

# 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. SIFLIN	DISTRICT 6
MARK MASSARO, P.E.	PUBLIC WORKS DIRECTOR
JERRY L. DEMINGS	COUNTY MAYOR

### PROJECT LOCATION

### GOVERNING STANDARDS AND SPECIFICATIONS:

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

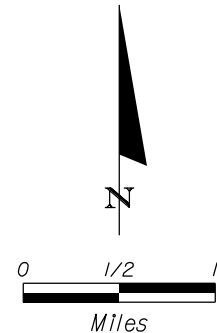
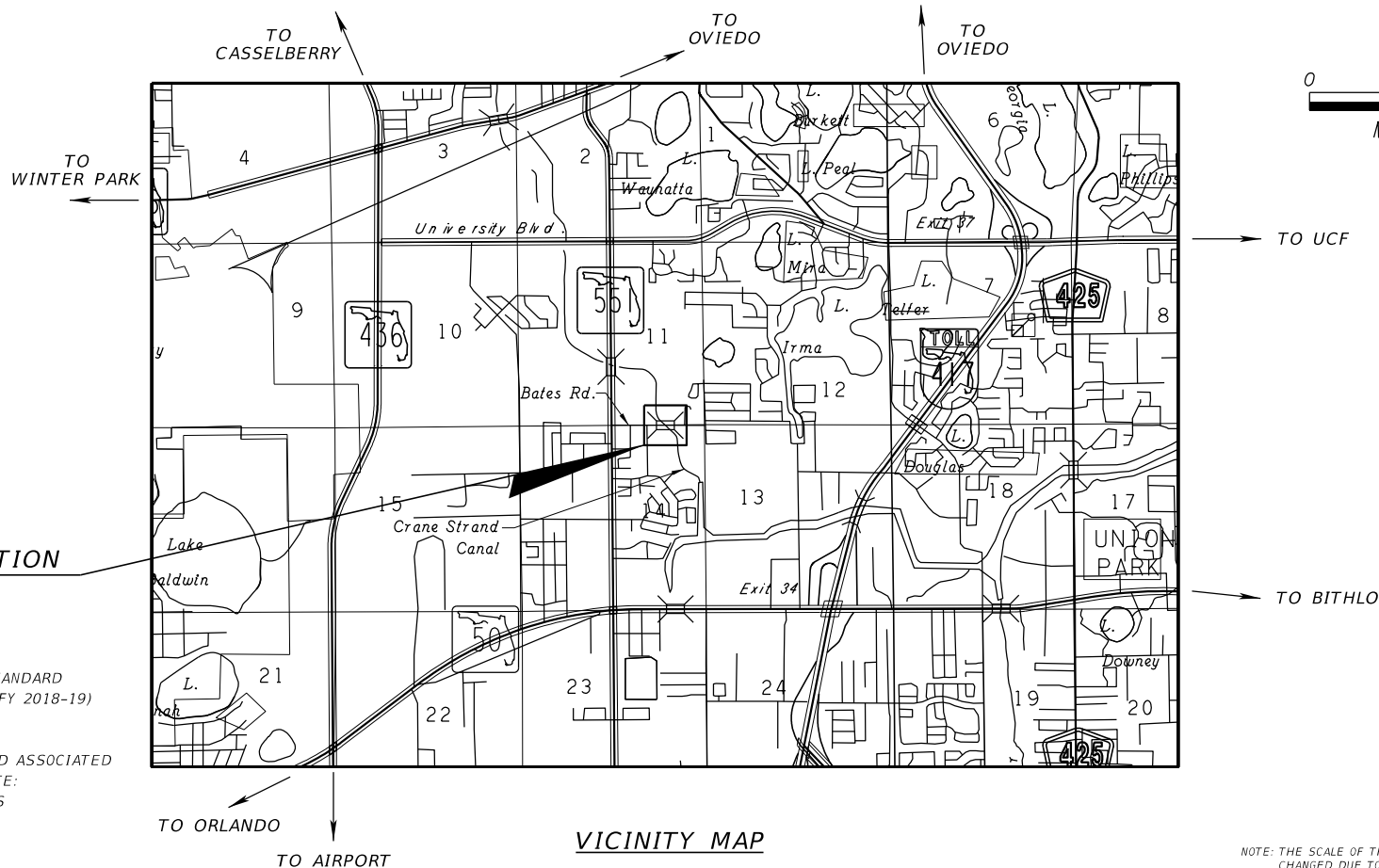
STANDARD PLANS FOR ROAD CONSTRUCTION AND ASSOCIATED IRs ARE AVAILABLE AT THE FOLLOWING WEBSITE:  
[HTTP://WWW.FDOT.GOV/DESIGN/STANDARDPLANS](http://www.fdot.gov/design/standardplans)

### APPLICABLE IRs:

FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED JANUARY 2019, 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  
APRIL 2019**



NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

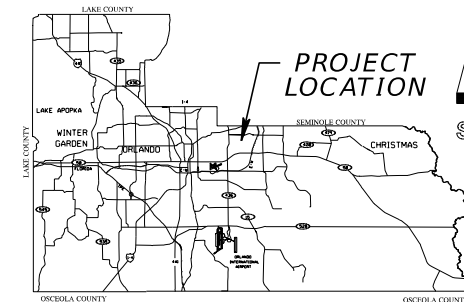
### NOTE:

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.



SEC. 11 & 14    TWP. 22 S    RGE. 30 E

LOCATION MAP

### INDEX OF SHEETS

SHEET	DESCRIPTION
1	KEY SHEET
2	SUMMARY OF PAY ITEMS
3	TEMPORARY TRAFFIC CONTROL DETAILS
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B-3	EAST APPROACH SLAB REPAIR DETAILS
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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

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



# 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 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. 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 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.

