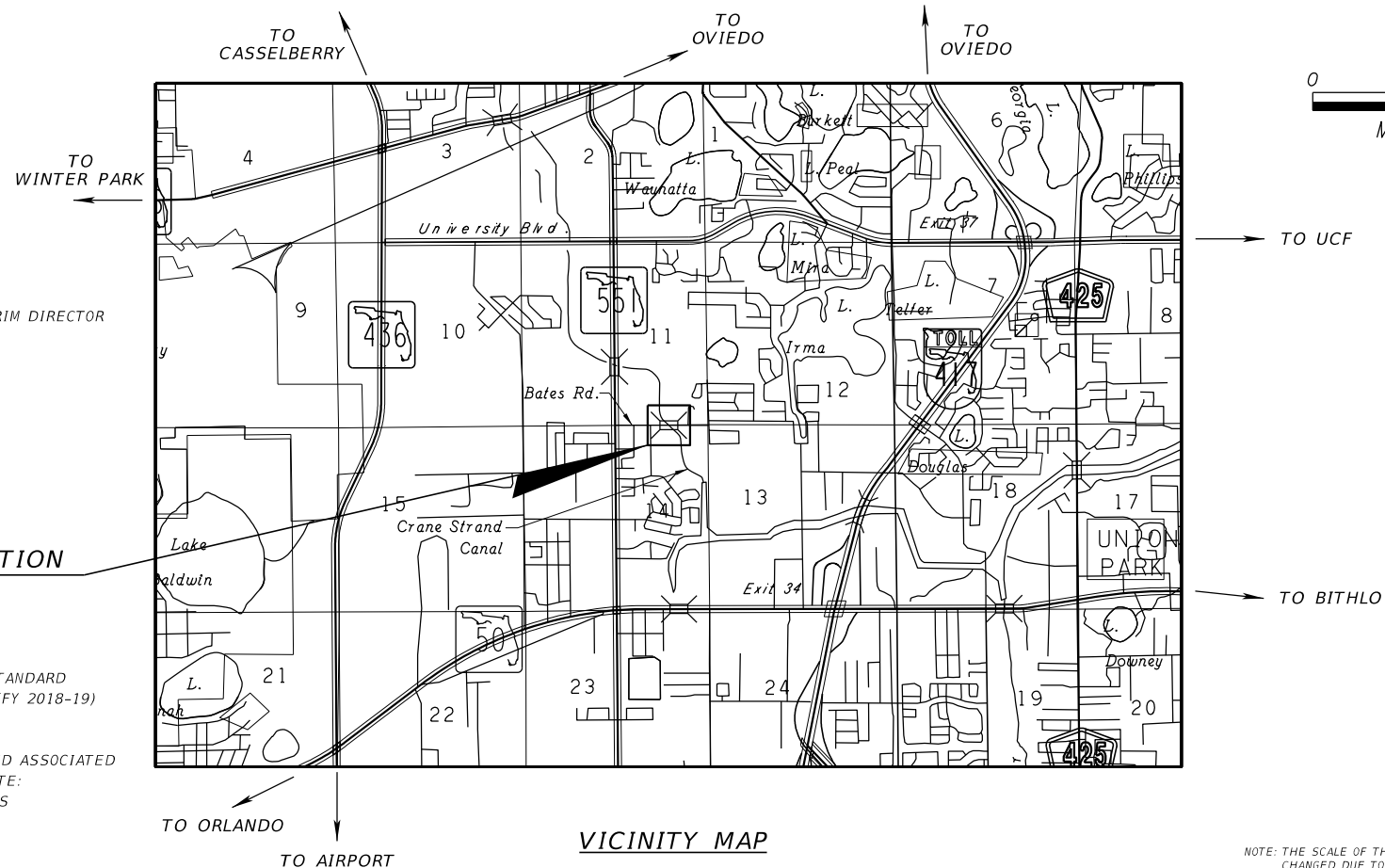


CONSTRUCTION PLANS FOR BATES ROAD OVER CRANE STRAND CANAL ORANGE COUNTY, FLORIDA

BOARD OF COUNTY COMMISSIONERS

- | | |
|--------------------------|-------------------------------|
| BETSY VANDERLEY | DISTRICT 1 |
| CHRISTINE MOORE | DISTRICT 2 |
| MAYRA URIBE | DISTRICT 3 |
| MARIBEL G. CORDERO | DISTRICT 4 |
| EMILY BONILLA | DISTRICT 5 |
| VICTORIA P. SIPLIN | DISTRICT 6 |
| | |
| DIANA M. ALMODOVAR, P.E. | PUBLIC WORKS INTERIM DIRECTOR |
| JERRY L. DEMINGS | COUNTY MAYOR |



PROJECT LOCATION

VICINITY MAP

GOVERNING STANDARDS AND SPECIFICATIONS:

FLORIDA DEPARTMENT OF TRANSPORTATION, STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION (FY 2018-19) AND APPLICABLE INTERIM REVISIONS (IRs).

STANDARD PLANS FOR ROAD CONSTRUCTION AND ASSOCIATED IRs ARE AVAILABLE AT THE FOLLOWING WEBSITE:
[HTTP://WWW.FDOT.GOV/DESIGN/STANDARDPLANS](http://www.fdot.gov/design/standardplans)

APPLICABLE IRs:

FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED JANUARY 2018, AT THE FOLLOWING WEBSITE:
[HTTP://WWW.FDOT.GOV/PROGRAMMANAGEMENT/IMPLEMENTED/SPECBOOKS](http://www.fdot.gov/programmanagement/implemented/specbooks)

LENGTH OF PROJECT		
	LINEAR FT.	MILES
CANAL	-	-
BRIDGES	100	0.019
NET LENGTH OF PROJ.	100	0.019
EXCEPTIONS	-	-
GROSS LENGTH OF PROJ.	100	0.019

**FINAL SUBMITTAL
AUGUST 2019**

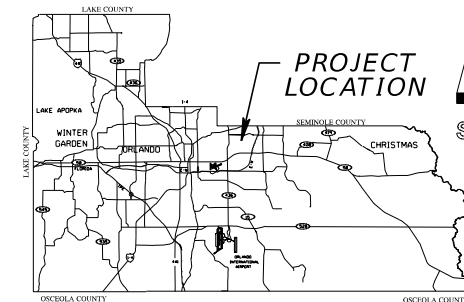
NOTE:

PLANS WERE PREPARED ACCORDING TO AVAILABLE INFORMATION TO ADEQUATELY ADDRESS CONDITIONS AS THEY EXISTED AT THE TIME OF PLANS PREPARATION. NEEDS, CONDITIONS AND OWNERSHIP OF PROPERTIES MAY HAVE CHANGED SINCE PROJECT DESIGN. THE COUNTY'S REPRESENTATIVE WILL ADDRESS CHANGES AND NEEDS WITH THE PROPERTY OWNER OR THEIR REPRESENTATIVES. CONTRACTOR SHALL WORK WITH THE COUNTY'S REPRESENTATIVE IN ADDRESSING AND MEETING NEEDS AND CONDITIONS THAT MAY HAVE CHANGED SINCE PLANS PREPARATION.

CERTIFICATION TO PLANS:

THIS IS TO CERTIFY THAT THE CONSTRUCTION PLANS AND SPECIFICATIONS AS CONTAINED HEREIN WERE DESIGNED TO APPLICABLE STANDARDS AS SET FORTH IN THE "MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS", STATE OF FLORIDA, AS PREPARED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION TALLAHASSEE, FLORIDA. DATED LATEST EDITION.

DATE: _____ ENGINEER: _____ REG. NO. 60074
KEVIN B. FISCHER, P.E.



LOCATION MAP

INDEX OF SHEETS

SHEET	DESCRIPTION
1	KEY SHEET
2	SUMMARY OF PAY ITEMS
3	TEMPORARY TRAFFIC CONTROL DETAILS
B-1	PLAN
B-2	DECK SPALL REPAIR DETAILS
B-3	EAST APPROACH SLAB REPAIR DETAILS
B-4	DOUBLE-TEE BEAM REPAIR DETAILS
B-5	CONCRETE PILE REPAIR DETAILS
B-6	PEDESTRIAN SIDEWALK REPAIR DETAILS (1 OF 2)
B-7	PEDESTRIAN SIDEWALK REPAIR DETAILS (2 OF 2)

UTILITIES ENCOUNTERED

CHARTER COMMUNICATIONS	(407) 532 - 8509
CITY OF WINTER PARK	(407) 599 - 3355
DUKE ENERGY	(407) 905 - 3376
ORANGE COUNTY UTILITIES - WASTE WATER	(407) 254 - 9764
ORANGE COUNTY UTILITIES	(407) 836 - 6869
TECO PEOPLES GAS - ORLANDO	(813) 275 - 3783
CENTURYLINK	(407) 830 - 3359



Kevin B. Fischer Certificate of Authorization No. 7074
FL P.E. No. 60074 3000 Dovera Drive, Suite 200 Oviedo, FL 32765

REVISIONS

NO.	REVISIONS	DATE	BY

DESIGNED BY: TTW DATE: 10-2018
DRAWN BY: NS DATE: 10-2018
CHECKED BY: KBF DATE: 10-2018
APPROVED BY: KBF DATE: 10-2018
PROJECT NO: ORC-18-40

SHEET 1
OF 10


SUMMARY OF PAY ITEMS

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY TOTAL	
			PLANS	FINAL
101-1	MOBILIZATION	LS	1	
102-1	MAINTENANCE OF TRAFFIC	LS	1	
104-11	PREVENTION, CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION	LF	40	
457-1-11	STANDARD INTEGRAL PILE JACKET, NON-STRUCTURAL	LF	40	
504-2	STEEL SIDEWALK FLOOR - REHAB	SF	1.0	
901-1	DOUBLE-TEE BEAM 3-3 REPAIR	SF	1.0	
901-2	DOUBLE-TEE BEAM 3-10 REPAIR	CF	1.0	
901-3	CONCRETE BRIDGE DECK CRACK REPAIR	LF	185	
901-4	CONCRETE BRIDGE DECK SPALL REPAIR	CF	4.0	
901-5	PEDESTRIAN SIDEWALK STRUCTURAL CONNECTION REPAIR	CF	1.0	
901-6	APPROACH SLAB RIDING SURFACE REPAIR	CF	12.7	

PAY ITEM NOTES:

