PROJECT: 5BPR.3.2

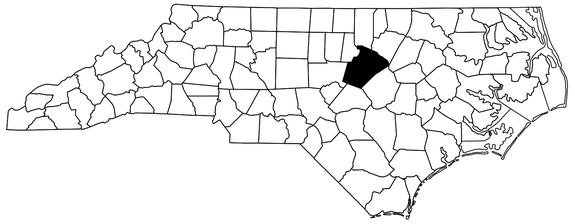
CONTRACT NO: DE00242

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY

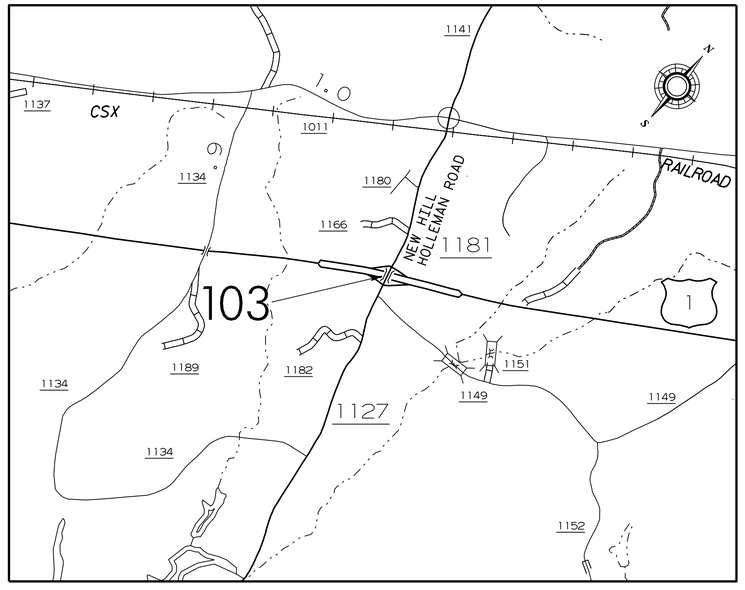
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	5BPR.3.2	1	19

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION



LOCATION: BRIDGE #103 ON SR1127 (NEW HILL HOLLEMAN ROAD) OVER US 1

TYPE OF WORK: BRIDGE PRESERVATION– HYDRO–DEMOLITION, SCARIFICATION, LATEX MODIFIED CONCRETE, INCIDENTIAL MILLING, CLEANING & PAINTING EXISTING BEARING PLATES, JOINT DEMOLITION, SUBSTRUCTURE REPAIRS USING SHOTCRETE AND EPOXY RESIN INJECTION.



DESIGN DATA

BRIDGE #103 – ADT 2013 =3,400

PROJECT LENGTH

BRIDGE #103 – 0.068 MILE

Prepared in the Office of:
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

GREG DICKEY, P.E.
PROJECT ENGINEER

2018 STANDARD SPECIFICATIONS

LETTING DATE:
MARCH 28, 2018

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

DocuSigned by: Greg Dickey 884E46B8CE5B4B6...

3/2/2018

GREG DICKEY, P.E.
PROJECT DESIGN ENGINEER

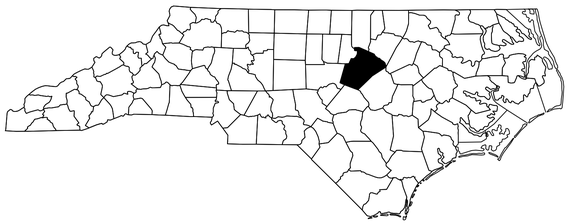
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	5BPR.3.2	1A	19

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION

STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

WAKE COUNTY



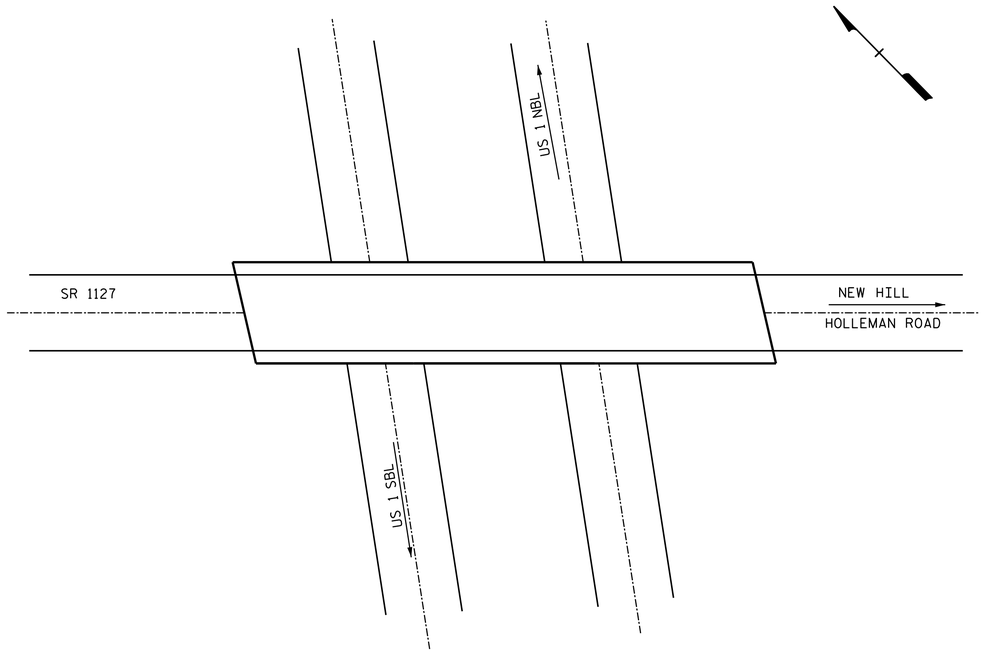
LOCATION: BRIDGE #103 ON SR1127 (NEW HILL HOLLEMAN ROAD) OVER US 1

TYPE OF WORK: ***BRIDGE PRESERVATION– HYDRO–DEMOLITION, SCARIFICATION, LATEX MODIFIED CONCRETE, INCIDENTAL MILLING, CLEANING & PAINTING EXISTING BEARING PLATES, JOINT DEMOLITION, SUBSTRUCTURE REPAIRS USING SHOTCRETE AND EPOXY RESIN INJECTION.***

INDEX OF SHEETS

PROJECT: 5BPR.3.2

CONTRACT NO: DE00242



LOCATION SKETCH

NOTES

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION, ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE MANAGING HYDRO-DEMOLITION WATER SPECIAL PROVISION.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT FLOW OR MIGRATE INTO ACTIVE TRAVEL LANES.

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, CLASS II SURFACE PREPARATION, AND CLASS III SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIR WITH THE APPROVAL OF THE ENGINEER. FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR LATEX MODIFIED CONCRETE OVERLAY, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIRS, SEE SPECIAL PROVISIONS.

FOR CLEANING AND PAINTING OF EXISTING BEARINGS WITH HRCSA, SEE SPECIAL PROVISIONS.

FOR POLLUTION CONTROL, SEE SPECIAL PROVISIONS.

FOR PAINTING CONTAINMENT, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR PLACING AND FINISHING OF LMC, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL

BRIDGE NO.	INCIDENTAL MILLING	GROOVING BRIDGE FLOORS	PAINTING CONTAINMENT FOR BRIDGE NO. 103	POLLUTION CONTROL	CLASS II SURFACE PREPARATION	* CLASS III SURFACE PREPARATION	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	ASPHALT BINDER FOR PLANT MIX	** LATEX MODIFIED CONCRETE OVERLAY	PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY	SHOTCRETE REPAIR	EPOXY RESIN INJECTION	CLEANING AND PAINTING EXISTING BEARINGS W/HRCSA	FOAM JOINT SEALS	EPOXY COATING	BRIDGE JOINT DEMOLITION	SCARIFYING BRIDGE DECK	HYDRO-DEMOLITION OF BRIDGE DECK	VOLUMETRIC MIXER	MOBILIZATION
	SQ.YDS.	SQ. FT.	LUMP SUM	LUMP SUM	SQ.YDS.	SQ.YDS.	TONS	TONS	C.Y.	SQ.YDS.	CU. FT.	LN. FT.	EA.	LUMP SUM	SQ. FT.	SQ. FT.	SQ.YDS.	SQ.YDS.	LUMP SUM	LUMP SUM
103	364.0	5474	LUMP SUM	LUMP SUM	268.6	2.0	35.0	2.1	46.6	689	54	21	32	LUMP SUM	459.4	91.7	689	689	LUMP SUM	LUMP SUM
TOTAL	364.0	5474	LUMP SUM	LUMP SUM	268.6	2.0	35.0	2.1	46.6	689	54	21	32	LUMP SUM	459.4	91.7	689	689	LUMP SUM	LUMP SUM

* CLASS III TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSES ONLY, IN CASE UNANTICIPATED SURFACE PREPARATION AREAS ARE ENCOUNTERED.

** THE QUANTITY OF LATEX MODIFIED CONCRETE OVERLAY INCLUDES THE 4" OVERLAP BETWEEN OVERLAYS, AND THE QUANTITY FOR THE CLASS II REPAIRS.

CLEANING AND PAINTING OF BEARINGS SEQUENCE:

CLEAN AND PAINT ALL EXPOSED AREAS OF PLATES, NUTS, BOLTS, AND WASHERS AT EACH BEARING IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS FOR CLEANING AND PAINTING OF EXISTING BEARING PLATES WITH HRCSA.

DURING ALL CLEANING AND PAINTING OPERATIONS, THE CONTRACTOR SHALL ISOLATE THE WORK AREA WITH APPROPRIATE CONTAINMENT DEVICES IN ORDER TO PREVENT ANY GENERATED DEBRIS FROM CAUSING VIOLATIONS OF CURRENT FEDERAL, STATE AND LOCAL AIR AND WATER POLLUTION REGULATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LEGAL DISPOSAL OF ALL DEBRIS COLLECTED BY THE CONTAINMENT DEVICES.

PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

SHEET 1 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

DocuSigned by: Greg Dickey 884E468CE5B4B8...

