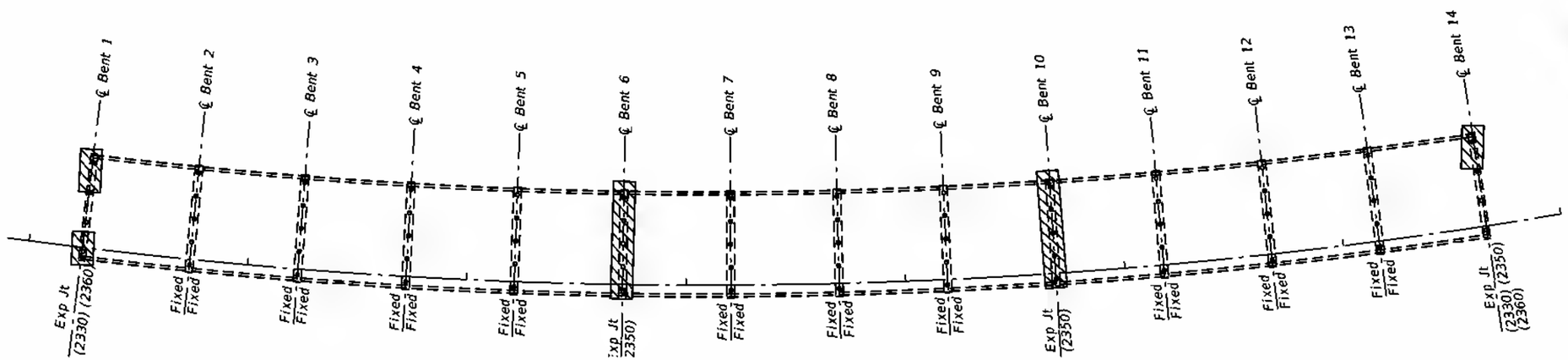
SHEET TITLE: JOINT REPLACEMENT LOCATION & DETAILS

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-30

SUBSETS | DATES | TIMES | FILES



PLAN

0 15 30 45 60

Feet

2360	ADJACENT HEADER DAMAGE

COMPRESSION JT. DEFICIENCIES		
		HEADER REPLACEMENT QUANTITY
JOINT	2360	(ASSUME .25'D x W x L)(CF)
	(ft.)	
1	2	0.0163
14	2	0.0195

COST FOR HEADER REPAIR SHALL BE INCLUDED IN PAY ITEM 458-2 POLYMER NOSING FOR BRIDGE DECK EXPANSION

2350	DEBRIS IMPACTION

COMPRESSION JT. DEFICIENCIES	
JOINT	2350
	(FT)
6	48
10	48
14	48

2330	SEAL DAMAGE

COMPRESSION JT. DEFICIENCIES	
JOINT	2330
	(FT)
1	46
14	46

LEGEND

Expansion Joints to be Repaired

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

BRIDGE NO. 874542

REVISIONS

NO.	DESCRIPTION	DATE	BY

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION

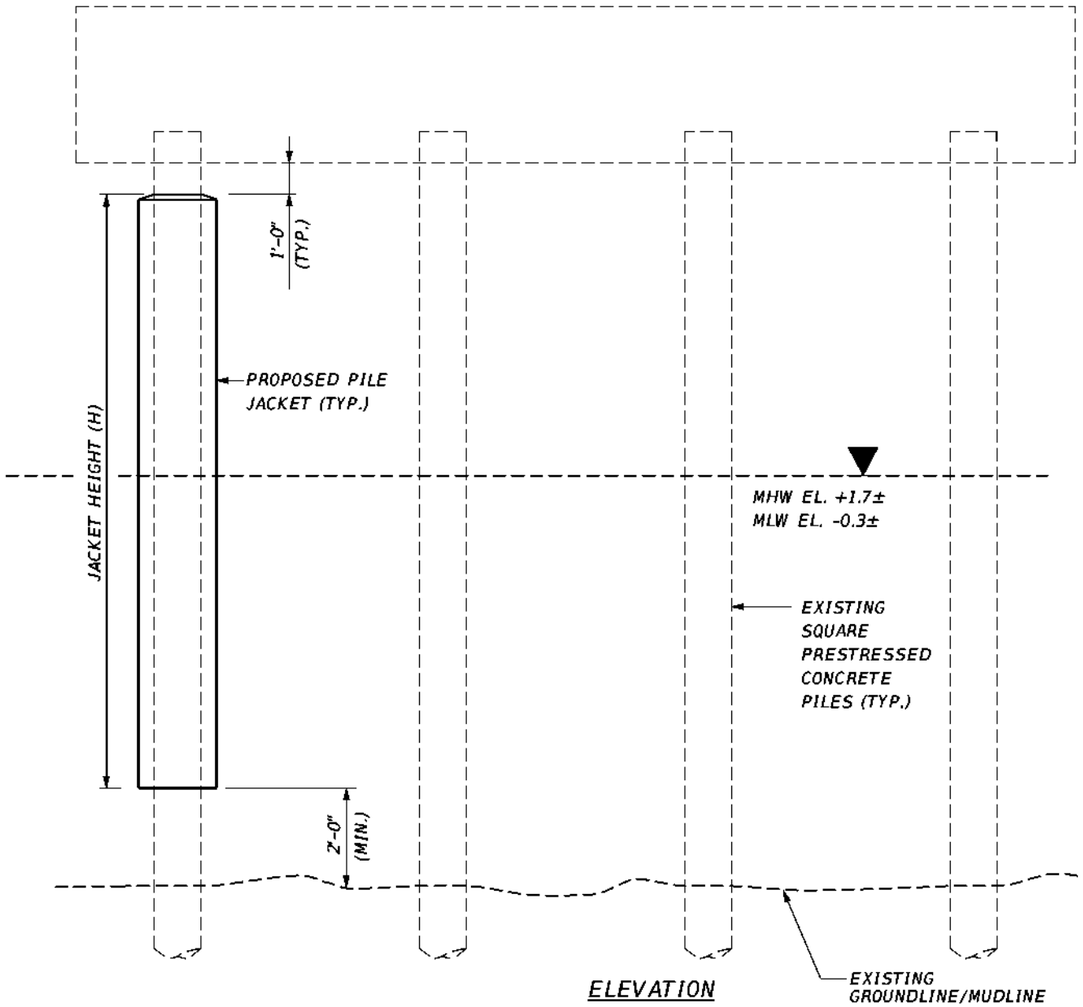
CONTRACT	PROJECT	FINANCIAL PROJECT
SR 913	MIAMI-DADE	

EXPANSION JOINT REPAIR

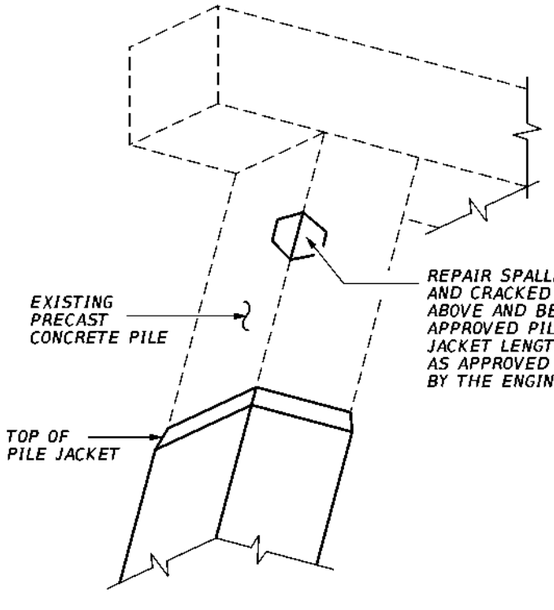
REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

REF. DWG. NO.

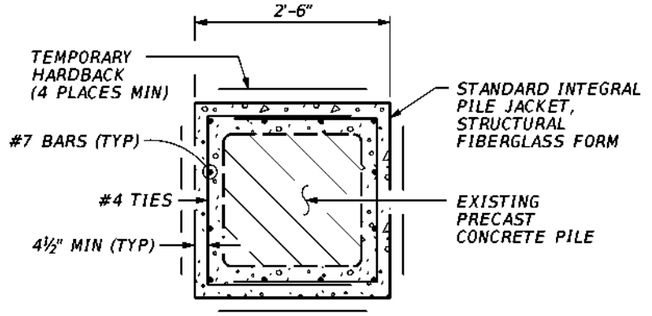
SHEET NO. S-31



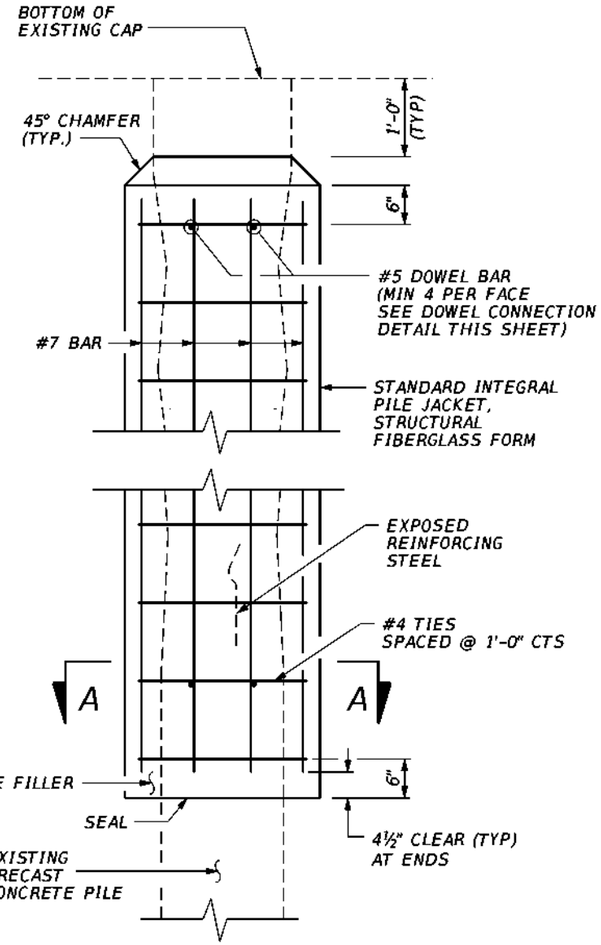
ELEVATION



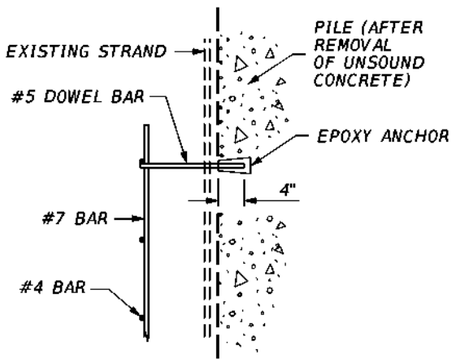
CONCRETE PILE DEFICIENCES



SECTION A-A THRU PILE JACKET



STANDARD INTEGRAL PILE JACKET



DOWEL CONNECTION

WORK IDENTIFICATION

1. CLEAN ALL PILES OF ALL MARINE GROWTH.
2. INSTALL STRUCTURAL PILE JACKET ON THE PILE AS DETAILED ON PILE JACKET DETAIL SHEETS.
3. STRUCTURAL JACKETS SHALL BE CONSTRUCTED USING REBAR AND CONCRETE FILLER.
4. PILE NUMBERING IS BASED ON LOOKING STATIONS AHEAD AND COUNTING LEFT TO RIGHT FOR ALL BENTS (BENT-PILE).
5. REPAIR SPALLS OUTSIDE THE LIMITS OF THE APPROVED JACKET LENGTHS IN ACCORDANCE WITH CONCRETE RESTORATION DETAILS SHEET.
6. THE CONTRACTOR SHALL CONFIRM EXISTING GROUNDLINE/MUDLINE ELEVATIONS WITH THE ENGINEER PRIOR TO ORDERING MATERIAL. MINOR ADJUSTMENTS MAY BECOME NECESSARY DUE TO FIELD AND CONSTRUCTION CONDITIONS.
7. WORK ON A MAXIMUM OF TWO PILES PER BENT AT ONE TIME. THE TWO PILES CANNOT BE ADJACENT TO EACH OTHER DURING WORK. BENTS MAY NOT BE ADJACENT TO EACH OTHER DURING WORK.

BRIDGE NO. 874541

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

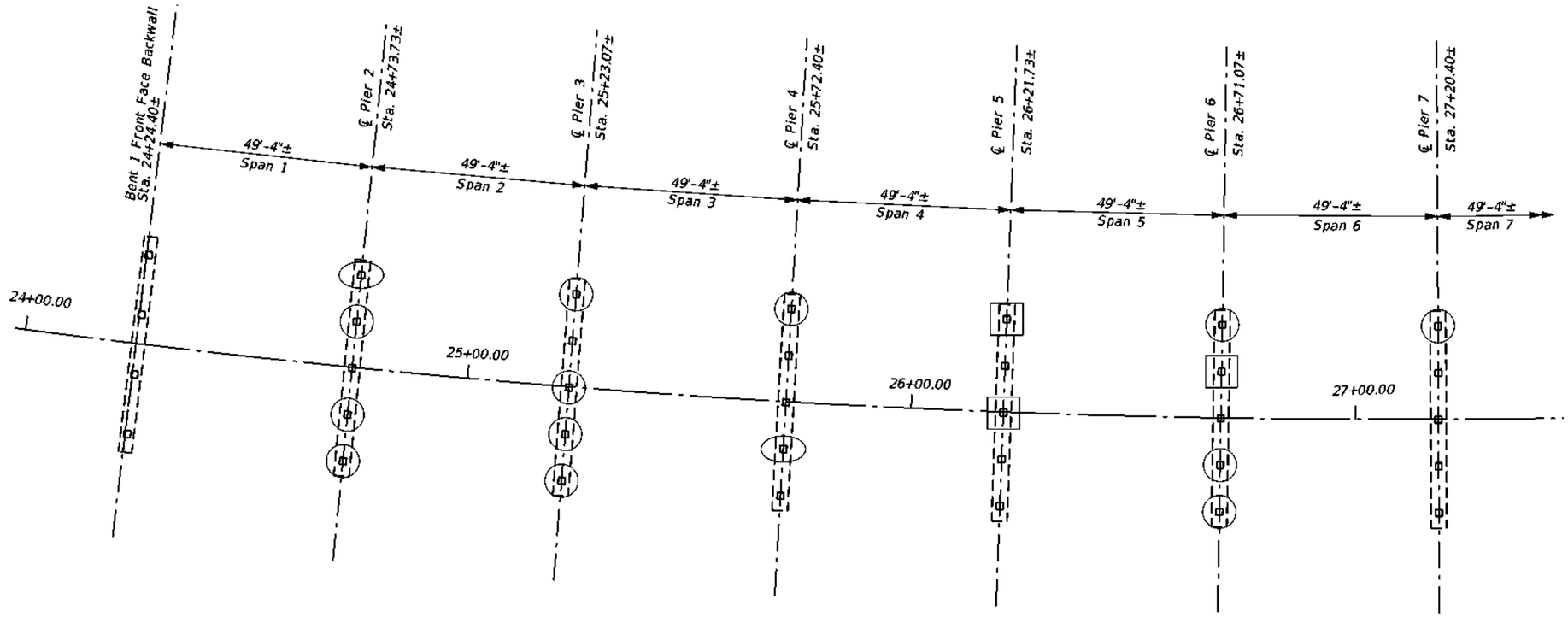
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: PILE JACKET DETAILS

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

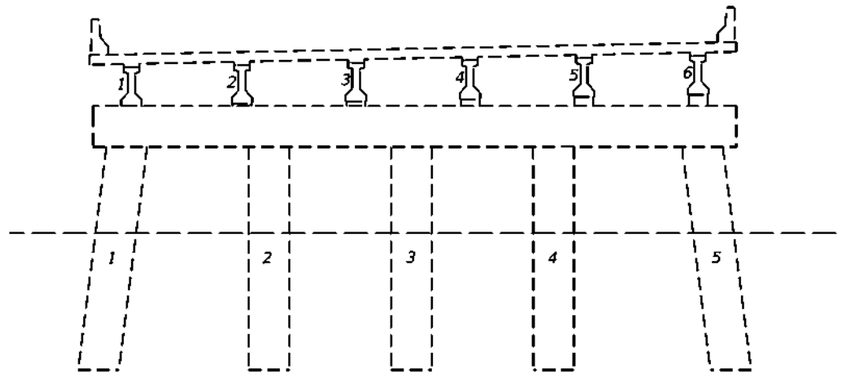
SHEET NO.: S-32



PLAN

0 15 30 45 60

Feet



SECTION LOOKING EAST

LEGEND

Pile Repair
See Details, General Notes
& Consult Field Engineer for
Extent of Reconstruction

Existing Pile Jacket Protection
in Place. See as-Built Plans

Pile Jacket Protection Required
See Details, General Notes
& Consult Filed Engineer for
Extent of Reconstruction

ESTIMATE OF QUANTITIES (1 OF 2)

See Details & General Notes

PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)
2-2	0.0440	-	5-1	-	8.0000
2-4	0.0260	-	5-3	-	4.3330
2-5	0.2150	-	6-1	0.0210	-
3-1	0.0240	-	6-2	-	4.5000
3-3	0.0170	-	6-4	0.2430	-
3-4	0.0100	-	6-5	0.0210	-
3-5	0.0210	-	7-1	1.8750	-
4-1	0.7500	-			
SUB-TOTAL	1.1070	0.0	SUB-TOTAL	2.1600	16.8

BRIDGE NO. 874542

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

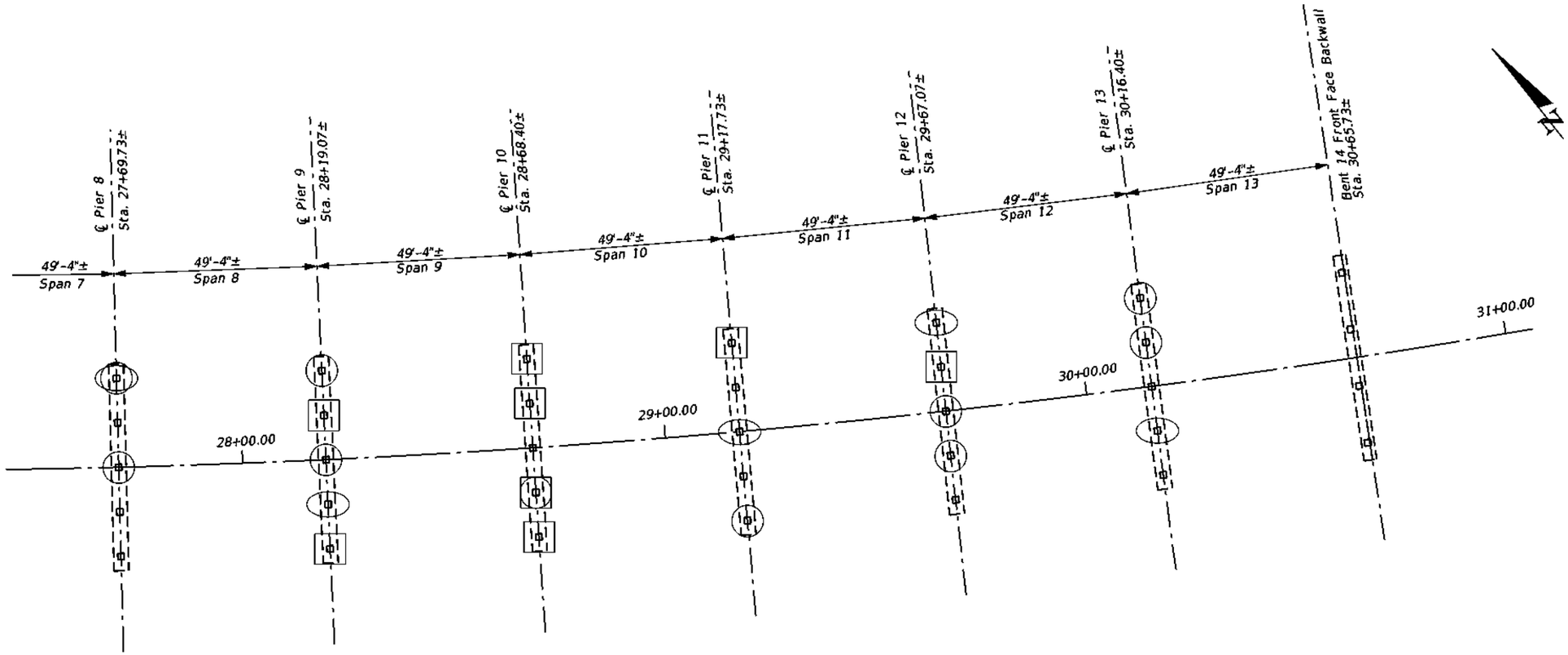
SHEET TITLE: LOCATIONS OF SUBSTRUCTURE REPAIR (1 OF 2)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

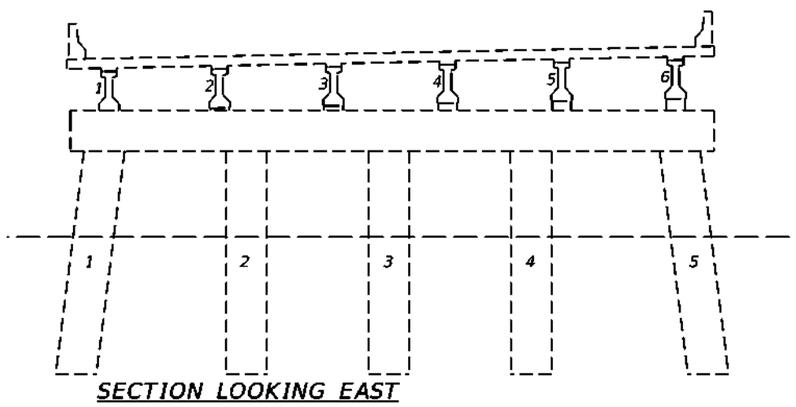
SHEET NO. S-33

$USERS $DATES $TIMES $FILES



PLAN

0 15 30 45 60
Feet



SECTION LOOKING EAST

ESTIMATE OF QUANTITIES (2 OF 2)

See Details & General Notes

PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	411-2 CRACKS INJECT & SEAL - STRUCTURES	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)
8-1	0.1110	-	-	10-5	-	7.0000
8-3	0.0190	-	1.3333	11-1	-	7.0000
9-1	2.2917	-	-	11-5	0.0350	-
9-2	-	5.0000	-	12-2	-	5.0830
9-3	0.0160	-	-	12-3	0.4380	-
9-5	-	6.0000	-	12-4	0.0220	-
10-1	-	7.0000	-	13-1	0.0420	-
10-2	-	7.0000	-	13-2	1.1076	-
10-4	0.4170	7.0000	-			
SUB-TOTAL	2.8547	32.0	1.3333	SUB-TOTAL	1.6446	19.1

LEGEND

- Pile Repair
  See Details, General Notes & Consult Field Engineer for Extent of Reconstruction
- Existing Pile Jacket Protection in Place. See as-Built Plans
- Pile Jacket Protection Required
  See Details, General Notes & Consult Filed Engineer for Extent of Reconstruction

BRIDGE NO. 874542

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

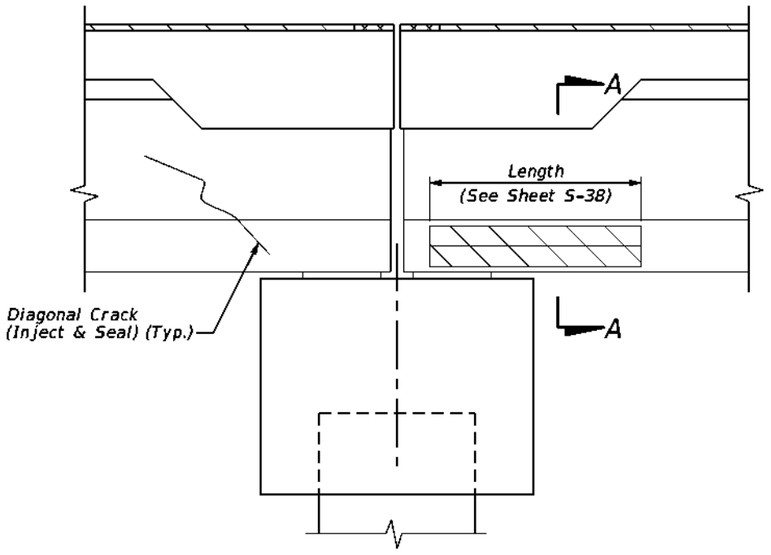
$USERS $DATES $TIMES $FILES

SHEET TITLE: LOCATIONS OF SUBSTRUCTURE REPAIR (2 OF 2)

REF. DWG. NO.