- 102-1 SEE SHEET 3 FOR ADDITIONAL INFORMATION.
- 104-11 INCLUDES THE COST (F&I) FOR TEMPORARY FLOATING TURBIDITY BARRIER. ALL OTHER ITEMS NECESSARY FOR THE PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION, AS WELL AS ALL FLOATING TURBIDITY BARRIER INCIDENTAL ITEMS ARE INCLUSIVE TO THIS PAY ITEM.
- 457-1-11 INCLUDES ALL ITEMS AND WORK ASSOCIATED WITH CONSTRUCTING THE PILE JACKETS INCLUDING BUT NOT LIMITED TO FORMS, EXCAVATION, BACKFILLING, ETC. ALL PILE JACKET INCIDENTAL ITEMS ARE INCLUSIVE TO THIS PAY ITEM. THE EXISTING PILES ARE 12" SQUARE PRECAST CONCRETE PILES.
- 504-2 INCLUDES ALL ITEMS AND WORK ASSOCIATED WITH THE REHAB OF THE STEEL SIDEWALK FLOOR AND REPAIR OF THE SIDEWALK PANEL WELD INCLUDING BUT NOT LIMITED TO WELD MATERIAL AND BACKER BAR. THE WELD SHALL BE IN ACCORDANCE WITH AMERICAN WELDING SOCIETY (AWS) D1.1, STRUCTURAL WELDING CODE, USING E70XX WELD MATERIAL. ALL SIDEWALK PANEL WELD REPAIR INCIDENTAL ITEMS ARE INCLUSIVE TO THIS PAY ITEM.
- 901-1 INCLUDES ALL ITEMS AND WORK ASSOCIATED WITH REPAIR OF BEAM 3-3 INCLUDING BUT NOT LIMITED TO SURFACE PREPARATION AND APPLICATION OF EPOXY COMPOUND AS INDICATED IN PLANS. ALL BEAM 3-3 REPAIR INCIDENTAL ITEMS ARE INCLUSIVE TO THIS PAY ITEM.
- 901-2 INCLUDES ALL ITEMS AND WORK ASSOCIATED WITH REPAIR OF BEAM 3-10 INCLUDING BUT NOT LIMITED TO SURFACE PREPARATION, APPLICATION OF EPOXY BONDING COMPOUND AND PLACEMENT OF BEAM REPAIR CONCRETE AS INDICATED IN PLANS. ALL BEAM 3-10 REPAIR INCIDENTAL ITEMS ARE INCLUSIVE TO THIS PAY ITEM.
- 901-3 INCLUDES ALL ITEMS AND WORK ASSOCIATED WITH CRACK REPAIRS INCLUDING BUT NOT LIMITED TO CUTTING DECK GROOVES, CLEANING DECK SURFACE AND POURING EPOXY RESIN. ALL DECK CRACK REPAIR INCIDENTAL ITEMS ARE INCLUSIVE TO THIS PAY ITEM.
- 901-4 INCLUDES ALL ITEMS AND WORK ASSOCIATED WITH DECK SPALL REPAIR INCLUDING BUT NOT LIMITED TO REMOVAL OF EXISTING DECK CONCRETE AND PREVIOUS SPALL REPAIRS AS NECESSARY, CLEANING DECK SURFACE, EPOXY BONDING COMPOUND, WELDED WIRE REINFORCEMENT, DECK REPAIR CONCRETE AND SURFACE FINISHING. ALL DECK SPALL REPAIR INCIDENTAL ITEMS ARE INCLUSIVE TO THIS PAY ITEM.
- 901-5 INCLUDES ALL ITEMS AND WORK ASSOCIATED WITH REPAIR OF THE PEDESTRIAN SIDEWALK STRUCTURAL CONNECTION TO INTERMEDIATE BENT CAP 2 INCLUDING BUT NOT LIMITED TO CAP SURFACE PREPARATION, HOLE DRILLING AND PLACEMENT OF ADHESIVE BONDING AGENT FOR DOWEL INSTALLATION, CLEANING CAP SURFACE, APPLICATION OF EPOXY BONDING COMPOUND AND PLACING BENT CAP REPAIR CONCRETE. ALL PEDESTRIAN SIDEWALK STRUCTURAL CONNECTION REPAIR INCIDENTAL ITEMS ARE INCLUSIVE TO THIS PAY ITEM.
- 901-6 INCLUDES ALL ITEMS AND WORK ASSOCIATED WITH REPAIR OF THE EAST APPROACH SLAB RIDING SURFACE INCLUDING BUT NOT LIMITED TO GRINDING CONCRETE PAVEMENT AND REMOVAL OF EXISTING ASPHALT OVERLAY REPAIR, CLEANING EXPOSED SLAB SURFACE, EPOXY BONDING COMPOUND, WELDED WIRE REINFORCEMENT, DECK REPAIR CONCRETE, SURFACE FINISHING AND ROADWAY STRIPING. ALSO INCLUDES REPAIR OF BRIDGE DECK AND/OR APPROACH SLAB IF DAMAGED DURING REMOVAL OF EXISTING ASPHALT OVERLAY. ALL APPROACH SLAB RIDING SURFACE REPAIR INCIDENTAL ITEMS ARE INCLUSIVE TO THIS PAY ITEM.

BRIDGE NO. 754003

REVISIONS						ENGINEER OF RECORD		SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	Kevin B. Fischer, PE PE No. 60074 Inwood Consulting Engineers, Inc. 3000 Dovera Drive, Suite 200 Oviedo, Florida 32765 Certificate of Authorization No. 7074		SUMMARY OF PAY ITEMS		
						 ORANGE COUNTY GOVERNMENT FLORIDA	PROJECT NAME:		SHEET NO.	
							BATES ROAD OVER CRANE STRAND CANAL		2	

TRAFFIC CONTROL GENERAL NOTES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A DETAILED AND COMPLETE TRAFFIC CONTROL PLAN (MAINTENANCE OF TRAFFIC PLAN) FOR THE PROJECT. ALL COSTS SHALL BE INCLUDED IN THE BID PRICE FOR PAY ITEM NUMBER 102-1.

1. THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST PUBLISHED EDITION, CHAPTER 6 AND THE FY 2018-19 FDOT STANDARD PLANS.
2. ALL TRAFFIC CONTROL DEVICES (TEMPORARY SIGNS, PAVEMENT MARKINGS, BARRIER WALL, ETC.) REQUIRED DURING A CONSTRUCTION PHASE SHALL BE INSTALLED AND APPROVED BY THE ORANGE COUNTY PROJECT MANAGER PRIOR TO COMMENCEMENT OF CONSTRUCTION AND WILL BE MAINTAINED IN ACCORDANCE WITH INDEX 102-600 OF THE FY 2018-19 FDOT STANDARD PLANS AND JULY 2018 SPECIFICATIONS FOR ROADS AND BRIDGE CONSTRUCTION.
3. ALL EXISTING SIGNS AND PAVEMENT MARKINGS WHICH CONFLICT WITH THE TRAFFIC CONTROL PLAN DURING CONSTRUCTION PHASE SHALL BE REMOVED OR TEMPORARILY RELOCATED AS NECESSARY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE COST OF REMOVING AND/OR REPLACING SIGNS AND PAVEMENT MARKINGS FOR MAINTENANCE OF TRAFFIC SHALL BE INCLUDED IN PAY ITEM 102-1.
4. ALL SIGNS 48"X48" OR LARGER SHALL BE MAINTAINED ON TWO (2) BREAKAWAY SUPPORTS OR YIELDING POSTS AS SHOWN IN FIGURE 6-1 OF THE MUTCD. THE CONTRACTOR SHALL USE THE MUTCD TO DETERMINE THE APPROPRIATE PLACEMENT AND ELEVATION OF CONSTRUCTION SIGNS. REFLECTIVITY SHALL ADHERE TO THE FY 2018-19 FDOT STANDARD PLANS AND JULY 2018 SPECIFICATIONS FOR ROADS AND BRIDGE CONSTRUCTION.
5. IF REQUIRED BY THE COUNTY THE CONTRACTOR WILL PROVIDE OFF DUTY LAW ENFORCEMENT OFFICER(S) TO BE USED FOR TRAFFIC CONTROL FOR MAJOR CHANGES IN TRAFFIC MOVEMENTS (INTERSECTION CHANGES, ETC.) AS DIRECTED BY THE ORANGE COUNTY PROJECT MANAGER. THE COST TO BE INCLUDED IN ITEM 102-1, MAINTENANCE OF TRAFFIC.
6. TRAFFIC CONTROL OFFICERS SHALL BE PROVIDED DURING ALL LANE CLOSURES, MINIMUM ONE OFFICER PER CLOSED LANE. COST TO BE INCLUDED IN PRICE BID FOR 102-1, MAINTENANCE OF TRAFFIC.
7. VEHICULAR ACCESS TO RESIDENCES AND BUSINESSES SHALL BE MAINTAINED AT ALL TIMES.
8. PORTABLE-CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PROVIDED DURING, AND PLACED TEN (10) DAYS IN ADVANCE OF ALL LANE CLOSURES. TWO PCMS MINIMUM, SHALL BE PROVIDED FOR EACH LANE CLOSURE. COST TO BE INCLUDED IN PRICE BID FOR PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.
9. WORK HOURS ARE FROM 7:00 AM TO 6:00 PM MONDAY TO FRIDAY, WORK WILL NOT BE ALLOWED ON WEEKENDS OR HOLIDAYS OBSERVED BY ORANGE COUNTY UNLESS AUTHORIZED BY THE COUNTY.

10. ALL OPERATIONS REQUIRING LANE CLOSURES SHALL BE SUBMITTED TO THE ORANGE COUNTY TRAFFIC ENGINEERING DIVISION.
11. LANE CLOSURES ARE TO BE BETWEEN 9:00 AM AND 4:00 PM ONLY. LANE SHALL ONLY BE CLOSED DURING WORK PERIODS OR AS OTHERWISE DIRECTED BY THE COUNTY.
12. TRAFFIC CONDITIONS, ACCIDENTS, AND/OR OTHER UNFORESEEN EMERGENCY CONDITIONS MAY REQUIRE THE ORANGE COUNTY PROJECT MANAGER TO MODIFY CHANNELIZATIONS. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS AS DIRECTED BY THE PROJECT MANAGER WITHOUT DELAY.
13. ALL TEMPORARY MARKINGS SHALL BE IN PLACE ONE HOUR BEFORE SUNSET.
14. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS THROUGH THE PROJECT LIMITS AT ALL TIMES.
15. THE EXISTING POSTED SPEED OF 30 MPH WILL BE MAINTAINED DURING CONSTRUCTION.
16. ORANGE COUNTY IS ADMINISTERING THE CONSTRUCTION OF THIS PROJECT. IT IS THE COUNTY'S POLICY TO PLACE THE RESPONSIBILITY FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION ON THE CONTRACTOR. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN SIGNED AND SEALED BY A STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER TO THE COUNTY PRIOR TO BEGINNING THE PROJECT.
17. THIS TRAFFIC CONTROL DATA SHEET IS INTENDED ONLY TO DEMONSTRATE THAT THE PROJECT IS CONSTRUCTABLE AS DESIGNED.

