

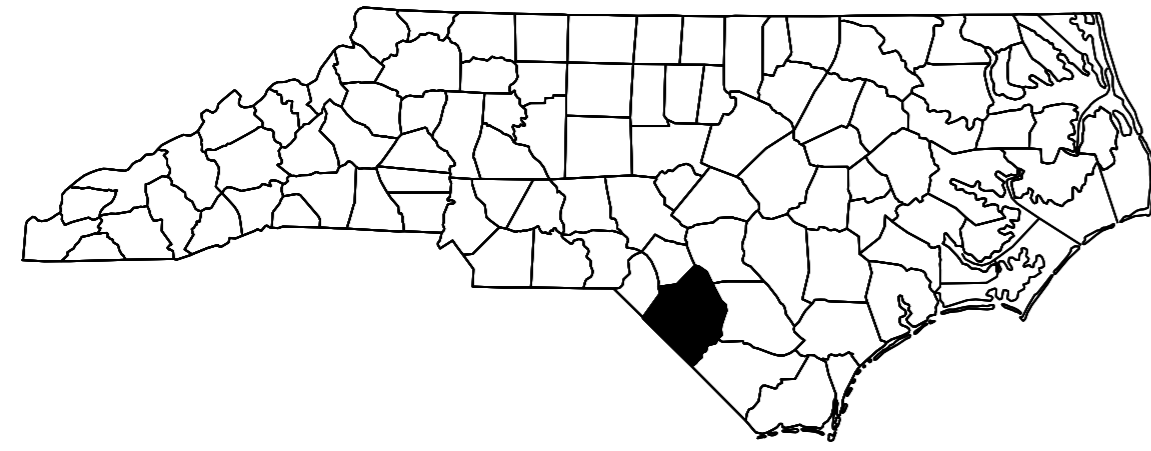
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PROJECT: I-5308

CONTRACT NO: C203549



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROBESON COUNTY

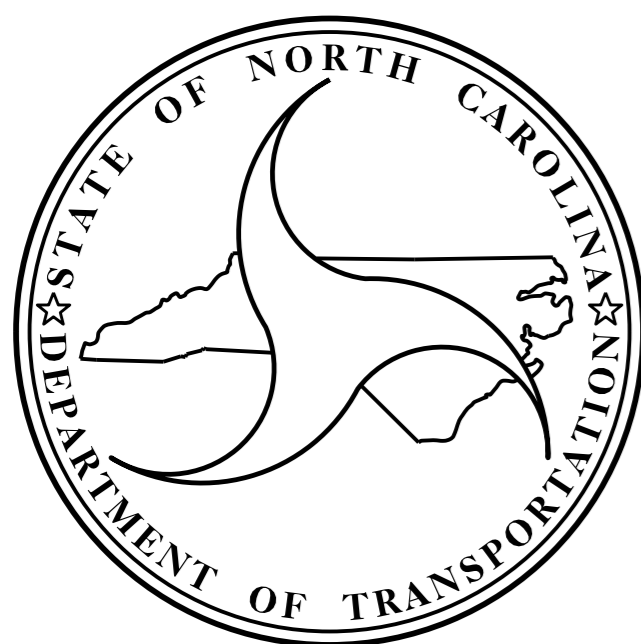
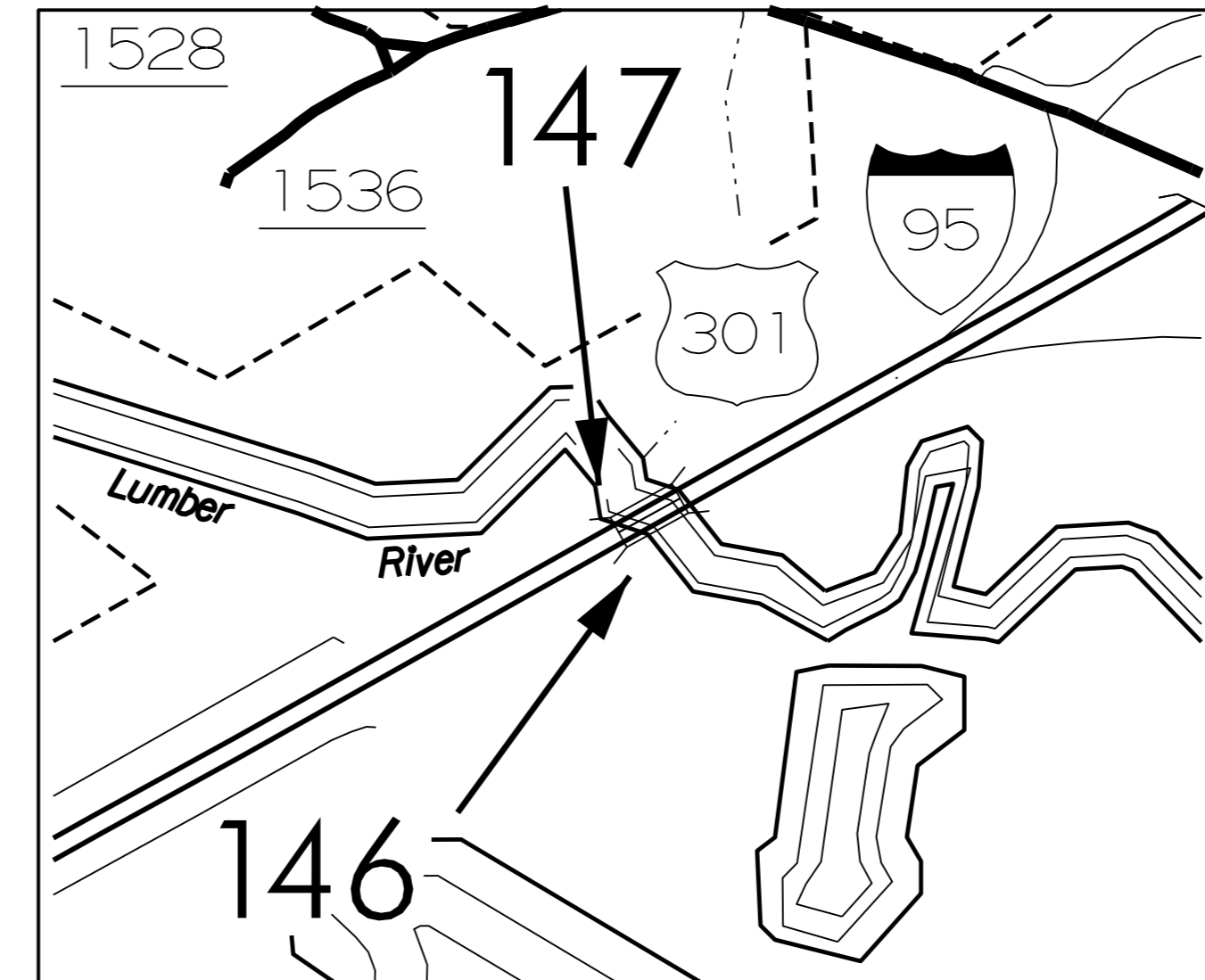
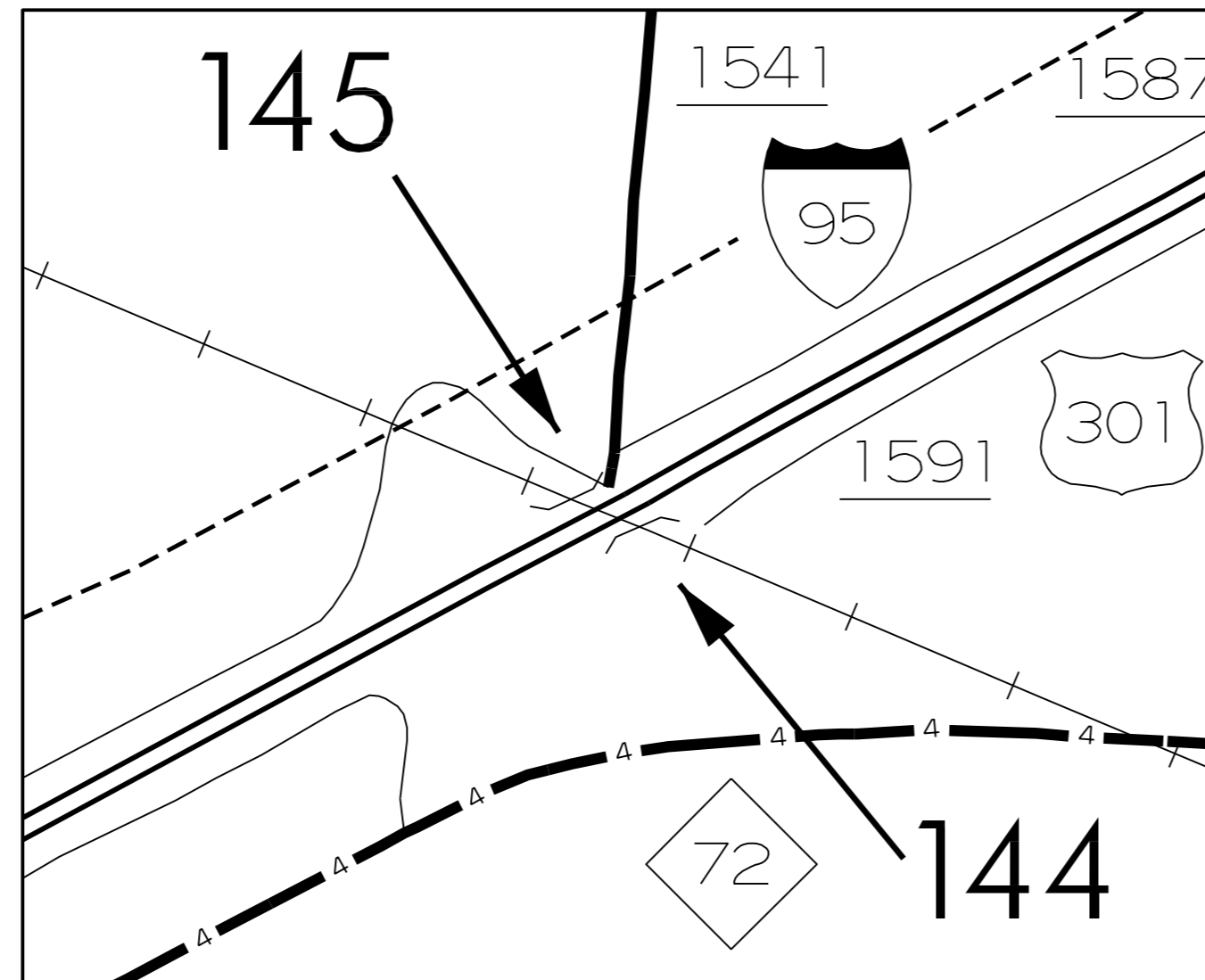
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5308	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47031.1.FS1		P.E.	
47031.1.FS1	—	CONST.	

LOCATION:

BRIDGE #144 ON I-95 NBL OVER SR 1541 & CSXRR
BRIDGE #145 ON I-95 SBL OVER SR 1541 & CSXRR
BRIDGE #146 ON I-95 NBL OVER THE LUMBER RIVER
BRIDGE #147 ON I-95 SBL OVER THE LUMBER RIVER

TYPE OF WORK:

BRIDGE PRESERVATION - LATEX MODIFIED CONCRETE OVERLAY & EPOXY OVERLAY SYSTEM OF EXISTING BRIDGE STRUCTURES



DESIGN DATA

BRIDGE #144 & #145 - ADT - 26,500
BRIDGE #146 & #147 - ADT - 26,500

PROJECT LENGTH

BRIDGE #144 & #145 - .03 MILE
BRIDGE #146 & #147 - .09 MILE

Prepared In the Office of:
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

TIMOTHY M. SHERRILL, P.E.
PROJECT ENGINEER

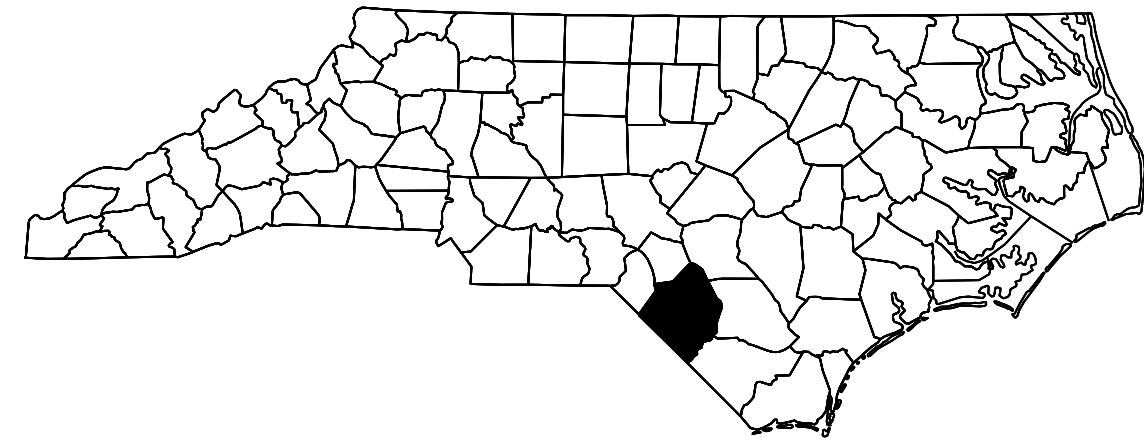
2012 STANDARD SPECIFICATIONS

LETTING DATE:
MAY 19, 2015

FARZIN ASEFNIA, P.E.
PROJECT DESIGN ENGINEER

PROJECT: I-5308

CONTRACT NO: C203549



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROBESON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5308	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47031.1.FS1		P.E.	
47031.1.FS1	—	CONST.	

LOCATION:

BRIDGE #144 ON I-95 NBL OVER SR 1541 & CSXRR
BRIDGE #145 ON I-95 SBL OVER SR 1541 & CSXRR
BRIDGE #146 ON I-95 NBL OVER THE LUMBER RIVER
BRIDGE #147 ON I-95 SBL OVER THE LUMBER RIVER

TYPE OF WORK:

BRIDGE PRESERVATION - LATEX MODIFIED CONCRETE OVERLAY
EPOXY OVERLAY SYSTEM OF EXISTING BRIDGE STRUCTURES

INDEX OF SHEETS

SHEET NO.

1

1A

S-1 THRU S-23

SN

DESCRIPTION

TITLE SHEET

INDEX OF SHEETS

STRUCTURAL PLANS

STANDARD NOTES

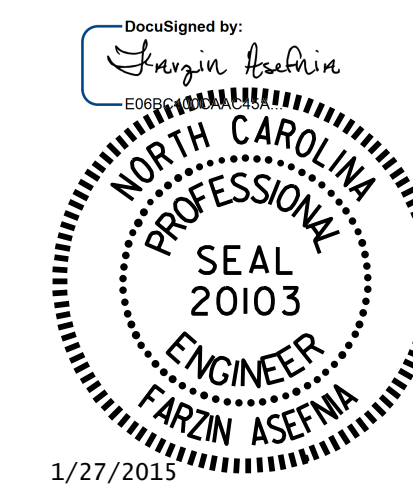
TOTAL BILL OF MATERIAL

BRIDGE NO.	GROOVING BRIDGE FLOORS	POLLUTION CONTROL	CLASS II SURFACE PREPARATION	FOAM JOINT SEALS	CLEANING & REPAINTING OF EXISTING STRUCTURAL STEEL BRIDGE*-----	PAINTING CONTAINMENT FOR BRIDGE*-----	LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH	BRIDGE JOINT DEMOLITION	EPOXY OVERLAY SYSTEM	HYDRO-DEMOLITION OF BRIDGE DECK	PLACING & FINISHING LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH	SCARIFYING BRIDGE DECK
	SQ.FT.	LUMP SUM	SO.YD.	LUMP SUM	LUMP SUM	LUMP SUM	CU.YD.	SO. FT.	SO. FT.	SO.YD.	SO.YD.	SO.YD.
144	5,616	LUMP SUM	7.2	LUMP SUM	LUMP SUM	LUMP SUM	44	98	-	704	704	704
145	5,616	LUMP SUM	7.2	LUMP SUM	LUMP SUM	LUMP SUM	44	98	-	704	704	704
146	9,214	LUMP SUM	11.4	LUMP SUM	LUMP SUM	LUMP SUM	72	208	-	1,157	1,157	1,157
147	-	-	-	-	-	-	-	-	28,600	-	-	-
TOTAL	20,446	LUMP SUM	25.8	LUMP SUM	LUMP SUM	LUMP SUM	160	404	28,600	2,565	2,565	2,565

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO. 144, 145, 146&147

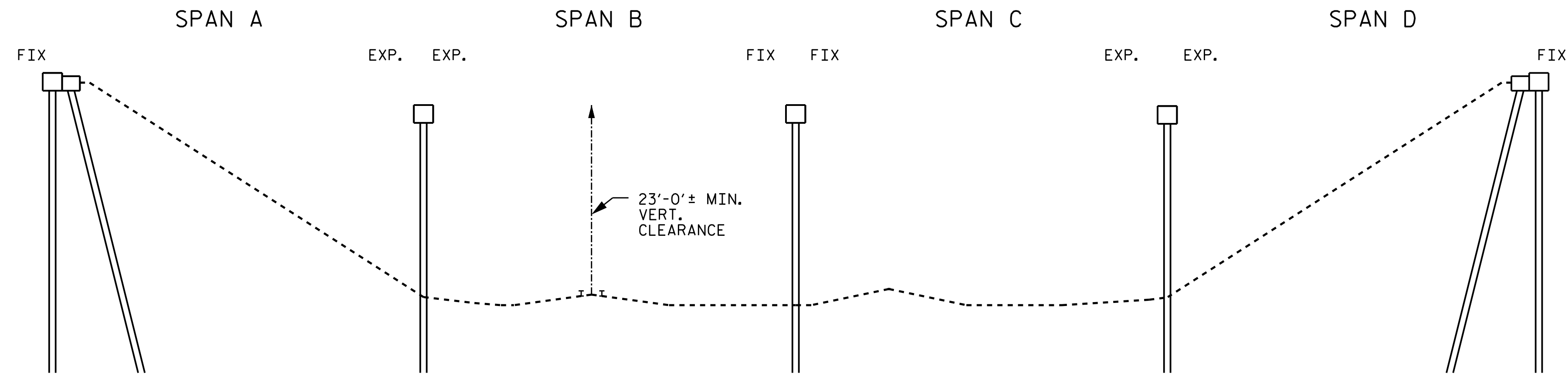
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**STRUCTURE
 TOTAL BILL
 OF MATERIAL**

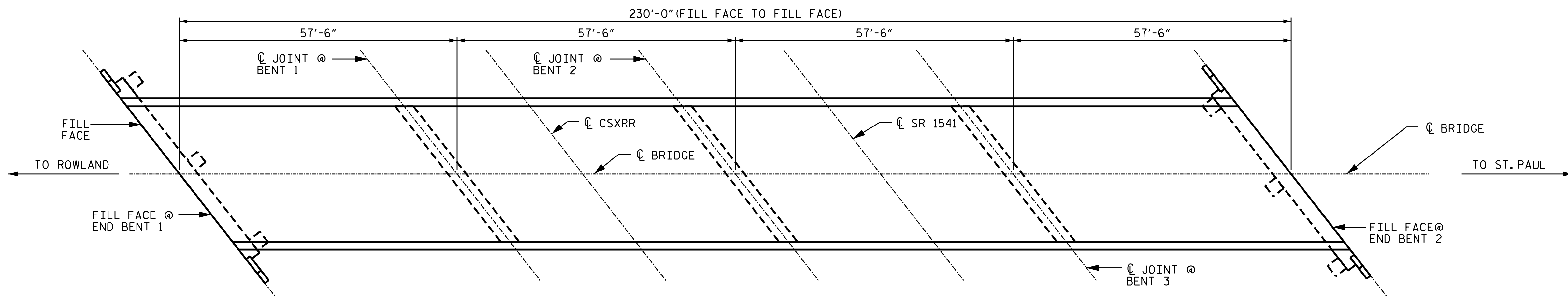


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NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			23

DRAWN BY : J. YANNACCONE DATE : 03/14
 CHECKED BY : F. ASEFNIA DATE : 03/14



SECTION PROFILE ALONG CL MEDIAN



PLAN OF SPANS
(BRIDGE 144 SHOWN, 145 SIMILAR)

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO.: 144 & 145
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

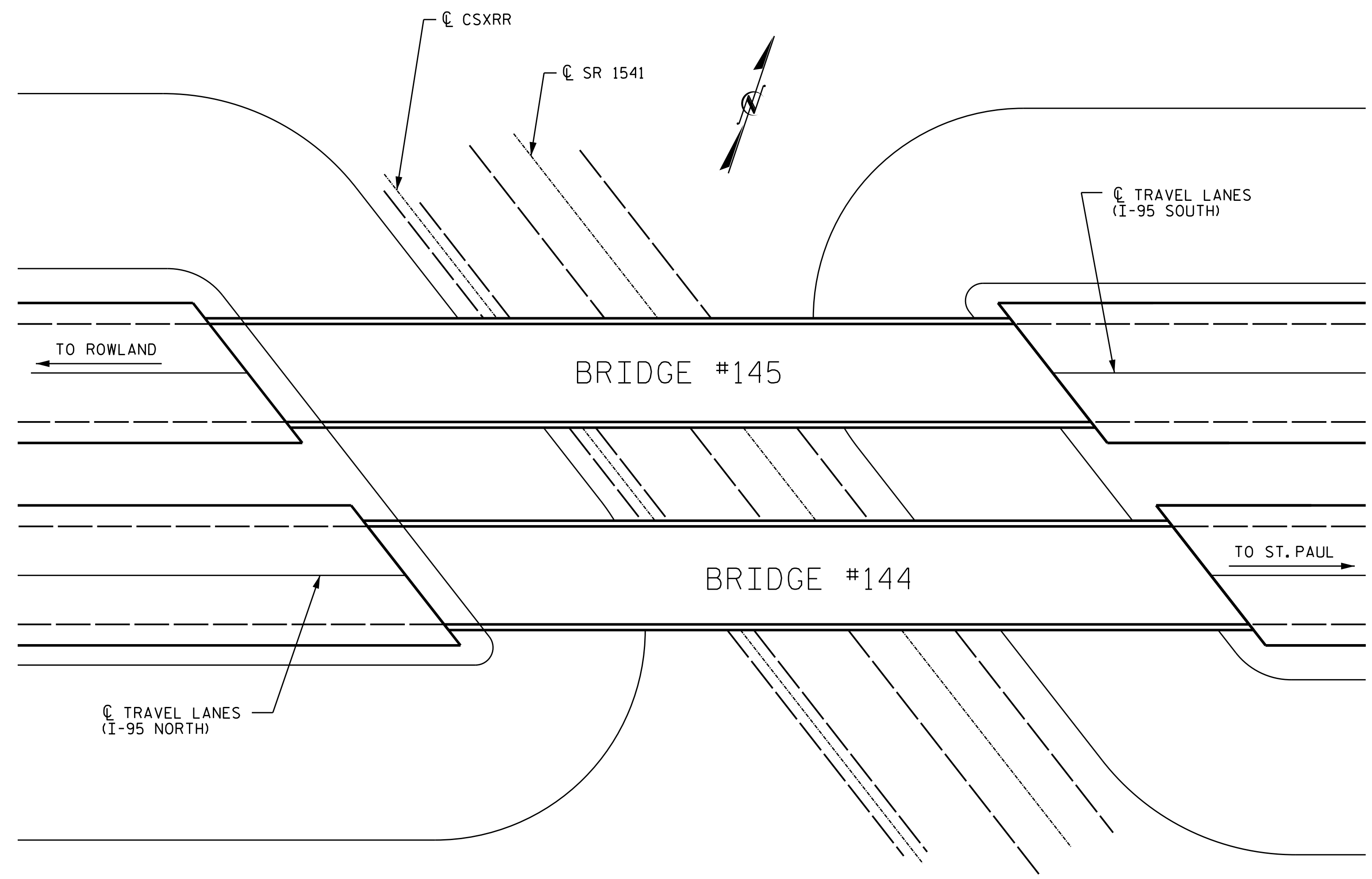
GENERAL DRAWING

BRIDGE #144 & #145 ON I-95
 OVER SR 1541 & CSXRR



DRAWN BY : M. WELDON DATE : 4/2014
 CHECKED BY : F. ASEFNIA DATE : 4/2014

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
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LOCATION SKETCH

NOTES

- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.
- 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.
- THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.
- THE CONTRACTOR MUST COLLECT, TREAT, AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.
- FOR OVERLAY SURFACE PREPARATION, SEE SPECIAL 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 LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN SHEETS.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.
- DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT FLOW OR MIGRATE INTO ACTIVE TRAVEL LANES.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- AVERAGE ASPHALT THICKNESS ON BRIDGE DECKS IS 2 3/8".
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.
- SEE ROADWAY PLANS FOR PROPOSED APPROACH PAVEMENT REHABILITATION AND ELEVATIONS. NEW APPROACH PAVEMENT ELEVATIONS SHALL PROVIDE SMOOTH TRANSITION FROM ROADWAY TO NEW BRIDGE DECK.