10. ALL OPERATIONS REQUIRING LANE CLOSURES SHALL BE SUBMITTED TO THE ORANGE COUNTY PROJECT MANAGER.
11. LANE CLOSURES ARE PERMITTED BETWEEN 9:00 AM AND 4:00 PM ONLY. LANE SHALL ONLY BE CLOSED DURING WORK PERIODS.
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

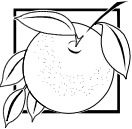
1. USE INDEX 102-603 TO CLOSE THE WESTBOUND LANE OF BATES ROAD.
2. USE INDEX 102-660 FOR THE SIDEWALK DIVERSION INTO THE WESTBOUND LANE OF BATES ROAD.
3. REPAIR SIDEWALK.

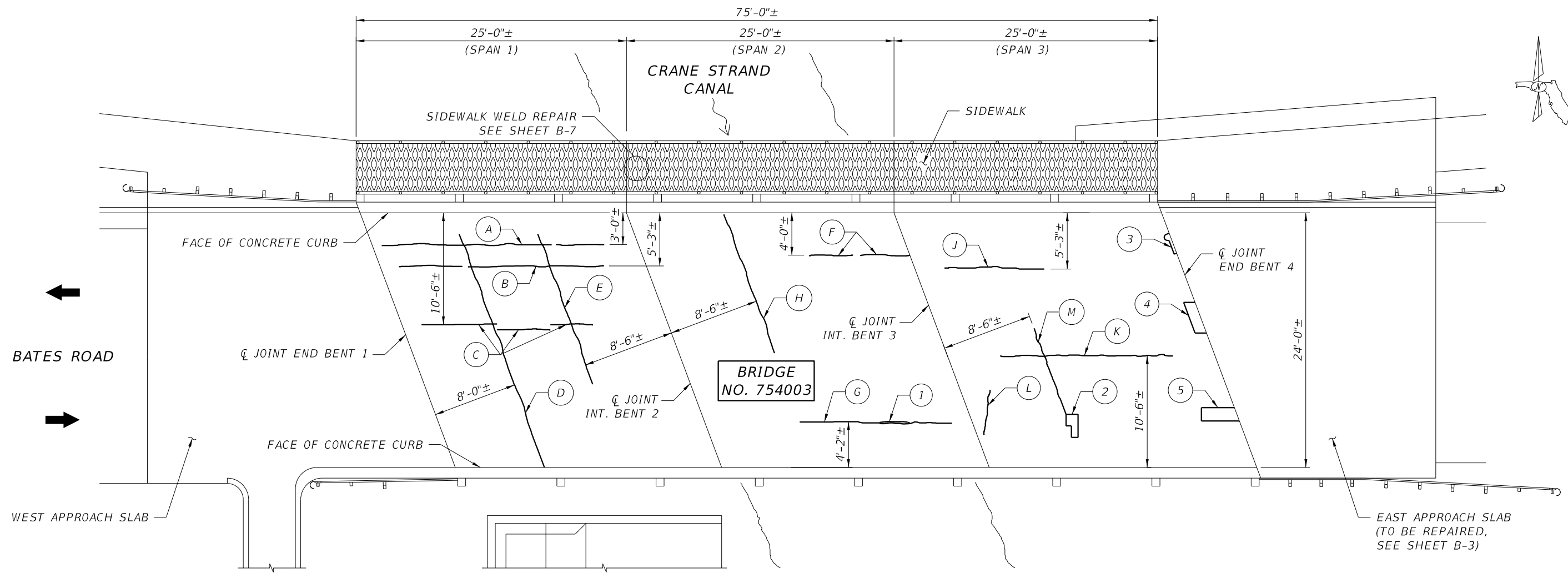
## BRIDGE REPAIR PHASE

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

BRIDGE NO. 754003

REVISIONS						ENGINEER OF RECORD		SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	Derek D. Dean, PE PE No. 51905 Inwood Consulting Engineers, Inc. 3000 Dovera Drive, Suite 200 Oviedo, Florida 32765 Certificate of Authorization No. 7074		TEMPORARY TRAFFIC CONTROL DETAILS		
						 <b>ORANGE COUNTY GOVERNMENT FLORIDA</b>		PROJECT NAME:		SHEET NO.
								BATES ROAD OVER CRANE STRAND CANAL		3



PLAN

**DECK CRACK REPAIR PROCEDURE:**

1. MATERIALS:  
 DECK CRACK REPAIR TYPE E LOW VISCOSITY EPOXY RESIN PER THE FDOT 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:**

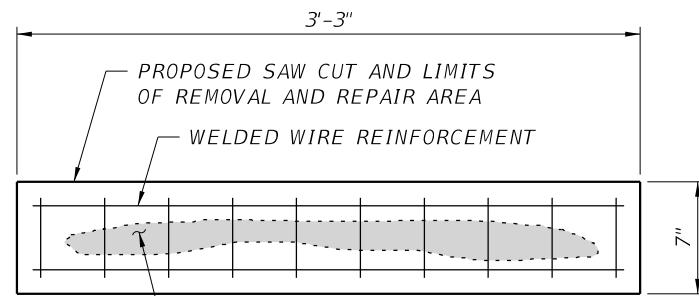
1. FOR DECK SPALL REPAIR PROCEDURE, SEE SHEET B-2.
2. CRACKS E, H AND M ARE EACH A CONTINUATION OF A PREVIOUSLY REPAIRED CRACK.