SIDEWALK REPAIR PHASE

THE INTENT OF THIS PHASE IS TO COMPLETE THE SIDEWALK REPAIRS

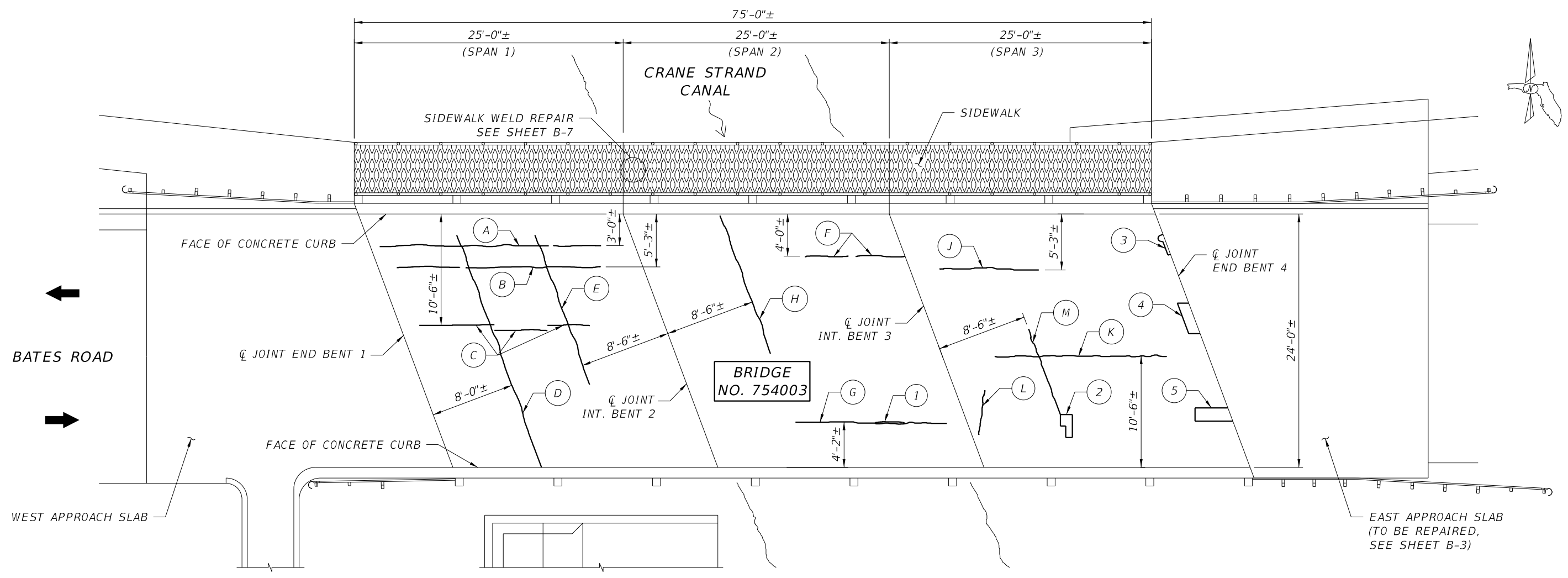
1. USE INDEX 102-603 TO CLOSE THE WESTBOUND LANE OF BATES ROAD.
2. USE INDEX 102-660 FOR THE SIDEWALK DIVERSION INTO THE WESTBOUND LANE OF BATES ROAD.
3. REPAIR SIDEWALK.

BRIDGE REPAIR PHASE

THE INTENT OF THIS PHASE IS TO COMPLETE THE BRIDGE REPAIRS

1. USE INDEX 102-603 TO CLOSE A LANE ON BATES ROAD.
2. REPAIR THE OTHER SIDE OF THE BRIDGE.
3. USE INDEX 102-603 TO CLOSE THE OTHER LANE ON BATES ROAD.
4. COMPLETE THE BRIDGE REPAIRS.

REVISIONS			BATES ROAD OVER CRANE STRAND CANAL	 ORANGE COUNTY GOVERNMENT FLORIDA	ENGINEER OF RECORD Catherine L. Spiess, PE PE No. 62501 Inwood Consulting Engineers, Inc. 3000 Dovera Drive, Suite 200 Oviedo, Florida 32765 Certificate of Authorization No. 7074	TEMPORARY TRAFFIC CONTROL DETAILS	SHEET NO.
DATE	BY	DESCRIPTION					3



PLAN

DECK CRACK REPAIR PROCEDURE:

1. MATERIALS:
 DECK CRACK REPAIR TYPE E LOW VISCOSITY EPOXY RESIN PER THE FDOT APPROVED PRODUCT LIST (APL) MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 926-4.
2. COMPLETE THE ENTIRE SERIES OF DECK CRACK REPAIR STEPS IN THE ORDER SHOWN BELOW AND IN ACCORDANCE WITH THE LANE CLOSURE RESTRICTIONS INDICATED ON SHEET 3. THE DECK CRACK REPAIR MATERIAL MUST ACHIEVE INITIAL SET IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS PRIOR TO REOPENING A CLOSED TRAVEL LANE.
3. THE PROCEDURE BELOW WILL BE USED TO REPAIR CRACKS IN THE BRIDGE DECK. FOR LOCATIONS AND APPROXIMATE LENGTH SEE PLAN AND SUMMARY OF DECK CRACKS ON THIS SHEET.
4. USE A CONCRETE ROUTER TO CUT A GROOVE ALONG THE CRACK APPROXIMATELY 1/4" WIDE X 1/4" DEEP. COMPLETED GROOVE MUST BE DRY AND THOROUGHLY CLEANED OF ALL LOOSE MATERIAL. USE HIGH PRESSURE, OIL FREE COMPRESSED AIR TO ENSURE THE GROOVE IS FREE OF ANY CONTAMINANTS, INCLUDING LAITANCE, OIL, DUST, DEBRIS, OR OTHER FOREIGN PARTICLES.
5. POUR EPOXY RESIN INTO PREPARED GROOVE NEATLY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTINUE PLACEMENT UNTIL GROOVE IS COMPLETELY FILLED. MAKE SURE EPOXY IS NOT OVERFILLED OR SPILLED ONTO THE DECK.

SUMMARY OF DECK CRACKS			
CRACK	SPAN	SIDE	LENGTH
A	1	NORTH	22'-0"
B	1	NORTH	20'-0"
C	1	NORTH	16'-0"
D	1	TRANSVERSE	23'-6"
E	1	TRANSVERSE	15'-0"
F	2	NORTH	9'-0"
G	2	SOUTH	13'-0"
H	2	TRANSVERSE	14'-0"
J	3	NORTH	10'-0"
K	3	SOUTH	17'-0"
L	3	TRANSVERSE	4'-6"
M	3	TRANSVERSE	8'-6"

NOTES:

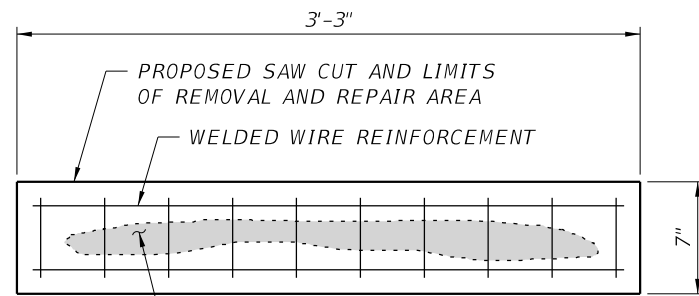
1. FOR DECK SPALL REPAIR PROCEDURE, SEE SHEET B-2.
2. CRACKS E, H AND M ARE EACH A CONTINUATION OF A PREVIOUSLY REPAIRED CRACK.

LEGEND:

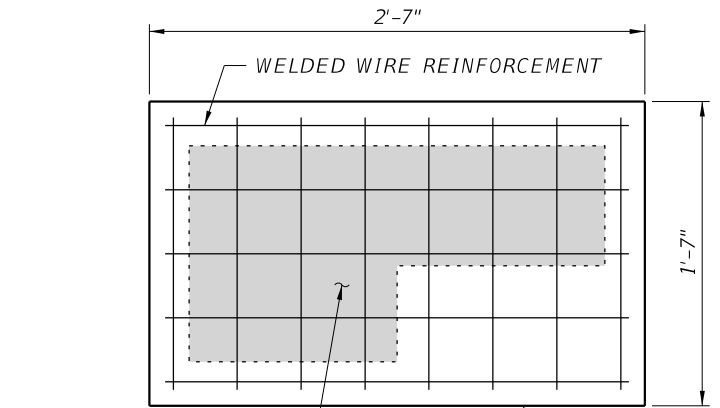
- (A) DECK CRACK
- (#) DECK SPALL

BRIDGE NO. 754003

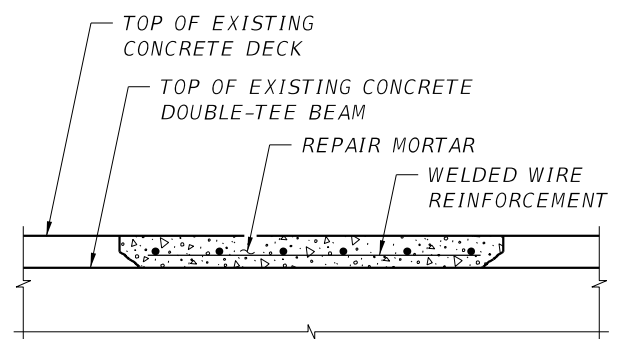
REVISIONS						ENGINEER OF RECORD		SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	Kevin B. Fischer, PE PE No. 60074 Inwood Consulting Engineers, Inc. 3000 Dovera Drive, Suite 200 Oviedo, Florida 32765 Certificate of Authorization No. 7074		PLAN		
								PROJECT NAME:		SHEET NO.
								BATES ROAD OVER CRANE STRAND CANAL		B-1