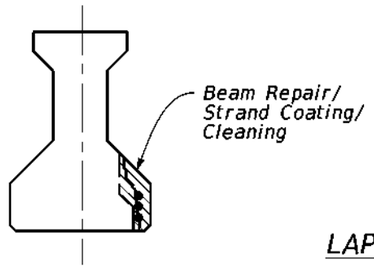
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-34



TYPICAL BEAM SHOWING EXPOSED REBAR/STRANDS

Concrete Beams with cracks shown on Sheet S-38 to be injected and sealed. Use Type F-1 compound epoxy for sealing crack surfaces in preparation for injection. Refer to Section 411 of standard specifications for additional information.



SECTION A-A

LAP SPLICE TABLE

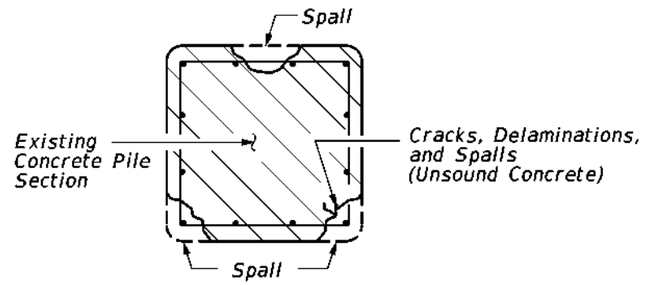
Rebar Size	Lap Splice Length
4	1'-0"
5	1'-3"
6	1'-6"
7	2'-1"
8	2'-8"
9	3'-5"
10	4'-4"
11	5'-4"

TYPICAL CRACK REPAIR METHOD

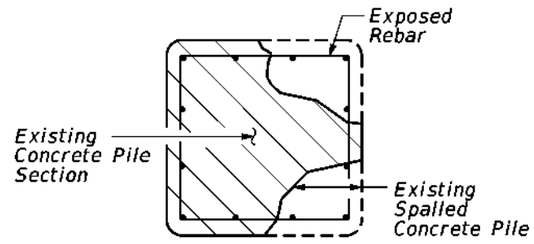
1. Cracks to be Repaired as Directed by the Engineer.
2. Remove Unsound Concrete from Crack Area.
3. Obtain Engineer's Approval to Carry Out Crack Repair (in Lieu of Spall Repair) for Cases Where Adjacent Concrete is Otherwise Unsound and Cracking is not a Result of Corroding Reinforcement.
4. For Cracks 1/32" to 1/8" use an Epoxy Resin with Minimum Viscosity of 325 cps, 28 day Compressive Strength of 13000 psi. for Cracks 1/8" to 1/4" use an Injection Gel or Equal Non-Sag Paste with 28 day Compressive Strength of 10000 psi.
5. For Cap Seal, use Injection Gel with Minimum 28 Day Compressive Strength of 12000 psi.
6. Engineer to Approve Crack and Cap Seal Material Prior to Beginning of Construction.
7. Apply Class II Finish at Completion of Crack Repair to Remove Fins or Knobs.

TYPICAL SPALL REPAIR

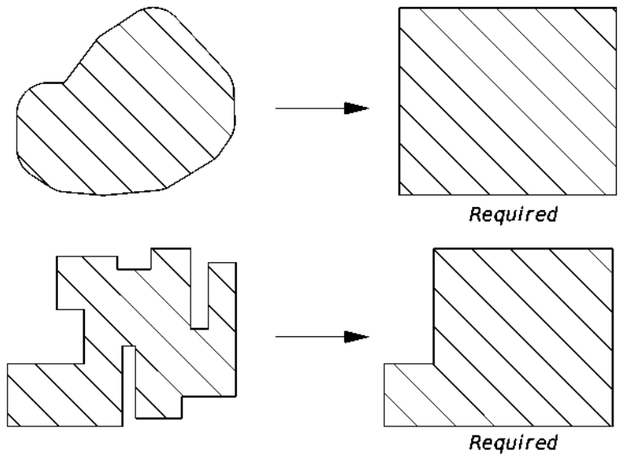
1. For Concrete Restoration, Remove and Repair Unsound Concrete from Areas to be Repaired in Accordance with this Sheet and the Technical Special Provisions. Areas Well Adhered to Existing Strand or Reinforcement Shall Remain.
2. Any Reinforcement Which is Loose shall be Secured in Place by Tying to other Secured Bars or by other Approved Methods. Lap Splices shall be Installed in Accordance with the Table.
3. Clean Exposed Rebar and Any Loose Concrete or Abrasives by Sandblasting.
4. Perform all sand blasting in accordance with the containment procedures as specified in Section 561 of the FDOT Standard Specifications. The containment system must comply with all applicable Federal, State, and Local regulations.
5. Fill Voids with Repair Material in Accordance with the Technical Special Provisions and FDOT Specifications.
6. Apply primer to area then apply epoxy coating. Coating shall extend 6" from the edge of the spall in every direction. Check coating thickness and inspect for defects.



TYPICAL DELAMINATIONS AND SPALLS

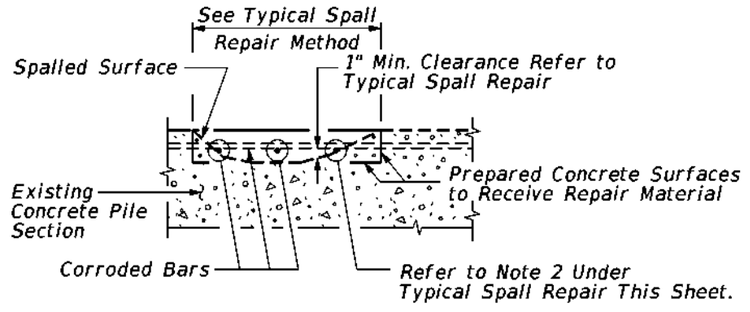


TYPICAL SPALL WITH EXPOSED REBAR



SIMPLE PATCH CONFIGURATION

At Corner Location Provide Right Angle Cuts.
Patch Configuration Shall be Kept as Simple as Possible.
Individual Repair Areas Within 2 Feet Shall be Joined at the Direction of the Engineer.



EXPOSING AND UNDERCUTTING REINFORCING STEEL

Applicable to Horizontal, Vertical, and Overhead Locations

BRIDGE NO. 874542

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
CGP	BWC	CGP	BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

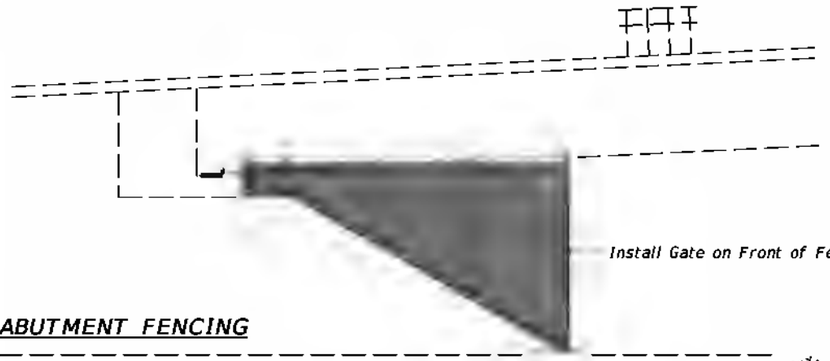
SHEET TITLE: CONCRETE REPAIR & CRACK INJECT/SEAL DETAILS

REF. DWG. NO.:

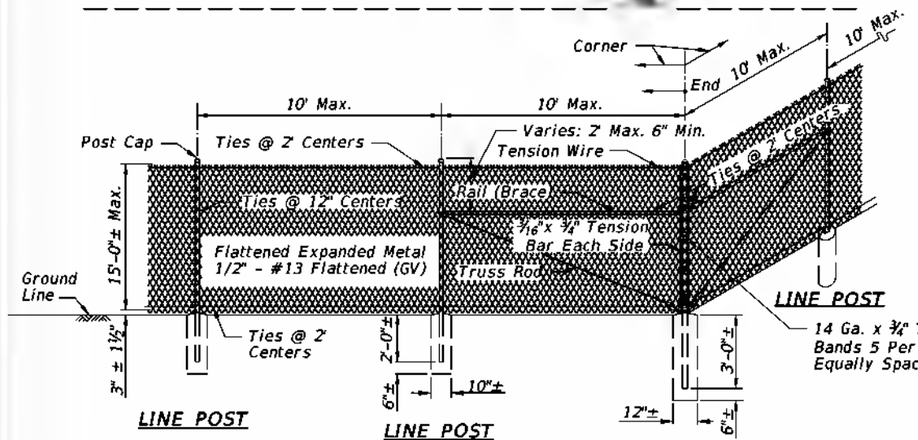
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-35

$USERS $DATES $TIMES $FILES



WEST ABUTMENT FENCING



NOTE: Tubular Post Illustrated

GENERAL NOTES:

1. For supplemental information refer to Spec. 550.
2. Post, truss rods, tension wires, tie wires, stretcher bars, gates and all miscellaneous hardware shall meet the requirements of AASHTO and ASTM signify current reference.
3. Fence Component Options:

A. Line post options:

(1) Galvanized steel pipe, Schedule 40- 1½" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².: ASTM A53 Table 2 (Grade A or B), ASTM F1083, and AASHTO M111.

(2) Aluminum coated steel pipe: ASTM A53, Table 2 (Grade A or B): Schedule 40- 1½" nominal dia., 1.90" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.

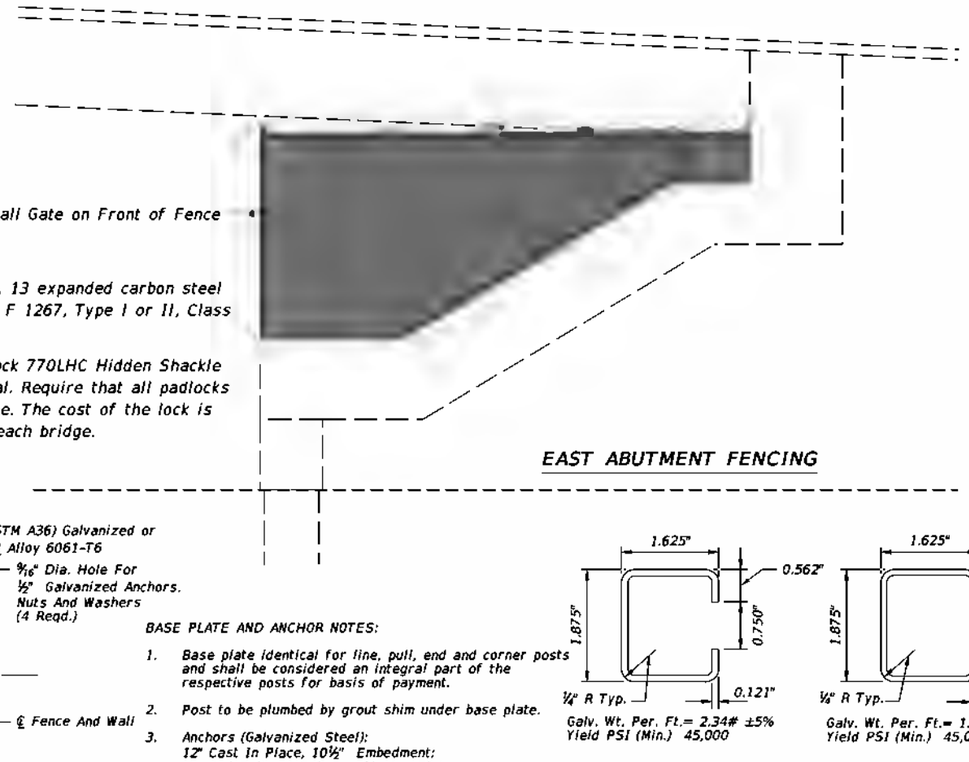
(3) Aluminum alloy pipe- 2" nominal dia.: ASTM B241 or B221, Alloy 6063, T6.

(4) Steel H-Beam- 1⅞"x 1⅝": Zinc Galv. 1.8 oz./ft.: AASHTO M111 and Detail.

(5) Aluminum alloy H-Beam- 1⅞"X 1⅝" Detail.

(6) Steel C- 1⅞"X 1⅝": Galv.: 1.8 oz/ft. zinc: AASHTO M111; OR , 0.9 oz./ft². zinc-5% aluminum-mischmetal: ASTM F1043 and Detail.

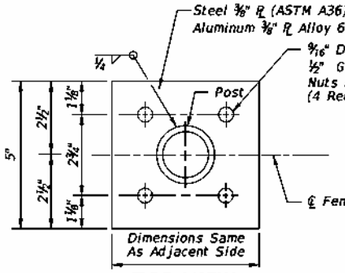
(7) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2" OD, 1½" NPS, 1.900" dec. equiv., 0.120" min. wall thick. and min. wt. 2.28 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.



EAST ABUTMENT FENCING

NOTES:

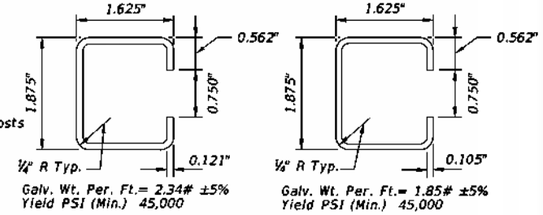
1. Expanded metal mesh shall be ½" No. 13 expanded carbon steel metal mesh in accordance with ASTM F 1267, Type I or II, Class 2, Grade A.
2. Equip access doors with a Master Lock 770LHC Hidden Shackle Padlock with Hasp, or approved equal. Require that all padlocks on an individual bridge be keyed alike. The cost of the lock is included in pay item 550-60-211 of each bridge.



TOP VIEW ANCHOR PLATE

BASE PLATE AND ANCHOR NOTES:

1. Base plate identical for line, pull, end and corner posts and shall be considered an integral part of the respective posts for basis of payment.
2. Post to be plumbed by grout shim under base plate.
3. Anchors (Galvanized Steel):
   12" Cast In Place, 10½" Embedment;
   Headed Bolts, U-Bolts or Cluster Plates.
   8" Adhesive Anchors, 6" Min. Embedment.*
   *Adhesive anchors shall be headless anchor bolts set in drilled holes with an Adhesive Material System in accordance with Specs. 416 and 937; drilled holes shall be ⅛" larger in diameter than the anchor bolt.
   Expansion Bolts Not Permitted.



Galv. Wt. Per. Ft.= 2.34# ±5%
Yield PSI (Min.) 45,000

STANDARD WALL

Galv. Wt. Per. Ft.= 1.85# ±5%
Yield PSI (Min.) 45,000

THINWALL

FENCE MOUNTING ON CONCRETE SLOPE PROTECTION

B. Corner, end, and pull post options:

(1) Galvanized steel pipe, Schedule 40- 2" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².: ASTM A53 Table X 2, ASTM F1083, and AASHTO M111.

(2) Aluminum coated steel pipe: ASTM A53 steel, X 2 Tables: Schedule 40; 2" nominal dia., 2.375" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.

(3) Aluminum alloy pipe- 2½" nominal dia.: ASTM B241 or B221, Alloy 6063,T6.

(4) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2½" OD, 2" NPS, 2.375" dec. equiv., 0.130"min. wall thick. and min. wt. 3.117 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in² min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

C. Tension wire options:

(1) Steel wire No. 7 gage zinc galvanized at the rate of 1.2 oz./ft².: AASHTO M181.

(2) Aluminum alloy wire with a diameter of 0.1875" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.

(3) Aluminum coated steel wire No.7 gage coated at the rate of 0.040 oz./ft².: AASHTO M181.

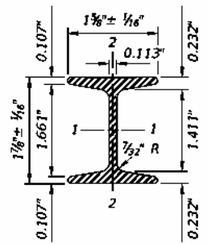
D. Tie wire and hog ring options:

(1) Steel wire No.9 gage zinc galvanized at the rate of 1.2 oz./ft².

(2) Aluminum alloy wire with a diameter of 0.1443" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.

(3) Aluminum coated steel wire No. 7 gage coated at the rate of 0.040 oz./ft².

OPTIONAL "C" LINE POST



	STEEL	ALUMINUM
Area (Sq. In.)	724	724
Weight (Lb./Ft.)	2.72 ± 5% (Galv.)	0.91 ± 5%
Surface Area (SF/Ft.)	0.776	0.776
Tensile Strength (psi Min.)	80,000	30,000
Yielding Point (psi Min.)	48,000	25,000

	Axes 1-1	Axes 2-2	Axes 1-1	Axes 2-2
Moment Of Inertia	0.428	0.101	0.428	0.101
Section Modulus	0.456	0.124	0.456	0.124
Rad. Of Gyration	0.779	0.373	0.779	0.373

OPTIONAL 1⅞"x 1⅝" H-BEAM LINE POST

BRIDGE NO. 874542

REVISIONS

DESIGNED BY:			
DETAILED BY:			
CHECKED BY:			

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

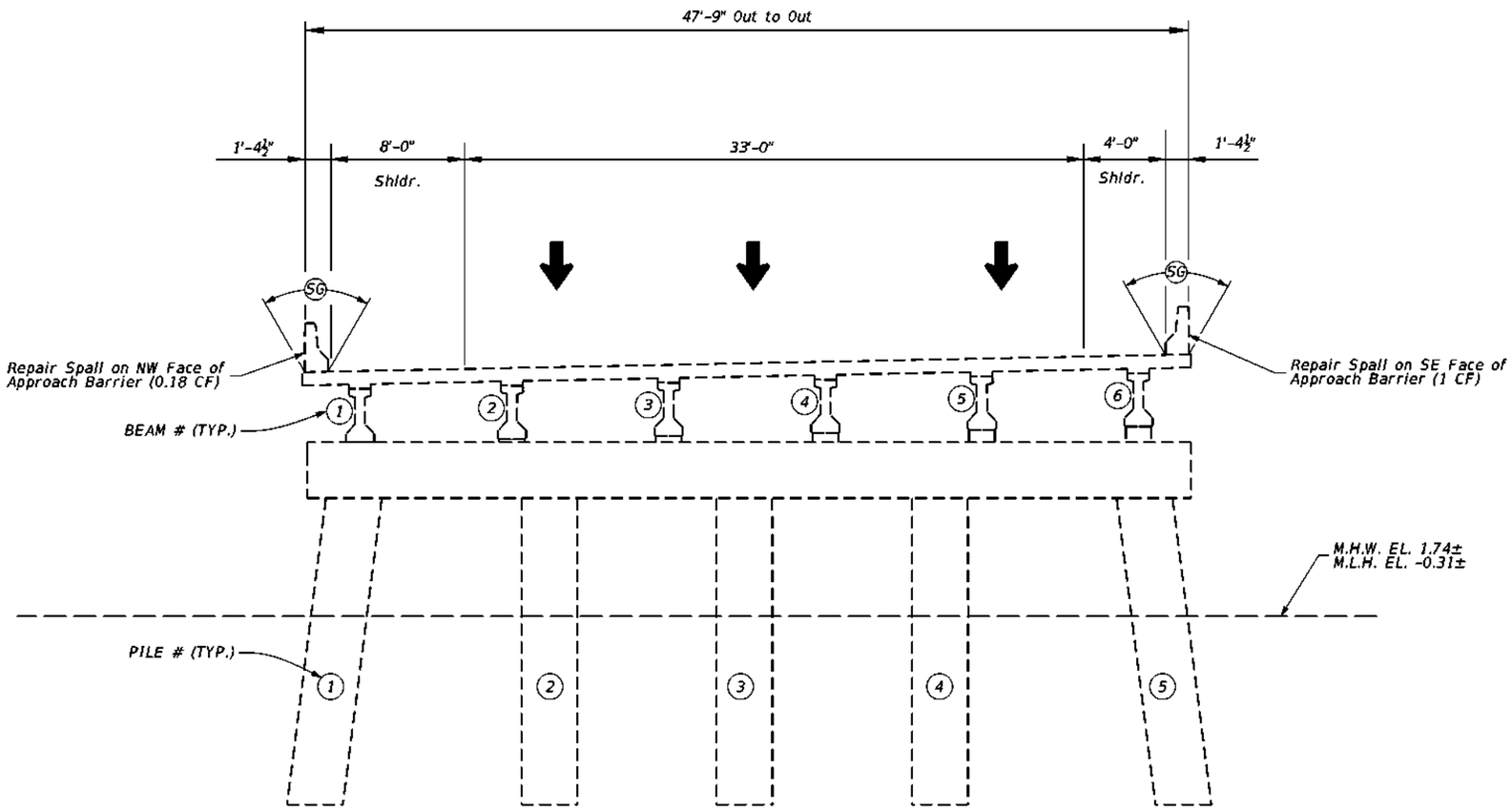
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	[illegible]

FENCING REPLACEMENT

REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-36



TYPICAL SECTION

KEY FOR REPAIR DESCRIPTIONS
LOOKING EAST

LEGEND:

Class 5 finish, color shall be federal standard 595B (July 1994) color 36622 (Standard Concrete Gray)

BRIDGE NO. 874542

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: TYPICAL BRIDGE SECTION AND PLAN KEY FOR REPAIRS

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-37

$USERS $DATES $TIMES $FILES

BEAM	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
1-1	1110	BEAM END AT CAP	DIAGONAL CRACK (4FT X 1/64IN)	1	4.000	-	-	-
2-1	1110	BEAM END AT CAP	DIAGONAL CRACK (4FT X 1/64IN)	1	4.000	-	-	-
3-1	1080	BOTTOM FLANGE, BOTTOM FACE OVER BENT 3 CAP	DELAM. (12IN X 5IN)	1	1.000	0.417	-	-
5-1	1080	OVER BENT 6	SPALL/DELAM. (8IN X 5IN X 3IN)	1	0.667	0.250	-	-
9-2	1080	BOTTOM NORTH FLANGE OVER BENT 10	DELAM. (4FT X 8IN)	1	4.000	0.667	-	-
11-3	1080	BOTTOM NORTH FLANGE, 5 FT FROM BENT 12	DELAM. (3FT X 10IN)	1	3.000	0.833	-	-
12-1	1110	BEAM END AT CAP	DIAGONAL CRACK (4FT X 1/64IN)	1	4.000	-	-	-
13-1	1080	NORTH FACE OF WEB, BEAM END AT ABUTMENT 14	SPALL (7IN X 4IN X 1IN)	1	0.583	0.333	0.083	0.016
13-1	1110	BEAM END AT CAP	DIAGONAL CRACK (4FT X 1/64IN)	1	4.000	-	-	-