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO. 144 & 145

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

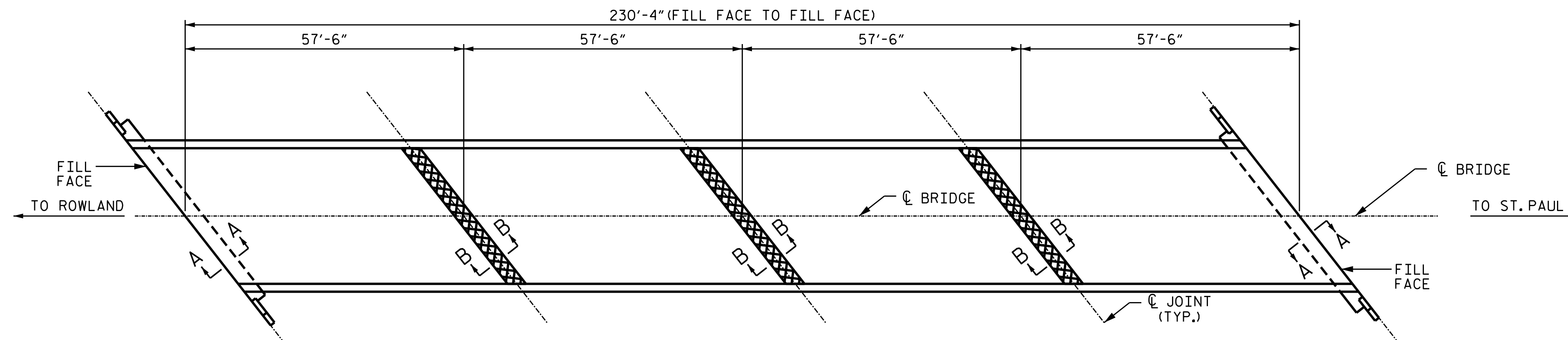
GENERAL DRAWING

BRIDGE #144 & #145 ON I-95
 OVER SR 1541 & CSXRR

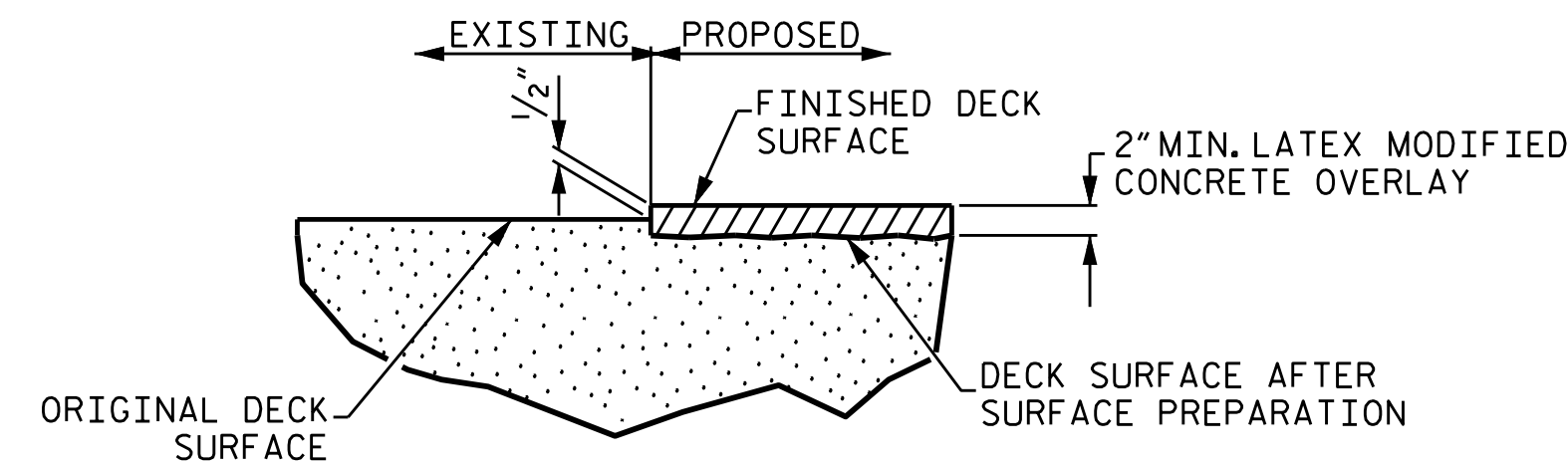
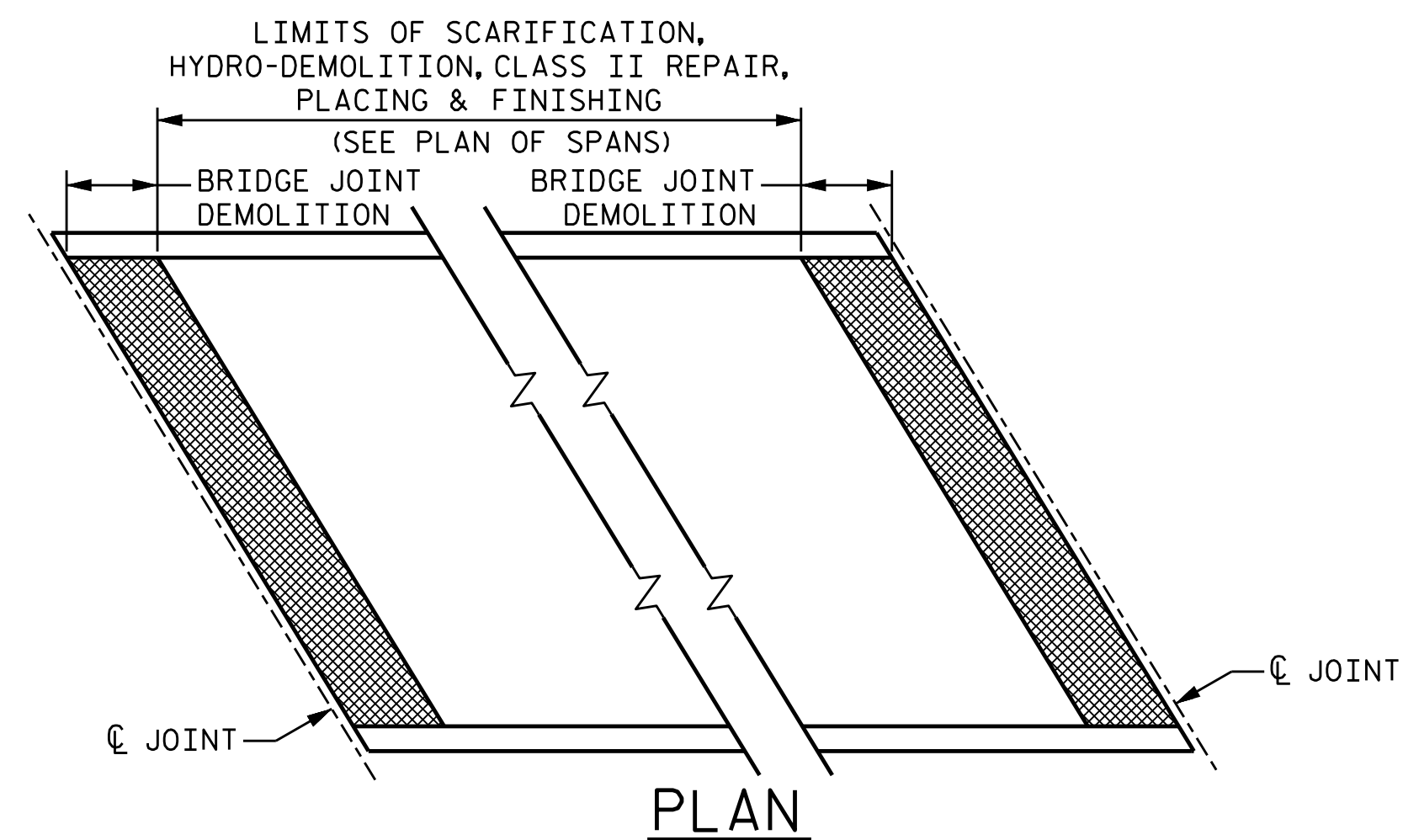


DRAWN BY : M. WELDON DATE : 11/14
 CHECKED BY : F. ASEFNIA DATE : 11/14

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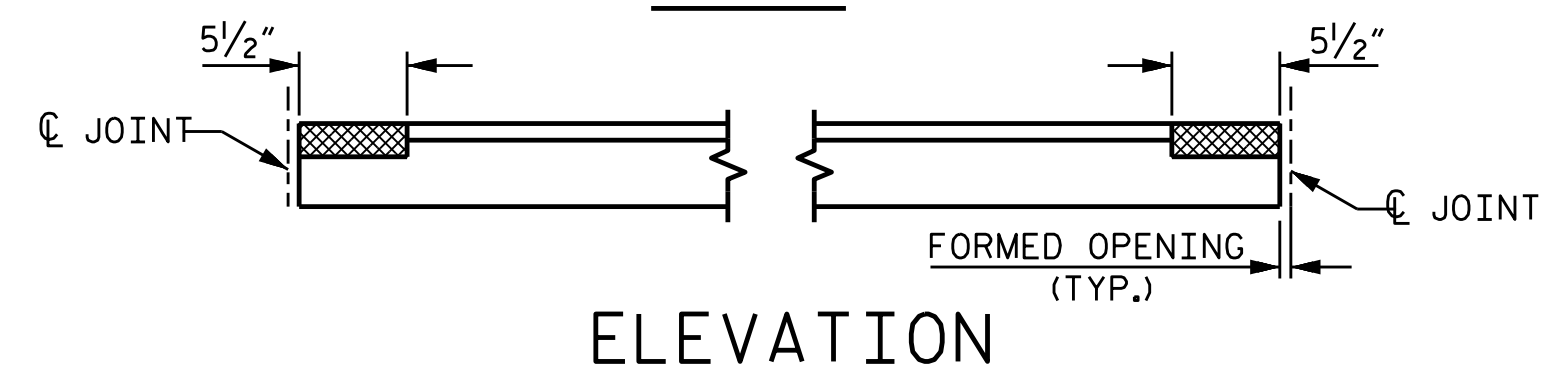


PLAN OF SPANS
(BRIDGE 144 SHOWN, 145 SIMILAR)



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH

- BRIDGE JOINT DEMOLITION
- DECK SCARIFICATION, HYDRO-DEMOLITION, AND LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH



ELEVATION

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO.: 144 & 145

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE



DRAWN BY : M. WELDON DATE : 4/2014
 CHECKED BY : F. ASEFNIA DATE : 4/2014

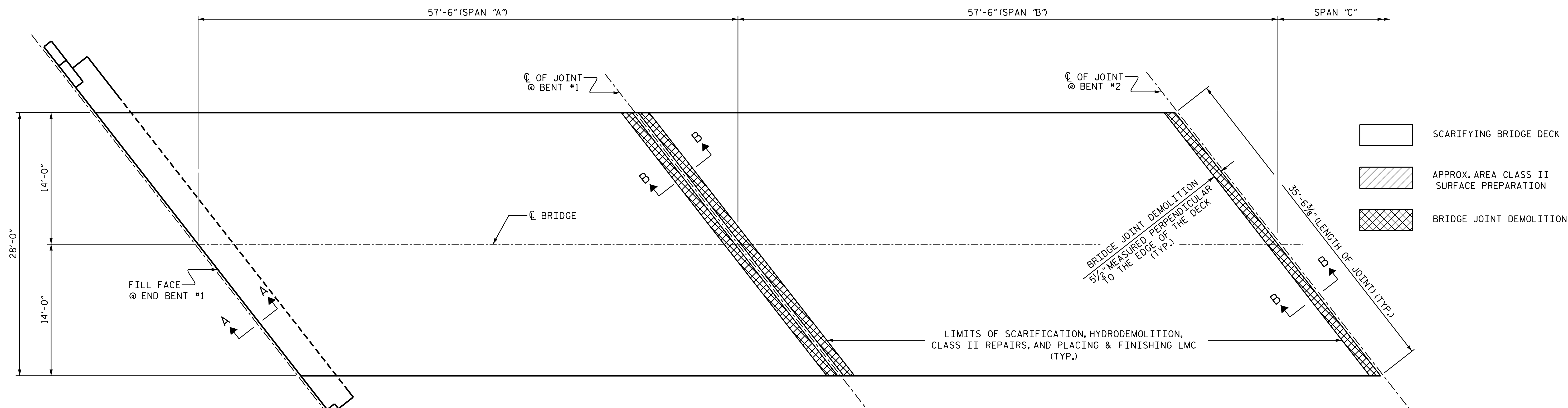
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SUMMARY OF QUANTITIES FOR SPAN'S "A" AND "B"

	SPAN "A"		SPAN "B"	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	176.0 SY		176.0 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	176.0 SY		176.0 SY	
CLASS II SURFACE PREPARATION	1.8 SY		1.8 SY	
CLASS III SURFACE PREPARATION	0.0 SY		0.0 SY	
JOINT DEMOLITION	16.3 SF		32.7 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

THE EXISTING BRIDGE SURFACE HAS AN ASPHALT WEARING SURFACE. IT IS POSSIBLE THAT CLASS II SURFACE PREPARATION MIGHT BE NECESSARY, BUT CANNOT BE ESTIMATED WITH THE AWS PRESENT. THE QUANTITY INDICATED IS FOR BIDDING PURPOSES ONLY. THE ACTUAL QUANTITY SHALL BE CONFIRMED AFTER SCARIFICATION AND HYDRO-DEMOLITION OF THE BRIDGE DECK.



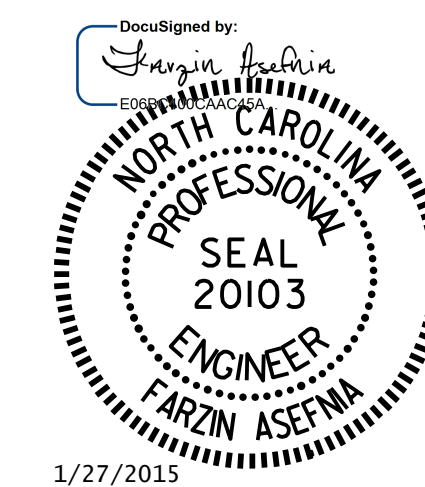
PLAN OF SPAN "A" AND "B"

(SEE "JOINT DETAILS" SHEET FOR SECTIONS A-A AND B-B)

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO.: 144

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPANS "A" AND "B"



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DRAWN BY : D.V. JOYNER DATE : 11/2014
 CHECKED BY : F. ASEFNIA DATE : 11/2014

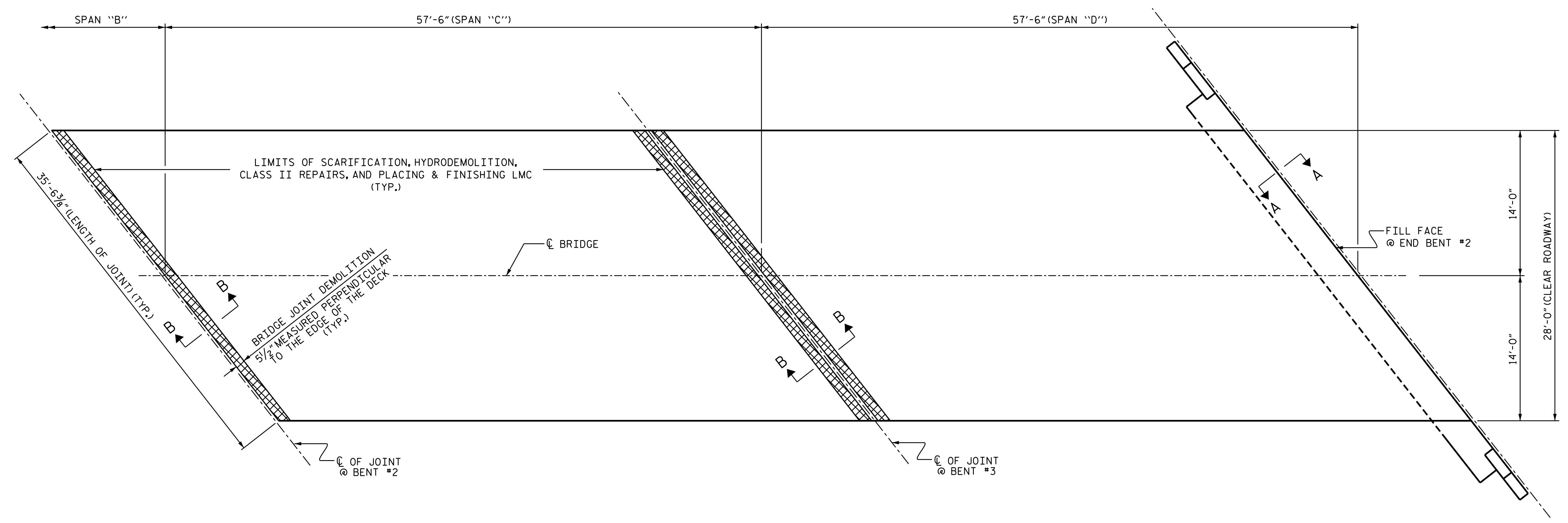
SUMMARY OF QUANTITIES FOR SPAN'S "C" AND "D"

	SPAN "C"		SPAN "D"	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	176.0 SY		176.0 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	176.0 SY		176.0 SY	
CLASS II SURFACE PREPARATION	1.8 SY		1.8 SY	
CLASS III SURFACE PREPARATION	0.0 SY		0.0 SY	
JOINT DEMOLITION	32.7 SF		16.3 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

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-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION



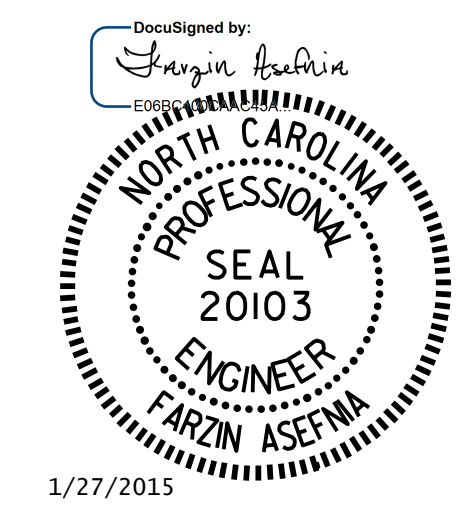
PLAN OF SPAN "C" AND "D"

(SEE "JOINT DETAILS" SHEET FOR SECTIONS A-A AND B-B)

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO.: 144

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPANS "C" AND "D"



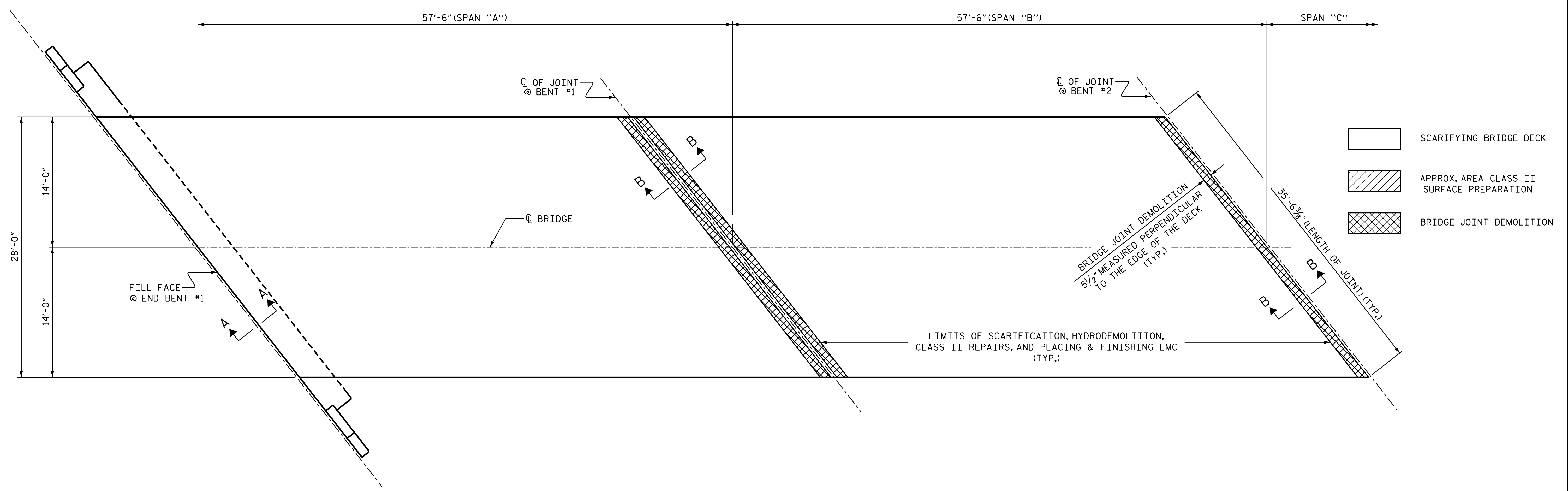
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 CHECKED BY : F. ASEFNIA DATE : 11/2014

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SUMMARY OF QUANTITIES FOR SPAN'S "A" AND "B"				
	SPAN "A"		SPAN "B"	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	176.0 SY		176.0 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	176.0 SY		176.0 SY	
CLASS II SURFACE PREPARATION	1.8 SY		1.8 SY	
CLASS III SURFACE PREPARATION	0.0 SY		0.0 SY	
JOINT DEMOLITION	16.3 SF		32.7 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

THE EXISTING BRIDGE SURFACE HAS AN ASPHALT WEARING SURFACE. IT IS POSSIBLE THAT CLASS II SURFACE PREPARATION MIGHT BE NECESSARY, BUT CANNOT BE ESTIMATED WITH THE AWS PRESENT. THE QUANTITY INDICATED IS FOR BIDDING PURPOSES ONLY. THE ACTUAL QUANTITY SHALL BE CONFIRMED AFTER SCARIFICATION AND HYDRO-DEMOLITION OF THE BRIDGE DECK.

