

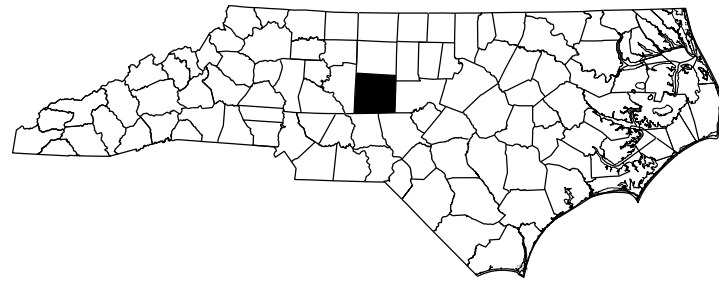
**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

**This file or an individual page
shall not be considered a certified document.**

PROJECT: I-5763

CONTRACT NO.: 53006.1.1



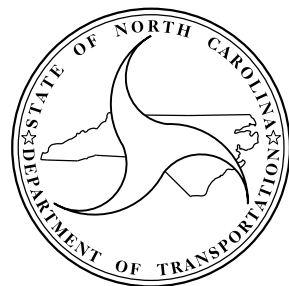
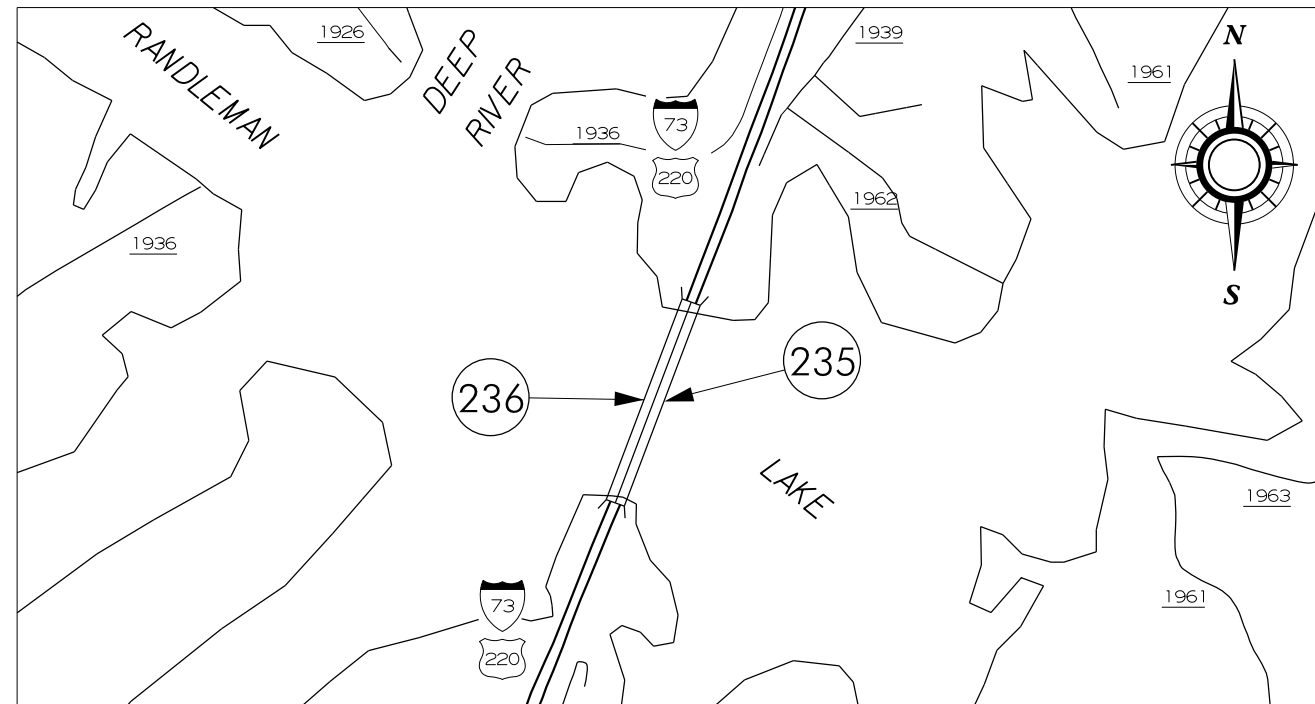
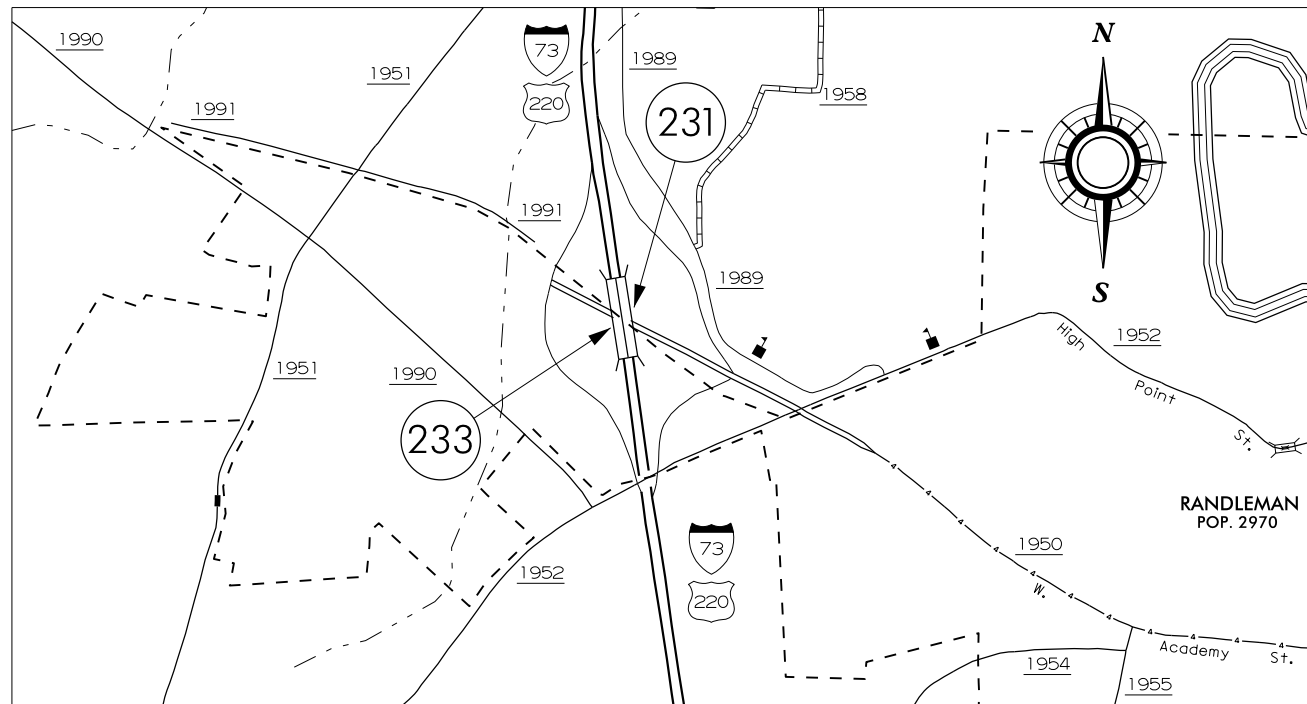
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

RANDOLPH COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5763	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53006.1.1	NHPP-0073(42)	PE	
53006.1.1	NHPP-0073(42)	CONST	

LOCATION: BRIDGE #231 ON I-73 NBL & US 220 NBL OVER SR 1950
BRIDGE #233 ON I-73 SBL & US 220 SBL OVER SR 1950
BRIDGE #235 ON I-73 NBL & US-220 NBL OVER DEEP RIVER
BRIDGE #236 ON I-73 SBL & US-220 SBL OVER DEEP RIVER

TYPE OF WORK: BRIDGE PRESERVATION - SCARIFICATION, HYDRO-DEMOLITION, DECK REPAIR, LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH, JOINT DEMOLITION, PAINTING STRUCTURAL STEEL AND SUBSTRUCTURE REPAIR.



DESIGN DATA

#231 ADT 2012 = 12,750
 #233 ADT 2012 = 12,750
 #235 ADT 2012 = 13,000
 #236 ADT 2012 = 13,000

PROJECT LENGTH

BRIDGE #231 = 0.05 MILE
 BRIDGE #233 = 0.05 MILE
 BRIDGE #235 = 0.13 MILE
 BRIDGE #236 = 0.13 MILE

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

E. E. MURRAY, P.E.
 PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

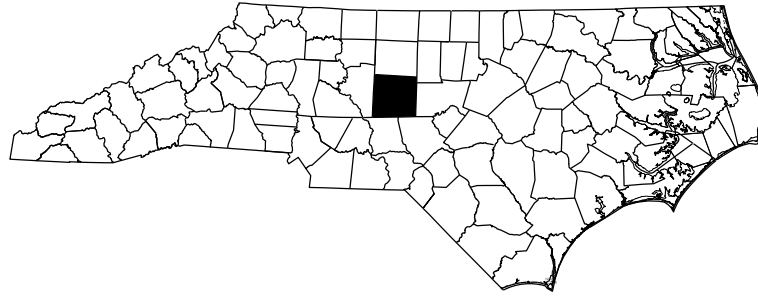
LETTING DATE:
 JANUARY 19, 2016

DocuSigned by:

 11/18/2015
FARZIN ASEFNIA, P.E.
 PROJECT DESIGN ENGINEER

PROJECT: I-5763

CONTRACT NO.: 53006.1.1



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

RANDOLPH COUNTY

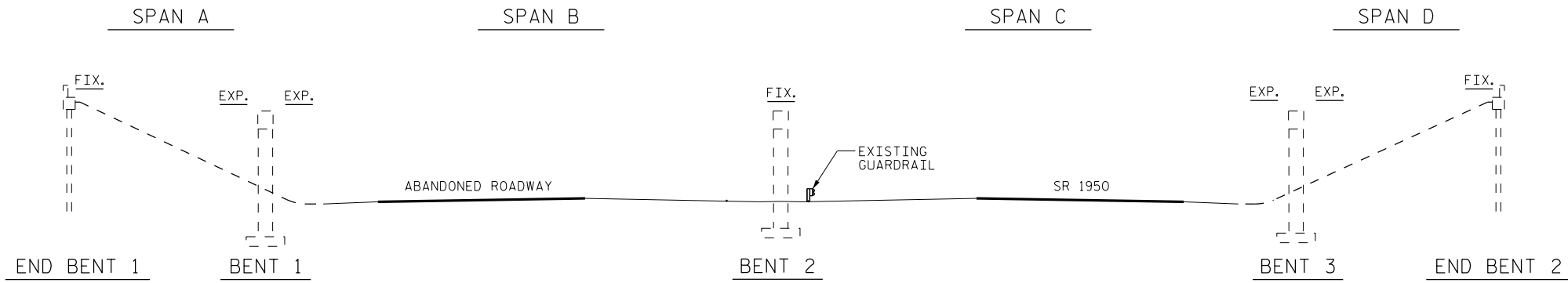
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5763	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53006.1.1	NHPP-0073(42)	P.E.	
53006.1.1	NHPP-0073(42)	CONST.	

LOCATION: BRIDGE #231 ON I-73 NBL & US 220 NBL OVER SR 1950
BRIDGE #233 ON I-73 SBL & US 220 SBL OVER SR 1950
BRIDGE #235 ON I-73 NBL & US-220 NBL OVER DEEP RIVER
BRIDGE #236 ON I-73 SBL & US-220 SBL OVER DEEP RIVER

TYPE OF WORK: BRIDGE PRESERVATION - SCARIFICATION, HYDRO-DEMOLITION, DECK REPAIR, LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH, JOINT DEMOLITION, PAINTING STRUCTURAL STEEL AND SUBSTRUCTURE REPAIR.

INDEX OF SHEETS

<i>1</i>	<i>TITLE SHEET</i>
<i>1A</i>	<i>INDEX OF SHEETS</i>
<i>S-1 - S-48</i>	<i>STRUCTURAL PLANS</i>
<i>SN</i>	<i>STANDARD NOTES</i>

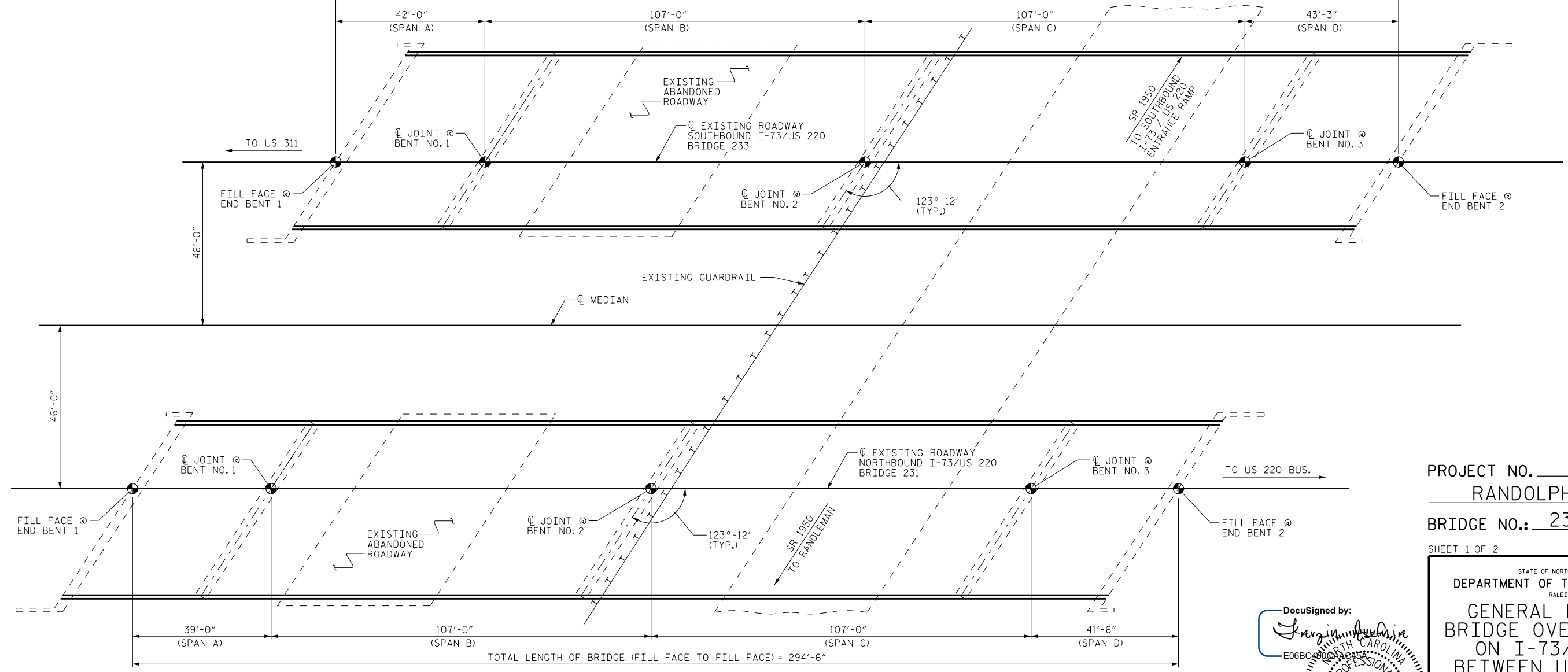


ELEVATION

SECTIONS AT BENTS AND END BENTS ARE AT RIGHT ANGLES



TOTAL LENGTH OF BRIDGE (FILL FACE TO FILL FACE) = 299'-3"



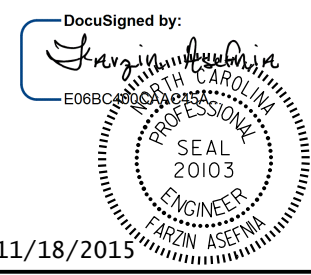
PLAN

COLUMNS AND FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO.: 231 & 233

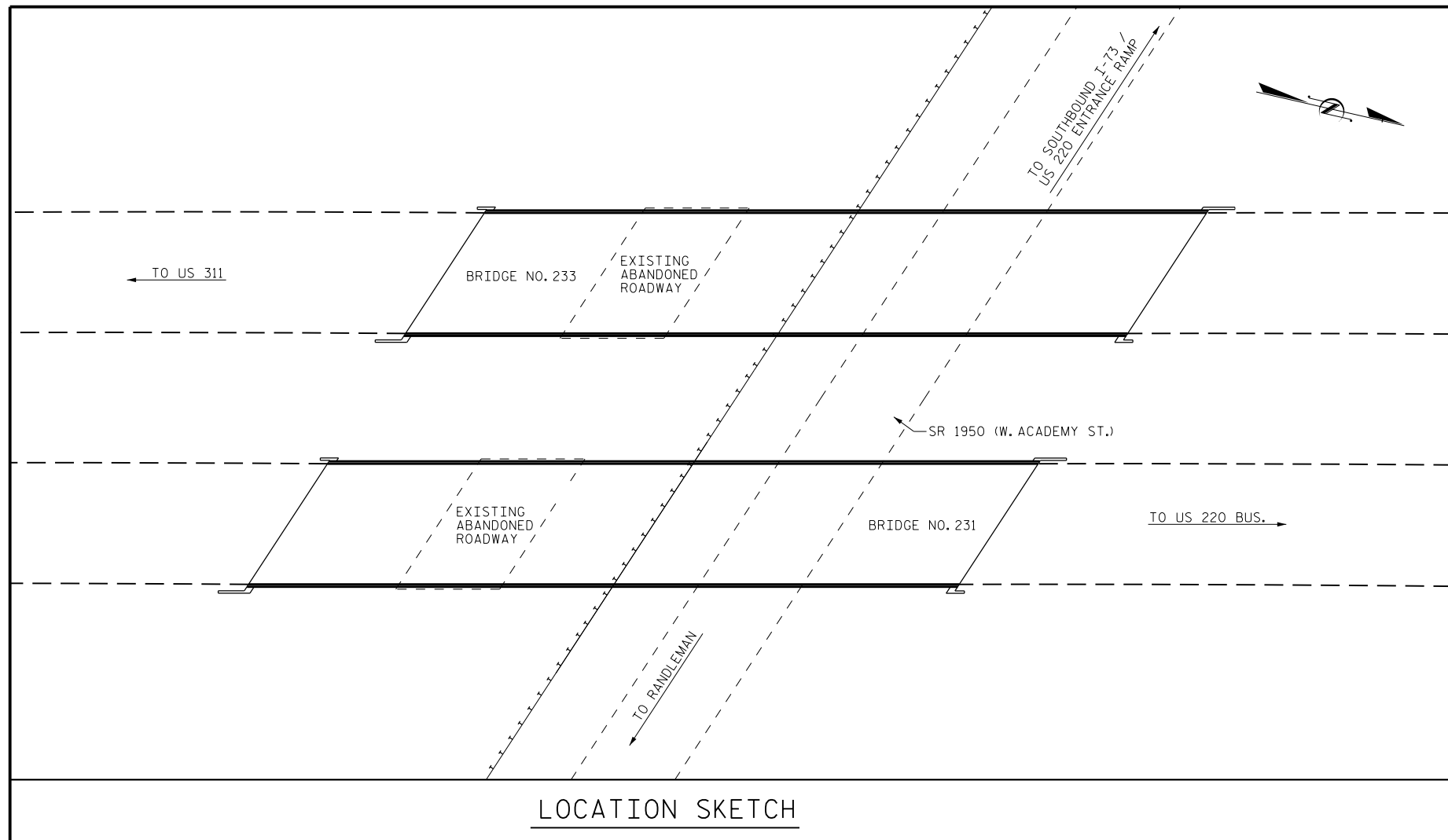
SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 BRIDGE OVER SR 1950
 ON I-73/US 220
 BETWEEN US 311 AND
 US 220 BUS.