BEAM DEFICIENCIES

DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
1130	VARIOUS LOCATIONS ALONG SOUTH BARRIER	VERTICAL CRACKS (FULL HEIGHT X 1/64IN)	1	3.000	-	-	-
1130	VARIOUS LOCATIONS ALONG NORTH BARRIER	VERTICAL CRACKS (FULL HEIGHT X 1/64IN)	1	3.000	-	-	-

PARAPET DEFICIENCIES

BEAM	DEFECT #	LOCATION	DEFICIENCY	QTY.
VARIOUS	1000	BEARING SOLE PLATES AND ANCHOR BOLTS	CORROSION	154

BEARING DEFICIENCIES

1080 - SPALL/DELAMINATION

1110 - PRESTRESSED CONCRETE CRACKING

1130 - CONCRETE CRACKING

1010 - CONCRETE CRACKING

BRIDGE NO. 874542

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

$USERS $DATE$ $TIME$ $FILE$

SHEET TITLE: BEAM & BEARING DEFICIENCIES

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-38

BAY	DEFECT	LOCATION	DEFICIENCY	QTY (EA)	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
8-5	1130	OVER BENT 8	DIAGONAL CRACK (4FT)	1	4.000	-	-	-	-
12-5	1130	OVER BENT 12	DIAGONAL CRACK (4FT)	1	4.000	-	-	-	-
VARIOUS	1130	MULTIDIRECTIONAL IN SEVERAL LOCATIONS THROUGHOUT BRIDGE	MULTIDIRECTIONAL CRACK (UP TO 4FT)	1	4.000	-	-	-	-

DECK UNDERSIDE DEFICIENCIES

SPAN	DEFECT	LOCATION	DEFICIENCY	QTY (EA)	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
7, 8, 9, 13	1130	ADJACENT TO CONSTRUCTION JOINTS	TRANSVERSE CRACKS (UP TO 45FT)	1	45.000	-	-	-	-
VARIOUS	1130	FULL SPAN LENGTH	LONGITUDINAL CRACKS	1	49.333	-	-	-	-
8	1130	2 AT LEFT SHOULDER, 2 AT LANE 3, 10 FT FROM RIGHT BARRIER, EXTENDING FROM BENT 8	DIAGONAL CRACK (UP TO 5FT)	1	5.000	-	-	-	-
12	1130	1 AT LEFT SHOULDER, 2 AT LANE 3 AND RIGHT SHOULDER, EXTENDING FROM BENT 12	DIAGONAL CRACK (UP TO 8FT)	1	8.000	-	-	-	-
13	1130	2 ADJACENT TO CONSTRUCTION JOINT AT BENT 13, TRANSVERSE FULL WIDTH	TRANSVERSE CRACKS	1	47.750	-	-	-	-

DECK SURFACE DEFICIENCIES

SPAN	DEFECT	LOCATION	DEFICIENCY	QTY (EA)	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
East Approach	3220	Center Lane Extending into Adjacent Lanes	MULTIDIRECTIONAL CRACKS (UP TO 21FT)	1	21.000	-	-	-	-

OVERLAY DEFICIENCIES

1130 - REINFORCED CONCRETE CRACKING

3220 - WEARING SURFACE CRACKING

BRIDGE NO. 874542

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: DECK DEFICIENCIES

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-39

$USERS $DATES $TIMES $FILES

PILE	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
2-2	1080	NE CORNER, 6 FT BELOW CAP	SPALL (10IN X 4IN X 1IN)	1	0.833	0.333	0.083	0.023
2-2	1080	SE CORNER, 5 FT BELOW CAP	SPALL (6IN X 6IN X 1IN)	1	0.500	0.500	0.083	0.021
2-4	1080	SOUTH FACE, 8 FT BELOW CAP	SPALL (9IN X 5IN X 1IN)	1	0.750	0.417	0.083	0.026
2-5	1080	NE CORNER, 8 FT BELOW CAP	SPALL (31IN X 11IN X 1IN)	1	2.583	0.917	0.083	0.197
2-5	1080	NW CORNER, 6 FT BELOW CAP	SPALL (10IN X 2IN X 1.5IN)	1	0.833	0.167	0.125	0.017
3-1	1080	SE AND NW CORNERS, 4 FT BELOW CAP	SPALL/DELAM. (14IN X 6IN X 1/2IN)	1	1.167	0.500	0.042	0.024
3-3	1080	SE CORNER, 6 FT BELOW CAP	SPALL (6IN X 5IN X 1IN)	1	0.500	0.417	0.083	0.017
3-4	1080	NW CORNER, 6 FT BELOW CAP	SPALL (6IN X 3IN X 1IN)	1	0.500	0.250	0.083	0.010
3-5	1080	SW CORNER, 6 FT BELOW CAP	SPALL (6IN X 6IN X 1IN)	1	0.500	0.500	0.083	0.021
4-1	1110	WEST FACE, BELOW CAP	SPALL/DELAM. (6FT X 12IN X 1.5IN) W/ VERT. CRACK (36IN X 1/16IN)	1	6.000	1.000	0.125	0.750
5-1	1100	SW CORNER, 7 FT BELOW CAP	SPALL (8FT X 14IN X 3.5IN) W/ EXPOSED STRAND	1	8.000	-	-	-
5-3	1100	NW CORNER, 1 FT BELOW CAP	SPALL/DELAM. (52IN X 16IN X 3IN) W/ EXPOSED STRAND	1	4.333	-	-	-
6-1	1080	NW AND NE CORNER, 1 FT BELOW CAP	SPALL (6IN X 6IN X 1IN)	1	0.500	0.500	0.083	0.021
6-2	1080	SE CORNER, 1 FT BELOW CAP	SPALL/DELAM. (54IN X 14IN X 1IN)	1	4.500	-	-	-
6-4	1110	EAST FACE, 3 FT BELOW CAP	DELAM. (20IN X 7IN) W/ VERT. CRACK (20IN X 1/32IN)	1	1.667	0.583	0.250	0.243
6-5	1080	SW CORNER, 8 FT BELOW CAP	SPALL (6IN X 6IN X 1IN)	1	0.500	0.500	0.083	0.021
7-1	1110	SW CORNER, BELOW CAP	DELAM. (5FT X 18IN) W/ VERT. CRACK (4FT X 1/8IN)	1	5.000	1.500	0.250	1.875
8-1	1080	SE CORNER, BELOW CAP	DELAM. (8IN X 8IN)	1	0.667	0.667	0.250	0.111
8-3	1080	SE CORNER, 2.5 FT BELOW CAP	SPALL/DELAM. (8IN X 4IN X 1IN)	1	0.667	0.333	0.083	0.019
8-3	1110	SOUTH FACE, 8 FT BELOW CAP	2 VERT. CRACKS (8IN X 1/16IN)	2	0.667	-	-	-
9-1	1110	SE CORNER, 18 IN BELOW CAP	DELAM. (5FT X 22IN) W/ VERT. CRACKS (5FT X 1/8IN)	1	5.000	1.833	0.250	2.292
9-2	1080	SW, NW, NE CORNER, BELOW CAP	DELAM. (5FT X 9IN)	1	5.000	-	-	-
9-3	1080	NE CORNER, 7 FT BELOW CAP	SPALL (12IN X 3IN X 3/4IN)	1	1.000	0.250	0.063	0.016
9-5	1080	NW CORNER, BELOW CAP	DELAM. (6FT X 1FT)	1	6.000	-	-	-
10-1	1100	SW AND NW CORNER, BELOW CAP	SPALL (7FT X 10IN X 4IN) W/ EXPOSED STRANDS	1	7.000	-	-	-
10-2	1100	SW AND NW CORNER, BELOW CAP	SPALL (7FT X 10IN X 4IN) W/ EXPOSED STRANDS	1	7.000	-	-	-
10-4	1080	SE CORNER, 38 IN BELOW CAP AND NE CORNER, 2 FT BELOW CAP	SPALL (8IN X 4IN X 1.5IN) AND DELAM. (40IN X 12IN)	1	3.333	1.000	0.125	0.417
10-4	1100	BELOW CAP	SPALL/DELAM. (7FT X 18IN X 4IN) W/ EXPOSED STRANDS AND CRACKING	1	7.000	-	-	-
10-5	1100	BELOW CAP	SPALL/DELAM. (7FT X 18IN X 4IN) W/ EXPOSED STRANDS AND CRACKING	1	7.000	-	-	-
11-1	1100	SW CORNER, 5 FT BELOW CAP	SPALL (7FT X 12IN X 4IN) W/ EXPOSED STRAND	1	7.000	-	-	-
11-5	1080	SE CORNER, 5 FT BELOW CAP	SPALL (10IN X 6IN X 1IN)	1	0.833	0.500	0.083	0.035
12-2	1100	NE CORNER, 10 IN BELOW CAP	SPALL/DELAM. (61IN X 4IN X 3.5IN)	1	5.083	-	-	-
12-3	1080	NE CORNER, 1 FT BELOW CAP	DELAM. (36IN X 7IN)	1	3.000	0.583	0.250	0.438
12-4	1080	SE CORNER, 7 FT BELOW CAP	SPALL (25IN X 3IN X 1/2IN)	1	2.083	0.250	0.042	0.022
13-1	1080	SE CORNER, 4.5 FT BELOW CAP	SPALL (12IN X 6IN X 1IN)	1	1.000	0.500	0.083	0.042
13-2	1110	BELOW CAP	DELAM. (58IN X 11IN) W/ CRACK (4FT X 1/16IN)	1	4.833	0.917	0.250	1.108

PIER PILE DEFICIENCIES

1080 - SPALL/DELAMINATION 1100 - Cracking and Exposed Prestressing

BRIDGE NO. 874542

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: SUBSTRUCTURE DEFICIENCIES (1 OF 2)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-40

$USERS $DATES $TIMES $FILES

BENT	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
1	1110	ABUTMENT 1 CAP	VERTICAL CRACK (FULL HEIGHT X 1/64IN)	5	3.000	-	-	-
6	1080	WEST FACE BETWEEN BEAMS 6-3 & 6-4	DELAMINATION (10IN X 5IN)	1	0.833	0.417	0.083	0.029
13	110	BAY 12-5 OVER BENT 13	HORIZONTAL CRACK (24IN X 1/64IN)	1	2.000	-	-	-

DIAPHRAGM DEFICIENCIES

CAP	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)	VOLUME (CY)
1	1130	ABUTMENT BACKWALL	DIAGONAL CRACK	2	2.000	-	-	-	-
VARIOUS	1130	RANDOM AT INTERMEDIATE BENT CAPS	VERTICAL CRACKS	1	15.000	-	-	-	-
14	1130	ABUTMENT CAP BELOW BEAM 13-2	HORIZONTAL CRACK	1	3.000	-	-	-	-

ABUTMENT AND PIER CAP DEFICIENCIES

LOCATION	DEFECT	DEFICIENCY	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
SW SLOPE, 2ND WEEP HOLE SOUTH OF BRIDGE	1130	DELAM (8IN X 5IN) W/ DIAG. CRACKS (30IN X 1/4IN)	2.500	0.667	0.250	0.417	0.015
PANEL 7 AT NW CORNER	1130	TRANSVERSE CRACK (31IN X 1/64IN)	2.583	-	-	-	-
EAST SLOPE CAP AT NORTH AND SOUTH END	1130	FULL HEIGHT CRACKS	6.000	-	-	-	-
EAST SLOPE AT BERM ADJACENT TO ABUTMENT CAP 14	4000	SETTLEMENT WITH DISPLACED PANELS	196.000	1.000	0.500	98.000	3.630

SLOPEWALL DEFICIENCIES

1080 - SPALL/DELAMINATION 1090 - EXPOSED REINFORCEMENT 1130 - REINFORCED CONCRETE CRACKING 4000 - SETTLEMENT

BRIDGE NO. 874542

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

$USERS $DATES $TIMES $FILES

SHEET TITLE: SUBSTRUCTURE DEFICIENCIES (2 OF 2)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-41

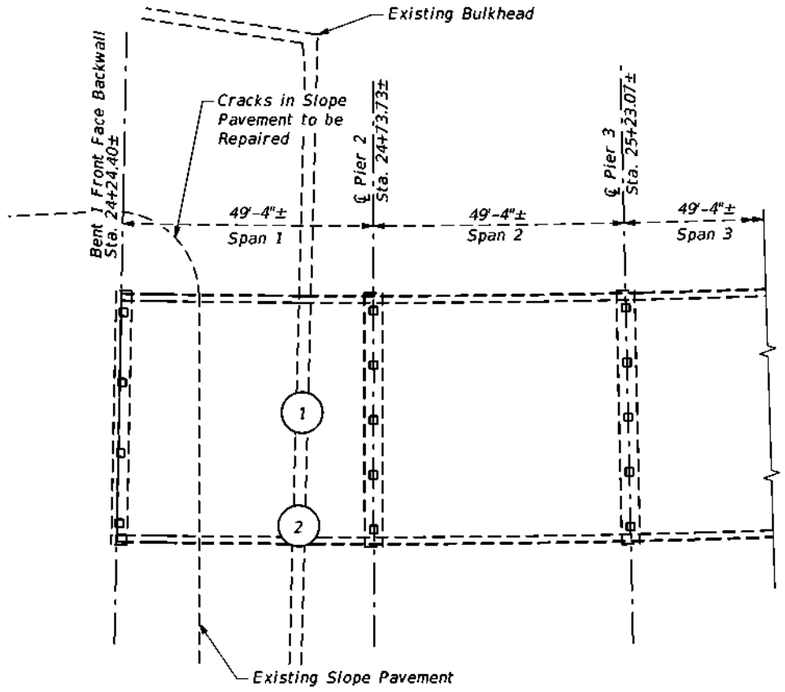
LEGEND

(#) Bulkhead to be Repaired

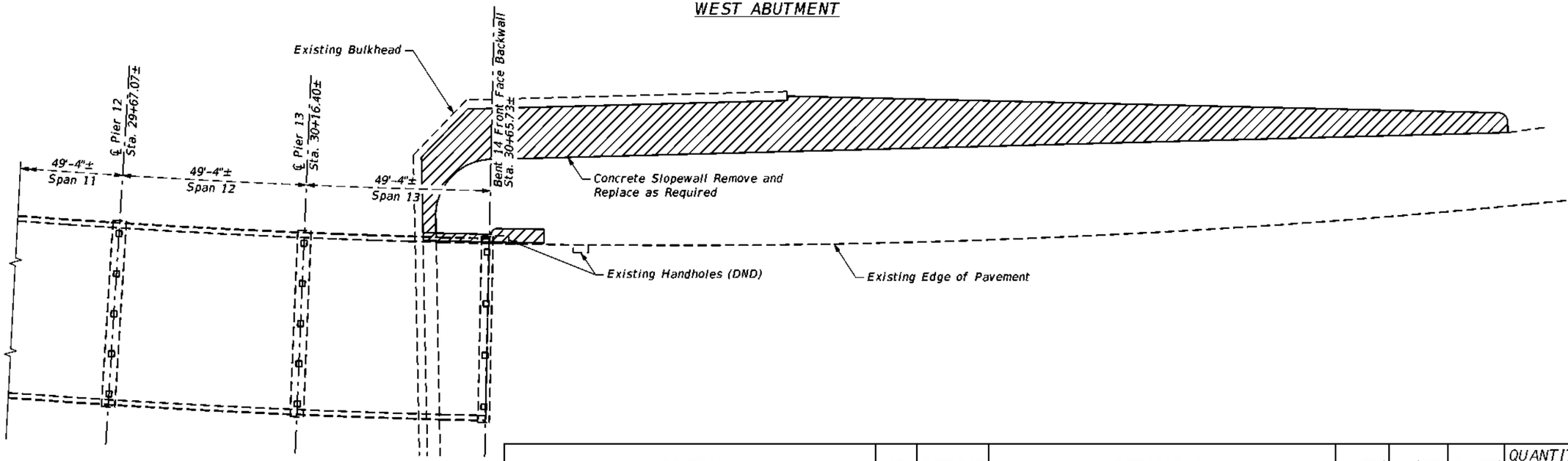
Concrete Slopewall Replacement

NOTE:

Beams not shown for clarity



WEST ABUTMENT



EAST ABUTMENT

LOCATION	ID	DEFECT	DEFICIENCY	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
WEST SEAWALL CAP BELOW BEAM 1-5	1	1080	DELAM	5.000	1.500	0.083	0.625	0.023
WEST SEAWALL CAP, 5 FT NORTH OF BRIDGE FASCIA	2	1090	SPALL/DELAM (24IN X 8IN) W/ EXPOSED REBAR	2.000	0.667	0.667	0.889	0.033

1080 - SPALL/DELAMINATION 1090 - ABRASION (PSC/RC)

BRIDGE NO. 874542

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

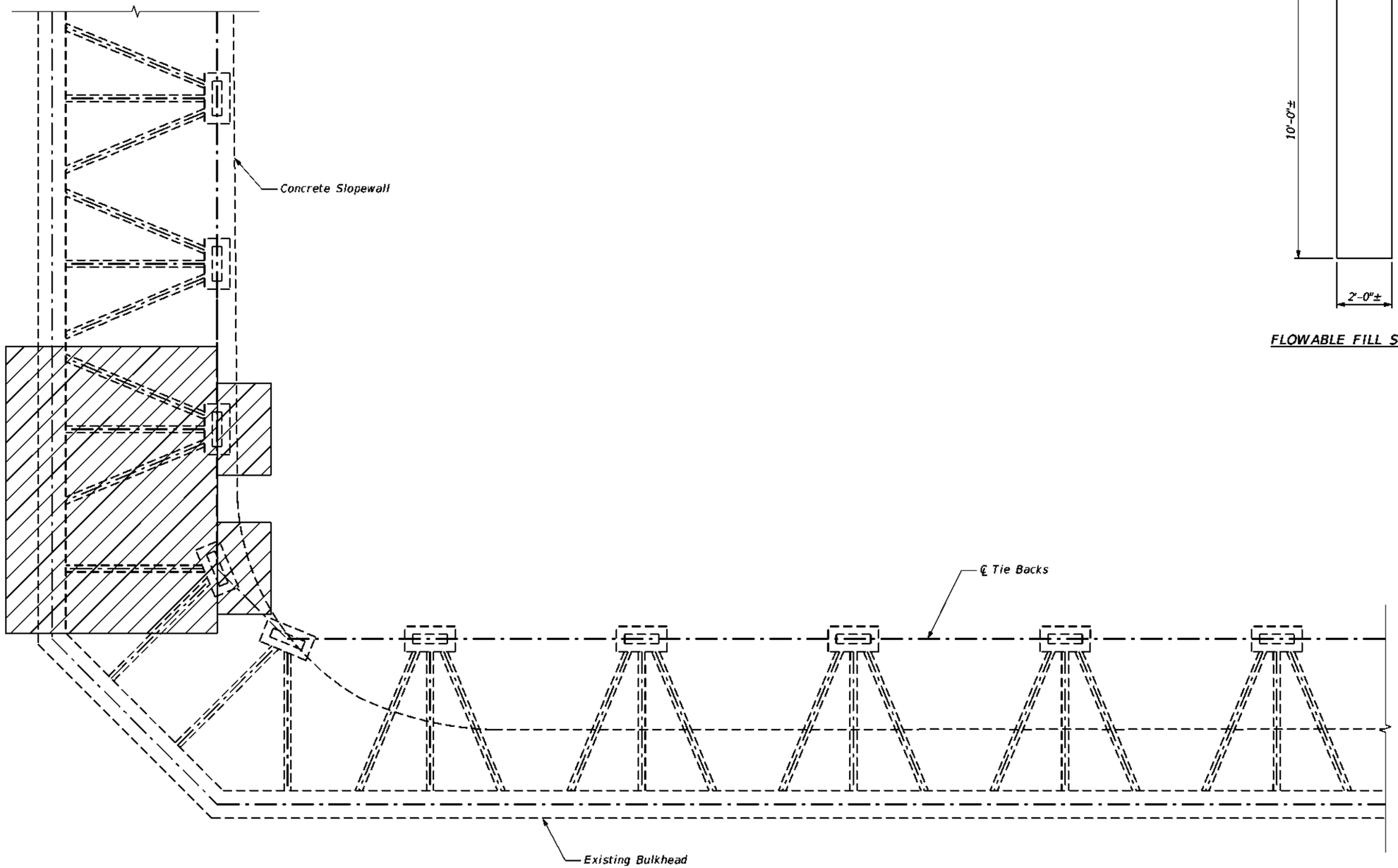
SHEET TITLE: BULKHEAD DEFICIENCIES & CONCRETE SLOPE REPLACEMENT

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-42

SUBSETS DATES TIMES FILES



FLOWABLE FILL SECTION

LEGEND:

Excavation

BRIDGE NO. 874542

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

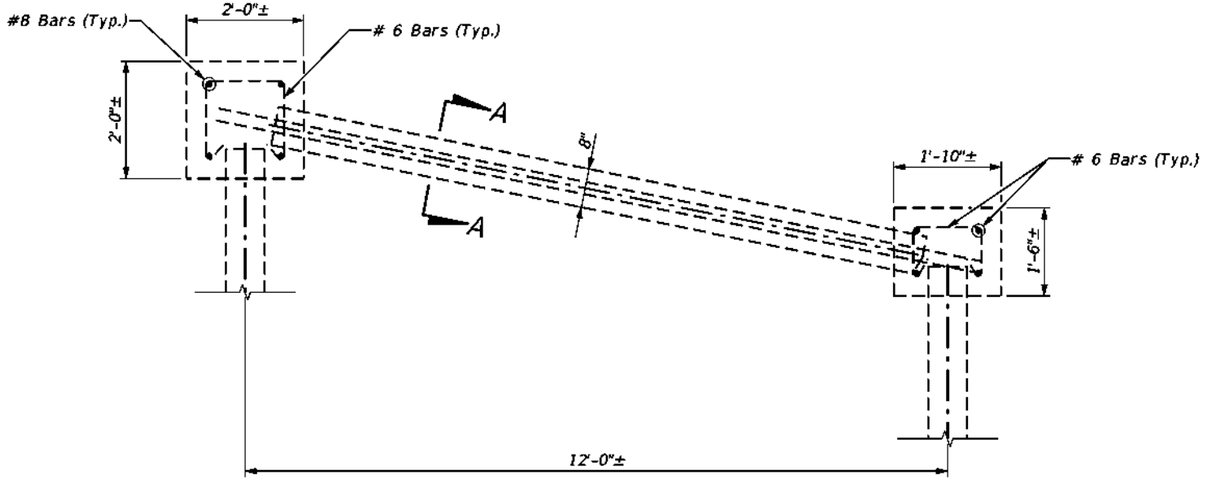
SHEET TITLE: EXISTING BULKHEAD PLAN

REF. DWG. NO.:

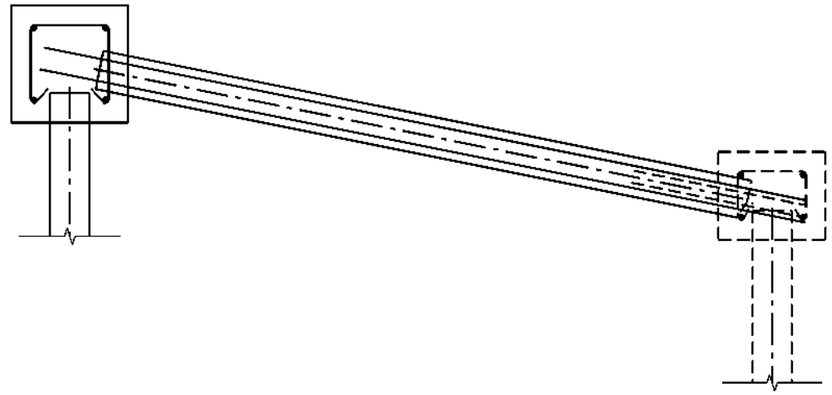
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-43