**LEGEND:**

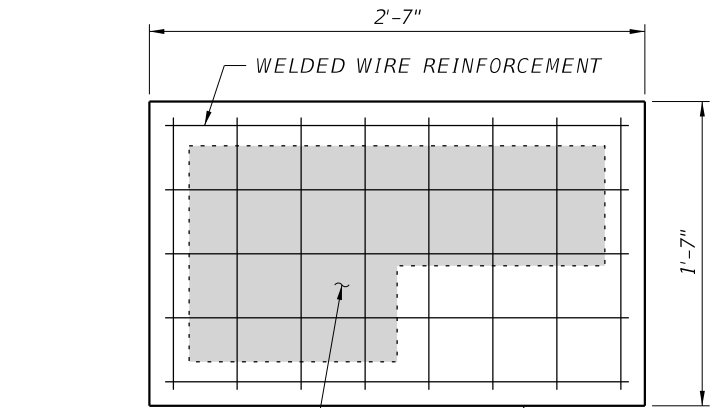
- (A) DECK CRACK
- (#) DECK SPALL

BRIDGE NO. 754003

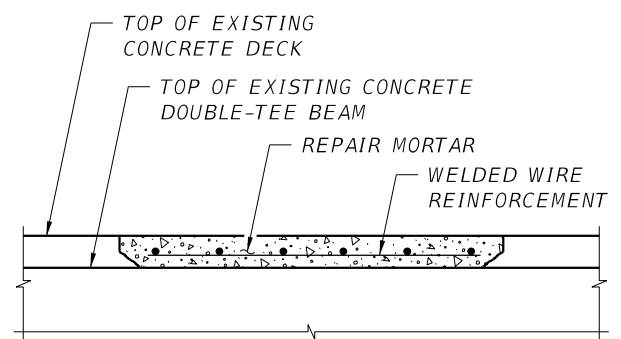
REVISIONS						ENGINEER OF RECORD		SHEET TITLE:		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	Kevin B. Fischer, PE PE No. 60074 Inwood Consulting Engineers, Inc. 3000 Dovera Drive, Suite 200 Oviedo, Florida 32765 Certificate of Authorization No. 7074		PLAN		
								PROJECT NAME:		SHEET NO.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



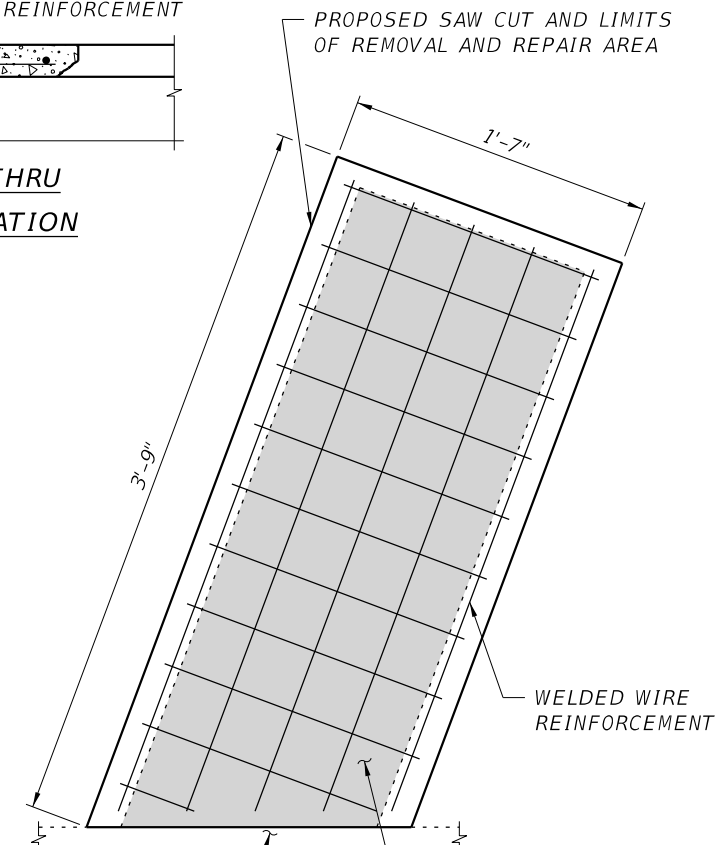
EXISTING SPALL/REPAIR  
**PLAN - SPALL NO. 1**



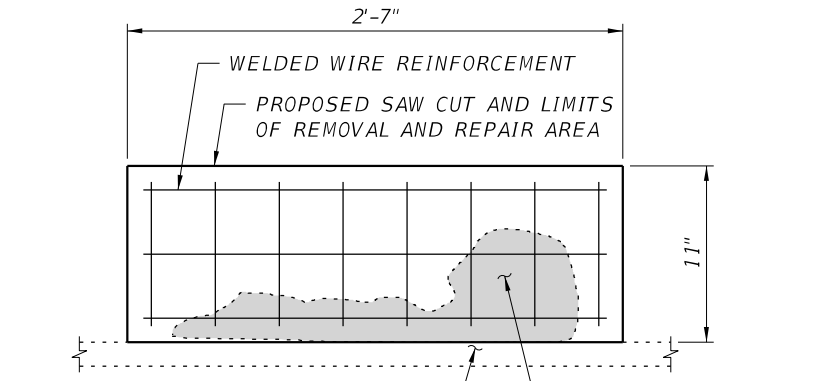
EXISTING SPALL/REPAIR  
**PLAN - SPALL NO. 2**



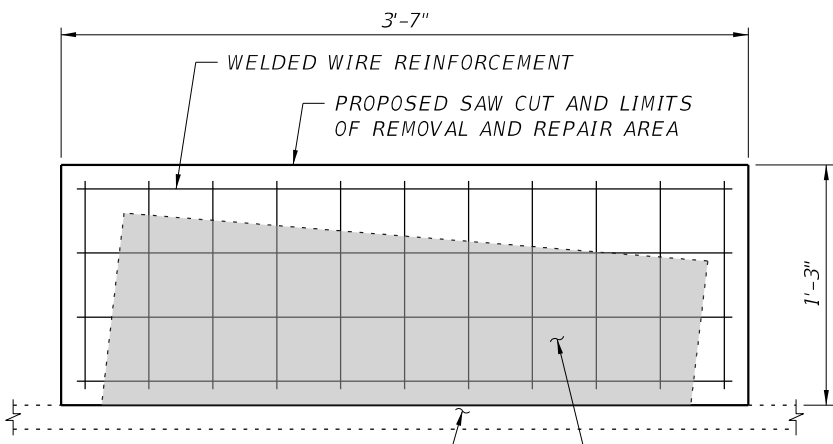
**TYPICAL SECTION THRU COMPLETED REMEDIATION**



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



**PLAN - SPALL NO. 3**



**PLAN - SPALL NO. 4**

**DECK SPALL REPAIR PROCEDURE:**

**1. MATERIALS:**

- DECK REPAIR CONCRETE      RAPID HARDENING CONCRETE BASED REPAIR MORTAR FOR HORIZONTAL SURFACES PER THE FDOT 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 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.