DRAWN BY : D.V. JOYNER DATE : 8/2015
 CHECKED BY : W. SMITH DATE : 8/2015

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			48



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 PROVISION.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.
- FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, 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 CONCRETE DECK REPAIR, SEE SPECIAL PROVISION.
- FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.
- FOR PAINTING EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

LOCATION SKETCH

TOTAL BILL OF MATERIAL

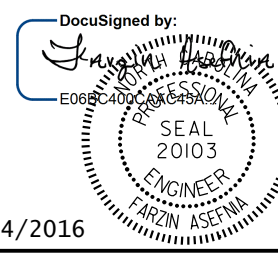
BRIDGE NO.	GROOVING BRIDGE FLOORS	POLLUTION CONTROL	* CLASS II SURFACE PREPARATION	* CLASS III SURFACE PREPARATION	** LATEX MODIFIED CONCRETE OVERLAY - VES	PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY - VES	CLEANING AND PAINTING OF BRIDGE *---	PAINT CONTAINMENT FOR BRIDGE *---	FOAM JOINT SEALS	* VOLUMETRIC MIXER	* CONCRETE FOR DECK REPAIR	BRIDGE JOINT DEMOLITION	SCARIFYING BRIDGE DECK	HYDRO-DEMOLITION OF BRIDGE DECK
	SQ. FT.	LUMP SUM	SQ. YDS.	SQ. YDS.	C.Y.	SQ. YDS.	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	CU. FT.	SO. FT.	SO. YDS.	SO. YDS.
231	15,134	LUMP SUM	4	4	87	1781	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	1	106	1781	1781
233	15,348	LUMP SUM	4	4	90	1806	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	1	106	1806	1806
TOTAL	30,482	LUMP SUM	8	8	177	3587	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	2	212	3587	3587

* CLASS II AND CLASS III SURFACE PREPARATION, VOLUMETRIC MIXER, AND CONCRETE FOR DECK REPAIR ARE NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

** THE QUANTITY OF LATEX MODIFIED CONCRETE OVERLAY - VES INCLUDES THE 4" OVERLAP BETWEEN OVERLAYS.

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 231 & 233

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
BRIDGE OVER SR 1950
ON I-73/US 220
BETWEEN US 311 AND
US 220 BUS.

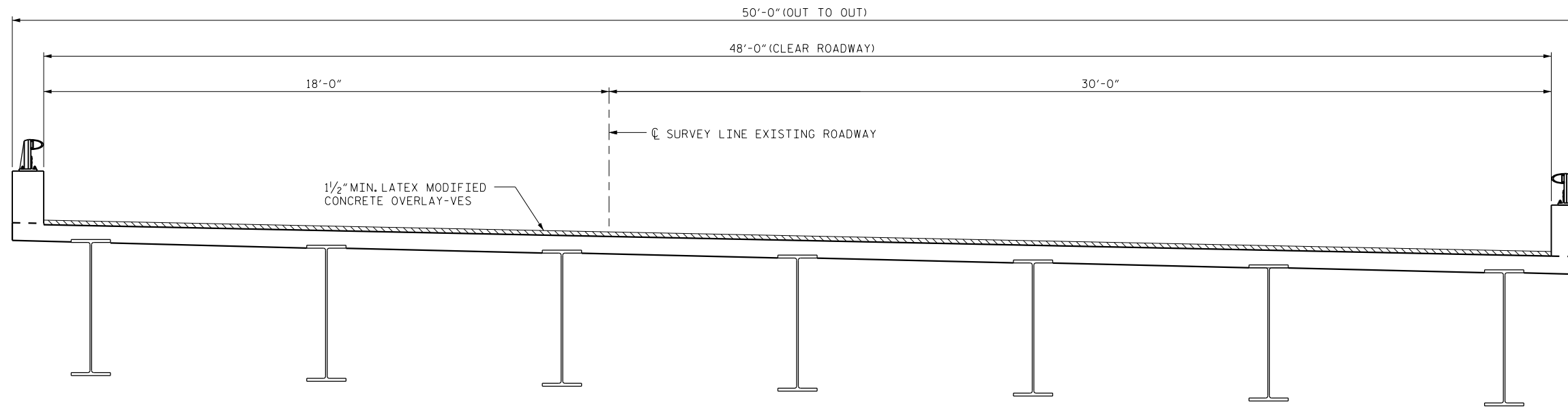
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			48
2			4			

DRAWN BY : D.V. JOYNER DATE : 08/15
 CHECKED BY : W. SMITH DATE : 08/15

1/4/2016

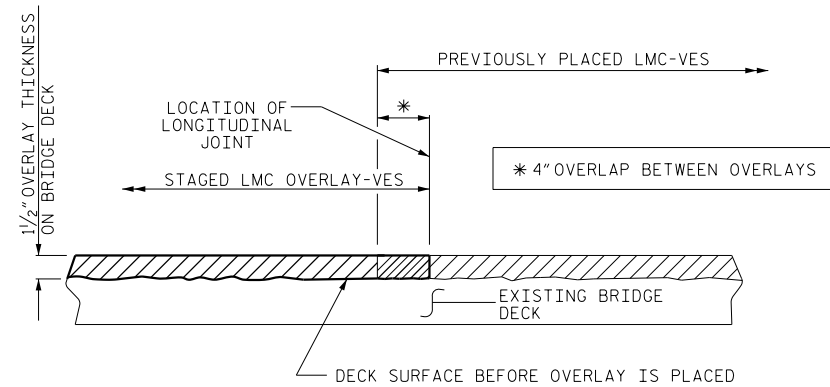
NOTE:

WHEN PREPARING THE SURFACE FOR LMC OVERLAY-VES ADJACENT TO A PREVIOUSLY PLACED LMC-VES STAGE, THE PREVIOUSLY PLACED LMC-VES SHALL BE REMOVED FOR A DISTANCE OF 4-INCHES FROM THE LMC-VES 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-VES SHALL BE PLACED IN THE 4-INCH OVERLAP, AS PART OF NEW LMC-VES STAGE PLACEMENT.



TYPICAL SECTION

(BRIDGE 231 NORTHBOUND LANES SHOWN - BRIDGE 233 SOUTHBOUND LANES SIMILAR BY ROTATION)



SECTION THRU DECK

STAGED LMC-VES OVERLAY JOINT

(AS NEEDED)

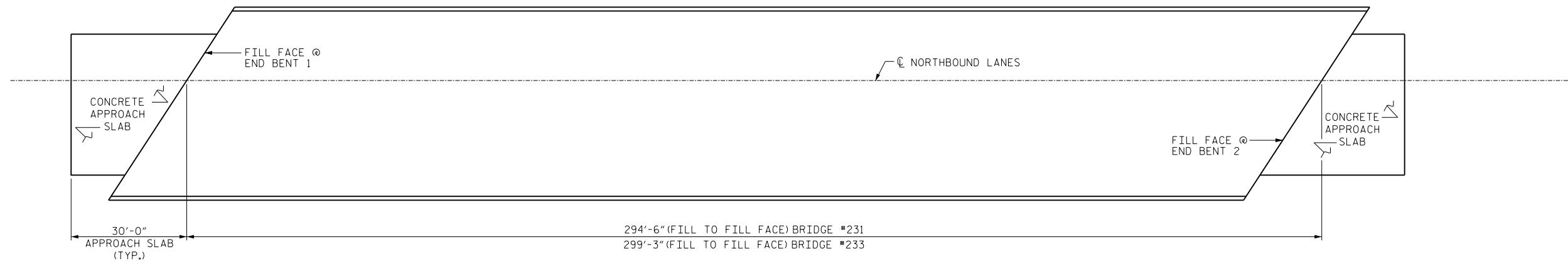
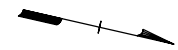
PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 231 & 233

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 & LATEX MODIFIED
 CONCRETE-VES
 DETAILS OF SPANS A, B, C, & D

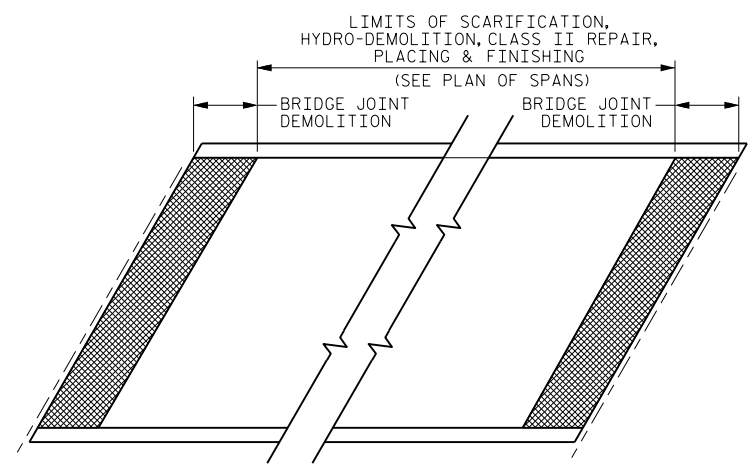
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			48

DocuSigned by:
Farzin Asefma
 NORTH CAROLINA
 PROFESSIONAL ENGINEER
 SEAL 20103
 FARZIN ASEFMA
 11/18/2015

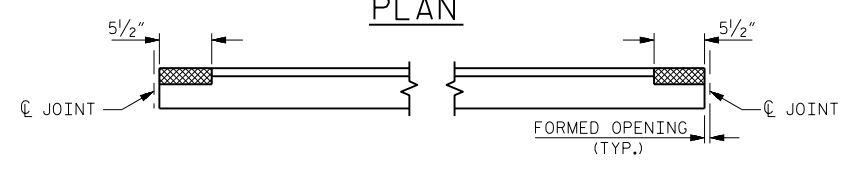
DRAWN BY : D.V. JOYNER DATE : 8/2015
 CHECKED BY : W. SMITH DATE : 8/2015



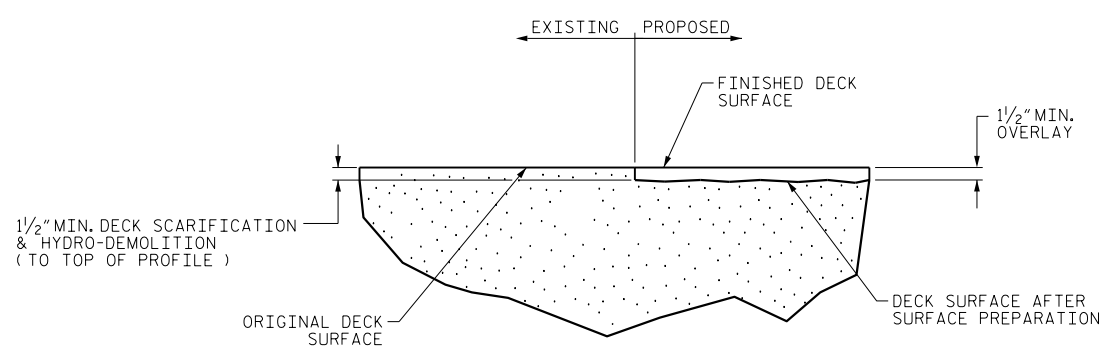
PLAN
(BRIDGE 231 SHOWN, BRIDGE 233 SIMILAR)



PLAN



ELEVATION



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY VES

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

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 231 & 233

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 SURFACE PREPARATION

DocuSigned by:
Farzin Asefina
 NORTH CAROLINA
 PROFESSIONAL ENGINEER
 SEAL 20103
 FARZIN ASEFINA




11/18/2015

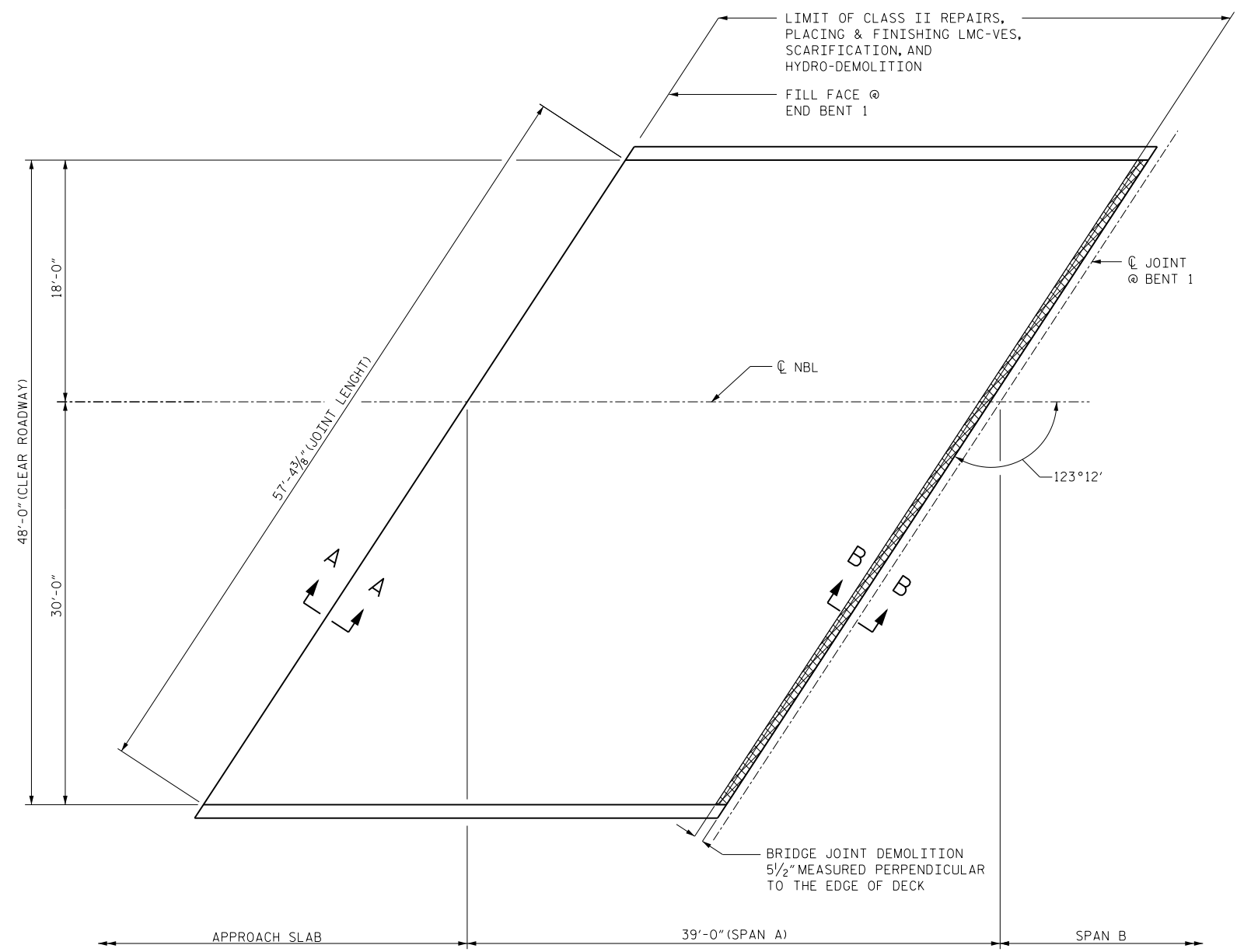
DRAWN BY : D.V. JOYNER DATE : 8/2015
 CHECKED BY : W. SMITH DATE : 8/2015

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			48
2			4			48

SPAN "A" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	26 SQ. FT.	
SCARIFYING BRIDGE DECK	205 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	205 SQ. YDS.	