3/2/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON
NEW HILL HOLLENMAN RD.
OVER US 1

DRAWN BY : J.D. HERNANDEZ DATE : 12/17
CHECKED BY : W.C. SMITH DATE : 12/17

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S-1

TOTAL SHEETS 19

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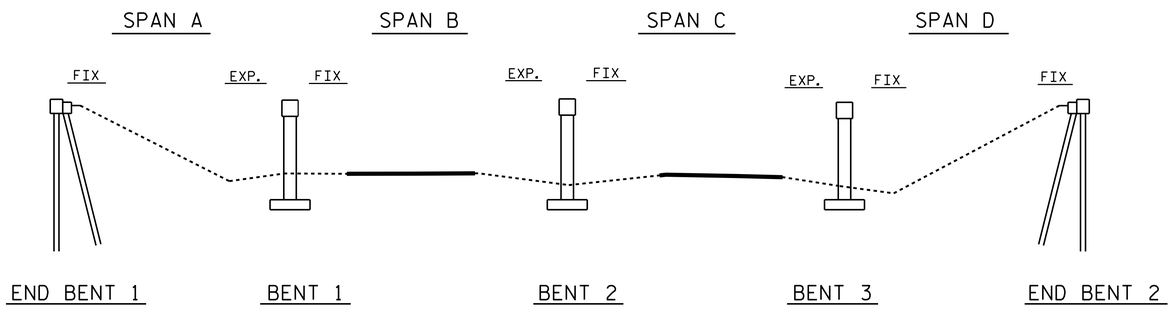
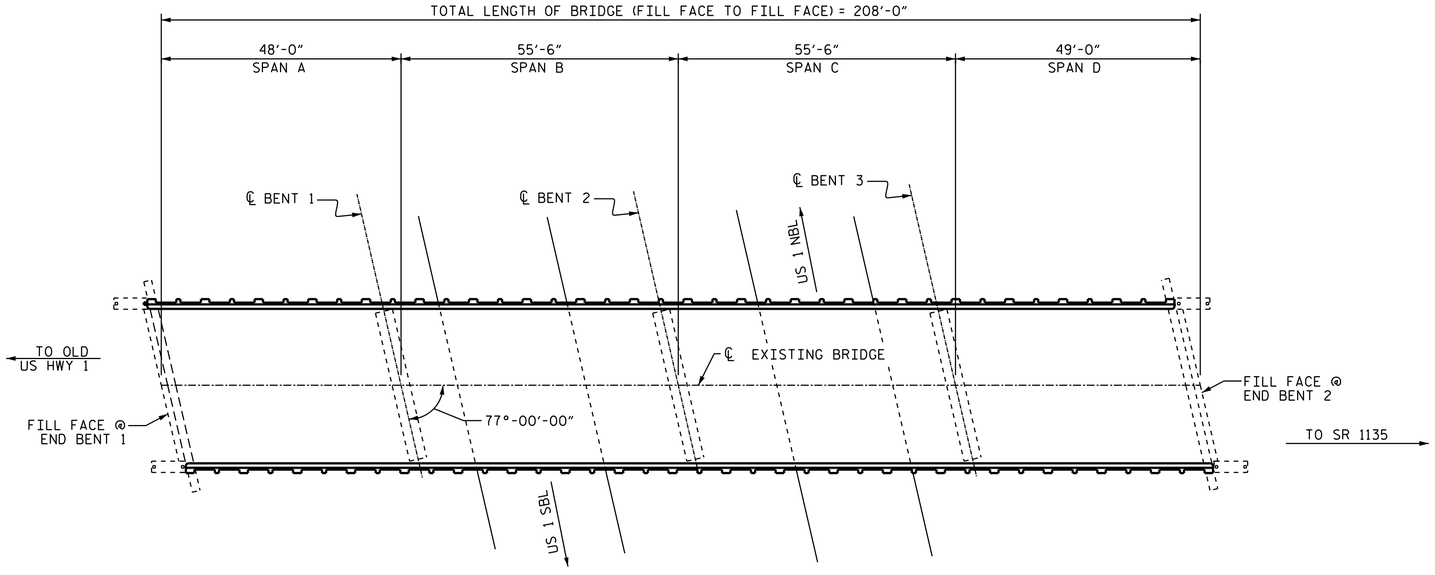


ELEVATION

(SECTION ALONG ℄ ROADWAY)

SCOPE OF WORK

- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND HYDRODEMOLITION METHODS.
- CLEAN AND REMOVE EXISTING BRIDGE DECK JOINTS MATERIAL.
- PERFORM DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPAIRED BRIDGE DECK WITH LATEX MODIFIED CONCRETE.
- GROOVE BRIDGE DECK.
- SUBSTRUCTURE REPAIRS USING EPOXY RESIN INJECTION AND SHOTCRETE.
- EPOXY COATING TOP OF CAP.
- CLEANING AND PAINTING EXISTING BEARING PLATES WITH HRCSA.
- INSTALL ELASTOMERIC HEADERS AND FOAM JOINTS.
- PRESTRESSED CONCRETE GIRDER REPAIR.
- MILLING AND PAVING APPROACH ROADWAY.



PLAN

(COLUMNS AND FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER DATE

PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

DocuSigned by: Greg Dickey 884E46B8CE5B4B6...

3/2/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON
NEW HILL HOLLENMAN RD.
OVER US 1

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			19

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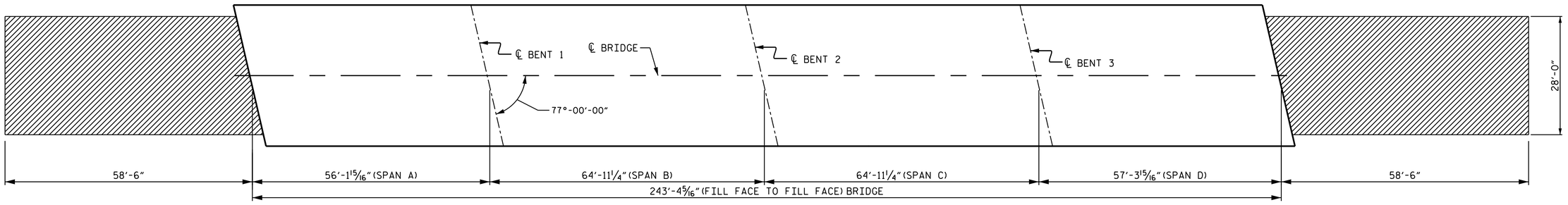
NOTE:

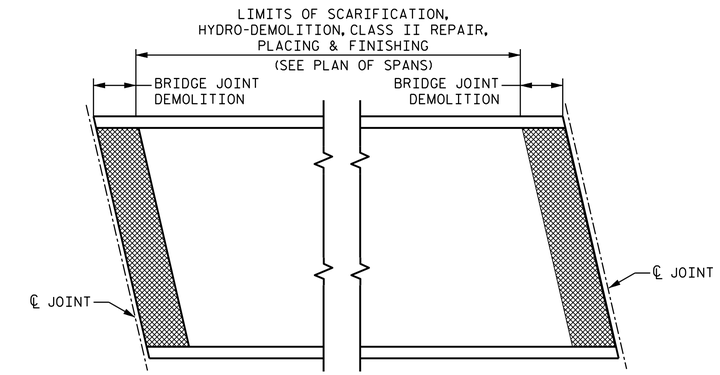
EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVING. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION TO THE ROADWAY AS SHOWN. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.



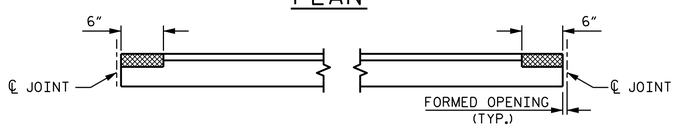
PLAN

DECK SCARIFICATION, HYDRO-DEMOLITION, AND LATEX MODIFIED CONCRETE OVERLAY

INCIDENTAL MILLING AND PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH OR GREATER THAN 1 ½" IN DEPTH



PLAN



ELEVATION

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	364 SQ. YDS.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	35.0 TONS	

PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

DocuSigned by: Greg Dickey 884E46B8CE5B4B6...

3/2/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

SURFACE PREPARATION

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1			3			TOTAL SHEETS
2			4			19

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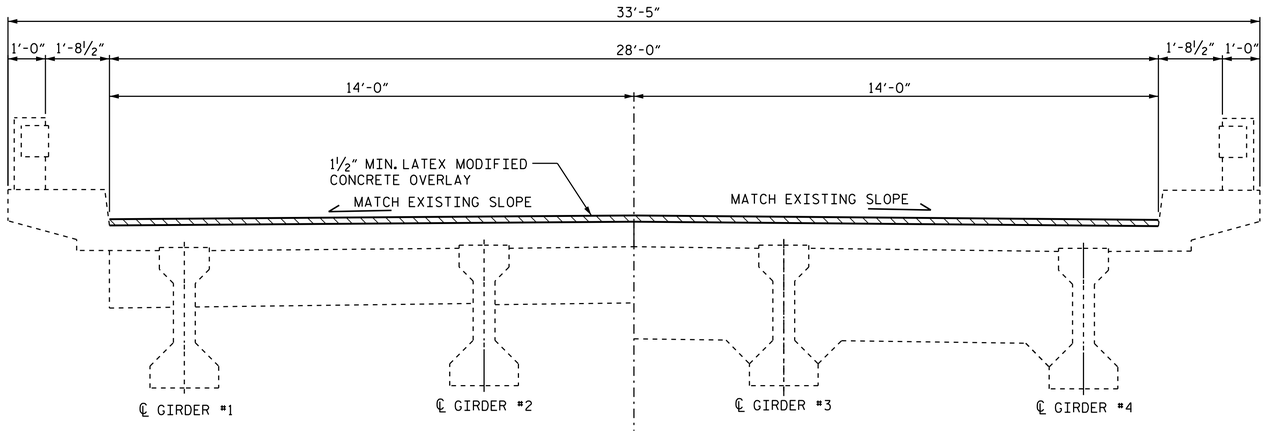
NOTE:

WHEN PREPARING THE SURFACE FOR LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE REMOVED FOR A DISTANCE OF 4-INCHES FROM THE LMC EDGE. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS. NEW LMC SHALL BE PLACED IN THE 4-INCH OVERLAP, AS PART OF NEW LMC STAGE PLACEMENT.

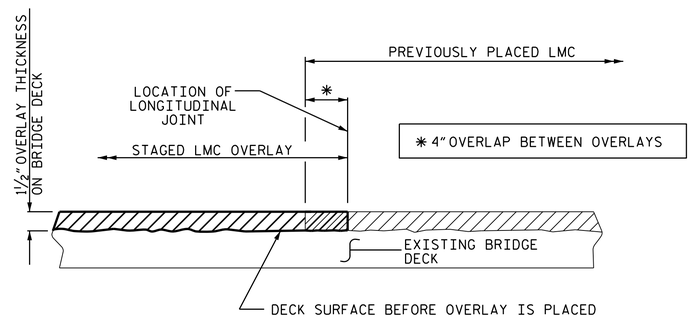
SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LMC PLACEMENT.



HALF SECTION
SHOWING EXISTING BENTS DIAPHRAGM

HALF SECTION
SHOWING EXISTING INTERMEDIATE DIAPHRAGM

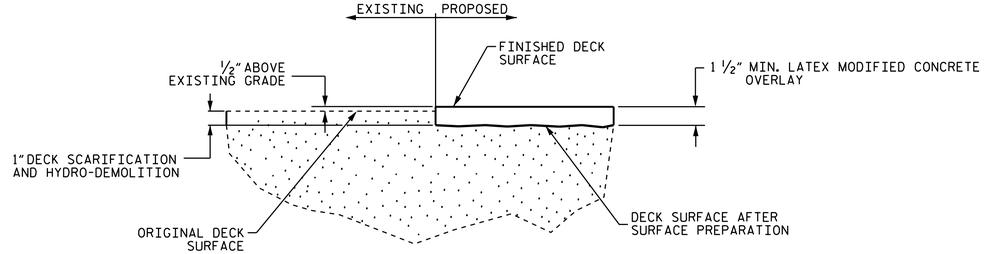
TYPICAL SECTION



SECTION THRU DECK

STAGED LMC OVERLAY JOINT

(AS NEEDED)



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY

PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

DocuSigned by: Greg Dickey 884E46B8CE5B4B6...

