MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS HIGHWAY DIVISION
CONTRACT PLANS

PW PROJECT NO. 20210010 / EDP-MT-20210010
WORK ORDER #1

MIAMI-DADE COUNTY

REHABILITATION OF BEAR CUT BRIDGE OVER
BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

BRIDGE REHABILITATION PLANS

BRIDGE NO. 874544

FINAL PLANS SUBMITTAL
AUGUST 2022

INDEX OF SHEETS

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1 MILE

BEGIN PROJECT
BEGIN BRIDGE #874544
STA. 1182+43.41±

END PROJECT
END BRIDGE #874544
STA. 1203+35.07±

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

Howard Gotschall 2023.02.10 14:05:36 -06'00'

BRIDGE REHABILITATION PLANS
ENGINEER OF RECORD:

HOWARD GOTSCHALL P.E.
P.E. NO.: 79639
HANSON PROFESSIONAL SERVICES INC.
6303 BLUE LAGOON DRIVE, SUITE 280
MIAMI, FLORIDA 33126
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.

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S-29	REINFORCING BAR LIST

GABRIEL GONZALEZ LICENSE No 86473 STATE OF FLORIDA PROFESSIONAL ENGINEER

Gabriel Gonzalez

Digitally signed by Gabriel Gonzalez
DN: CN=Gabriel Gonzalez, dnQualifier=A01410D0000017EB16BC2C00004621A, O=HANSON PROFESSIONAL SERVICES INC., C=US
Date: 2023.02.10 15:37:43-05'00'

TEMPORARY TRAFFIC CONTROL PLANS
ENGINEER OF RECORD:

GABRIEL GONZALEZ P.E.
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SHEET NO.	SHEET DESCRIPTION
S-7 - S-8	TEMPORARY TRAFFIC CONTROL PLANS

SHEET NO.
S-1

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

SUMMARY OF BRIDGE PAY ITEMS

PAY ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
101-1-A	MOBILIZATION	LS	1
104-11-A	FLOATING TURBIDITY BARRIER	LF	580
400-4-8	CONCRETE CLASS IV, BULKHEAD	CY	14
400-134	EPOXY MATERIAL FOR CRACK INJECTION - STRUCTURES REHAB	GA	12*
400-135	EPOXY INJECTION OF CRACKS IN CONCRETE STRUCTURE	LF	128*
400-143	CLEANING & COATING OF EXPOSED STRANDS - BEAMS	SF	20*
400-143A	BEARINGS - CLEANING AND COATING	EA	228*
400-145A	CLEANING CONCRETE SURFACE	SF	1732*
401-70-4	RESTORE SPALLED AREAS, PORTLAND CEMENT GROUT	CF	435*
415-1-8	REINFORCING STEEL - BULKHEAD	LB	700
450-82	BEAM REPAIR	LF	194*
457-1-22	STANDARD INTEGRAL PILE JACKET, STRUCTURAL,SIZE, 16.1"-30"	LF	1327
457-1-23	STANDARD INTEGRAL PILE JACKET, STRUCTURAL,SIZE, >30"	LF	258
458-1-11	BRIDGE DECK EXPANSION JT., REHAB, POURED JOINT W BACKER ROD	LF	4368
460-1-13-B	STRUCTURAL STEEL REPAIR (BOLTS BEARING AREA WASHER/PLATE)	EA	3
460-40	DECK JOINT HEADER REPAIR	LF	87
906-173	SLOPEWALL REPAIR - FILL MATERIAL	CY	28*

*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.

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.

SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS

PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	PHASE I			PHASE II			TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
			DURATION	QUANTITY	TOTAL	DURATION	QUANTITY	TOTAL				
			DAYS	P	P	DAYS	P	P	P	F		
0102-1-A	MAINTENANCE OF TRAFFIC	LS							1		20 CONSTRUCTION DAYS	
0102-10A	OFF-DUTY LAW ENFORCEMENT OFFICER	LS							1		20 CONSTRUCTION DAYS	
0102-60A	WORK ZONE SIGNS	ED	10	46	460	10	46	460	920			
0102-74-1	BARRICADES (TEMPORARY - TYPE I, II, VP & DRUM)	ED	10	54	540	10	54	540	1080			
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	24	240	10	24	240	480			
0102-76B	ARROW BOARD / ADVANCED WARNING ARROW PANEL	ED	10	2	20	10	2	20	40			
0102-99A	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	24	2	48	10	2	20	68		14 DAYS PRIOR TO CONSTRUCTION	

PAY ITEM NOTES:

1. FOR ESTIMATION OF THE PILE JACKET QUANTITIES, 1'-0" BELOW THE CAP TO 10'-0" BELOW THE WATER SURFACE WAS TYPICALLY USED. PILE JACKETS IN AREAS WHERE 10'-0" BELOW THE WATER COULD NOT BE ACHIEVED, THE PILE JACKETS WERE TERMINATED 2'-0" ABOVE THE MUDLINE. ALL COSTS ASSOCIATED WITH FURNISHING AND INSTALLING STRUCTURAL PILE JACKETS INCLUDED BUT NOT LIMITED TO FORMING, REINFORCING STEEL, PORTLAND CEMENT GROUT SHALL BE INCLUDED IN PAY ITEM NO. 457-1-22, STANDARD INTEGRAL PILE JACKET, STRUCTURAL, PILE SIZE 16.1" TO 30" AND PAY ITEM NO. 457-1-23, STANDARD INTEGRAL PILE JACKET, STRUCTURAL, PILE SIZE >30".
2. PAY ITEM DESCRIPTIONS ARE PROVIDED IN THE CONTRACT DOCUMENTS.
3. PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL PAY ITEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICES FOR PAY ITEMS.
4. 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.
5. ALL COSTS ASSOCIATED WITH SHALLOW PILE SPALL CONCRETE REPAIRS SHALL BE INCLUDED IN PAY ITEM NO. 401-70-4. THE QUANTITY SHOWN IN THE SUMMARY OF PAY ITEMS TABLE HAS BEEN INCLUDED TO ACCOUNT FOR UNCERTAINTY IN THE FIELD.
6. ALL COSTS ASSOCIATED WITH PILE SPALLS AND DELAMINATIONS 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.
7. 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, PILE SIZE 16.1 TO 30" AND PAY ITEM NO. 457-1-23 STANDARD PILE JACKET, STRUCTURAL, PILE SIZE >30".
8. 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.

BRIDGE NO. 874544

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: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: SUMMARY OF QUANTITIES

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-2

SCOPE OF WORK:

1. REHABILITATION WORK AT BEAR CUT BRIDGE (874544) 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/FIXED JOINTS AT EACH PIER/ABUTMENT.
   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. INSTALL CFRP (CARBON FIBER REINFORCED POLYMER) STRUCTURAL STRENGTHENING TO BEAMS AT LOCATIONS NOTED.
   7. INJECT AND SEAL CRACKS AS INDICATED IN THE PLANS.
   8. REPAIR EXISTING PILES WITH STRUCTURAL JACKETS AS INDICATED IN THE PLANS.
   9. REPAIR BULKHEAD CAP AND REPAIR CRACKS AS INDICATED IN THE PLANS.
   10. INJECT EXISTING SLOPE PROTECTION WITH FILL MATERIAL TO RAISE EXISTING PANELS TO THEIR ORIGINAL POSITION.
   11. CLEANING AND COATING BEARINGS AS NEEDED. REPAIR BEARINGS AS SHOWN IN THE PLANS.

DESIGN SPECIFICATIONS:

1. FLORIDA DEPARTMENT OF TRANSPORTATION STRUCTURES MANUAL DATED JANUARY 2022 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, 2022.

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

4. ACI GUIDE FOR THE DESIGN AND CONSTRUCTION OF EXTERNALLY BONDED FRP SYSTEMS FOR STRENGTHENING CONCRETE STRUCTURES (ACI 440.2-17, 2017 EDITION)

GOVERNING STANDARDS AND CONSTRUCTION SPECIFICATIONS:

1. FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2021-22 STANDARD PLANS AND REVISED INDEX DRAWINGS AS APPENDED HEREIN, AND JANUARY 2022 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY CONTRACT DOCUMENTS.

VERTICAL DATUM:

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

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	EDDIE FREAY	305-938-1936
HOTWIRE COMMUNICATIONS	WALTER DAVILA	954-699-0900
MIAMI-DADE WATER & SEWER	LAZARO GUERRA	786-268-5273
CROWN CASTLE NG	----	fiber.dig@crowncastle.com
AT&T DISTRIBUTION	HENRY URENA	hu083j@att.com

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EXISTING PLANS:

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

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

ENVIRONMENT:

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

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.

BRIDGE NO. 874544

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
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MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: GENERAL NOTES (1 OF 4)

REF. DWG. NO.

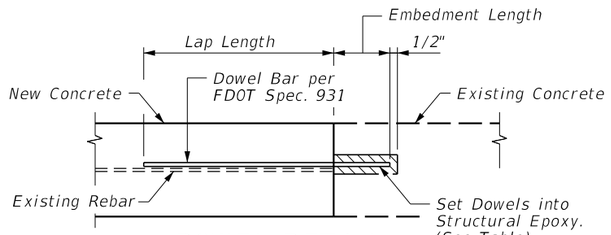
PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-3

DOWEL DETAIL (GENERAL DETAIL-FOR STRUCTURAL JACKETS SEE SHEET S-16):

1. ANY REQUIRED DOWEL HOLES FOR SECURING NEW OR EXISTING REINFORCING STEEL SHALL BE DRILLED INTO EXISTING CONCRETE ACCORDING TO THE DETAIL AND FDOT SPECIFICATIONS.

2. NOTIFY THE ENGINEER OF ANY BROKEN BARS OR BARS WHICH ARE DETERMINED TO HAVE A SECTION LOSS OF 25% OR GREATER BY THE ENGINEER. THESE LOCATIONS SHALL RECEIVE DOWELS.



DOWEL DETAIL

DOWEL DIMENSIONS (UNLESS OTHERWISE NOTED)		
DOWEL SIZE	EMBEDMENT LENGTH	MIN. LAP LENGTH
4	8"	1'-9"
5	9"	2'-2"
6	11"	2'-7"
7	1'-2"	3'-0"
8	1'-4"	4'-0"

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.

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.

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.

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.

CFRP STRENGTHENING NOTES:

1. FOR REPAIR NOTES AND ADDITIONAL DETAILS, SEE THE "CONCRETE RESTORATION DETAILS & CRACK INJECT/SEAL DETAILS" SHEET.

2. APPLICATION OF CFRP WRAPPING SYSTEM SHALL BE PERFORMED WITH NO LIVE LOAD DIRECTLY OVER THE BEAM.

3. CFRP PROPERTIES, MINIMUM REQUIREMENTS AND PREPARATION OF BEAM SURFACE AND INSTALLATION OF CFRP WRAPPING ARE IN ACCORDANCE WITH THE TECHNICAL SPECIAL PROVISIONS FOR CARBON STRENGTHENING USING CARBON FIBER REINFORCED POLYMER WRAP. NUMBER OF PLIES SPECIFIED IS BASED ON A TOTAL MINIMUM REQUIRED THICKNESS OF 0.08".

4. CFRP WRAPPING SHALL BE TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIAL PROVISIONS FOR CARBON FIBER REINFORCED POLYMER FIELD TESTING REQUIREMENTS.

5. TAKE CARE TO AVOID DAMAGING THE EXISTING PRESTRESSED STRANDS IN THE BEAM UNITS. IF ANY STRANDS ARE DAMAGED, NOTIFY THE ENGINEER FOR CORRECTIVE RECOMMENDATIONS.

BRIDGE NO. 874544

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: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
BWC	HNG	BWC	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: GENERAL NOTES (2 OF 4)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-4

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.

REPAIR FOR CONCRETE PILE:

1. MARINE GROWTH AND LOOSE SAND SHALL BE REMOVED FROM THE EXISTING EXPOSED PILE JACKET REINFORCEMENT AND EXISTING CONCRETE PILE IN THE AREA BEING REPAIRED. UNSOUND PILE CONCRETE SHALL BE REMOVED DOWN TO SOUND CONCRETE USING A PNEUMATIC CHIPPING HAMMER AND WATER BLASTING. WORK SHALL STOP AND THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IF REMOVAL OF MORE THAN 2 LINEAR VERTICAL FEET OF CONCRETE IS REQUIRED IN ORDER TO REACH SOUND CONCRETE.
2. THE CONTRACTOR SHALL EXERCISE SPECIAL CARE TO NOT DAMAGE ANY ELEMENTS OF THE STRUCTURES THAT ARE TO REMAIN, INCLUDING EXISTING REINFORCING.
3. TURBIDITY SCREENS SHALL BE USED TO PREVENT THE TURBIDITY LEVELS IN THE PROJECT AREA FROM EXCEEDING 29 NTU'S ABOVE THE NATURAL BACKGROUND. CONTRACTOR SHALL SUBMIT TO THE ENGINEER DETAILS OF THE FLOATING TURBIDITY BARRIER FOR APPROVAL.
4. PILE REPAIR SHALL UTILIZE AN EPOXY COMPOUND DESIGNED FOR UNDERWATER APPLICATION PER SECTION 926 OF THE FDOT CONSTRUCTION SPECIFICATIONS. AN FDOT APL MATERIAL OR APPROVED EQUAL PRODUCT SHALL BE UTILIZED IN THE PILE REPAIR. THE CONCRETE COVER FOR THE PILE JACKET REPAIR SHALL BE 4½".
5. CONTRACTOR SHALL VERIFY REPAIR DIMENSIONS AND SUBMIT SHOP DRAWINGS OF THE PILE JACKET REPAIRS TO THE ENGINEER OF RECORD FOR APPROVAL BEFORE CONSTRUCTION BEGINS.

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 JUNE 30, 2020 AND FIELD OBSERVATIONS PERFORMED ON OCTOBER 25-27, 2021. 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
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MIAMI-DADE COUNTY
HIGHWAY BRIDGE ENGINEER MANAGER
RYAN FISHER, P.E.
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111 NW 1 ST
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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

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. 874544

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
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ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
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DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: GENERAL NOTES (3 OF 4)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-5

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 ARE 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 ON 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 REMOVE 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. 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 THE MIAMI-DADE COUNTY ENVIRONMENTAL PERMITS COORDINATOR.

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

4. THE STAGING AREA SHALL NOT BE WITHIN THE LIMITS OF THE WETLANDS.

5. 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. 874544

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

HANSON PROFESSIONAL SERVICES INC.
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MIAMI, FLORIDA 33126
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ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: GENERAL NOTES (4 OF 4)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-6

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 (45 MPH).
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. 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

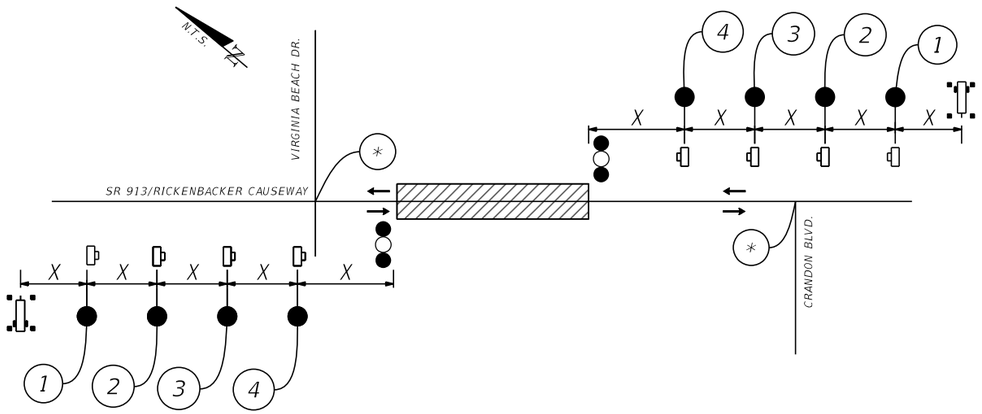
DURING CONSTRUCTION, PCMS MESSAGE
SHALL DISPLAY THE FOLLOWING:

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



ADVANCED SIGNING

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.

* = SEE FDOT STANDARD PLANS INDEX 102-660 AND 102-661 FOR PEDESTRIAN AND BICYCLE DETOURS.