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

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION



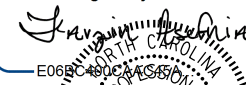
PLAN OF SPAN A
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-15)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 231
 SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN A
 NBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			48

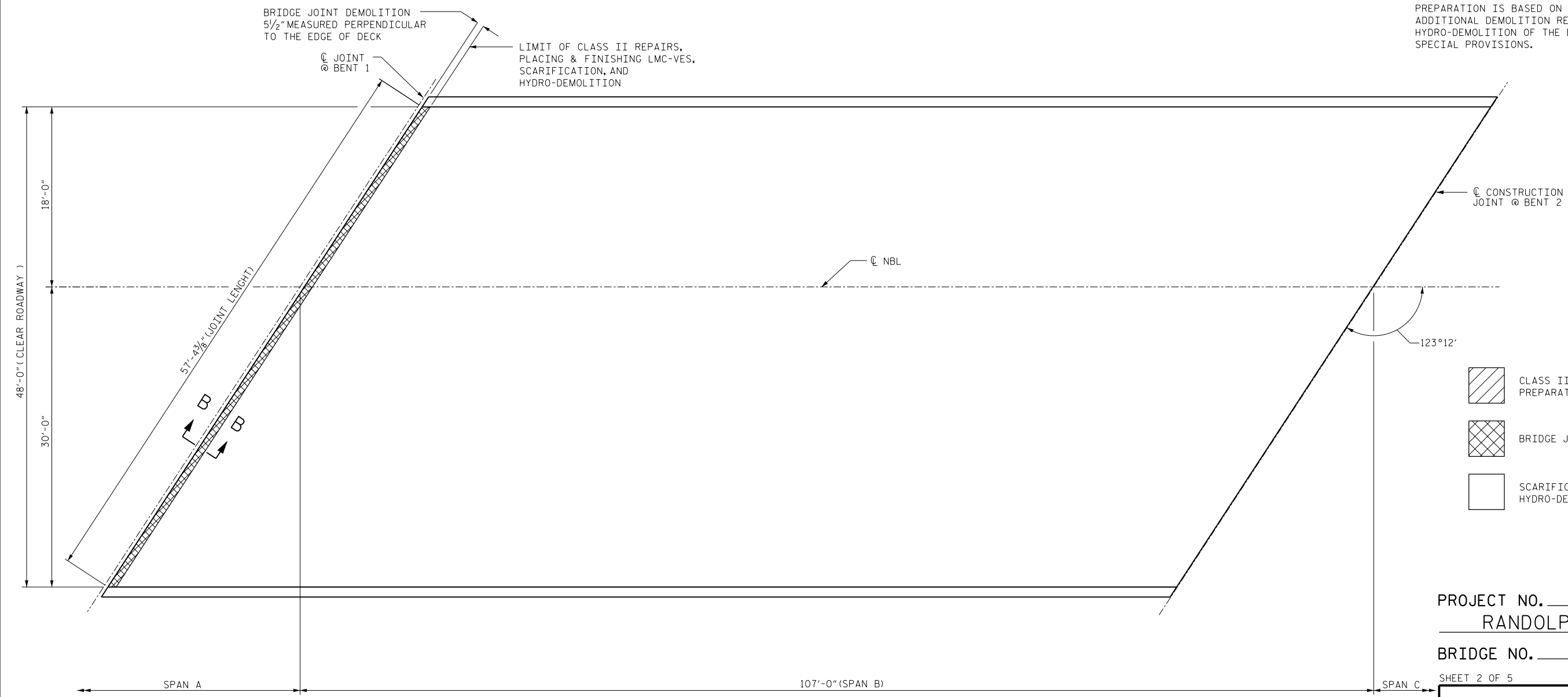
DocuSigned by:

 E068C480C43585
 STATE OF NORTH CAROLINA
 PROFESSIONAL ENGINEER
 SEAL 20103
 FARZIN ASEFINA
 11/18/2015




DRAWN BY : D.V. JOYNER DATE : 9/2015
 CHECKED BY : W. SMITH DATE : 9/2015

18-NOV-2015 08:49
 Z:\TIP\Projects-I\I5763\Structures\I-5763 Final Drawings\DCN\402.001.I5763.SMU.S5.SPA.DGN
 fosefnrlo

SPAN "B" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	26 SQ. FT.	
SCARIFYING BRIDGE DECK	568 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	568 SQ. YDS.	

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



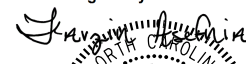
-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 231

PLAN OF SPAN B
 (FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-15)

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN B
 NBL

DocuSigned by:

 E068C40C4A56
 NORTH CAROLINA PROFESSIONAL SEAL 20103
 ENGINEER
 FARZIN ASEFINA

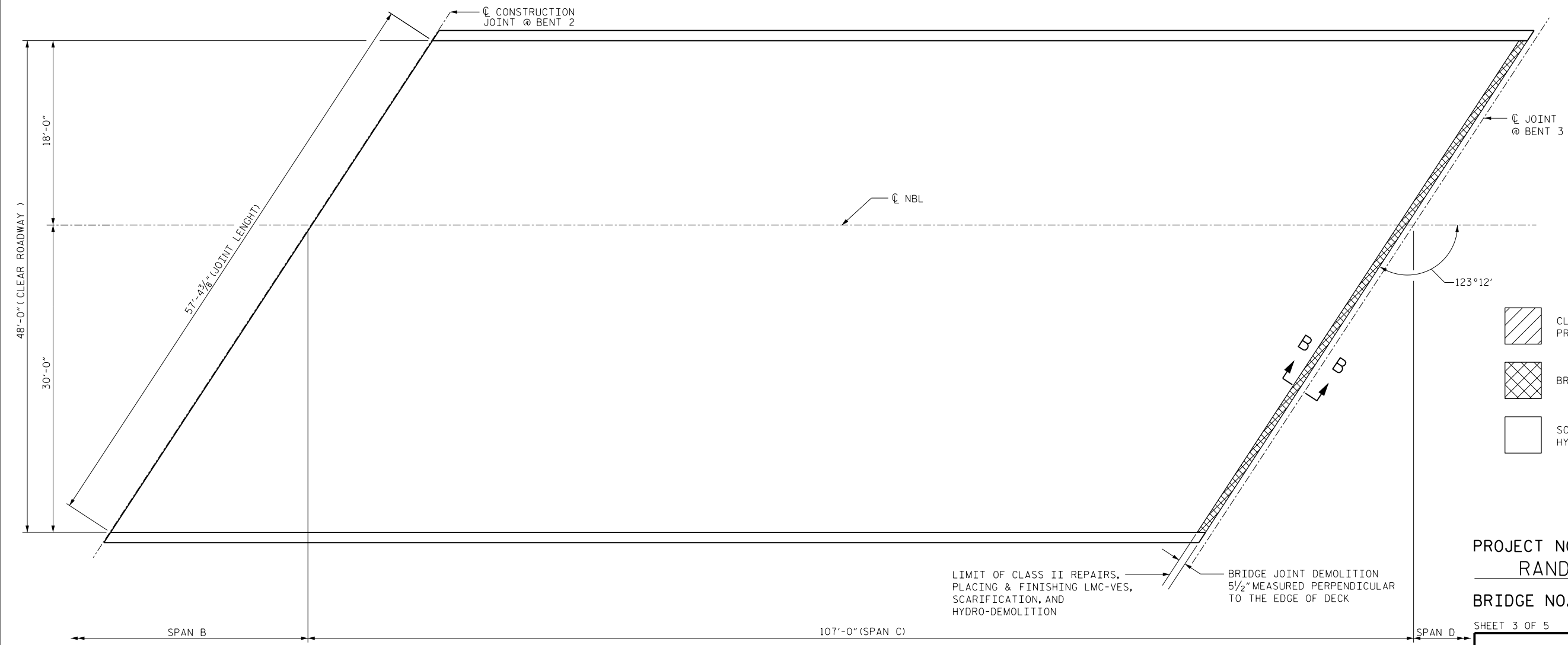
11/18/2015

DRAWN BY : D.V. JOYNER DATE : 9/2015
 CHECKED BY : W. SMITH DATE : 9/2015

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-6
2			4			TOTAL SHEETS 48

SPAN "C" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	26 SQ. FT.	
SCARIFYING BRIDGE DECK	568 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	568 SQ. YDS.	

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



PLAN OF SPAN C
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-15)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 231

SHEET 3 OF 5

DocuSigned by:
Farzin Asefina
 ENGINEER
 SEAL
 20103
 FARZIN ASEFINA




11/18/2015

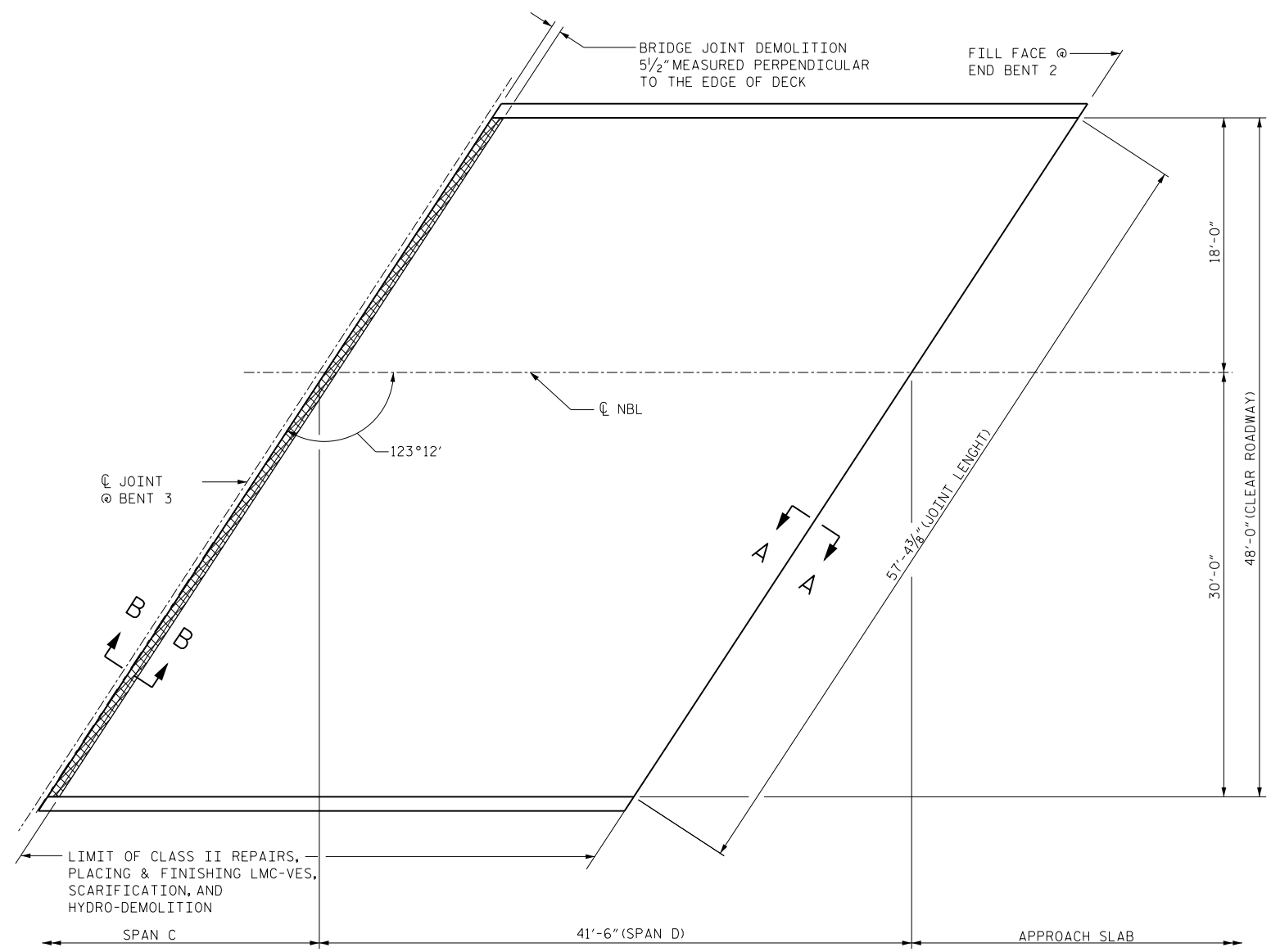
DRAWN BY : D.V. JOYNER DATE : 9/2015
 CHECKED BY : W. SMITH DATE : 9/2015

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.	
SURFACE PREPARATION SPAN C NBL						S-7	
REVISIONS						TOTAL SHEETS	
NO.	BY:	DATE:	NO.	BY:	DATE:	48	
1			3				
2			4				

SPAN "D" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	26 SQ. FT.	
SCARIFYING BRIDGE DECK	218 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	218 SQ. YDS.	

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

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION



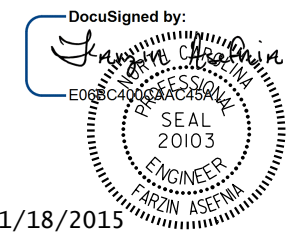
PLAN OF SPAN D
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-15)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 231
 SHEET 4 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN D
 NBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			48



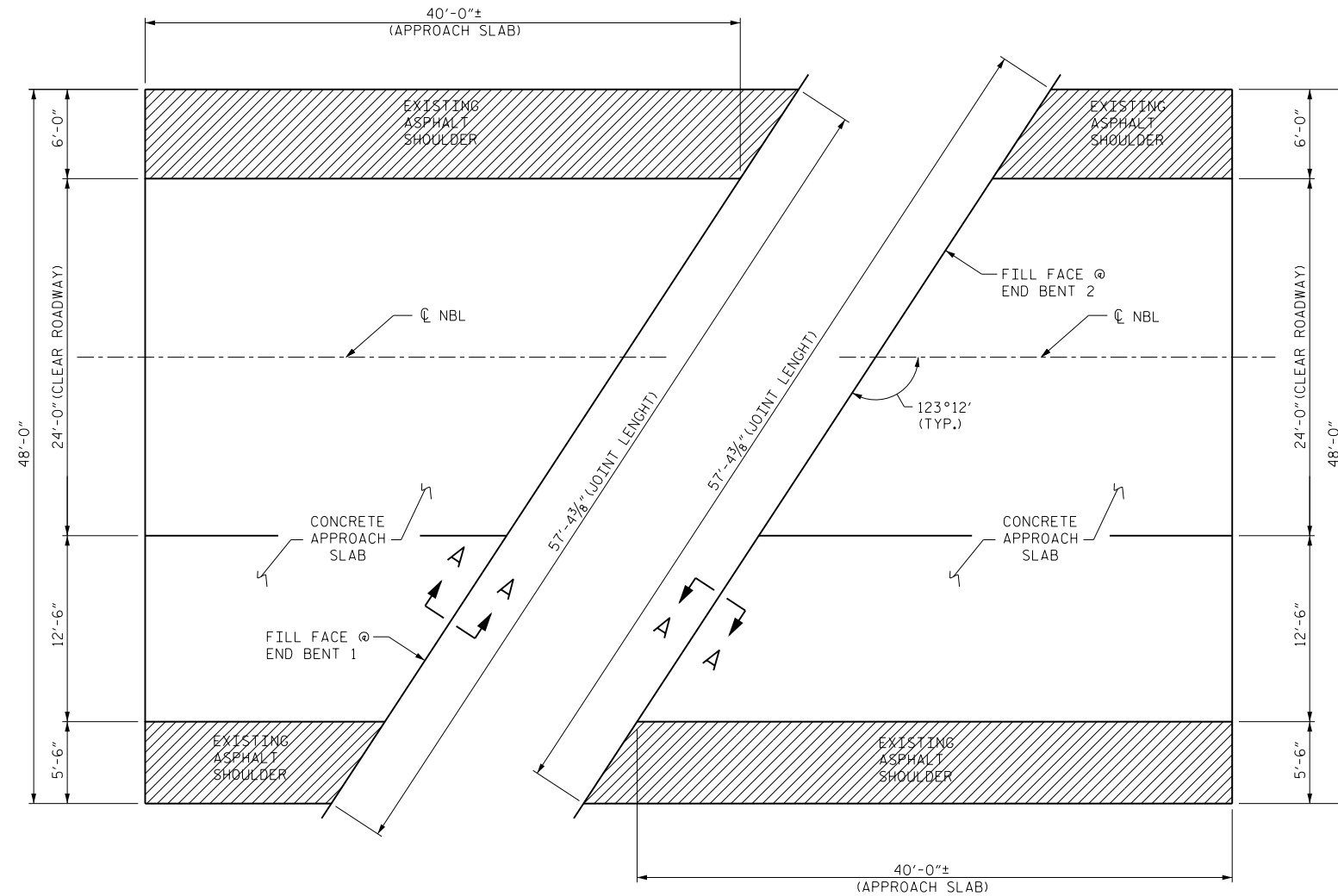
11/18/2015

DRAWN BY : D.V. JOYNER DATE : 9/2015
 CHECKED BY : W. SMITH DATE : 9/2015

18-NOV-2015 08:49
 Z:\TIP\Projects-I\I5763\Structures\I-5763 Final Drawings\DCN\402_007_I5763_SMU_S8_SPD.DGN
 fasefria

BRIDGE APPROACH SLAB QUANTITIES				
	AT END BENT 1		AT END BENT 2	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING APPROACH SLAB	111 SQ. YDS.		SCARIFYING APPROACH SLAB	111 SQ. YDS.
HYDRO-DEMOLITION OF APPROACH SLAB	111 SQ. YDS.		HYDRO-DEMOLITION OF APPROACH SLAB	111 SQ. YDS.

SCARIFICATION & HYDRO-DEMOLITION



BRIDGE APPROACH SLAB AT END BENT 1
(FOR SECTION VIEWS, SEE "JOINT DETAILS" SHEET S-15)

BRIDGE APPROACH SLAB AT END BENT 2
(FOR SECTION VIEWS, SEE "JOINT DETAILS" SHEET S-15)

PROJECT NO. I-5763
RANDOLPH COUNTY
BRIDGE NO. 231

SHEET 5 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

APPROACH SLABS
SURFACE PREPARATION

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS
2			4			48

DocuSigned by:
Farzin Asefina
E06B400CA4396




SEAL
20103
ENGINEER
FARZIN ASEFINA

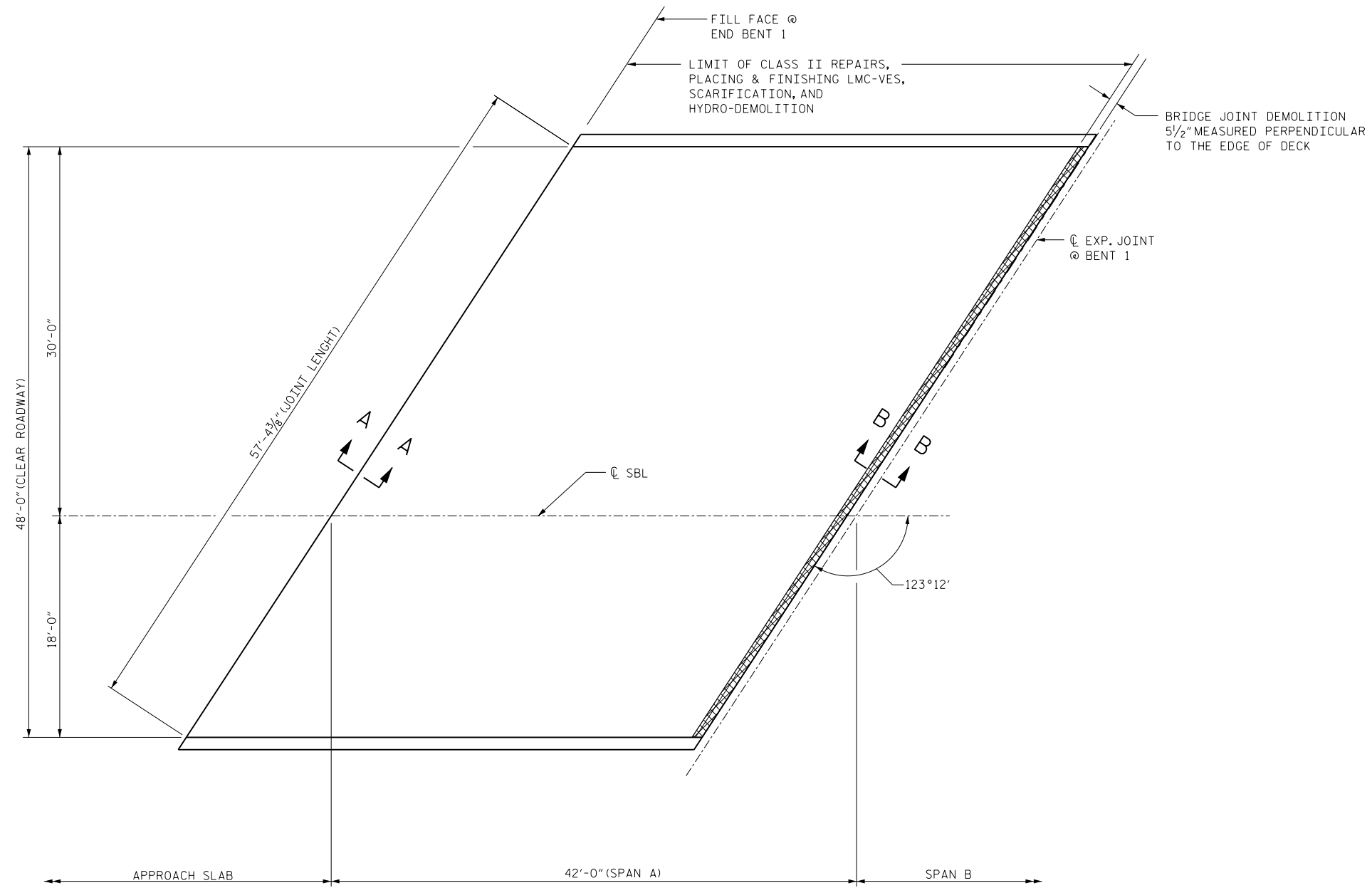
11/18/2015

DRAWN BY : D.V. JOYNER DATE : 9/2015
CHECKED BY : W. SMITH DATE : 9/2015

SPAN "A" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	26 SQ. FT.	
SCARIFYING BRIDGE DECK	221 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	221 SQ. YDS.	