3/2/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

TYPICAL SECTION

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1			3			TOTAL SHEETS
2			4			19

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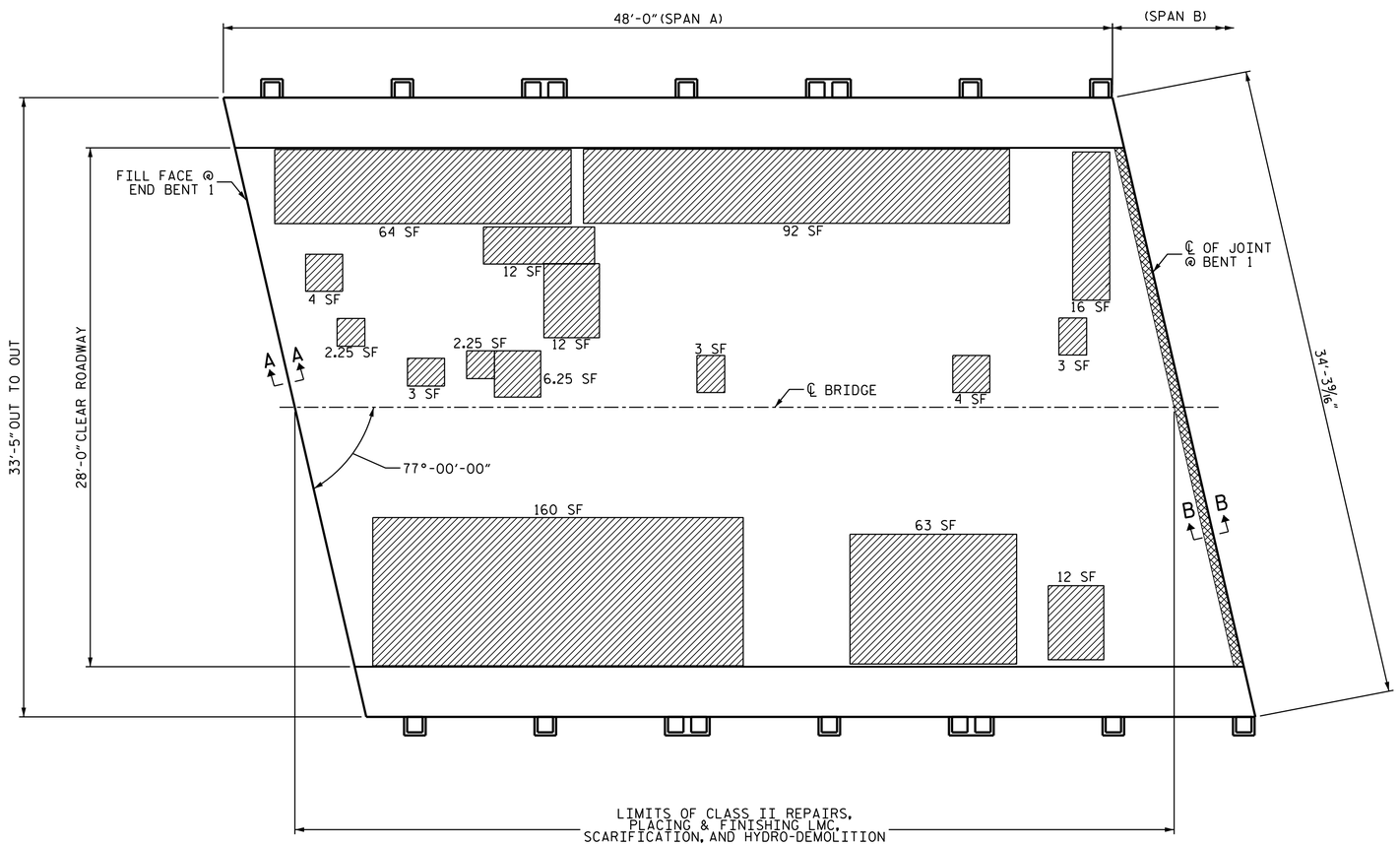
SPAN A QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	51.0 SQ. YDS.	
CLASS III SURFACE PREPARATION	0.5 SQ. YDS.	
BRIDGE JOINT DEMOLITION	15.3 SQ. FT.	
SCARIFYING BRIDGE DECK	159 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	159 SQ. YDS.	
GROOVING DECK FLOOR	1262 SQ. FT.	

PAYMENT FOR CLASS II OR III SURFACE PREPARATION IS BASED ON THE SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF THE BRIDGE DECK. SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISIONS.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.



SPAN A

(FOR SECTIONS A-A AND B-B, SEE SHEET NO. S-17)

CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

SCARIFICATION & HYDRO-DEMOLITION

PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN A

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

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3/2/2018

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1			3			TOTAL SHEETS
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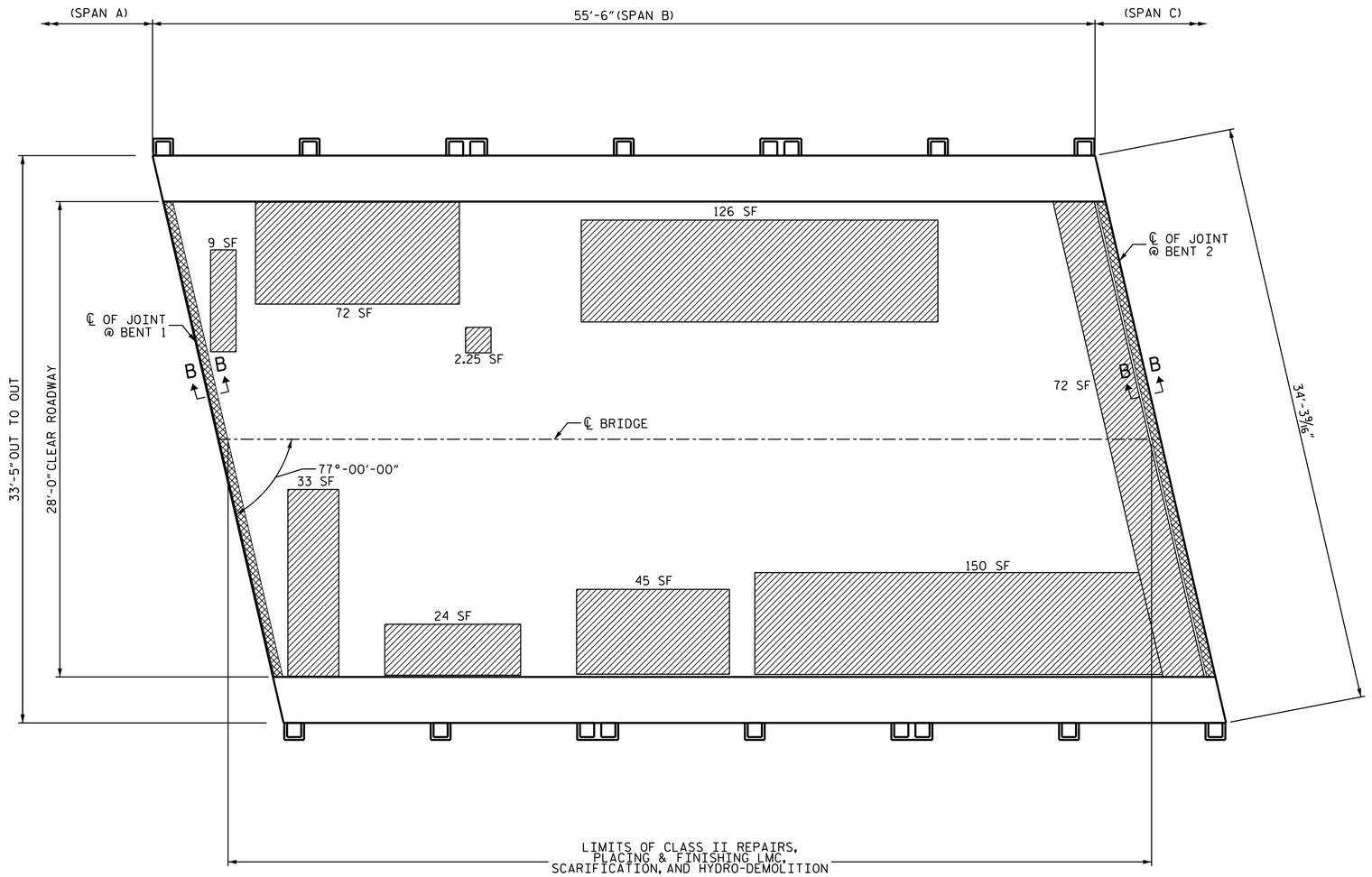

SPAN B

(FOR SECTION B-B, SEE SHEET NO. S-17)

SPAN B QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	59.3 SQ. YDS.	
CLASS III SURFACE PREPARATION	0.5 SQ. YDS.	
BRIDGE JOINT DEMOLITION	30.5 SQ. FT.	
SCARIFYING BRIDGE DECK	184 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	184 SQ. YDS.	
GROOVING DECK FLOOR	1462 SQ. FT.	

PAYMENT FOR CLASS II SURFACE PREPARATION IS BASED ON THE SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF THE BRIDGE DECK. SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISIONS.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

SCARIFICATION & HYDRO-DEMOLITION

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

DocuSigned by: Greg Dickey 884E46B8CE584B6...

3/2/2018

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PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN B

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			19

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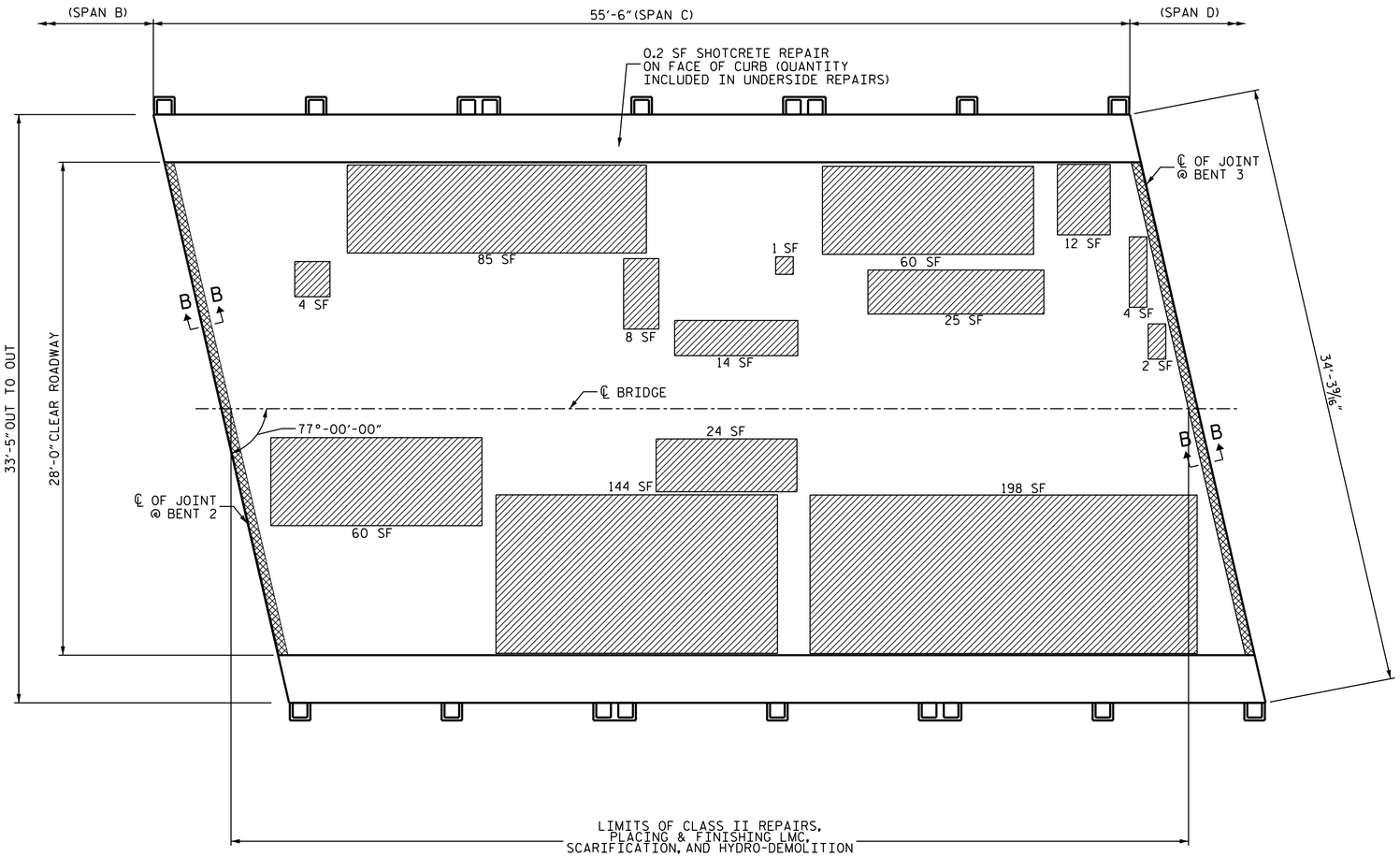

SPAN C

(FOR SECTION B-B, SEE SHEET NO. S-17)

SPAN C QUANTITIES

	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	72 SQ. YDS.	
CLASS III SURFACE PREPARATION	0.5 SQ. YDS.	
BRIDGE JOINT DEMOLITION	30.6 SQ. FT.	
SCARIFYING BRIDGE DECK	184 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	184 SQ. YDS.	
GROOVING DECK FLOOR	1462 SQ. FT.	