3. THIS PROCEDURE WILL BE USED TO REPLACE AND RESTORE PREVIOUSLY REPAIRED SPALLS IN THE BRIDGE DECK. FOR LOCATIONS SEE SHEET B-1.

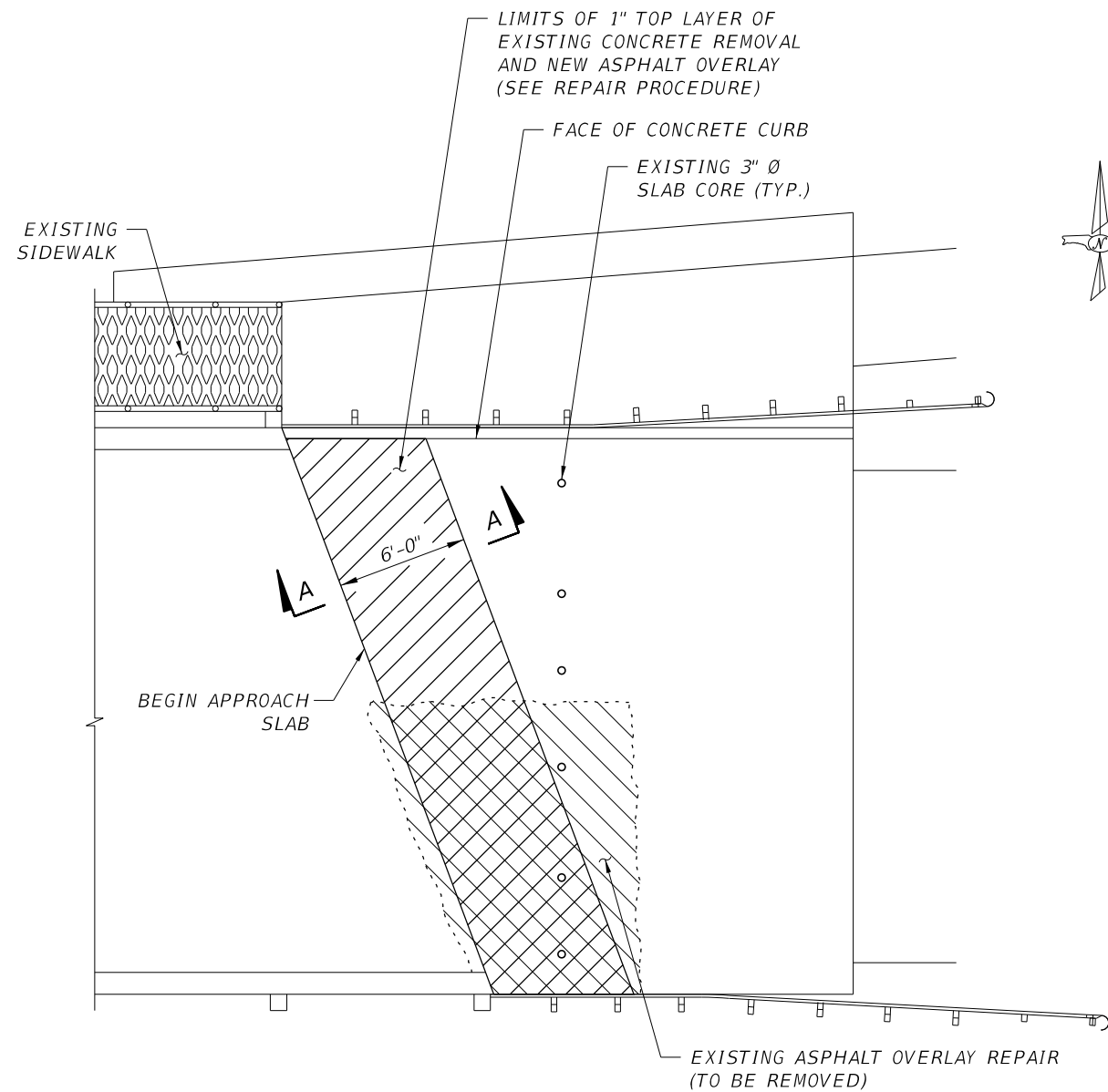
4. CENTER THE PROPOSED REMOVAL AND REPAIR AREA ON THE EXISTING SPALL/REPAIR. REMOVE CONCRETE A MINIMUM OF 1" BEYOND PERIMETER OF EXISTING SPALL/REPAIR. SAWCUT THE PERIMETER OF THE REMOVAL AREA APPROXIMATELY 1" DEEP AND COMPLETELY REMOVE EXISTING CONCRETE AND OLD REPAIR MATERIAL TO THE TOP OF THE EXISTING DOUBLE-TEE BEAM. CARE SHALL BE TAKEN NOT TO DAMAGE THE TOP OF THE EXISTING DOUBLE-TEE BEAM.

5. 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.