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

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION



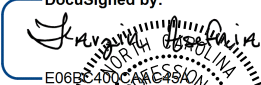
PLAN OF SPAN A
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-15)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 233

SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN A
 SBL

DocuSigned by:

 E0612403
 PROFESSIONAL ENGINEER
 SEAL 2013
 FARZIN ASEFINA

11/18/2015

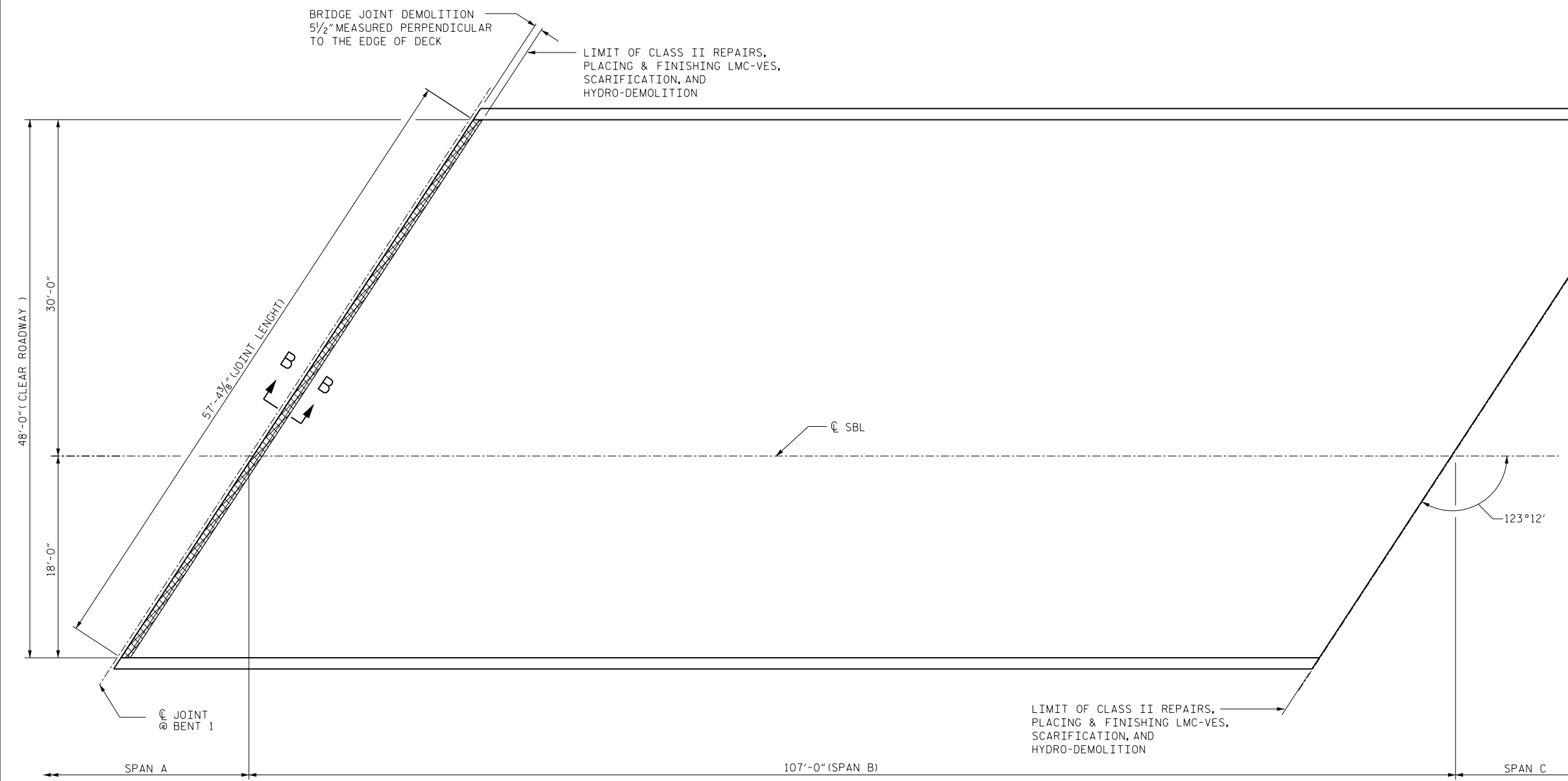
DRAWN BY : D.V. JOYNER DATE : 9/2015
 CHECKED BY : W. SMITH DATE : 9/2015




REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-10
2			4			TOTAL SHEETS 48

18-NOV-2015 08:49
 Z:\TIP\Projects-I\I5763\Structures\I-5763 Final Drawings\DCN\403.001.I5763.SMU.S10.SPA.DGN
 fasefria

SPAN "B" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	26 SQ. FT.	
SCARIFYING BRIDGE DECK	568 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	568 SQ. YDS.	

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



-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION

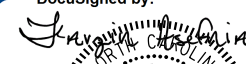
PLAN OF SPAN B
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-15)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 233
 SHEET 2 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN B
SBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
1			3			TOTAL SHEETS
2			4			48

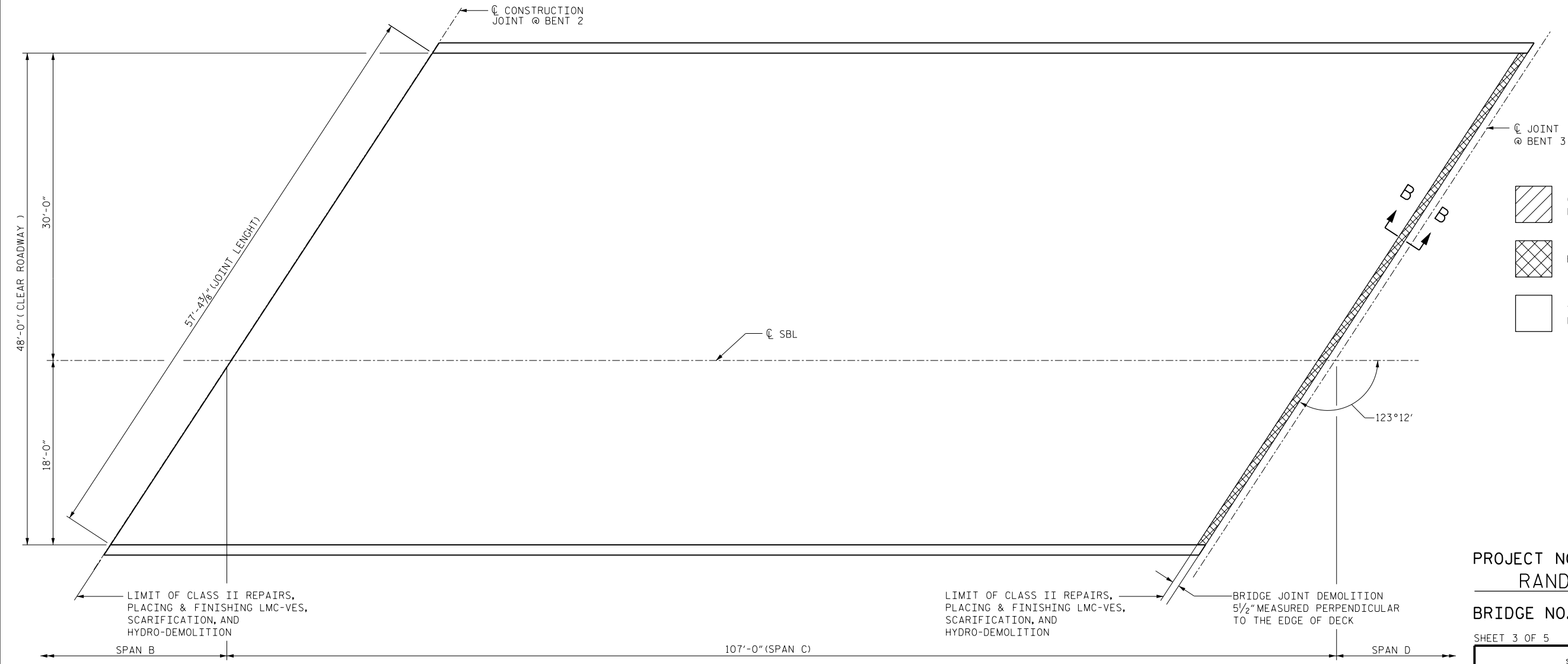
DocuSigned by:

 E065C70064540
 SEAL
 20103
 ENGINEER
 FARZIN ASEFINA
 11/18/2015

DRAWN BY : D.V. JOYNER DATE : 9/2015
 CHECKED BY : W. SMITH DATE : 9/2015

18-NOV-2015 08:49
 Z:\TIP\Projects-I\5763\Structures\I-5763 FinalDrawings\DCN\403.003.I5763.SMU.S11.SPB.DGN
 fasefnrlo

SPAN "C" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	26 SQ. FT.	
SCARIFYING BRIDGE DECK	568 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	568 SQ. YDS.	

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



- CLASS II SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION
- SCARIFICATION & HYDRO-DEMOLITION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 233

SHEET 3 OF 5

PLAN OF SPAN C
 (FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-15)

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN C
 SBL

DocuSigned by:




 FARZIN ASEFINA
 ENGINEER
 SEAL 20103
 11/18/2015

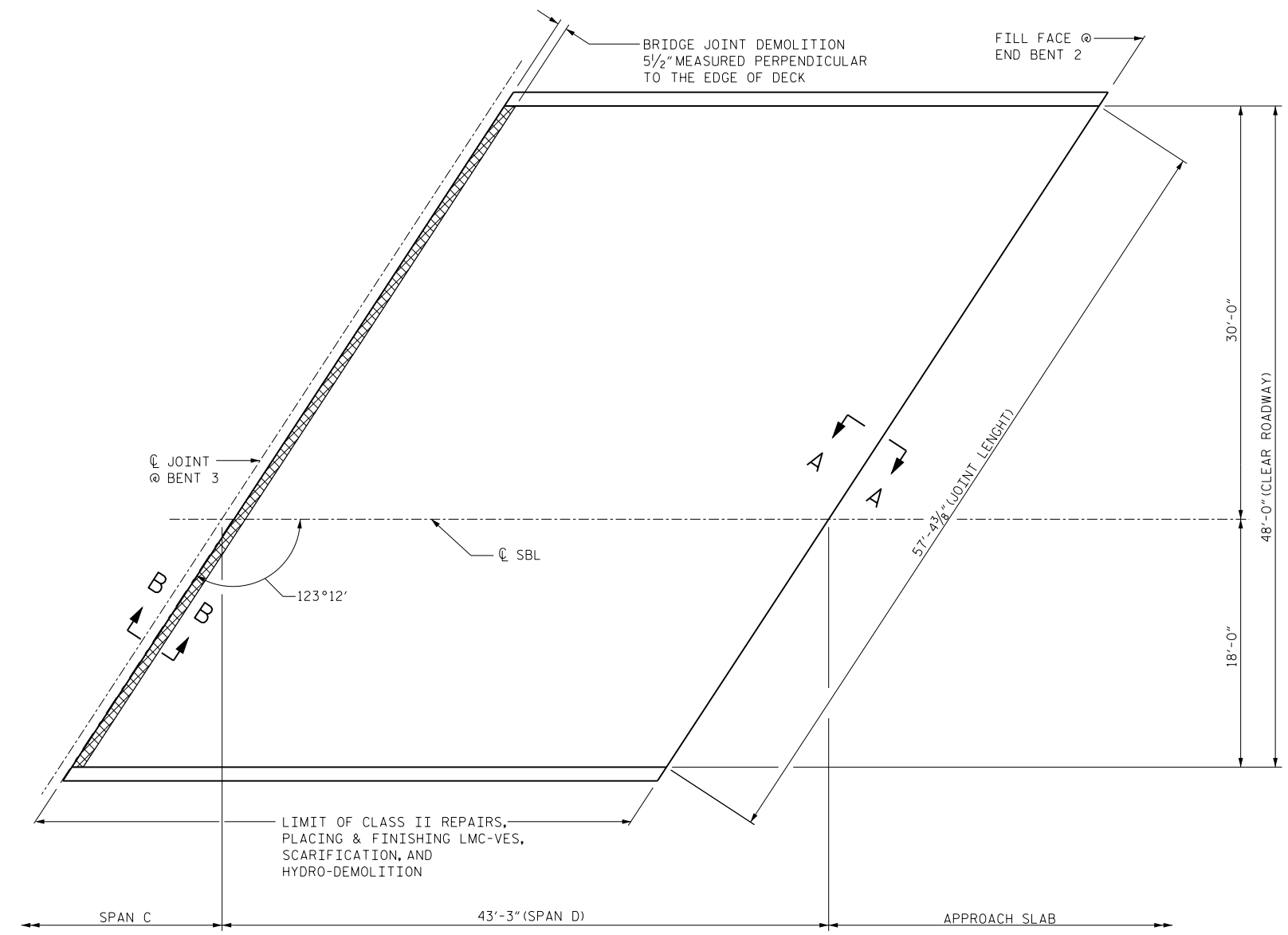
DRAWN BY : D.V. JOYNER DATE : 9/2015
 CHECKED BY : W. SMITH DATE : 9/2015

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-12
1			3			TOTAL SHEETS
2			4			48

SPAN "D" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	26 SQ. FT.	
SCARIFYING BRIDGE DECK	227 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	227 SQ. YDS.	

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

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION



PLAN OF SPAN D
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-15)

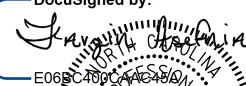
PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 233

SHEET 4 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN D
SBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
1			3			TOTAL SHEETS
2			4			48

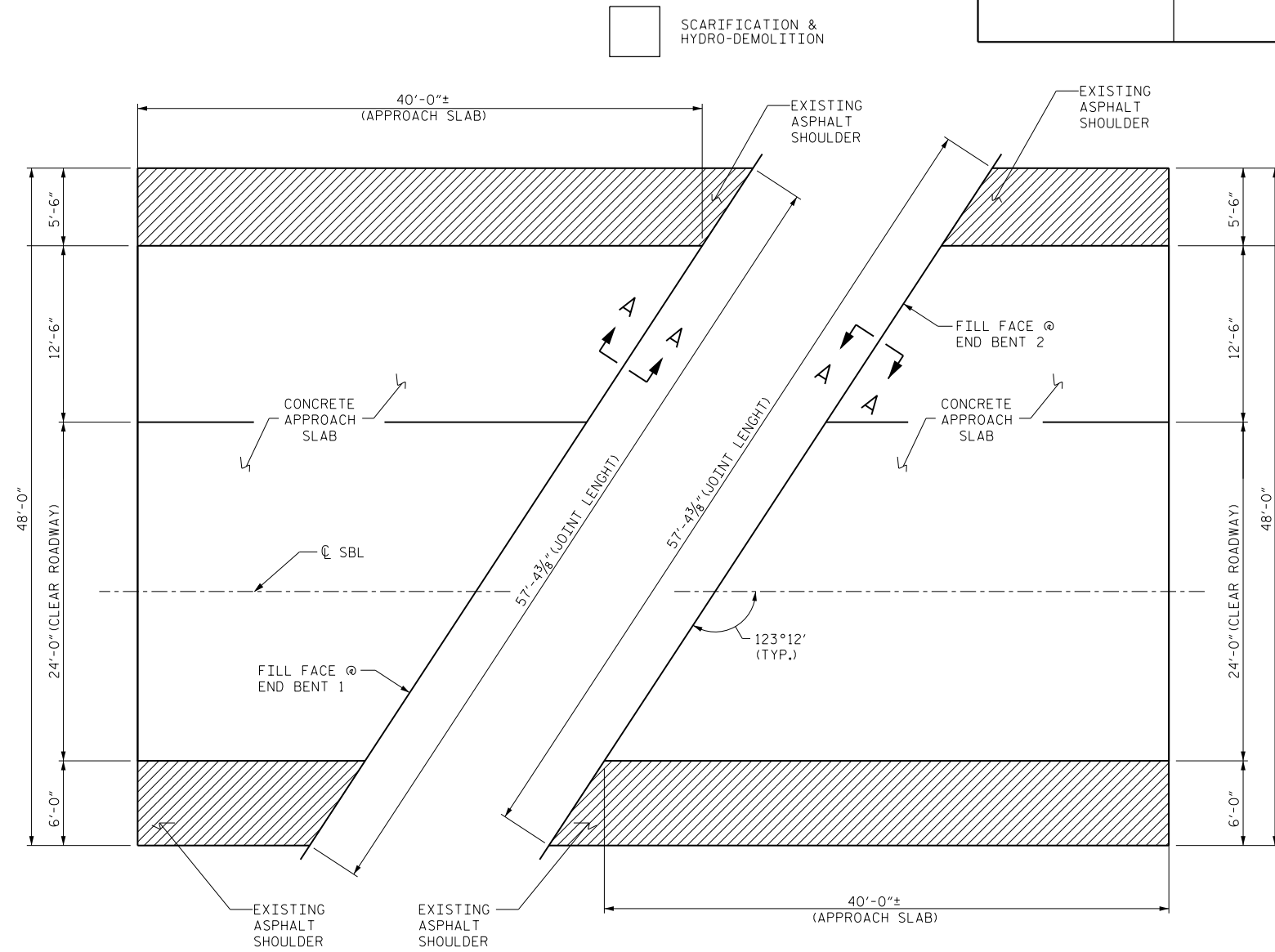
DocuSigned by:

 E006C409-4464-4444-8444-4444
 SEAL 20103
 ENGINEER
 FARZIN ASEFINA

11/18/2015

DRAWN BY : D.V. JOYNER DATE : 9/2015
 CHECKED BY : W. SMITH DATE : 9/2015

18-NOV-2015 08:49
 Z:\TIP\Projects-I\I5763\Structures\I-5763_FinalDrawings\DCN\403_007_I5763_SMU_S13_SPD.DGN
 f0sefria

BRIDGE APPROACH SLAB QUANTITIES				
AT END BENT 1			AT END BENT 2	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING APPROACH SLAB	111 SQ. YDS.		SCARIFYING APPROACH SLAB	111 SQ. YDS.
HYDRO-DEMOLITION OF APPROACH SLAB	111 SQ. YDS.		HYDRO-DEMOLITION OF APPROACH SLAB	111 SQ. YDS.