1 — W20-1F — ROAD WORK AHEAD

3 — W20-5 — LEFT LANE CLOSED AHEAD — OR — W20-5 — RIGHT LANE CLOSED AHEAD

2 — MOT-13-06 — SPEEDING FINES DOUBLED WHEN WORKERS PRESENT

4 — W4-2 — OR — W4-2

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

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DESIGNED BY:	GG
CHECKED BY:	MH

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

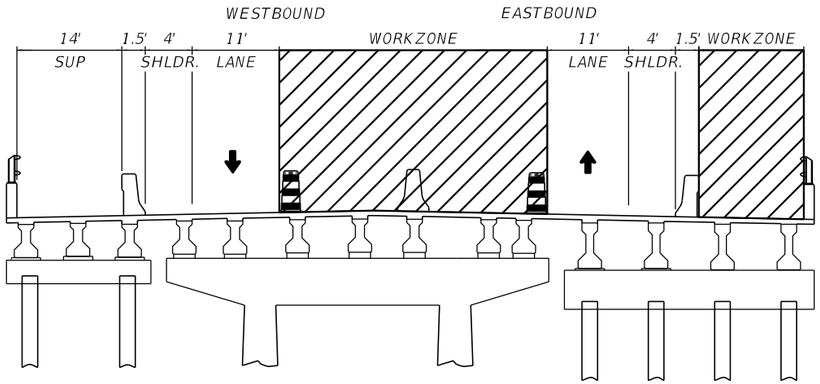
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: TEMPORARY TRAFFIC CONTROL PLANS (1 OF 2)

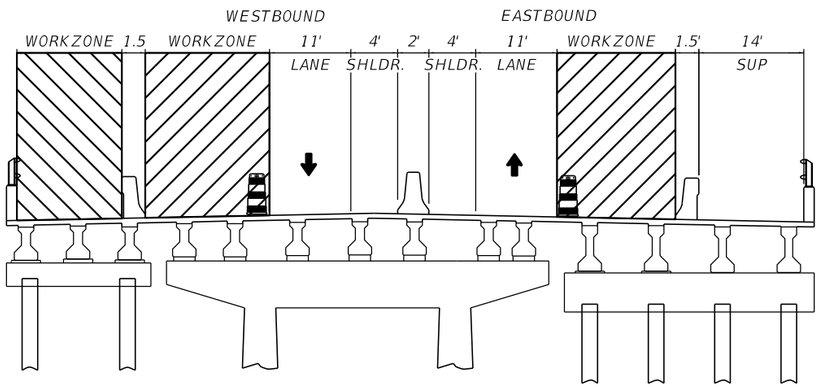
REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-7



PHASE I



PHASE II

PHASING NOTES

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, 102-613 & 102-615.
3. SHIFT TRAFFIC TO THE OUTSIDE LANE AS SHOWN IN THE TTC TYPICAL.
4. DETOUR PEDESTRIANS AND BICYCLISTS TO THE WESTBOUND SHARED USE PATH AS SHOWN IN THE TTC TYPICALS AND FDOT STANDARD PLANS INDEX 102-660 & 102-661.
5. WORK OPERATION ON INSIDE LANES, SHOULDERS AND EASTBOUND SHARED USE PATH.

PHASE II

1. INSTALL ADVANCE WARNING SIGNS, DEVICES, MAINTAIN TRAFFIC PER TTC PLANS AND FDOT STANDARD PLANS INDEX 102-600, 102-613 & 102-615.
2. SHIFT TRAFFIC TO THE INSIDE LANES AS SHOWN IN THE TTC TYPICALS.
3. DETOUR PEDESTRIANS AND BICYCLISTS TO THE EASTBOUND SHARED USE PATH AS SHOWN IN THE TTC TYPICALS AND FDOT STANDARD PLANS INDEX 102-660 & 102-661.
4. WORK OPERATION ON OUTSIDE LANE, SHOULDERS AND WESTBOUND SHARED USE PATH.
5. REMOVE ALL TRAFFIC CONTROL DEVICES.
6. OPEN LANES TO TRAFFIC AND SHARED USE PATH TO PEDESTRIAN AND BICYCLISTS.

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: GG
CHECKED BY: MH
DESIGNED BY: GG
CHECKED BY: MH

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

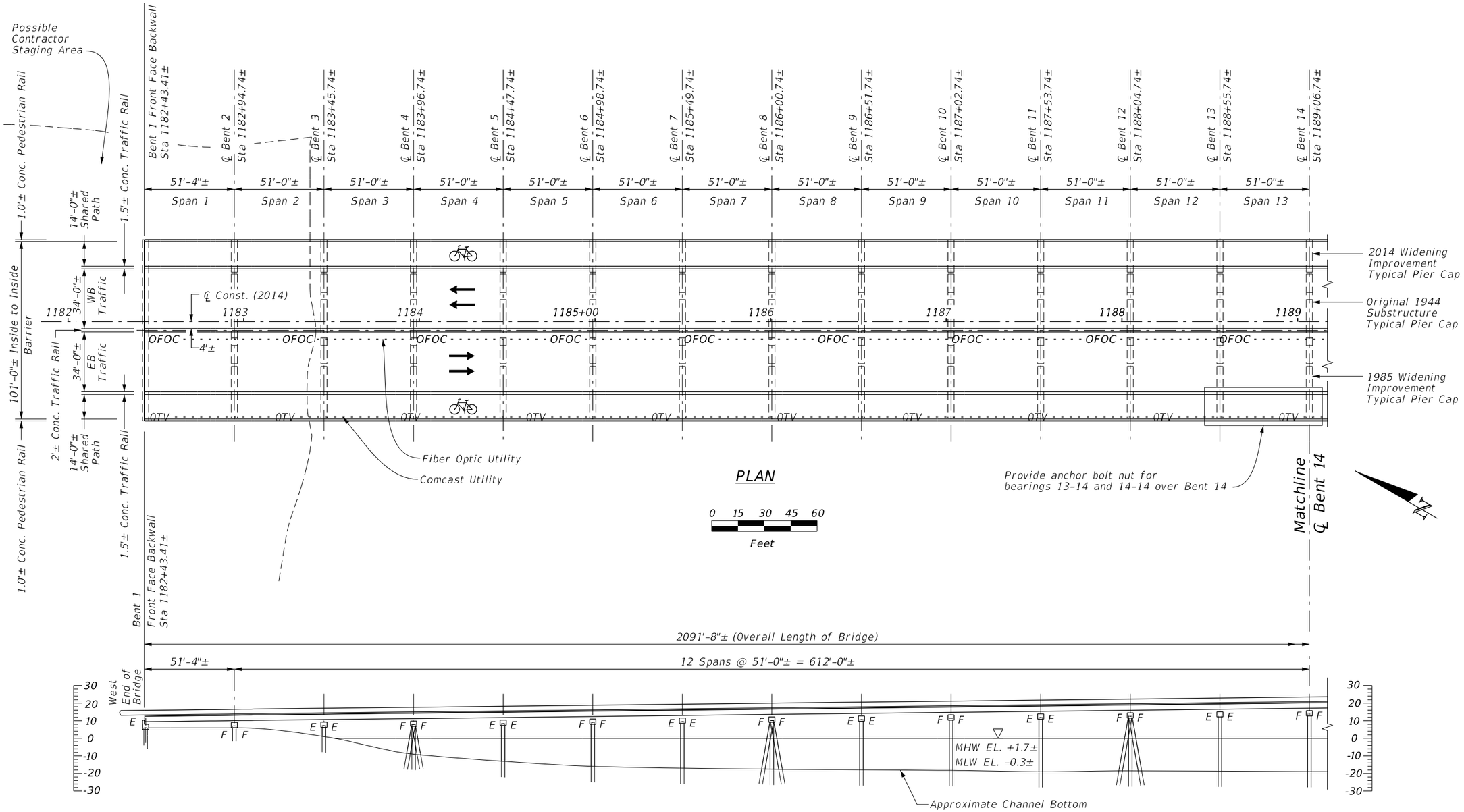
SHEET TITLE: TEMPORARY TRAFFIC CONTROL PLANS (2 OF 2)

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-8

Cunni00866 2/10/2023 1:58:03 PM I:\21jobs\21L0042\FDOTDirStruct\Roadway\tcplrd02.dgn



PLAN

ELEVATION

NOTE:

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

BRIDGE NO. 874544

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

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	BWC
CHECKED BY:	HNG
DESIGNED BY:	BWC
CHECKED BY:	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

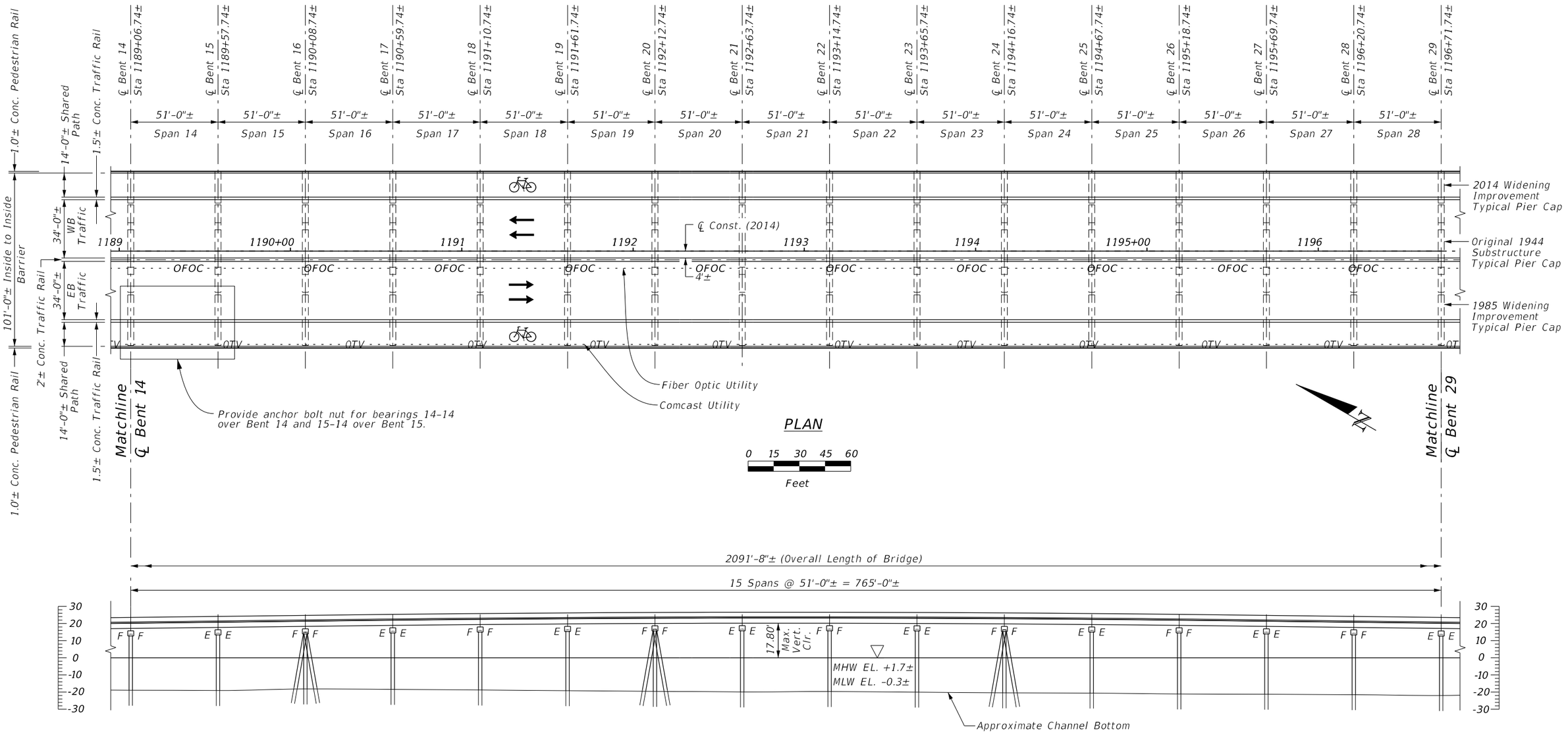
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: GENERAL PLAN & ELEVATION (1 OF 3)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-9



NOTE:

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

BRIDGE NO. 874544

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REVISIONS					
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MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

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MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

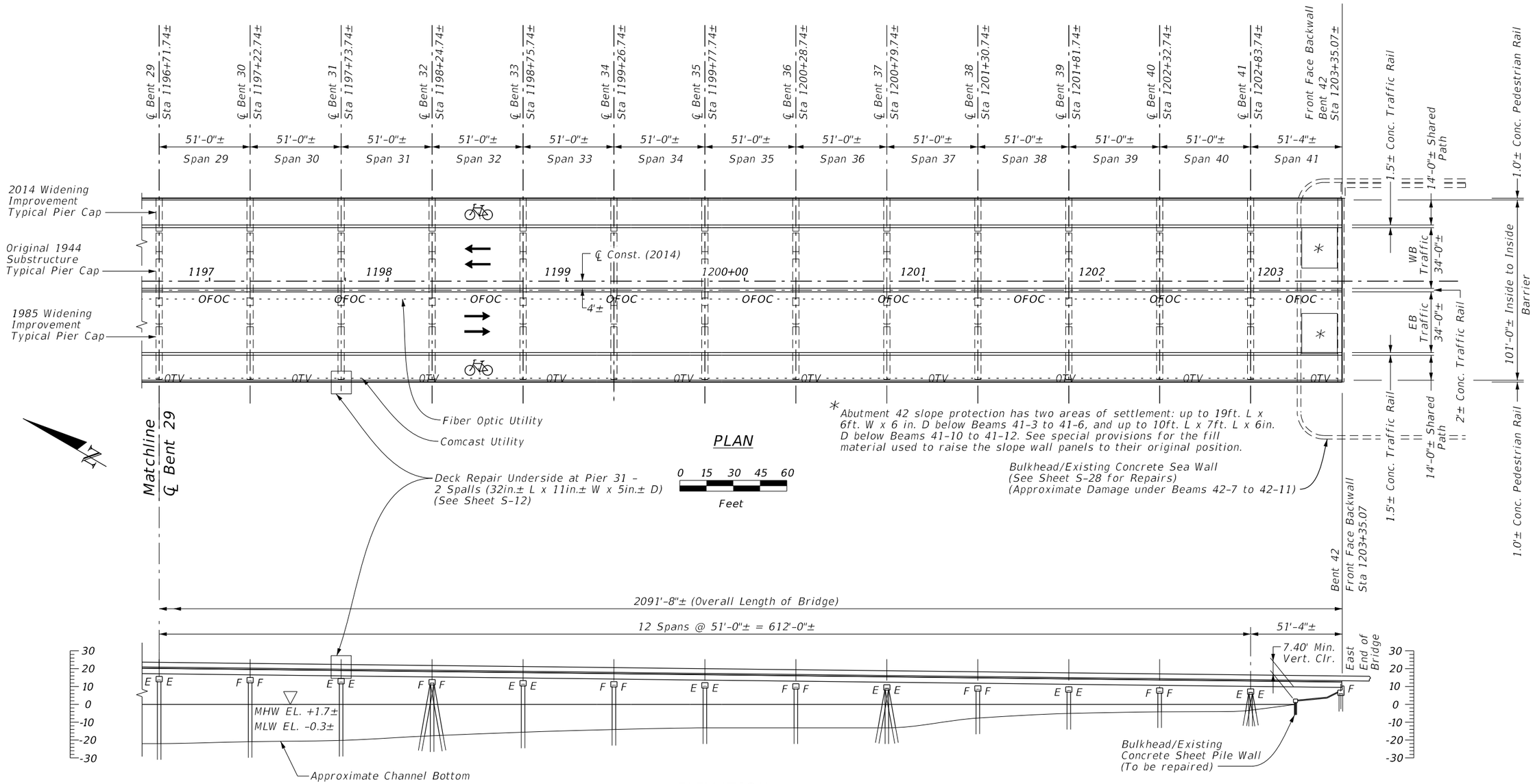
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: GENERAL PLAN & ELEVATION (2 OF 3)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-10