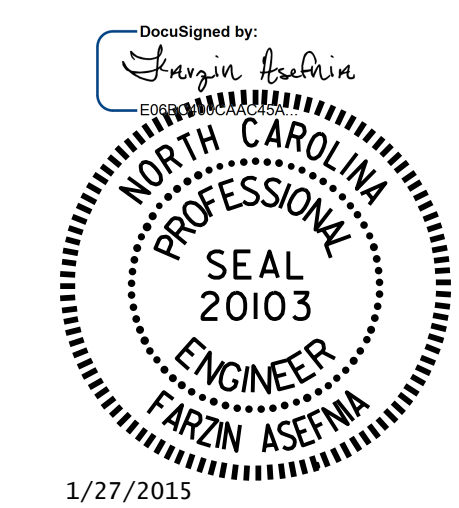


PLAN OF SPAN "A" AND "B"

(SEE "JOINT DETAILS" SHEET FOR SECTIONS A-A AND B-B)

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO.: 145

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPANS "A" AND "B"



DRAWN BY : D.V. JOYNER DATE : 11/2014
 CHECKED BY : F. ASEFNIA DATE : 11/2014




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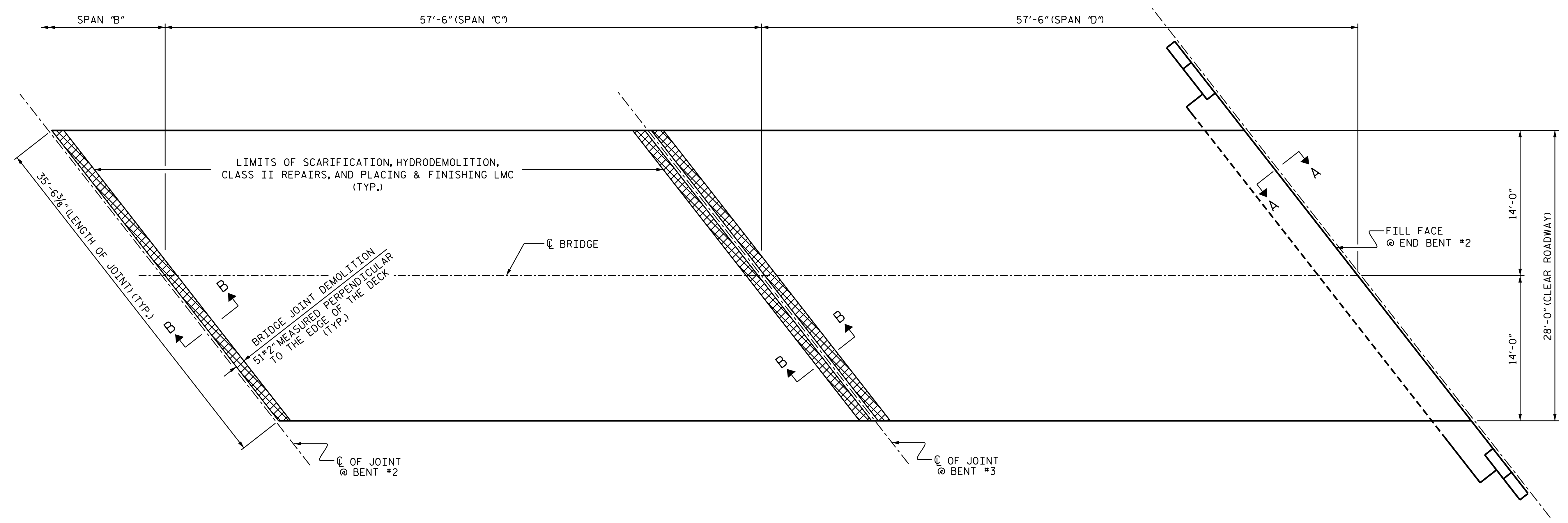
SUMMARY OF QUANTITIES FOR SPAN'S "C" AND "D"

	SPAN "C"		SPAN "D"	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	176.0 SY		176.0 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	176.0 SY		176.0 SY	
CLASS II SURFACE PREPARATION	1.8 SY		1.8 SY	
CLASS III SURFACE PREPARATION	0.0 SY		0.0 SY	
JOINT DEMOLITION	32.7 SF		16.3 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

THE EXISTING BRIDGE SURFACE HAS AN ASPHALT WEARING SURFACE. IT IS POSSIBLE THAT CLASS II SURFACE PREPARATION MIGHT BE NECESSARY, BUT CANNOT BE ESTIMATED WITH THE AWS PRESENT. THE QUANTITY INDICATED IS FOR BIDDING PURPOSES ONLY. THE ACTUAL QUANTITY SHALL BE CONFIRMED AFTER SCARIFICATION AND HYDRO-DEMOLITION OF THE BRIDGE DECK.

-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION



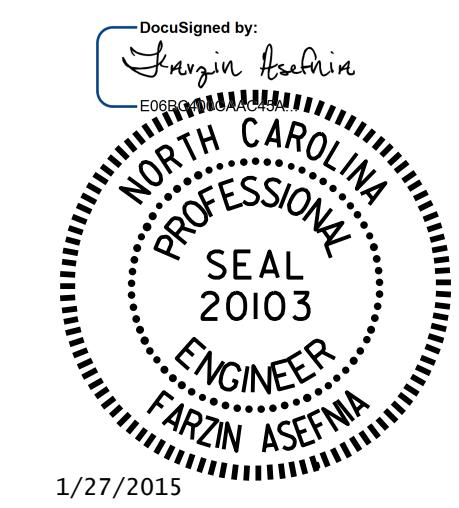
PLAN OF SPAN "C" AND "D"

(SEE "JOINT DETAILS" SHEET FOR SECTIONS A-A AND B-B)

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO.: 145

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPANS "C" AND "D"

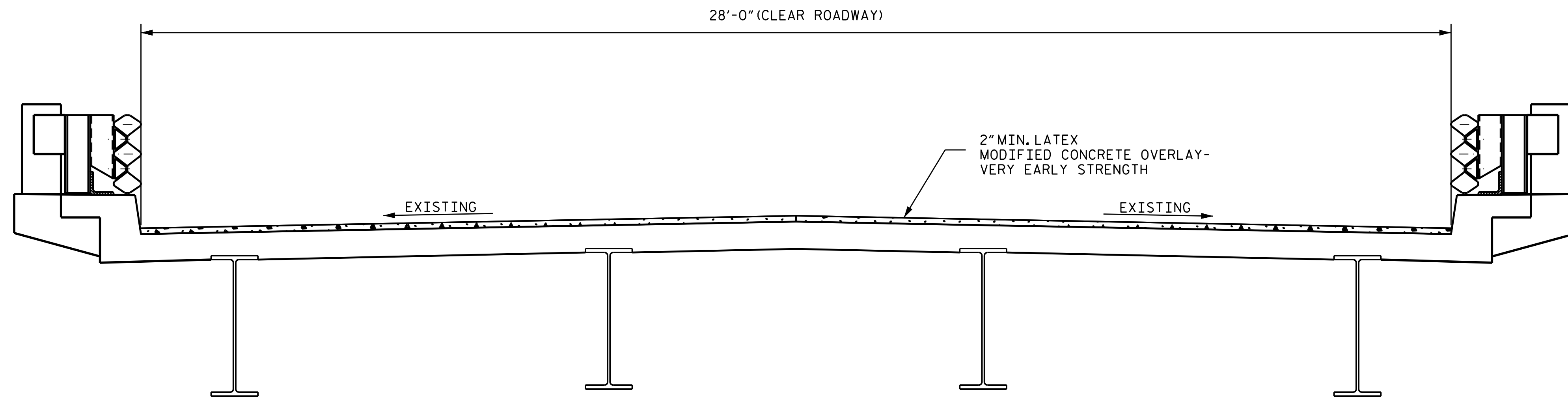


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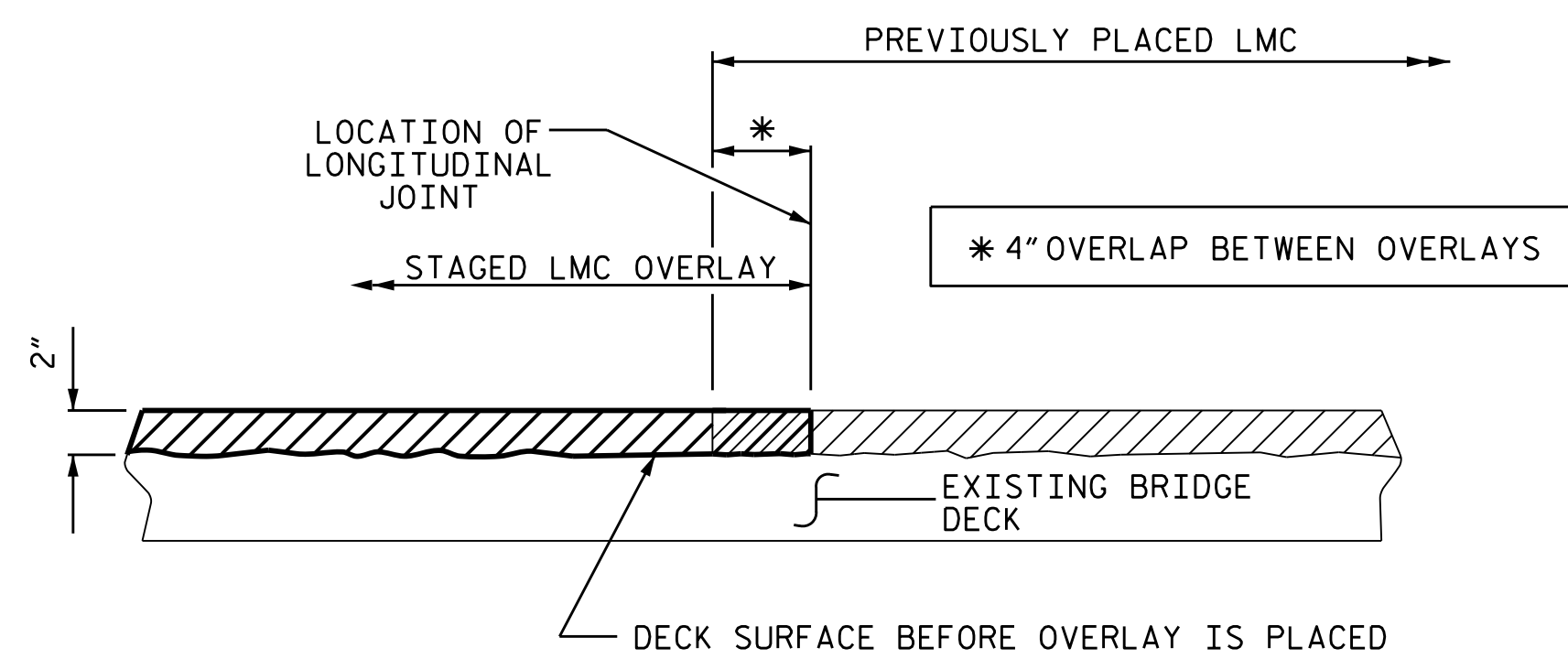
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1			3			S-8
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NOTE:

STAGING OF LATEX MODIFIED CONCRETE (LMC) OVERLAY-VERY EARLY STRENGTH IS NOT INDICATED ON STRUCTURE PLANS. IN THE EVENT STAGED CONSTRUCTION IS UTILIZED OR IF LONGITUDINAL JOINTS ARE NECESSARY, LONGITUDINAL CONSTRUCTION JOINTS OF LMC-VES SHALL BE LOCATED ALONG CENTERLINE OR EDGE OF TRAVEL LANES. 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.



TYPICAL SECTION

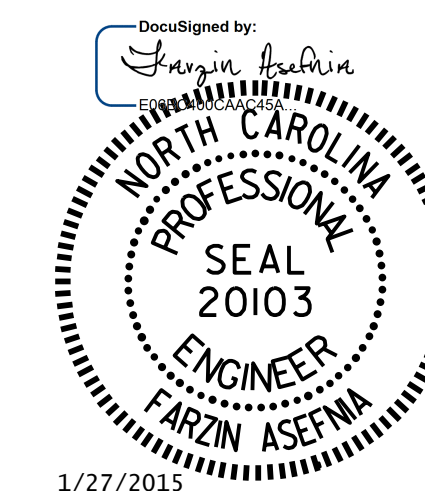


SECTION THRU DECK
STAGED LMC OVERLAY JOINT
(AS NEEDED)

PROJECT NO. I-5308
ROBESON COUNTY
BRIDGE NO. 144 & 145

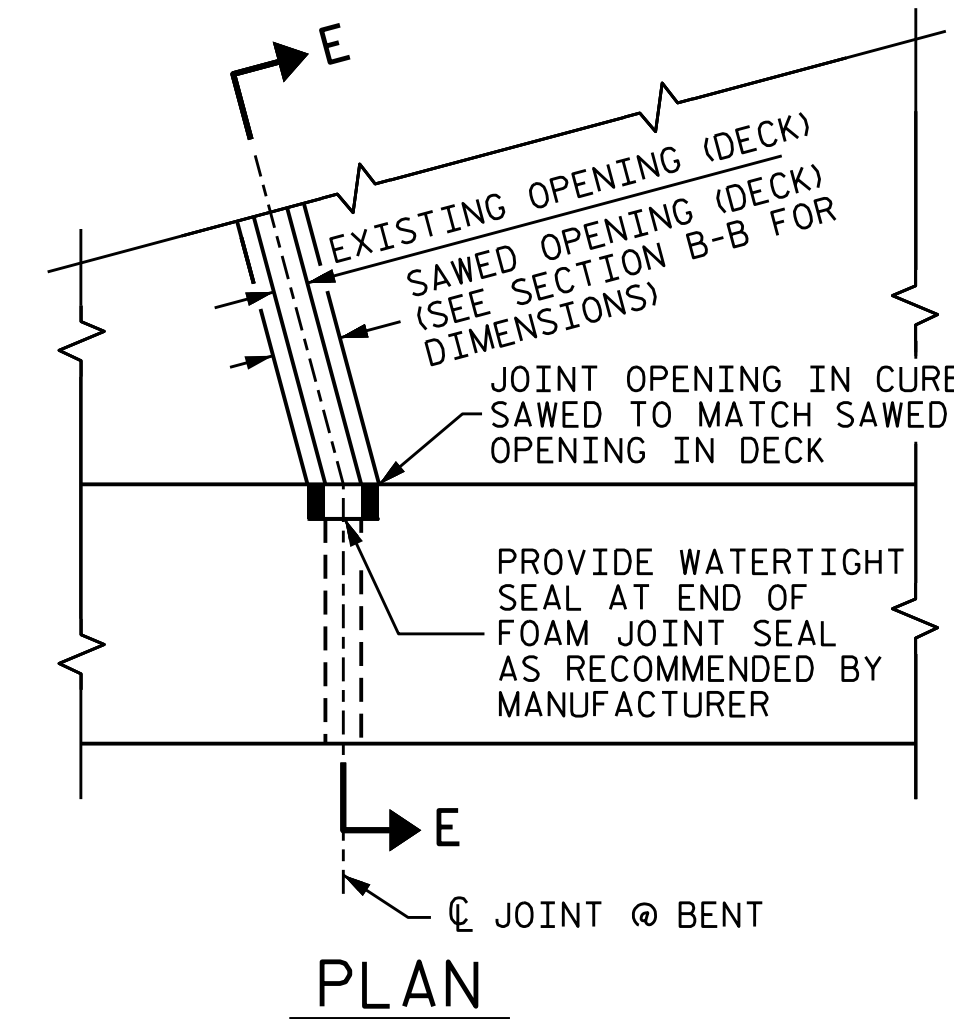
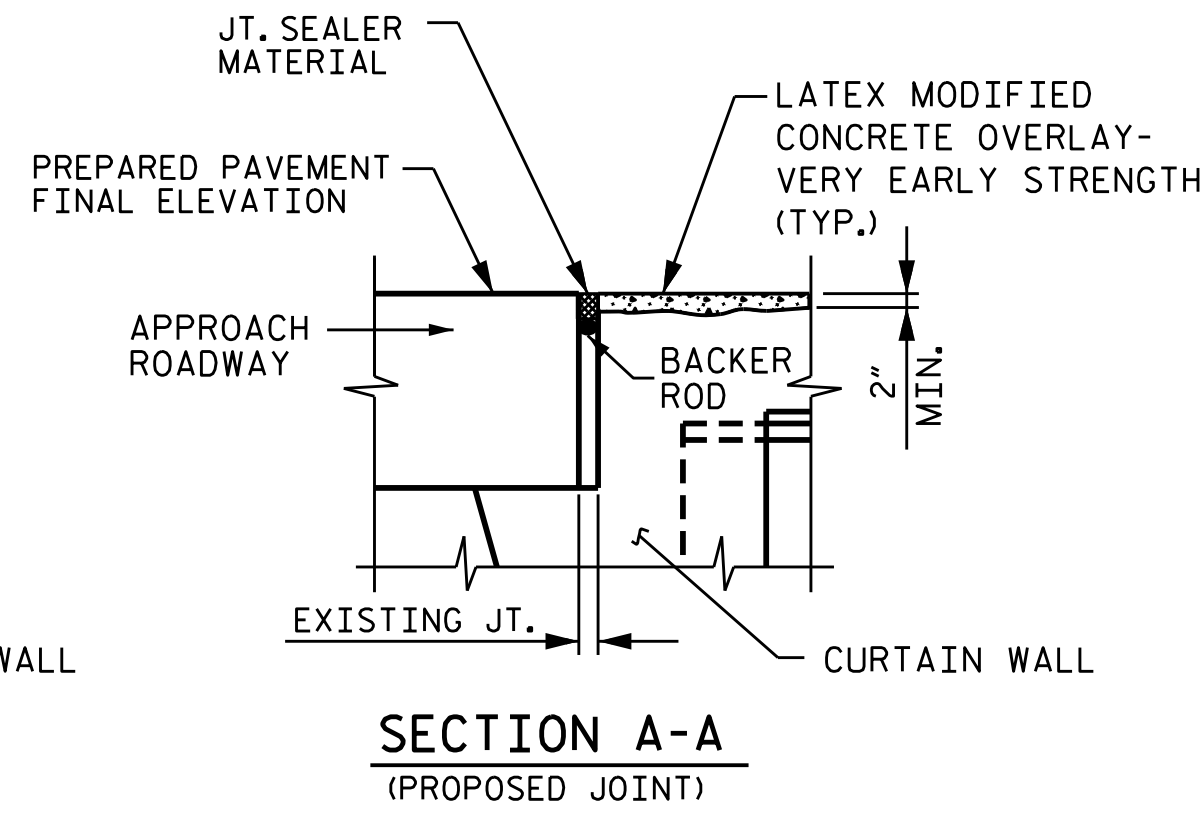
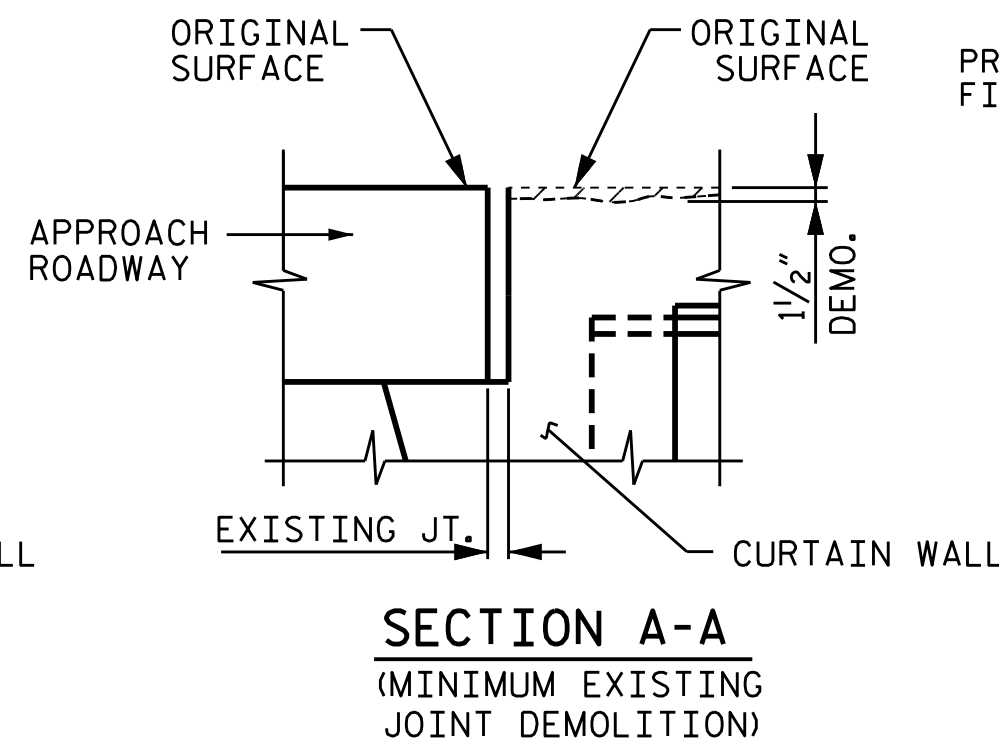
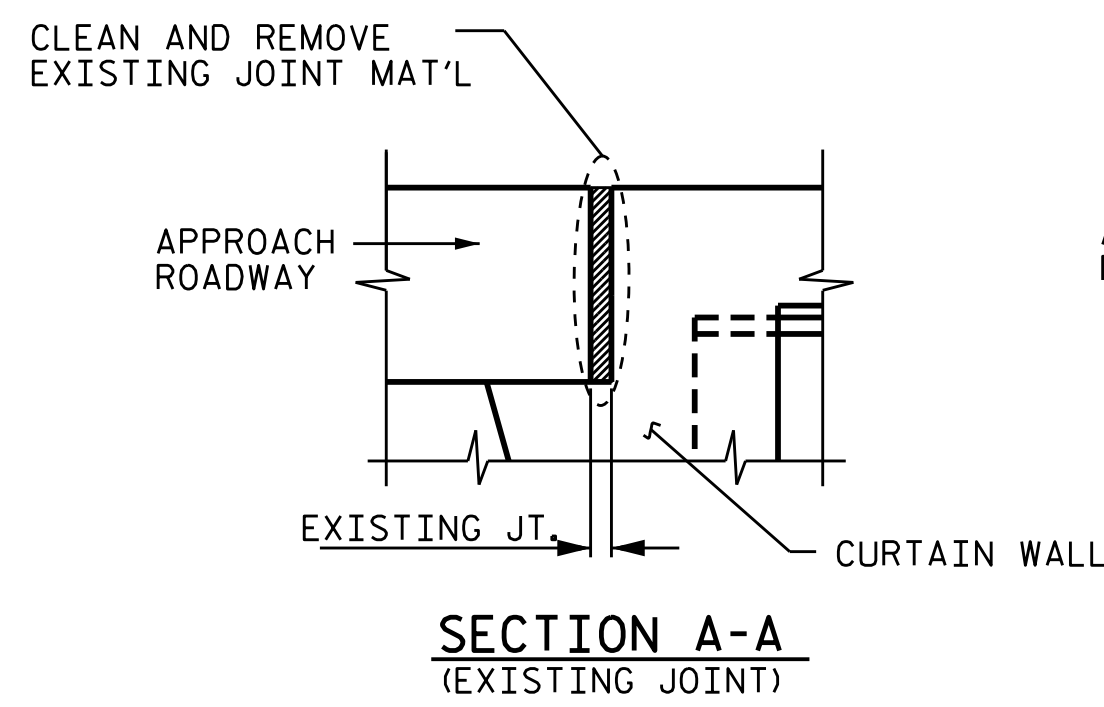
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION &
LATEX MODIFIED
CONCRETE DETAILS



DRAWN BY : M. WELDON DATE : 4/2014
CHECKED BY : F. ASEFNIA DATE : 4/2014

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
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JOINT INSTALLATION SEQUENCE AT END BENTS

NOTES:

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL.