PAYMENT FOR CLASS II SURFACE PREPARATION IS BASED ON THE SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF THE BRIDGE DECK. SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISIONS.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

▨ CLASS II SURFACE PREPARATION

▩ BRIDGE JOINT DEMOLITION

☐ SCARIFICATION & HYDRO-DEMOLITION

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

DocuSigned by: Greg Dickey 884E468BCE5B486...

3/2/2018

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PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN C

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
2			4			19

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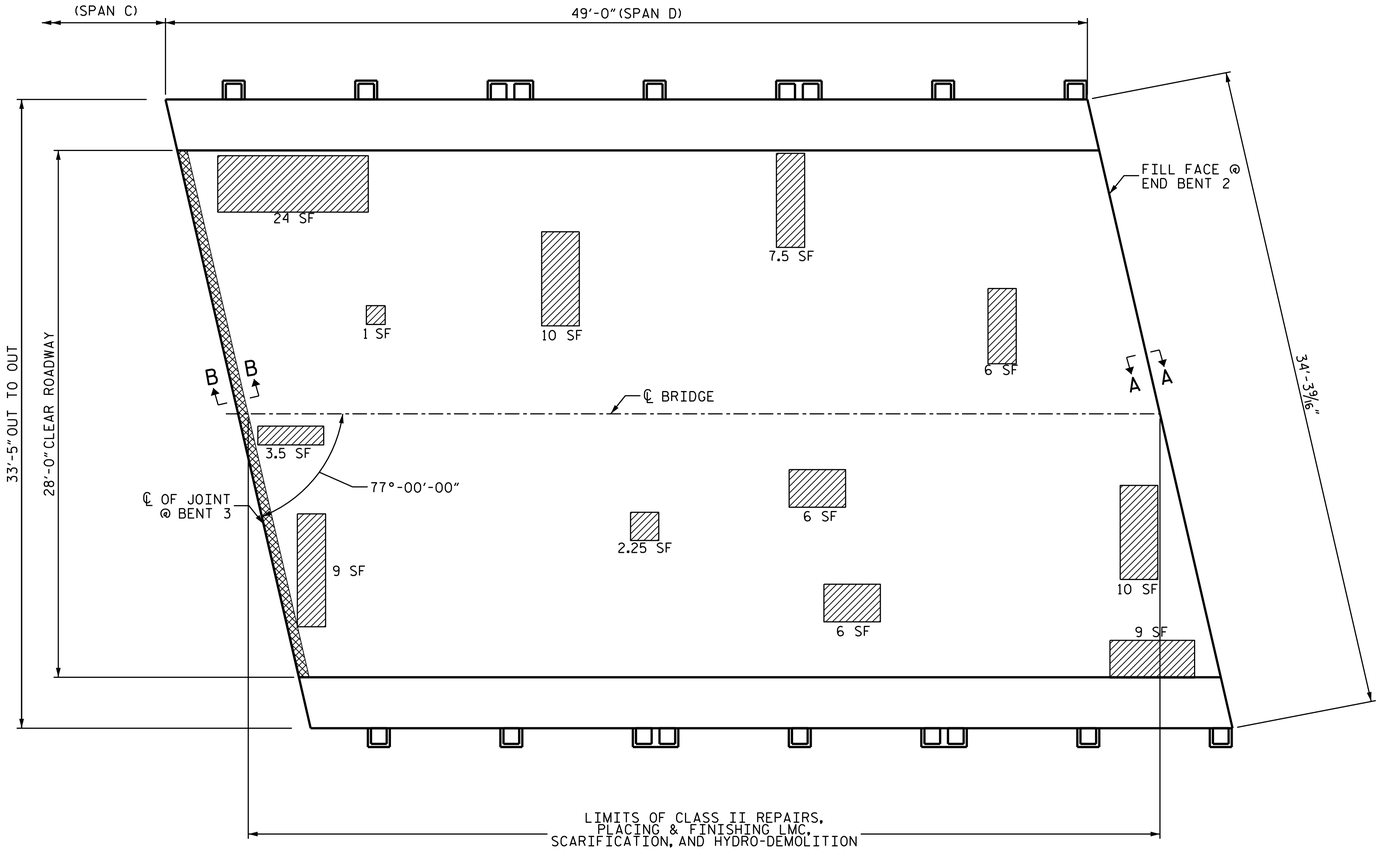

SPAN D

(FOR SECTIONS A-A AND B-B, SEE SHEET NO. S-17)

SPAN D QUANTITIES

	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	86.3 SQ. YDS.	
CLASS III SURFACE PREPARATION	0.5 SQ. YDS.	
BRIDGE JOINT DEMOLITION	15.3 SQ. FT.	
SCARIFYING BRIDGE DECK	162 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	162 SQ. YDS.	
GROOVING DECK FLOOR	1288 SQ. FT.	

PAYMENT FOR CLASS II SURFACE PREPARATION IS BASED ON THE SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF THE BRIDGE DECK. SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISIONS.

CLASS III SURFACE PREPARATION IS NOT ANTICIPATED. A TOKEN AMOUNT IS INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

▨ CLASS II SURFACE PREPARATION

▩ BRIDGE JOINT DEMOLITION

☐ SCARIFICATION & HYDRO-DEMOLITION

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WAKE COUNTY

BRIDGE NO. 103

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPAN D

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			19

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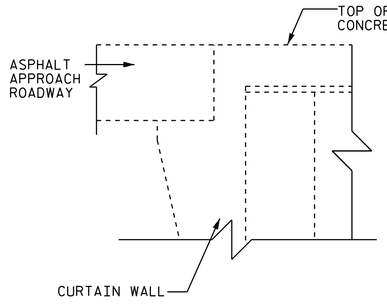
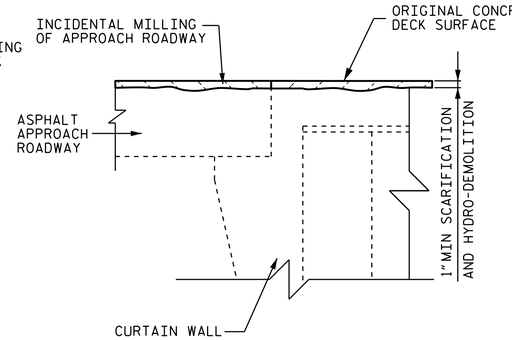
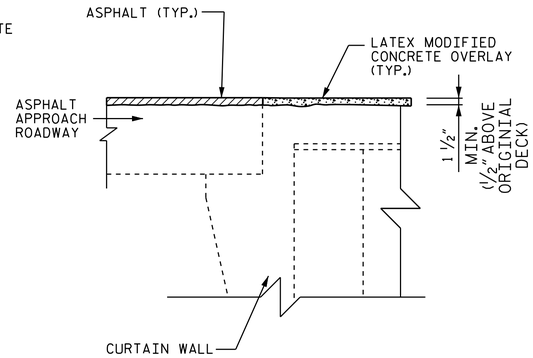


EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT

NOTES:

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE OR IF UNSOUND CONCRETE IS REMOVED TO WITHIN 2" OF THE WATERSTOP, THE ENTIRE WATERSTOP SHALL BE REMOVED.

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT AND LEVEL, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC CONCRETE.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

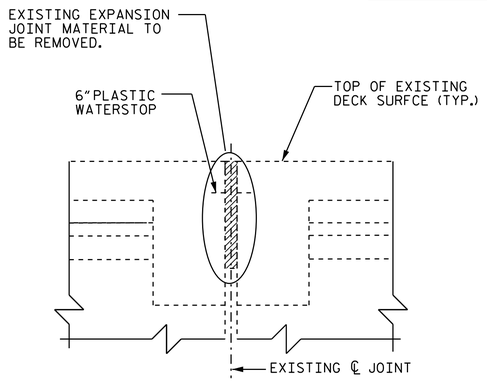
FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

THE WIDTH OF THE UNCOMPRESSED FOAM JOINT MATERIAL SHALL BE 2".

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A



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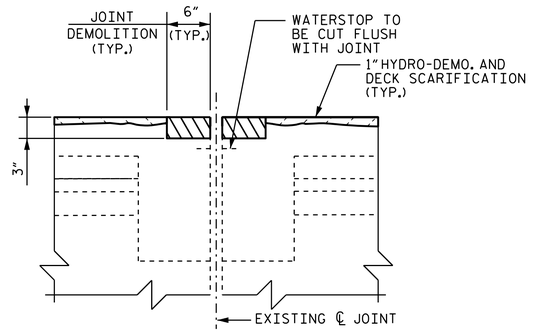
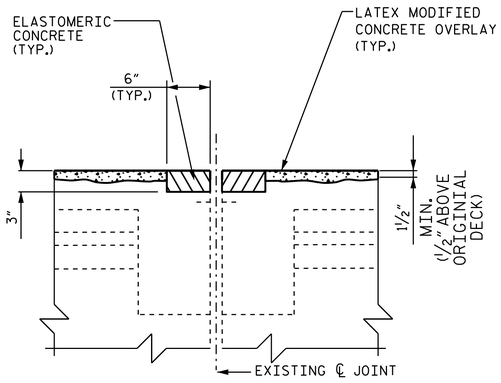
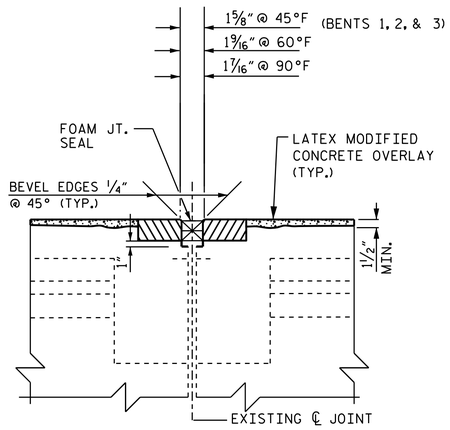


MINIMUM EXISTING JOINT DEMOLITION



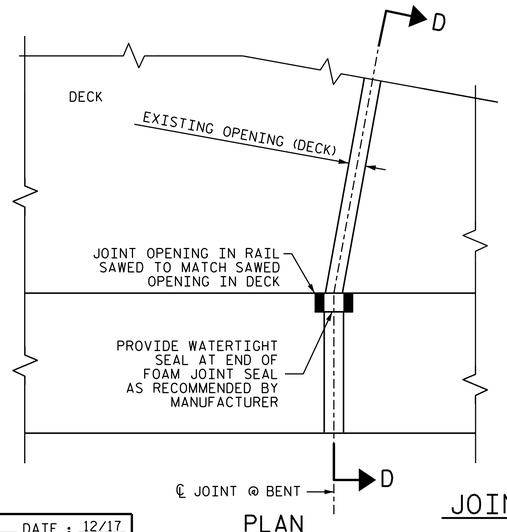
PROPOSED JOINT PRE-SAWED DIMENSIONS



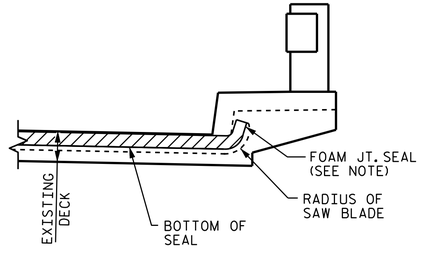
PROPOSED FOAM JOINT SEAL EXPANSION

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B



PLAN



SECTION D-D

FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP.