NOTE:

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

BRIDGE NO. 874544

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MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

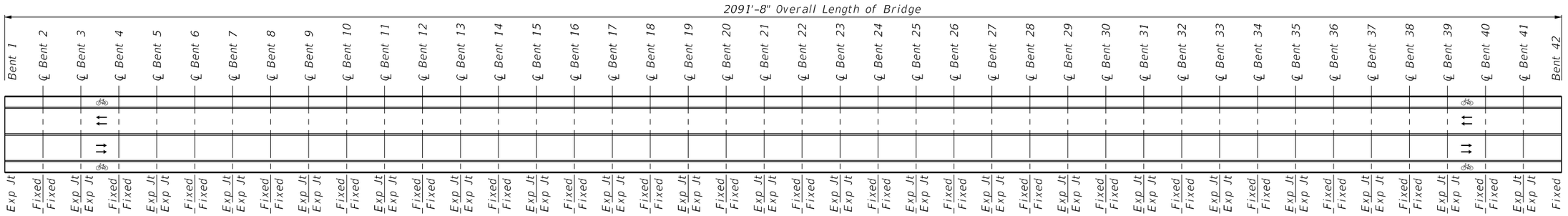
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

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

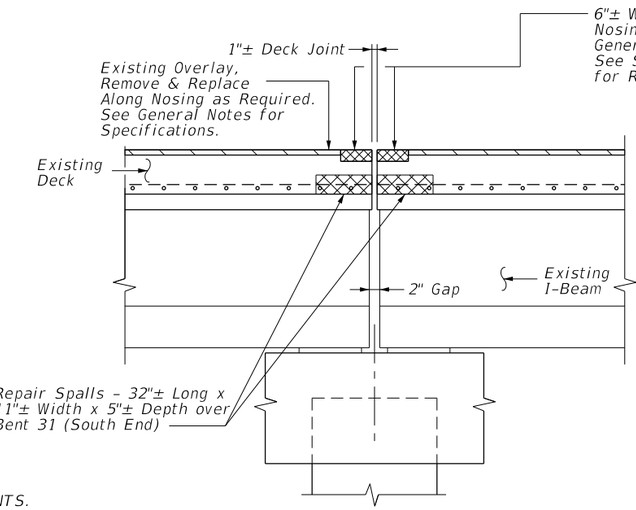
REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

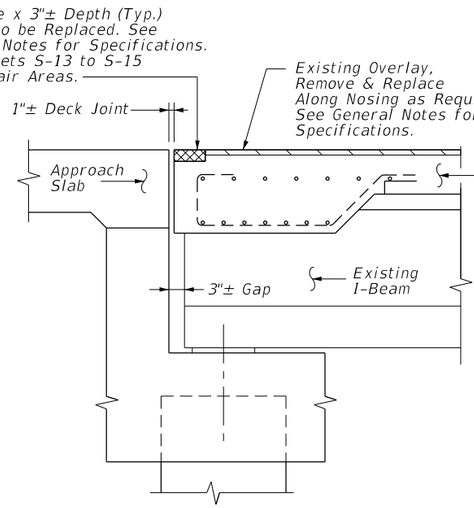
SHEET NO.: S-11



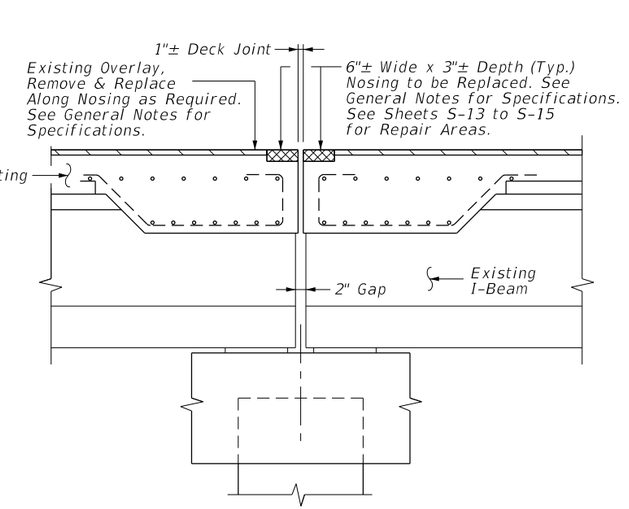
PLAN
NTS



SUPERSTRUCTURE SECTION AT INTERMEDIATE BENTS
BEAMS 11-14



SUPERSTRUCTURE SECTION AT END BENT 1
END BENT 42 SIMILAR



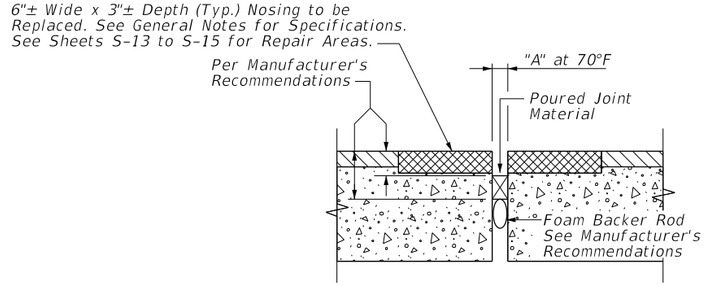
SUPERSTRUCTURE SECTION AT INTERMEDIATE BENTS
BEAMS 1-10

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 SHEETS S-13 THROUGH S-15 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.

NOTES: DECK REPAIR IS COVERED BY PAY ITEM 401-70-4. CONTRACTOR SHALL CONTACT COMCAST (STEVEN FLIPPO, (561) 460-2728, sflippo@cypresscommunications.net) PRIOR TO WORKING ADJACENT TO CONDUIT ON UNDERSIDE OF BRIDGE ON SOUTH SIDE.

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"



TYPICAL SECTION THRU JOINT

BRIDGE NO. 874544

REVISIONS

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

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: JOINT REPLACEMENT LOCATION & DETAILS

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-12

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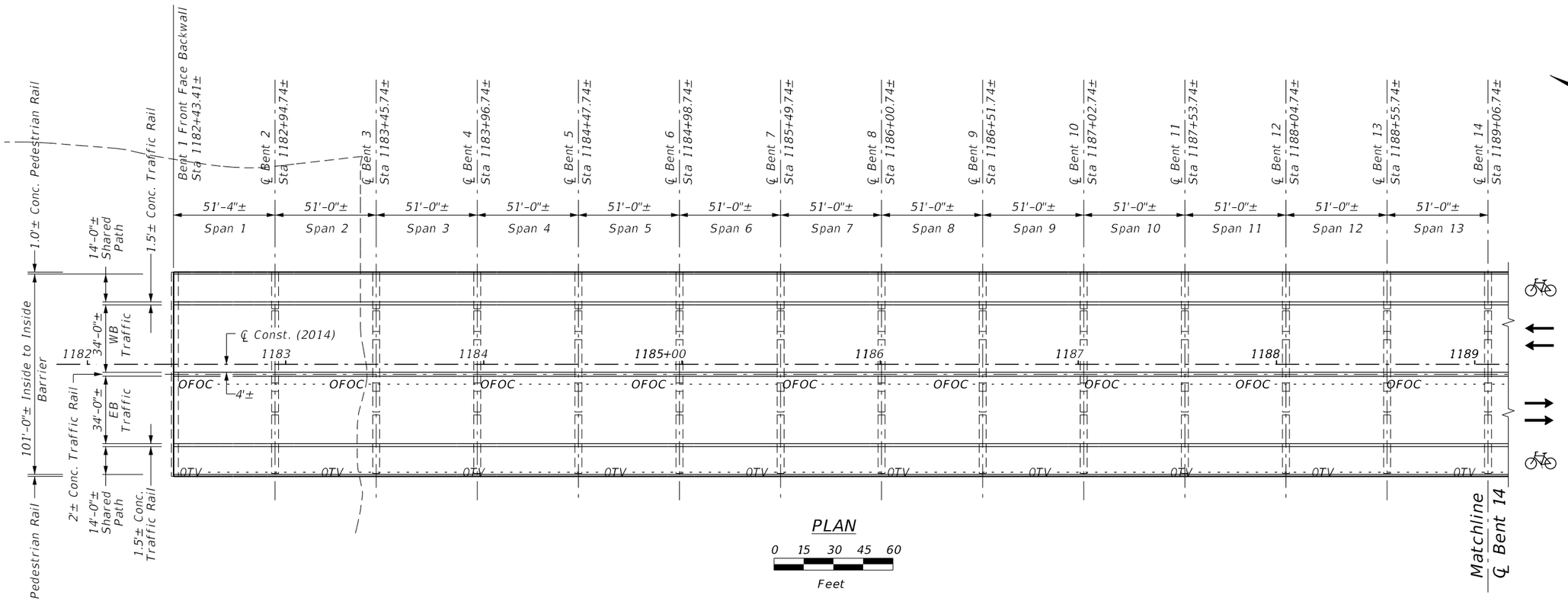

PLAN

0 15 30 45 60

Feet

2360	ADJACENT HEADER DAMAGE

Bridge: 874544

EASTBOUND EXPANSION JT. DEFICIENCIES

JOINT	2360 (ft.)	Header Replacement Quantity (Assume .25'D x 0.5'W x L)(CY)
1	3	0.014
2	2	0.009
3	1	0.005
4	2	0.009
5	3	0.014
6	2	0.009
7	–	–
8	–	–
9	–	–
10	3	0.014
11	–	–
12	2	0.009
13	–	–
14	3	0.014

2360	ADJACENT HEADER DAMAGE

Bridge: 874544

WESTBOUND EXPANSION JT. DEFICIENCIES

JOINT	2360 (ft.)	Header Replacement Quantity (Assume .25'D x 0.5'W x L)(CY)
1	3	0.014
2	4	0.019
3	–	–
4	–	–
5	4	0.019
6	–	–
7	–	–
8	–	–
9	–	–
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–

BRIDGE NO. 874544

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MIAMI, FLORIDA 33126
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ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

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MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: SUPERSTRUCTURE REPAIR PLAN (1 OF 3)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-13

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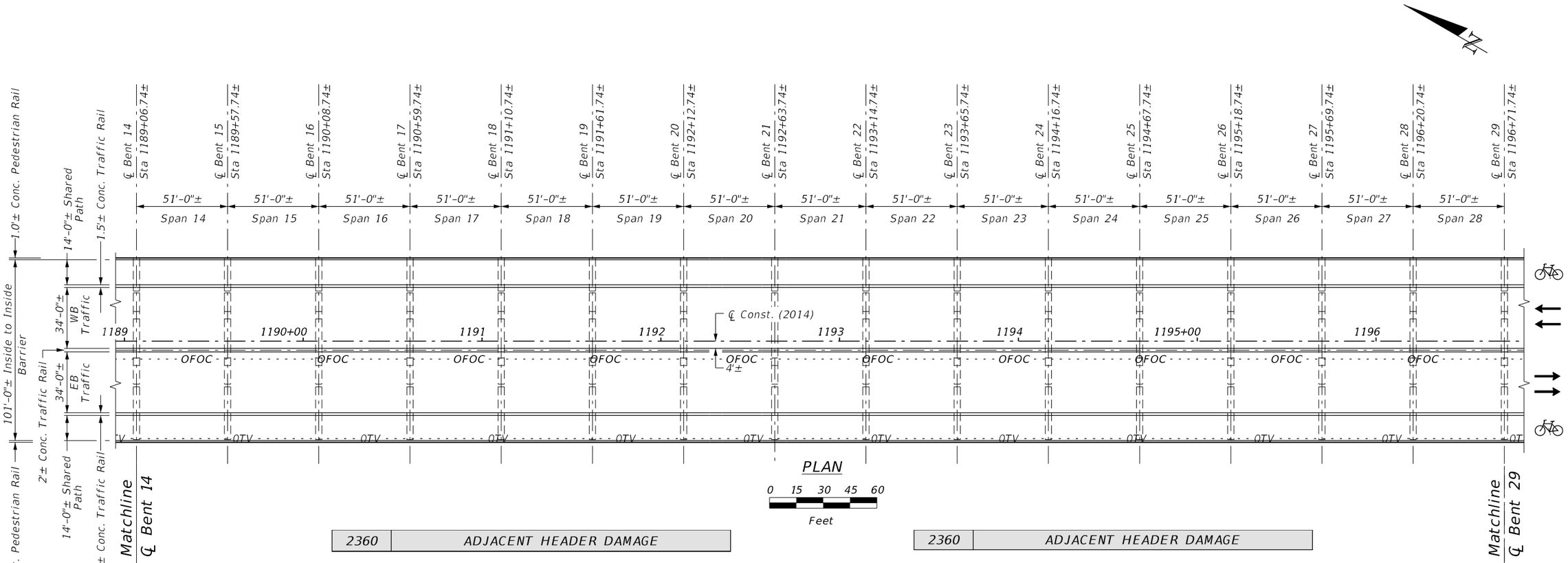

PLAN

0 15 30 45 60

Feet

2360	ADJACENT HEADER DAMAGE

2360	ADJACENT HEADER DAMAGE

Bridge: 874544

EASTBOUND EXPANSION JT. DEFICIENCIES		
		Header Replacement Quantity
JOINT	2360	(Assume .25'D x 0.5'W x L)(CY)
	(ft.)	
14	3	0.014
15	–	–
16	2	0.009
17	1	0.005
18	2	0.009
19	–	–
20	2	0.009
21	1.5	0.007
22	4	0.019
23	–	–
24	4	0.014
25	3	0.014
26	2	0.014
27	2	0.014
28	3	0.014
29	3	0.014

Bridge: 874544

WESTBOUND EXPANSION JT. DEFICIENCIES		
		Header Replacement Quantity
JOINT	2360	(Assume .25'D x 0.5'W x L)(CY)
	(ft.)	
14	–	–
15	–	–
16	–	–
17	–	–
18	–	–
19	–	–
20	–	–
21	–	–
22	–	–
23	–	–
24	–	–
25	–	–
26	–	–
27	–	–
28	1	0.005
29	–	–

BRIDGE NO. 874544

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

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
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DESIGNED BY: BWC
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MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

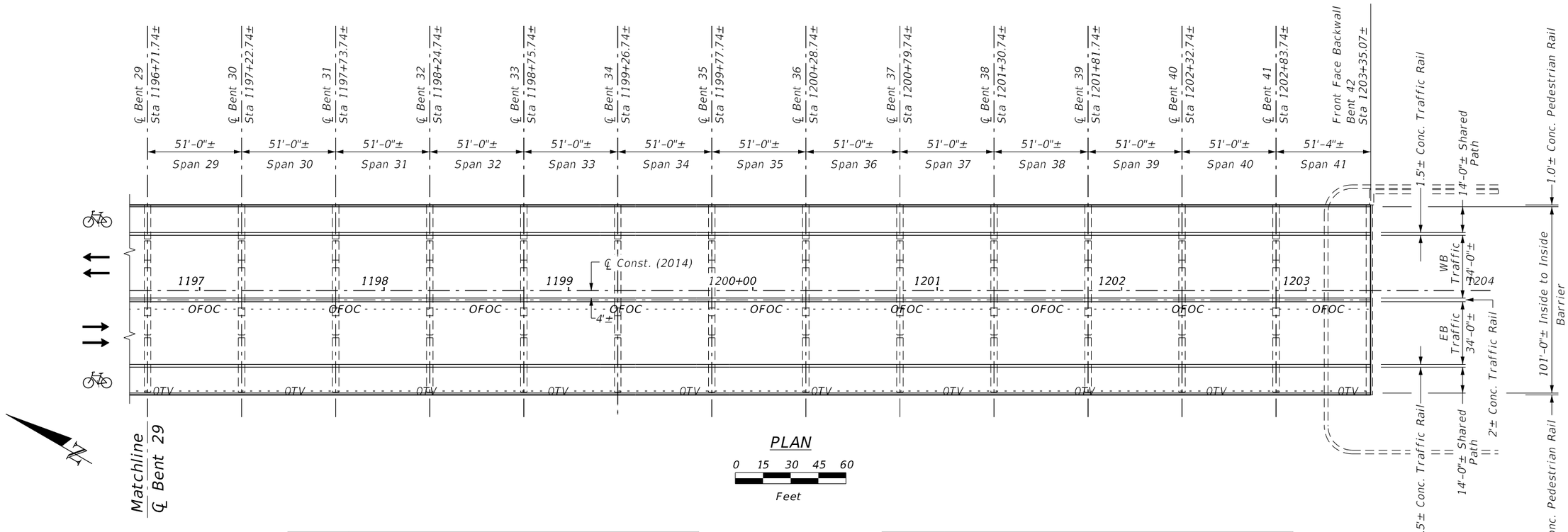
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: SUPERSTRUCTURE REPAIR PLAN (2 OF 3)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-14