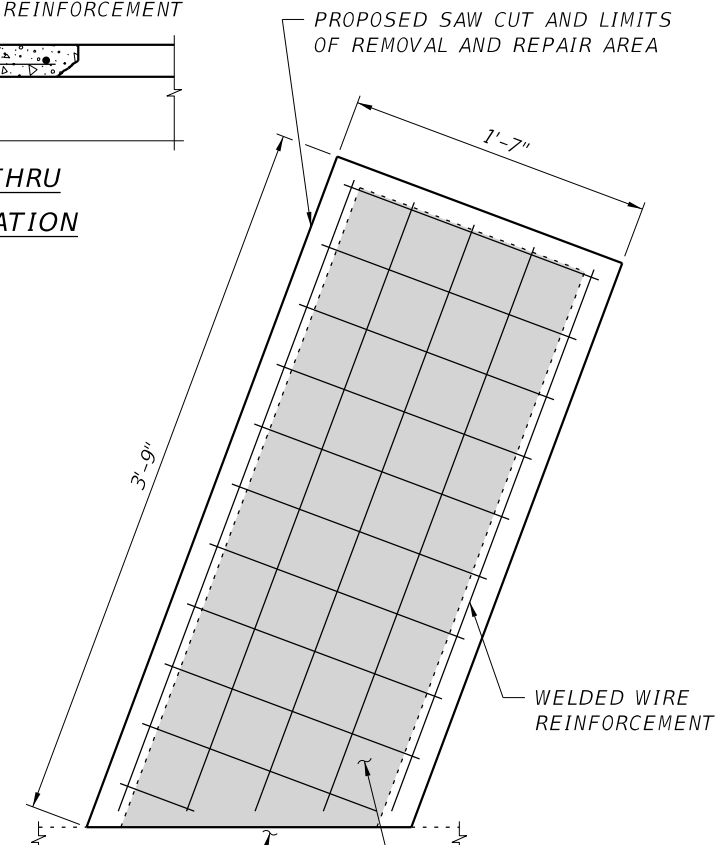
EXISTING SPALL/REPAIR
PLAN - SPALL NO. 1



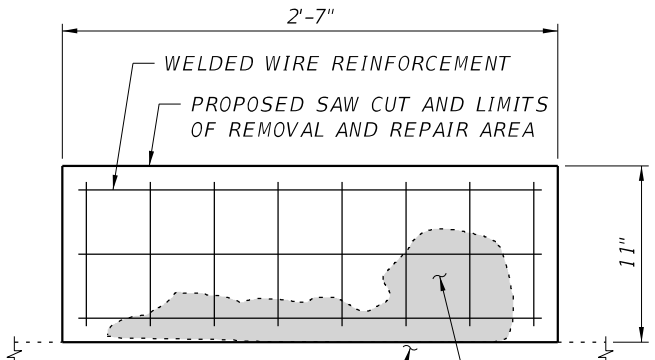
EXISTING SPALL/REPAIR
PLAN - SPALL NO. 2



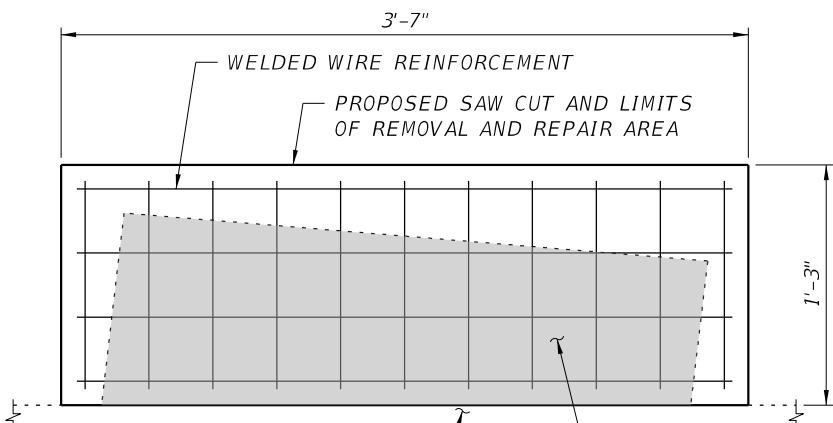
TYPICAL SECTION THRU COMPLETED REMEDIATION



EXISTING JOINT BETWEEN END BENT AND EAST APPROACH SLAB
PLAN - SPALL NO. 5



EXISTING JOINT BETWEEN END BENT AND EAST APPROACH SLAB
PLAN - SPALL NO. 3



EXISTING JOINT BETWEEN END BENT AND EAST APPROACH SLAB
PLAN - SPALL NO. 4

DECK SPALL REPAIR PROCEDURE:

- MATERIALS:**

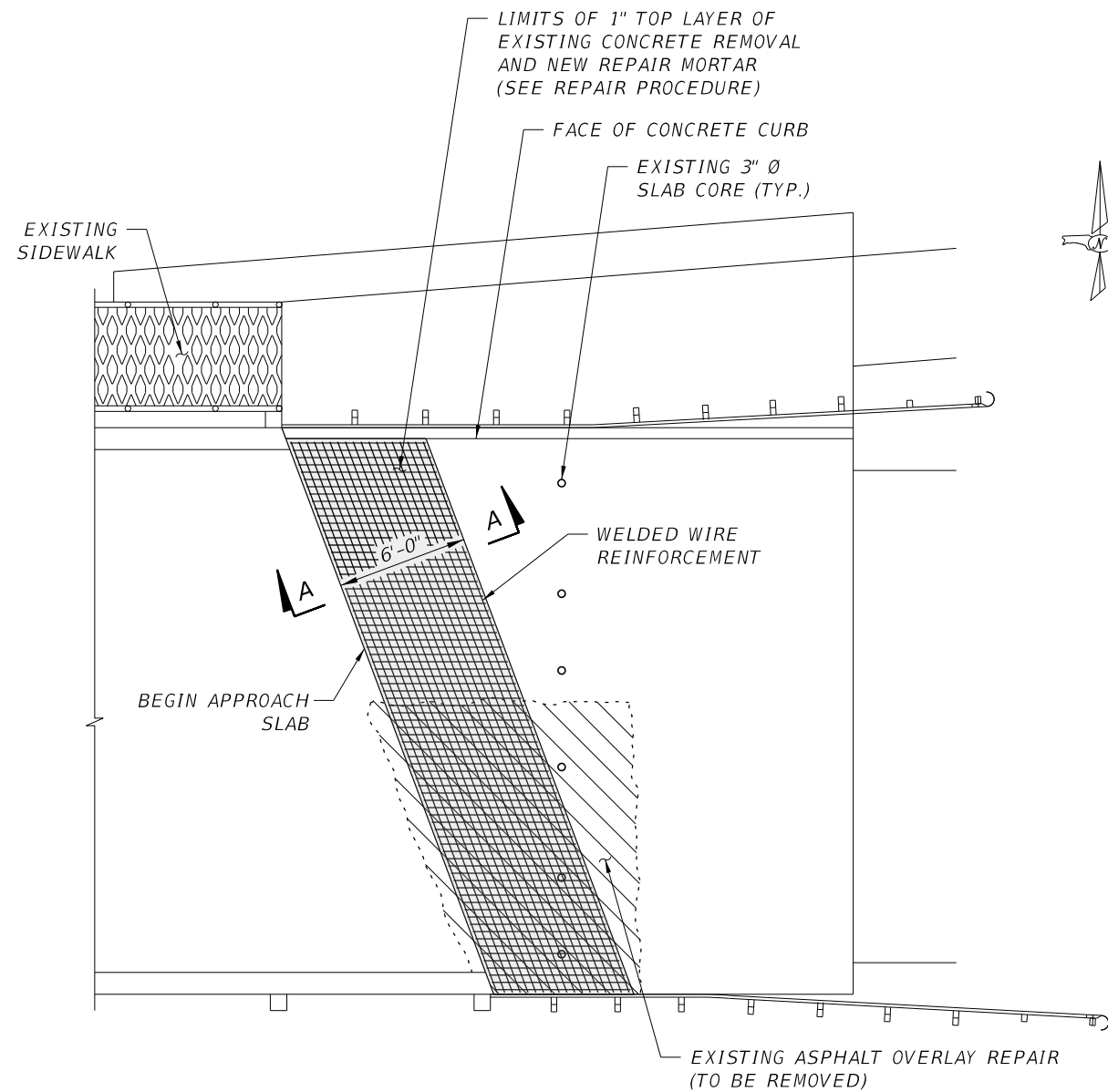
 - DECK REPAIR CONCRETE: RAPID HARDENING CONCRETE BASED REPAIR MORTAR FOR HORIZONTAL SURFACES PER THE FDOT APPROVED PRODUCT LIST (APL) MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 930-4.
 - EPOXY BONDING COMPOUND: TYPE A OR AB PER THE FDOT APL MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 926-3.
 - WELDED WIRE REINFORCEMENT: ASTM A1064, GRADE 75 MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 931.
- COMPLETE THE ENTIRE SERIES OF DECK SPALL REPAIR STEPS IN THE ORDER SHOWN BELOW AND IN ACCORDANCE WITH THE LANE CLOSURE RESTRICTIONS INDICATED ON SHEET 3. ALL MATERIALS USED MUST ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI LOADING PRIOR TO REOPENING A CLOSED TRAVEL LANE.

- THIS PROCEDURE WILL BE USED TO REPLACE AND RESTORE PREVIOUSLY REPAIRED SPALLS IN THE BRIDGE DECK. FOR LOCATIONS SEE SHEET B-1.
- CENTER THE PROPOSED REMOVAL AND REPAIR AREA ON THE EXISTING SPALL/REPAIR. REMOVE CONCRETE A MINIMUM OF 1" BEYOND PERIMETER OF EXISTING SPALL/REPAIR. SAWCUT THE PERIMETER OF THE REMOVAL AREA APPROXIMATELY 1" DEEP AND COMPLETELY REMOVE EXISTING CONCRETE AND OLD REPAIR MATERIAL TO THE TOP OF THE EXISTING DOUBLE-TEE BEAM. CARE SHALL BE TAKEN NOT TO DAMAGE THE TOP OF THE EXISTING DOUBLE-TEE BEAM.
- REMOVE ALL LOOSE MATERIAL AND THOROUGHLY CLEAN ALL EXPOSED AREAS OF CONCRETE. PLACE 4 X 4-W4 X W4 WELDED WIRE REINFORCEMENT INTO REPAIR AREA. PLACE REINFORCEMENT SUCH THAT 1" COVER WILL BE PROVIDED FROM THE FINISHED TOP SURFACE OF THE REPAIR AREA USING REINFORCING SUPPORT CHAIRS IF NECESSARY. CUT PERIMETER OF REINFORCEMENT IN ORDER TO MAINTAIN 1/2" CLEARANCE FROM VERTICAL FACE OF SAWCUT/REPAIR AREA. CUT AND SPLICE WELDED WIRE REINFORCEMENT (6" MIN. LAP) AS REQUIRED TO ACCOMMODATE REPAIR AREA.