ELASTOMERIC CONCRETE (CU. FT.)	
BENT 1	30.5
BENT 2	30.5
BENT 3	30.5

JOINT SEAL DETAILS AT BENT

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SUPERSTRUCTURE

JOINT DETAILS

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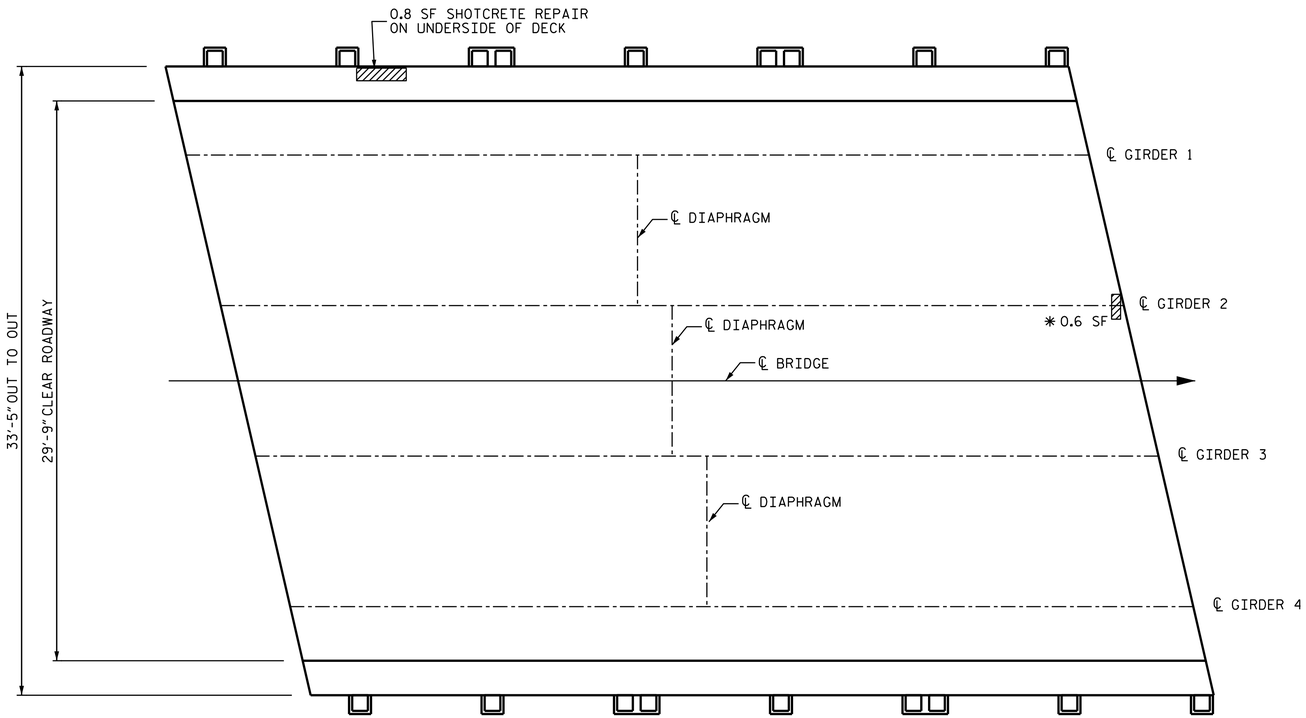

SPAN A

REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS

SHOTCRETE REPAIRS	ESTIMATE AREA SF	ESTIMATE VOLUME CF	ACTUAL AREA SF	ACTUAL VOLUME CF
UNDERSIDE OF DECK & OVERHANGS	0.8	0.23		
BENT DIAPHRAGMS	0.0	0.0		
PRESTRESSED GIRDERS	0.6	0.20		

	ESTIMATE	ACTUAL
EPOXY RESIN INJECTION	0.0 LF	

VALUES IN CHARTS REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE. SEE REPAIR DETAILS.

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPARIS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REAPRIS AND ADJSUT THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR BENT DIAPHRAGM AND PRESTRESSED CONCRETE GIRDER REPAIR DETAILS SEE SHEET S-14.

✱ SHOTCRETE REPAIR AT BOTTOM OF GIRDER OVER BEARING

▨ SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

UNDERSIDE OF SPAN A

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

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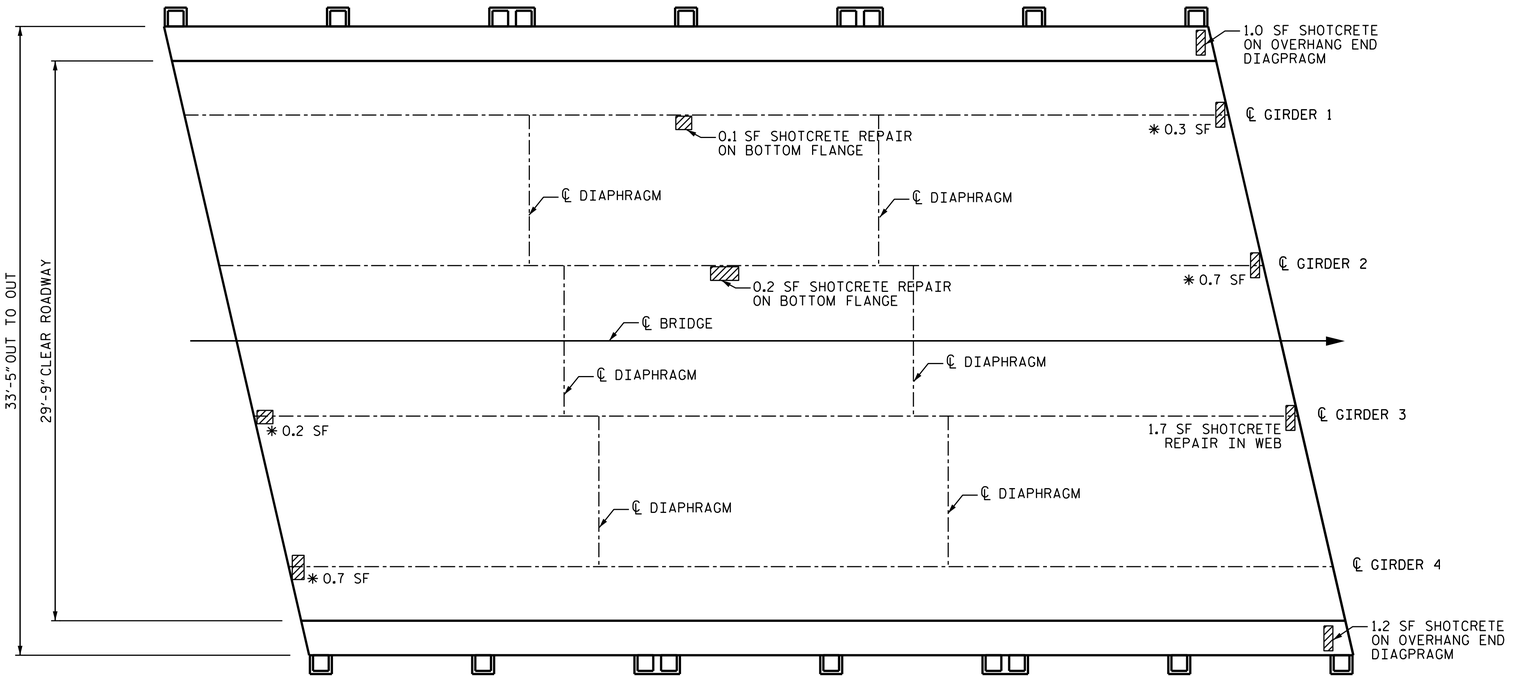

SPAN B

REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK & OVERHANGS	2.2	0.75		
BENT DIAPHRAGMS	0.0	0.0		
PRESTRESSED GIRDERS	3.9	1.30		
	ESTIMATE		ACTUAL	
EPOXY RESIN INJECTION	0.0 LF			

VALUES IN CHARTS REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE. SEE REPAIR DETAILS.

NOTES:

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FOR BENT DIAPHRAGM AND PRESTRESSED CONCRETE GIRDER REPAIR DETAILS SEE SHEET S-14.

* SHOTCRETE REPAIR AT BOTTOM OF GIRDER OVER BEARING

SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

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NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

PROJECT NO. 5BPR.3.2
WAKE COUNTY
BRIDGE NO. 103

SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

UNDERSIDE OF SPAN B

REVISIONS						SHEET NO.
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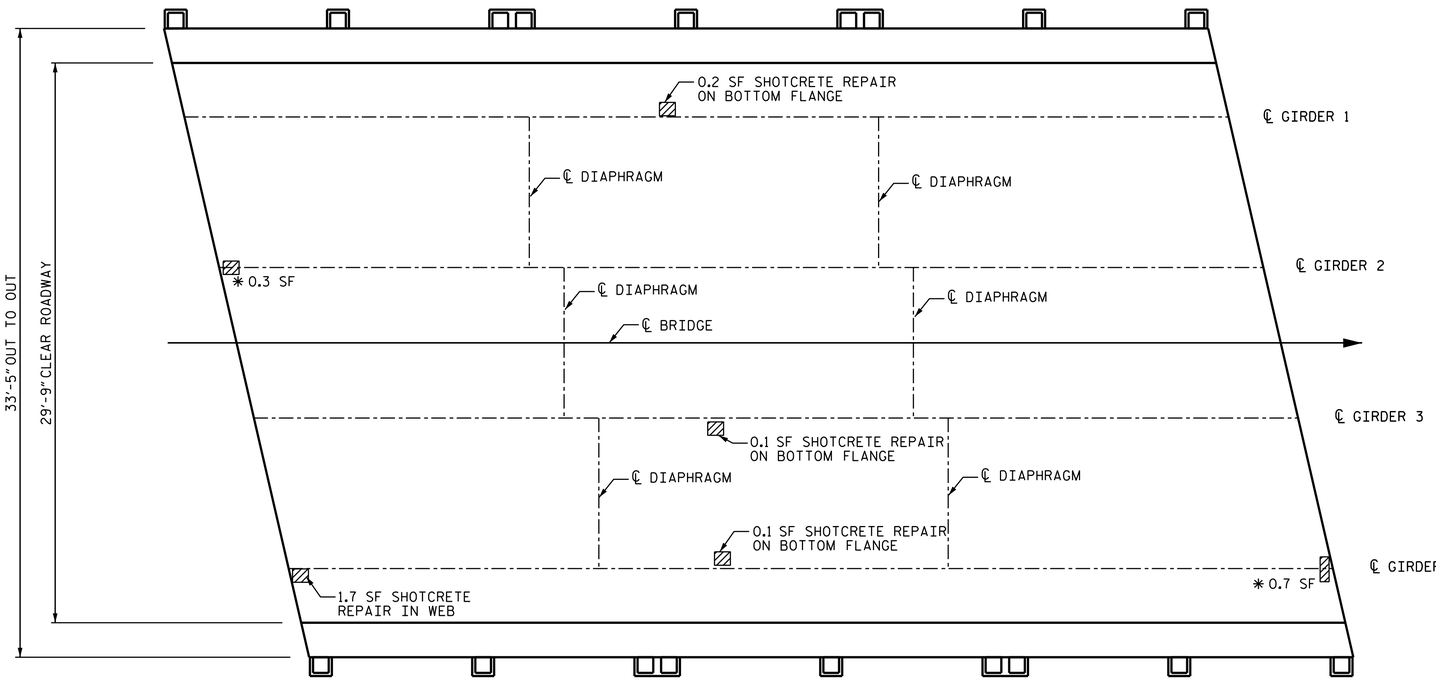

SPAN C

REPAIR QUANTITY TABLE				
UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK & OVERHANGS	1.4	0.47		
BENT DIAPHRAGMS	0.0	0.0		
PRESTRESSED GIRDERS	3.1	1.03		
	ESTIMATE		ACTUAL	
EPOXY RESIN INJECTION	0.0 LF			

VALUES IN CHARTS REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE. SEE REPAIR DETAILS.