2360	ADJACENT HEADER DAMAGE

Bridge: 874544

EASTBOUND EXPANSION JT. DEFICIENCIES		
		Header Replacement Quantity
JOINT	2360	(Assume .25'D x 0.5'W x L)(CY)
	(ft.)	
29	3	0.014
30	2	0.014
31	2	0.014
32	1.5	0.014
33	4	0.014
34	-	-
35	1	0.005
36	2	0.009
37	2	0.009
38	1.5	0.007
39	-	-
40	2	0.009
41	2	0.009
42	2	0.009

2360	ADJACENT HEADER DAMAGE

Bridge: 874544

WESTBOUND EXPANSION JT. DEFICIENCIES		
		Header Replacement Quantity
JOINT	2360	(Assume .25'D x 0.5'W x L)(CY)
	(ft.)	
29	-	-
30	-	-
31	1	0.005
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	-	-
42	1	0.005

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MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

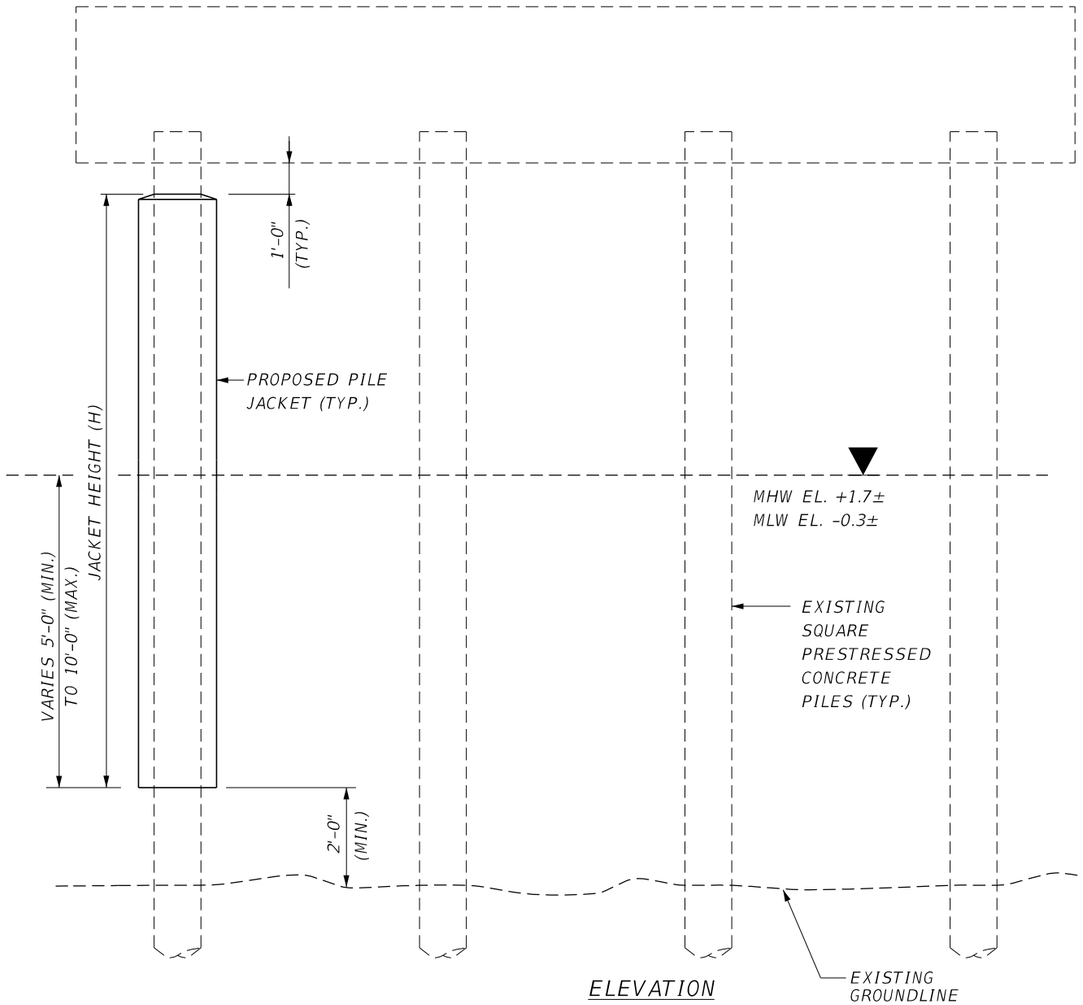
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: SUPERSTRUCTURE REPAIR PLAN (3 OF 3)

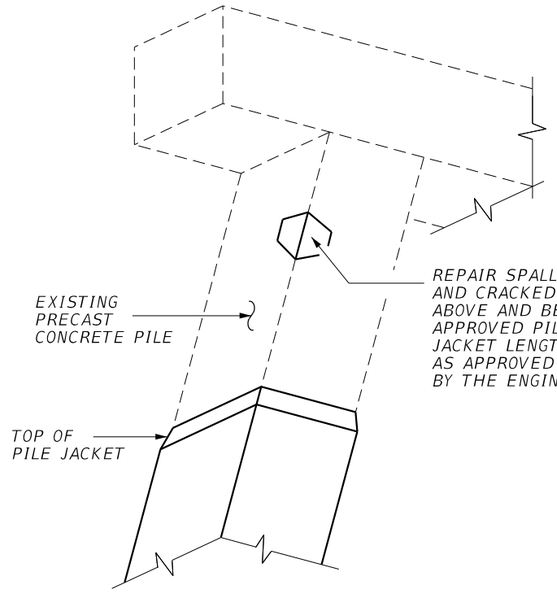
REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

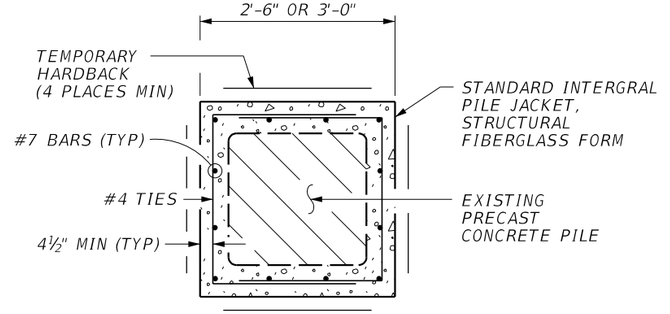
SHEET NO. S-15



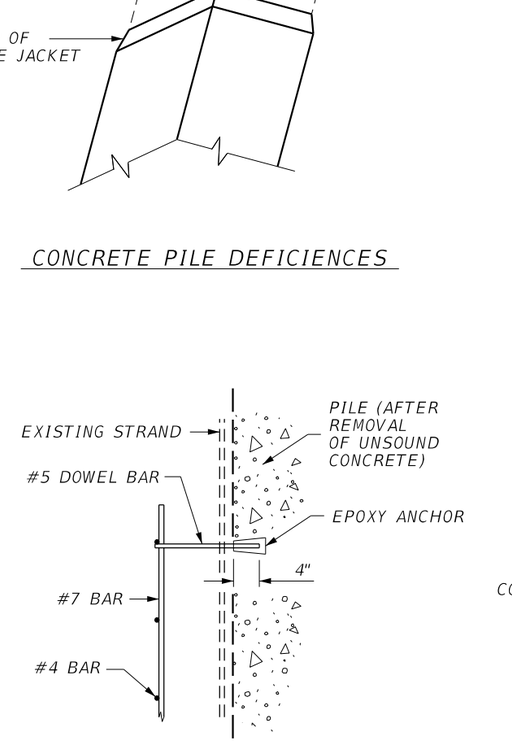
ELEVATION



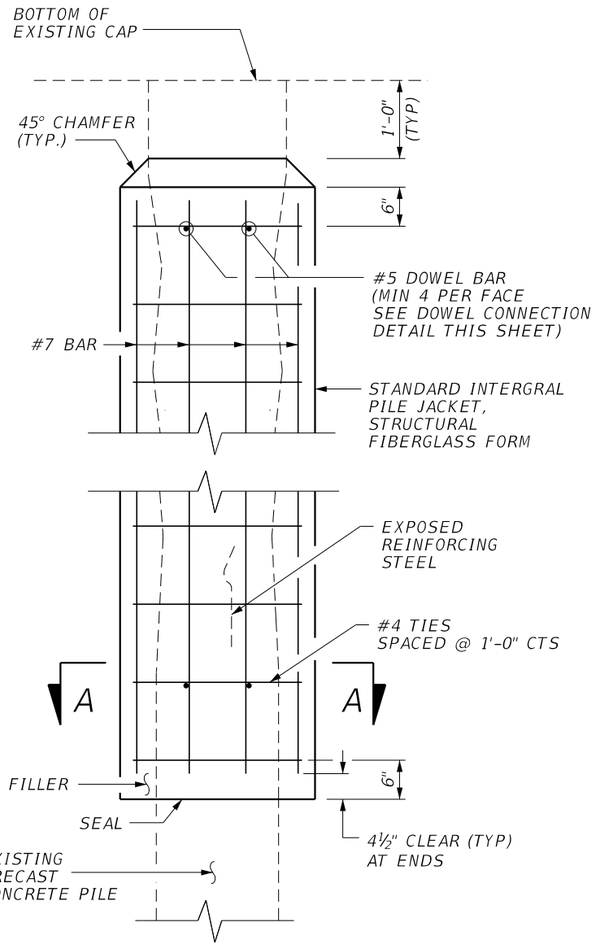
CONCRETE PILE DEFICIENCES



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 ELEVATIONS WITH THE ENGINEER PRIOR TO ORDERING MATERIAL. MINOR ADJUSTMENTS MAY BECOME NECESSARY DUE TO 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.

BRIDGE NO. 874544

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MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

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DESIGNED BY:	BWC
CHECKED BY:	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

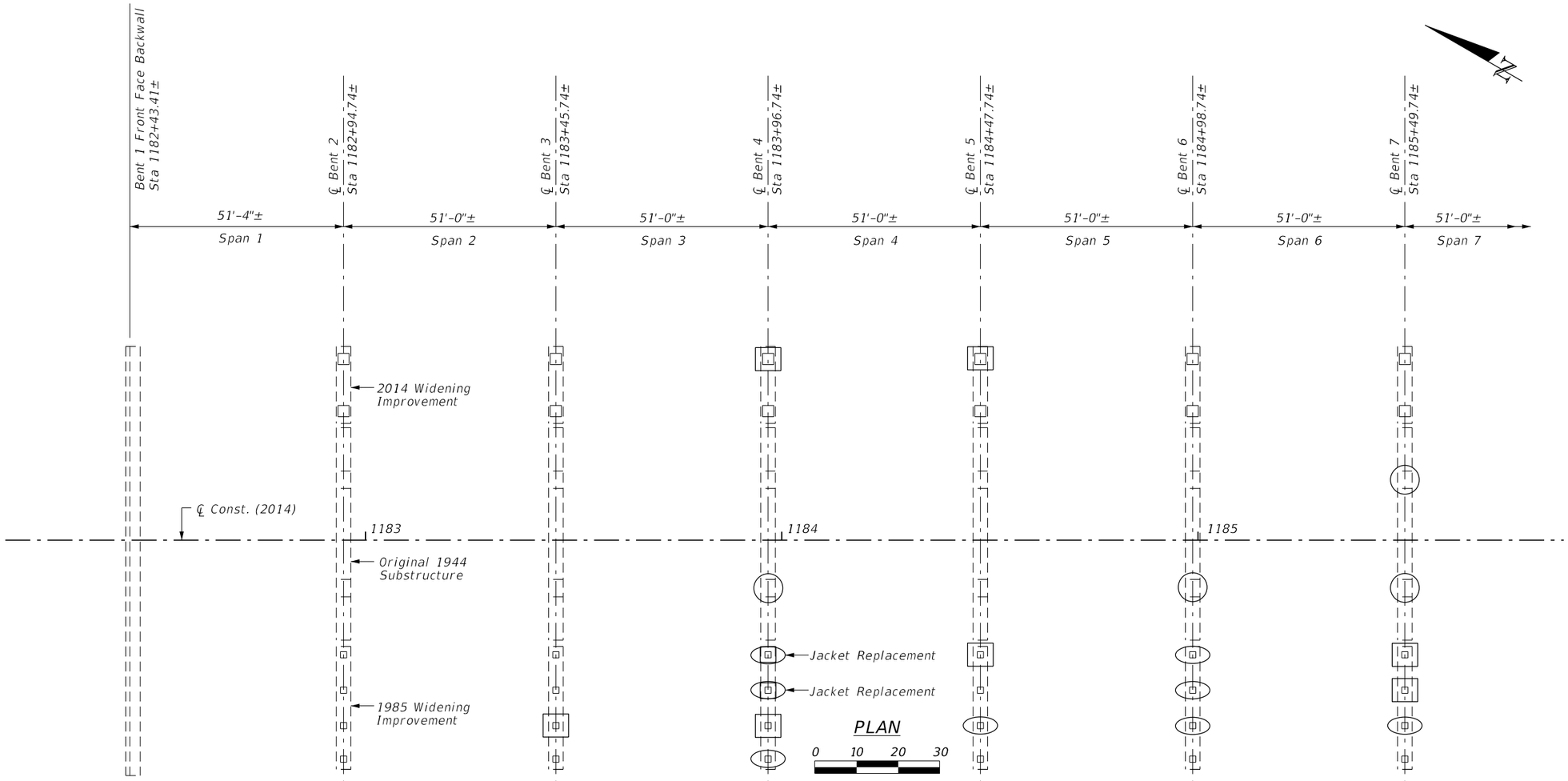
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

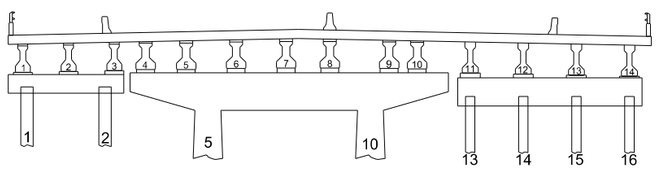
SHEET TITLE: PILE JACKET DETAILS

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-16





SECTION LOOKING UPSTATION

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 Field Engineer for Extent of Reconstruction.