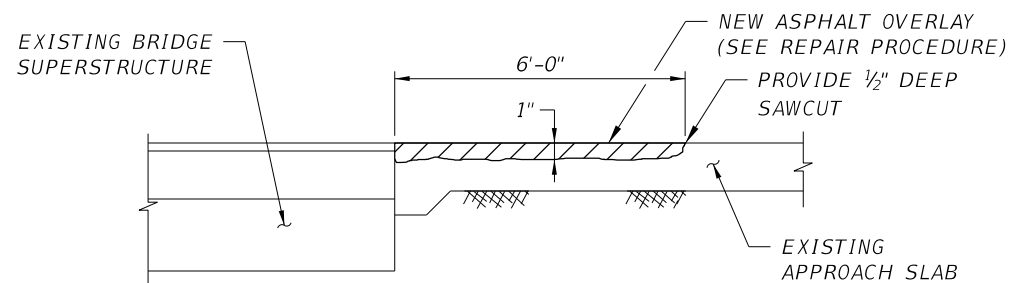
6. APPLY THE EPOXY BONDING COMPOUND TO EXPOSED AREA OF CONCRETE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PLACE THE RAPID HARDENING MORTAR AND SCREED TO MATCH EXISTING DECK ELEVATIONS WHILE THE BONDING AGENT IS STILL TACKY. AFTER SCREEDING IS COMPLETED AND WHILE MORTAR IS STILL PLASTIC, 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:  
 ASPHALT OVERLAY                      SUPERPAVE ASPHALT CONCRETE TYPE SP-9.5  
    MEETING THE REQUIREMENTS OF FDOT  
    SPECIFICATION SECTION 334.
2. COMPLETE THE APPROACH SLAB REPAIR STEPS IN THE ORDER SHOWN AND IN ACCORDANCE WITH THE LANE CLOSURE RESTRICTIONS INDICATED ON SHEET 3.
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.
4. APPLY NEW ASPHALT OVERLAY WITHIN THE LIMITS OF THE EXISTING APPROACH SLAB CONCRETE REMOVED IN STEP 3. FINISH NEW OVERLAY LEVEL WITH BRIDGE RIDING SURFACE ON WEST SIDE AND APPROACH SLAB RIDING SURFACE ON EAST SIDE.
5. REPLACE ROADWAY STRIPING WHERE MISSING.

**BRIDGE NO. 754003**

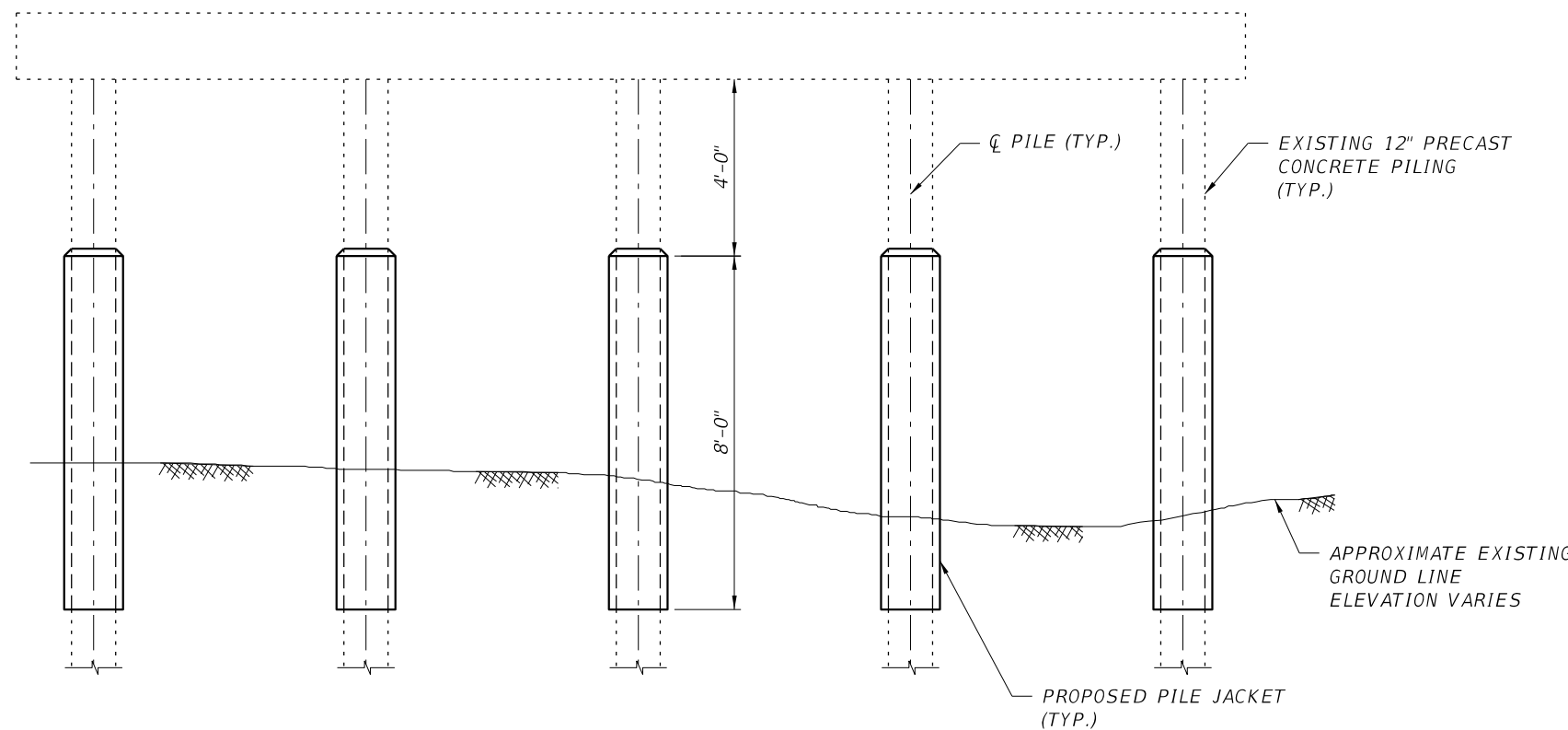
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**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: <b>EAST APPROACH SLAB REPAIR DETAILS</b>	REF. DWG. NO.
PROJECT NAME: <b>BATES ROAD OVER CRANE STRAND CANAL</b>	SHEET NO. <b>B-3</b>