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.

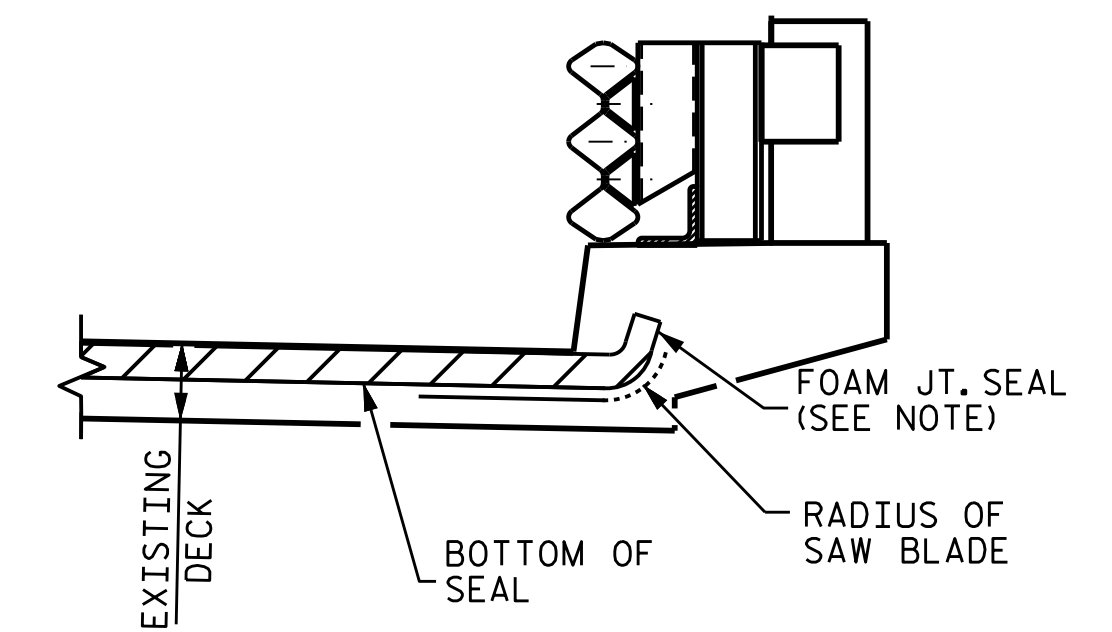
HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC CONCRETE.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

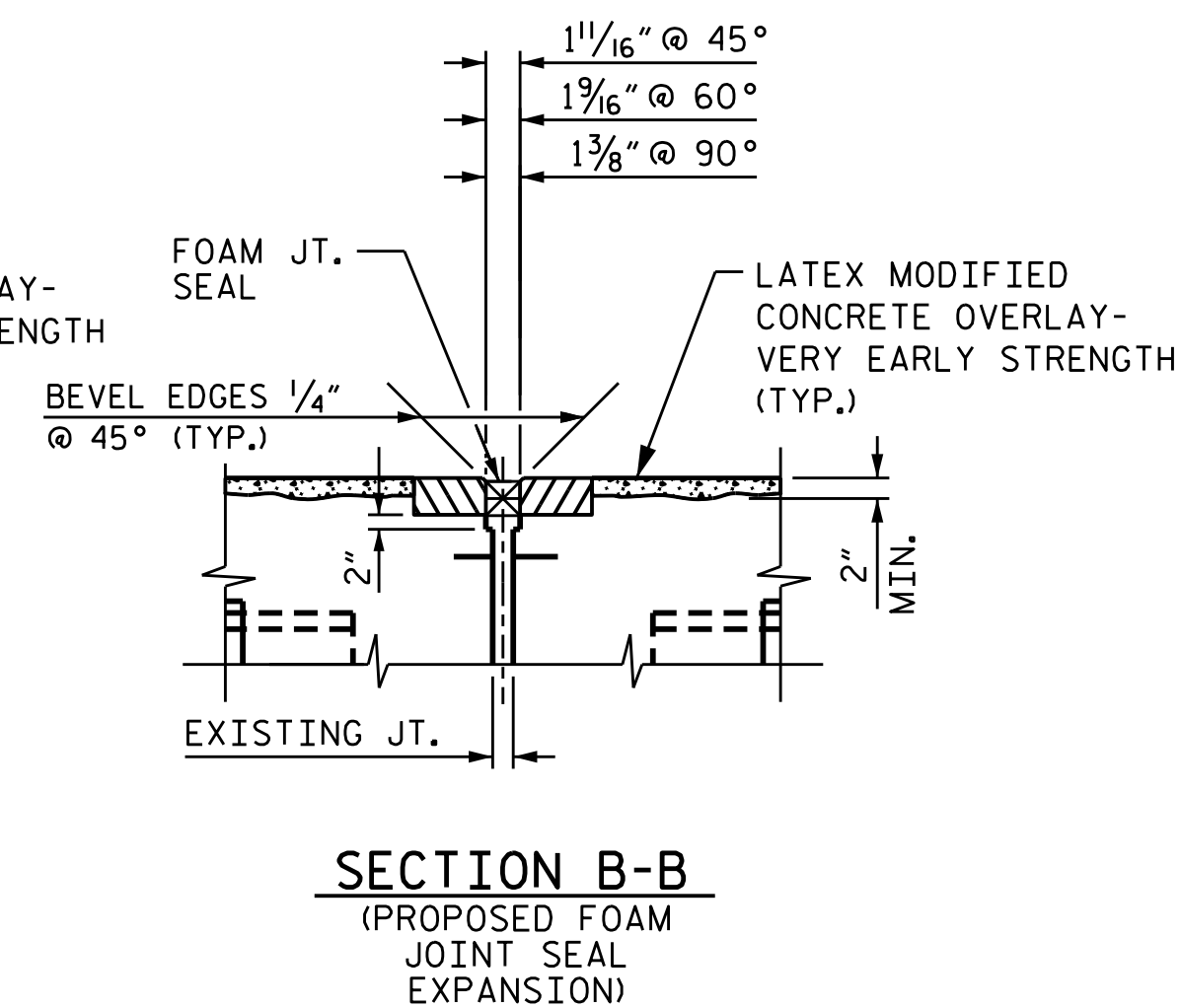
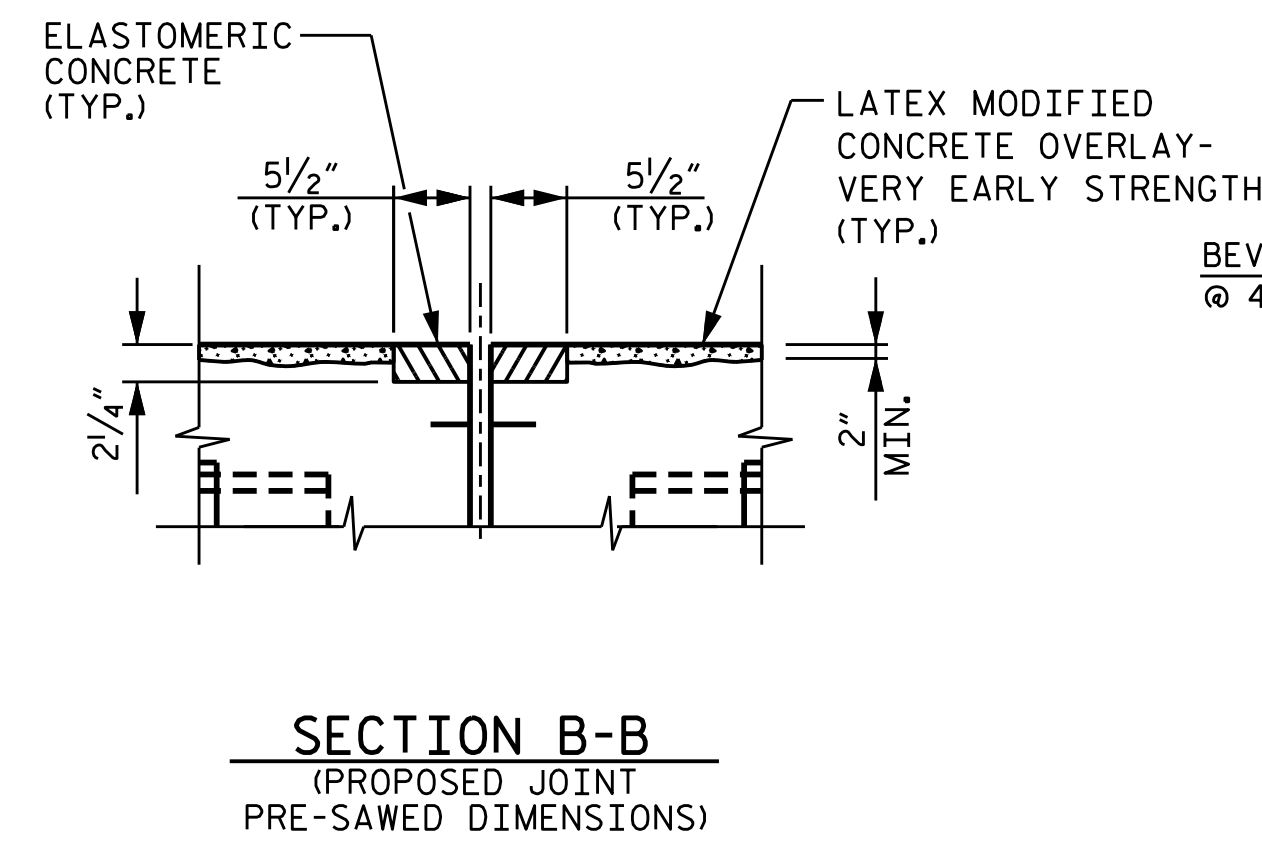
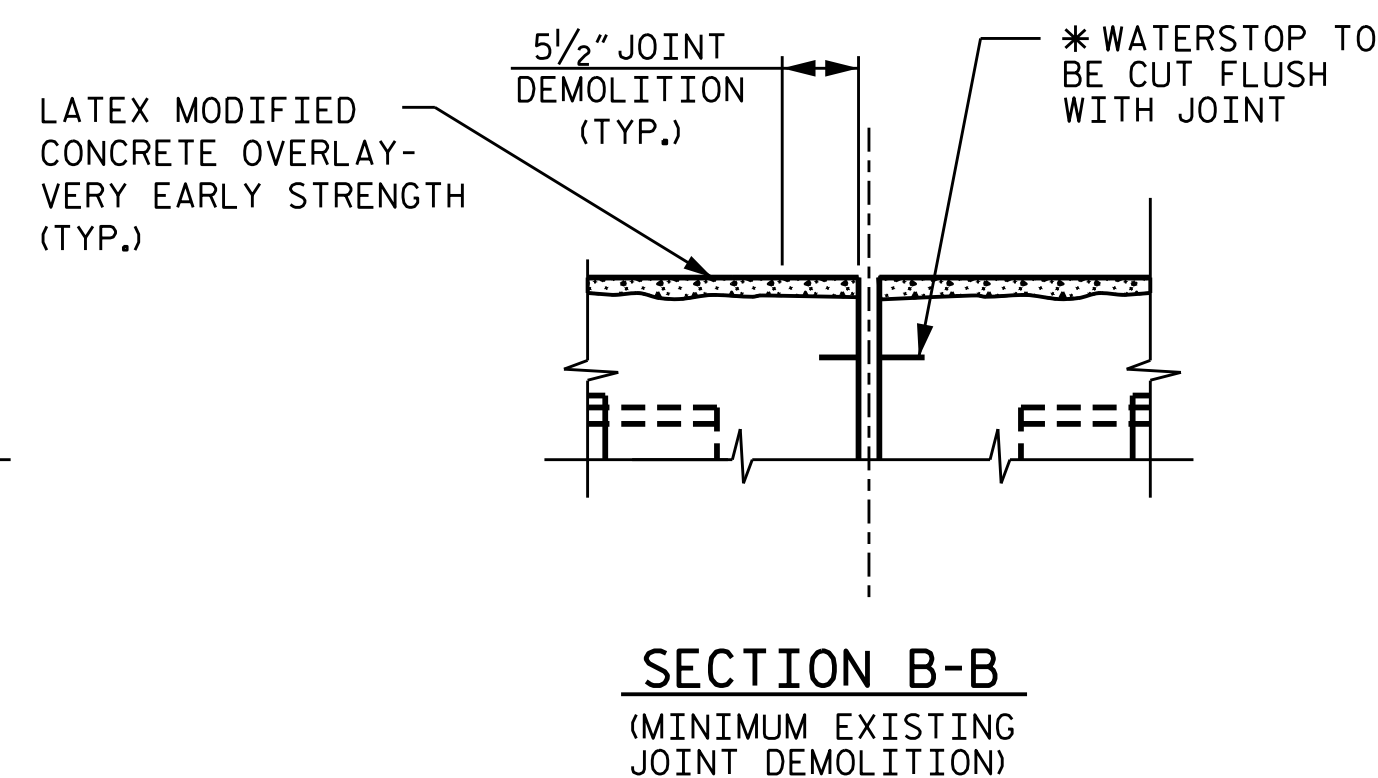
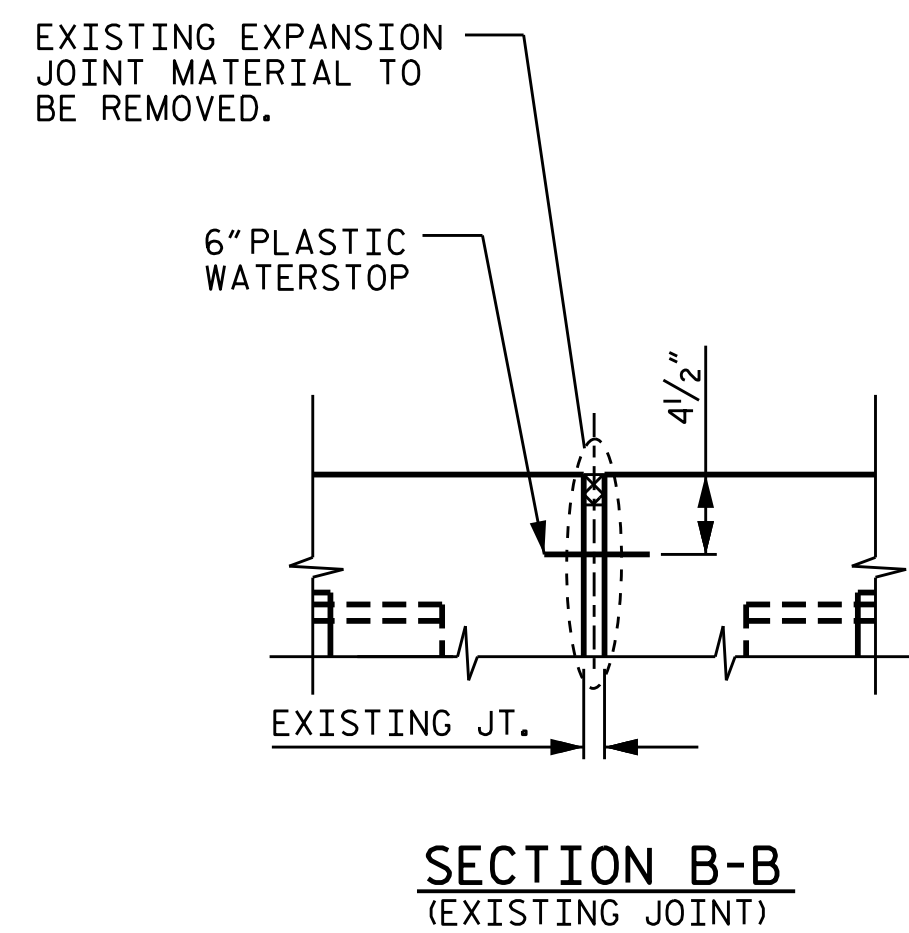
FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

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

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



SECTION E-E

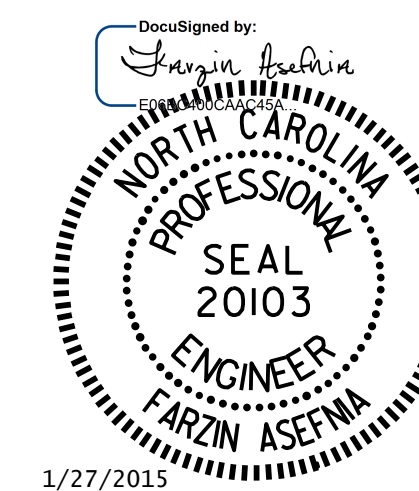


JOINT INSTALLATION SEQUENCE AT BENTS

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO.: 144 & 145

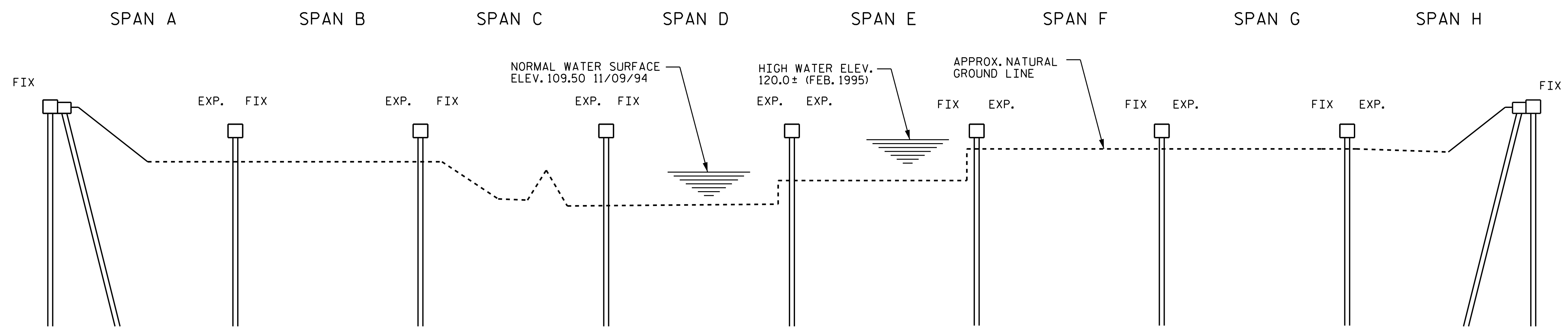
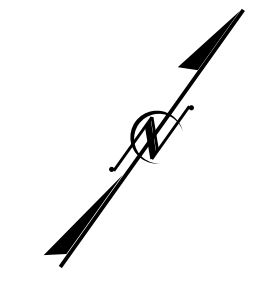
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 JOINT DETAILS