ESTIMATE OF QUANTITIES (1 OF 5)

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)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)
3-15	-	3.250	-	7-10	5.000	-	-
4-1	-	-	12.833	7-13	-	17.500	-
4-10	0.500	-	-	7-14	-	17.500	-
4-13	-	12.833	-				
4-14	-	12.833	-				
4-15	-	12.833	-				
5-1	-	-	16.500				
5-13	-	16.500	-				
6-10	2.000	-	-				
6-10	4.500	-	-				
6-10	0.313	-	-				
7-5	2.250	-	-	SUB-TOTAL	14.563	93.250	29.333

BRIDGE NO. 874544

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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: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

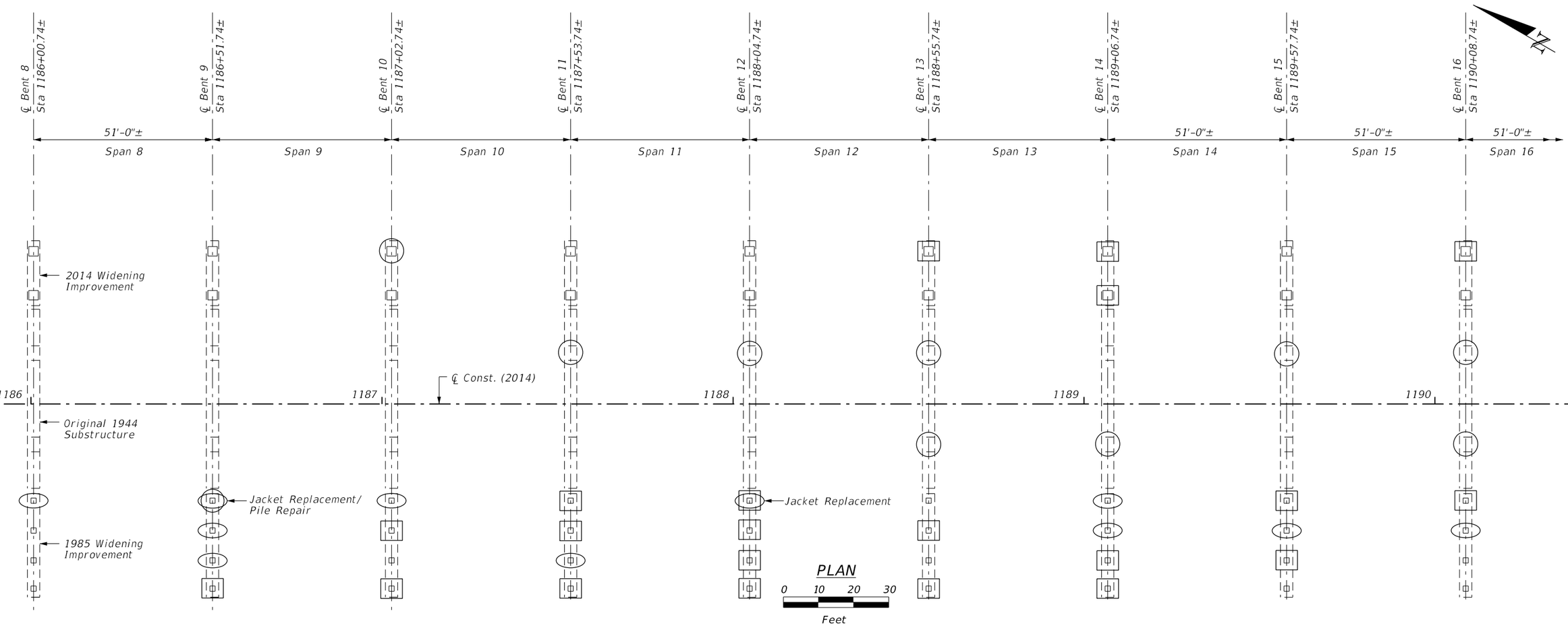
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

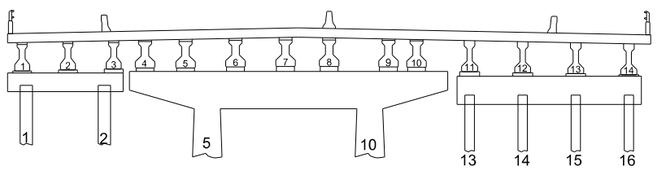
SHEET TITLE: LOCATION OF SUBSTRUCTURE REPAIRS (1 OF 5)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-17





SECTION LOOKING UPSTATION

LEGEND

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

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

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

ESTIMATE OF QUANTITIES (2 OF 5)

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)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)
9-13	-	18.750	-	12-15	-	20.500	-	14-16	-	21.750	-
9-13	0.250	-	-	12-16	-	20.500	-	15-5	1.125	-	-
9-16	-	18.750	-	13-1	-	21.000	-	15-5	2.500	-	-
10-1	0.063	-	-	13-5	0.500	-	-	15-13	-	22.250	-
10-14	-	19.500	-	13-10	2.000	-	-	15-15	-	22.250	-
10-16	-	19.500	-	13-10	0.781	-	-	16-1	-	-	22.750
11-5	1.167	-	-	13-14	-	21.000	-	16-5	1.750	-	-
11-13	-	20.000	-	13-16	-	21.000	-	16-5	0.875	-	-
11-14	-	20.000	-	14-1	-	-	21.750	16-10	3.000	-	-
11-16	-	20.000	-	14-2	-	-	21.750	16-13	-	22.750	-
12-5	0.500	-	-	14-10	0.313	-	-	-	-	-	-
12-13	-	20.500	-	14-10	0.250	-	-	-	-	-	-
12-14	-	20.500	-	14-15	-	21.750	-	SUB-TOTAL	15.074	392.250	66.250

BRIDGE NO. 874544

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

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: LOCATION OF SUBSTRUCTURE REPAIRS (2 OF 5)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-18

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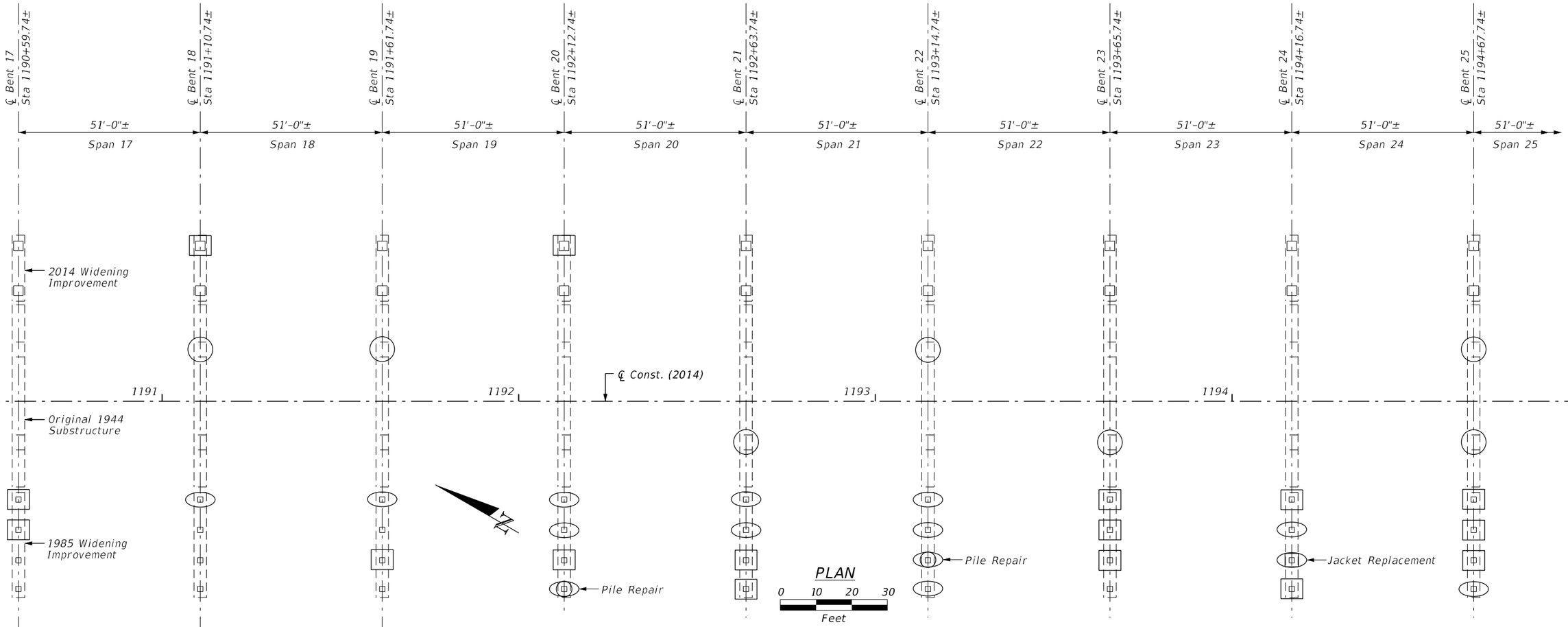

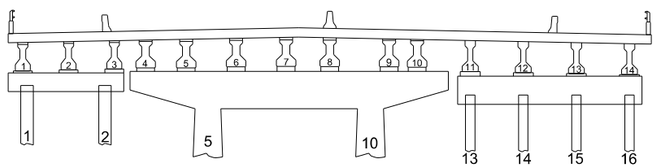

SECTION LOOKING UPSTATION

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 Field Engineer for Extent of Reconstruction.

ESTIMATE OF QUANTITIES (3 OF 5)

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)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)
17-13	-	23.500	-	21-16	-	24.750	-	25-13	-	24.000	-
17-14	-	23.500	-	22-5	0.375	-	-	25-14	-	24.000	-
18-1	-	-	24.000	22-15	0.250	-	-	25-15	-	24.000	-
18-5	0.500	-	-	23-10	0.750	-	-				
19-5	1.563	-	-	23-13	-	24.500	-				
19-15	-	24.500	-	23-14	-	24.500	-				
20-1	-	-	14.500	23-15	-	24.500	-				
20-15	-	14.500	-	24-13	-	24.500	-				
20-16	0.188	-	-	24-15	-	24.500	-				
21-3	0.938	-	-	24-16	-	24.500	-				
21-6	0.333	-	-	25-5	0.375	-	-				
21-10	2.000	-	-	25-5	1.750	-	-				
21-15	-	24.750	-	25-10	1.111	-	-	SUB-TOTAL	10.133	354.500	38.500

BRIDGE NO. 874544

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MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

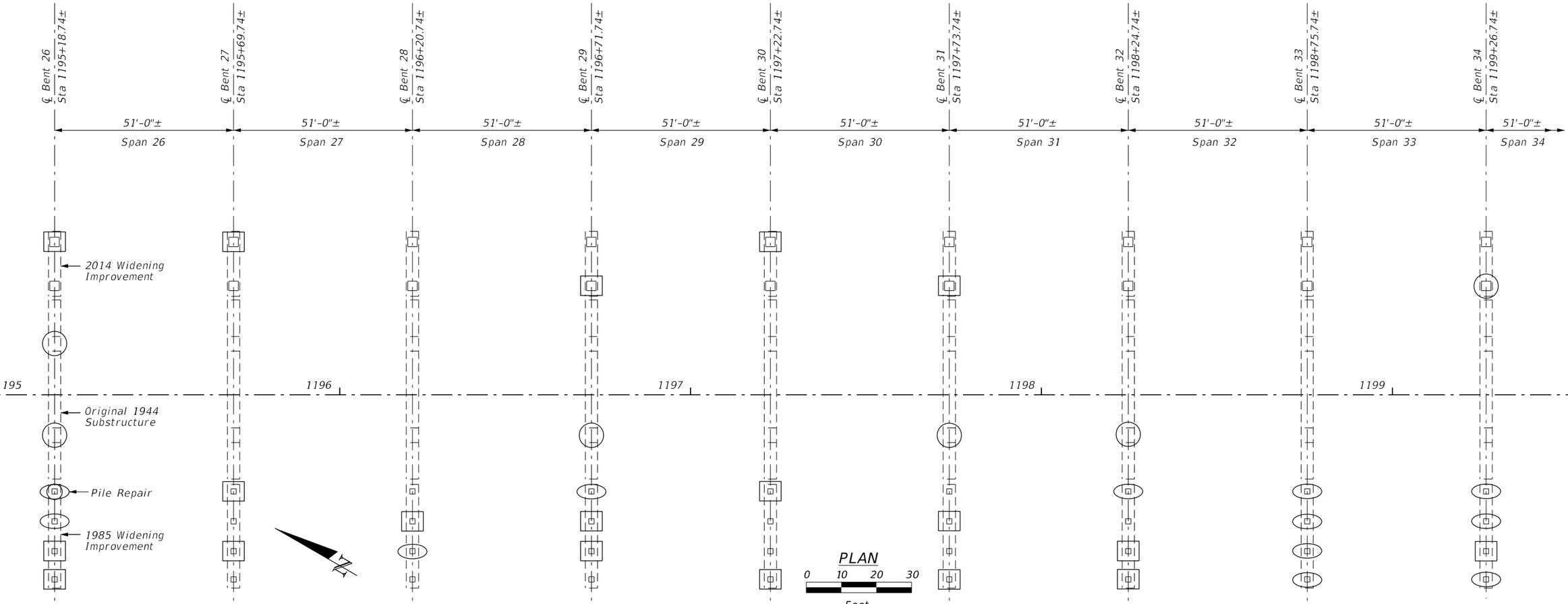
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

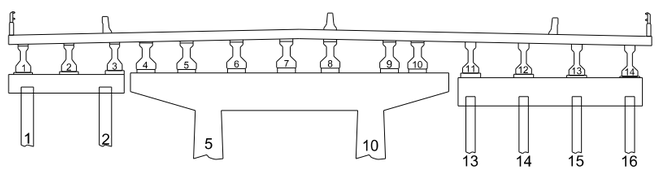
SHEET TITLE: LOCATION OF SUBSTRUCTURE REPAIRS (3 OF 5)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-19





SECTION LOOKING UPSTATION

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 Field Engineer for Extent of Reconstruction.

ESTIMATE OF QUANTITIES (4 OF 5)

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)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)
26-1	-	-	23.500	29-10	2.604	-	-	32-10	0.500	-	-
26-5	2.333	-	-	29-14	-	21.750	-	32-15	-	20.000	-
26-5	0.479	-	-	29-15	-	21.750	-	32-16	-	20.000	-
26-10	1.500	-	-	30-1	-	-	21.000	34-2	0.167	-	-
26-13	0.250	-	-	30-13	-	21.000	-	34-15	-	18.750	-
26-13	1.500	-	-	30-16	-	21.000	-				
26-15	-	23.500	-	31-2	-	-	20.500				
26-16	-	23.500	-	31-10	0.340	-	-				
27-1	-	-	22.750	31-10	3.750	-	-				
27-13	-	22.750	-	31-10	0.375	-	-				
27-15	-	22.750	-	31-14	-	20.500	-				
28-14	-	22.250	-	31-16	-	20.500	-				
29-2	-	-	21.750	32-10	0.625	-	-	SUB-TOTAL	14.423	300.000	109.500

BRIDGE NO. 874544

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MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

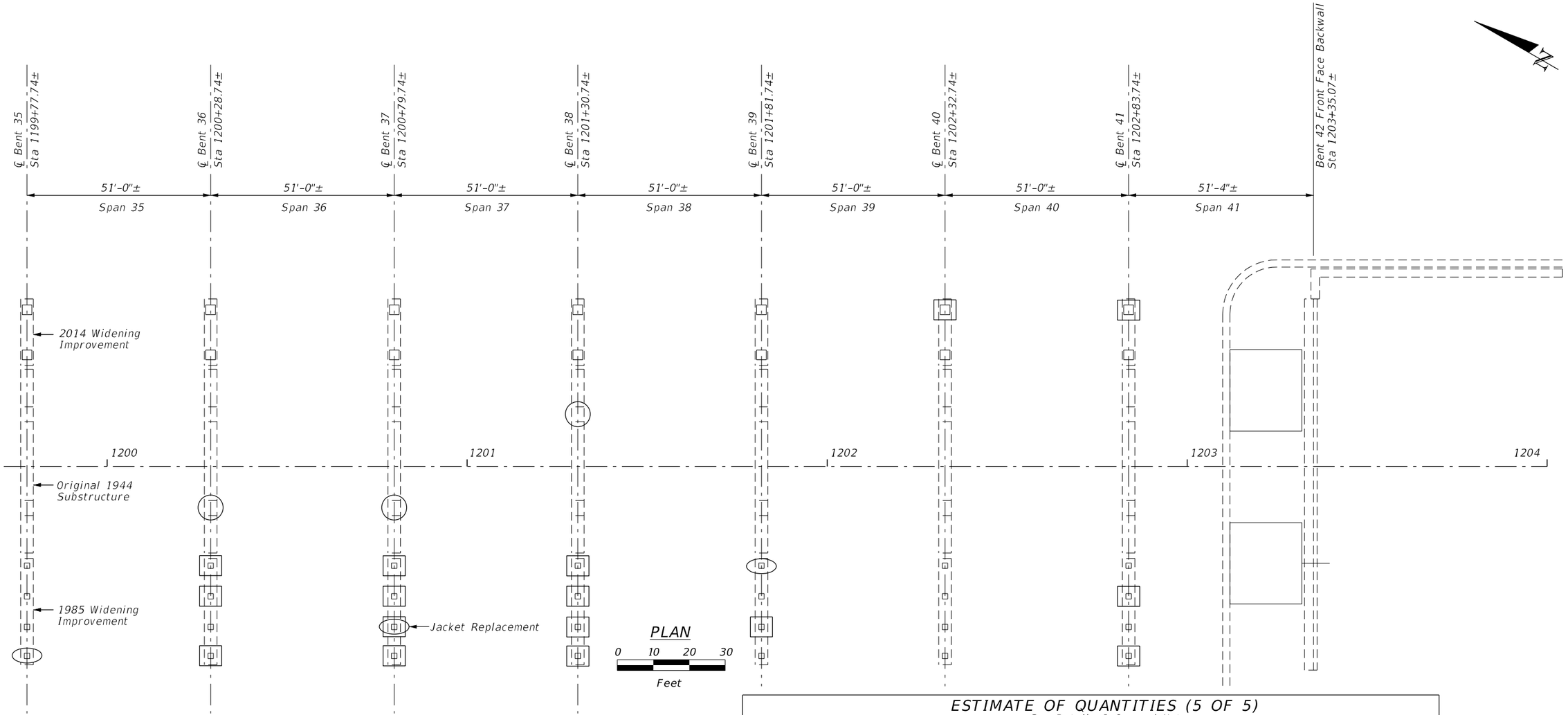
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