BRIDGE APPROACH SLAB AT END BENT 1
(FOR SECTION VIEWS, SEE "JOINT DETAILS" SHEET S-15)

BRIDGE APPROACH SLAB AT END BENT 2
(FOR SECTION VIEWS, SEE "JOINT DETAILS" SHEET S-15)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 233

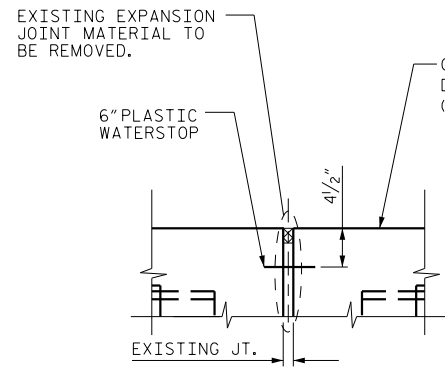
SHEET 5 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
APPROACH SLABS SURFACE PREPARATION					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-14
TOTAL SHEETS					48

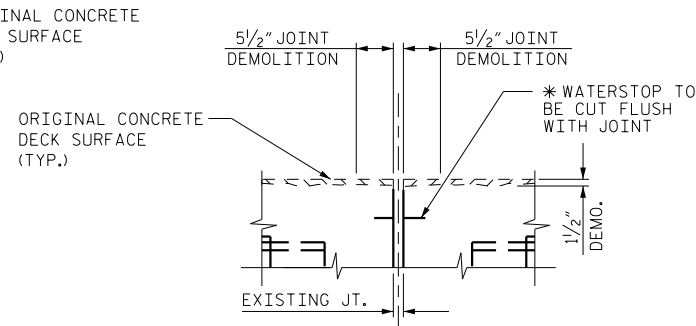
DocuSigned by:
Farzin Asefma
 E06B40020043A
 SEAL
 20103
 ENGINEER
 FARZIN ASEFMA

11/18/2015

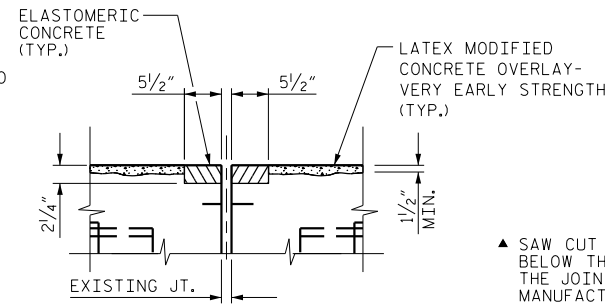
DRAWN BY : D.V. JOYNER DATE : 9/2015
 CHECKED BY : W. SMITH DATE : 9/2015



EXISTING JOINT

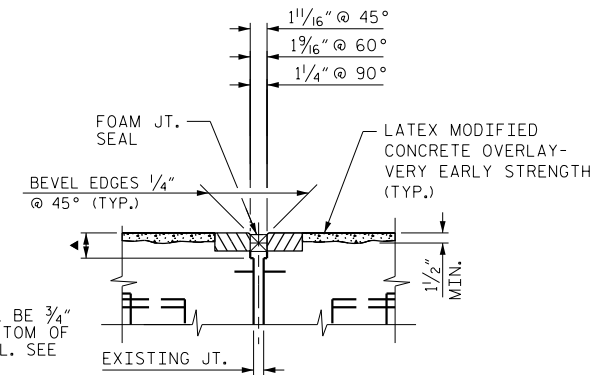


MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT PRE-SAWED DIMENSIONS

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS



PROPOSED FOAM JOINT SEAL EXPANSION

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.

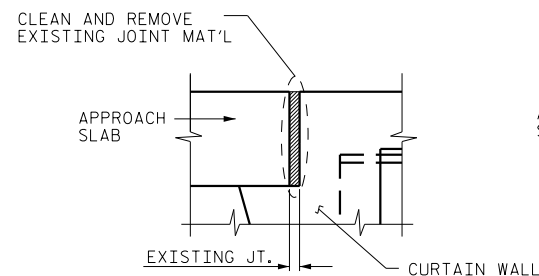
RETAIN ALL EXISTING REINFORCING STEEL, CLEAN AND REPAIR AS NEEDED.

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

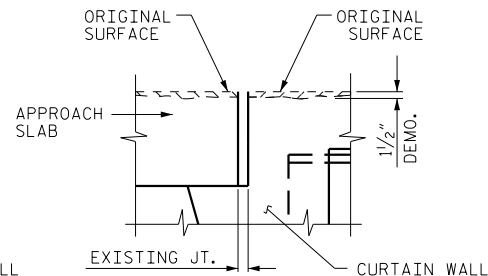
JOINT INSTALLATION SEQUENCE AT BENTS
SECTION B-B

ELASTOMERIC CONCRETE	
BRIDGE 231	22 CU. FT.
BRIDGE 233	22 CU. FT.
* TOTAL	44 CU. FT.

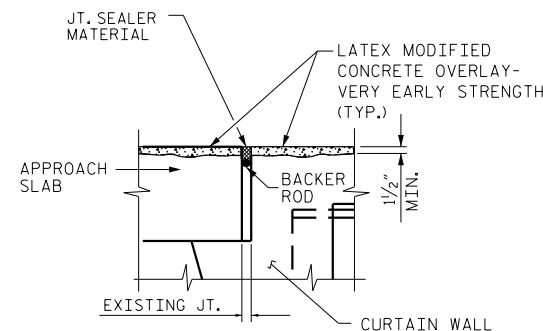
* BASED ON THE MINIMUM BLOCKOUT SHOWN.



EXISTING COLD JOINT

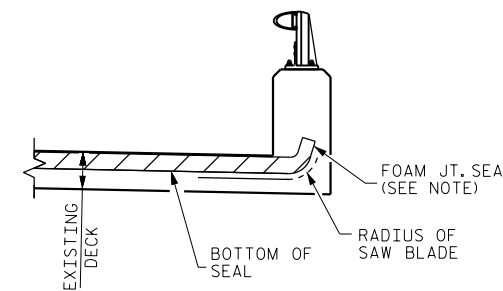


MINIMUM EXISTING JOINT DEMOLITION

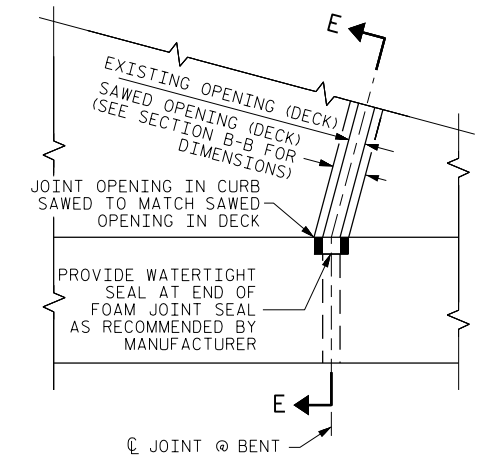


PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS
SECTION A-A



SECTION E-E



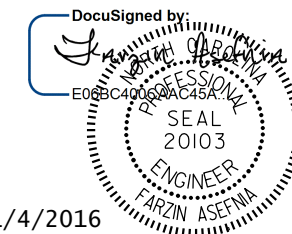
JOINT SEAL DETAILS AT BENT

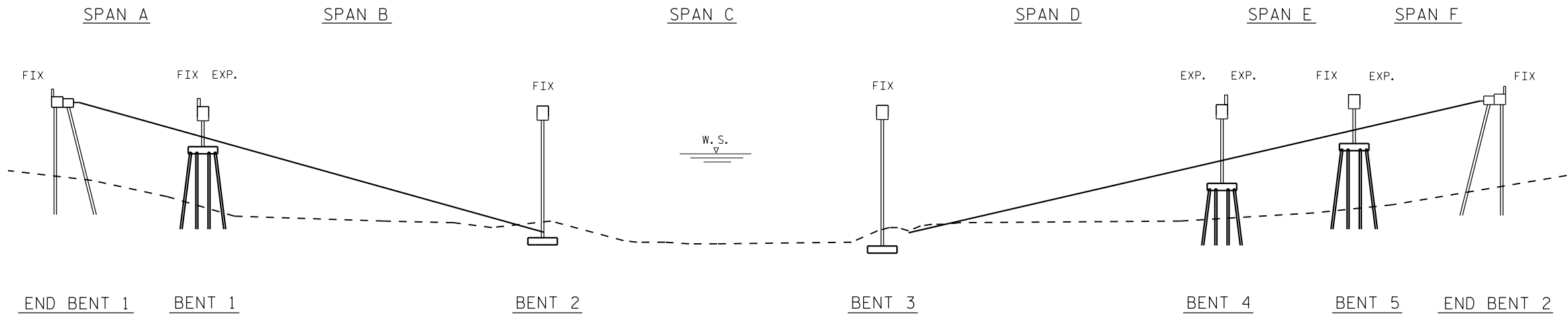
PROJECT NO. I-5763
RANDOLPH COUNTY
BRIDGE NO.: 231 & 233

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUPERSTRUCTURE JOINT DETAILS					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-15
					TOTAL SHEETS 48

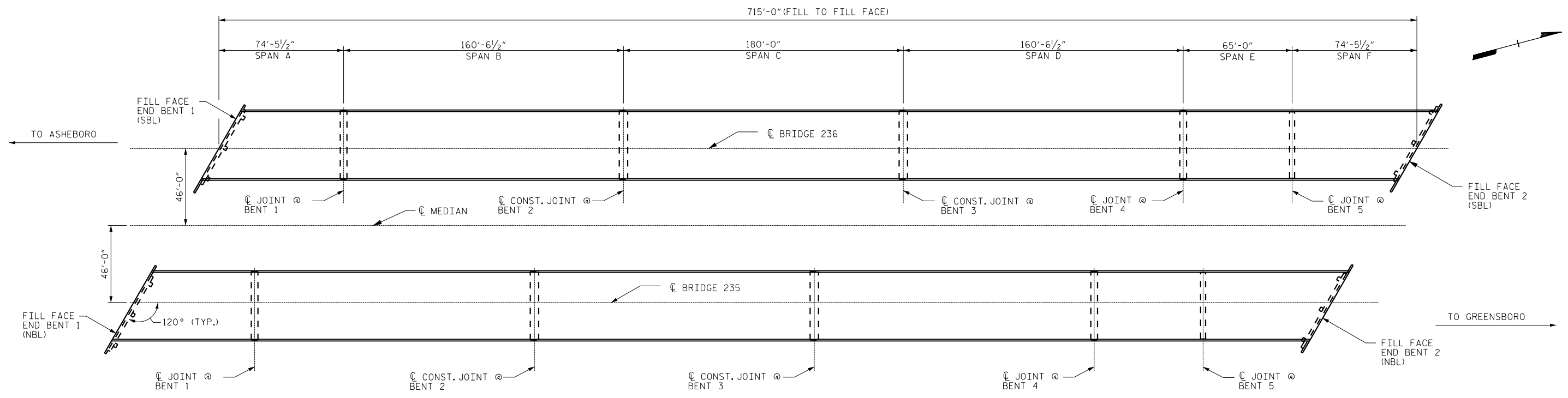
DRAWN BY : D.V. JOYNER DATE : 9/2015
CHECKED BY : W. SMITH DATE : 9/2015

1/4/2016





ELEVATION
SECTION PROFILE ALONG CL MEDIAN



PLAN
NORTH AND SOUTH BOUND LANES

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235 & 236

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE #235 & #236 ON I-73
 & US-220
 OVER DEEP RIVER

DocuSigned by:

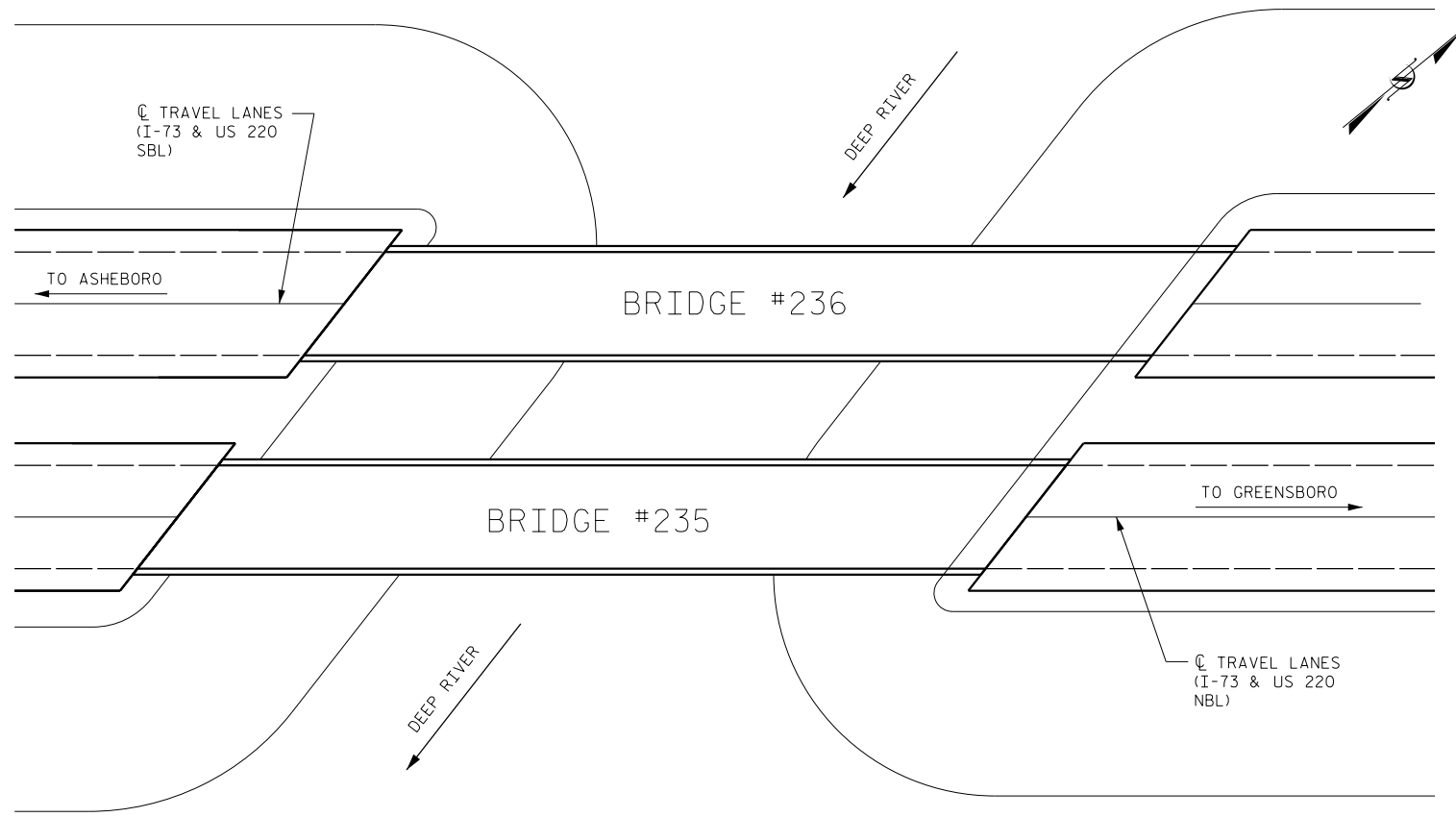
 SEAL
 20103
 ENGINEER
 FARZIN ASEFNIA

11/18/2015

DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-16	
1			3			TOTAL SHEETS	
2			4			47	

18-NOV-2015 08:49
 Z:\TIP\Projects-I\I5763\Structures\I-5763 Final Drawings\DCN\404_001_I5763_SMU_S16_G0.DGN
 fasefnia



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 PROVISION.
- FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
- FOR LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH, 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 DECK REPAIR, SEE SPECIAL PROVISIONS.
- FOR PAINTING EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL

BRIDGE NO.	INCIDENTAL MILLING	GROOVING BRIDGE FLOORS	* CLASS II SURFACE PREPARATION	* CLASS III SURFACE PREPARATION	** LATEX MODIFIED CONCRETE OVERLAY - VES	PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY - VES	CONCRETE REPAIR	SHOTCRETE REPAIR	EPOXY RESIN INJECTION	FOAM JOINT SEALS	* VOLUMETRIC MIXER	* CONCRETE FOR DECK REPAIR	BRIDGE JOINT DEMOLITION	EPOXY COATING	SCARIFYING BRIDGE DECK	HYDRO-DEMOLITION OF BRIDGE DECK
	SQ.YDS.	SQ. FT.	SQ.YDS.	SQ.YDS.	C.Y.	SQ.YDS.	CU. FT.	CU. FT.	LN. FT.	LUMP SUM	LUMP SUM	CU. FT.	SQ. FT.	SQ. FT.	SQ.YDS.	SQ.YDS.
235	40	26,940	6	6	159	3243	0	15	191	LUMP SUM	LUMP SUM	1	111	533	3243	3243
236	0	26,940	6	6	159	3243	40	34	260	LUMP SUM	LUMP SUM	1	111	533	3243	3243
TOTAL	40	53,880	12	12	318	6486	40	49	451	LUMP SUM	LUMP SUM	2	222	1066	6486	6486

* CLASS II AND CLASS III SURFACE PREPARATION, VOLUMETRIC MIXER AND CONCRETE FOR DECK REPAIR ARE NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS III SURFACE PREPARATION AREAS ARE ENCOUNTERED.