NOTES:

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FOR BENT DIAPHRAGM AND PRESTRESSED CONCRETE GIRDER REPAIR DETAILS SEE SHEET S-14.

✳ SHOTCRETE REPAIR AT BOTTOM OF GIRDER OVER BEARING

▨ SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

UNDERSIDE OF SPAN C

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

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1			3			TOTAL SHEETS
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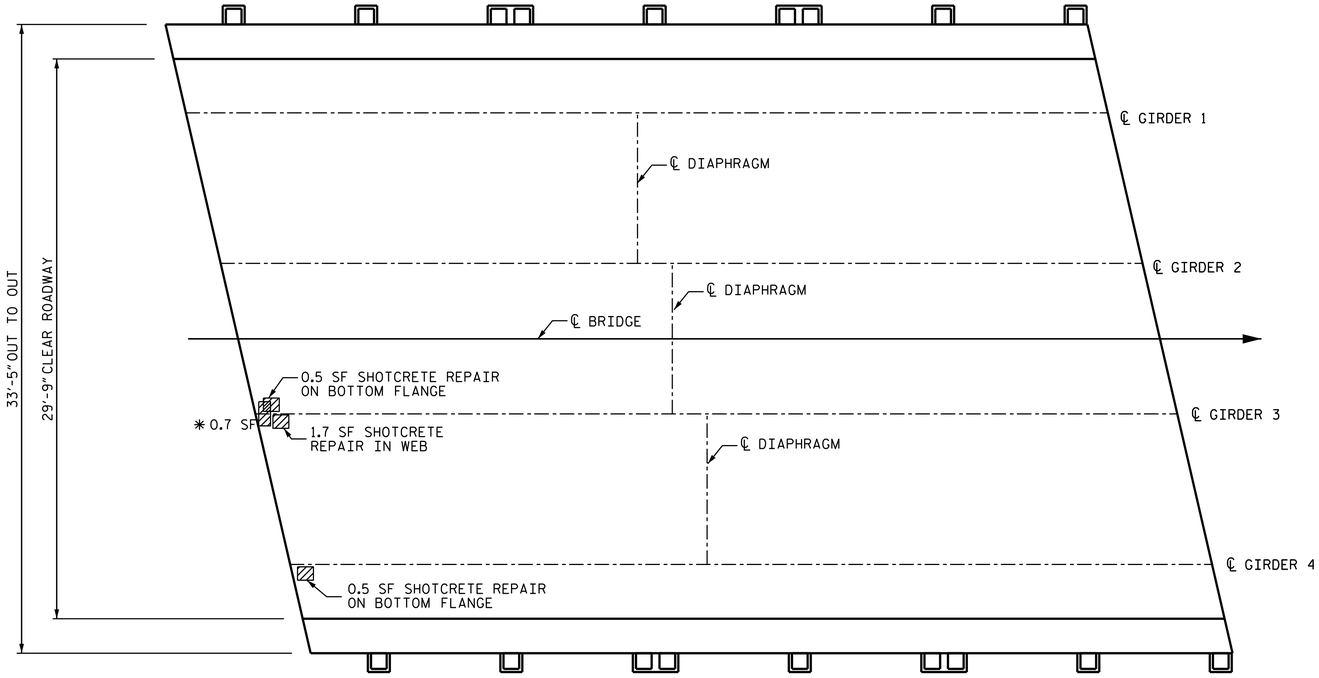

SPAN D

REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS

SHOTCRETE REPAIRS	ESTIMATE AREA SF	ESTIMATE VOLUME CF	ACTUAL AREA SF	ACTUAL VOLUME CF
UNDERSIDE OF DECK & OVERHANGS	0.0	0.0		
BENT DIAPHRAGMS	0.0	0.0		
PRESTRESSED GIRDERS	3.4	1.13		

	ESTIMATE	ACTUAL
EPOXY RESIN INJECTION	0.0 LF	

VALUES IN CHARTS REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE. SEE REPAIR DETAILS.

NOTES:

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FOR BENT DIAPHRAGM AND PRESTRESSED CONCRETE GIRDER REPAIR DETAILS SEE SHEET S-14.

* SHOTCRETE REPAIR AT BOTTOM OF GIRDER OVER BEARING

▨ SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

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WAKE COUNTY

BRIDGE NO. 103

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

UNDERSIDE OF SPAN D

REVISIONS						SHEET NO.
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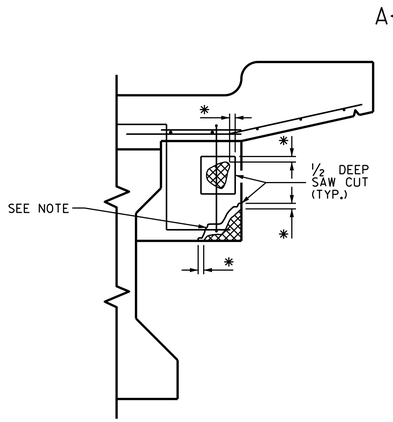

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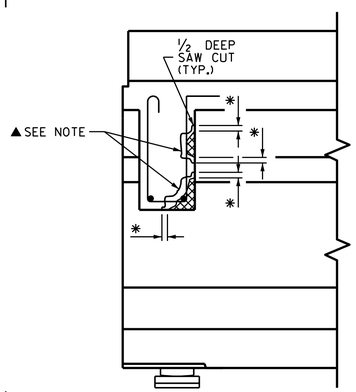
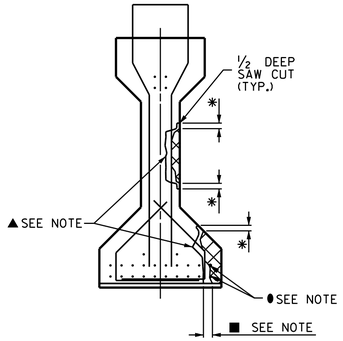


SECTION A-A



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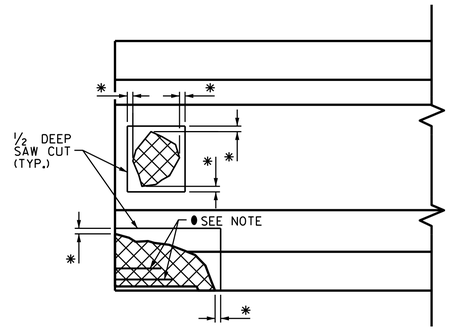


ELEVATION

PRESTRESSED GIRDER REPAIR DETAIL

(EXAMPLE DETAILS ONLY. ACTUAL REBAR SIZE & LOCATION MAY VARY)

OVERHANG DIAPHRAGM REPAIR DETAIL

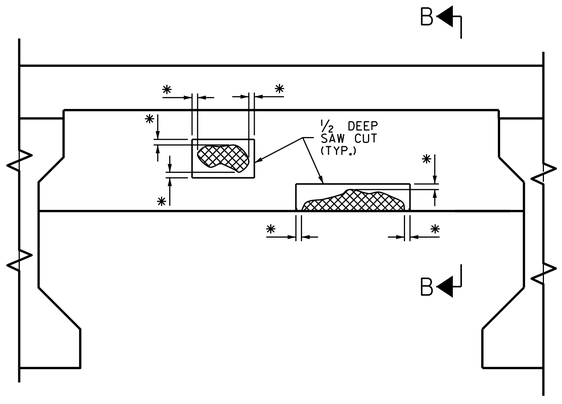
(EXAMPLE DETAILS ONLY. ACTUAL REBAR SIZE & LOCATION MAY VARY)

PRESTRESSED GIRDER REPAIR SEQUENCE:

1. SOUND CONCRETE TO DETERMINE EXTENTS OF REPAIR LOCATION.
2. REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL. SAW CUT AROUND REPAIR AREA TO A MINIMUM DEPTH OF ½".
3. REMOVE CONCRETE WITHIN SAW CUT AREA TO MINIMUM ½" DEPTH. IF CONCRETE IS DAMAGED BEYOND THE ORIGINAL SAW CUT, A NEW SAW CUT IS REQUIRED.
4. ▲ IF MORE THAN HALF THE CIRCUMFERENCE OF A REINFORCING BAR IS EXPOSED DURING THIS PROCESS, REMOVE ADDITIONAL CONCRETE TO 1" MIN. BEHIND THE BAR.
5. ■ ALL UNSOUND CONCRETE MUST BE REMOVED, HOWEVER, PRESTRESSED STRANDS SHOULD NOT BE DISTURBED UNLESS ABSOLUTELY NECESSARY. USE EXTREME CARE TO NOT DAMAGE STRANDS.
6. ⬮ THE ENGINEER SHALL BE NOTIFIED OF ALL DEBONDED STRANDS. DEBONDED STRANDS OUTSIDE OF REINFORCING STEEL MAYBE CUT BACK TO WHERE THE BOND IS STILL INTACT AT THE ENGINEERS DISCRETION.
7. USE A WIRE BRUSH TO CLEAN ALL EXPOSED REINFORCING BARS AND PRESTRESSED STRANDS. FOR BARS WITH MORE THAN 10% SECTION LOSS, SPLICE AND SECURELY TIE SUPPLEMENTAL REINFORCING BARS AS NEEDED. NOTE AND PROVIDE DETAILED DOCUMENTATION, INCLUDING LOCATION AND SEVERITY, OF ALL DAMAGE TO PRESTRESSED STRANDS THAT EXCEEDS 10% SECTION LOSS. IF FIVE OR MORE STRANDS ARE DAMAGED, NOTIFY THE ENGINEER PRIOR TO PLACEMENT OF REPAIR MATERIAL.
8. REMOVE ALL LOOSE OR WEAKENED MATERIAL THEN CLEAN THE REPAIR AREA OF DIRT, GREASE, OIL, AND FOREIGN MATTER.
9. PREPARE SURFACE AND PLACE APPROVED SHOTCRETE OR REPAIR MATERIAL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. MAXIMUM AGGREGATE SIZE FOR SHOTCRETE OR REPAIR MATERIAL SHALL NOT EXCEED 2/3 THE MINIMUM REPAIR DEPTH.
10. USE SPECIAL PROVISIONS FOR SHOTCRETE OR SPECIAL PROVISIONS FOR CONCRETE REPAIR, TO PERFORM THIS WORK.

* ½"DEEP SAW CUT SHALL BE PLACED 1" INTO SOUND CONCRETE.