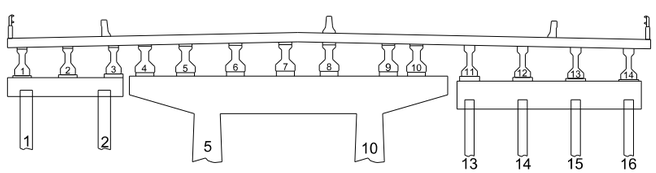
SHEET TITLE: LOCATION OF SUBSTRUCTURE REPAIRS (4 OF 5)

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-20





SECTION LOOKING UPSTATION

LEGEND

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

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

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

ESTIMATE OF QUANTITIES (5 OF 5)

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)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)	PILE #	401-70-4 RESTORE SPALLED AREAS (PCG) (CF)	457-1-22 STANDARD INTEGRAL PILE JACKET S.S. 16"-30" (30")(LF)	457-1-23 STANDARD INTEGRAL PILE JACKET S.S. >30" (36")(LF)
36-10	0.417	-	-	38-14	-	11.500	-
36-13	-	17.500	-	38-15	-	11.500	-
36-14	-	17.500	-	38-16	-	11.500	-
36-16	-	17.500	-	39-15	-	8.750	-
37-10	0.500	-	-	40-1	-	-	8.250
37-13	-	17.000	-	41-1	-	-	5.667
37-14	-	17.000	-	41-14	-	5.667	-
37-15	-	17.000	-	41-16	-	5.667	-
37-16	-	17.000	-				
38-5	0.703	-	-	SUB-TOTAL	1.964	186.583	13.917
38-5	0.344	-	-				
38-13	-	11.500	-	TOTAL	56.157	1326.583	257.500

BRIDGE NO. 874544

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MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: LOCATION OF SUBSTRUCTURE REPAIRS (5 OF 5)

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-21

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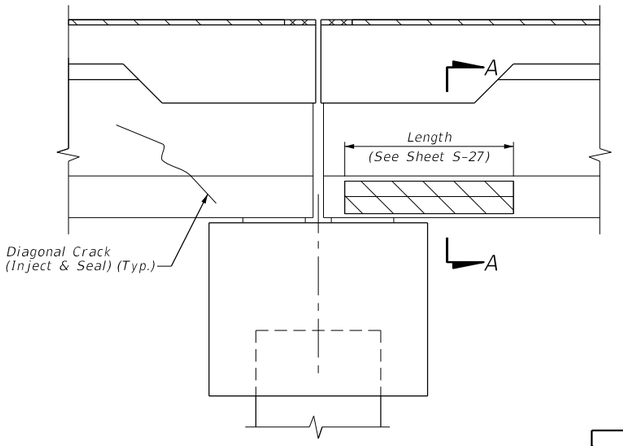


TYPICAL BEAM SHOWING EXPOSED REBAR/STRANDS

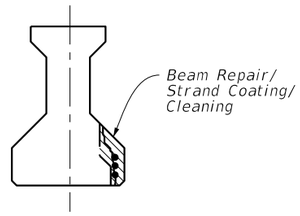
Concrete Beams with cracks shown on Sheet S-27 to be injected and sealed. Use Type F-1 compound epoxy for sealing crack surfaces in preparation for injection. Refer to Section 411 of standard specifications for additional information.

TYPICAL CRACK REPAIR METHOD

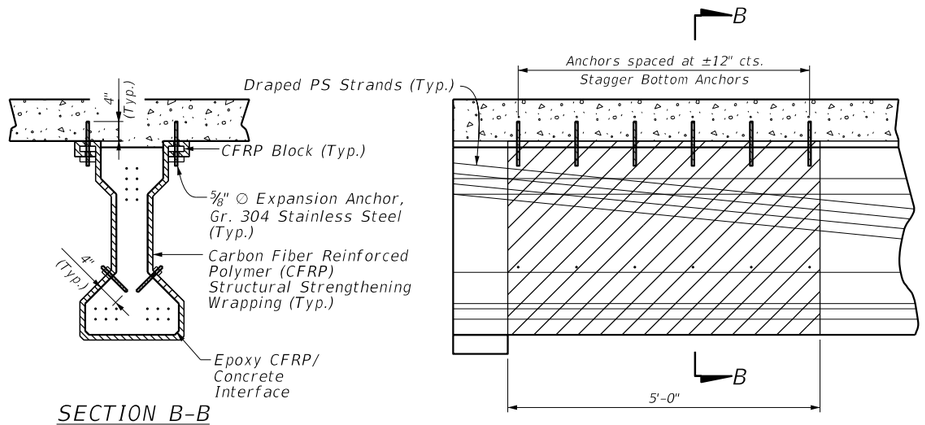
1. Cracks to be Repaired as Directed by the Engineer.
2. Remove Unsound Concrete from Crack Area.
3. Obtain Engineer's Approval to Carry Out Crack Repair (in Lieu of Spall Repair) for Cases Where Adjacent Concrete is Otherwise Unsound and Cracking is not a Result of Corroding Reinforcement.
4. For Cracks 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.

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"



SECTION A-A



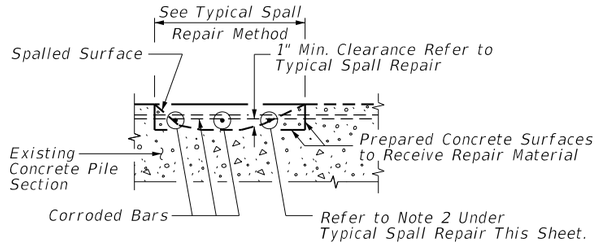
SECTION B-B

CARBON FIBER REINFORCED POLYMER (CFRP) STRUCTURAL STRENGTHENING WRAPPING DETAILS

Spans 36 & 40, Beams 11-14 (Each End) (4 Locations) (80 LF Total)

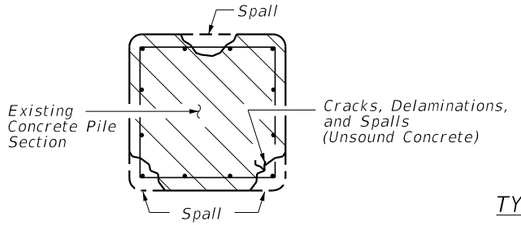
CFRP Wrapping to be included in Pay Item 450-82 (Beam Repair)

CFRP Wrapping System must provide a minimum increase in ultimate shear capacity of 70 kips.



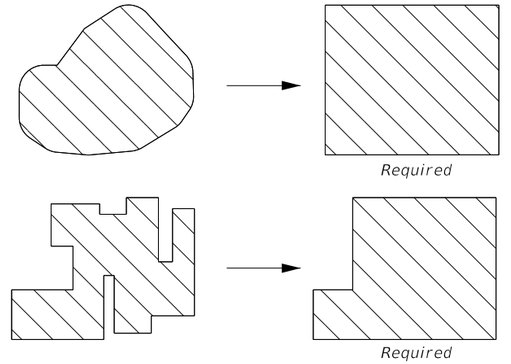
EXPOSING AND UNDERCUTTING REINFORCING STEEL

Applicable to Horizontal, Vertical, and Overhead Locations



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.

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 Rebars and Any Loose Concrete or Abrasives by Sandblasting.
4. Fill Voids with Repair Material in Accordance with the Technical Special Provisions and FDOT Specifications.
5. 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.

BRIDGE NO. 874544

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

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
BWC	HNG	BWC	HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

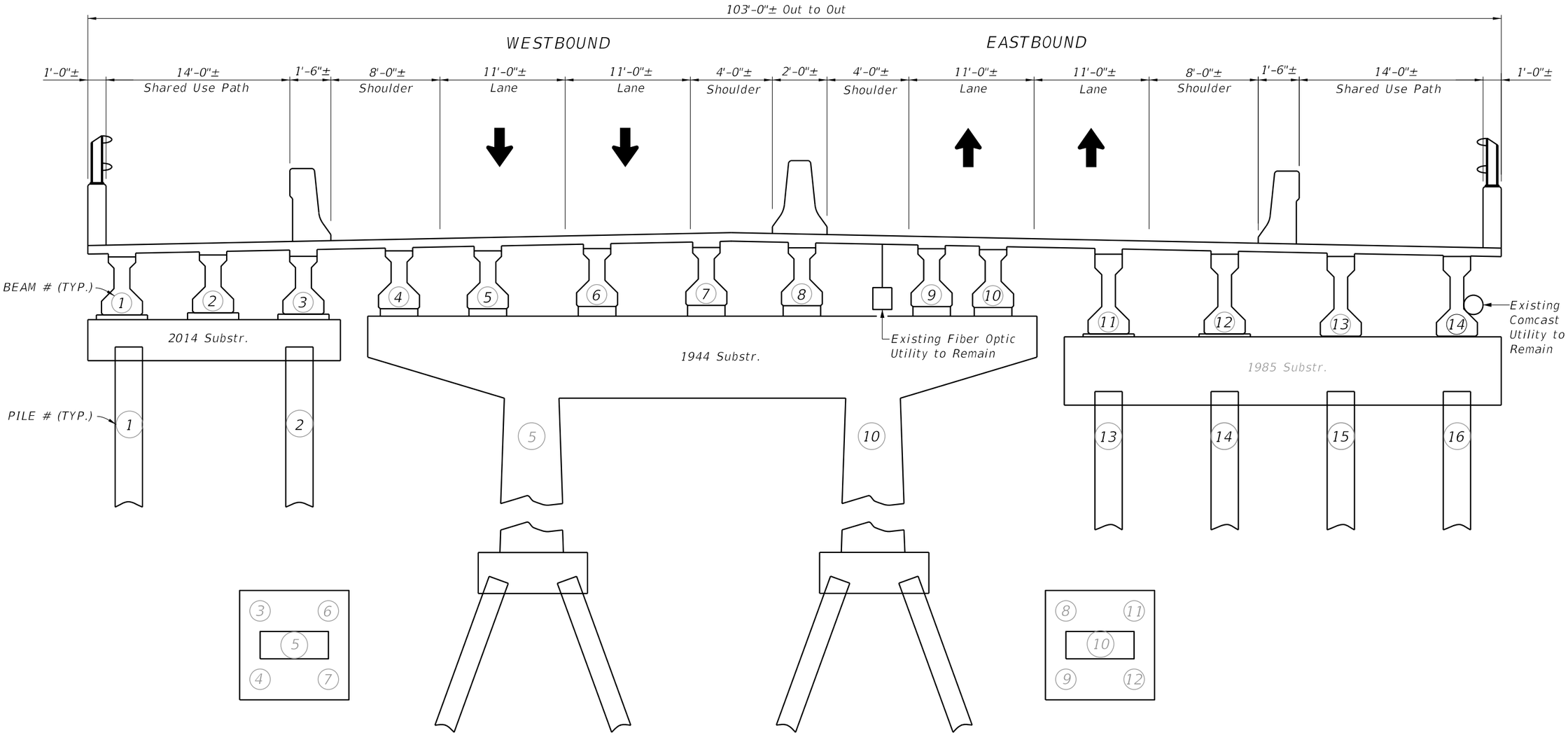
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: CONCRETE RESTORATION DETAILS & CRACK INJECT/SEAL DETAILS

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-22



TYPICAL SECTION

KEY FOR REPAIR DESCRIPTIONS
LOOKING UPSTATION

BRIDGE NO. 874544

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: TYPICAL BRIDGE SECTION KEY FOR REPAIRS

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-23

PILE (PIER-PILE)	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
4-10	1080	EAST FACE, BELOW CAP	DELAMINATION (2FT X 1FT X 3IN)	1	2.000	1.000	0.250	0.500
6-10	1130	WEST FACE, STARTING AT THE FOOTING	DELAMINATION (4FT X 1FT X 3IN)	2	4.000	1.000	0.250	2.000
6-10	1130	WEST FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (3FT X 6FT X 3IN)	1	3.000	6.000	0.250	4.500
6-10	1130	NORTH FACE	VERTICAL CRACK (2.5 FT LONG)	1	2.500	0.500	0.250	0.313
7-5	1080	WEST FACE	DELAMINATION (3FT X 3FT X 3IN)	1	3.000	3.000	0.250	2.250
7-10	1080	WEST FACE	DELAMINATION (5FT X 4FT X 3IN)	1	5.000	4.000	0.250	5.000
9-13	1110	EAST & WEST FACES	CRACK ABOVE JACKET (1FT LONG)	1	1.000	0.500	0.250	0.250
10-1	1080	NE CORNER	SPALL (6IN X 6IN X 3IN)	1	0.500	0.500	0.250	0.063
11-5	1080	SOUTH FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (3FT X 4.67FT X 3IN)	1	3.000	4.667	0.083	1.167
12-5	1080	EAST FACE, 1 FT. BELOW CAP	DELAMINATION (2FT X 1FT X 3IN)	1	2.000	1.000	0.250	0.500
13-5	1080	SE CORNER AT THE CAP	DELAMINATION (2FT X 1FT X 3IN)	1	2.000	1.000	0.250	0.500
13-10	1130	SOUTH & WEST FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (2FT X 2FT X 3IN)	2	2.000	2.000	0.250	2.000
13-10	1130	SOUTH FACE, JUST BELOW CAP	VERTICAL CRACK (6.25FT LONG)	1	6.250	0.500	0.250	0.781
14-10	1130	NE CORNER, 1 FT. BELOW CAP	DELAMINATION (2.5FT X 0.5FT X 3IN)	1	2.500	0.500	0.250	0.313
14-10	1130	WEST FACE, 5 FT. FROM BOTTOM OF CAP	VERTICAL CRACK (2FT LONG)	1	2.000	0.500	0.250	0.250
15-5	1080	WEST FACE AT THE CAP	DELAMINATION (3FT X 1.5FT X 3IN)	1	3.000	1.500	0.250	1.125
15-5	1080	WEST FACE, 1 FT. BELOW CAP	DELAMINATION (5FT X 2FT X 3IN)	1	5.000	2.000	0.250	2.500
16-5	1080	EAST FACE, BELOW CAP	DELAMINATION (1.583FT X 4.417FT X 3IN)	1	1.583	4.417	0.250	1.748
16-5	1130	NORTH FACE	VERTICAL CRACK (7FT LONG)	1	7.000	0.500	0.250	0.875
16-10	1080	NW CORNER AT THE CAP	DELAMINATION (6FT X 2FT X 3IN)	1	6.000	2.000	0.250	3.000
18-5	1130	SW CORNER ABOVE AND BELOW THE CAP	VERTICAL CRACK (2FT LONG)	2	2.000	0.500	0.250	0.500
19-5	1080	SOUTH FACE	DELAMINATION (2.5FT X 2.5FT X 3IN)	1	2.500	2.500	0.250	1.563
20-16	1110	WEST FACE	CRACK ABOVE JACKET (18IN LONG)	1	1.500	0.500	0.250	0.188
21-3	1080	EAST FACE, ABOVE JACKET EXTENDING INTO NORTH & SOUTH FACE	DELAMINATION (2.5FT X 1.5FT X 3IN)	1	2.500	1.500	0.250	0.938
21-6	1130	ABOVE THE JACKET	VERTICAL CRACK (2.667FT LONG)	1	2.667	0.500	0.250	0.333
21-10	1080	NORTH FACE AT THE CAP	DELAMINATION (2FT X 4FT X 3IN)	1	2.000	4.000	0.250	2.000
22-5	1130	NORTH FACE	VERTICAL CRACK (3FT LONG)	1	3.000	0.500	0.250	0.375
22-15	1110	EAST FACE	CRACK ABOVE REPAIR (2FT LONG)	1	2.000	0.500	0.250	0.250
23-10	1130	WEST FACE	VERTICAL CRACK (6FT LONG)	1	6.000	0.500	0.250	0.750
25-5	1080	SOUTH FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (1.5FT X 1FT X 3IN)	1	1.500	1.000	0.250	0.375
25-5	1080	WEST FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (3.5FT X 2FT X 3IN)	1	3.500	2.000	0.250	1.750
25-10	1080	NE CORNER, 2 FT. BELOW CAP	DELAMINATION (5FT X 1.333FT X 2IN)	1	5.000	1.333	0.167	1.111
26-5	1080	WEST FACE AT THE CAP	DELAMINATION (2FT X 4.667FT X 3IN)	1	2.000	4.667	0.250	2.333
26-5	1080	WEST FACE, 1 FT. ABOVE THE FOOTING	DELAMINATION (0.5FT X 3.833FT X 3IN)	1	0.500	3.833	0.250	0.479
26-10	1080	EAST FACE, BELOW CAP	DELAMINATION (2FT X 3FT X 3IN)	1	2.000	3.000	0.250	1.500
26-13	1110	EAST & WEST FACES	CRACK 2FT LONG	1	2.000	0.500	0.250	0.250
26-13	1080	NORTH FACE	DELAMINATION WITH CRACK (3FT X 2FT X 3IN)	1	3.000	2.000	0.250	1.500
29-10	1080	EAST FACE, BELOW CAP	DELAMINATION (2.083FT X 5FT X 3IN)	1	2.083	5.000	0.250	2.604
31-10	1080	EAST FACE, BELOW CAP	DELAMINATION (2.333FT X 0.583FT X 3IN)	1	0.583	2.333	0.250	0.340
31-10	1080	NORTH FACE, BELOW CAP	DELAMINATION (5FT X 3FT X 3IN)	1	5.000	3.000	0.250	3.750
31-10	1130	NORTH FACE	VERTICAL CRACK (3FT LONG)	1	3.000	0.500	0.250	0.375
32-10	1130	NORTH FACE, 1 FT. BELOW CAP	DELAMINATION (3FT X 1FT X 3IN)	1	3.000	0.833	0.250	0.625
32-10	1130	NORTH FACE, BELOW CAP	CRACK (4FT LONG)	1	4.000	0.500	0.250	0.500
34-2	1080	SOUTH FACE	SPALL (2FT X 4IN X 3IN)	1	2.000	0.333	0.250	0.167
36-10	1080	NW CORNER, 1 FT. BELOW CAP	DELAMINATION (2FT X 0.833FT X 3IN)	1	2.000	0.833	0.250	0.417
37-10	1130	SOUTH FACE	VERTICAL CRACK (4FT LONG)	1	4.000	0.500	0.250	0.500
38-5	1130	SW CORNER, AT THE CAP	DELAMINATION (3.75FT X 0.75FT X 3IN)	1	3.750	0.750	0.250	0.703
38-5	1130	WEST FACE, BELOW CAP	CRACK (33IN LONG)	1	2.750	0.500	0.250	0.344