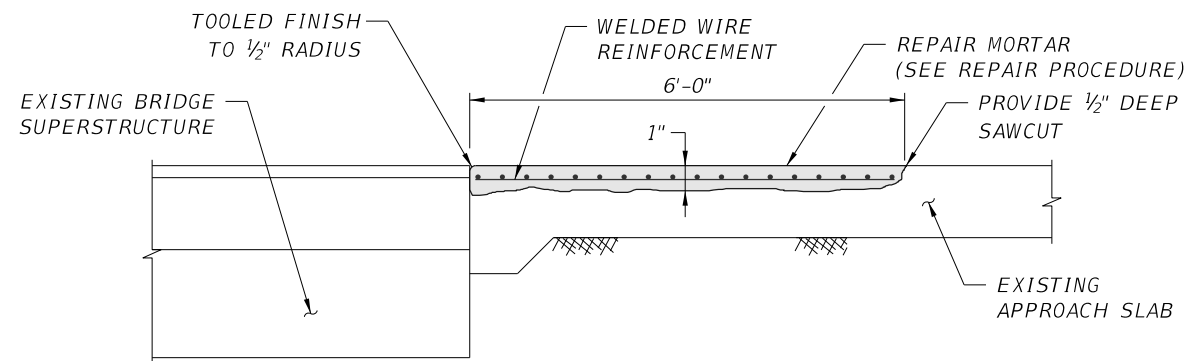
- APPLY THE EPOXY BONDING COMPOUND TO EXPOSED AREA OF CONCRETE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PLACE THE RAPID HARDENING MORTAR AND SCREED TO MATCH EXISTING DECK ELEVATIONS WHILE THE BONDING AGENT IS STILL TACKY. AFTER SCREEDING IS COMPLETED AND WHILE MORTAR IS STILL PLASTIC, THE SURFACE SHALL BE CHECKED FOR CONFORMITY WITH A STRAIGHT EDGE SPANNING ACROSS THE REPAIRED AREA. AN UNEVENNESS OF MORE THAN 1/8" BETWEEN THE SURFACE AND THE STRAIGHT EDGE SHALL BE CORRECTED IMMEDIATELY. BEFORE MORTAR ATTAINS ITS INITIAL SET THE SURFACE SHALL BE FINISHED TO A UNIFORM TEXTURE USING A FINE BRISTLE BROOM. THE COMPLETED FINISH SHALL BE A SURFACE WITH A SANDY TEXTURE FREE OF BLEMISHES, GROOVES, MARKS OR SCRATCHES HAVING A DEPTH GREATER THAN 1/16".

BRIDGE NO. 754003

REVISIONS						ENGINEER OF RECORD		SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	Kevin B. Fischer, PE PE No. 60074 Inwood Consulting Engineers, Inc. 3000 Dovera Drive, Suite 200 Oviedo, Florida 32765 Certificate of Authorization No. 7074		DECK SPALL REPAIR DETAILS		
								PROJECT NAME:		SHEET NO.
								BATES ROAD OVER CRANE STRAND CANAL		B-2



PLAN



SECTION A-A

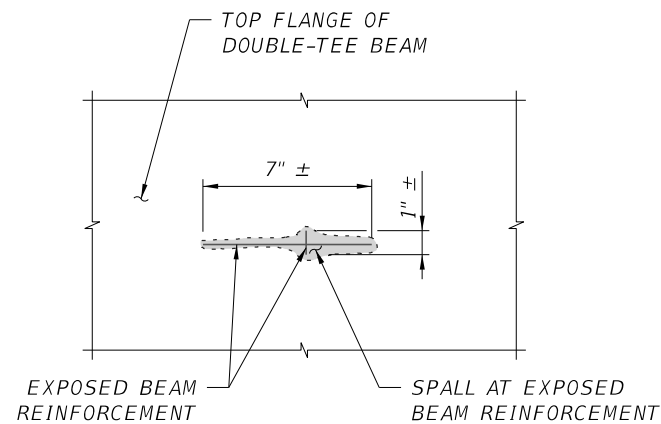
EAST APPROACH SLAB REPAIR PROCEDURE:

1. MATERIALS:

SLAB REPAIR CONCRETE	RAPID HARDENING CONCRETE BASED REPAIR MORTAR FOR HORIZONTAL SURFACES PER THE FDOT APPROVED PRODUCT LIST (APL) MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 930-4.
EPOXY BONDING COMPOUND	TYPE A OR AB PER THE FDOT APL MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 926-3.
WELDED WIRE REINFORCEMENT	ASTM A1064, GRADE 75 MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 931.
2. COMPLETE THE APPROACH SLAB REPAIR STEPS IN THE ORDER SHOWN AND IN ACCORDANCE WITH THE LANE CLOSURE RESTRICTIONS INDICATED ON SHEET 3. ALL MATERIALS USED MUST ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI LOADING PRIOR TO REOPENING A CLOSED TRAVEL LANE.
3. REMOVE EXISTING ASPHALT OVERLAY AND THE TOP 1" OF THE EXISTING APPROACH SLAB CONCRETE WITHIN THE LIMITS SHOWN. SAWCUT CONCRETE APPROXIMATELY 1/2" DEEP ALONG EDGE OF REPAIR AREA TO FACILITATE REMOVAL. THE REMAINING DEPTH SHALL BE REMOVED BY GRINDING. CARE SHALL BE TAKEN NOT TO DAMAGE THE APPROACH SLAB REINFORCING.
4. COMPLETELY REMOVE ALL LOOSE MATERIAL AND THOROUGHLY CLEAN ALL EXPOSED AREAS OF CONCRETE WITHIN THE LIMITS OF THE EXISTING APPROACH SLAB CONCRETE REMOVED IN STEP 3.
5. PLACE 4 X 4-W4 X W4 WELDED WIRE REINFORCEMENT INTO REMOVAL AREA. PLACE REINFORCEMENT AT BOTTOM OF REMOVAL AREA SUCH THAT APPROXIMATELY 1" COVER WILL BE PROVIDED FROM THE FINISHED TOP SURFACE OF THE REPAIR AREA. CUT PERIMETER OF REINFORCEMENT IN ORDER TO MAINTAIN 1/2" CLEARANCE FROM VERTICAL FACE OF SAWCUT/REPAIR AREA. CUT AND SPLICE WELDED WIRE REINFORCEMENT (6" MIN. LAP) AS REQUIRED TO ACCOMMODATE REPAIR AREA.
6. APPLY THE EPOXY BONDING COMPOUND TO EXPOSED AREA OF CONCRETE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PLACE THE RAPID HARDENING MORTAR AND FINISH LEVEL WITH BRIDGE RIDING SURFACE ON WEST SIDE AND APPROACH SLAB RIDING SURFACE ON EAST SIDE WHILE THE BONDING AGENT IS STILL TACKY. AFTER SCREEDING IS COMPLETED AND WHILE MORTAR IS STILL PLASTIC, THE SURFACE SHALL BE CHECKED FOR CONFORMITY WITH A STRAIGHT EDGE SPANNING ACROSS THE REPAIRED AREA. AN UNEVENNESS OF MORE THAN 1/8" BETWEEN THE SURFACE AND THE STRAIGHT EDGE SHALL BE CORRECTED IMMEDIATELY. BEFORE MORTAR ATTAINS ITS INITIAL SET THE SURFACE SHALL BE FINISHED TO A UNIFORM TEXTURE USING A FINE BRISTLE BROOM. THE COMPLETED FINISH SHALL BE A SURFACE WITH A SANDY TEXTURE FREE OF BLEMISHES, GROOVES, MARKS OR SCRATCHES HAVING A DEPTH GREATER THAN 1/16". FINISH NEW OVERLAY LEVEL WITH BRIDGE RIDING SURFACE ON WEST SIDE AND APPROACH SLAB RIDING SURFACE ON EAST SIDE.
7. REPLACE ROADWAY STRIPING WHERE MISSING.

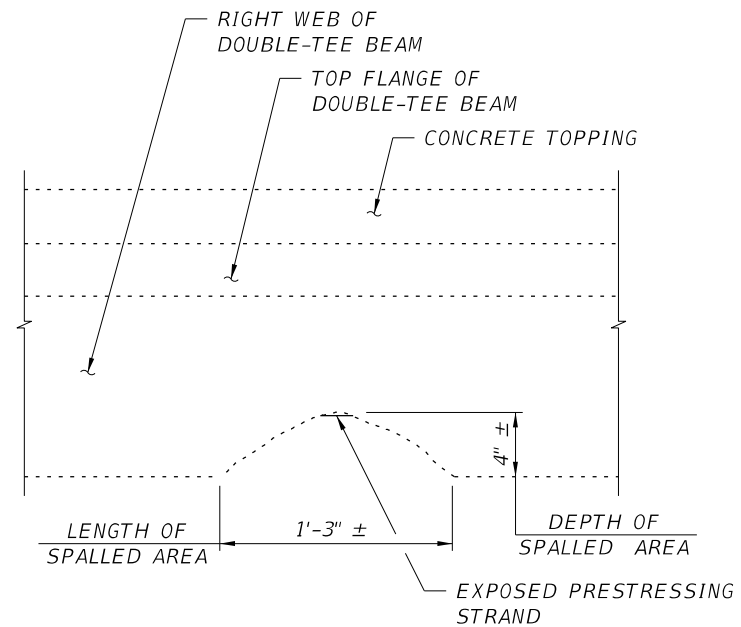
BRIDGE NO. 754003

REVISIONS						ENGINEER OF RECORD		SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	Kevin B. Fischer, PE PE No. 60074 Inwood Consulting Engineers, Inc. 3000 Dovera Drive, Suite 200 Oviedo, Florida 32765 Certificate of Authorization No. 7074		EAST APPROACH SLAB REPAIR DETAILS		
								PROJECT NAME:		SHEET NO.
						ORANGE COUNTY GOVERNMENT FLORIDA		BATES ROAD OVER CRANE STRAND CANAL		B-3



**PLAN VIEW OF EXPOSED TOP FLANGE
REINFORCEMENT AT MID-SPAN OF BEAM 3-3**

(VIEW FROM BELOW)



**ELEVATION OF MID-SPAN SPALL
IN RIGHT WEB OF BEAM 3-10**

BEAM 3-3 EXPOSED REINFORCEMENT REPAIR PROCEDURE:

1. MATERIALS:
EPOXY COMPOUND TYPE F-1 PER THE FDOT APPROVED PRODUCT LIST (APL) MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 926-5.
2. WIRE BRUSH EXPOSED REINFORCEMENT TO REMOVE SURFACE CORROSION. USE OIL AND WATER FREE COMPRESSED AIR ON THE EXPOSED SURFACES OF DAMAGED CONCRETE AND THE EXPOSED REINFORCEMENT TO REMOVE ANY DUST OR DEBRIS UNTIL THE CONCRETE AND REINFORCEMENT ARE CLEAN AND DRY.
3. THOROUGHLY APPLY EPOXY COMPOUND TO THE EXPOSED SURFACES OF THE DAMAGED CONCRETE AND THE EXPOSED REINFORCEMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

BEAM 3-10 SPALL REPAIR PROCEDURE:


1. MATERIALS:
EPOXY BONDING COMPOUND TYPE A OR AB PER THE FDOT APPROVED PRODUCT LIST (APL) MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 926-3.