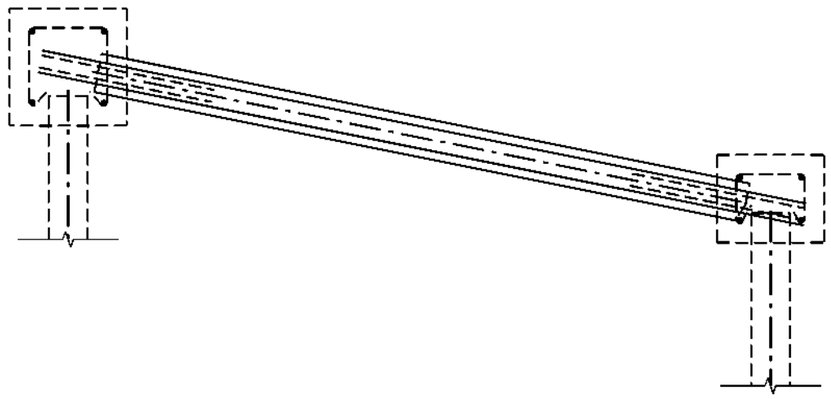
$USER$ $DATE$ $TIME$ $FILE$



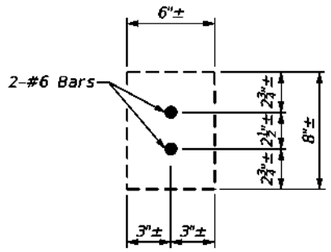
EXISTING



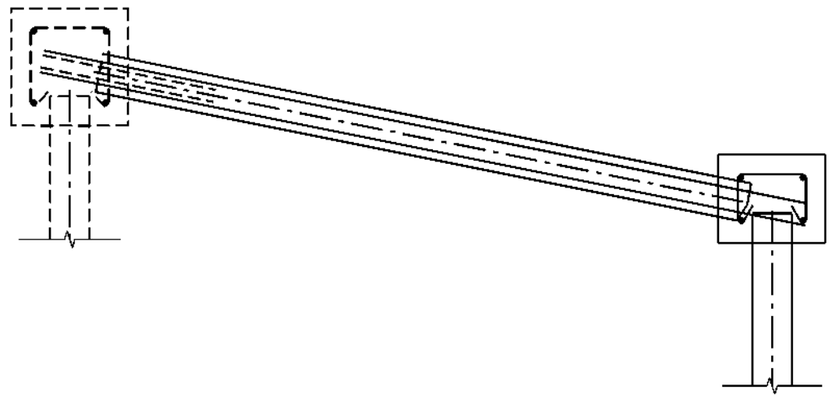
OPTION 2: TIE BEAM & BULKHEAD REPLACEMENT



OPTION 1: TIE BEAM REPLACEMENT



SECTION A-A



OPTION 3: TIE BEAM & BULKHEAD REPLACEMENT

NOTES:

1. Contractor shall determine the limits of repair once the concrete slopewall has been removed.
2. If it appears there is a loss of backfill material contractor shall use flowable fill to fill the void.
3. If it appears there is damage to the sheeting, no work shall be done without the direction of the engineer.

BRIDGE NO. 874542

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: CGP
CHECKED BY: BWC
DESIGNED BY: CGP
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: TIE BACK REPAIR OPTIONS

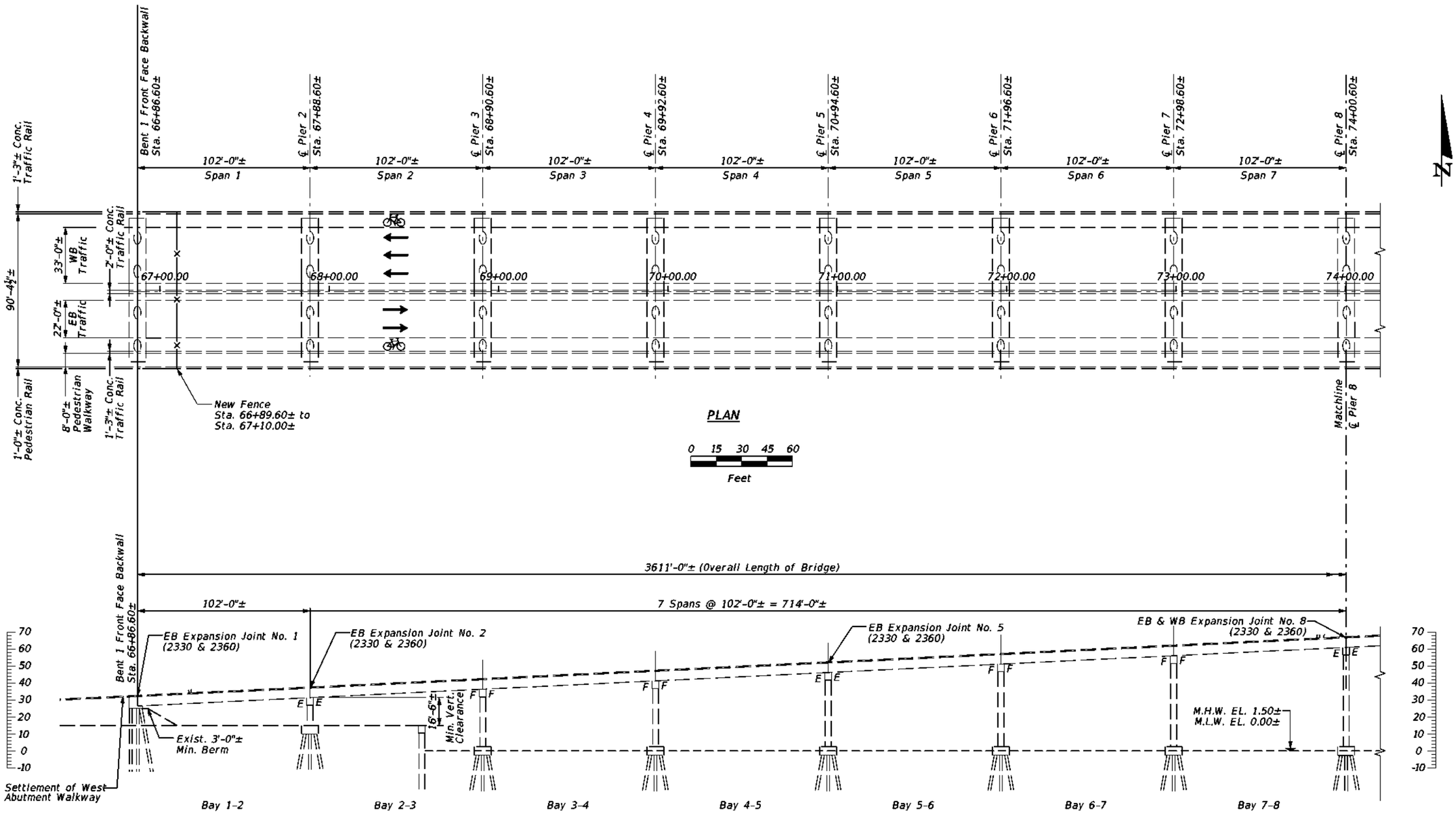
REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-44

$USERS $DATE$ $TIME$ $FILE$

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



PLAN

ELEVATION

NOTE:

Contractor shall field verify all span lengths and skew angles and notify the Engineer of any discrepancies

BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY:	SMC
CHECKED BY:	BWC
DESIGNED BY:	SMC
CHECKED BY:	BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

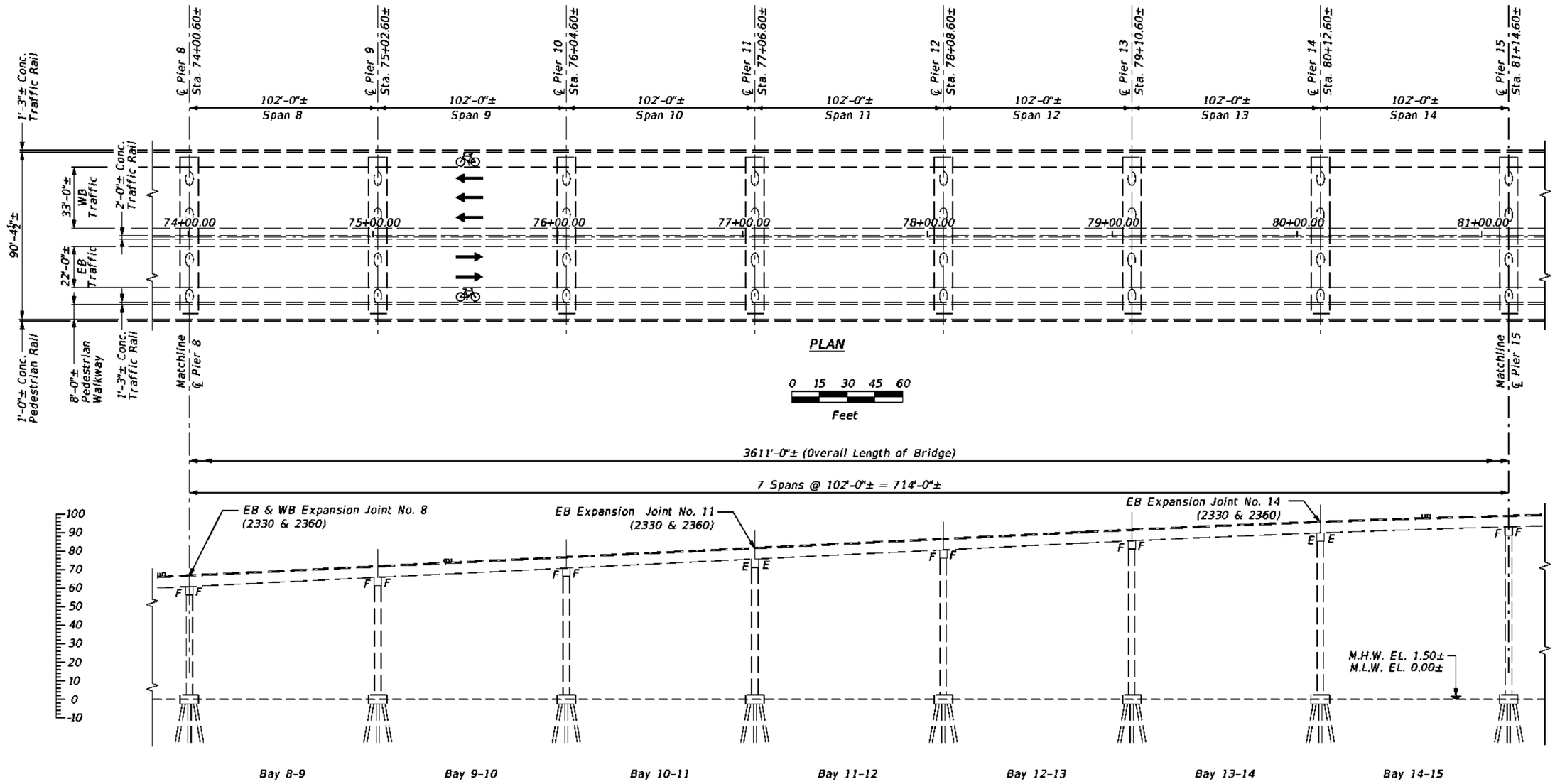
SHEET TITLE: GENERAL PLAN & ELEVATION (1 OF 5)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-45

$USERS $DATES $TIMES $FILES



NOTE:

Contractor shall field verify all span lengths and skew angles and notify the Engineer of any discrepancies.

BRIDGE NO. 874545

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: GENERAL PLAN & ELEVATION (2 OF 5)

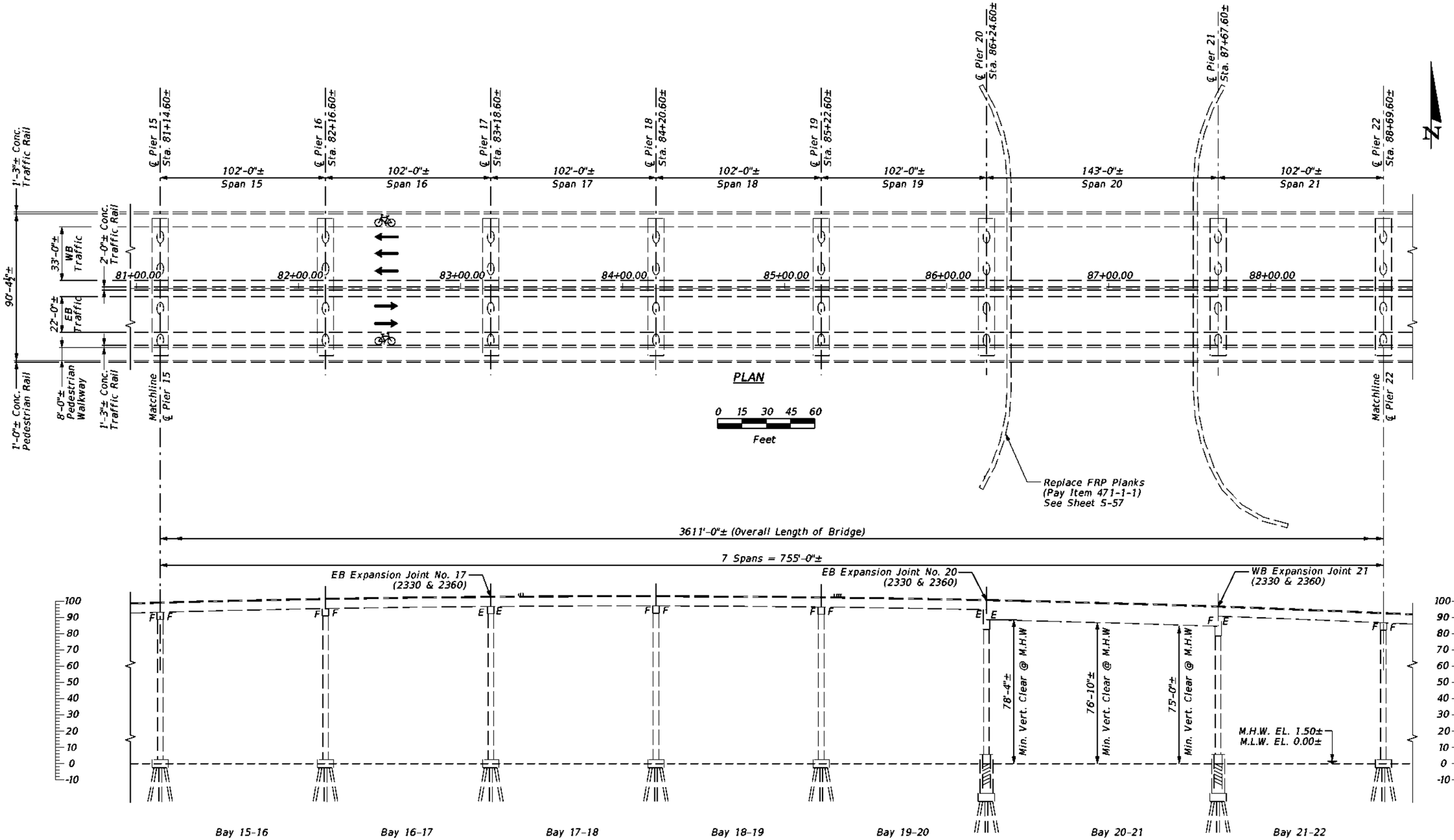
REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-46

$USERS $DATE$ $TIME$ $FILE$

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



ELEVATION

NOTE:

Contractor shall field verify all span lengths and skew angles and notify the Engineer of any discrepancies.

BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

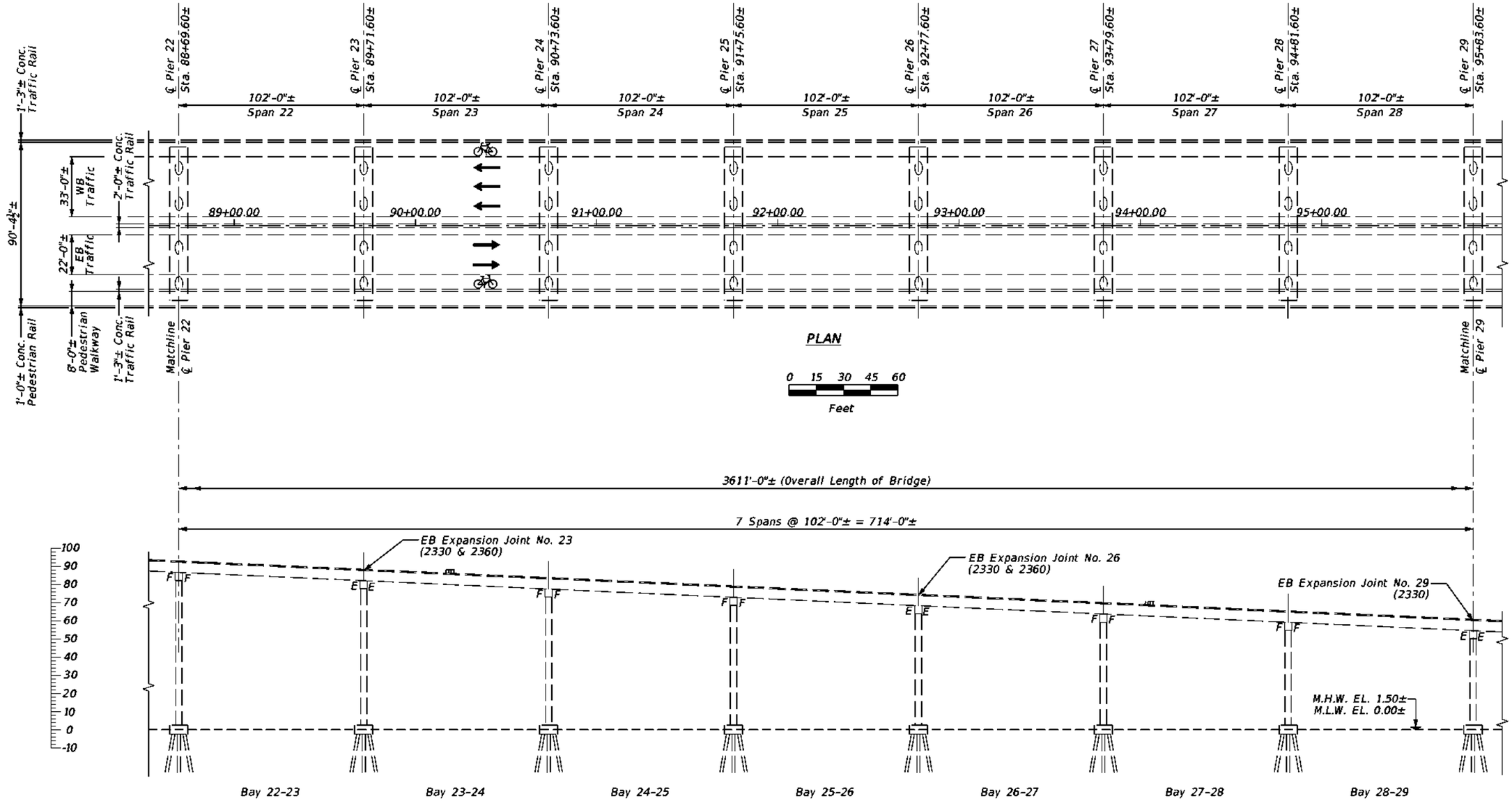
SHEET TITLE: GENERAL PLAN & ELEVATION (3 OF 5)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-47

$USERS $DATES $TIMES $FILES



NOTE:

Contractor shall field verify all span lengths and skew angles and notify the Engineer of any discrepancies.

BRIDGE NO. 874545

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: GENERAL PLAN & ELEVATION (4 OF 5)

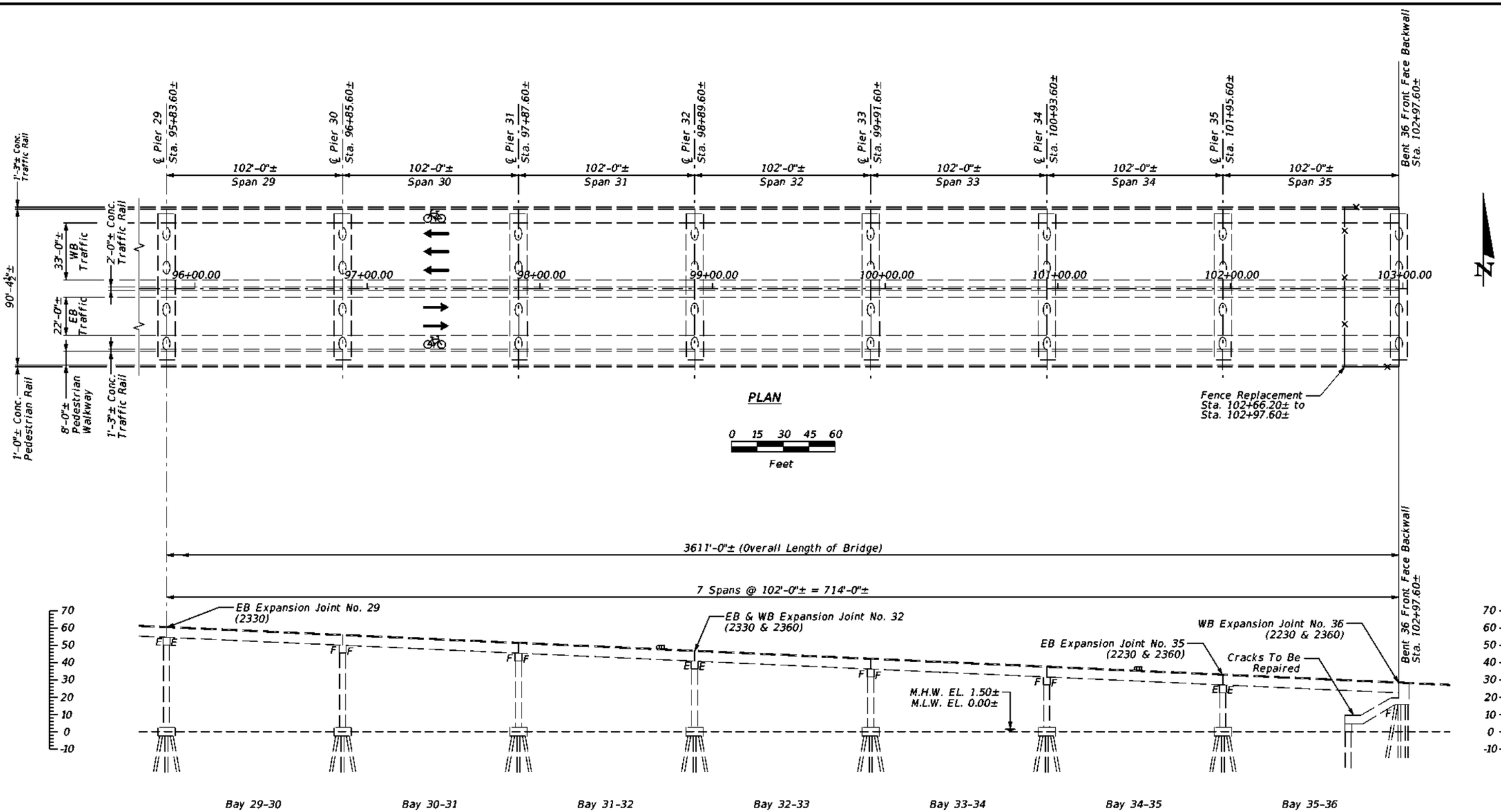
REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-48

$USERS $DATES $TIMES $FILES

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



NOTE:

Contractor shall field verify all span lengths and skew angles and notify the Engineer of any discrepancies.