▨ DAMAGED AREA



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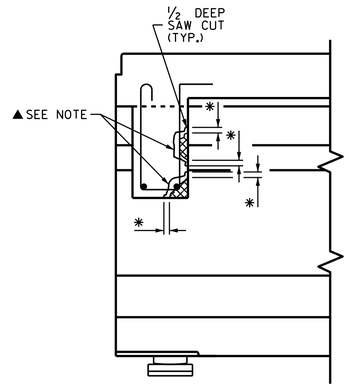

SECTION B-B

BENT DIAPHRAGM REPAIR DETAIL

(EXAMPLE DETAILS ONLY. ACTUAL REBAR SIZE & LOCATION MAY VARY)

PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL GIRDER, DIAPHRAGM REPAIR DETAILS

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

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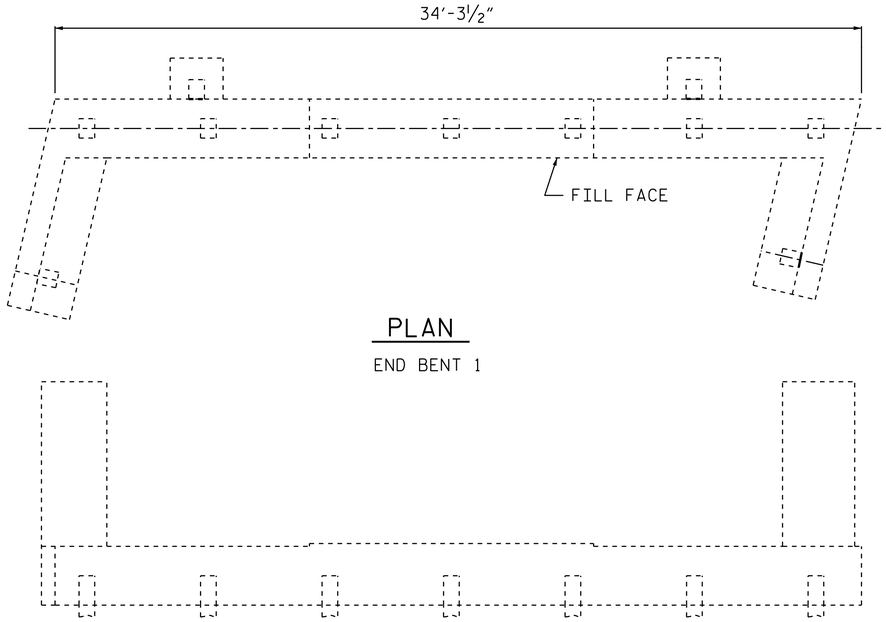
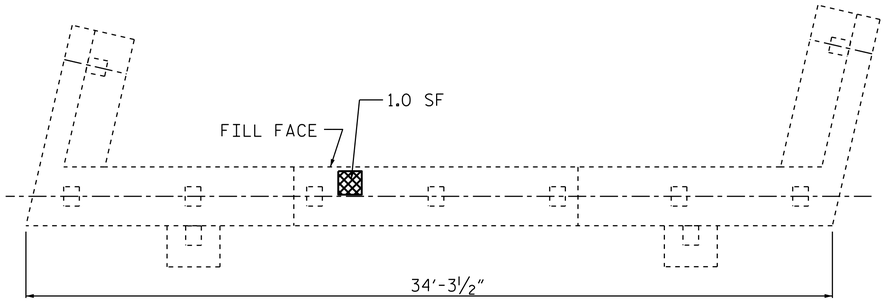


PLAN

END BENT 1

ELEVATION

END BENT 1



PLAN

END BENT 2

ELEVATION

END BENT 2

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

CONTRACTOR SHALL SAW CUT TO A MINIMUM DEPTH OF ½" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		
SHOTCRETE REPAIR	0.0	0.0		

EPOXY RESIN INJECTION	LN. FT		LN. FT
CAP	0.0		
COLUMN	0.0		

EPOXY COATING	AREA SF
TOP OF CAP	86.0

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	1.0	0.5		
COLUMN	0.0	0.0		
SHOTCRETE REPAIR	1.0	0.5		

EPOXY RESIN INJECTION	LN. FT		LN. FT
CAP	0.0		
COLUMN	0.0		

EPOXY COATING	AREA SF
TOP OF CAP	86.0

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE. SEE REPAIR DETAILS.

▨ - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

END BENTS

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

DocuSigned by: Greg Dickey 884E46B8CE5B486...

3/2/2018

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1			3			TOTAL SHEETS
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CHECKED BY : W.C. SMITH DATE : 12/17

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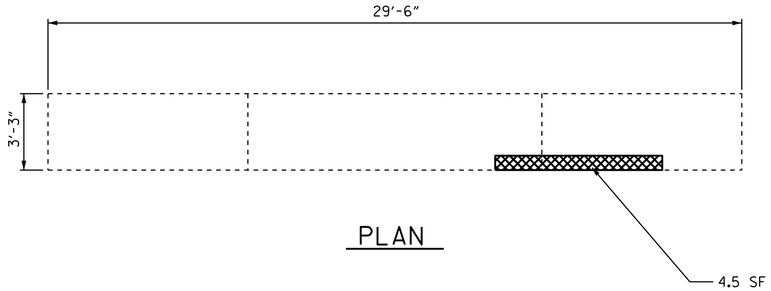

PLAN

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

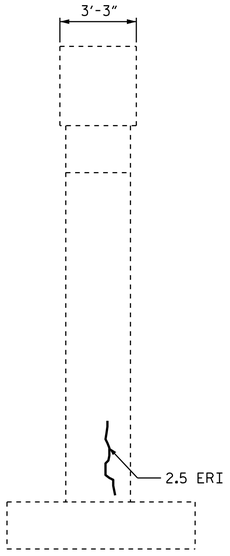
REPAIR QUANTITY TABLE

BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	26.4	13.2		
CAP (HORIZONTAL FACE)	4.5	2.25		
COLUMN	0.0	0.0		
SHOTCRETE REPAIR	30.9	15.5		

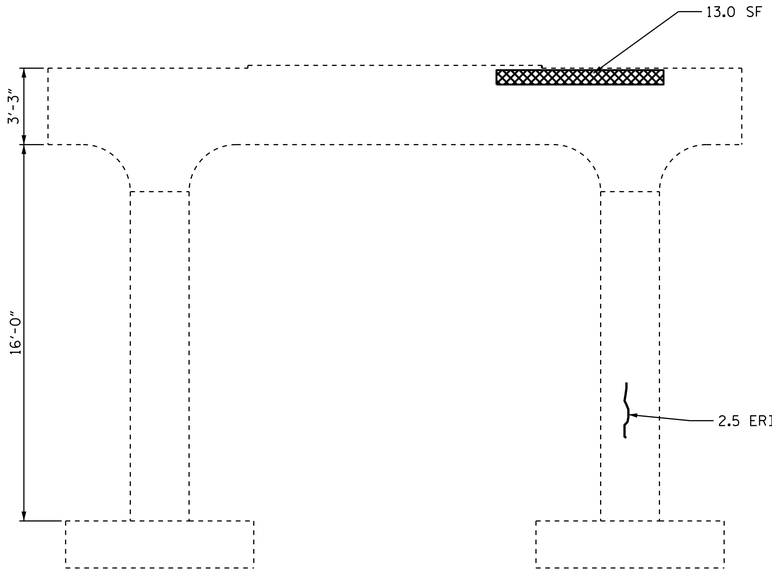
EPOXY RESIN INJECTION	LN. FT		LN. FT
CAP	0.0		
COLUMN	5.0		

EPOXY COATING	AREA SF
TOP OF CAP	95.8

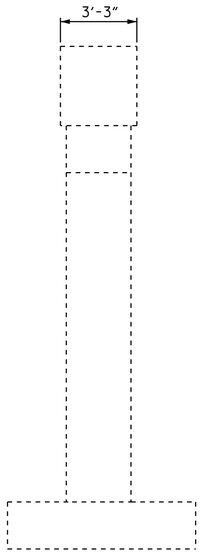
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE. SEE REPAIR DETAILS.



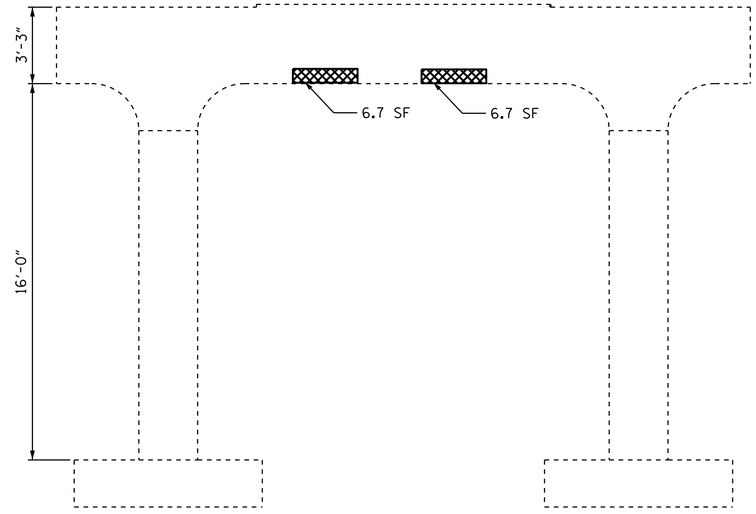
END VIEW
NORTH SIDE



ELEVATION
WEST SIDE



END VIEW
SOUTH SIDE



ELEVATION
EAST SIDE

PLAN
BOTTOM OF CAP
(LOOKING UP)

▨ - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

BENT 1

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

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3/2/2018

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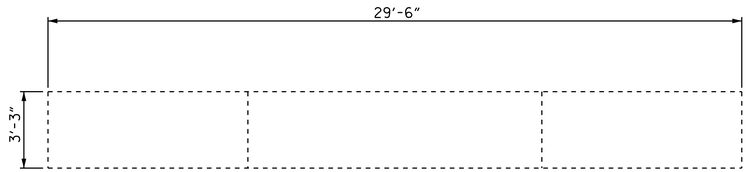

PLAN

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

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CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

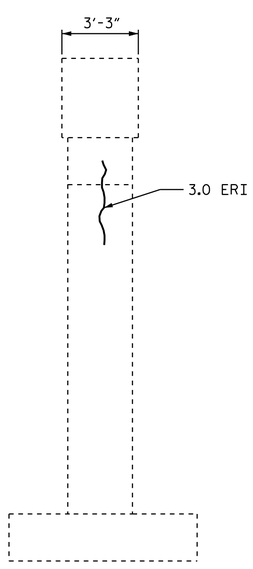
FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

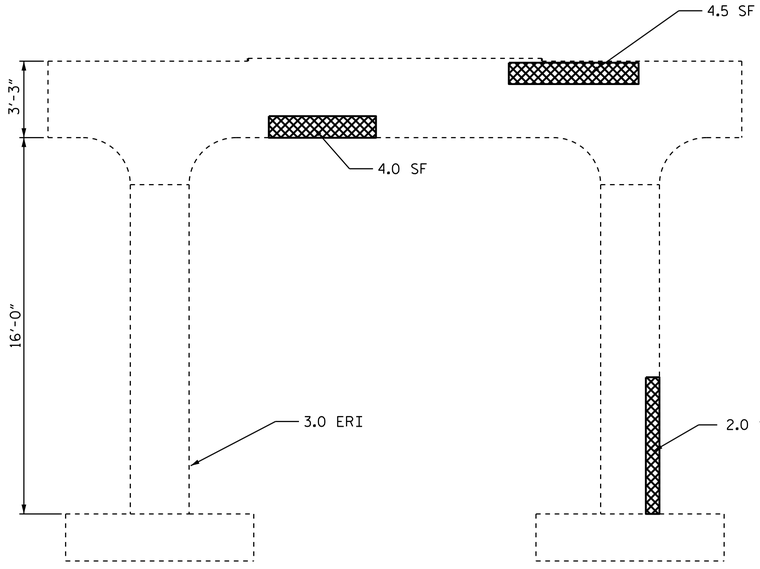
REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	9.5	4.8		
CAP (HORIZONTAL FACE)	1.7	0.9		
COLUMN	4.0	2.0		
SHOTCRETE REPAIR	15.2	7.6		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		10.0		
EPOXY COATING	AREA SF			
TOP OF CAP	95.8			

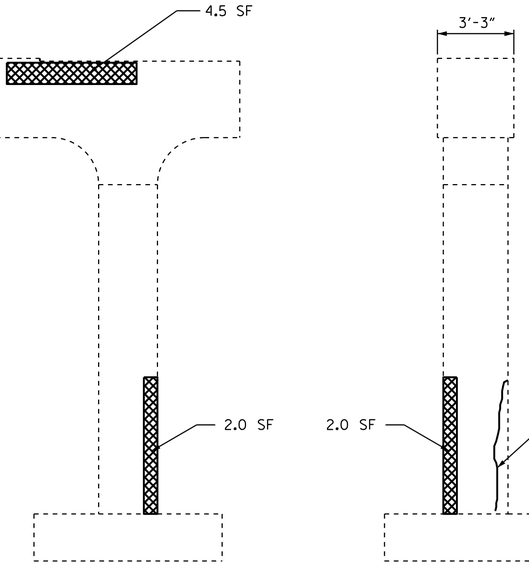
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE. SEE REPAIR DETAILS.