** THE QUANTITY OF LATEX MODIFIED CONCRETE OVERLAY - VES INCLUDES THE 4" OVERLAP BETWEEN OVERLAYS.

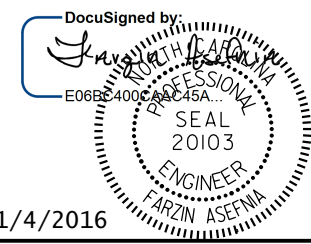
PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235 & 236

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE #235 & #236 ON I-73
 & US 220
 OVER DEEP RIVER

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-17
2			4			TOTAL SHEETS 48

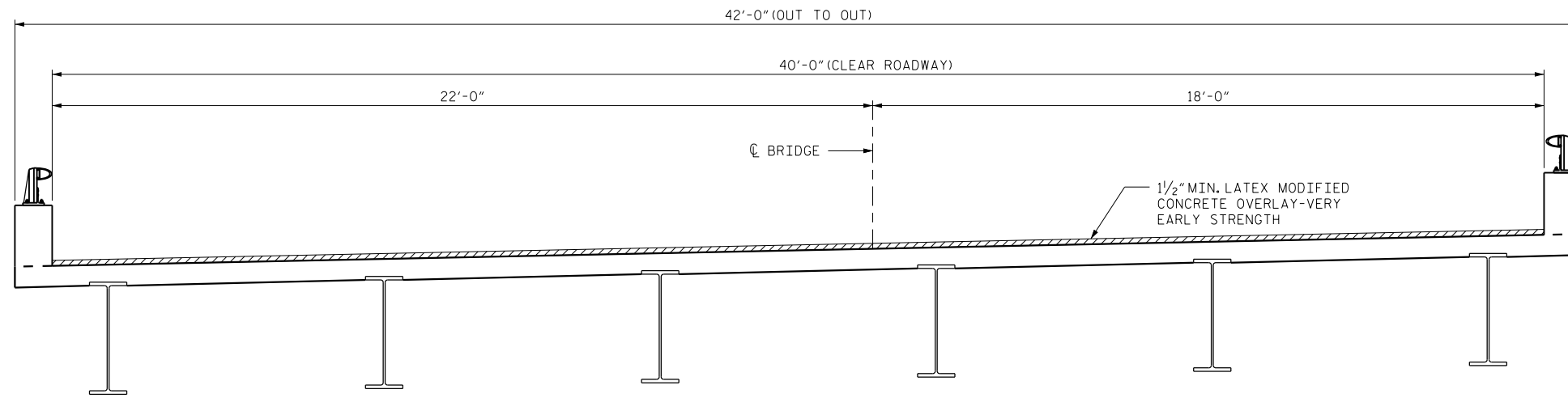


1/4/2016

DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

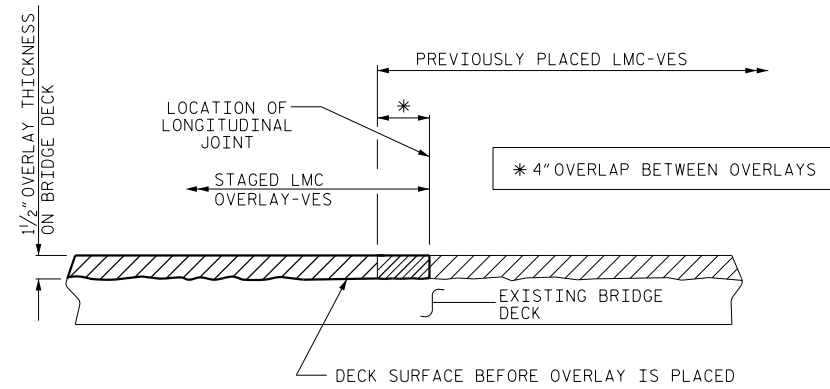
NOTE:

WHEN PREPARING THE SURFACE FOR LMC OVERLAY-VES ADJACENT TO A PREVIOUSLY PLACED LMC-VES STAGE, THE PREVIOUSLY PLACED LMC-VES SHALL BE REMOVED FOR A DISTANCE OF 4-INCHES FROM THE LMC-VES 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-VES SHALL BE PLACED IN THE 4-INCH OVERLAP AS PART OF NEW LMC-VES STAGE PLACEMENT.



TYPICAL SECTION

(SBL SHOWN - NBL SIMILAR BY ROTATION)



SECTION THRU DECK

STAGED LMC OVERLAY-VES JOINT

(AS NEEDED)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235 & 236

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 & LATEX MODIFIED
 CONCRETE-VES
 DETAILS OF SPANS A, E, & F

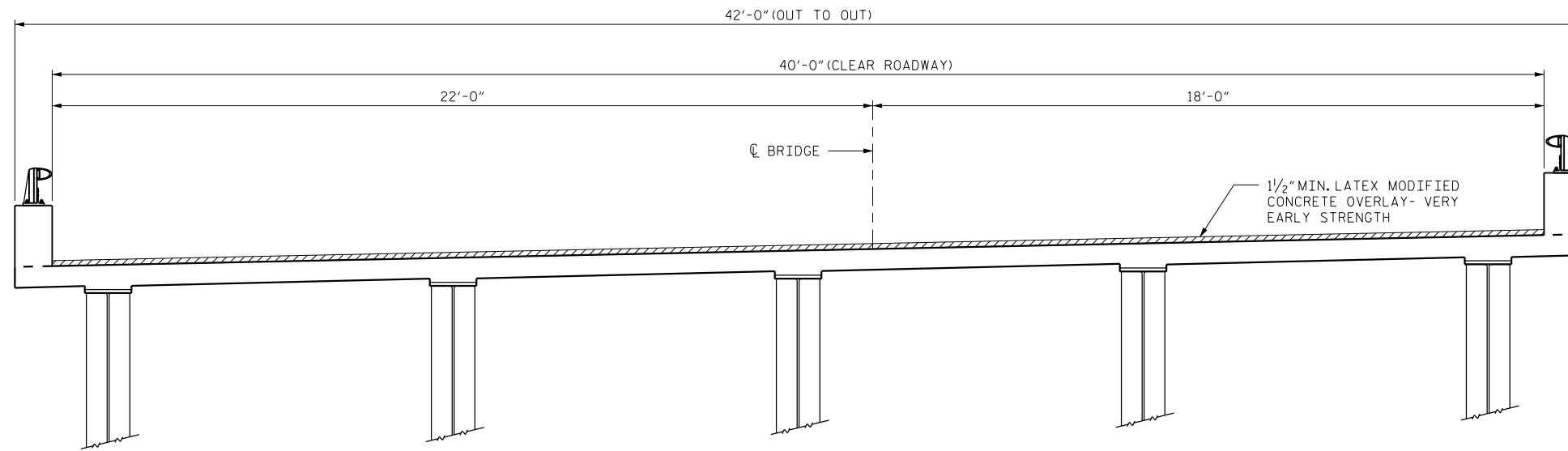
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-18
2			4			48

DocuSigned by:
Farzin Asefina
 E066C40028A0C43A
 PROFESSIONAL
 SEAL
 20103
 ENGINEER
 FARZIN ASEFINA
 11/18/2015

DRAWN BY : M.WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

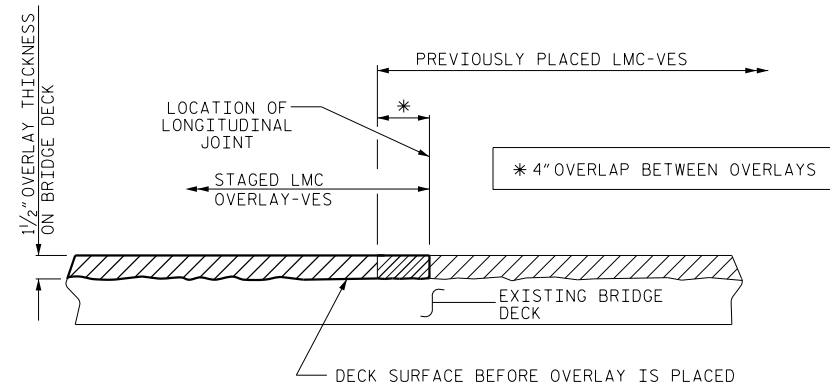
NOTE:

WHEN PREPARING THE SURFACE FOR LMC OVERLAY-VES ADJACENT TO A PREVIOUSLY PLACED LMC-VES STAGE, THE PREVIOUSLY PLACED LMC-VES SHALL BE REMOVED FOR A DISTANCE OF 4-INCHES FROM THE LMC-VES 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-VES SHALL BE PLACED IN THE 4-INCH OVERLAP AS PART OF NEW LMC-VES STAGE PLACEMENT.



TYPICAL SECTION

(SBL SHOWN - NBL SIMILAR BY ROTATION)



SECTION THRU DECK

STAGED LMC OVERLAY-VES JOINT

(AS NEEDED)

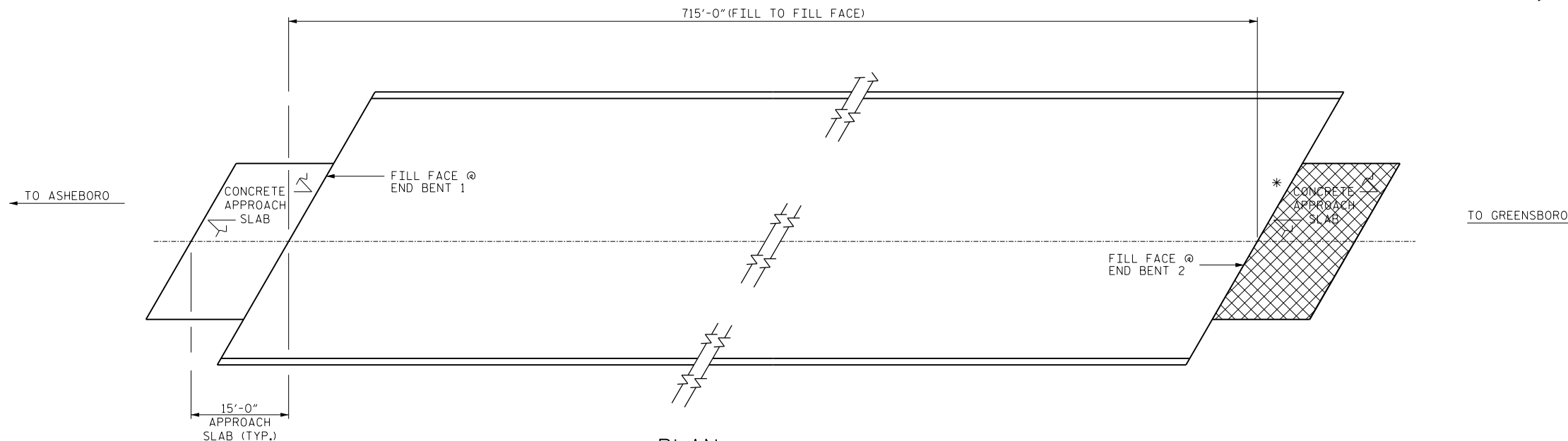
PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235 & 236

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 & LATEX MODIFIED
 CONCRETE-VES
 DETAILS OF SPANS B, C, & D

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-19
2			4			48

DocuSigned by:
Farzin Asefma
 E06B40C...
 PROFESSIONAL ENGINEER
 SEAL 20103
 FARZIN ASEFMA
 11/18/2015

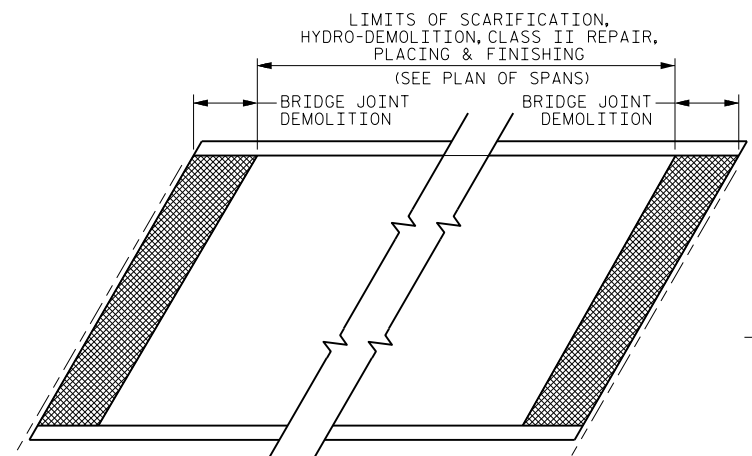
DRAWN BY : M.WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015



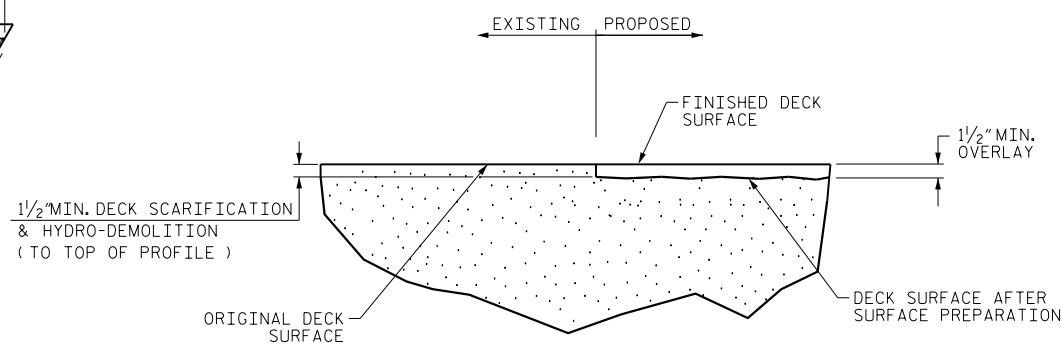
PLAN
(BRIDGE 235 SHOWN, BRIDGE 236 SIMILAR)

- DECK SCARIFICATION, HYDRO-DEMOLITION, AND LATEX MODIFIED CONCRETE OVERLAY-VES
- INCIDENTAL MILLING

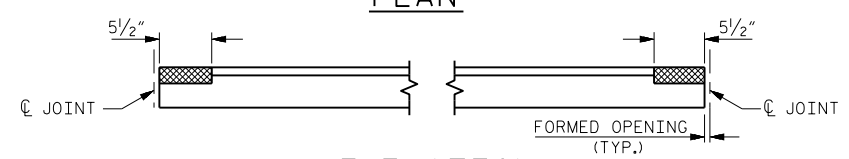
* BRIDGE 235
END BENT 2
APPROACH SLAB
COVERED WITH
ASPHALT



PLAN



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY-VES



ELEVATION

PROJECT NO. I-5763
RANDOLPH COUNTY
BRIDGE NO. 235 & 236

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUPERSTRUCTURE
SURFACE PREPARATION**

DocuSigned by:
Farzin Asefina
E065C40904AC43A
SEAL
20103
ENGINEER
FARZIN ASEFINA




11/18/2015

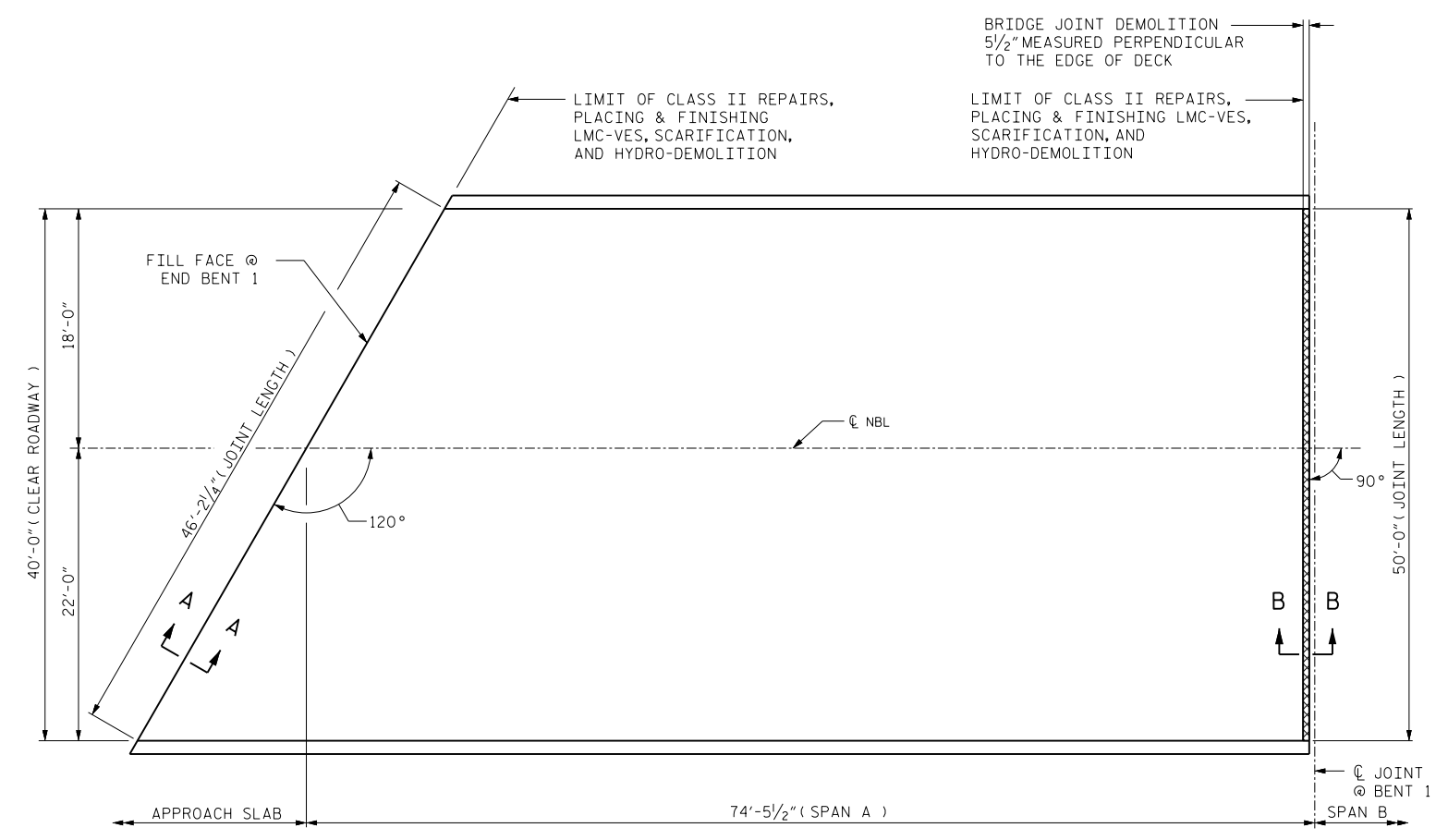
DRAWN BY : M. WELDON DATE : 08/2015
CHECKED BY : W. SMITH DATE : 08/2015

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-20
1			3			TOTAL SHEETS
2			4			48

SPAN "A" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	18.5 SQ. FT.	
SCARIFYING BRIDGE DECK	328 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	328 SQ. YDS.	