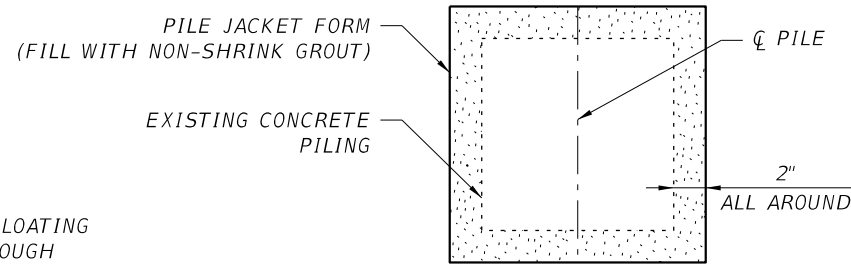




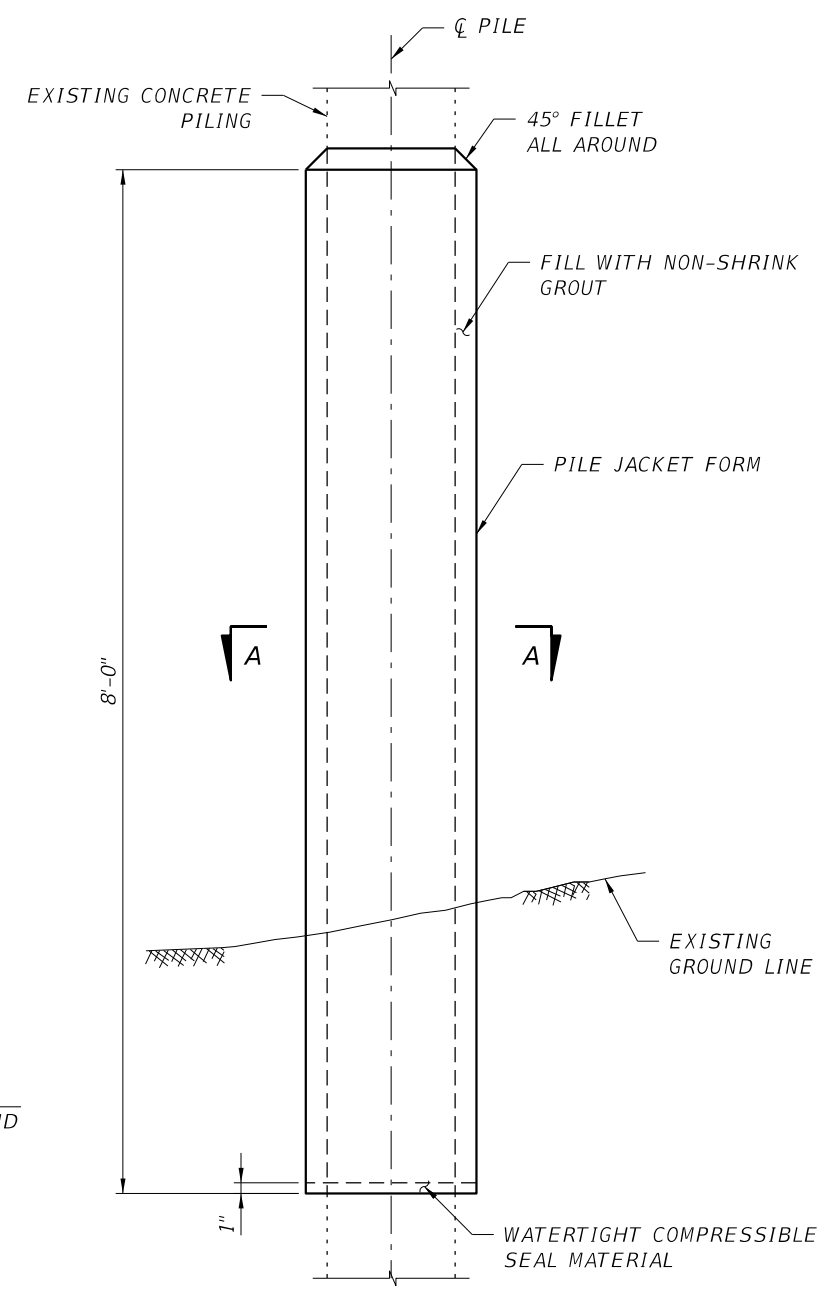
**INTERMEDIATE BENT 2**

**PRESTRESSED CONCRETE PILE REPAIR PROCEDURE:**

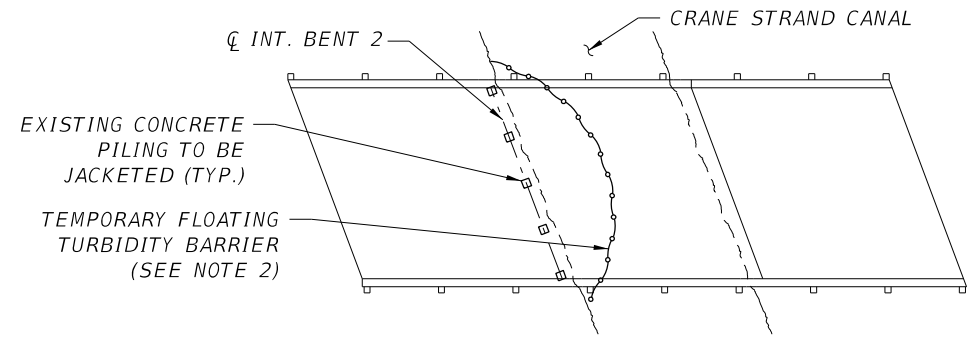
1. MATERIALS:  
 PILE PROTECTION CONCRETE      NON-SHRINK CEMENTITIOUS GROUT  
    PER THE FDOT APL AND MEETING THE  
    REQUIREMENTS OF FDOT SPECIFICATION  
    SECTION 934.
2. PILE JACKETS TO BE PLACED AT INTERMEDIATE BENT 2 (WEST BENT) ONLY. INSTALL TEMPORARY FLOATING TURBIDITY BARRIER PRIOR TO BEGINNING 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**