BRIDGE NO. 874545

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY:	SMC
CHECKED BY:	BWC
DESIGNED BY:	SMC
CHECKED BY:	BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

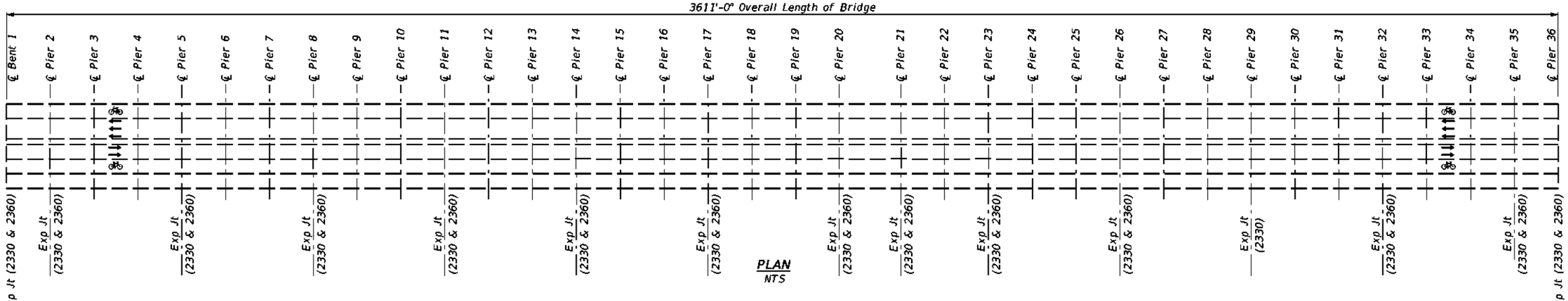
SHEET TITLE: GENERAL PLAN & ELEVATION (5 OF 5)

REF. DWG. NO.:

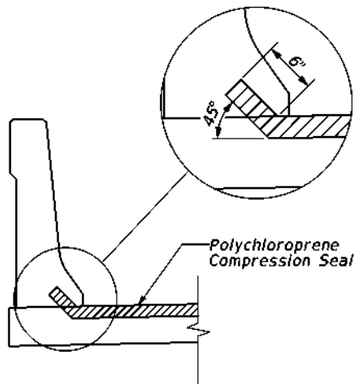
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-49

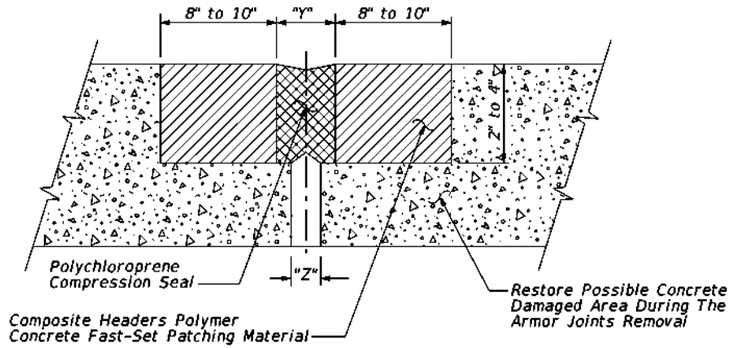
$USERS $DATES $TIMES $FILES



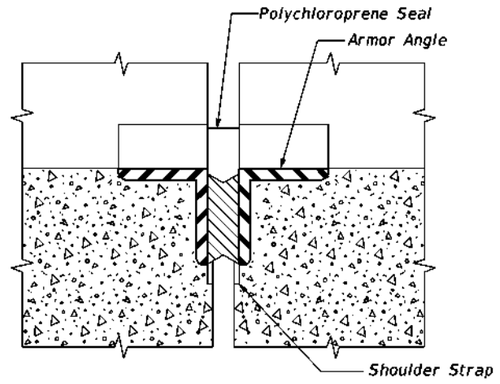
PLAN
NTS



SECTION THROUGH BARRIER



EXISTING ELASTOMERIC COMPRESSION SEAL JOINTS



SECTION THROUGH JOINT AT SIDEWALK

NOTES FOR REPAIR OF JOINTS:

1. THE WORK TO BE COMPLETED INCLUDES CLEANING AND INSTALLATION OF A NEW WATER TIGHT JOINT AT INDICATED BENTS.
2. THE JOINT SHALL BE AIR BLASTED TO REMOVE ALL LOOSE MATERIAL THE CONTRACTOR SHALL SUBMIT A DEBRIS CONTAINMENT PLAN TO THE ENGINEER FOR APPROVAL.
3. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING REINFORCEMENT, UNLESS OTHERWISE NOTED.
4. THE WIDTH OF REMOVAL OF EXISTING DECK CONCRETE SHALL REMAIN CONSTANT THROUGHOUT THE REPAIR AREA OF THE JOINT.
5. EXISTING JOINT WIDTH FROM EXISTING PLANS, CONTRACTOR TO FIELD VERIFY, JOINT WIDTH VARIES WITH TEMPERATURE.
6. 2" CLEAR COVER SHALL BE MAINTAINED FOR ALL BARS.
7. A CLEAN SAWCUT LINE IS REQUIRED FOR CONCRETE REMOVAL AROUND JOINTS.
8. INDICATED JOINTS ARE TO BE REMOVED AND REPLACED.
9. SEE SHEETS EXPANSION JOINT REPAIR SHEETS FOR AREAS OF HEADER REPAIR.
10. EXISTING REINFORCEMENT WITHIN REPAIR AREA TO REMAIN IN PLACE.
11. EXISTING REINFORCEMENT THAT IS DAMAGED/NON-SALVAGEABLE SHALL BE REPLACED WITH DRILLED OR EPOXY GROUTED BARS AT NO ADDITIONAL COST.

EXPANSION JOINT DATA TABLE					
LOCATION	END BENTS	PIERS 2 AND 35	PIER 20	PIER 21	ALL OTHER PIERS
TOTAL MOVEMENT	0	2"	2 1/4"	7/8"	2 3/8"
RANGE OF "Y"	0	2"–4"	2"–4 1/4"	1 3/8"–2 1/4"	1 7/8"–4 1/4"
"X"	0	3/16"	7/32"	1/16"	7/32"
"Y" AT 70°	1 1/4"	2 3/4"	2 3/4"	1 3/4"	2 3/4"
"Z" AT 70°	1/2"	2"	2"	1"	2"

BRIDGE NO. 874545

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

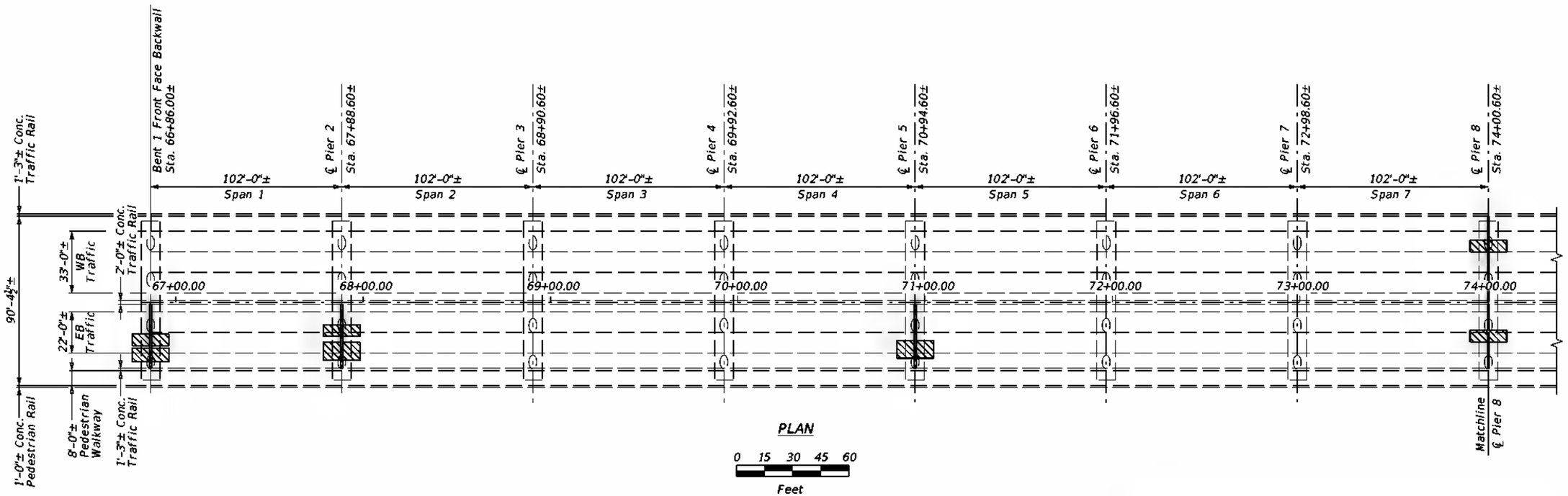
DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: JOINT REPLACEMENT LOCATION & DETAILS
REF. DWG. NO.
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY
SHEET NO. S-50

SUBSETS
DATES
TIMES
FILES



PLAN

0 15 30 45 60

Feet

2330	SEAL DAMAGE

EASTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Seal Replacement Quantity
	(FT.)
1	35
2	35
5	35
8	35

2360	ADJACENT DECK DAMAGE

EASTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Deck Replacement Quantity
	(CF)
1	6.222
2	1.000
5	3.000
8	1.333

2330	SEAL DAMAGE

WESTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Seal Replacement Quantity
	(FT.)
8	35

2360	ADJACENT DECK DAMAGE

WESTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Deck Replacement Quantity
	(CF)
8	0.333

LEGEND

Elastomeric Compression Seal Replacement

Concrete Spall Repair

BRIDGE NO. 874545

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	FIN-MT-[illegible]

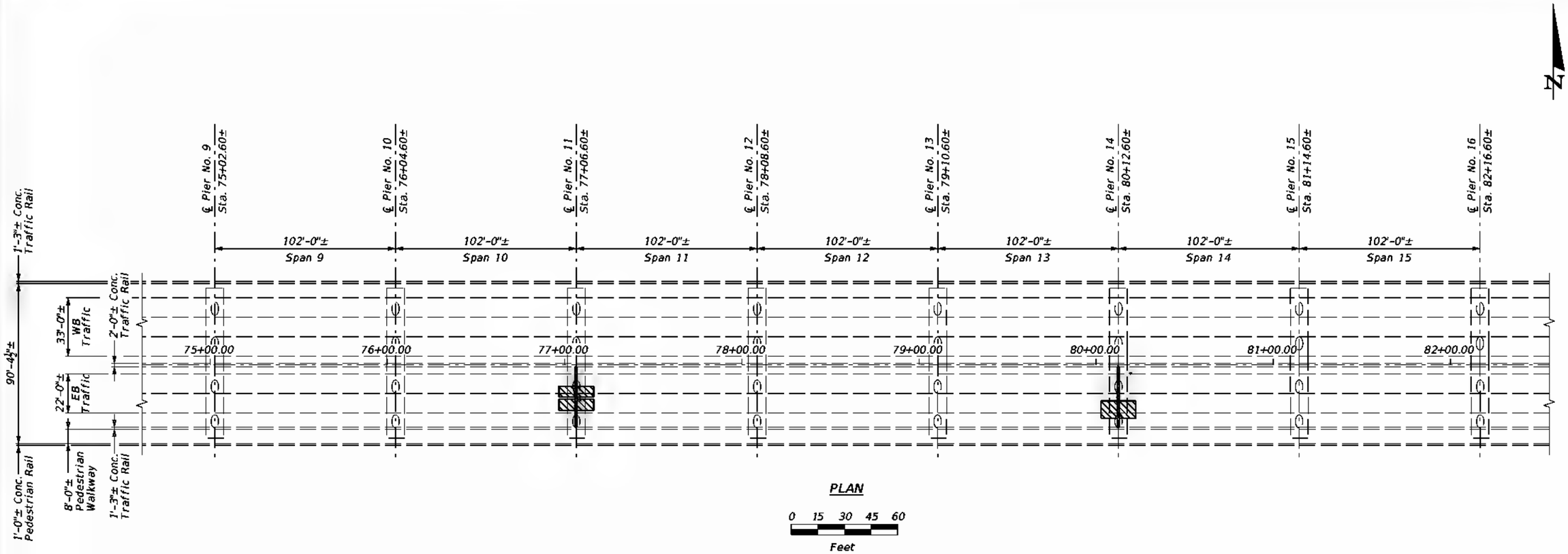
EXPANSION JOINT REPAIR (1 OF 5)

REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-51

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



PLAN

0 15 30 45 60

Feet

2330	SEAL DAMAGE

EASTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Seal Replacement Quantity
	(FT.)
11	35
14	35

2360	ADJACENT DECK DAMAGE

EASTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Deck Replacement Quantity
	(CF)
11	6.000
14	2.063

LEGEND

Elastomeric Compression Seal Replacement

Concrete Spall Repair

BRIDGE NO. 874545

REVISIONS

NO.	DESCRIPTION	NO.	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

CHECKED BY:

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	214 -MT-

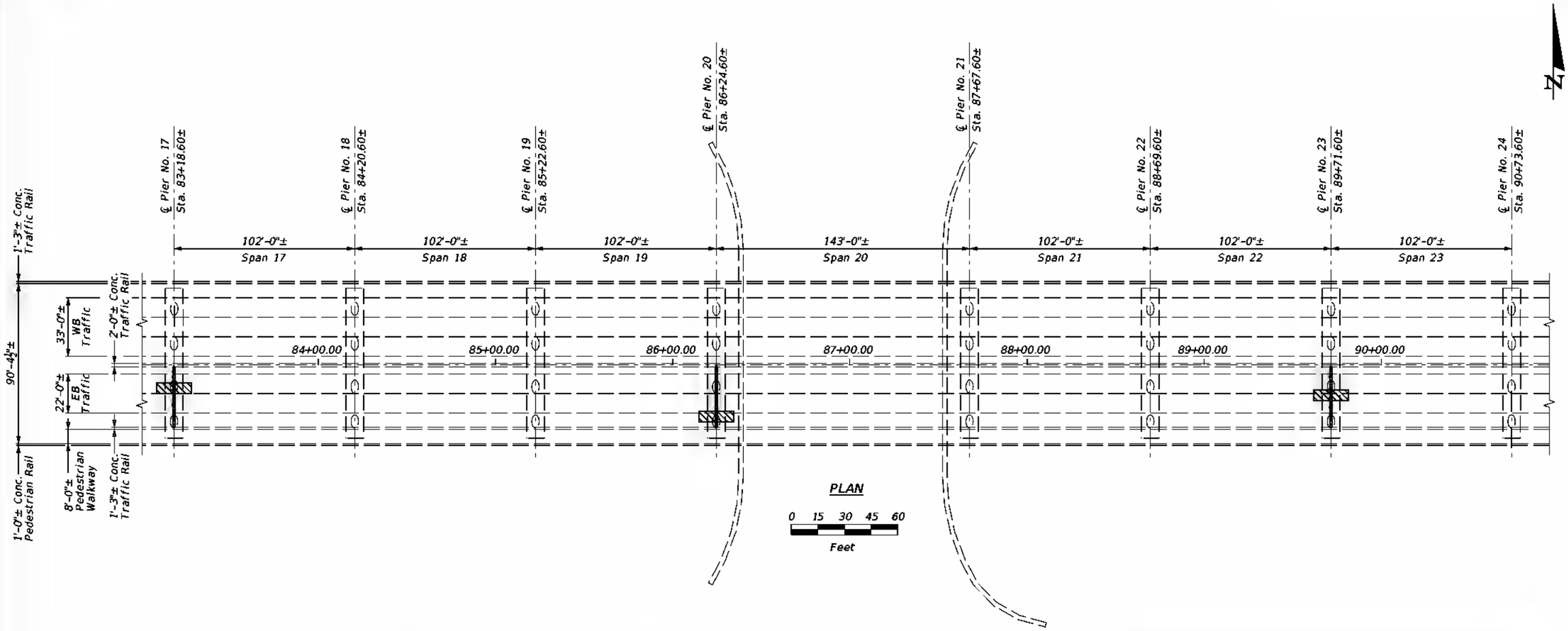
EXPANSION JOINT REPAIR (2 OF 5)

REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-52

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



2330	SEAL DAMAGE

EASTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Seal Replacement Quantity
	(FT.)
17	35
20	35
23	35

2360	ADJACENT DECK DAMAGE

EASTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Deck Replacement Quantity
	(CF)
17	0.255
20	0.139
23	1.111

2330	SEAL DAMAGE

WESTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Seal Replacement Quantity
	(FT.)
21	35

2360	ADJACENT DECK DAMAGE

WESTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Deck Replacement Quantity
	(CF)
21	0.076

LEGEND

Elastomeric Compression Seal Replacement

Concrete Spall Repair

BRIDGE NO. 874545

REVISIONS

NO.	DESCRIPTION	DATE	BY

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	[illegible]-MT-[illegible]

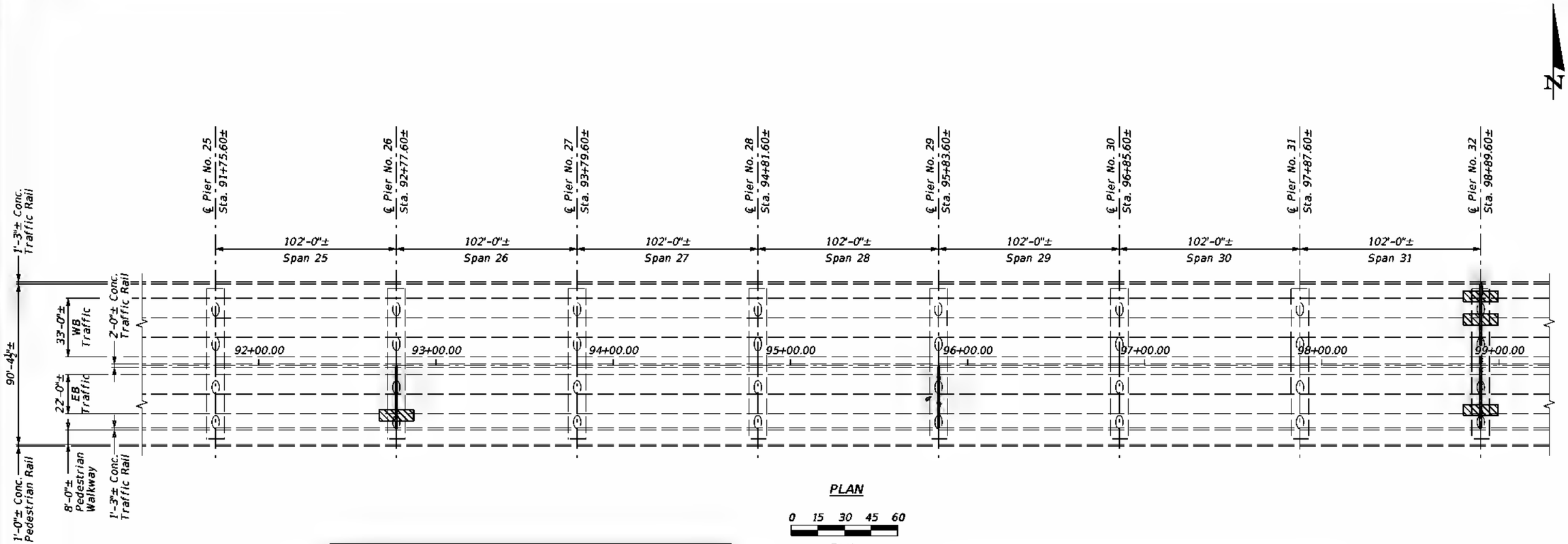
EXPANSION JOINT REPAIR (3 OF 5)

REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-53

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



PLAN

0 15 30 45 60
Feet

2330	SEAL DAMAGE

EASTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Seal Replacement Quantity
	(FT.)
26	35
29	35
32	35

2360	ADJACENT DECK DAMAGE

EASTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Deck Replacement Quantity
	(CF)
26	3.333
32	0.500

2330	SEAL DAMAGE

WESTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Seal Replacement Quantity
	(FT.)
32	35

2360	ADJACENT DECK DAMAGE

WESTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Deck Replacement Quantity
	(CF)
32	0.292

LEGEND

Elastomeric Compression Seal Replacement

Concrete Spall Repair

BRIDGE NO. 874545

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DESIGNED BY: JM
DRAWN BY: [illegible]
CHECKED BY: [illegible]

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	[illegible]-MT-[illegible]

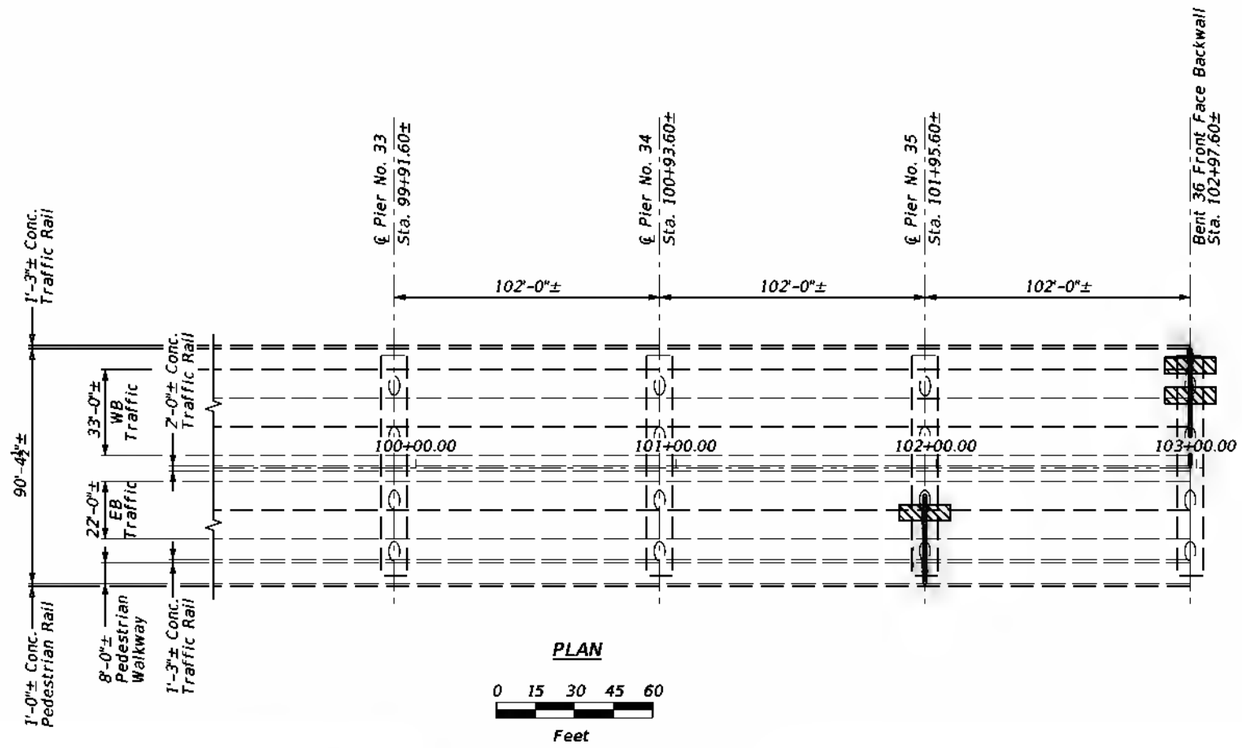
EXPANSION JOINT REPAIR (4 OF 5)

REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-54

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



PLAN

2330	SEAL DAMAGE

EASTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Seal Replacement Quantity
	(FT.)
35	35

2360	ADJACENT DECK DAMAGE

EASTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Deck Replacement Quantity
	(CF)
35	0.139

2330	SEAL DAMAGE

WESTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Seal Replacement Quantity
	(FT.)
36	35

2360	ADJACENT DECK DAMAGE

WESTBOUND EXPANSION JT. DEFICIENCIES	
JOINT	Deck Replacement Quantity
	(CF)
36	1.667

LEGEND

Elastomeric Compression Seal Replacement

Concrete Spall Repair

BRIDGE NO. 874545

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

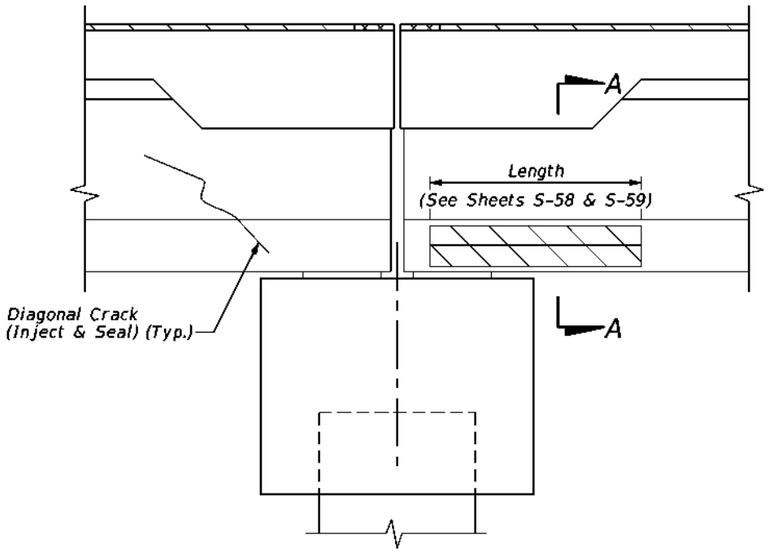
CONTRACT	JOINT	FINANCIAL PROJECT #
SR 913	MIAMI-DADE	

EXPANSION JOINT REPAIR (5 OF 5)

REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

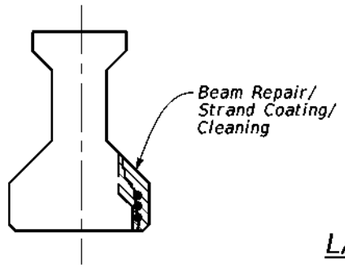
REF. DWG. NO.