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

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION



PLAN OF SPAN A
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

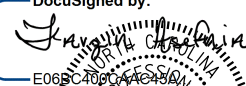
PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235

SHEET 1 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN A
 NBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-21
1			3			TOTAL SHEETS
2			4			48

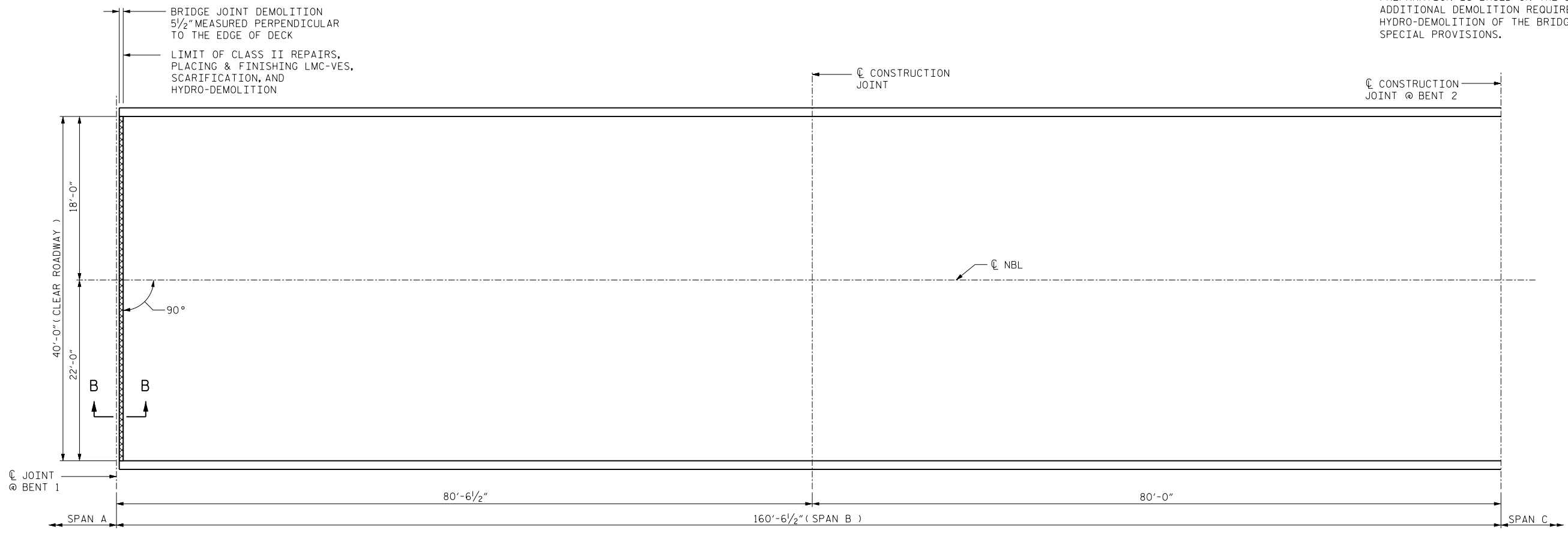
DocuSigned by:

 E006C409046434
 SEAL
 20103
 ENGINEER
 FARZIN ASEFINA

11/18/2015




DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

SPAN "B" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	18.5 SQ. FT.	
SCARIFYING BRIDGE DECK	711 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	711 SQ. YDS.	

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



PLAN OF SPAN B
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

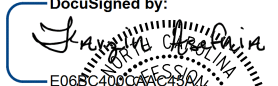
-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235
 SHEET 2 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN B
 NBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-22
2			4			TOTAL SHEETS 48

DocuSigned by:

 E066C400C84C433
 SEAL 2013
 ENGINEER
 FARZIN ASEFINA

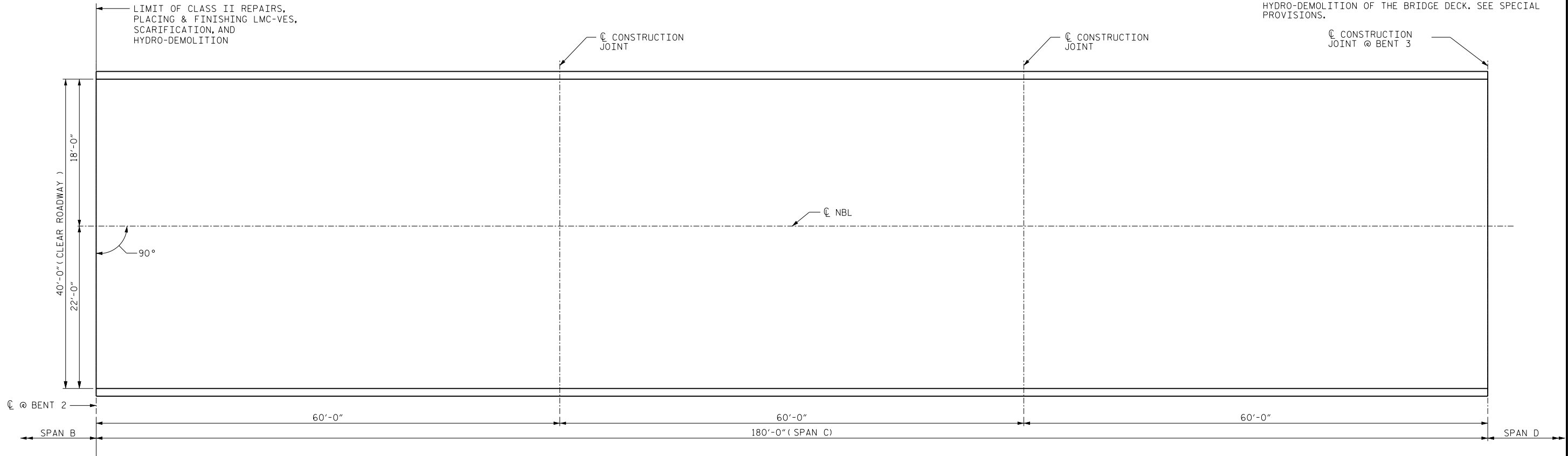
11/18/2015

DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015




SPAN "C" QUANTITIES

	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
SCARIFYING BRIDGE DECK	800 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	800 SQ. YDS.	

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



PLAN OF SPAN C
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

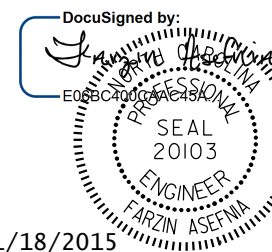
-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235

SHEET 3 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN C
 NBL



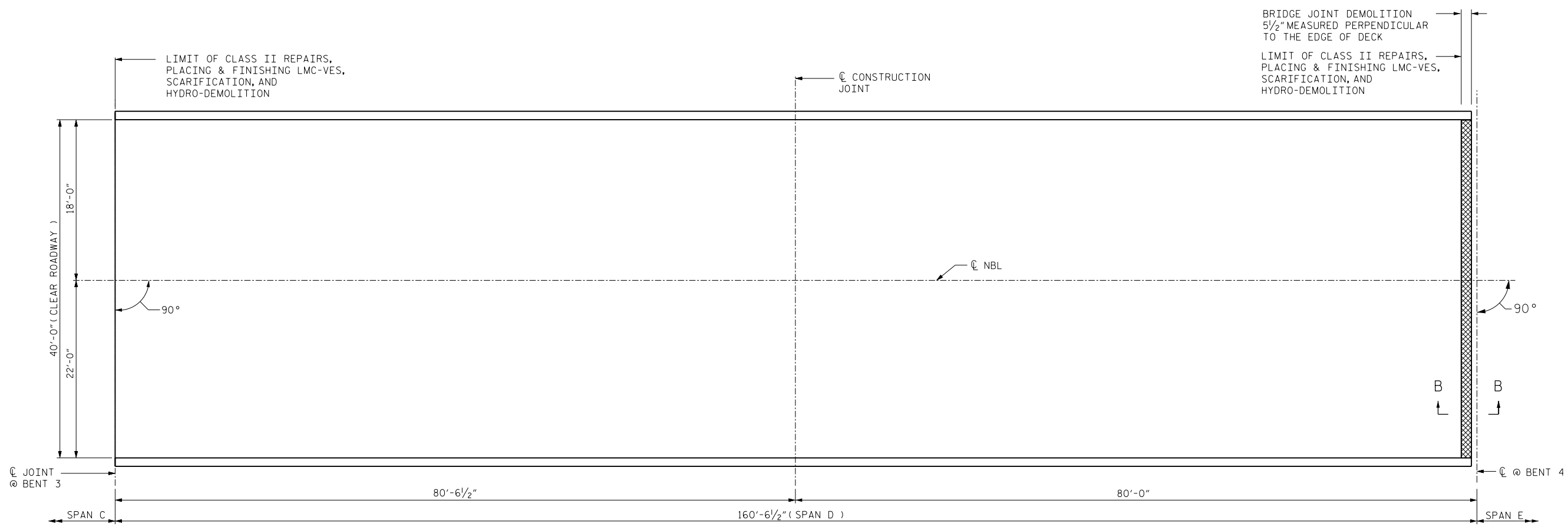
11/18/2015

DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015




REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-23
2			4			48

SPAN "D" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	18.5 SQ. FT.	
SCARIFYING BRIDGE DECK	711 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	711 SQ. YDS.	

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



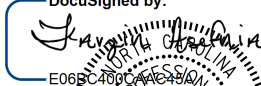
PLAN OF SPAN D
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235
 SHEET 4 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN D
 NBL

DocuSigned by:

 E006C400046434
 SEAL
 20103
 ENGINEER
 FARZIN ASEFINA

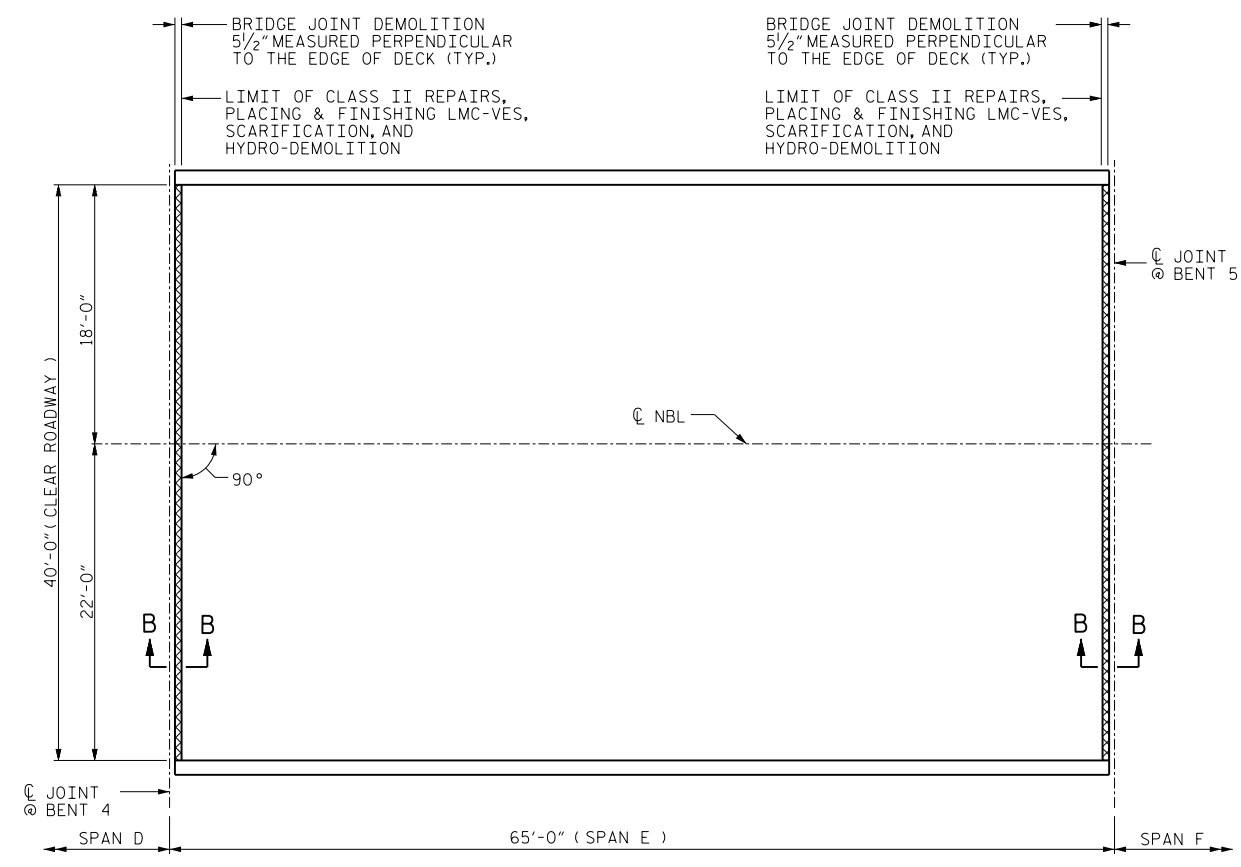
11/18/2015




DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-24
1			3			TOTAL SHEETS
2			4			48

SPAN "E" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	37 SQ. FT.	
SCARIFYING BRIDGE DECK	284 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	284 SQ. YDS.	

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



-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION

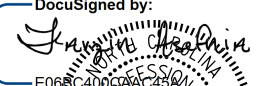
PLAN OF SPAN E
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235
 SHEET 5 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN E
 NBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-25
1			3			TOTAL SHEETS
2			4			48




DocuSigned by:

 E068C40028AC435
 SEAL
 20103
 ENGINEER
 FARZIN ASEFINA

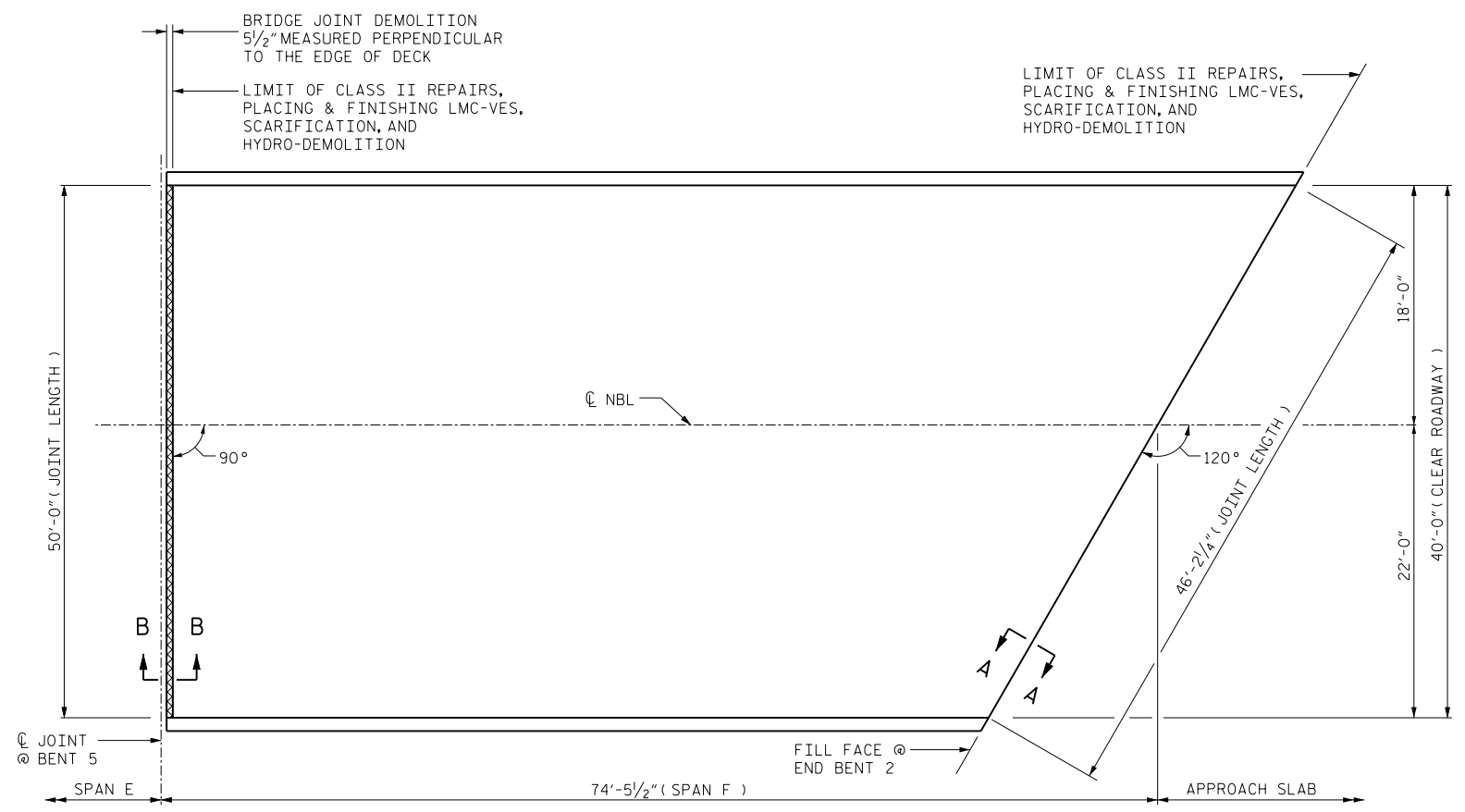
DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

11/18/2015

SPAN "F" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	18.5 SQ. FT.	
SCARIFYING BRIDGE DECK	328 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	328 SQ. YDS.	