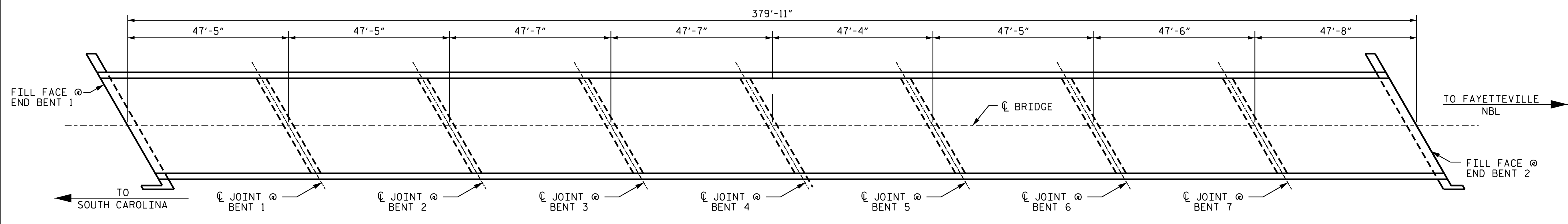


DRAWN BY : M. WELDON DATE : 4/2014
 CHECKED BY : F. ASEFNIA DATE : 4/2014

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			23



SECTION PROFILE ALONG CL MEDIAN



PLAN OF SPANS

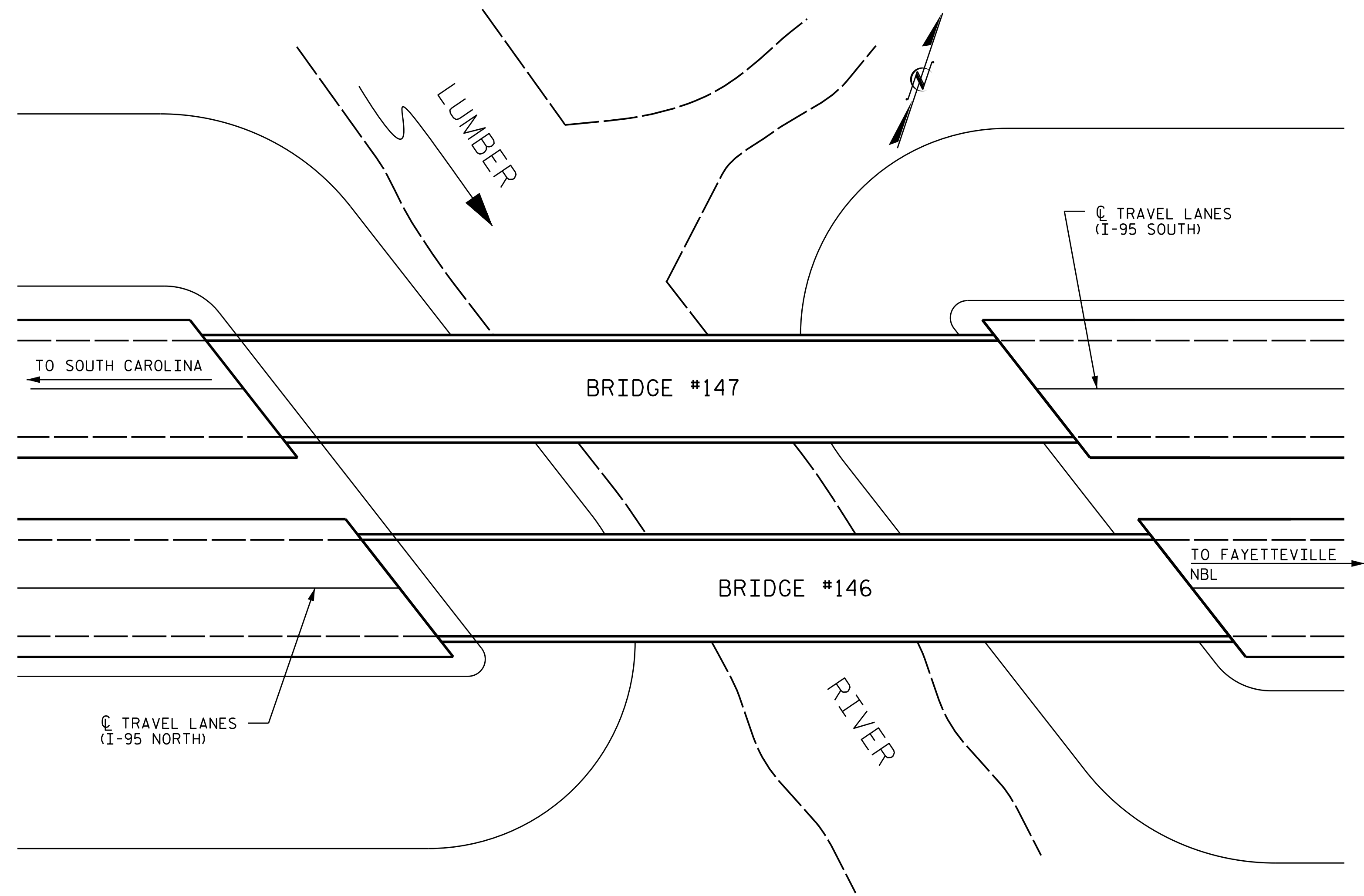
PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO: 146
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 BRIDGE #146 ON I-95
 NORTHBOUND LANE
 OVER LUMBER RIVER



DRAWN BY : M. WELDON DATE : 11/2014
 CHECKED BY : F. ASEFNIA DATE : 11/2014

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11	
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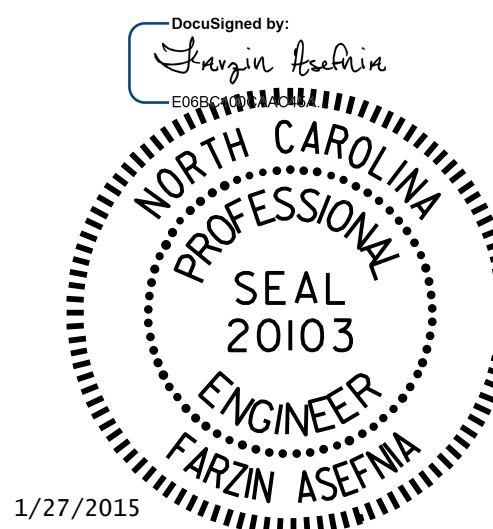
LOCATION SKETCH

NOTES

- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.
- 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.
- THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.
- THE CONTRACTOR MUST COLLECT, TREAT, AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.
- FOR OVERLAY SURFACE PREPARATION, SEE SPECIAL 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 LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN SHEETS.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.
- DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT FLOW OR MIGRATE INTO ACTIVE TRAVEL LANES.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- AVERAGE ASPHALT THICKNESS ON BRIDGE DECKS IS 2 3/8".
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.
- SEE ROADWAY PLANS FOR PROPOSED APPROACH PAVEMENT REHABILITATION AND ELEVATIONS. NEW APPROACH PAVEMENT ELEVATIONS SHALL PROVIDE SMOOTH TRANSITION FROM ROADWAY TO NEW BRIDGE DECK.

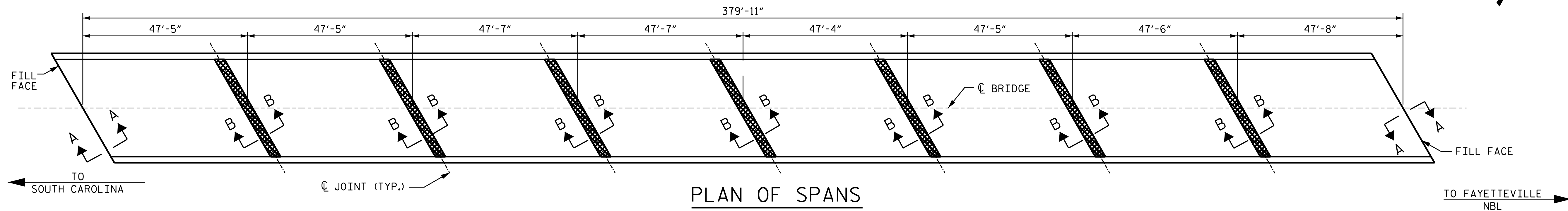
PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO. 146
 SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 BRIDGE #146 ON I95
 NORTHBOUND LANE
 OVER LUMBER RIVER


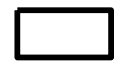


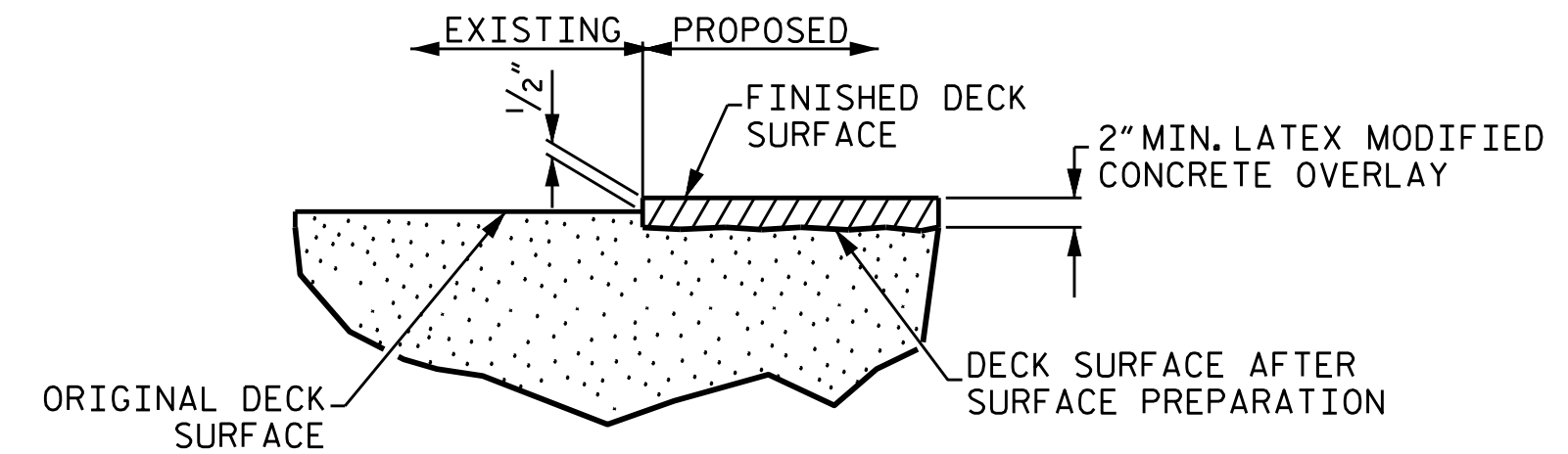
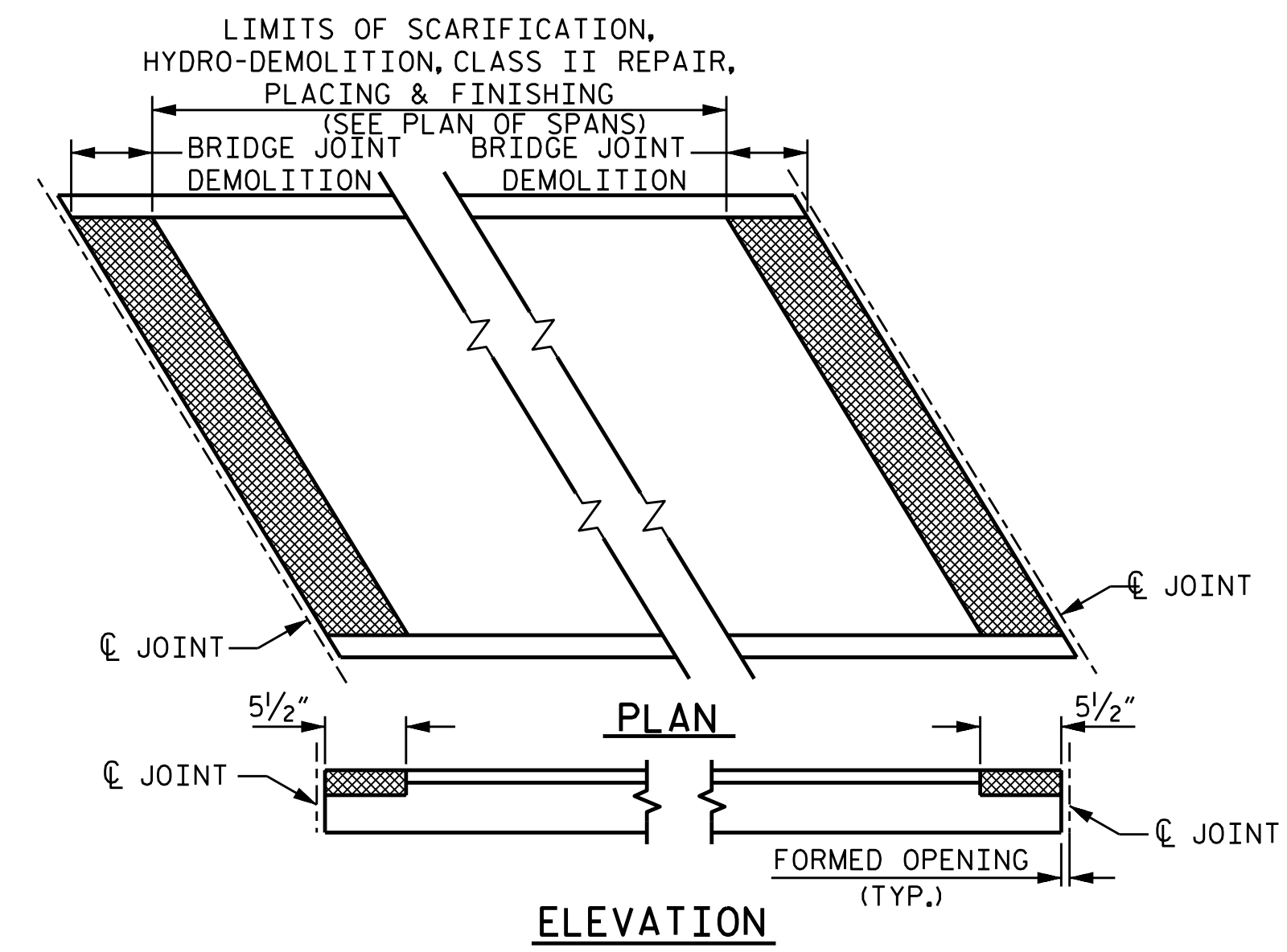
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REVISIONS						SHEET NO.
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2			4			23



PLAN OF SPANS

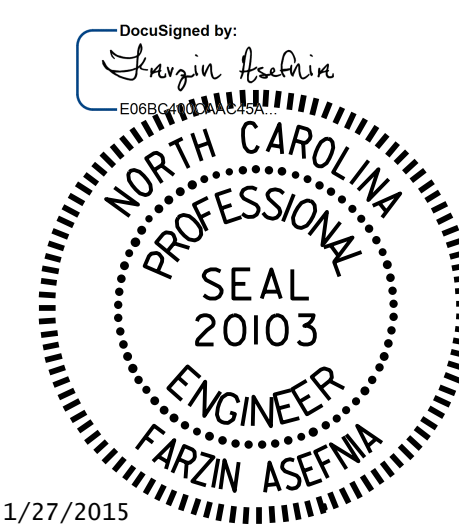
-  BRIDGE JOINT DEMOLITION
-  DECK SCARIFICATION, HYDRO-DEMOLITION, AND LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH



DETAIL FOR LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO: 146

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE



DRAWN BY : M. WELDON DATE : 3/2014
 CHECKED BY : F. ASEFNIA DATE : 3/2014

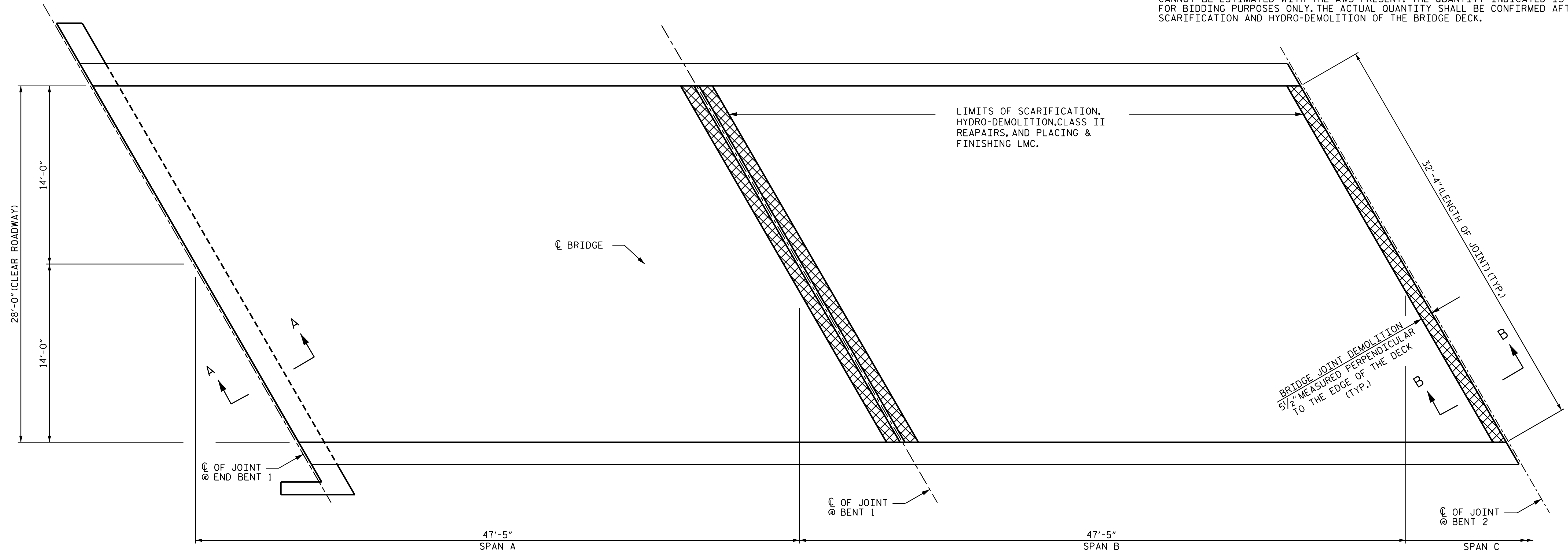
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
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SUMMARY OF QUANTITIES FOR SPAN'S "A" AND "B"

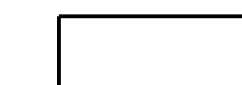


	SPAN "A"		SPAN "B"	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	146.0 SY		144.0 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	146.0 SY		144.0 SY	
CLASS II SURFACE PREPARATION	1.5 SY		1.4 SY	
CLASS III SURFACE PREPARATION	0.0 SY		0.0 SY	
JOINT DEMOLITION	14.8 SF		29.6 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

THE EXISTING BRIDGE SURFACE HAS AN ASPHALT WEARING SURFACE. IT IS POSSIBLE THAT CLASS II SURFACE PREPARATION MIGHT BE NECESSARY, BUT CANNOT BE ESTIMATED WITH THE AWS PRESENT. THE QUANTITY INDICATED IS FOR BIDDING PURPOSES ONLY. THE ACTUAL QUANTITY SHALL BE CONFIRMED AFTER SCARIFICATION AND HYDRO-DEMOLITION OF THE BRIDGE DECK.



PLAN OF SPAN "A" & "B"
(SEE JOINT DETAIL FOR SECTION A-A & B-B)

-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO.: 146

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE
 SURFACE PREPARATION
 SPANS "A" & "B"



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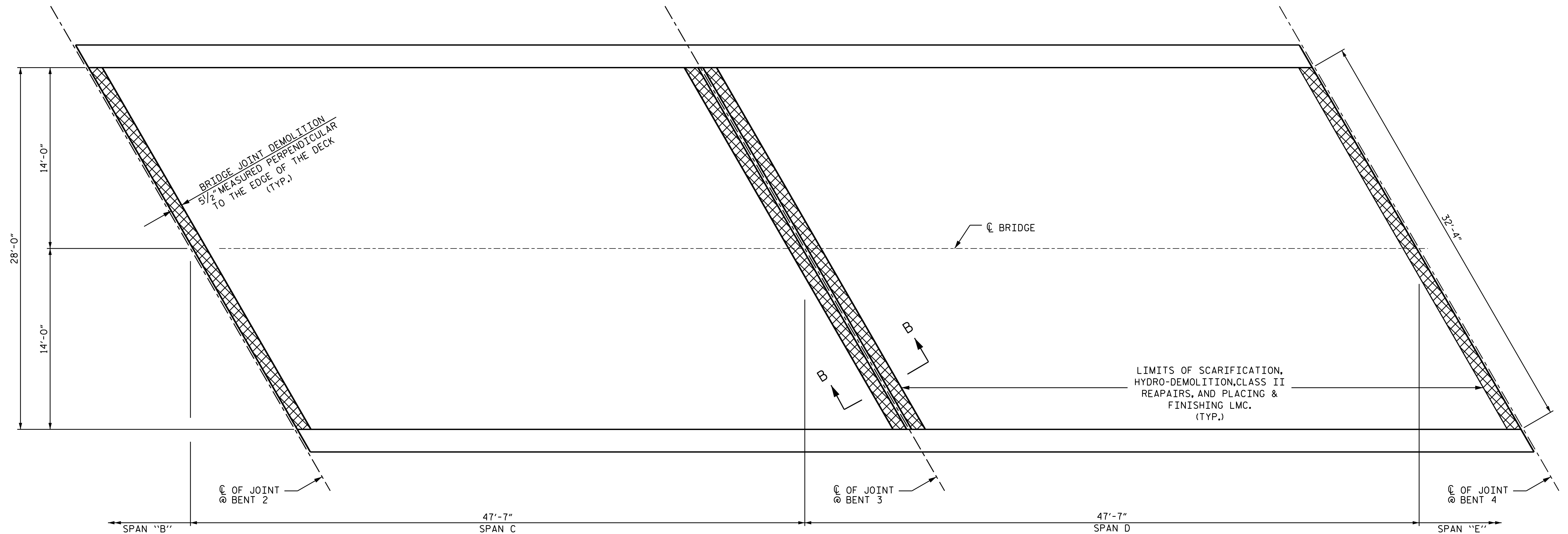
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SUMMARY OF QUANTITIES FOR SPAN'S "C" AND "D"

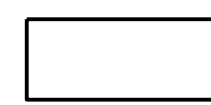
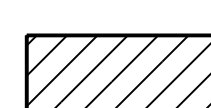

	SPAN "C"		SPAN "D"	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	144.0 SY		144.0 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	144.0 SY		144.0 SY	
CLASS II SURFACE PREPARATION	1.4 SY		1.4 SY	
CLASS III SURFACE PREPARATION	0.0 SY		0.0 SY	
JOINT DEMOLITION	29.6 SF		29.6 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

THE EXISTING BRIDGE SURFACE HAS AN ASPHALT WEARING SURFACE. IT IS POSSIBLE THAT CLASS II SURFACE PREPARATION MIGHT BE NECESSARY, BUT CANNOT BE ESTIMATED WITH THE AWS PRESENT. THE QUANTITY INDICATED IS FOR BIDDING PURPOSES ONLY. THE ACTUAL QUANTITY SHALL BE CONFIRMED AFTER SCARIFICATION AND HYDRO-DEMOLITION OF THE BRIDGE DECK.