SHEET NO. S-55



TYPICAL BEAM SHOWING EXPOSED REBAR/STRANDS

Concrete Beams with cracks shown on Sheet S-62 and S-63 injected and sealed. Use Type F-1 compound epoxy for sealing crack surfaces in preparation for injection. Refer to Section 411 of standard specifications for additional information.



SECTION A-A

LAP SPLICE TABLE

Rebar Size	Lap Splice Length
4	1'-0"
5	1'-3"
6	1'-6"
7	2'-1"
8	2'-8"
9	3'-5"
10	4'-4"
11	5'-4"

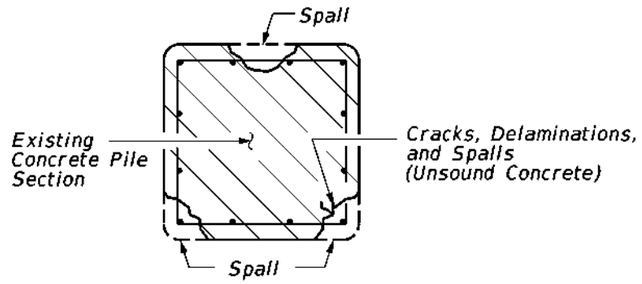
TYPICAL CRACK REPAIR METHOD

1. Cracks to be Repaired as Directed by the Engineer.
2. Remove Unsound Concrete from Crack Area.
3. Obtain Engineer's Approval to Carry Out Crack Repair (in Lieu of Spall Repair) for Cases Where Adjacent Concrete is Otherwise Unsound and Cracking is not a Result of Corroding Reinforcement.
4. For Cracks 1/32" to 1/8" use an Epoxy Resin with Minimum Viscosity of 325 cps, 28 day Compressive Strength of 13000 psi. for Cracks 1/8" to 1/4" use an Injection Gel or Equal Non-Sag Paste with 28 day Compressive Strength of 10000 psi.
5. For Cap Seal, use Injection Gel with Minimum 28 Day Compressive Strength of 12000 psi.
6. Engineer to Approve Crack and Cap Seal Material Prior to Beginning of Construction.
7. Apply Class II Finish at Completion of Crack Repair to Remove Fins or Knobs.

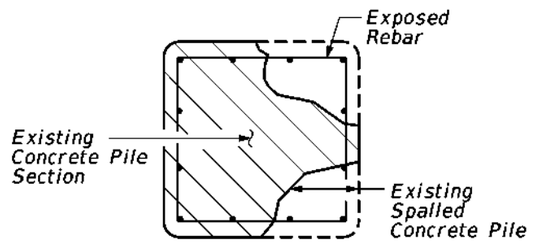
TYPICAL SPALL REPAIR

1. For Concrete Restoration, Remove and Repair Unsound Concrete from Areas to be Repaired in Accordance with this Sheet and the Technical Special Provisions. Areas Well Adhered to Existing Strand or Reinforcement Shall Remain.
2. Any Reinforcement Which is Loose shall be Secured in Place by Tying to other Secured Bars or by other Approved Methods. Lap Splices shall be Installed in Accordance with the Table.
3. Clean Exposed Rebar and Any Loose Concrete or Abrasives by Sandblasting.
4. Perform all sand blasting in accordance with the containment procedures specified in Section 561 of the FDOT Standard Specifications. The containment system must comply with all applicable Federal, State, and Local regulations.
5. Fill Voids with Repair Material in Accordance with the Technical Special Provisions and FDOT Specifications.

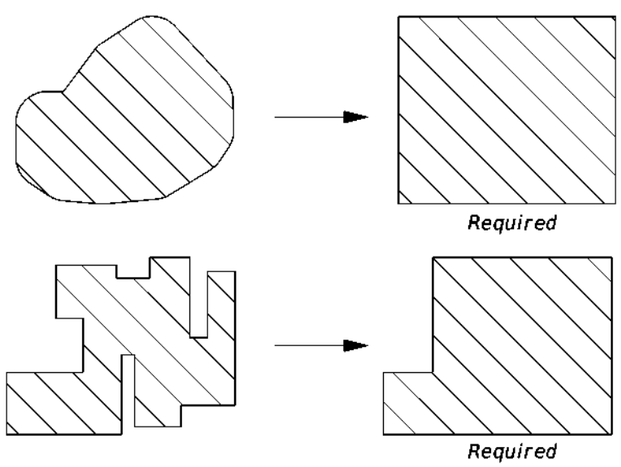
   Apply primer to area then apply epoxy coating. Coating shall extend 6" from the edge of the spall in every direction. Check coating thickness and inspect for defects.



TYPICAL DELAMINATIONS AND SPALLS

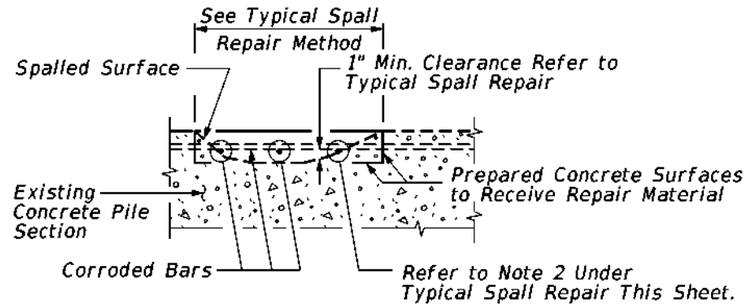


TYPICAL SPALL WITH EXPOSED REBAR



SIMPLE PATCH CONFIGURATION

At Corner Location Provide Right Angle Cuts.
Patch Configuration Shall be Kept as Simple as Possible.
Individual Repair Areas Within 2 Feet Shall be Joined at the Direction of the Engineer.



EXPOSING AND UNDERCUTTING REINFORCING STEEL

Applicable to Horizontal, Vertical, and Overhead Locations

BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: CONCRETE REPAIR & CRACK INJECT/SEAL DETAILS

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-56

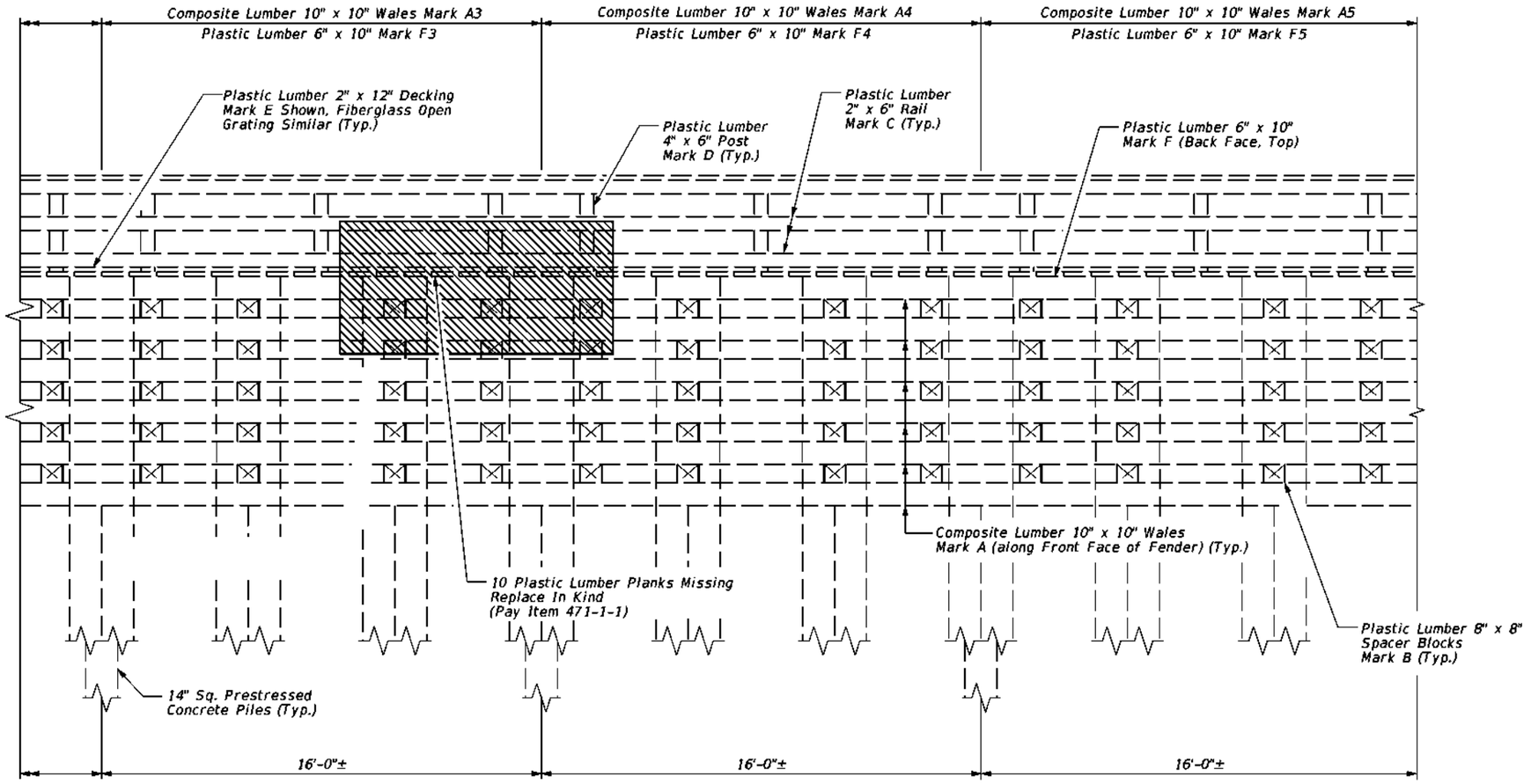
$USERS $DATES $TIMES $FILES

GENERAL NOTES:

PLASTIC LUMBER DECKING FOR CATWALKS: Provide Plastic Lumber decking for catwalks when called for in the Plans in accordance with FDOT Specification Section 973.

Install Plastic Lumber Decking according to manufacturer's recommendations using stainless steel #10 x 3" (minimum) deck screws.

25 LF of Plastic Lumber Decking to be removed and replaced.



PARTIAL PLAN

LEGEND

▨ Fender Planks to be Replaced

BRIDGE NO. 874545

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

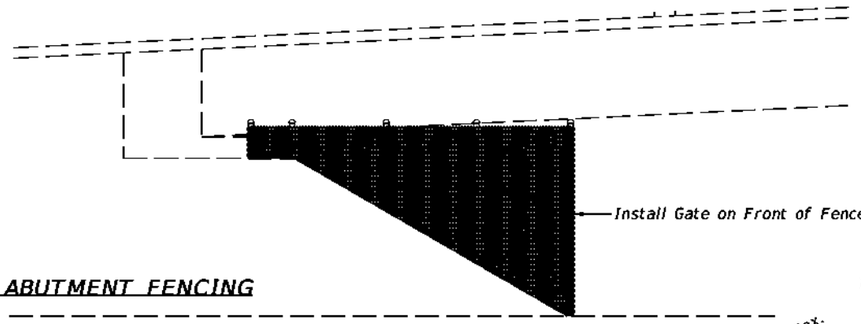
$USERS $DATE$ $TIME$ $FILE$

SHEET TITLE: FENDER DEFICIENCIES

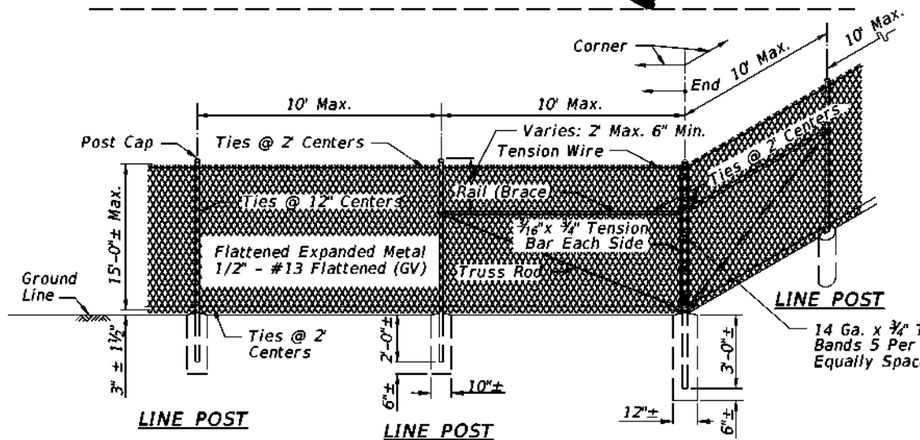
REF. DWG. NO.

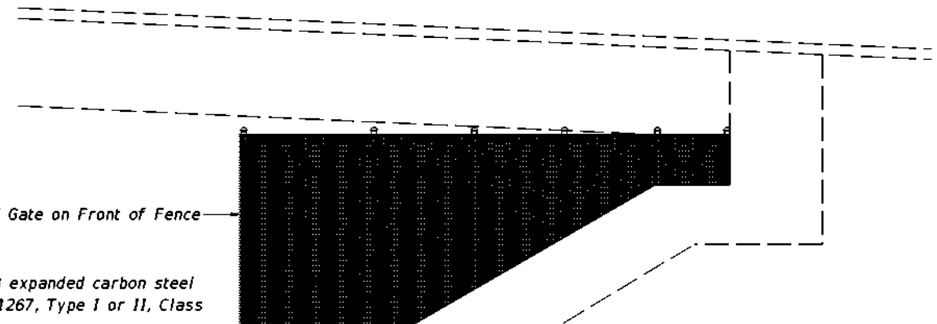
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-57



WEST ABUTMENT FENCING

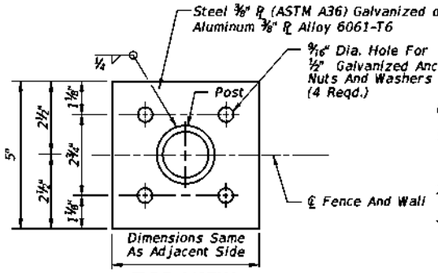




EAST ABUTMENT FENCING

NOTES:

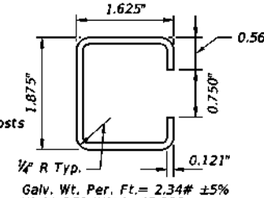
1. Expanded metal mesh shall be ½" No. 13 expanded carbon steel metal mesh in accordance with ASTM F 1267, Type I or II, Class 2, Grade A.
2. Equip access doors with a Master Lock 770LHC Hidden Shackle Padlock with Hasp, or approved equal. Require that all padlocks on an individual bridge be keyed alike. The cost of the lock is included in pay item 550-60-211 of each bridge.



TOP VIEW
ANCHOR PLATE

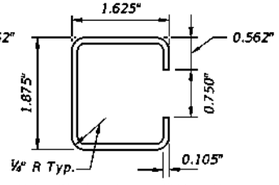
BASE PLATE AND ANCHOR NOTES:

1. Base plate identical for line, pull, end and corner posts and shall be considered an integral part of the respective posts for basis of payment.
2. Post to be plumbed by grout shim under base plate.
3. Anchors (Galvanized Steel):
   12" Cast In Place, 10½" Embedment:
   Headed Bolts, U-Bolts or Cluster Plates.
   8" Adhesive Anchors, 6" Min. Embedment.*
   *Adhesive anchors shall be headless anchor bolts set in drilled holes with an Adhesive Material System in accordance with Specs. 416 and 937; drilled holes shall be ⅛" larger in diameter than the anchor bolt.
   Expansion Bolts Not Permitted.



Galv. Wt. Per. Ft.= 2.34# ±5%
Yield PSI (Min.) 45,000

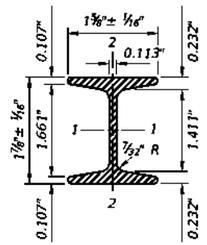
STANDARD WALL



Galv. Wt. Per. Ft.= 1.85# ±5%
Yield PSI (Min.) 45,000

THINWALL

OPTIONAL "C" LINE POST



	STEEL	ALUMINUM
Area (Sq. In.)	724	724
Weight (Lb./Ft.)	2.72 ± 5% (Galv.)	0.91 ± 5%
Surface Area (SF/Ft.)	0.776	0.776
Tensile Strength (psi Min.)	80,000	30,000
Yielding Point (psi Min.)	48,000	25,000

	Axes 1-1	Axes 2-2	Axes 1-1	Axes 2-2
Moment Of Inertia	0.428	0.101	0.428	0.101
Section Modulus	0.456	0.124	0.456	0.124
Rad. Of Gyration	0.779	0.373	0.779	0.373

OPTIONAL 1⅞"x 1⅝" H-BEAM LINE POST

FENCE MOUNTING ON CONCRETE SLOPE PROTECTION

GENERAL NOTES:

1. For supplemental information refer to Spec. 550.
2. Post, truss rods, tension wires, tie wires, stretcher bars, gates and all miscellaneous hardware shall meet the requirements of AASHTO and ASTM signify current reference.
3. Fence Component Options:

A. Line post options:
   (1) Galvanized steel pipe, Schedule 40- 1½" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².: ASTM A53 Table 2 (Grade A or B), ASTM F1083, and AASHTO M111.
   (2) Aluminum coated steel pipe: ASTM A53, Table 2 (Grade A or B): Schedule 40- 1½" nominal dia., 1.90" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.
   (3) Aluminum alloy pipe- 2" nominal dia.: ASTM B241 or B221, Alloy 6063, T6.
   (4) Steel H-Beam- 1⅞"x 1⅝": Zinc Galv. 1.8 oz./ft.: AASHTO M111 and Detail.
   (5) Aluminum alloy H-Beam- 1⅞"X 1⅝" Detail.
   (6) Steel C- 1⅞"X 1⅝": Galv.: 1.8 oz/ft. zinc: AASHTO M111; OR , 0.9 oz./ft². zinc-5% aluminum-mischmetal: ASTM F1043 and Detail.
   (7) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2" OD, 1½" NPS, 1.900" dec. equiv., 0.120" min. wall thick. and min. wt. 2.28 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

B. Corner, end, and pull post options:
   (1) Galvanized steel pipe, Schedule 40- 2" nominal dia. zinc galvanized at the rate of 1.8 oz./ft².: ASTM A53 Table X 2, ASTM F1083, and AASHTO M111.
   (2) Aluminum coated steel pipe: ASTM A53 steel, X 2 Tables: Schedule 40; 2" nominal dia., 2.375" OD; coated at the rate 0.40 oz./ft.: AASHTO M111.
   (3) Aluminum alloy pipe- 2½" nominal dia.: ASTM B241 or B221, Alloy 6063,T6.
   (4) Resistance welded steel pipe; 50,000 psi min. yield strength ASTM A569/A569M, A653/A653M or undepleted stock of discontinued A446/A446M base materials; ASTM F669 Group IV (Alternative Design); fence industry 2½" OD, 2" NPS, 2.375" dec. equiv., 0.130"min. wall thick. and min. wt. 3.117 lb./ft.; with ASTM F1043 metric equivalent internal coating Types A, B, C or D and external coating Types A, B, or C; the chromate conversion coating of external Type B shall have a thickness of 15µg/in². min. and the polymer film topcoat shall have a thickness of 0.0003" min.; internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

C. Tension wire options:
   (1) Steel wire No. 7 gage zinc galvanized at the rate of 1.2 oz./ft².: AASHTO M181.
   (2) Aluminum alloy wire with a diameter of 0.1875" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
   (3) Aluminum coated steel wire No.7 gage coated at the rate of 0.040 oz./ft².: AASHTO M181.

D. Tie wire and hog ring options:
   (1) Steel wire No.9 gage zinc galvanized at the rate of 1.2 oz./ft².
   (2) Aluminum alloy wire with a diameter of 0.1443" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
   (3) Aluminum coated steel wire No. 7 gage coated at the rate of 0.040 oz./ft².

BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

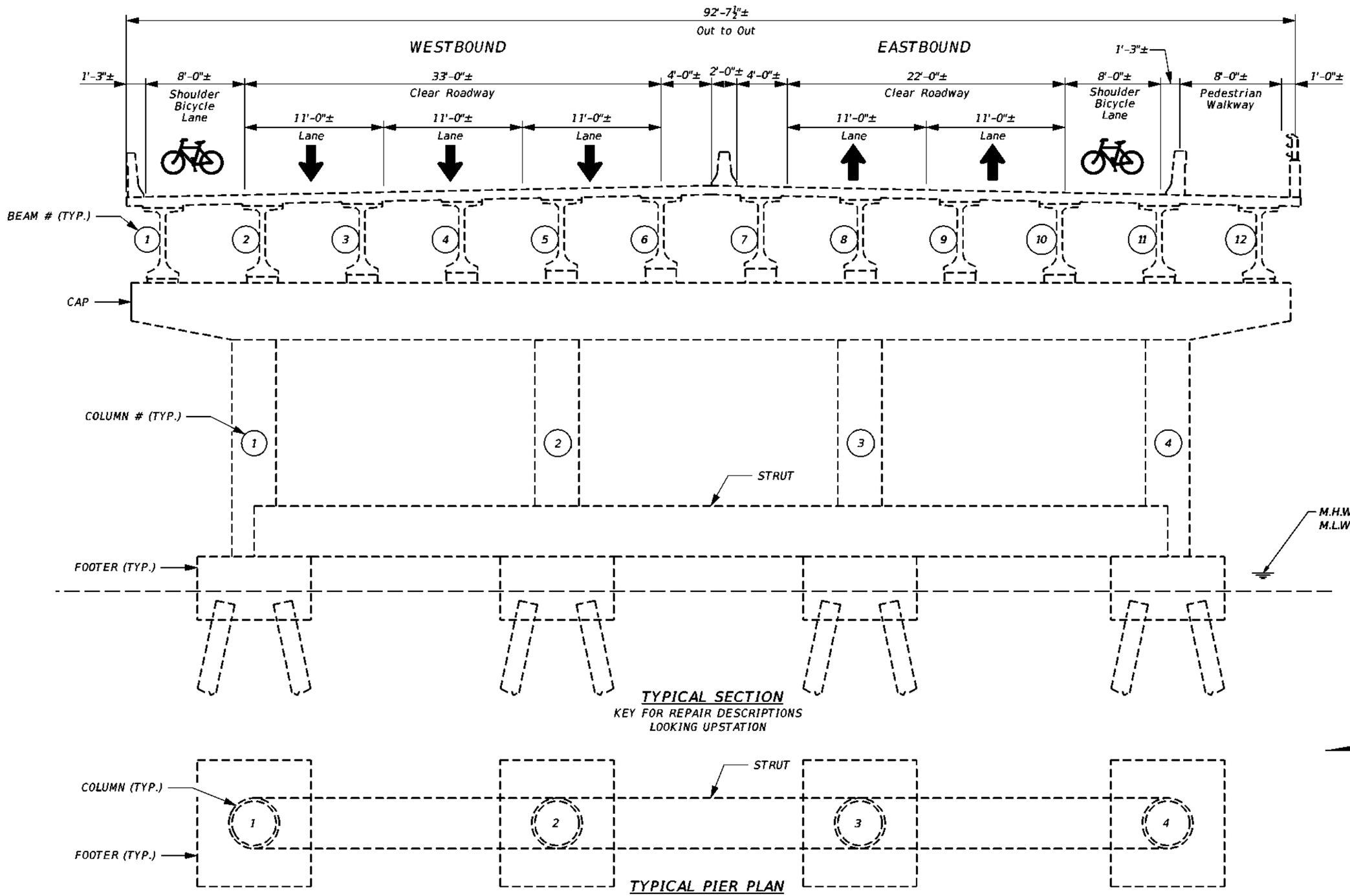
SHEET TITLE: FENCING REPLACEMENT

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-58

SUBSETS $SUBSETS
DATES $DATES
TIMES $TIMES
FILES $FILES



TYPICAL SECTION
KEY FOR REPAIR DESCRIPTIONS
LOOKING UPSTATION

TYPICAL PIER PLAN

BRIDGE NO. 874545

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

$USERS $DATES $TIMES $FILES

SHEET TITLE: TYPICAL BRIDGE SECTION AND PLAN KEY FOR REPAIRS

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-59

BEARING	DEFECT #	LOCATION	DEFICIENCY	QTY.
VARIOUS	1000	BEARING SOLE PLATES AND ANCHOR BOLTS	CORROSION	25
VARIOUS	1020	BEARING SOLE PLATE ANCHOR NUTS	LOOSE OR MISSING	43

BEARING DEFICIENCIES

BAY	DEFECT	LOCATION	L (FT)	W (FT)	D (FT)	VOLUME (FT^3)
7-2	1080	Underside Span 7	2.000	0.833	0.500	0.833
7-3	1080	Underside Span 7	0.833	0.500	0.083	0.035
7-5	1080	Over Pier Cap 8	0.833	0.833	0.083	0.058
7-9	1080	Over Pier Cap 8	0.833	0.833	0.083	0.058
14-5	1080	Adjacent to Pier Cap 14	1.333	0.833	0.083	0.093
14-7	1080	Adjacent to Pier Cap 14	1.333	0.833	0.083	0.093
14-9	1080	Adjacent to Pier Cap 14	1.333	0.833	0.083	0.093
17-9	1080	Over Pier Cap 17	1.000	0.833	0.083	0.069
22-1	1080	Over Pier Cap 22	1.667	0.250	0.208	0.260
23-8	1080	Over Pier Cap 23	1.000	1.000	0.083	0.083
32	1130	Various Locations	15.000	-	-	-
34-1	1080	Over Pier Cap 35	0.833	0.500	0.083	0.035

DECK UNDERSIDE DEFICIENCIES

SPAN	DEFECT	LOCATION	L (FT)	W (FT)	D (FT)	VOLUME (FT^3)
5	1130	Eastbound, 5ft from Joint 5, 7ft from Right Barrier	6.000	-	-	-
6	1090	Westbound, Lane 1 Near Mid-Span	1.000	0.500	0.500	0.250
7	1080	Over Pier Cap 18	0.667	0.500	0.083	0.028
16	1080	South Sidewalk, 30ft West of Joint 17	1.250	0.667	0.083	0.069
18	1130	South Sidewalk, From Bent 18 to Concrete Barrier	7.000	-	-	-
19	1130	From Pier 19 Joint into Shoulder	10.000	-	-	-
19	1130	Various Locations	51.000	-	-	-
20	1130	Eastbound, 35ft from Joint 21, 10ft from Right Barrier	10.000	-	-	-
25	1130	From Joint 26, 5ft from West Barrier	6.000	-	-	-
32	1130	Westbound, Joint 32, 5ft from Left Barrier	8.000	-	-	-
32	1130	Various Locations	15.000	-	-	-
34	1080	North Deck Overhang Over Pier Cap 35	0.833	0.583	0.167	0.081

DECK SURFACE DEFICIENCIES

1080 - SPALL/DELAMINATION 1090 - ABRASION (PSC/RC) 1130 - REINFORCED CONCRETE CRACKING

BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: DECK & BEARING DEFICIENCIES

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-60

$USERS $DATES $TIMES $FILES

BETWEEN FOOTERS	DEFECT	L (FT)	W (FT)	D (FT)	VOLUME (FT^3)
ALL FACES	220	4	-	-	-
10-2 & 10-3	220	10	4.000	0.250	10.000
11-2 & 11-3	220	8	4.000	0.250	8.000
13-2 & 13-3	220	7	4.000	0.250	7.000
13-3 & 13-4	220	7	4.000	0.250	7.000
14-1 & 14-2	220	3	3.000	0.250	2.250
15-1 & 15-2	220	3	2.000	0.250	1.500
15-2 & 15-3	220	3	3.000	0.250	2.250
17-2 & 17-3	220	6	5.000	0.250	7.500
19-3 & 19-4	220	8	3.000	0.250	6.000
22-2 & 22-3	220	6	4.000	0.250	6.000
24-2 & 24-3	220	5	4.000	0.250	5.000
31-1 & 31-2	220	6	2.000	0.250	3.000
32-2 & 32-3	220	5	3.000	0.250	3.750
34-1 & 34-2	220	12	4.000	0.250	12.000

STRUT BOTTOM FACE DEFICIENCIES

COLUMN	DEFECT	LOCATION	L (FT)	W (FT)	D (FT)	VOLUME (FT^3)
21-1	1030	West Face at Cap	38.000	-	-	-
21-2	1080	Between Strut and Cap Along East Face	0.750	0.500	0.083	0.031
21-2	1130	West Face at Cap	38.000	-	-	-
21-2	1130	Various Locations	3.000	-	-	-
22-2	1130	West Face at Cap	40.000	-	-	-

COLUMN DEFICIENCIES

PIER CAP	DEFECT	LOCATION	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)
5	1090	Bottom Face Between Piles 5-1 and 5-2	10	-	-	-
10	1080	Between Piles 10-1 and 10-2	10	-	-	-
11	1130	East Face, South of Column 11-1	4	-	-	-
14	1130	East Face Next to Column 14-4	3	-	-	-
18	1080	West Face, 1ft South of Beam 18-1	1	0.417	0.083	0.035
20	1090	Pedestals Under Beams 19-3, 19-4, and 19-7	3	-	-	-

PIER CAP DEFICIENCIES

220 - STRUT SPALL/DELAMINATION 1080 - SPALL/DELAMINATION 1090 - ABRASION (PSC/RC) 1130 - REINFORCED CONCRETE CRACKING

BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

$USERS$ $DATE$ $TIME$ $FILE$

SHEET TITLE: SUBSTRUCTURE DEFICIENCIES

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-61

BEAM	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
2-4	1080	BOTTOM FACE OF THE BOTTOM FLANGE, 2 FT. FROM PIER 3	DELAMINATION (2FT X 10IN X 3IN)	1	2.000	0.833	0.250	0.417
3-12	1110	WEB AND TOP FLANGE SOUTH FACE OVER PIER 4	LONGITUDINAL AND DIAGONAL CRACKS (40IN)	2	4.000	-	-	-
4-1	1110	WEB AND TOP FLANGE NORTH FACE OVER PIER 4	DIAGONAL CRACKS (66IN)	2	6.000	-	-	-
4-9	1080	BOTTOM FACE OF THE BOTTOM FLANGE, 25 FT FROM PIER 5	DELAMINATION (28IN X 8IN X 3IN)	1	2.333	0.667	0.250	0.389
4-11	1110	BOTTOM SOUTH FLANGE AT PIER 5	LONGITUDINAL CRACK (5FT)	1	5.000	-	-	-
4-12	1110	BOTTOM SOUTH FLANGE AT PIER 5	LONGITUDINAL CRACK (5FT)	1	5.000	-	-	-
5-1	1110	TOP NORTH FLANGE OVER PIER 6 EXTENDING INTO THE WEB	DIAGONAL CRACK (3FT)	1	3.000	-	-	-
5-3	1110	BOTTOM SOUTH FLANGE OVER PIER 5	LONGITUDINAL CRACK (2FT)	1	2.000	-	-	-
5-9	1110	BOTTOM NORTH FLANGE OVER PIER 5	LONGITUDINAL CRACK (2FT)	1	2.000	-	-	-
5-10	1100	BOTTOM FACE OF THE BOTTOM FLANGE, 25 FT FROM PIER 6	POPOUT SPALL W/ONE EXP. STRAND (3IN DIAM. X 1IN)	1	0.250		0.083	0.004
6-1	1110	WEB OVER PIER 6	DIAGONAL CRACK (4FT)	1	4.000	-	-	-
7-1	1110	TOP NORTH FLANGE OVER PIER 7	DIAGONAL CRACK (1FT)	1	1.000	-	-	-
8-1	1110	TOP NORTH FLANGE OVER PIER 9	LONGITUDINAL AND DIAGONAL CRACKS (1FT)	1	1.000	-	-	-
9-1	1110	TOP NORTH FLANGE OVER PIER 9	DIAGONAL CRACK (1FT)	1	1.000	-	-	-
9-11	1080	NORTH FACE, END DIAPHRAGM OVER PIER 10	SPALL (16IN X 16IN X 1IN)	1	1.333	1.333	0.083	0.148
9-11	1080	TOP SOUTH FLANGE AT THE 3RD SCUPPER FROM PIER 10	SPALL (16IN X 16IN X 1IN)	1	1.333	1.333	0.083	0.148
9-12	1110	TOP NORTH FLANGE OVER PIER 9	DIAGONAL CRACK (2FT)	1	2.000	-	-	-
10-1	1110	TOP NORTH FLANGE OVER PIER 10	DIAGONAL CRACK (1FT)	1	1.000	-	-	-
11-1	1080	BOTTOM NORTH FLANGE, END DIAPHRAGM OVER PIER 11	SPALL W/ EXPOSED STRANDS (10IN X 12IN X 1 IN)	1	0.833	1.000	0.083	0.069
11-1	1110	TOP NORTH WEB OVER PIER 11	3 DIAGONAL CRACKS (1FT)	3	1.000	-	-	-
11-1	1110	TOP NORTH FLANGE OVER PIER 12	DIAGONAL CRACK (1FT)	1	1.000	-	-	-
13-9	1080	NORTH FACE OF WEB, 10FT FROM PIER 13	SHALLOW SPALLS	7	0.583	0.083	0.083	0.004
14-2	1100	BOTTOM FACE OF THE BOTTOM FLANGE, 25FT FROM PIER 6	POPOUT SPALL W/EXPOSED STRAND (3IN DIAM. X 1/4IN)	1	0.250		0.083	0.004
14-12	1100	BOTTOM FACE AT 10FT FROM PIER 15	SPALL W/ EXPOSED STRANDS (4IN X 2IN X 1/2IN)	1	0.333	0.167	0.083	0.005
16-1	1080	BOTTOM NORTH FLANGE, END DIAPHRAGM OVER PIER 17	SPALL W/ EXPOSED STRANDS (8IN X 8IN X 2IN)	1	0.667	0.667	0.167	0.074
16-1	1110	TOP NORTH WEB OVER PIER 17	DIAGONAL CRACK (1FT)	1	1.000	-	-	-
16-2	1110	BOTTOM SOUTH FLANGE AT 6FT FROM PIER 17	DIAGONAL CRACK (2FT)	1	2.000	-	-	-
17-1	1080	BOTTOM NORTH FLANGE, END DIAPHRAGM OVER PIER 17	SPALL W/ EXPOSED STRANDS (18IN X 3IN X 2IN)	1	1.500	0.250	0.167	0.063
17-2	1110	BOTTOM NORTH FLANGE OVER PIER 17	LONGITUDINAL CRACK (5FT)	1	5.000	-	-	-
17-4	1110	BOTTOM NORTH FLANGE OVER PIER 17	LONGITUDINAL CRACK (5FT)	1	5.000	-	-	-
17-9	1110	BOTTOM NORTH AND SOUTH FLANGES OVER PIER 17	LONGITUDINAL CRACK (5FT)	1	5.000	-	-	-
17-11	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 17	SPALL/DELAMINATION (3FT X 16IN X 2.5IN)	1	3.000	1.333	0.208	0.833
18-1	1110	BOTTOM SOUTH AND NORTH FLANGE OVER PIER 18	LONGITUDINAL CRACK (5FT)	2	5.000	-	-	-
18-7	1110	BOTTOM SOUTH FLANGE OVER PIER 19	LONGITUDINAL CRACK (5FT)	1	5.000	-	-	-
18-8	1110	BOTTOM SOUTH FLANGE OVER PIER 19	LONGITUDINAL CRACK (5FT)	1	5.000	-	-	-
18-10	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 18	SPALL (16IN X 4IN X 2IN)	1	1.333	0.333	0.167	0.074
19-8	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 19	SPALL (3FT X 8IN X 2IN)	1	3.000	0.667	0.167	0.333
20-1	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 20	DELAMINATION (1FT X 10IN X 3IN)	1	1.000	0.833	0.250	0.208
20-1	1080	BOTTOM NORTH FLANGE, END DIAPHRAGM OVER PIER 21	SPALL W/ EXPOSED STRANDS (1FT X 8IN X 1.5IN)	1	1.000	0.667	0.125	0.083
20-1	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 21	DELAMINATION (14IN X 8IN X 3IN)	1	1.167	0.667	0.250	0.194
20-1	1110	SOUTH FACE, OVER PIER 21	DIAGONAL CRACK (3FT)	1	3.000	-	-	-
20-2	1110	SOUTH FACE, OVER PIER 21	DIAGONAL CRACK (3FT)	1	3.000	-	-	-
20-3	1110	SOUTH FACE, OVER PIER 21	DIAGONAL CRACK (3FT)	1	3.000	-	-	-
20-4	1110	SOUTH FACE, OVER PIER 21	DIAGONAL CRACK (3FT)	1	3.000	-	-	-
20-5	1080	BEAM END DIAPHRAGM OVER PIER 20	SPALL (2FT X 1FT X 1IN)	1	2.000	1.000	0.083	0.167
20-5	1110	OVER PIER 21	HONEYCOMBED W/EXPOSED STRANDS	1	0.500	0.500	0.083	0.021
20-10	1110	OVER PIER 21	HONEYCOMBED W/EXPOSED STRANDS	1	0.500	0.500	0.083	0.021
20-11	1110	OVER PIER 21	HONEYCOMBED W/EXPOSED STRANDS	1	0.500	0.500	0.083	0.021
20-11	1110	SOUTH FACE, OVER PIER 21	DIAGONAL CRACK (3FT)	1	3.000	-	-	-

1080 - SPALL/DELAMINATION 1090 - ABRASION (PSC/RC) 1110 - PRESTRESSED CONCRETE CRACKING 1130 - REINFORCED CONCRETE CRACKING

BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: BEAM DEFICIENCIES (1 OF 2)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-62

$USERS $DATES $TIMES $FILES

BEAM	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
20-12	1110	OVER PIER 21	HONEYCOMBED W/EXPOSED REBAR	1	0.500	0.500	0.083	0.021
20-13	1110	OVER PIER 21	HONEYCOMBED W/EXPOSED REBAR	1	0.500	0.500	0.083	0.021
20-13		OVER PIER CAP 21	MISSING END DIAPHRAGM W/EXPOSED STRANDS	1	0.500	0.500	0.083	0.021
20-14	1110	BOTTOM SOUTH FLANGE OVER PIER 20 AND 21	DIAGONAL CRACK (2FT)	1	2.000	-	-	-
21-4	1080	BOTTOM NORTH FLANGE, OVER PIER 21	SPALL W/ EXPOSED CORRODED STRANDS (3FT X 1FT X 2IN)	1	3.000	1.000	0.167	0.500
21-4	1110	BOTTOM SOUTH FLANGE OVER PIER 22	LONGITUDINAL CRACK (5FT)	1	5.000	-	-	-
21-7	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 22	SPALL (1FT X 8IN X 1IN)	1	1.000	0.667	0.083	0.056
21-10	1080	BOTTOM SOUTH FLANGE, 10FT FROM PIER 21	SPALL (21IN X 6IN X 3/4IN)	1	1.750	0.500	0.083	0.073
21-12	1080	BOTTOM NORTH FLANGE, 20FT FROM PIER 21	SPALL (10IN X 4IN X 1/2IN)	1	0.833	0.333	0.083	0.023
21-12	1110	SURFACE OVER PIER 21	SEVERAL DIAGONAL CRACKS (5FT)	2	5.000	-	-	-
22-1	1110	BOTTOM NORTH FLANGE OVER PIER 23	LONGITUDINAL CRACK (5FT)	1	5.000	-	-	-
22-4	1080	BOTTOM FACE OF BOTTOM FLANGE AT MID-SPAN ON SOUTH EDGE	2 SPALLS (2FT X 6IN X 1IN)	2	2.000	0.500	0.083	0.083
22-5	1110	BOTTOM SOUTH FLANGE OVER PIER 22	LONGITUDINAL CRACK (5FT)	1	5.000	-	-	-
23-1	1080	BOTTOM NORTH FLANGE AT 15FT FROM PIER 23	SPALL (12IN X 6IN X 1/2IN)	1	1.000	0.500	0.083	0.042
24-6	1080	BOTTOM SOUTH FLANGE NEAR MID-SPAN	3 SPALLS (26IN X 6IN X 1IN)	3	2.167	0.500	0.083	0.090
25-1	1080	BOTTOM NORTH FACE, END DIAPHRAGM OVER PIER 26	SPALL/DELAMINATION (10IN X 13IN X 3IN)	1	0.833	1.083	0.250	0.226
25-2	1080	BOTTOM SOUTH FLANGE, 10FT FROM PIER 25	SPALL (1FT X 4IN X 3/4IN)	1	1.000	0.333	0.083	0.028
25-2	1080	BOTTOM NORTH FLANGE, END DIAPHRAGM OVER PIER 26	SPALL W/ EXPOSED STRANDS (7IN X 6IN X 1 1/2IN)	1	0.583	0.500	0.125	0.036
25-3	1080	BOTTOM NORTH FLANGE, END DIAPHRAGM OVER PIER 26	SPALL/DELAMINATION W/EXPOSED STRANDS (12IN X 10IN X 1IN)	1	1.000	0.833	0.083	0.069
25-12	1080	BOTTOM NORTH FLANGE, END DIAPHRAGM OVER PIER 26	SPALL (12IN X 10IN X 1IN)	1	1.000	0.833	0.083	0.069
27-5	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 28	SPALL (8IN X 4IN X 1IN)	1	0.667	0.333	0.083	0.019
27-11	1080	BOTTOM SOUTH FLANGE, 30FT FROM PIER 28	SPALL (32IN X 6IN X 1IN)	1	2.667	0.500	0.083	0.111
28-1	1080	BOTTOM NORTH FACE, END DIAPHRAGM OVER 29	SPALL W/ EXPOSED STRANDS (14IN X 9IN X 1IN)	1	1.167	0.750	0.083	0.073
28-3	1080	BOTTOM NORTH FACE, END DIAPHRAGM OVER PIER 29	DELAMINATION (8IN X 7IN X 3IN)	1	0.667	0.583	0.250	0.097
28-10	1080	BOTTOM NORTH FACE, END DIAPHRAGM OVER PIER 28	SPALL (18IN X 5IN X 1IN)	1	1.500	0.417	0.083	0.052
29-1	1080	BOTTOM NORTH FLANGE, END DIAPHRAGM OVER PIER 29	SPALL W/ EXPOSED STRANDS (8IN X 9IN X 1IN)	1	0.667	0.750	0.083	0.042
29-1	1080	BOTTOM NORTH FLANGE, END DIAPHRAGM OVER PIER 29	SPALL W/ EXPOSED STRANDS (8IN X 4IN X 3IN)	1	0.667	0.333	0.250	0.056
29-12	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 29	SPALL (12IN X 8IN X 3/4IN)	1	1.000	0.667	0.083	0.056
30-12	1110	TOP SOUTH FLANGE OVER PIER 30	LONGITUDINAL CRACK (24IN)	1	2.000	-	-	-
31-1	1080	BOTTOM NORTH FLANGE, END DIAPHRAGM OVER PIER 31	SPALL W/ EXPOSED STRANDS (16IN X 12IN X 1IN)	1	1.333	1.000	0.083	0.111
31-1	1080	OUTSIDE FACE, OVER BENT 32	SPALL (24IN X 3IN X 3IN)	1	2.000	0.250	0.250	0.125
31-6	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 32	SPALL W/ EXPOSED STRANDS (1FT X 8IN X 2IN)	1	1.000	0.667	0.167	0.111
31-8	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 31	SPALL (3IN X 4IN X 1/2IN)	1	0.250	0.333	0.083	0.007
31-9	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 31	SPALL W/ EXPOSED STRANDS (8IN X 6IN X 1IN)	1	0.667	0.500	0.083	0.028
31-12	1110	BOTTOM SOUTH FLANGE OVER PIER 31	DIAGONAL CRACK (30IN X LESS THAN 1/64IN X 3IN)	1	3.000	-	-	-
32-12	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 33	SPALL (6IN X 3IN X 1/4IN)	1	0.500	0.250	0.083	0.010
33-1	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 34	SPALL (1FT X 6IN X 1/2IN)	1	1.000	0.500	0.083	0.042
34-1	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 34	SPALL (1FT X 6IN X 1/2IN)	1	1.000	0.500	0.083	0.042
34-12	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 35	SPALL W/ EXPOSED STRANDS (6IN X 6IN X 1IN)	1	0.500	0.500	0.083	0.021
35-11	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 35	SPALL W/ EXPOSED STRANDS (8IN X 4IN X 3IN)	1	0.667	0.333	0.250	0.056
35-12	1080	BOTTOM SOUTH FLANGE, END DIAPHRAGM OVER PIER 35	SPALL (6IN X 6IN X 6IN)	1	0.500	0.500	0.500	0.125