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

BRIDGE NO. 874544

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MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: DEFICIENCIES TO REPAIR (1 OF 4)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-24

PIER CAP	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
3	1080	EAST SIDE AT COLUMN 1	DELAMINATION (2FT X 2FT X 3IN)	1	2.000	2.000	0.250	1.000
3	1080	EAST SIDE BETWEEN GIRDERS 4 & 5	DELAMINATION (2FT X 1FT X 3IN)	1	2.000	1.000	0.250	0.500
3	1080	EAST SIDE AT COLUMN 2	DELAMINATION (3FT X 3FT X 3IN)	1	3.000	3.000	0.250	2.250
4	1080	EAST FACE OVER COLUMN 4-2	7FT. L X 2FT. H DELAMINATION	1	7.000	2.000	0.250	3.500
4	1080	EAST FACE OVER COLUMN 4-1	32IN H X 22IN L X 3IN D SPALL/DELAMINATION	1	2.667	1.833	0.250	1.222
4	1080	WEST FACE OVER COLUMN 4-1	24IN L X 20IN H DELAMINATION	1	2.000	1.667	0.250	0.833
4	1080	NORTH FACE ABOVE PILE 1	SPALL (2FT X 6IN X 3IN)	1	2.000	0.500	0.250	0.250
5	1080	EAST FACE BETWEEN COLUMNS 5-1 & 5-2	THREE DELAMINATIONS UP TO 4FT. L X 2FT. H	3	4.000	2.000	0.250	6.000
5	1080	WEST FACE BETWEEN COLUMNS 5-1 & 5-2	7FT. L X 17IN H DELAMINATION	1	7.000	1.417	0.250	2.479
5	1130	BETWEEN BEAMS 5-5 AND 5-7	CRACKS UP TO 10FT. L X 1/64IN W WITH EFFLORESCENCE	1	10.000	0.500	0.250	1.250
6	1080	WEST FACE, NORTH OF COLUMN 6-1	3FT. L X 1FT. H DELAMINATION	1	3.000	1.000	0.250	0.750
6	1080	WEST FACE BETWEEN COLUMNS 6-1 & 6-2	4FT. L X 3FT. H DELAMINATION	1	4.000	3.000	0.250	3.000
6	1080	EAST FACE, NORTH OF COLUMN 6-1	3FT. L X 2FT. H DELAMINATION	1	3.000	2.000	0.250	1.500
6	1080	NORTH WEST CORNER	SPALL/DELAMINATION 24IN L X 10IN H 1/2IN D	1	2.000	0.833	0.083	0.139
7	1080	WEST FACE, 24IN FROM THE NORTH END	9FT. L X 1FT. H CONCRETE PATCH. (PREVIOUSLY SPALL)	1	9.000	1.000	0.250	2.250
7	1080	EAST FACE BETWEEN COLUMNS 7-1 & 7-2	FOUR DELAMINATIONS UP TO 5FT. L X 42IN H	4	5.000	3.500	0.250	17.500
7	1080	EAST FACE OVER COLUMN 7-1	1FT. L X 1FT. H DELAMINATION	1	1.000	1.000	0.250	0.250
7	1080	SOUTH END, UNDERSIDE	4FT. L X 2FT. W DELAMINATION	1	4.000	2.000	0.250	2.000
8	1080	EAST FACE EXTENDING SOUTH AND NORTH FROM COLUMN 8-2	DELAMINATION 6FT. L X 12IN H	1	6.000	1.000	0.250	1.500
8	1080	EAST FACE EXTENDING SOUTH AND NORTH FROM COLUMN 8-2	DELAMINATION 7FT. L X 3FT. H	1	7.000	3.000	0.250	5.250
9	1080	WEST FACE OVER COLUMNS 9-1 & 9-2	TWO SPALLS/DELAMINATION UP TO 36IN L X 5FT. H X 1IN D	2	3.000	5.000	0.083	2.500
9	1080	EAST FACE EXTENDING NORTH 2FT. FROM COLUMN 9-2	44IN L X 28IN H DELAMINATION	1	3.667	2.333	0.250	2.139
9	1080	EAST FACE EXTENDING SOUTH FROM BEAM 9-6	5FT. L X 30IN H DELAMINATION	1	5.000	2.500	0.250	3.125
10	1080	SOUTH OVERHANG UNDERSIDE	3FT. L X 12IN W DELAMINATION	1	3.000	1.000	0.250	0.750
10	1130	NORTH OVERHANG ABOVE COLUMN 1 (EAST SIDE)	CRACK 5FT LONG	1	5.000	0.500	0.250	0.625
11	1080	EAST FACE OVER COLUMN 11-1	TWO SPALLS/DELAMINATIONS UP TO 3FT. L X 3FT. H X 1-1/2IN D	2	3.000	3.000	0.125	2.250
11	1080	BETWEEN COLUMNS 11-1 & 11-2	2 DELAMINATIONS UP TO 2FT. L X 2FT. H	2	2.000	2.000	0.250	2.000
12	1080	WEST FACE, BETWEEN COLUMNS 12-1 & 12-2	2 DELAMINATIONS UP TO 33IN L X 16IN H	2	2.750	1.333	0.250	1.833
12	1080	WEST FACE, NORTH OVERHANG	30IN L X 20IN H DELAMINATION	1	2.500	1.667	0.250	1.042
12	1080	EAST FACE, BETWEEN COLUMNS 12-1 & 12-2	40IN L X 5IN H DELAMINATION	1	3.333	0.417	0.250	0.347
12	1080	EAST FACE, SOUTH OVERHANG	5FT. L X 2FT. H X 1/2IN D SPALL/DELAMINATION	1	5.000	2.000	0.042	0.417
13	1080	WEST FACE, OVER COLUMN 13-1	4FT. L X 6IN H X 2IN D SPALL/DELAMINATION	1	4.000	0.500	0.167	0.333
13	1080	WEST FACE, EXTENDING NORTH FROM COLUMN 13-2	5FT. L X 16IN H DELAMINATION	1	5.000	1.333	0.167	1.111
13	1080	EAST FACE, OVER COLUMN 13-2	32IN L X 6IN H DELAMINATION	1	2.667	0.500	0.250	0.333
14	1080	BOTTOM FACE, SOUTH OF COLUMN 14-1	6FT. L X 30IN W X 4IN D SPALL WITH 6 REBARS EXPOSED	1	6.000	2.500	0.333	5.000
14	1080	EAST & WEST FACE	4FT. L X 8IN H DELAMINATION	1	4.000	0.667	0.250	0.667
14	1080	EAST FACE, OVER COLUMN 14-2	2FT. L X 1FT. H DELAMINATION	1	2.000	1.000	0.250	0.500
15	1080	WEST FACE, SOUTH HAUNCH	30IN L X 8IN H DELAMINATION	1	2.500	0.667	0.250	0.417
15	1080	EAST FACE, OVER COLUMN 15-1	18IN L X 10IN H DELAMINATION	1	1.500	0.833	0.250	0.312
16	1080	EAST FACE, OVER COLUMN 16-2	52IN L X 7IN H DELAMINATION	1	4.333	0.583	0.250	0.632
17	1080	WEST FACE, OVER COLUMN 17-2	40IN L X 7IN H DELAMINATION	1	3.333	0.583	0.250	0.486
17	1080	EAST FACE, OVER COLUMN 17-1	34IN L X 7IN H DELAMINATION	1	2.833	0.583	0.250	0.413
18	1080	WEST FACE, NORTH HAUNCH	6IN L X 27IN H DELAMINATION	1	2.250	0.500	0.250	0.281
18	1080	SOUTHWEST CORNER	2FT. H X 6IN L DELAMINATION	1	2.000	0.500	0.250	0.250
19	1080	WEST FACE, OVER COLUMN 19-1	48IN L X 10IN H DELAMINATION	1	4.000	0.833	0.250	0.833
19	1080	EAST FACE, OVER COLUMN 19-1	48IN L X 12IN H DELAMINATION	1	4.000	1.000	0.250	1.000

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

1110 - PRESTRESSED CONCRETE CRACKING

1130 - REINFORCED CONCRETE CRACKING

BRIDGE NO. 874544

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: DEFICIENCIES TO REPAIR (2 OF 4)

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

REF. DWG. NO.

SHEET NO. S-25

PIER CAP	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH (FT.)	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
19	1080	EAST FACE, OVER COLUMN 19-2	20IN L X 6IN H DELAMINATION	1	1.667	0.500	0.250	0.208
19	1080	SOUTHEAST CORNER, TOP SECTION	9IN L X 25IN H DELAMINATION	1	2.083	0.750	0.250	0.391
19	1080	ON TOP OF EDGE EXTENDING NORTH & ON BOTTOM EDGE, ABOVE COLUMN 19-2	TWO DELAMINATIONS UP TO 42IN L X 6IN W	2	3.500	0.500	0.250	0.875
20	1080	EAST FACE, NORTH OF COLUMN 20-1	88IN L X 12IN H DELAMINATION	1	7.333	1.000	0.250	1.833
20	1080	EAST FACE, SOUTH OF COLUMN 20-1	24IN L X 7IN H DELAMINATION	1	2.000	0.583	0.250	0.292
20	1080	EAST FACE, OVER COLUMN 20-2	52IN L X 6IN H DELAMINATION	1	4.333	0.500	0.250	0.542
20	1080	SOUTHEAST TOP CORNER	12IN L X 12IN H X 1IN D SPALL/DELAMINATION	1	1.000	1.000	0.083	0.083
22	1080	WEST FACE, OVER COLUMN 22-1	56IN L X 9IN H DELAMINATION	1	4.667	0.750	0.250	0.875
22	1080	WEST FACE, OVER COLUMN 22-1	CRACKING 56IN LONG	1	4.667	0.500	0.250	0.583
22	1080	EAST FACE, OVER COLUMN 22-2	42IN L X 9IN H DELAMINATION	1	3.500	0.750	0.250	0.656
22	1080	SOUTH HAUNCH AREA.	3FT. L X 3IN W CONCRETE PATCH. (PREVIOUSLY SPALL)	1	3.000	0.250	0.250	0.188
23	1080	EAST FACE, OVER COLUMN 23-2	72IN L X 15IN H DELAMINATION	1	6.000	1.250	0.250	1.875
24	1080	WEST AND EAST FACE, OVER COLUMN 24-1	3FT. L X 6IN H DELAMINATION	1	3.000	0.500	0.250	0.375
25	1080	SOUTH SIDE OF THE NORTH HAUNCH.	30IN L X 10IN W CONCRETE PATCH. (PREVIOUSLY SPALL)	1	2.500	0.833	0.250	0.521
25	1080	EAST FACE, OVER COLUMN 25-1	45IN L X 14IN H DELAMINATION	1	3.750	1.167	0.250	1.094
27	1080	WEST FACE, SOUTH OF COLUMN 27-2	24IN L X 12IN H X 1IN D SPALL/DELAMINATION	1	2.000	1.000	0.250	0.500
28	1080	WEST FACE, OVER COLUMN 28-2	38IN L X 12 H X 2IN D SPALL/DELAMINATION	1	3.167	1.000	0.167	0.528
29	1080	WEST FACE, OVER COLUMN 29-2, TOP SECTION	9FT. L X 10IN H DELAMINATION	1	9.000	0.833	0.250	1.875
29	1080	EAST FACE, OVER COLUMN 29-1	27IN L X 12IN H DELAMINATION	1	2.250	1.000	0.250	0.563
29	1080	BOTTOM FACE ADJACENT COLUMNS 29-1	40IN L X 36IN W X 2IN D SPALL/DELAMINATION	1	3.333	3.000	0.167	1.667
29	1080	WEST FACE ABOVE COLUMN 1	DELAMINATION (3FT X 8IN X 3IN)	1	3.000	0.666	0.250	0.500
29	1080	WEST FACE, MIDSPAN	DELAMINATION (2FT X 6IN X 3IN)	1	2.000	0.500	0.250	0.250
30	1080	NORTHWEST AND NORTHEAST CORNER	20IN H X 14IN W DELAMINATION	1	1.667	1.167	0.250	0.486
30	1080	BOTTOM FACE BETWEEN COLUMNS 30-1 ADJACENT TO 30-2	2FT. L X 1FT. W DELAMINATION	1	2.000	1.000	0.250	0.500
30	1080	SOUTHWEST CORNER AND SOUTHEAST CORNER	2FT. H X 2FT. W X 3IN D SPALL WITH EXPOSED REBAR	1	2.000	2.000	0.250	1.000
31	1080	EAST FACE, OVER COLUMN 31-2	42IN L X 5IN H DELAMINATION	1	3.500	0.417	0.250	0.365
31	1080	SOUTH HAUNCH SW CORNER	1FT. H X 1FT. W DELAMINATION	1	1.000	1.000	0.250	0.250
32	1080	EAST FACE, BETWEEN COLUMN 32-1 & 32-2 EXTENDING INTO BOTTOM FACE	40IN L X 20IN H DELAMINATION	1	3.333	1.667	0.250	1.389
32	1080	SOUTHEAST TOP CORNER	7IN H X 16IN W DELAMINATION	1	1.333	0.583	0.250	0.194
32	1080	EAST FACE	SPALL (3FT X 1FT X 3IN)	1	3.000	1.000	0.250	0.750
33	1080	EAST FACE BOTTOM AND TOP SECTION BETWEEN BEAMS 6 AND 7	2 DELAMINATIONS UP TO 31IN L X 15IN H	2	2.583	1.250	0.250	1.615
34	1080	BOTTOM WEST EDGE/FACE, BETWEEN COLUMNS 34-1 & 34-2	SPALL/DELAMINATION 13.5FT. L X 2FT. W X 4IN D WITH EXPOSED REBAR.	1	13.500	2.000	0.333	9.000
34	1080	TOP AND BOTTOM EAST EDGE/FACE AND UNDERSIDE, BETWEEN COLUMNS 34-1	FOUR DELAMINATIONS UP TO 3FT. L X 2FT. W	4	3.000	2.000	0.250	6.000
34	1080	SOUTHWEST TOP CORNER	6IN H X 20IN W DELAMINATION	1	0.500	1.667	0.250	0.208
34	1080	WEST FACE TOP AND BOTTOM, BETWEEN BEAMS 5 AND 6 AND UNDER UTILITY	3 DELAMINATIONS UP TO 54IN L X 8IN H	3	4.500	0.667	0.250	2.250
35	1080	TOP AND BOTTOM EAST EDGE/FACE, BETWEEN COLUMNS 35-1 & 35-2	FOUR DELAMINATIONS UP TO 17FT. L X 1FT. H	4	17.000	1.000	0.250	17.000
35	1080	SOUTH HAUNCH, SE CORNER	2FT. L X 2FT. W DELAMINATION	1	2.000	2.000	0.250	1.000
35	1080	EAST FACE, BETWEEN BEAMS 35-4 & 35-5	4FT. L X 1FT. H DELAMINATION	1	4.000	1.000	0.250	1.000
36	1080	TOP/BOTTOM W EDGE/FACE, UNDERSIDE & SOUTH END BETWEEN COLUMNS 36-1/36-2	FOUR DELAMINATIONS UP TO 38IN L X 21IN H	4	3.167	1.750	0.250	5.542
36	1080	TOP AND BOTTOM EAST EDGE/FACE	THREE DELAMINATIONS UP TO 46IN L X 23IN H	3	3.833	1.917	0.250	5.510
36	1080	SOUTH END	12IN H X 24IN W DELAMINATION	1	1.000	2.000	0.250	0.500
37	1080	WEST FACE, OVER COLUMN 37-1	12IN L X 48IN H DELAMINATION	1	1.000	4.000	0.250	1.000
37	1080	WEST FACE, OVER COLUMN 37-2	24IN L X 36IN H DELAMINATION	1	2.000	3.000	0.250	1.500
37	1080	WEST FACE, NORTH END	16IN L X 24IN H DELAMINATION	1	1.333	2.000	0.250	0.667
37	1080	EAST FACE, BETWEEN COLUMNS 37-1 & 37-2	11IN L X 25IN H DELAMINATION	1	0.917	2.083	0.250	0.477
38	1080	WEST FACE, SOUTH END	28IN L X 16IN H DELAMINATION	1	2.333	1.333	0.250	0.778
38	1080	WEST FACE, OVER COLUMN 38-2	44IN L X 12IN H DELAMINATION	1	3.667	1.000	0.250	0.917
40	1080	NORTH FACE EXTENDING FROM COLUMN 40-2	SPALL AREA WITH EXPOSED STEEL AND CORROSION BLEEDOUT	1	1.000	1.000	0.250	0.250