PLAN OF SPAN "C" & "D"
(SEE JOINT DETAIL FOR SECTION A-A & B-B)

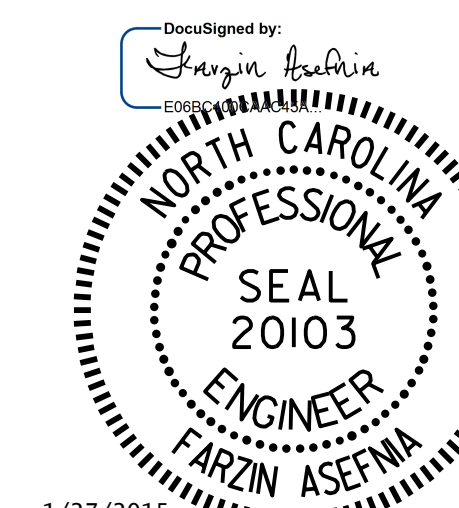
-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

DRAWN BY : M. WELDON DATE : 11/2014
CHECKED BY : F. ASEFNIA DATE : 11/2014

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PROJECT NO. I-5308
ROBESON COUNTY
BRIDGE NO.: 146

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
SURFACE PREPARATION
SPANS "C" & "D"



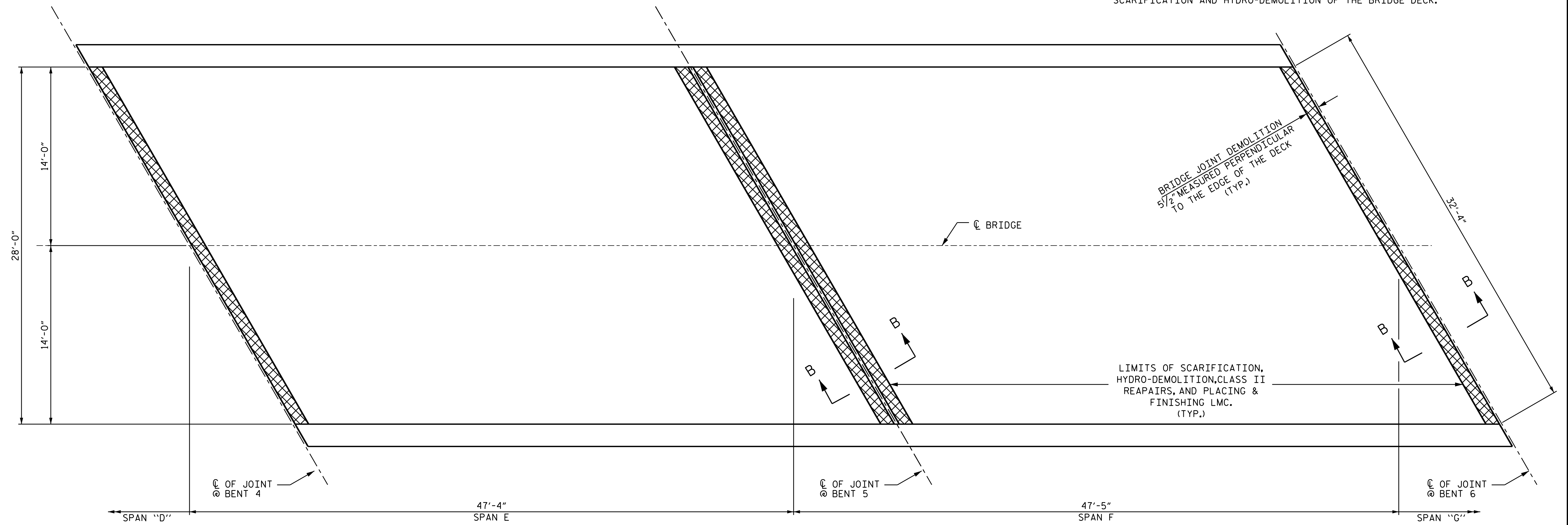
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SUMMARY OF QUANTITIES FOR SPAN'S "E" AND "F"

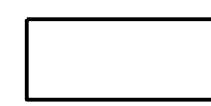
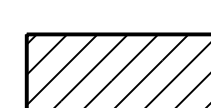

	SPAN "E"		SPAN "F"	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	144.0 SY		144.0 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	144.0 SY		144.0 SY	
CLASS II SURFACE PREPARATION	1.4 SY		1.4 SY	
CLASS III SURFACE PREPARATION	0.0 SY		0.0 SY	
JOINT DEMOLITION	29.6 SF		29.6 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

THE EXISTING BRIDGE SURFACE HAS AN ASPHALT WEARING SURFACE. IT IS POSSIBLE THAT CLASS II SURFACE PREPARATION MIGHT BE NECESSARY, BUT CANNOT BE ESTIMATED WITH THE AWS PRESENT. THE QUANTITY INDICATED IS FOR BIDDING PURPOSES ONLY. THE ACTUAL QUANTITY SHALL BE CONFIRMED AFTER SCARIFICATION AND HYDRO-DEMOLITION OF THE BRIDGE DECK.



PLAN OF SPAN "E" & "F"
(SEE JOINT DETAIL FOR SECTION A-A & B-B)

-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

DRAWN BY : M. WELDON DATE : 11/2014
 CHECKED BY : F. ASEFNIA DATE : 11/2014

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PROJECT NO. I-5308
 ROBESON COUNTY
 BRIDGE NO.: 146

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE
 SURFACE PREPARATION
 SPANS "E" & "F"



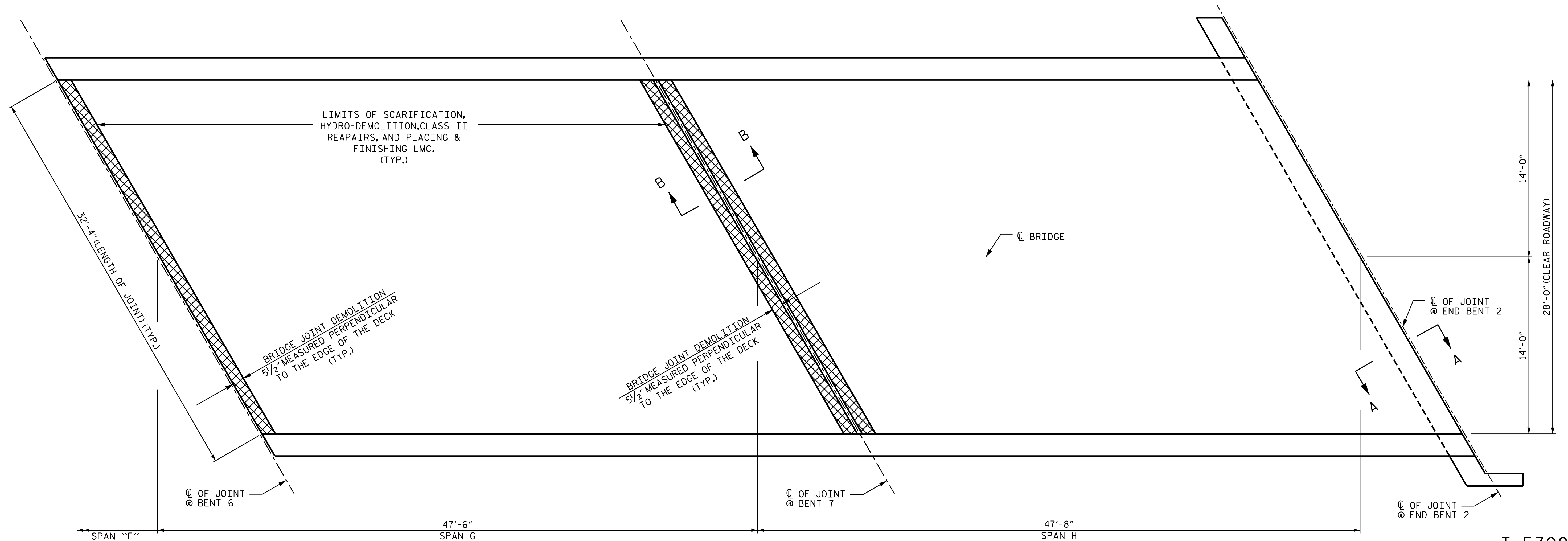
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SUMMARY OF QUANTITIES FOR SPAN'S "G" AND "H"

	SPAN "G"		SPAN "H"	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	144.0 SY		146.0 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	144.0 SY		146.0 SY	
CLASS II SURFACE PREPARATION	1.4 SY		1.5 SY	
CLASS III SURFACE PREPARATION	0.0 SY		0.0 SY	
JOINT DEMOLITION	29.6 SF		14.8 SF	




PAYMENT FOR CLASS II AND CLASS III SURFACE PREP. BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

THE EXISTING BRIDGE SURFACE HAS AN ASPHALT WEARING SURFACE. IT IS POSSIBLE THAT CLASS II SURFACE PREPARATION MIGHT BE NECESSARY, BUT CANNOT BE ESTIMATED WITH THE AWS PRESENT. THE QUANTITY INDICATED IS FOR BIDDING PURPOSES ONLY. THE ACTUAL QUANTITY SHALL BE CONFIRMED AFTER SCARIFICATION AND HYDRO-DEMOLITION OF THE BRIDGE DECK.



PLAN OF SPAN "G" & "H"

(SEE JOINT DETAIL FOR SECTION A-A & B-B)

-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

DRAWN BY : M. WELDON DATE : 11/2014
 CHECKED BY : F. ASEFNIA DATE : 11/2014

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PROJECT NO. I-5308
 ROBESON COUNTY
 BRIDGE NO.: 146

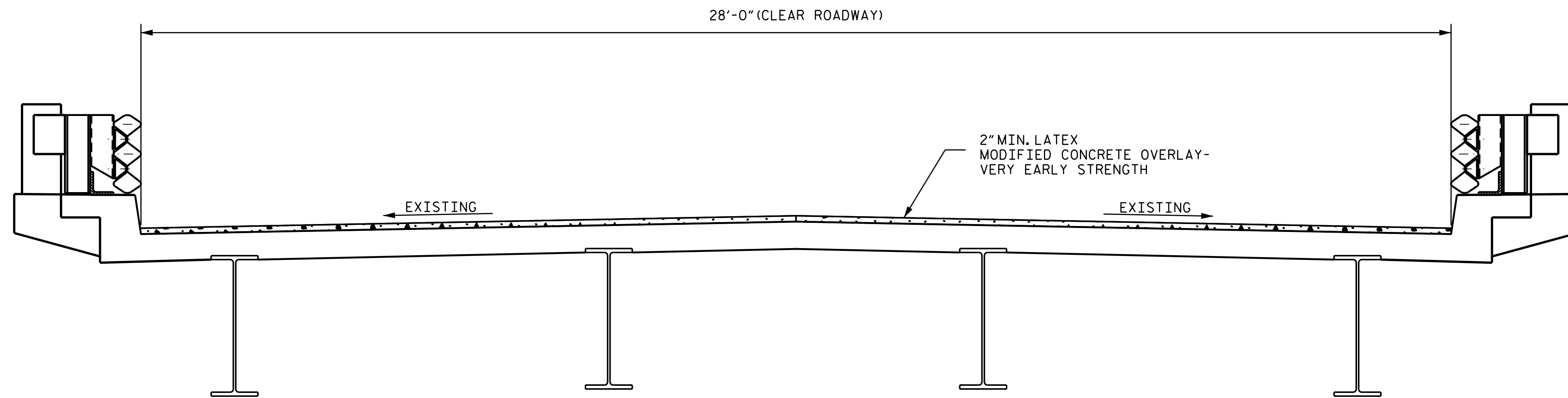
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE
 SURFACE PREPARATION
 SPANS "G" & "H"



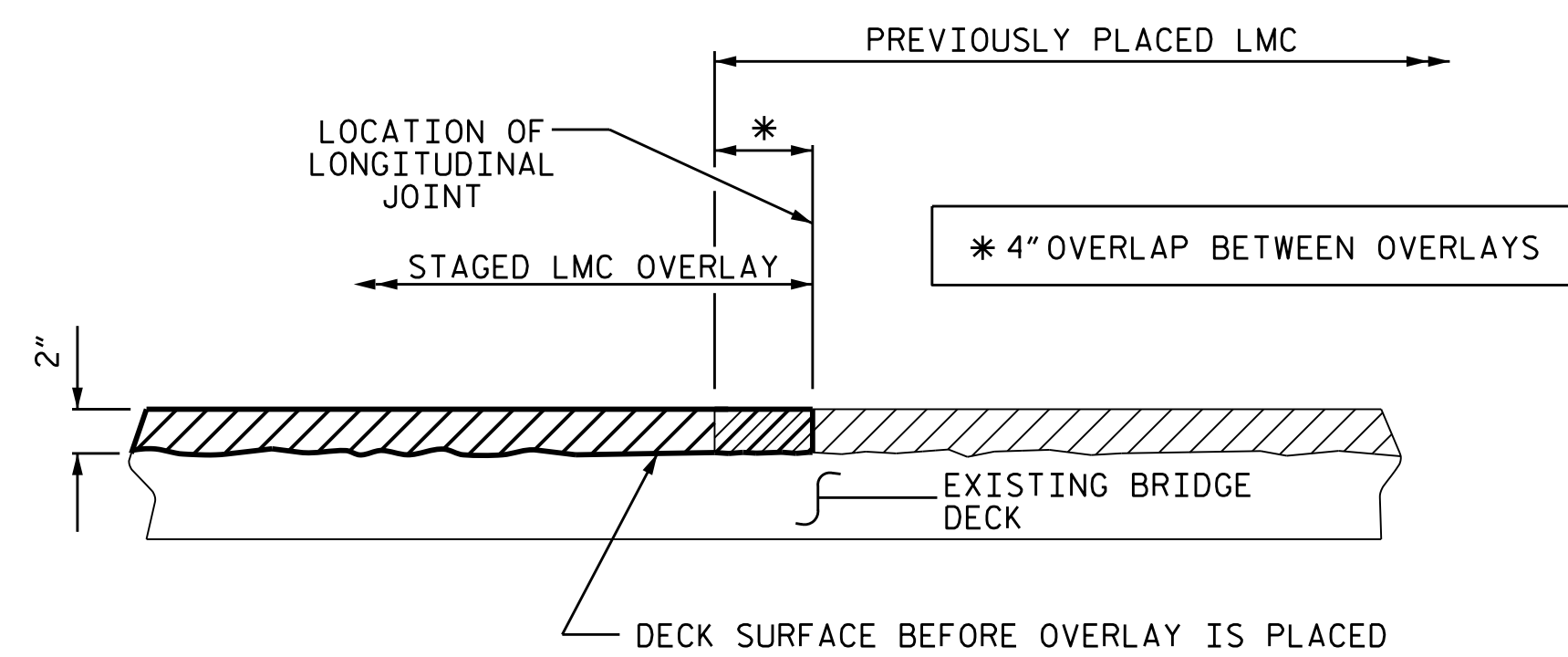
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1			3			TOTAL SHEETS
2			4			23

NOTE:

STAGING OF LATEX MODIFIED CONCRETE (LMC) OVERLAY-VERY EARLY STRENGTH IS NOT INDICATED ON STRUCTURE PLANS. IN THE EVENT STAGED CONSTRUCTION IS UTILIZED OR IF LONGITUDINAL JOINTS ARE NECESSARY, LONGITUDINAL CONSTRUCTION JOINTS OF LMC-VES SHALL BE LOCATED ALONG CENTERLINE OR EDGE OF TRAVEL LANES. 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.



TYPICAL SECTION



SECTION THRU DECK
STAGED LMC OVERLAY JOINT
(AS NEEDED)

PROJECT NO. I-5308
ROBESON COUNTY
BRIDGE NO. 146

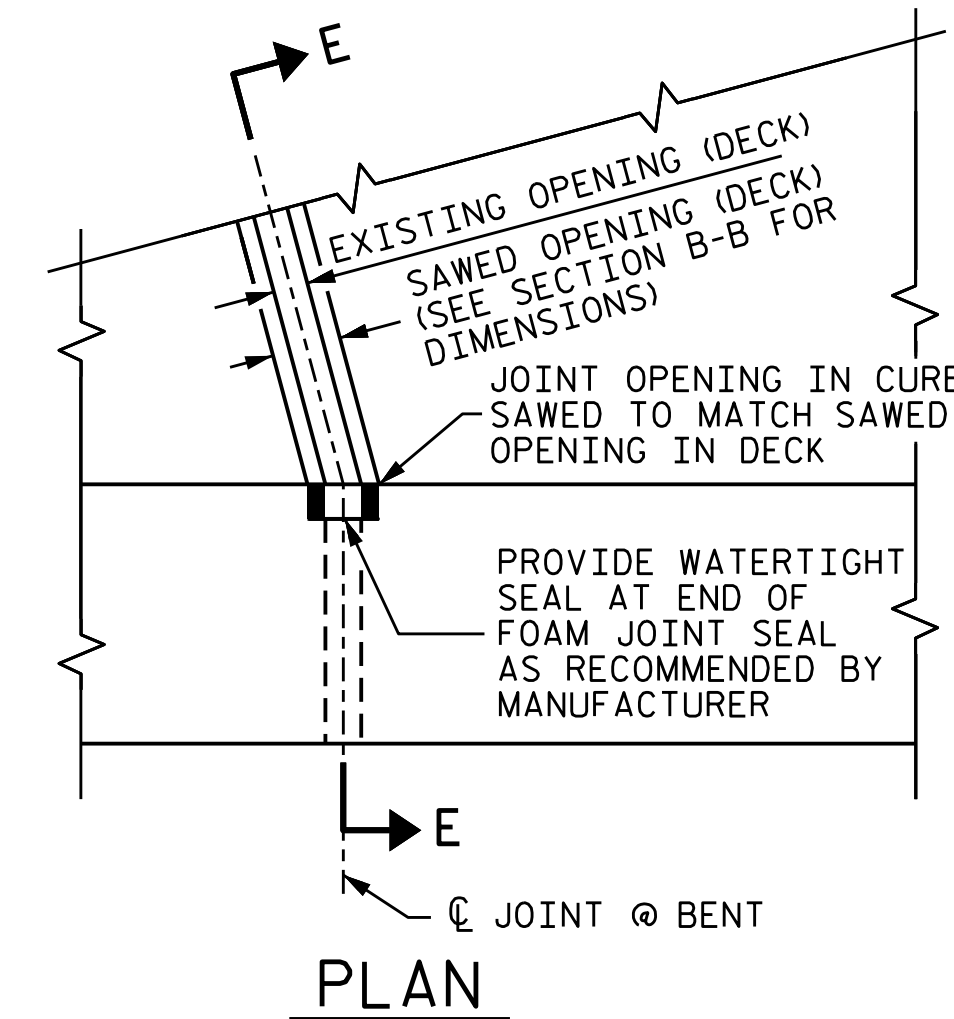
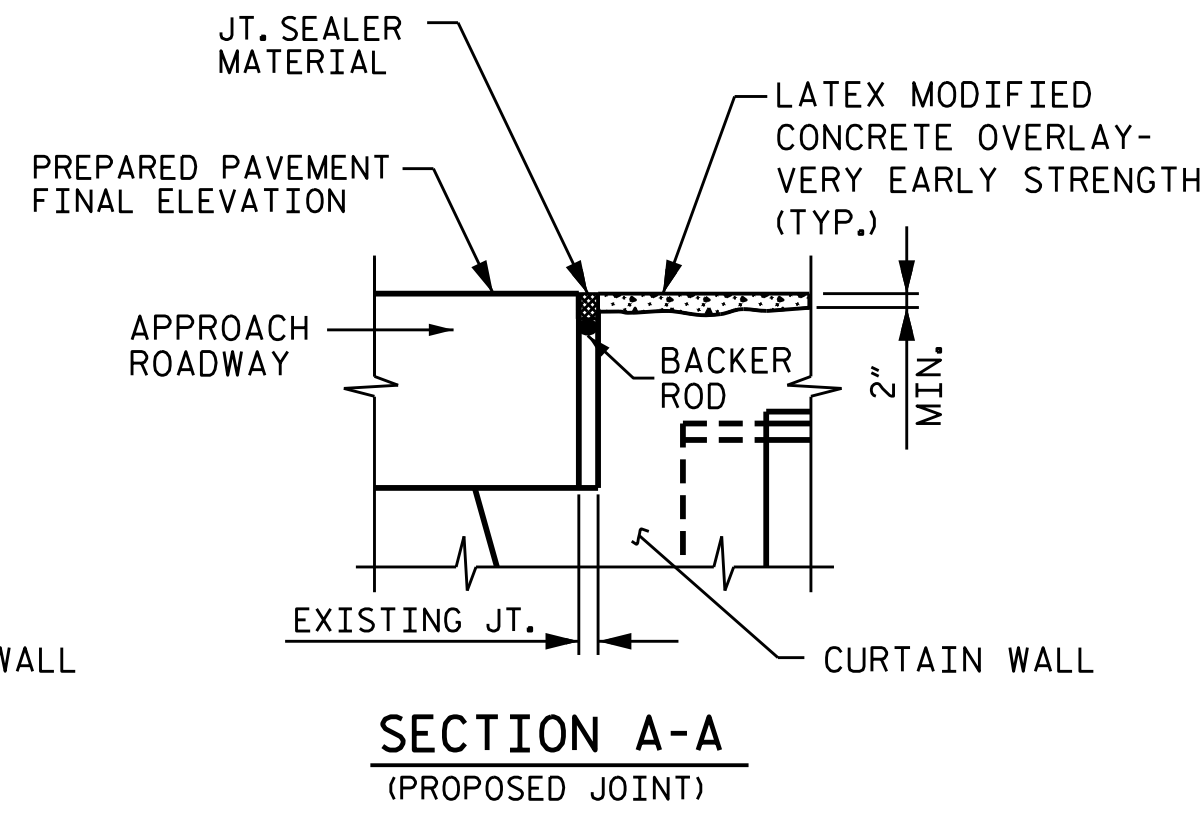
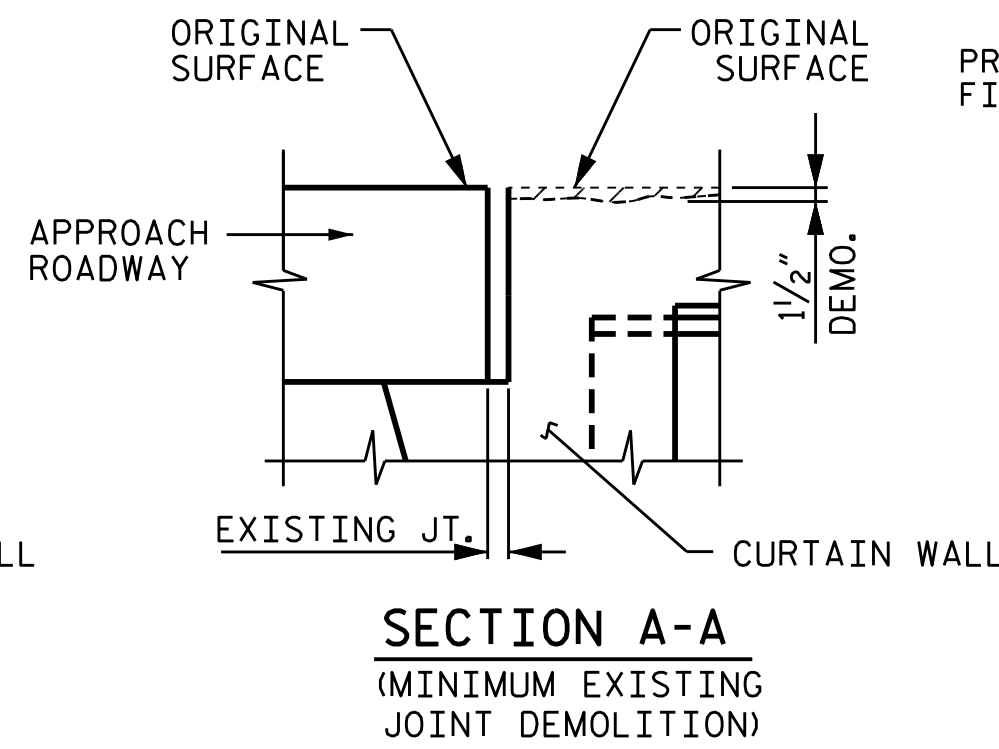
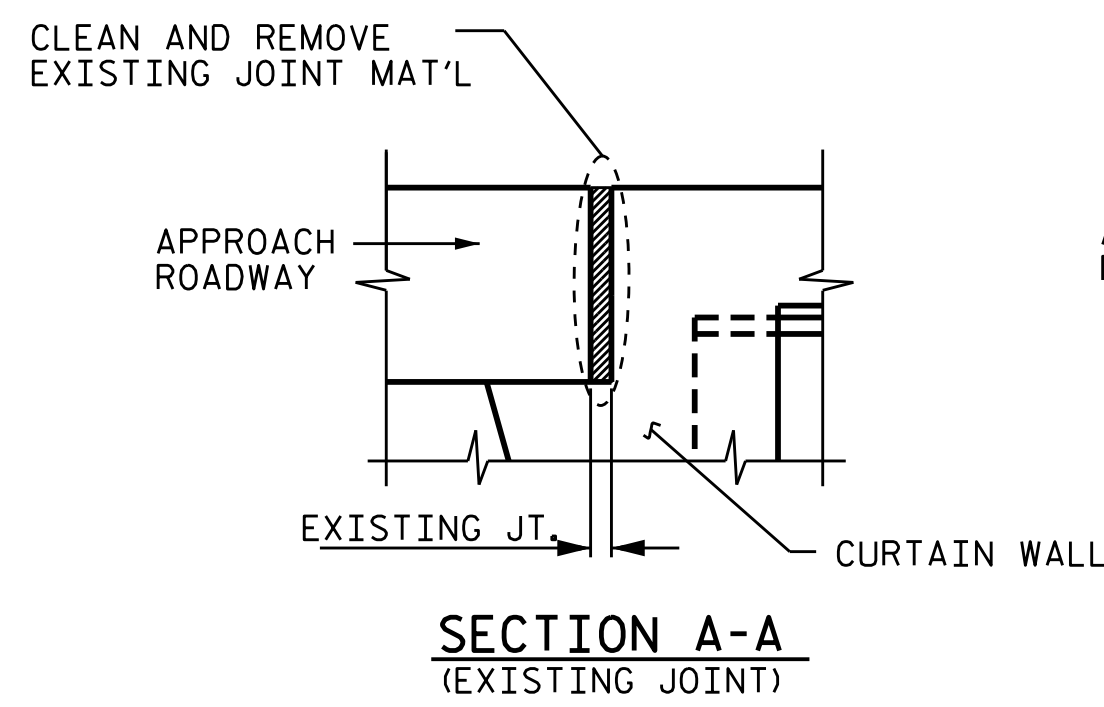
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION &
LATEX MODIFIED
CONCRETE DETAILS