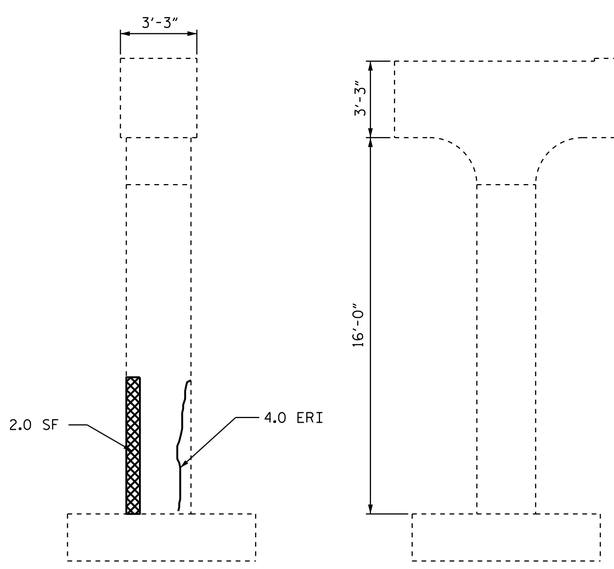
END VIEW
NORTH SIDE



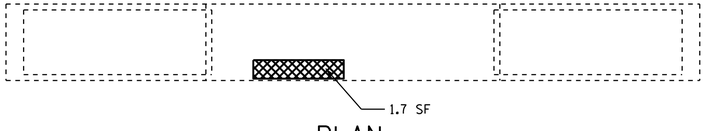
ELEVATION
WEST SIDE



END VIEW
SOUTH SIDE



ELEVATION
EAST SIDE



PLAN
BOTTOM OF CAP
(LOOKING UP)

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

DocuSigned by: Greg Dickey 804E468DCE5D4B6...
3/2/2018

PROJECT NO. 5BPR.3.2
WAKE COUNTY
BRIDGE NO. 103

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

BENT 2

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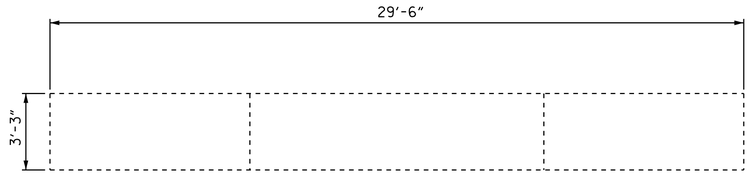

PLAN

NOTES:

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

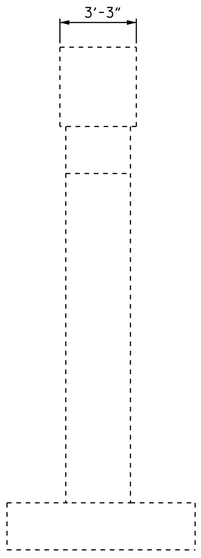
FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

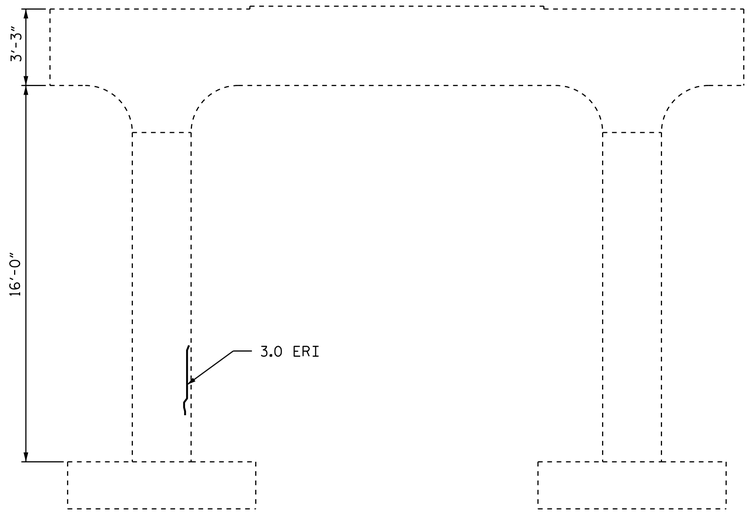
REPAIR QUANTITY TABLE

BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	47.7	23.9		
CAP (HORIZONTAL FACE)	3.0	1.5		
COLUMN	0.0	0.0		
SHOTCRETE REPAIR	50.7	25.4		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		6.0		
EPOXY COATING	AREA SF			
TOP OF CAP	95.8			

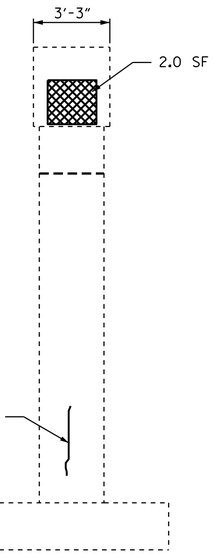
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE. SEE REPAIR DETAILS.



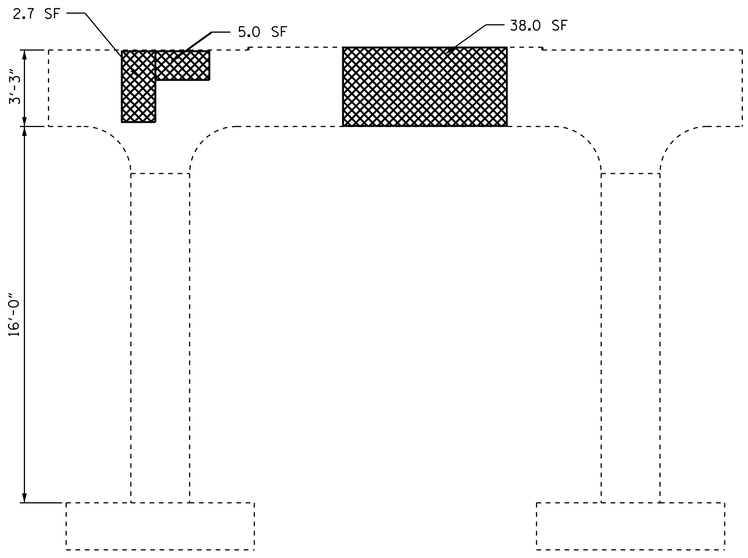
END VIEW
NORTH SIDE



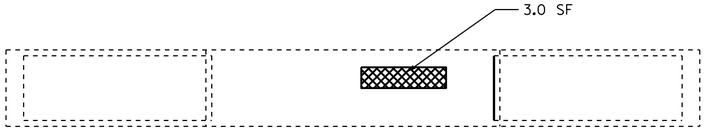
ELEVATION
WEST SIDE



END VIEW
SOUTH SIDE



ELEVATION
EAST SIDE



PLAN
BOTTOM OF CAP
(LOOKING UP)

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

DocuSigned by:
Greg Dickey
884E46B8CE5B4B6...
3/2/2018

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

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PROJECT NO. 5BPR.3.2
WAKE COUNTY
BRIDGE NO. 103

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

BENT 3

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-18
1			3			TOTAL SHEETS
2			4			19

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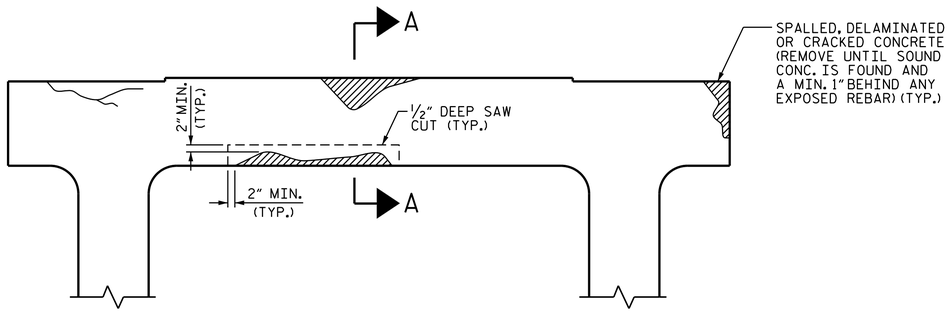
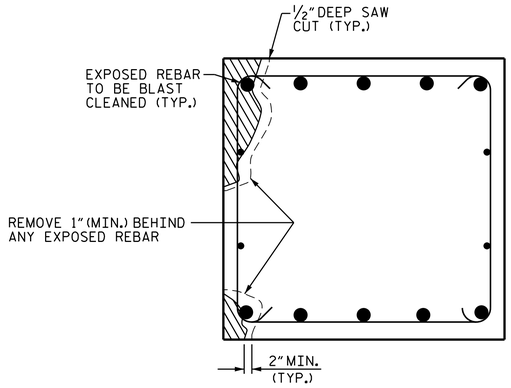


BENT CAP REPAIRS



SECTION A-A

NOTES:

CONTRACTOR SHALL SAW CUT TO A NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

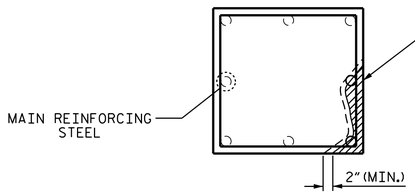
CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

CONCRETE REPAIRS MAY BE SUBSTIITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

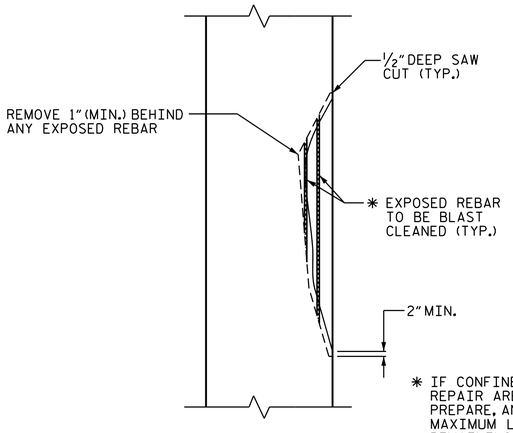
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.



PLAN OF COLUMN



ELEVATION OF COLUMN

* IF CONFINEMENT STEEL IS NOT PRESENT AND REPAIR AREA EXCEEDS 10'-0" IN LENGTH, EXCAVATE, PREPARE, AND COMPLETE REPAIR SEGMENTS OF A MAXIMUM LENGTH OF 10 FEET, PRIOR TO REPAIRING REMAINING PORTION OF REPAIR AREA.

COLUMN REPAIR

PROJECT NO. 5BPR.3.2

WAKE COUNTY

BRIDGE NO. 103

NORTH CAROLINA PROFESSIONAL SEAL 21271 ENGINEER GREGORY W. DICKEY

DocuSigned by: Greg Dickey 884E46BBCE5B4B6...

3/2/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL CAP AND COLUMN REPAIR DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-19
1			3			TOTAL SHEETS
2			4			19

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