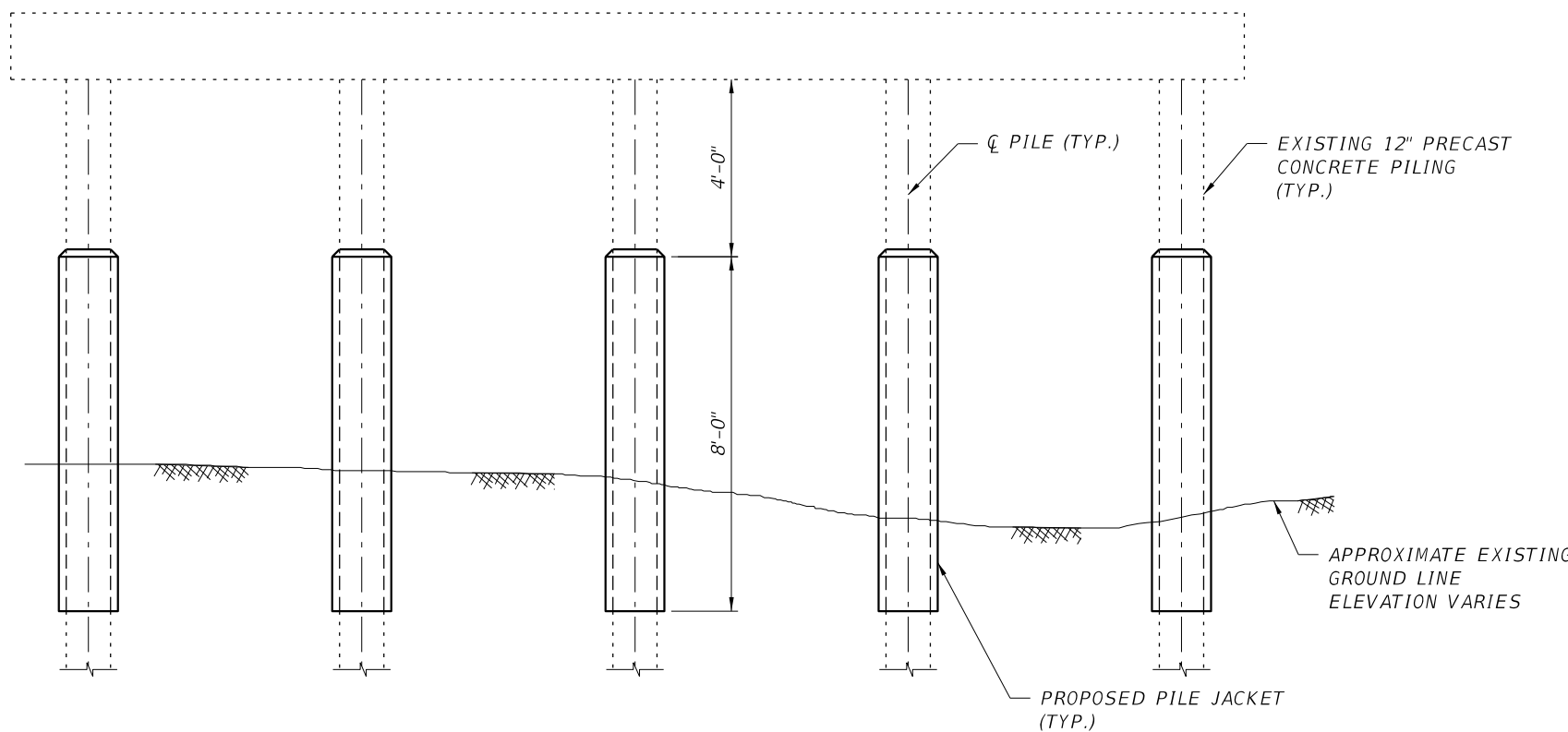
BEAM REPAIR CONCRETE ULTRA-HIGH PERFORMANCE CONCRETE BASED REPAIR MORTAR FOR PREDOMINATELY VERTICAL SURFACES PER THE FDOT APL MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 930-5.
2. USE A WIRE WHEEL ON ALL EXPOSED SPALL SURFACES TO REMOVE ANY LOOSE OR UNSOUND CONCRETE. CARE SHALL BE TAKEN NOT TO DAMAGE ANY OF THE BEAM PRESTRESSING OR REINFORCING.
3. USE OIL AND WATER FREE COMPRESSED AIR ON THE EXPOSED SPALLED CONCRETE SURFACES AND EXPOSED PRESTRESSING STRAND TO REMOVE ANY REMAINING DUST OR DEBRIS UNTIL THE CONCRETE AND STRAND ARE CLEAN AND DRY.
4. THOROUGHLY APPLY EPOXY BONDING COMPOUND TO THE EXPOSED SURFACES OF THE SPALLED CONCRETE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
5. REFORM THE SPALLED PORTION OF THE DAMAGED BEAM TO THE ORIGINAL DIMENSIONS OF THE BEAM WEB USING THE BEAM REPAIR CONCRETE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS (INCLUDING MINIMUM TIME BEFORE FORM REMOVAL) WHILE THE EPOXY BONDING COMPOUND IS STILL TACKY.

BEAM NOTE:

DOUBLE-TEE BEAMS ARE NUMBERED FROM 1 TO 10 STARTING FROM THE LEFT (NORTH) COPING.

BRIDGE NO. 754003

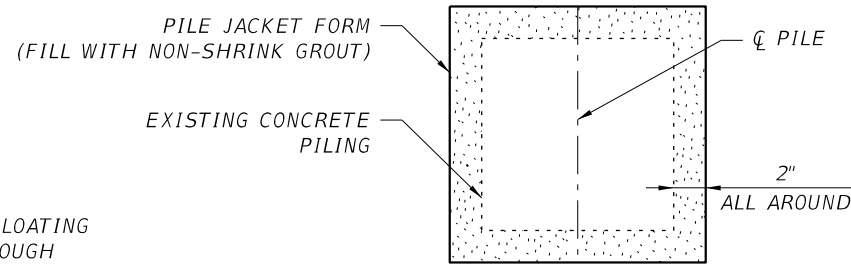
REVISIONS						ENGINEER OF RECORD		SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	Kevin B. Fischer, PE PE No. 60074 Inwood Consulting Engineers, Inc. 3000 Dovera Drive, Suite 200 Oviedo, Florida 32765 Certificate of Authorization No. 7074		DOUBLE-TEE BEAM REPAIR DETAILS		
						 ORANGE COUNTY GOVERNMENT FLORIDA		PROJECT NAME:		SHEET NO.
								BATES ROAD OVER CRANE STRAND CANAL		B-4



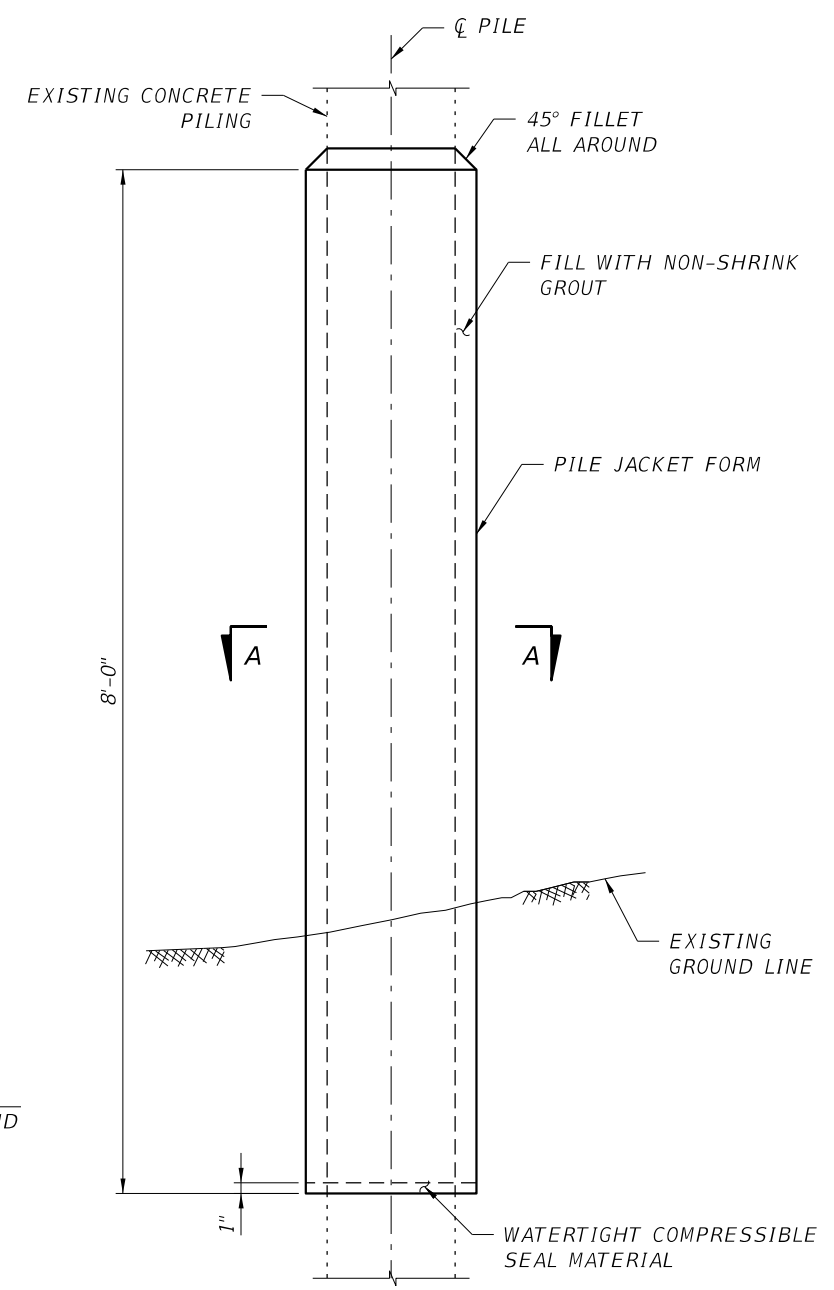
INTERMEDIATE BENT 2

PRESTRESSED CONCRETE PILE REPAIR PROCEDURE:

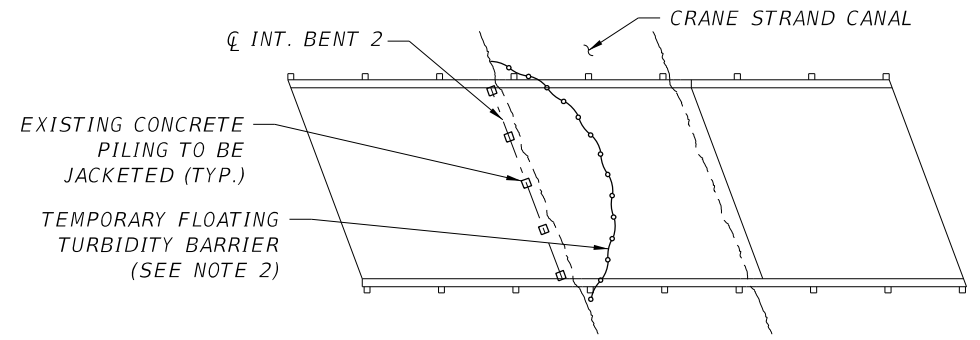
1. MATERIALS:
 PILE PROTECTION CONCRETE NON-SHRINK CEMENTITIOUS GROUT PER THE FDOT APPROVED PRODUCT LIST (APL) AND MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 934.
2. PILE JACKETS TO BE PLACED AT INTERMEDIATE BENT 2 (WEST BENT) ONLY. INSTALL TEMPORARY FLOATING TURBIDITY BARRIER PRIOR TO BEGINNING WORK FOR PILE JACKET INSTALLATION. REMOVE ONLY ENOUGH SURROUNDING SOIL NECESSARY AT EACH PILE TO ACCOMMODATE THE PILE JACKET INSTALLATION.
3. REMOVE ALL LOOSE MATERIAL AND UNSOUND CONCRETE FROM THE PILES WITHIN THE LIMITS OF THE PILE JACKETS. THOROUGHLY CLEAN ALL SURFACES OF THE EXISTING CONCRETE PILES WITHIN THE LIMITS OF THE PILE JACKETS TO ENSURE THAT THE SURFACES FREE OF DUST, LOOSE PARTICLES AND OTHER DEBRIS PRIOR TO PLACING THE JACKETS.
4. PLACE PILE JACKET FORMS AROUND PILES. IF PERMANENT FORMS ARE USED THEY SHALL BE COMPOSED OF INERT MATERIALS (NON-RUSTING AND NON-DECAYING). SUBMIT THE FORMING SYSTEM TO ORANGE COUNTY PUBLIC WORKS FOR APPROVAL PRIOR TO INSTALLATION. THE FORMING DETAILS WILL INCLUDE A MEANS FOR HOLDING THE FORMS IN PLACE PRIOR TO AND DURING CONCRETE PLACEMENT. SEAL INTERLOCKING FORM JOINTS AS NECESSARY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SEAL BOTTOM OF FORM AGAINST PILE SURFACE WITH WATERTIGHT COMPRESSIBLE MATERIAL. DEWATER FORMS PRIOR TO PLACING GROUT.
5. FILL THE FORMS WITH THE PILE PROTECTION CONCRETE. CREATE A SLOPED TOP EDGE TO ALLOW WATER TO SHED AWAY FROM THE PILE.
6. IF REMOVABLE FORMS HAVE BEEN UTILIZED LEAVE THEM IN PLACE FOR A MINIMUM OF 72 HOURS.
7. RESTORE THE GRADING AT THE PILE BASE AND THE PREVAILING SHORE BANK TO THE APPROXIMATE ORIGINAL CONDITION. IF REMOVABLE FORMS HAVE BEEN UTILIZED DO NOT RESTORE THE GRADING UNTIL FORMS HAVE BEEN COMPLETELY REMOVED.
8. REMOVE THE FLOATING TURBIDITY BARRIER.



SECTION A-A



PILE JACKET DETAILS



TURBIDITY BARRIER DETAIL

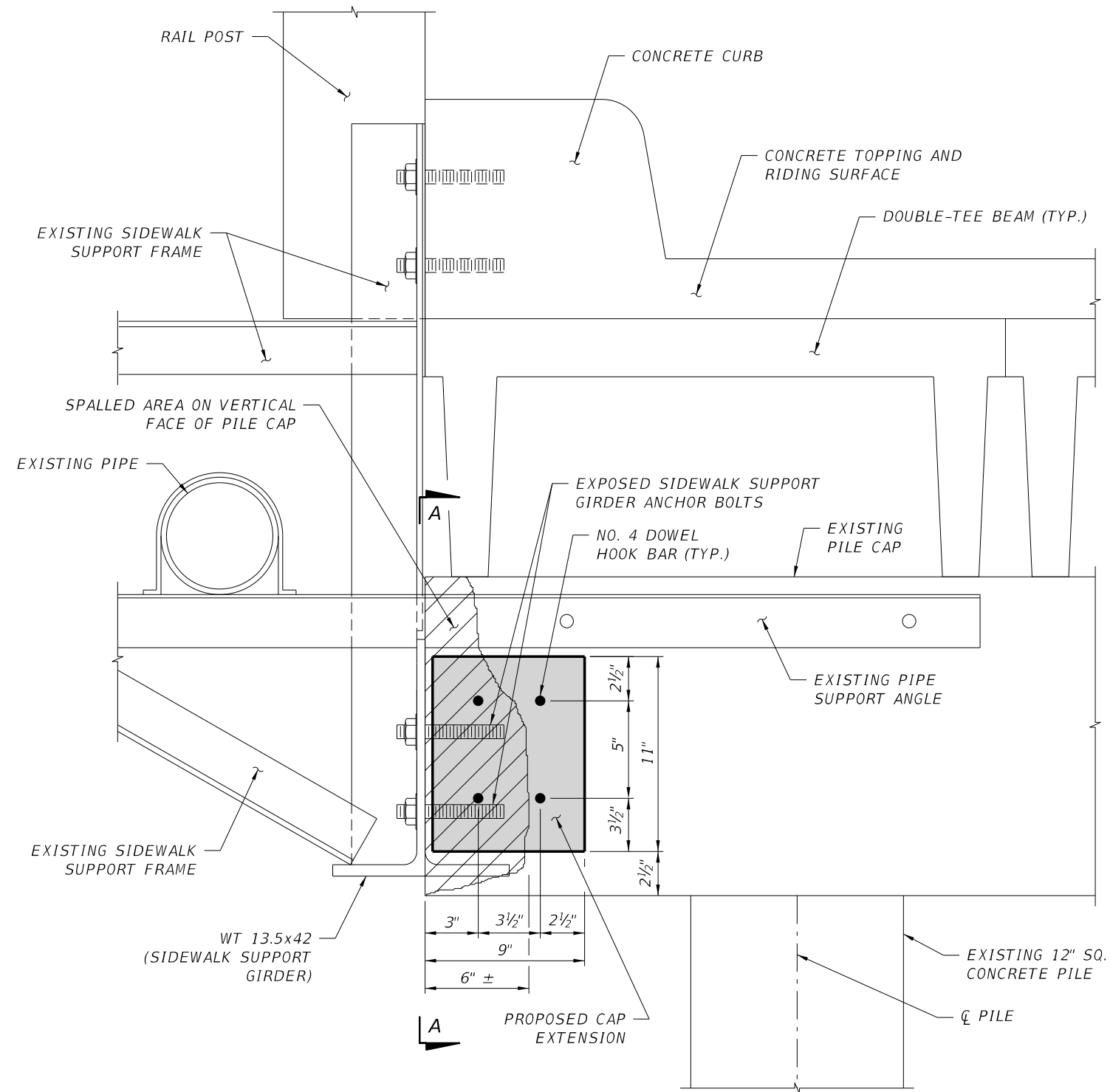
BRIDGE NO. 754003

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

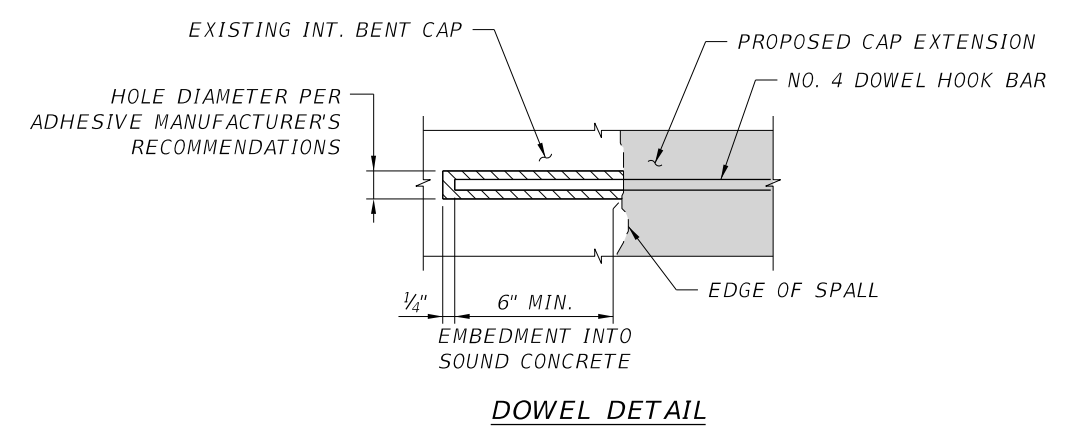
ENGINEER OF RECORD
 Kevin B. Fischer, PE
 PE No. 60074
 Inwood Consulting Engineers, Inc.
 3000 Dovera Drive, Suite 200
 Oviedo, Florida 32765
 Certificate of Authorization No. 7074