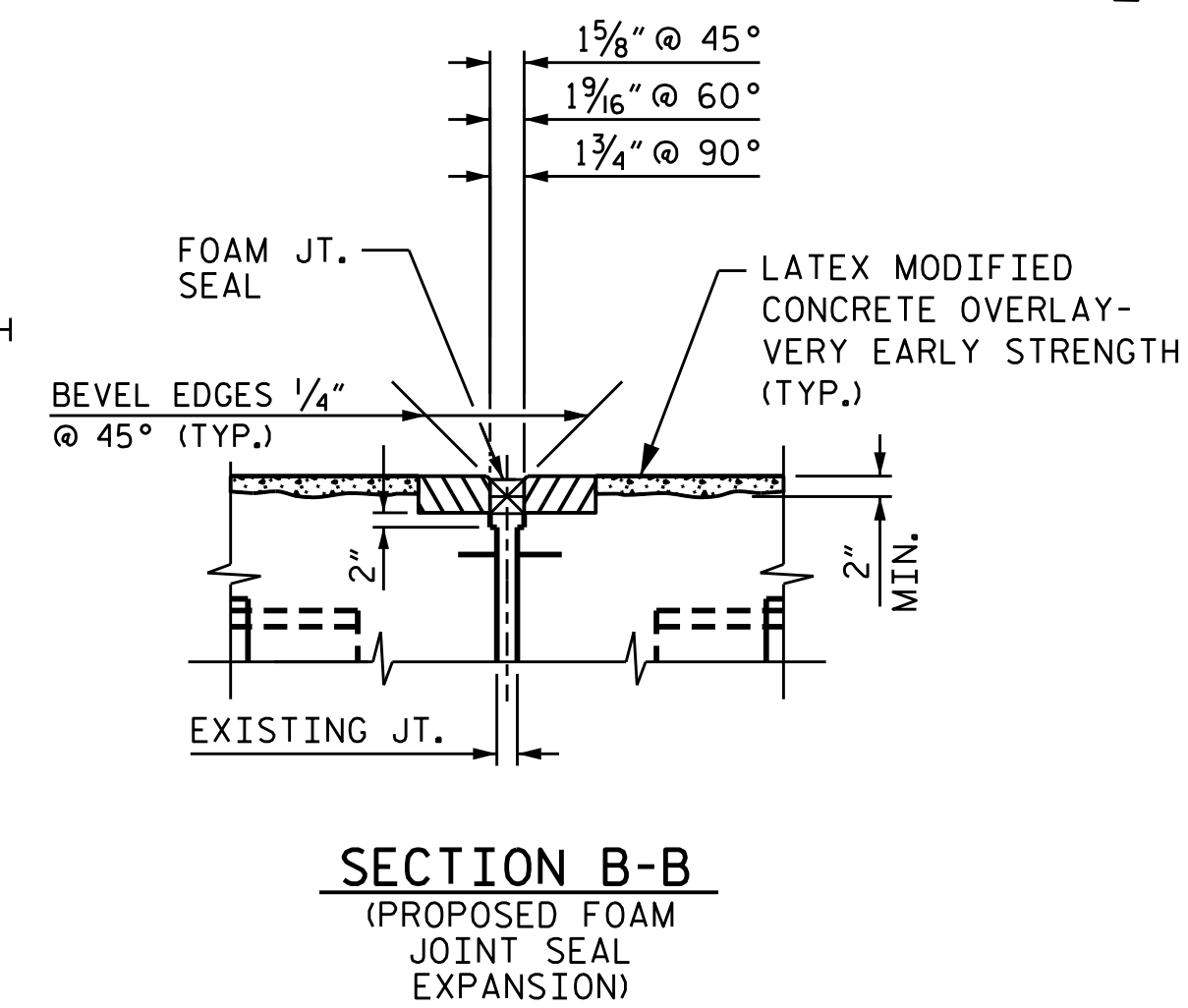
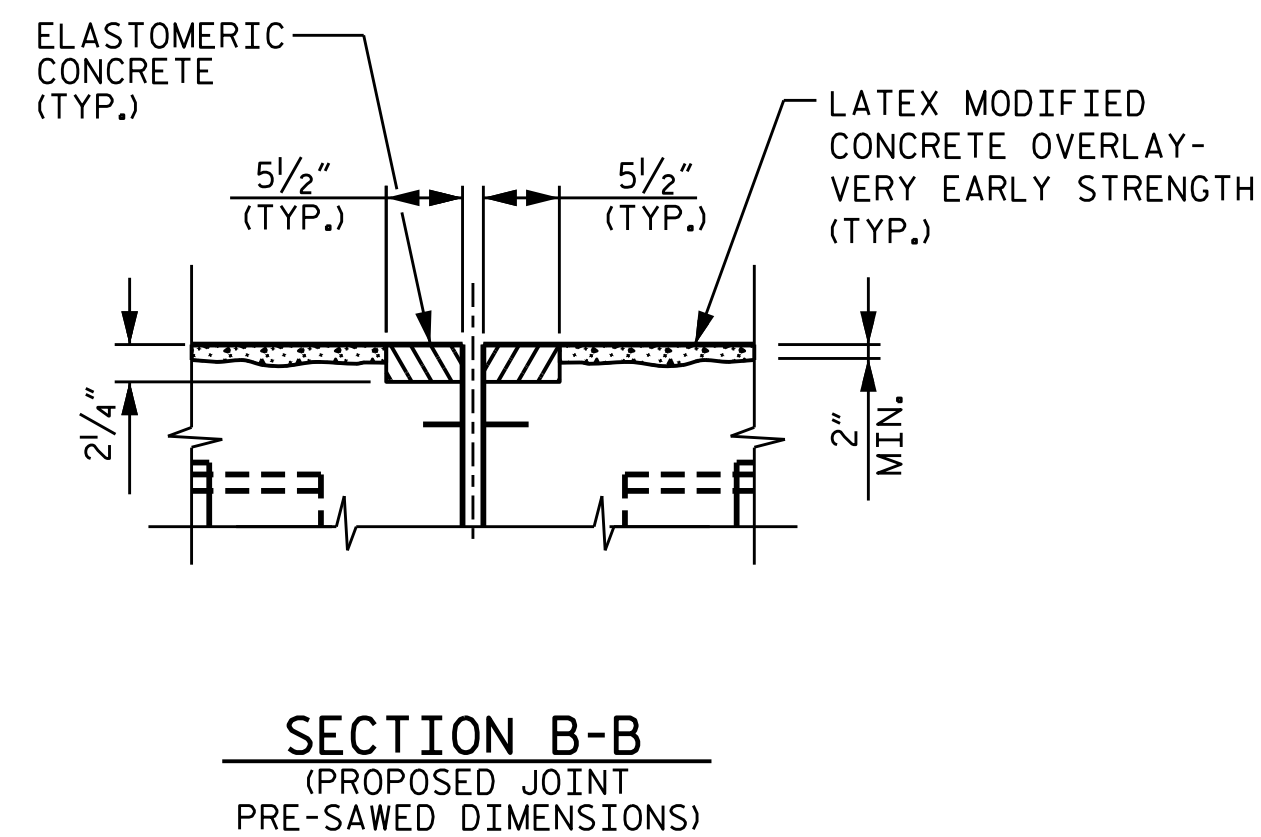
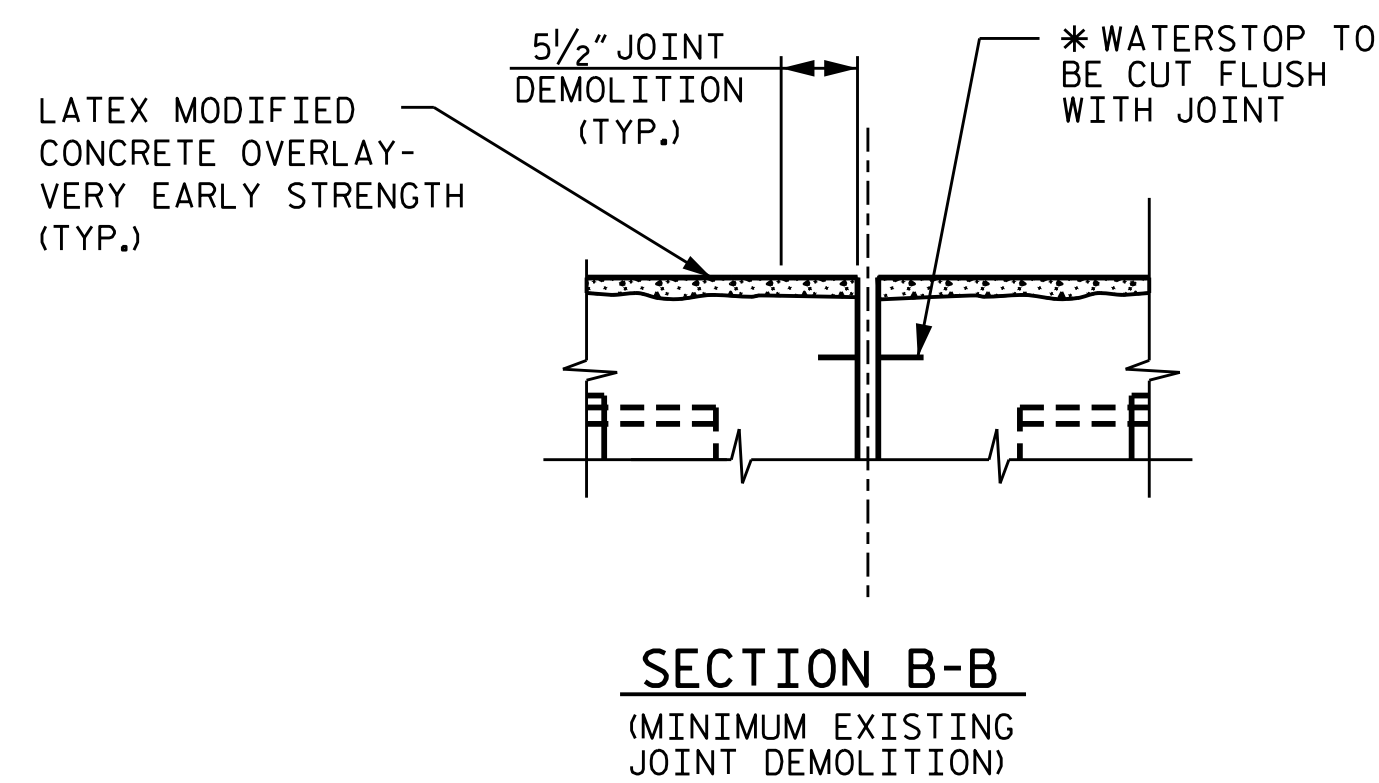
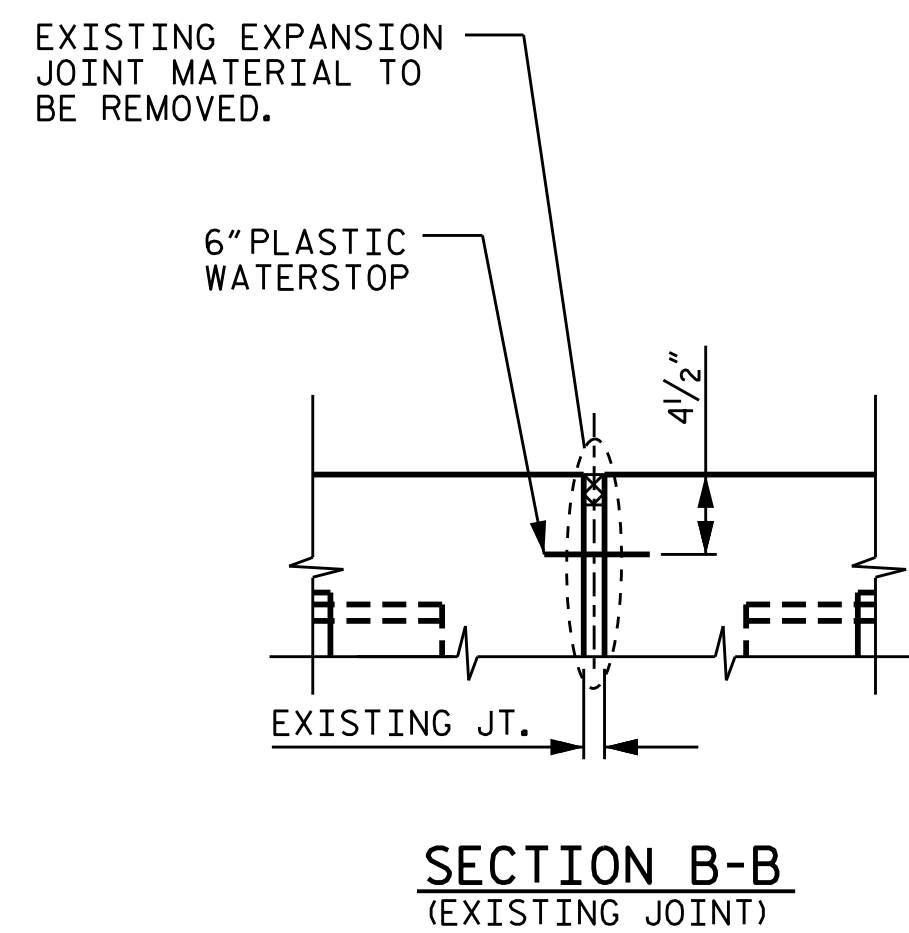


DRAWN BY : M. WELDON DATE : 4/2014
CHECKED BY : F. ASEFNIA DATE : 4/2014

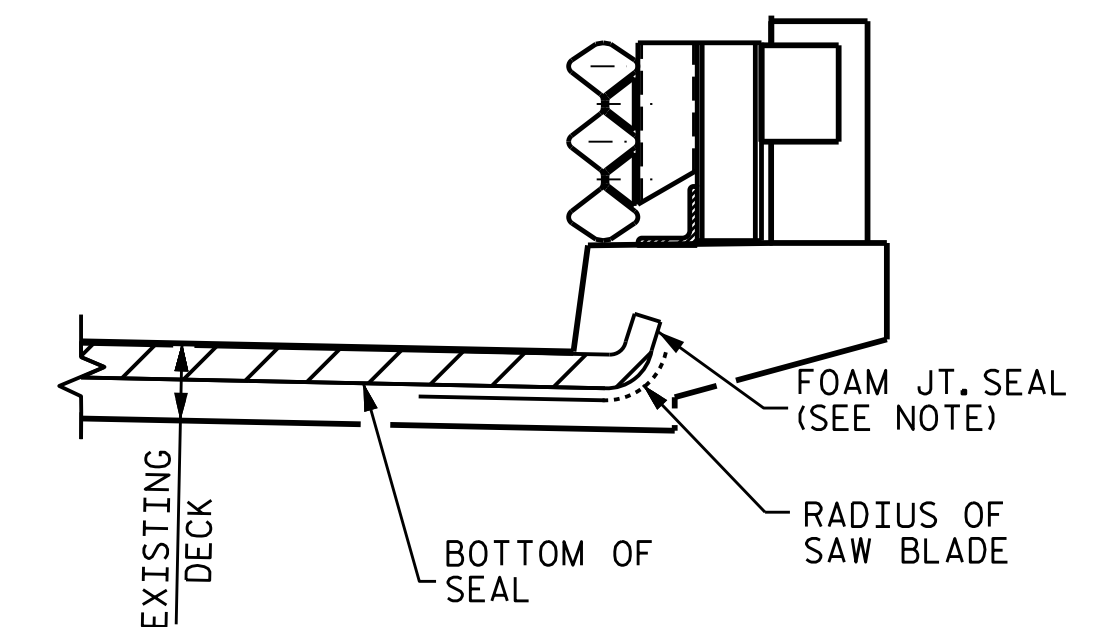
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-18
2			4			23



**JOINT INSTALLATION SEQUENCE
AT END BENTS**



**JOINT INSTALLATION SEQUENCE
AT BENTS**



NOTES:

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL.

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, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC CONCRETE.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

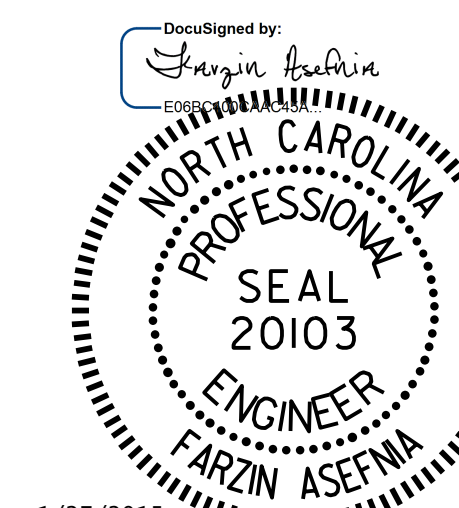
RETAIN ALL EXISTING REINFORCING STEEL, CLEAN AND REPAIR AS NEEDED.