Crack Repair Paid for Under Pay Item 400-145 & 411-2

DEFICIENCY	TOTAL	UNIT
1080	6	CF
1110	136	LF
1130	1	LF

1080 - SPALL/DELAMINATION 1110 - PRESTRESSED CONCRETE CRACKING 1130 - REINFORCED CONCRETE CRACKING

BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

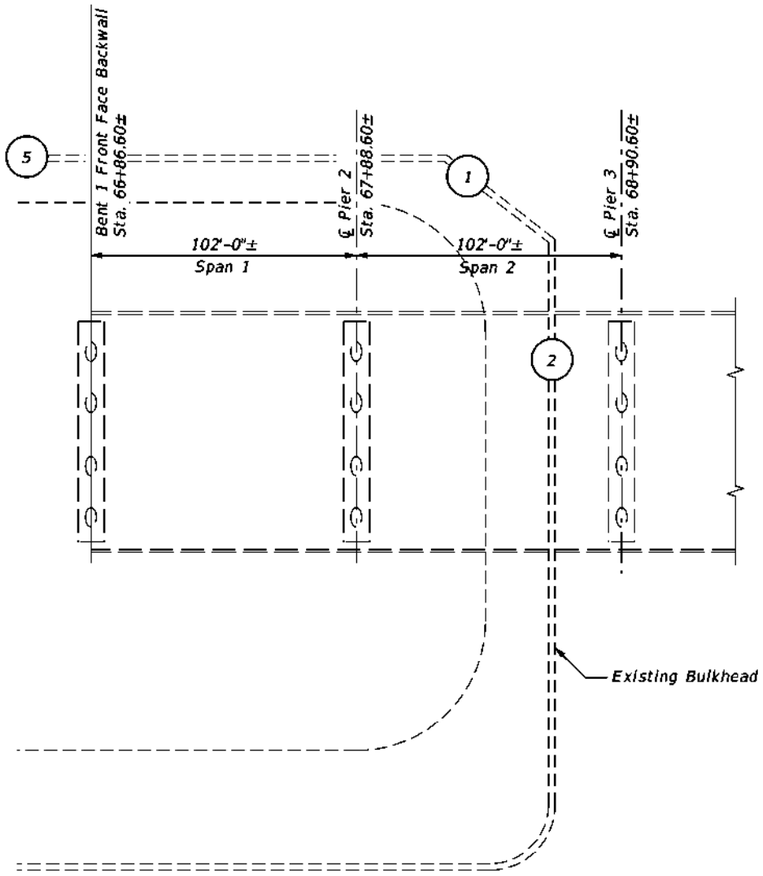
SHEET TITLE: BEAM DEFICIENCIES (2 OF 2)

REF. DWG. NO.:

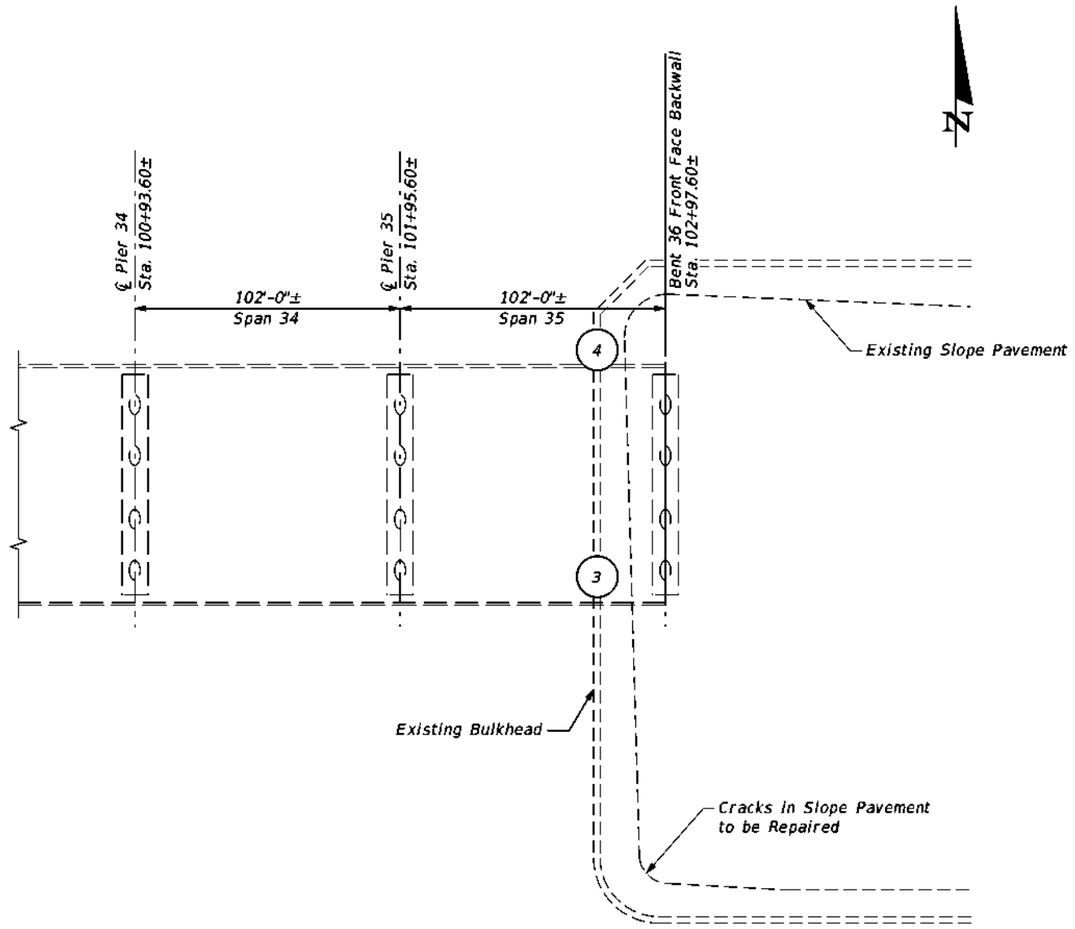
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO.: S-63

$USERS $DATES $TIMES $FILES



WEST ABUTMENT



EAST ABUTMENT

LOCATION	DEFECT	L (FT)	W (FT)	D (FT)	QUANTITY (FT^3)	QUANTITY (CY)
1	1080	0.583	0.333	0.333	0.065	0.002
2	1080	2.333	0.833	0.583	1.134	0.042
3	1080	1.000	1.000	0.250	0.250	0.009
4	1120	1.000	-	-	-	-
5	1080	10	2	3	60.000	2.222

LEGEND

(#) Bulkhead to be Repaired

1080 - SPALL/DELAMINATION 1120 - EFFLORESCENCE

NOTE:
Beams not shown for clarity

BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: BWC
DESIGNED BY: SMC
CHECKED BY: BWC

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

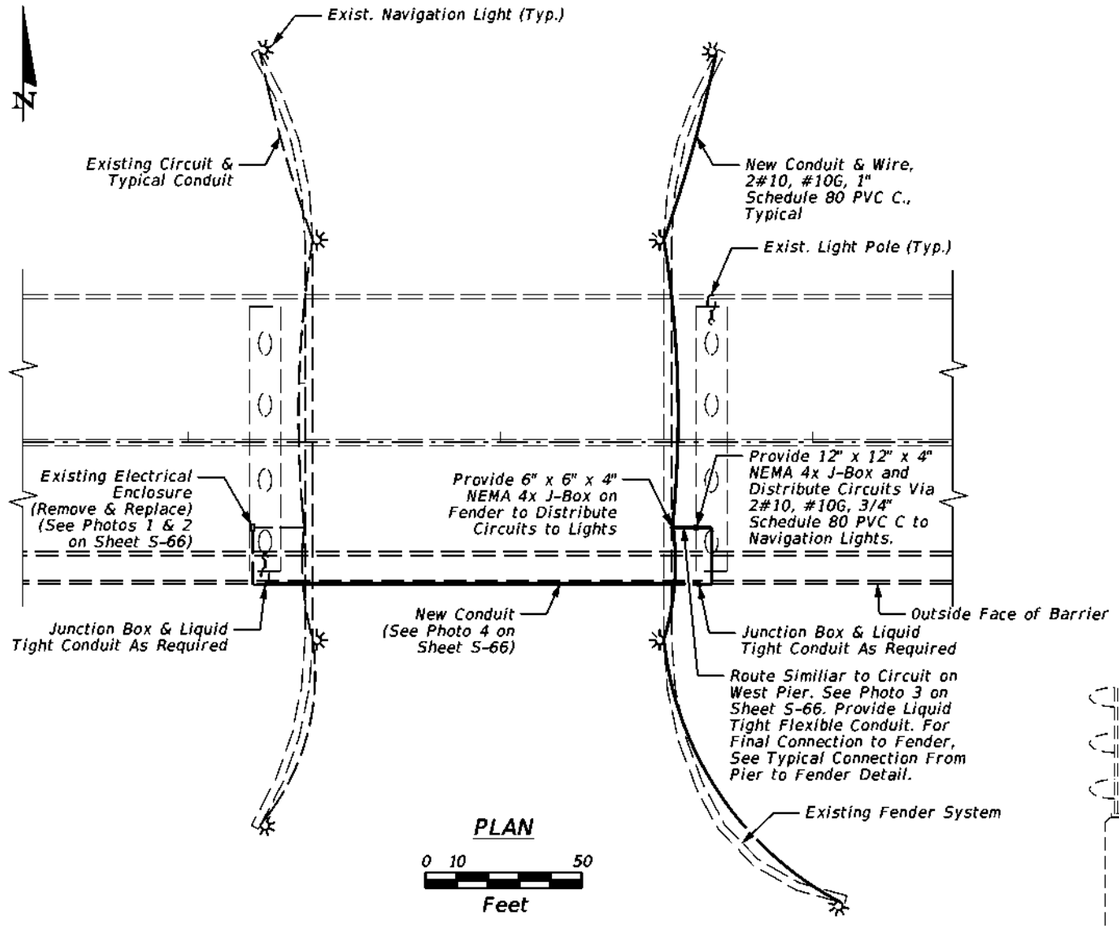
SHEET TITLE: BULKHEAD DEFICIENCIES

REF. DWG. NO.

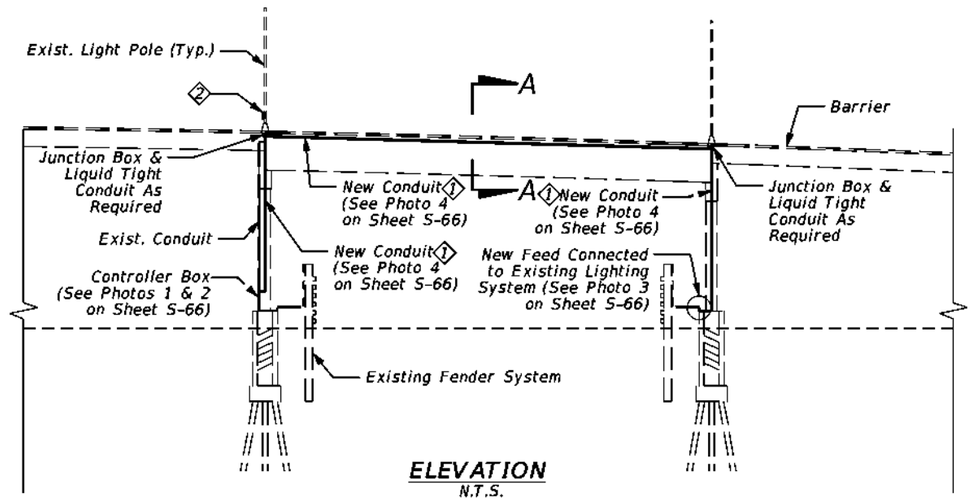
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

SHEET NO. S-64

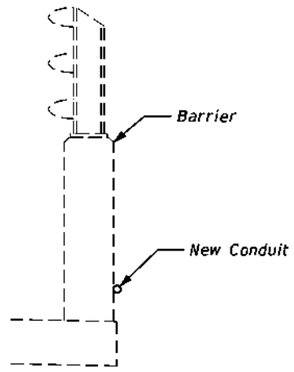
SUBSETS DATES TIMES FILES



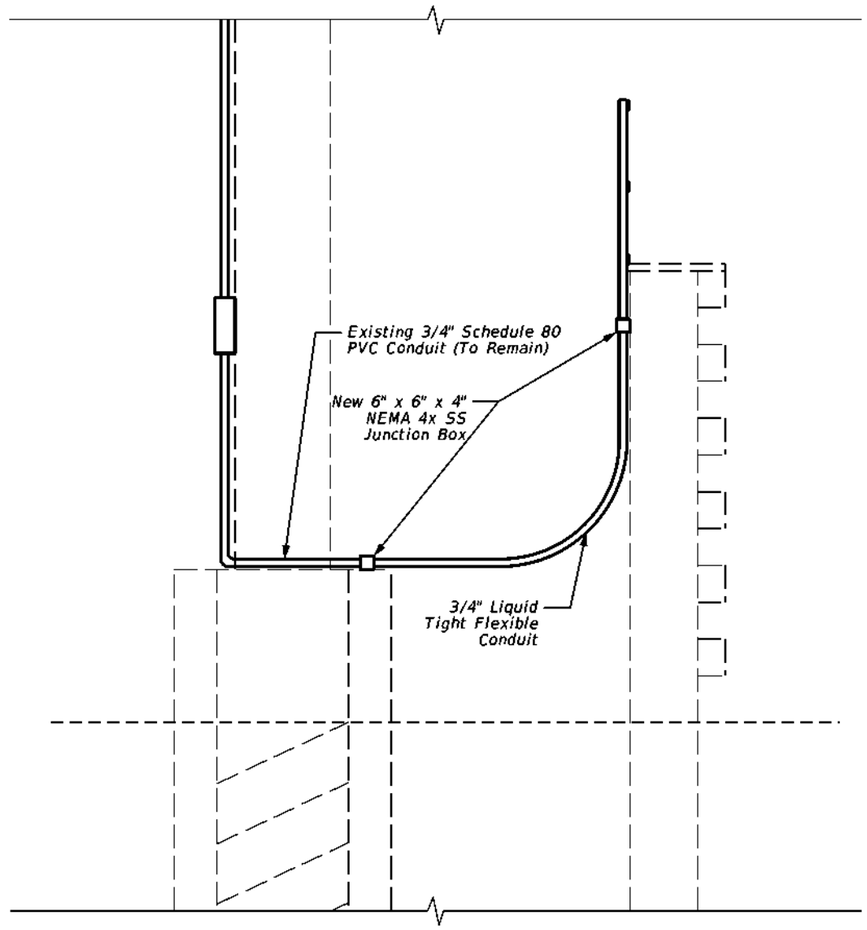
PLAN



ELEVATION
N.T.S.



SECTION A-A
N.T.S.



TYPICAL CONNECTION FROM PIER TO FENDER
N.T.S.

KEYED NOTES

1. Provide 316L stainless steel unistrut and conduit clamps every 5 ft to attach conduit to pier & bridge. See Photo 1 on Sheet S-66 for reference.
2. Provide new heavy duty 30A/2P disconnect with NEMA 4x, NEMA 316L stainless steel enclosure and 2-15A fuses. Route power circuit from light pole through disconnect and then down to the electrical enclosure for the navigation lighting. Re-work conduit at light pole as required. Locate disconnect 8 ft above the bridge deck.

BRIDGE NO. 874545

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
SMC	AT	RN	AT

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: FENDER LIGHTING

PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY

REF. DWG. NO.:

SHEET NO.: S-65

$USERS $DATES $TIMES $FILES

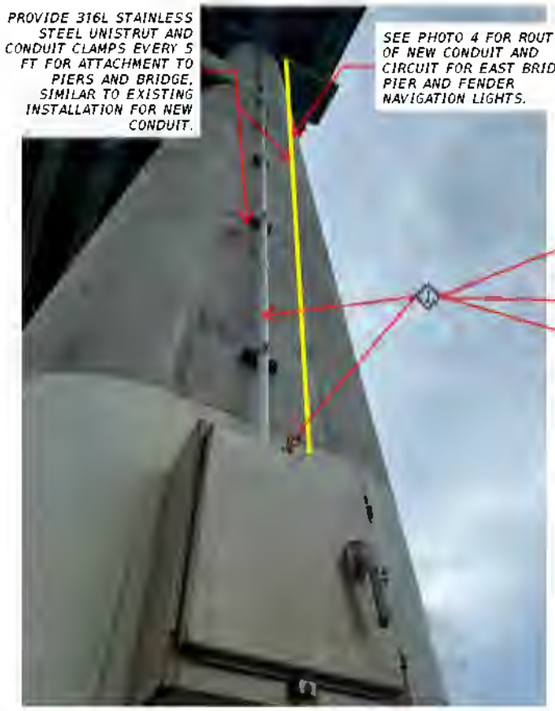


PHOTO 1 - EXISTING ELECTRICAL ENCLOSURE

PHOTO 2 - EXISTING ELECTRICAL ENCLOSURE INTERIOR VIEW

PHOTO 3 - EXISTING WEST FENDER CONNECTION. PROVIDE SIMILAR CONNECTION FROM EAST PIER J-BOX TO EXISTING EAST FENDER LIGHTS.

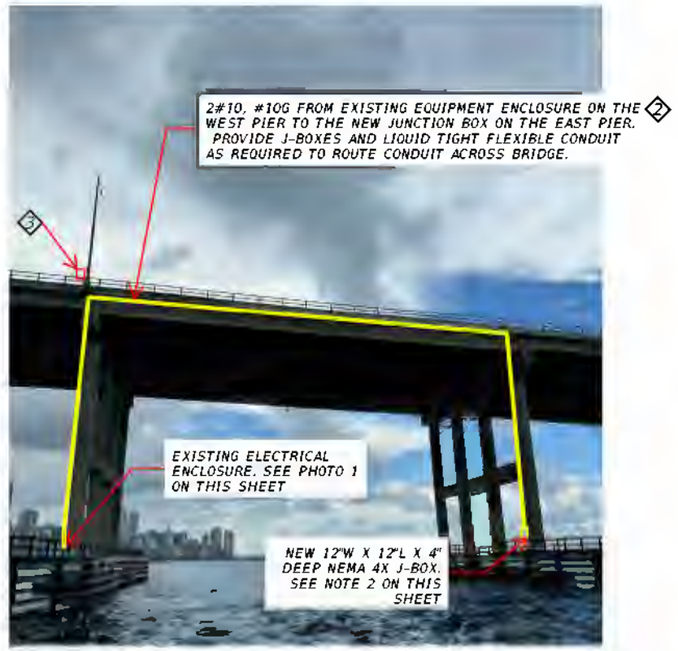


PHOTO 4 - CIRCUIT CROSSING FROM WEST TO EAST PIER

NOTES:

1. REMOVE AND REPLACE EXISTING ELECTRICAL ENCLOSURE CONTAINING A 480V-120/240V, 2 KVA STEP DOWN TRANSFORMER AND 3 POSITION CIRCUIT BREAKER DISCONNECT. PROVIDE A NEW STEPDOWN TRANSFORMER MATCHING THE SAME SPECIFICATIONS EXCEPT PROVIDE A NEMA 316L, NEMA 3R STAINLESS STEEL ENCLOSURE FOR THE TRANSFORMER. PROVIDE A NEW SQUARE D LOAD CENTER WITH A MINIMUM OF 3 CIRCUIT BREAKER SPACES IN A NEMA 316L, NEMA 3R STAINLESS STEEL ENCLOSURE. ENCLOSE BOTH PIECES OF EQUIPMENT IN A NEW NEMA 4X, 316L STAINLESS STEEL ENCLOSURE. ENCLOSURE TO HAVE MINIMUM DIMENSTIONS OF 30" L X 30" W X 8" D BUT SIZE SHALL BE COORDINATED TO FIT THE EQUIPMENT SELECTED DURING SHOP DRAWINGS. PROVIDE 2-15A / 1P BREAKERS INSIDE THE LOAD CENTER ONE TO FEED THE WEST FENDER AND THE SECOND TO FEED THE EAST FENDER. ADJUST MOUNTING HEIGHT OF THE OVERALL ENCLOSURE TO 8 FT ABOVE THE BRIDGE PIER. RE-WORK CONDUIT TO LIGHT POLE AOBVE ON THE BRIDGE AND PROVIDE NEW WIRING COMPLETE BETWEEN THE LIGHT POLE ON THE BRIDGE AND THE NEW ELECTRICAL EQUIPMENT ENCLOSURE/ TRANSFORMER 2#10, #10G, ¾" SCHEDULE 80 PVC CONDUIT.
2. ROUTE CIRCUIT FOR THE EAST FENDER UP THE WEST BRIDGE PIER, ACROSS THE BRIDGE AND THEN DOWN THE EAST BRIDGE PIER. INSTALL A 12" L X 12" W X 4" D NEMA 4X, 316L STAINLESS STEEL JUNCTION BOX ON THE EAST BRIDGE PIER AND DISTRIBUTE THE CIRCUIT ALONG THE EAST BRIDGE FENDER TO EACH OF THE 4 NAVIGATION LIGHTS. UTILIZE 2#10, #10G, ¾" SCHEDULE 80 PVC CONDUIT.
3. PROVIDE NEW HEAVY DUTY 304/2P DISCONNECT WITH NEMA 4X, NEMA 316L STAINLESS STEEL ENCLOSURE AND 2-15A FUSES. ROUTE POWER CIRCUIT FROM LIGHT POLE THROUGH DISCONNECT AND THEN DOWN TO THE ELECTRICAL ENCLOSURE FOR THE NAVIGATION LIGHTING. RE-WORK CONDUIT AT LIGHT POLE AS REQUIRED. LOCATE DISCONNECT 8 FT ABOVE THE BRIDGE DECK.
4. RE-WORK EXISTING ¾" SCHEDULE 80 PVC CONDUIT FOR EXISITNG WEST FENDER NAVIGATION LIGHTING AND ROUTE INTO REPLACED AND RELOCATED ELECTRICAL ENCLOSURE. REPLACE WIRING COMPLETE BETWEEN ELECTRICAL ENCLOSURE AND FIRST SPLICE POINT ON FENDER. 2#10, #10G.

BRIDGE NO. 874545

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
TEL. (305) 428-4350

DRAWN BY: SMC
CHECKED BY: AT
DESIGNED BY: RJV
CHECKED BY: AT

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20230087

SHEET TITLE: NAVIGATION LIGHTING
REF. DWG. NO.:
PROJECT NAME: REHABILITATION OF WEST BRIDGES AND WILLIAM POWELL BRIDGE OVER INTRACOASTAL WATERWAY, RICKENBACKER CAUSEWAY
SHEET NO.: S-66

$USERS $DATE$ $TIME$ $FILE$

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