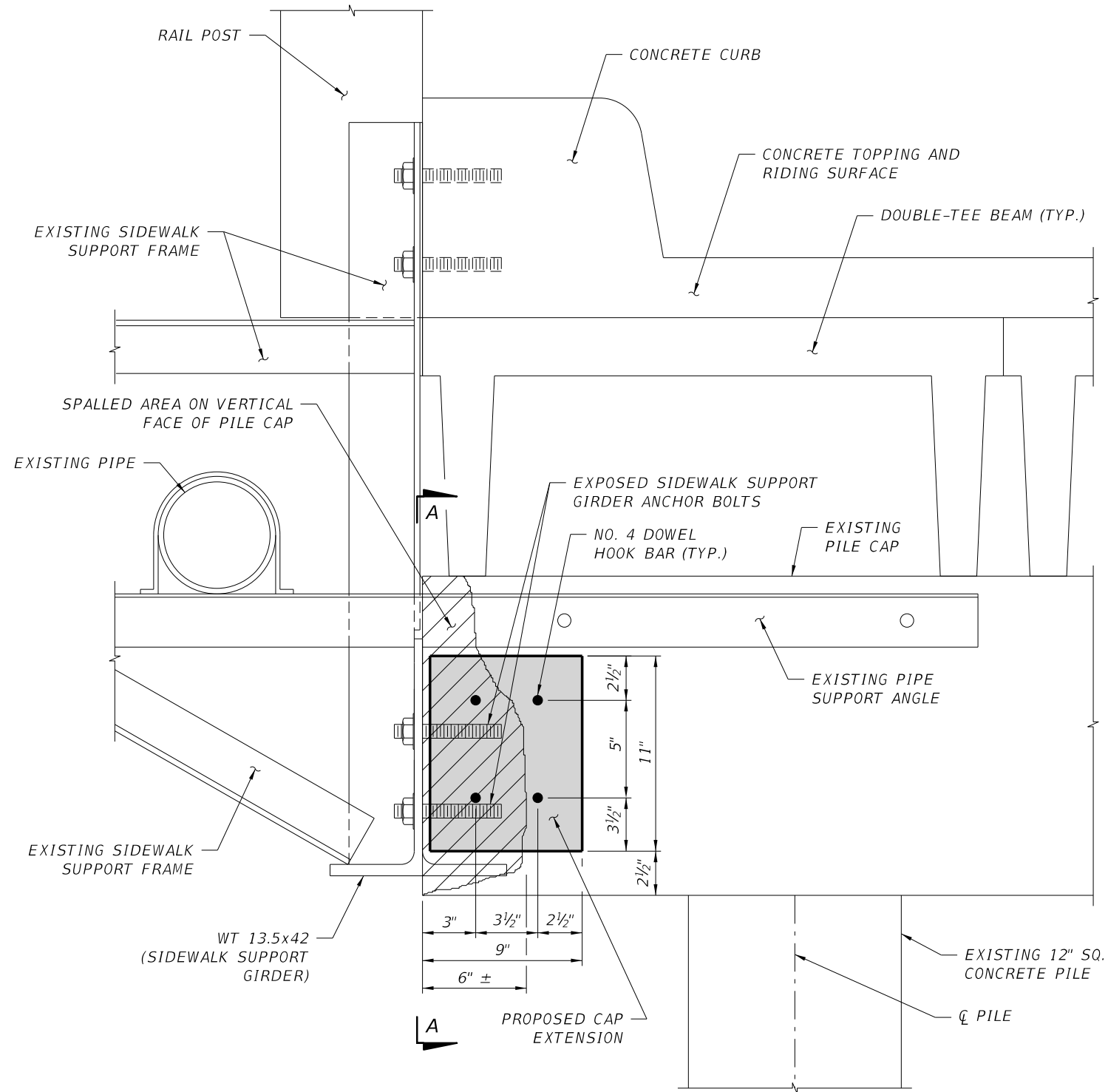
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**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

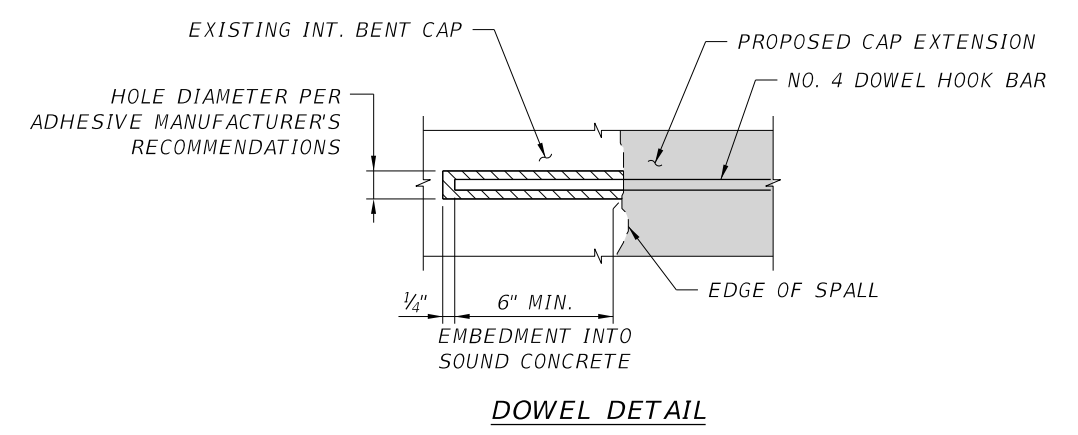


SHEET TITLE: <b>CONCRETE PILE REPAIR DETAILS</b>	REF. DWG. NO.
PROJECT NAME: <b>BATES ROAD OVER CRANE STRAND CANAL</b>	SHEET NO. <b>B-5</b>