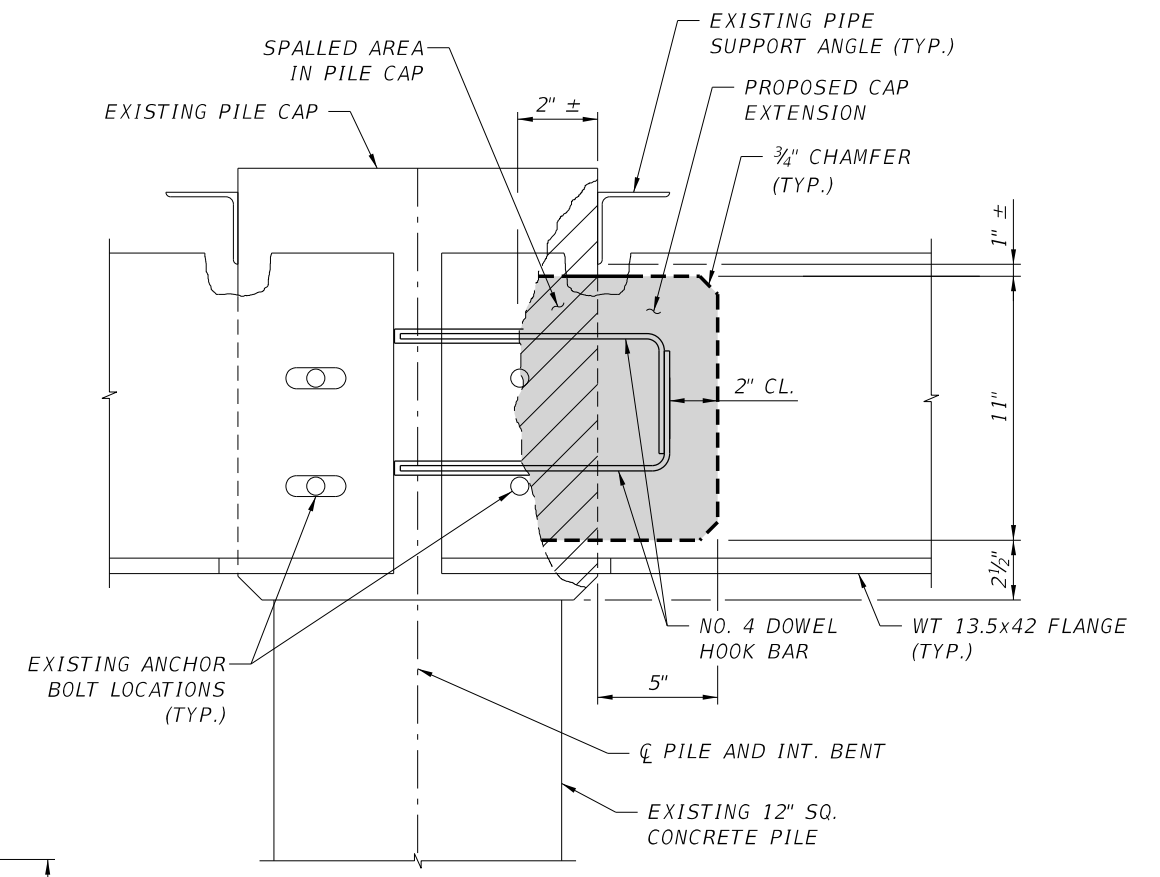
SHEET TITLE: CONCRETE PILE REPAIR DETAILS	REF. DWG. NO.
PROJECT NAME: BATES ROAD OVER CRANE STRAND CANAL	SHEET NO. B-5



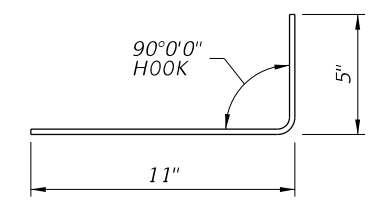
ELEVATION OF INTERMEDIATE BENT 2 PILE CAP AND PEDESTRIAN SIDEWALK CONNECTION



DOWEL DETAIL




SECTION A-A



NO. 4 DOWEL HOOK BAR

NOTE:
FOR REPAIR PROCEDURE SEE SHEET B-7.

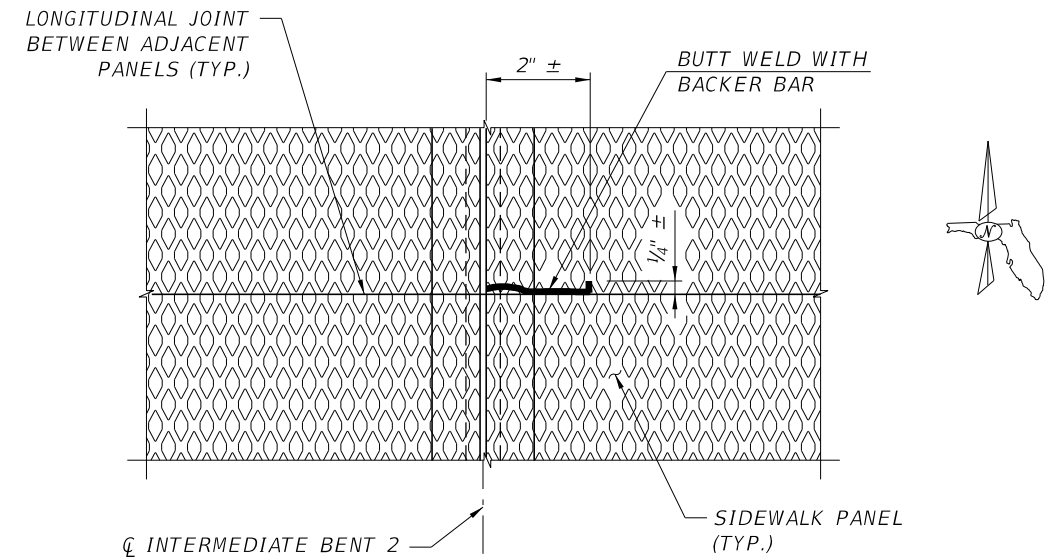
BRIDGE NO. 754003

REVISIONS						ENGINEER OF RECORD		SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	Kevin B. Fischer, PE PE No. 60074 Inwood Consulting Engineers, Inc. 3000 Dovera Drive, Suite 200 Oviedo, Florida 32765 Certificate of Authorization No. 7074		PEDESTRIAN SIDEWALK REPAIR DETAILS (1 OF 2)		
								PROJECT NAME:		SHEET NO.
								BATES ROAD OVER CRANE STRAND CANAL		B-6

INTERMEDIATE BENT 2 CAP AND PEDESTRIAN SIDEWALK CONNECTION REPAIR PROCEDURE:

1. MATERIALS:

ADHESIVE BONDING AGENT	TYPE HV PER THE FDOT APPROVED PRODUCT LIST (APL) MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 937-4.
EPOXY BONDING COMPOUND	TYPE A OR AB PER THE FDOT APL MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 926-3.
REINFORCING STEEL	ASTM A-615, GRADE 60 MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 931.
BENT CAP REPAIR CONCRETE	ULTRA-HIGH PERFORMANCE CONCRETE BASED REPAIR MORTAR FOR PREDOMINATELY VERTICAL SURFACES PER THE FDOT APL MEETING THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 930-5.
2. USE A WIRE WHEEL TO REMOVE ANY LOOSE OR UNSOUND CONCRETE FROM THE INTERMEDIATE BENT 2 CAP SPALL LOCATED AT THE EXPOSED SIDEWALK SUPPORT BEAM ANCHOR BOLTS. REMOVE ANY LOOSE RUST PARTICLES OR FLAKES FROM ANCHOR BOLTS. CARE SHALL BE TAKEN NOT TO DAMAGE OR CUT ANY OF THE ANCHOR BOLTS OR THE BENT CAP REINFORCING.
3. DRILL HOLES FOR REINFORCING DOWELS AT LOCATIONS SHOWN ON SHEET B-6. CARE SHALL BE TAKEN NOT TO DAMAGE THE BENT CAP REINFORCEMENT. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING THE HOLE LOCATION MAY BE SHIFTED UP TO 1" IN ORDER TO AVOID IT.
4. USE OIL AND WATER FREE COMPRESSED AIR ON THE EXPOSED CONCRETE, DRILLED HOLES AND ANCHOR BOLTS TO REMOVE ANY REMAINING DUST OR DEBRIS UNTIL THE CONCRETE AND BOTH BOLTS ARE CLEAN AND DRY.
5. IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS APPLY ADHESIVE BONDING AGENT TO THE DRILLED HOLES AND SET THE CAP DOWELS.
6. SET THE FORMS FOR THE CAP EXTENSION. SEE SHEET B-6 FOR DIMENSIONS OF CAP EXTENSION.
7. APPLY THE EPOXY BONDING COMPOUND TO THE EXPOSED SPALL SURFACES IN ACCORDANCE TO THE MANUFACTURER'S INSTRUCTIONS.
8. CONSTRUCT THE CAP EXTENSION USING THE BENT CAP REPAIR CONCRETE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS (INCLUDING MINIMUM TIME BEFORE FORM REMOVAL) WHILE THE BONDING AGENT IS STILL TACKY.
9. AFTER CAP EXTENSION FORMS HAVE BEEN REMOVED REPAIR SIDEWALK PANEL WELD AT INTERMEDIATE BENT 2. THE WELD SHALL BE IN ACCORDANCE WITH AMERICAN WELDING SOCIETY (AWS) D1.1, STRUCTURAL WELDING CODE, USING E70XX WELD MATERIAL.
10. REOPEN SIDEWALK TO PEDESTRIAN TRAFFIC.



**SIDEWALK PANEL REPAIR AT
INTERMEDIATE BENT 2**

BRIDGE NO. 754003

REVISIONS						ENGINEER OF RECORD		SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	Kevin B. Fischer, PE PE No. 60074 Inwood Consulting Engineers, Inc. 3000 Dovera Drive, Suite 200 Oviedo, Florida 32765 Certificate of Authorization No. 7074		PEDESTRIAN SIDEWALK REPAIR DETAILS (2 OF 2)		
						ORANGE COUNTY GOVERNMENT FLORIDA		PROJECT NAME:		SHEET NO.
								BATES ROAD OVER CRANE STRAND CANAL		B-7