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

PROJECT NO. I-5308
ROBESON COUNTY
BRIDGE NO.: 146

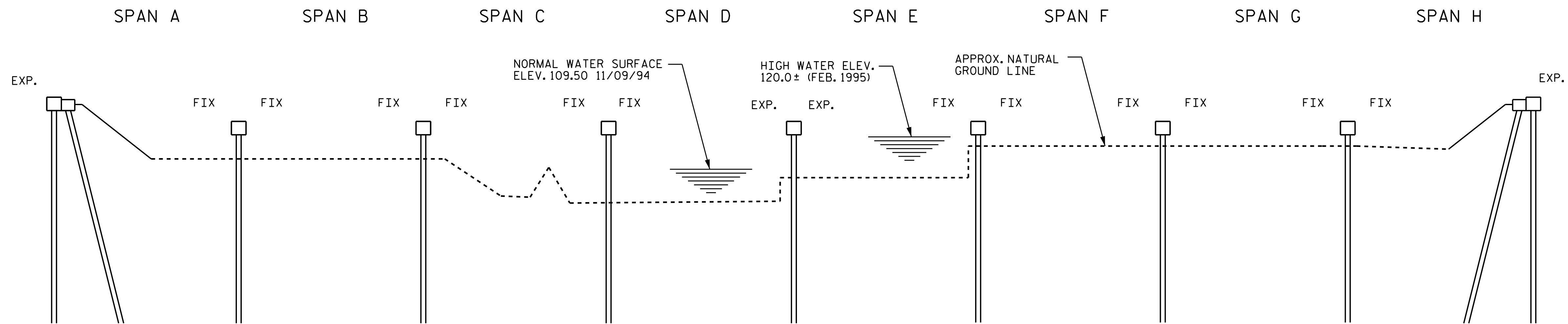
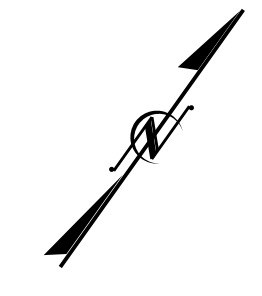
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUPERSTRUCTURE
JOINT DETAILS**

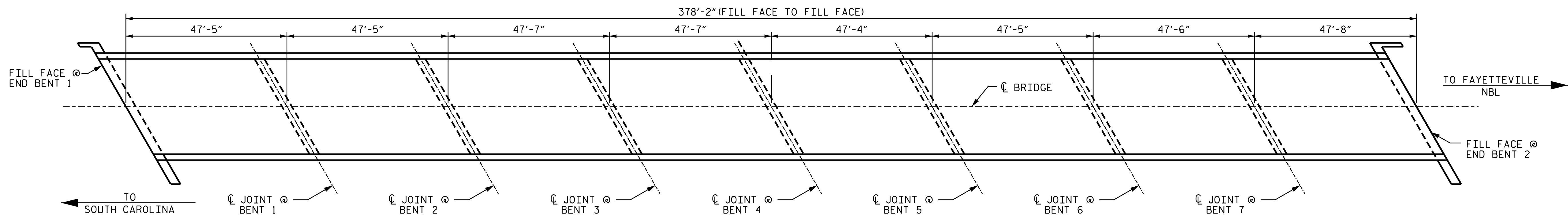


DRAWN BY : M. WELDON DATE : 4/2014
CHECKED BY : F. ASEFNIA DATE : 4/2014

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-19
2			4			23



SECTION PROFILE ALONG CL MEDIAN

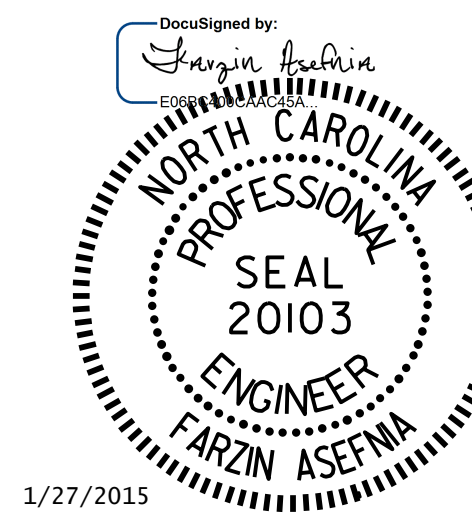


PLAN OF SPANS

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO: 147
 SHEET 1 OF 2

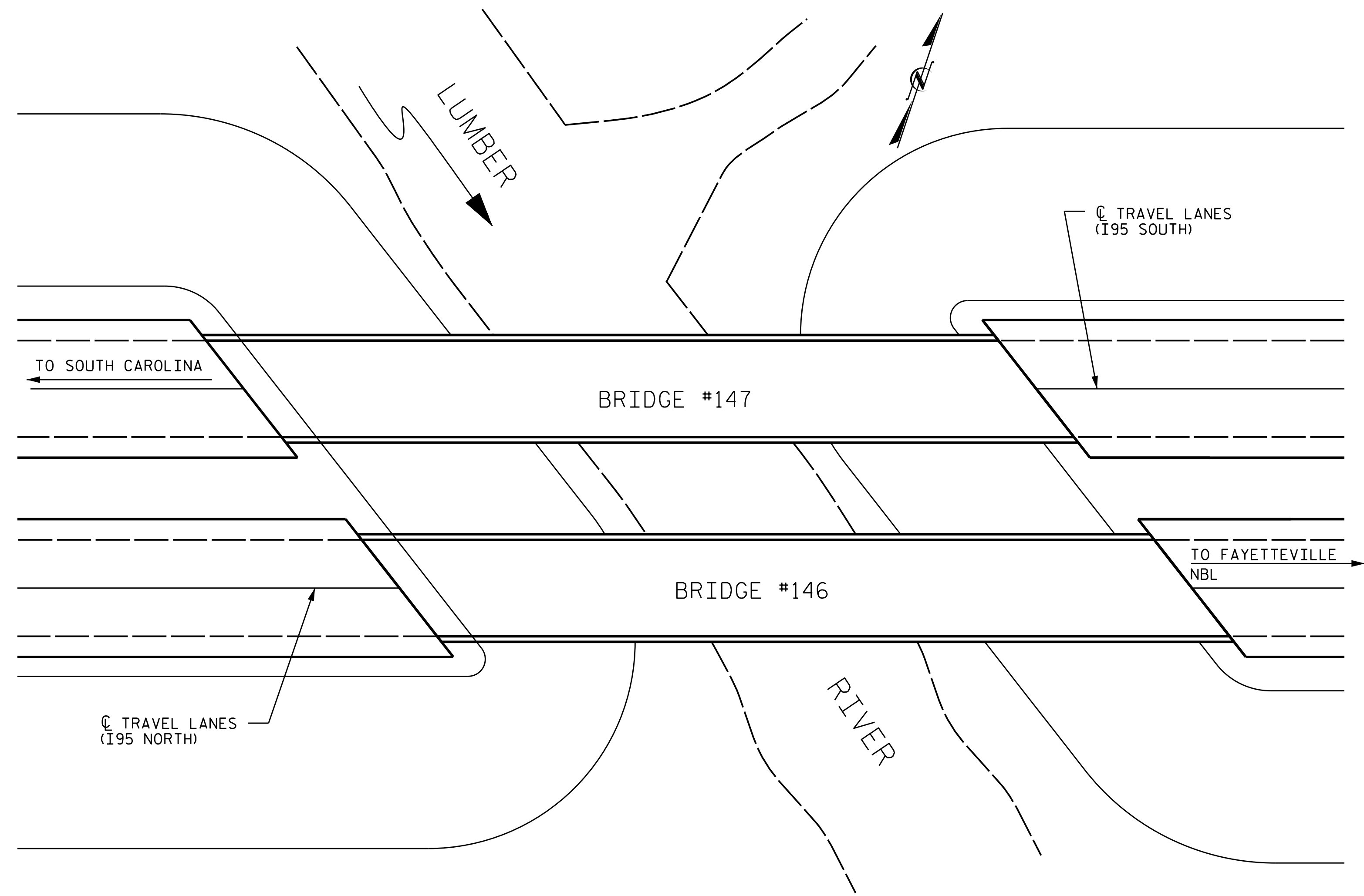
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE #147 ON I95
 SOUTHBOUND LANE
 OVER LUMBER RIVER



DRAWN BY : M. WELDON DATE : 11/2014
 CHECKED BY : F. ASEFNIA DATE : 11/2014

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-20
1			3			TOTAL SHEETS
2			4			23



LOCATION SKETCH

NOTES

- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING OF SURFACE PREPARATION OF BRIDGE DECK.
- 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.
- FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL 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.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN SHEETS.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.
- SEE ROADWAY PLANS FOR PROPOSED APPROACH PAVEMENT REHABILITATION AND ELEVATIONS. NEW APPROACH PAVEMENT ELEVATIONS SHALL PROVIDE SMOOTH TRANSITION FROM ROADWAY TO NEW BRIDGE DECK.

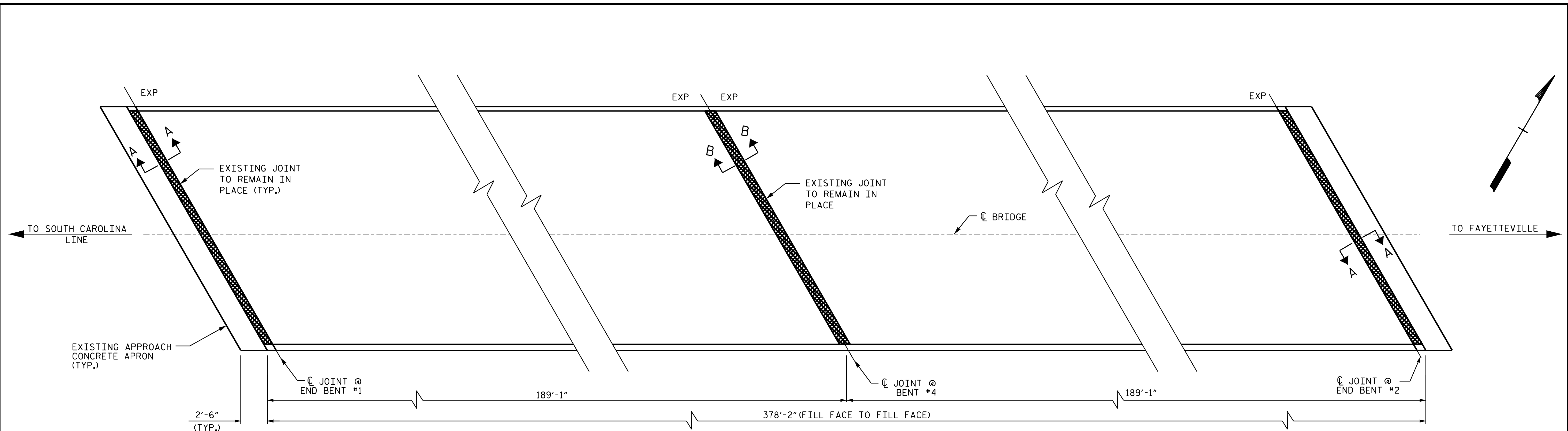
PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO. 147
 SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 BRIDGE #147 ON I-95
 SOUTHBOUND LANE
 OVER LUMBER RIVER





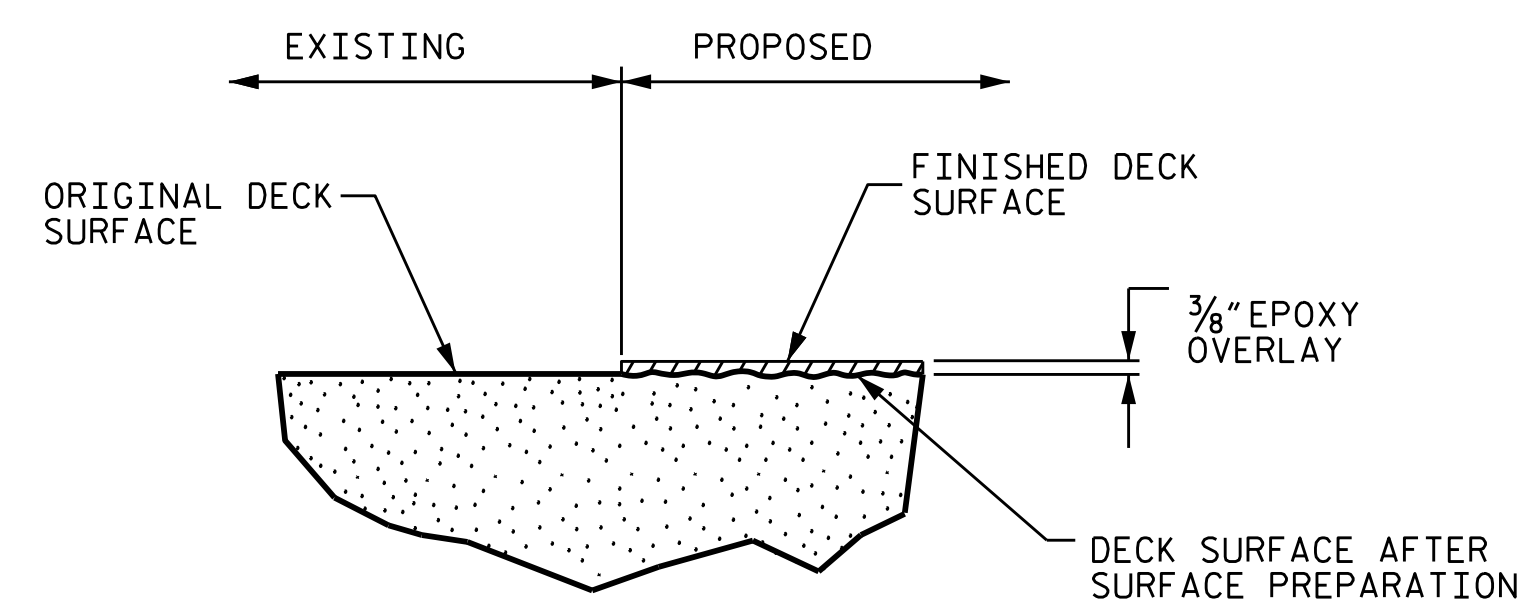
DRAWN BY : M. WELDON DATE : 11/14
 CHECKED BY : F. ASEFNIA DATE : 11/14

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-21
1			3			TOTAL SHEETS
2			4			23



PLAN

-  BRIDGE JOINT
-  EPOXY OVERLAY



DETAIL FOR EPOXY OVERLAY

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO: 147

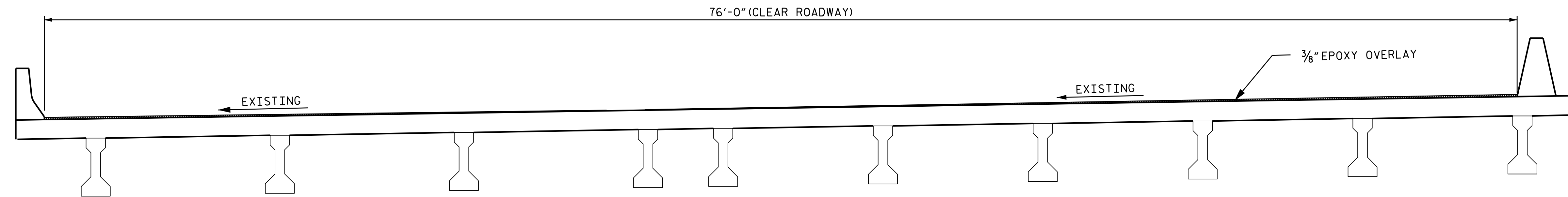
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE



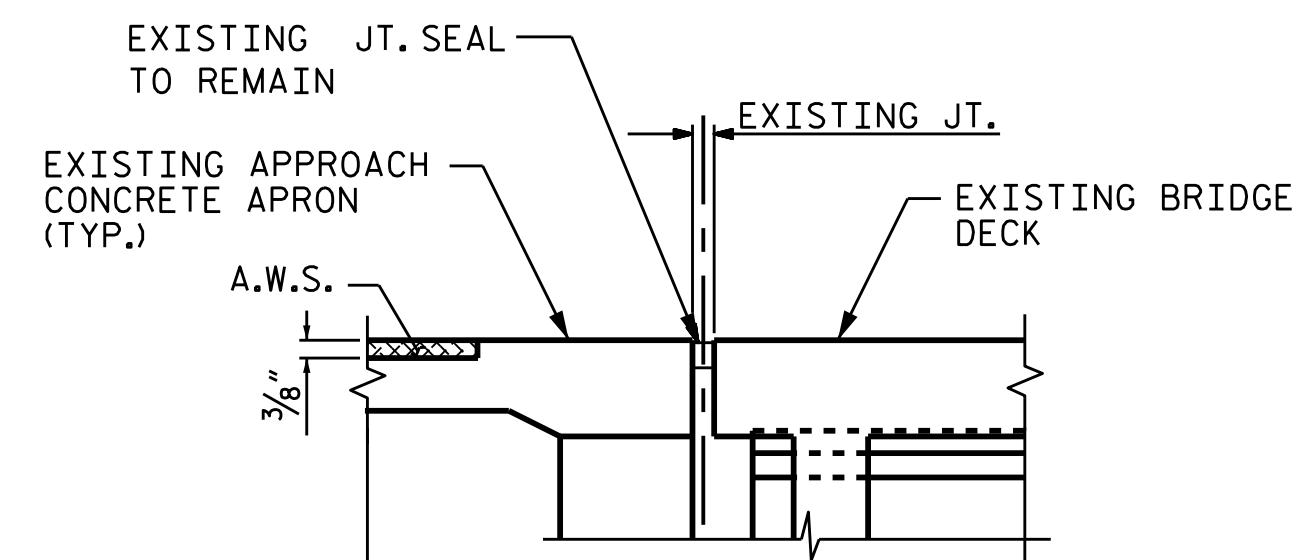
DRAWN BY : M. WELDON DATE : 3/2014
 CHECKED BY : F. ASEFNIA DATE : 3/2014

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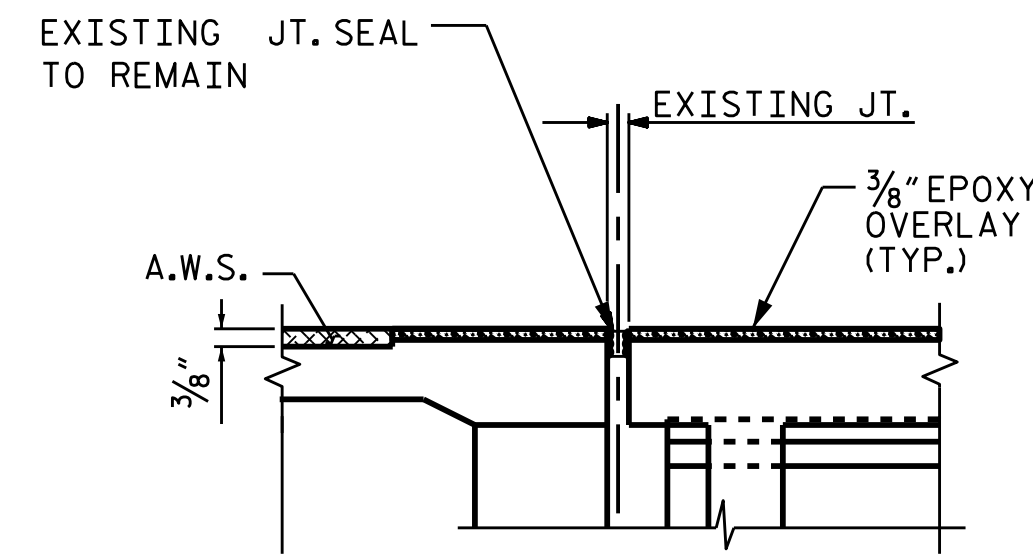
NOTE:
 STAGING OF THE EPOXY OVERLAY SYSTEM IS NOT INDICATED ON STRUCTURE PLANS. IN THE EVENT STAGED CONSTRUCTION IS UTILIZED OR IF LONGITUDINAL JOINTS ARE NECESSARY, LONGITUDINAL CONSTRUCTION JOINTS OF THE EPOXY OVERLAY SYSTEM SHALL BE LOCATED ALONG CENTERLINES OR EDGE OF TRAVEL LANES.



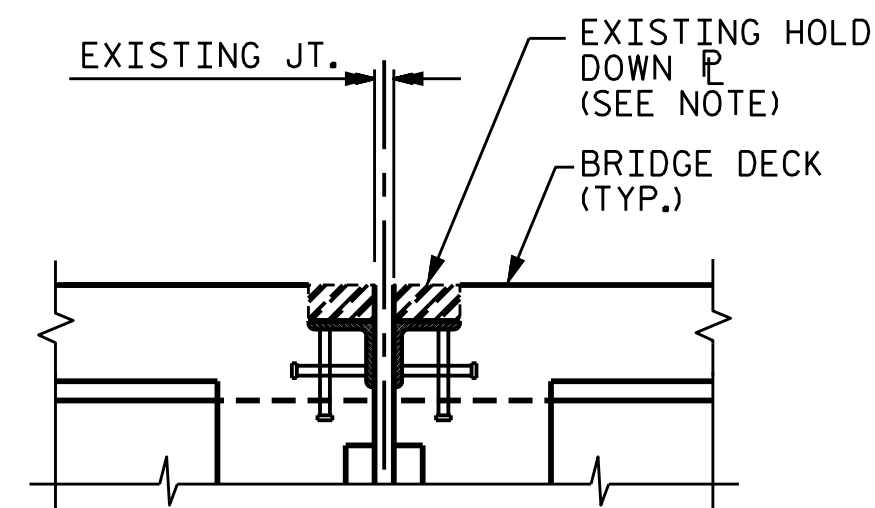
TYPICAL SECTION



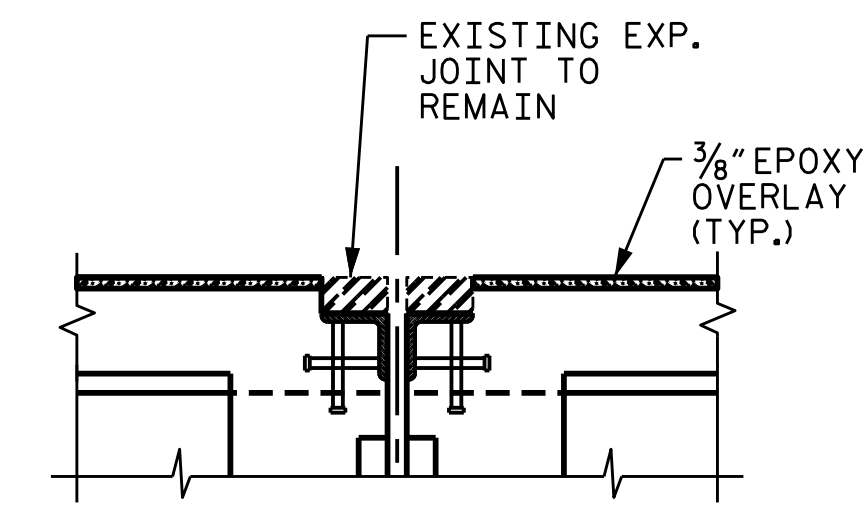
SECTION A-A
(EXISTING JOINT)



SECTION A-A
(PROPOSED EPOXY OVERLAY)



SECTION B-B
(EXISTING JOINT)



SECTION B-B
(PROPOSED EPOXY OVERLAY)

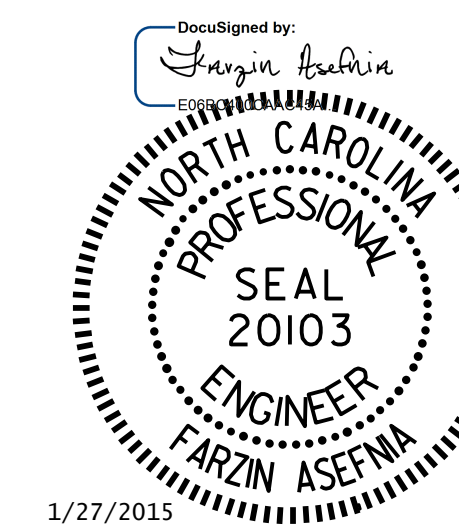
JOINT SEAL DETAILS AT BENT NO. 4 & END BENTS

ALL EXISTING JOINTS TO REMAIN IN PLACE (SEE NOTES.)

PROJECT NO. I-5308
ROBESON COUNTY
 BRIDGE NO: 147

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE

TYPICAL SECTION
 AND
 JOINT DETAILS



DRAWN BY : M. WELDON DATE : 3/2014
 CHECKED BY : F. ASEFNIA DATE : 3/2014

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-23
2			4			23

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 36	-	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	-	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	-	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	--	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	-----	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.
ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.
IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.
DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.
WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".
EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.
WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16" INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.
METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

STD. NO. SN