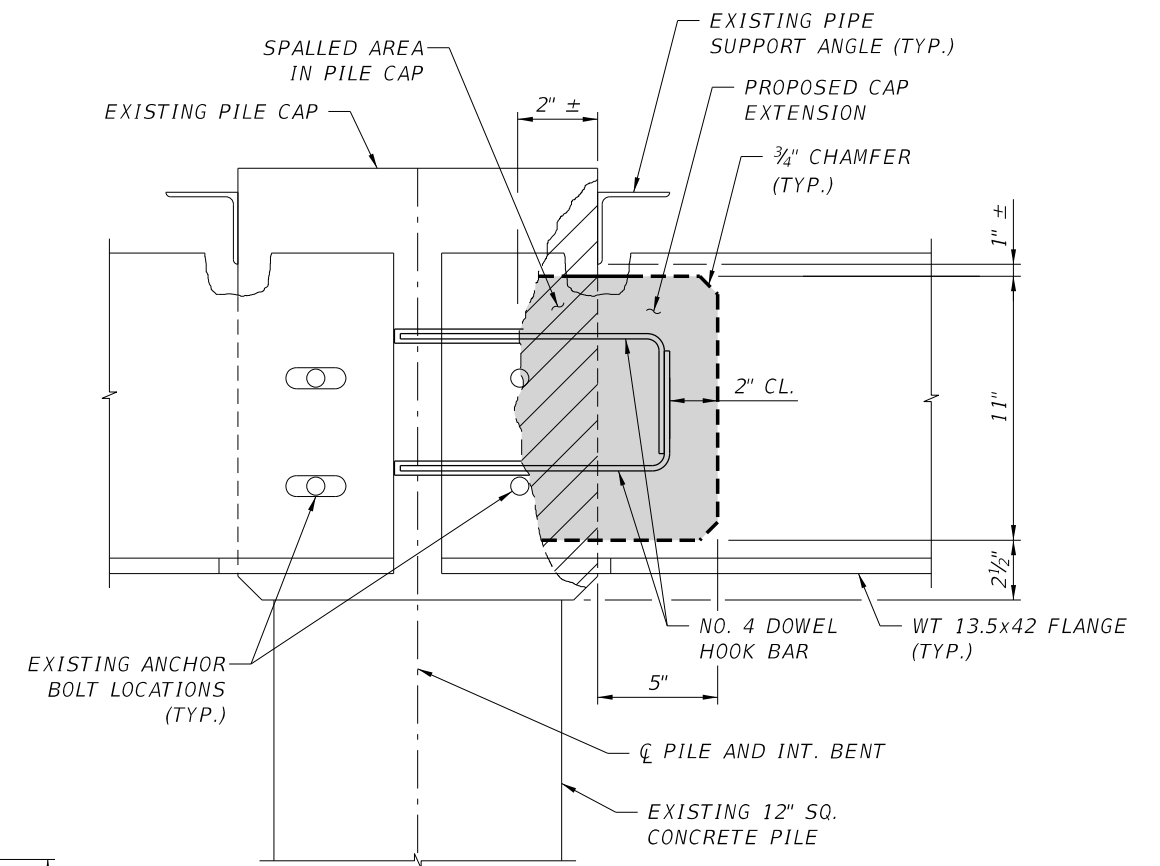




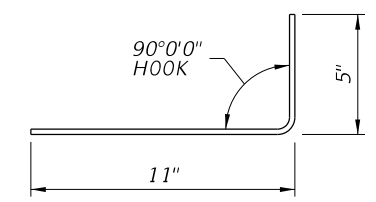
**ELEVATION OF INTERMEDIATE BENT 2 PILE CAP AND PEDESTRIAN SIDEWALK CONNECTION**



**DOWEL DETAIL**



**SECTION A-A**



**NO. 4 DOWEL HOOK BAR**

**NOTE:**  
FOR REPAIR PROCEDURE SEE SHEET B-7.

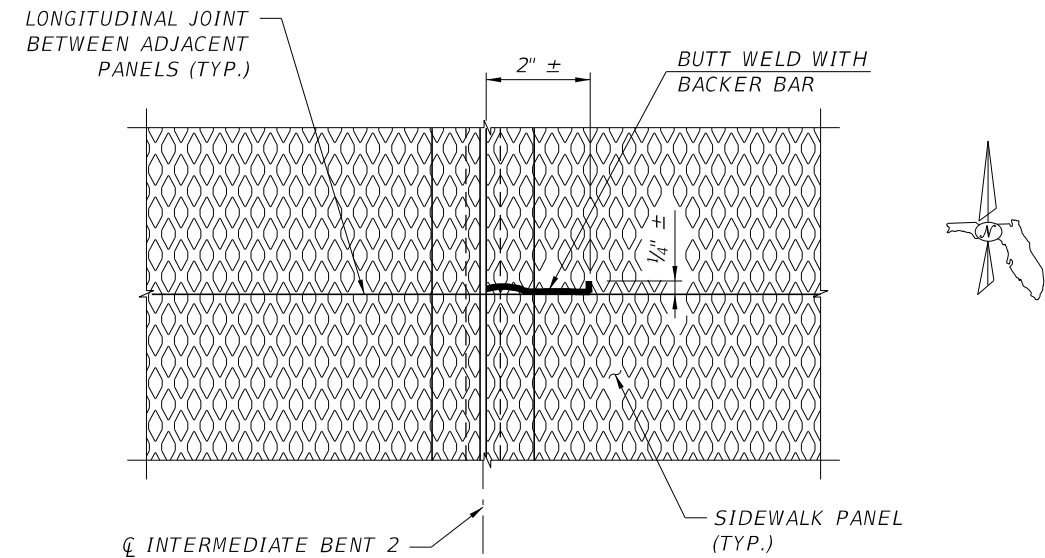
**BRIDGE NO. 754003**

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 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.
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)		
						<b>ORANGE COUNTY GOVERNMENT FLORIDA</b>		PROJECT NAME:		SHEET NO.
								BATES ROAD OVER CRANE STRAND CANAL		B-7