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

BRIDGE NO. 874544

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: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: DEFICIENCIES TO REPAIR (3 OF 4)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-26

BEAM #	DEFECT #	LOCATION	DEFICIENCY	QTY.	LENGTH	WIDTH (FT.)	DEPTH (FT.)	VOLUME (CF)
1-14	1080	PIER CAP 2	DELAMINATION (8IN X 5IN X 5IN)	1	0.667	0.417	0.417	0.116
1-14	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
2-14	1080	PIER CAP 3	DELAMINATION (8IN X 5IN X 5IN)	1	0.667	0.417	0.417	0.116
2-14	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
4-14	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
4-14	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
5-11	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
5-11	1080	BOTTOM NORTH FLANGE	DELAMINATION (4FT X 10IN X 3IN)	1	4.000	0.833	0.250	0.833
6-11	1080	BENT 6	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 0.50IN)	1	1.000	0.250	0.042	0.010
6-11	1100	PIER CAP 6	DELAMINATION (4FT X 7IN X 3IN)	1	4.000	0.583	0.250	0.583
6-13	1110	NORTH BOTTOM FLANGE, PIER CAP 6	HORIZONTAL CRACK (36IN)	1	3.000	——	——	——
7-11	1080	BENT 7	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 0.50IN)	1	1.000	0.250	0.042	0.010
7-11	1100	PIER CAP 7	DELAMINATION (4FT X 12IN X 3IN)	1	4.000	1.000	0.250	1.000
7-14	1110	SOUTH BOTTOM FLANGE, PIER CAP 8	HORIZONTAL CRACK (24IN)	1	2.000	——	——	——
7-14	1110	SOUTH BOTTOM FLANGE, PIER CAP 8	DIAGONAL CRACK (16IN)	1	1.333	0.500	0.250	0.167
8-11	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
8-11	1080	BOTTOM NORTH FLANGE OVER BENT 8 CAP	DELAMINATION (4FT X 10IN X 3IN)	1	4.000	0.833	0.250	0.833
8-13	1110	NORTH BOTTOM FLANGE, PIER CAP 9	HAIRLINE CRACK (28IN)	1	2.333	——	——	——
8-14	1110	NORTH AND SOUTH FACE OVER BENT 9	DIAGONAL HAIRLINE CRACK (24IN)	2	2.000	——	——	——
9-11	1080	NORTH BOTTOM FLANGE, PIER CAP 9	DELAMINATION (2FT X 3IN X 3IN)	1	2.000	0.250	0.250	0.125
9-11	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
9-13	1090	TOP OF FLANGE AT SLAB	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 0.50IN)	1	1.000	0.250	0.042	0.010
9-14	1110	NORTH AND SOUTH FACE OVER BENT 9	DIAGONAL HAIRLINE CRACK (24IN)	2	2.000	——	——	——
10-11	1100	NORTH BOTTOM FLANGE, PIER CAP 10	DELAMINATION (2FT X 5IN X 3IN)	1	2.000	0.417	0.250	0.208
10-11	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
11-11	1080	NORTH BOTTOM FLANGE, PIER CAP 9	DELAMINATION (2FT X 3IN X 3IN)	1	2.000	0.250	0.250	0.125
14-4	1080	BEAM ENDS	DELAMINATION (6IN X 3IN X 3IN)	1	0.500	0.250	0.250	0.031
16-14	1110	SOUTH BOTTOM FLANGE, PIER CAP 16	VERTICAL CRACK (28IN)	1	2.333	——	——	——
20-13	1080	BEAM ENDS	DELAMINATION (6IN X 3IN X 3IN)	1	0.500	0.250	0.250	0.031
20-13	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
27-12	1110	SOUTH BOTTOM FLANGE, PIER CAP 27	HORIZONTAL HAIRLINE CRACK (36IN)	1	3.000	——	——	——
30-14	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
30-14	1080	END BEAM DIAPHRAGM	DELAMINATION (16IN X 12IN X 0.50IN)	1	1.333	1.000	0.042	0.056
32-12	1100	BOTTOM FLANGE, PIER CAP 33	DELAMINATION (1FT X 6IN X 1IN)	1	1.000	0.500	0.083	0.042
36-14	1080	SOUTH BOTTOM FLANGE, PIER CAP 36	DELAMINATION (8FT X 1FT X 3IN)	1	8.000	1.000	0.250	2.000
39-14	1110	SOUTH BOTTOM FLANGE, PIER CAP 40	VERTICAL CRACK (30IN)	1	2.500	——	——	——
40-1	1100	BOTTOM FLANGE, PIER CAP 40	DELAMINATION/SPALL (2FT X 8IN X 4IN)	1	2.000	0.667	0.333	0.444
40-1	1100	BOTTOM FLANGE, PIER CAP 40	DELAMINATION/SPALL (1FT X 5IN X 3IN)	1	1.000	0.417	0.250	0.104
40-11	1100	NORTH BOTTOM FLANGE, PIER CAP 40	DELAMINATION/SPALL (1FT X 6IN X 4IN)	1	1.000	0.500	0.333	0.167
40-11	1100	SOUTH BOTTOM FLANGE, PIER CAP 40	DELAMINATION/SPALL (6IN X 4IN X 4IN)	1	0.500	0.333	0.333	0.056
40-11	1080	SOUTH BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 3IN)	1	1.000	0.250	0.250	0.063
40-14	1100	BOTTOM FLANGE, PIER CAP 40	DELAMINATION/SPALL (33IN X 17IN X 4IN)	1	2.750	1.417	0.333	1.298
40-14	1080	BEAM END	DELAMINATION/EXPOSED REBAR (12IN X 3IN X 0.50IN)	1	1.000	0.250	0.042	0.010

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

BRIDGE NO. 874544

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REVISIONS

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MIAMI, FLORIDA 33126
TEL. (305) 428-4350

ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

DRAWN BY: BWC
CHECKED BY: HNG
DESIGNED BY: BWC
CHECKED BY: HNG

MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

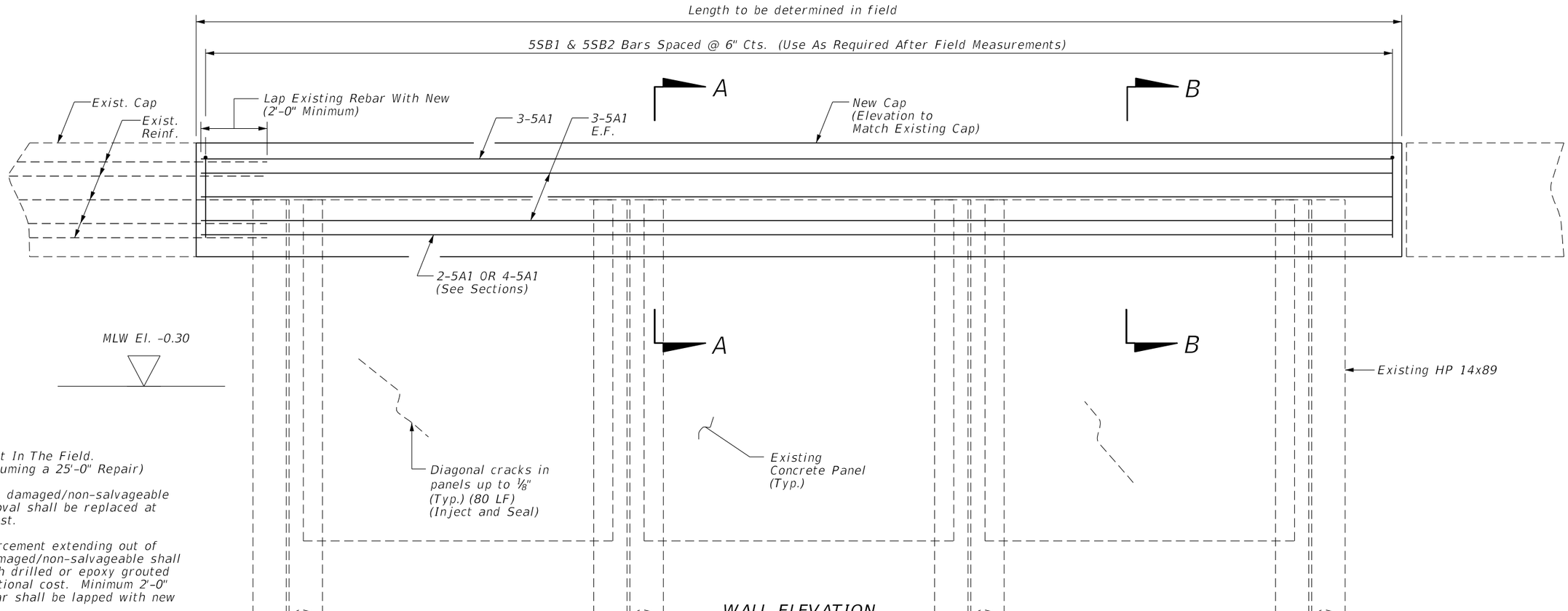
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: DEFICIENCIES TO REPAIR (4 OF 4)

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

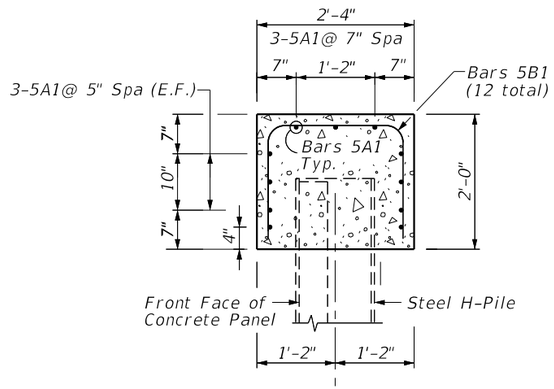
SHEET NO. S-27



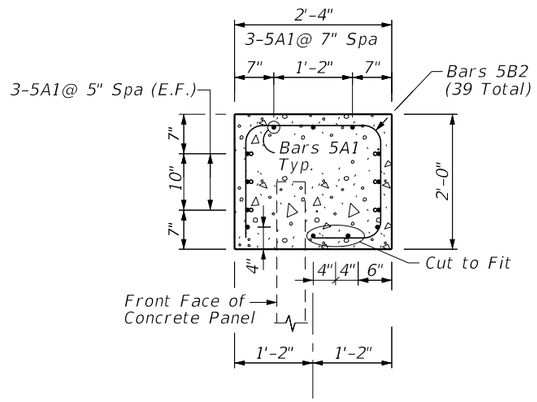
WALL ELEVATION

NOTES:

1. Cut Rebar To Fit In The Field. (Bar Layout Assuming a 25'-0" Repair)
2. Concrete Panels damaged/non-salvageable during cap removal shall be replaced at no additional cost.
3. Existing Reinforcement extending out of existing cap damaged/non-salvageable shall be replaced with drilled or epoxy grouted bars at no additional cost. Minimum 2'-0" of existing rebar shall be lapped with new rebar.
4. Quantities for cracks to be injected and sealed are estimated and will be field marked by the Engineer at time of construction.
5. Existing Bulkhead wall shall be stabilized during construction.
6. Contractor shall monitor the existing bulkhead wall during construction and if deflection of the wall is noted construction operations shall cease and the Engineer of Record shall be notified.



SECTION A-A



SECTION B-B

BRIDGE NO. 874544

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REVISIONS					
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ENGINEER OF RECORD: HOWARD GOTSCHALL P.E. NO. 79639

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MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: BULKHEAD REPAIRS AT ABUTMENT 42 SEAWALL

REF. DWG. NO.

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO. S-28

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LOCATION - BULKHEAD REPAIRS																																
MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	Ø	REMARKS
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG	
NO REQUIRED = 1																																		
5	A1	25	0	13	1			25	0																									
5	B1	5	7	12	11			2	1		1	9		1	9																			
5	B2	6	9	39	5			1	9		2	1		---			1	2																

BRIDGE NO. 874544

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MIAMI-DADE COUNTY
DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 913	MIAMI-DADE	EDP-MT-20210010

SHEET TITLE: REINFORCING BAR LIST

REF. DWG. NO.:

PROJECT NAME: REHABILITATION OF BEAR CUT BRIDGE OVER BISCAYNE BAY/BEAR CUT, RICKENBACKER CAUSEWAY

SHEET NO.: S-29