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

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION



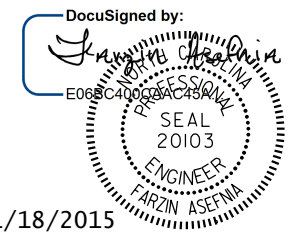
PLAN OF SPAN F
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235
 SHEET 6 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN F
 NBL

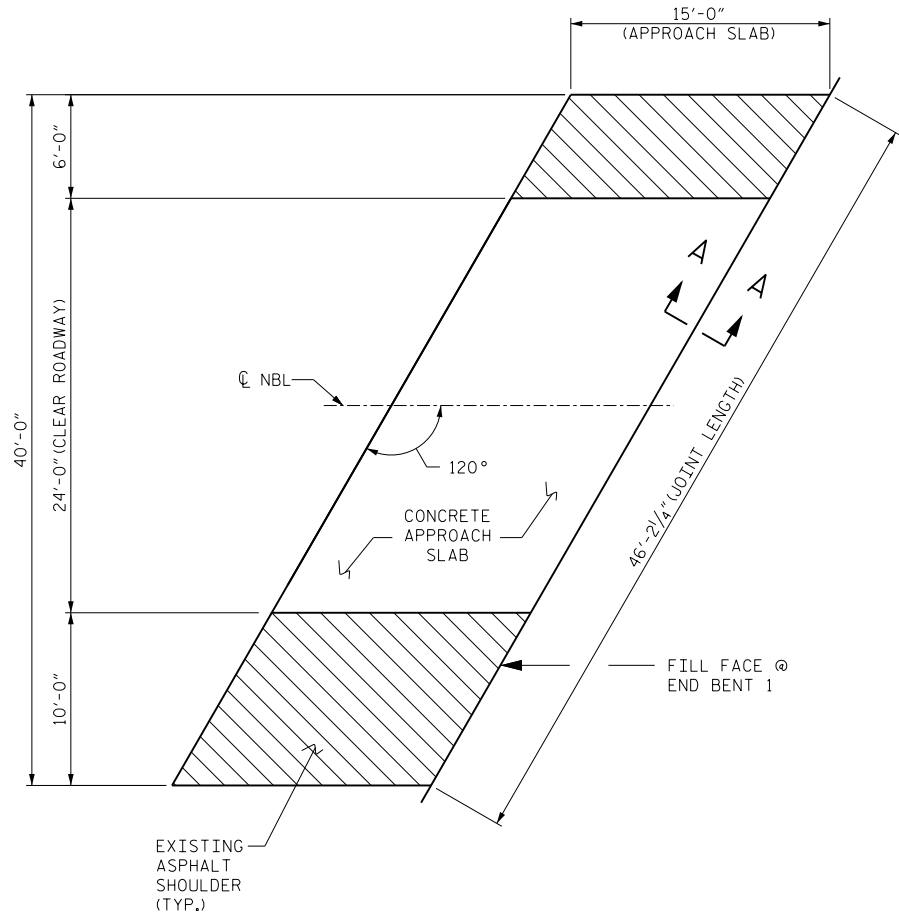
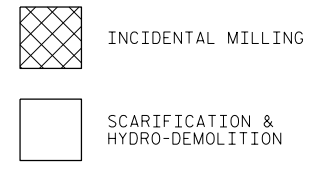
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			48
2			4			48



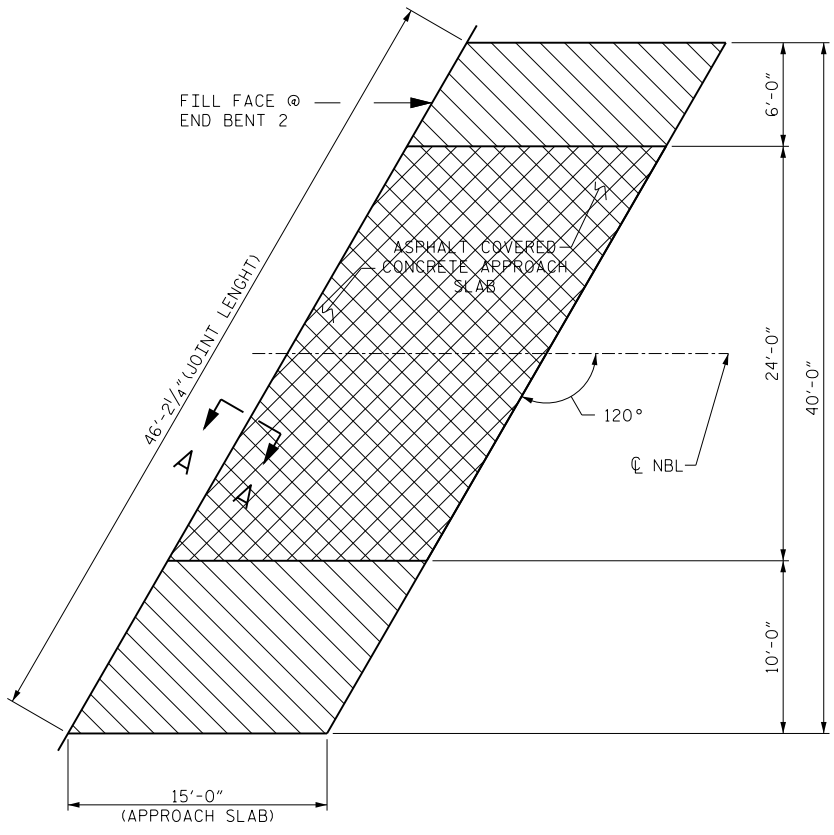
11/18/2015

DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

BRIDGE APPROACH SLAB QUANTITIES				
	AT END BENT 1		AT END BENT 2	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING APPROACH SLAB	40 SQ. YDS.		SCARIFYING APPROACH SLAB	40 SQ. YDS.
HYDRO-DEMOLITION OF APPROACH SLAB	40 SQ. YDS.		HYDRO-DEMOLITION OF APPROACH SLAB	40 SQ. YDS.
			INCIDENTAL MILLING	40 SQ. YDS.



BRIDGE APPROACH SLAB AT END BENT 1
(FOR SECTION VIEWS, SEE "JOINT DETAILS" SHEET S-41)



BRIDGE APPROACH SLAB AT END BENT 2
(FOR SECTION VIEWS, SEE "JOINT DETAILS" SHEET S-41)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235

SHEET 7 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

APPROACH SLABS
 SURFACE PREPARATION

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-27
1			3			TOTAL SHEETS
2			4			48

DocuSigned by:
Farzin Asefina
 E065C4008A6E43A
 PROFESSIONAL ENGINEER
 SEAL 2013
 FARZIN ASEFINA

11/18/2015

DRAWN BY: M. WELDON DATE: 8/2015
 CHECKED BY: W. SMITH DATE: 8/2015

18-NOV-2015 08:50
 Z:\TIP\Projects\I-5763\Structures\I-5763 Final Drawings\DCN\405_013_I5763_SMU_S27_AS.DGN
 fasefria

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, CORNER)	0.0	0.0		
CONCRETE REPAIR	0.0	0.0		
EPOXY RESIN INJECTION			LN. FT	LN. FT
CAP			0.0	
EPOXY COATING	AREA SF			
CAP	0.0			
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
CONCRETE REPAIR	0.0	0.0		
EPOXY RESIN INJECTION			LN. FT	LN. FT
CAP			0.0	

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

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 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.

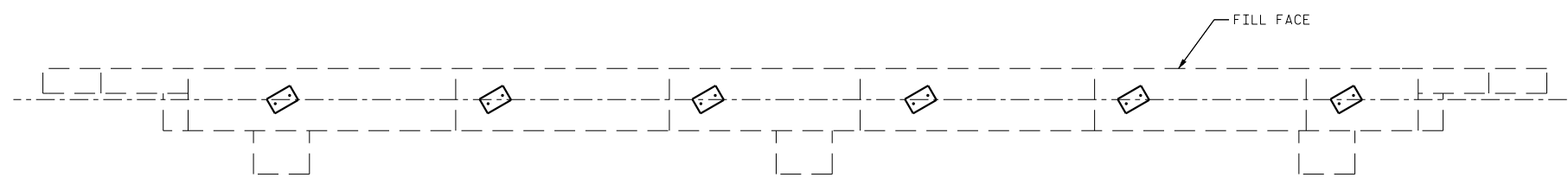
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

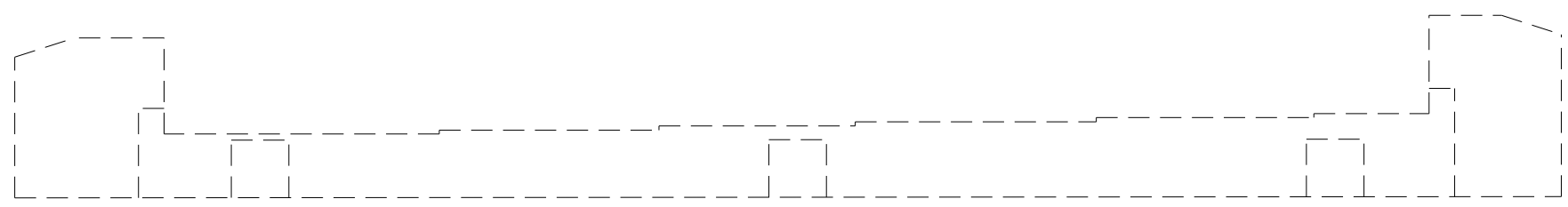
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

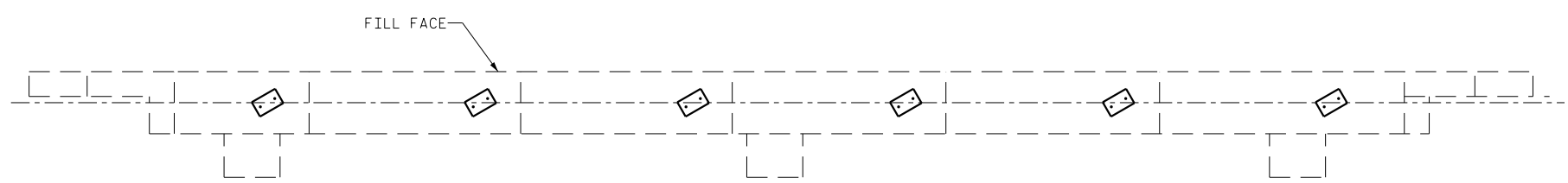
NO REPAIR NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE END BENTS PRIOR TO BEGINNING WORK.



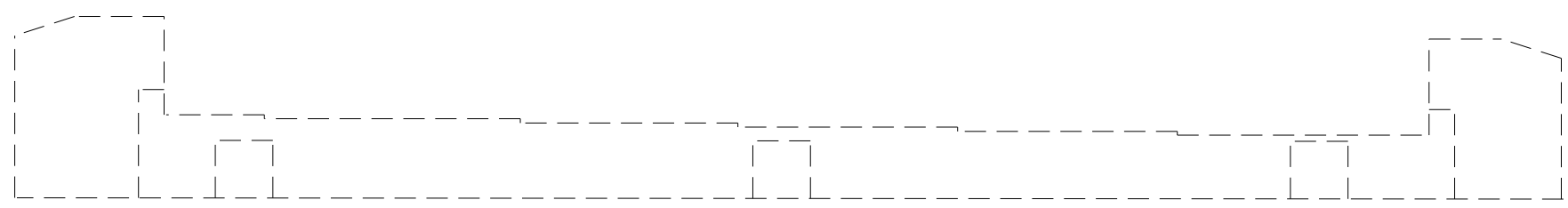
PLAN
END BENT 1



ELEVATION
END BENT 1



PLAN
END BENT 2



ELEVATION
END BENT 2

- CONCRETE REPAIRS
- SHOTCRETE REPAIRS
- ERI EPOXY RESIN INJECTION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO.: 235

DocuSigned by:

 SEAL 20103
 ENGINEER
 FARZIN ASEFINA

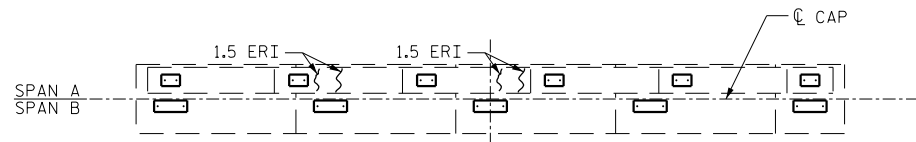
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT 1 & 2
 NBL

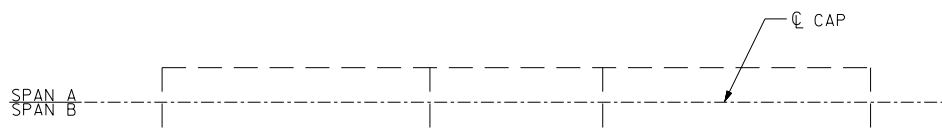
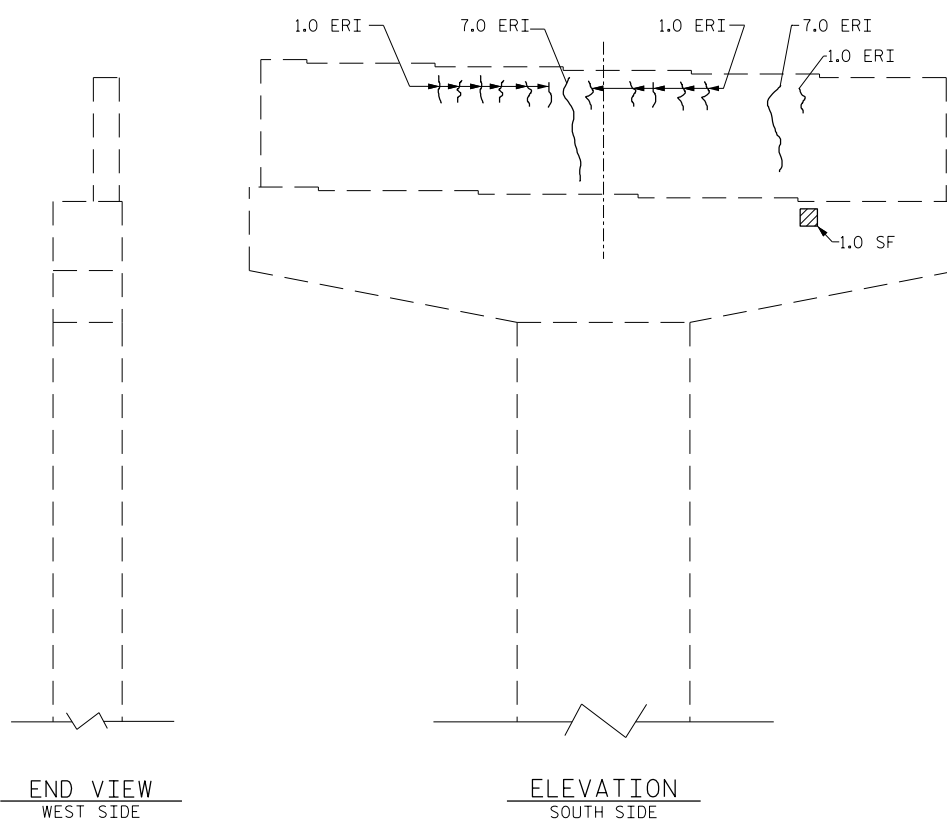
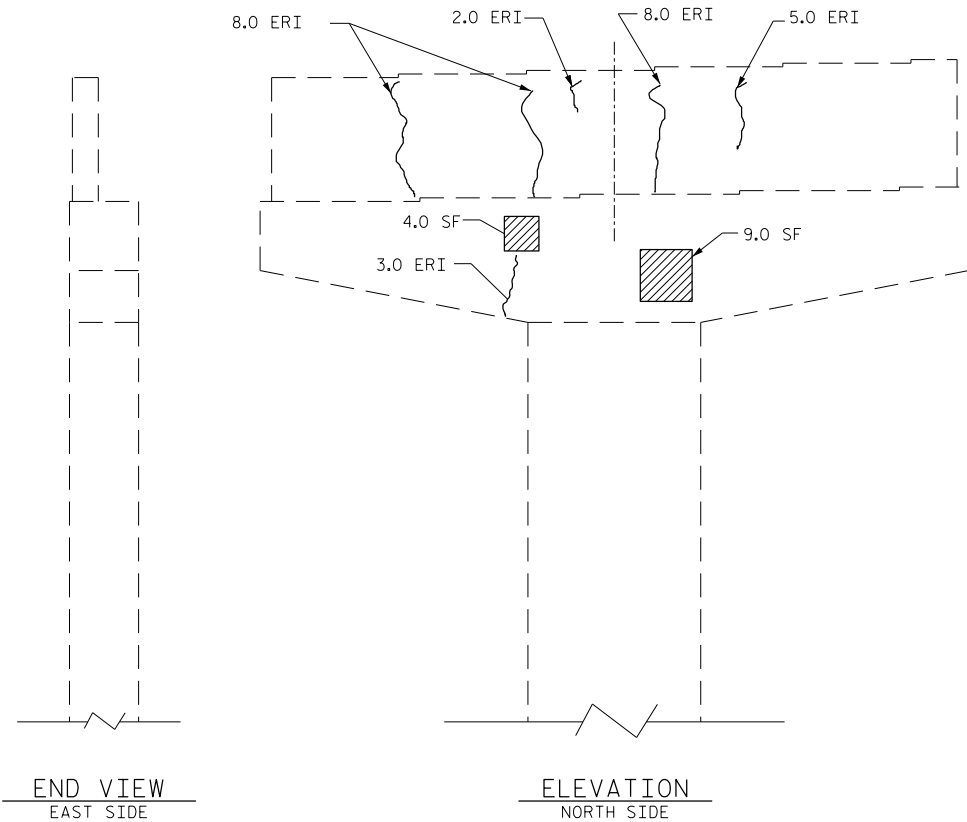
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-28
2			4			TOTAL SHEETS 48

DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

11/18/2015



PLAN OF CAP
TOP



PLAN OF CAP
BOTTOM

REPAIR QUANTITY TABLE				
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	14.0	3.5		
CAP (HORIZONTAL FACE)	0.0	0.00		
COLUMN (HORIZONTAL FACE)	0.0	0.00		
CONCRETE REPAIR	0.0	0.0		
EPOXY RESIN INJECTION		LN FT		LN FT
CAP		66.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
CAP	164.0			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

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 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.
- SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.
- FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
- FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
- FOR REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.
- THE CONTRACTOR SHALL EPOXY COAT PAINT THE TOP SURFACE OF BENT CAPS AFTER ALL BEARING REPAIRS ARE COMPLETED, AS A FINAL FINISH.
- FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

- CONCRETE REPAIRS
- SHOTCRETE REPAIR
- ERI EPOXY RESIN INJECTION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE

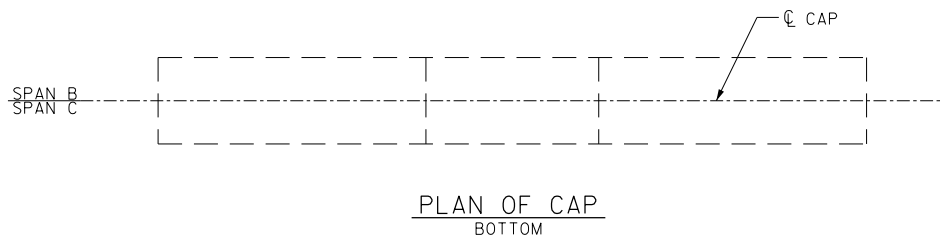
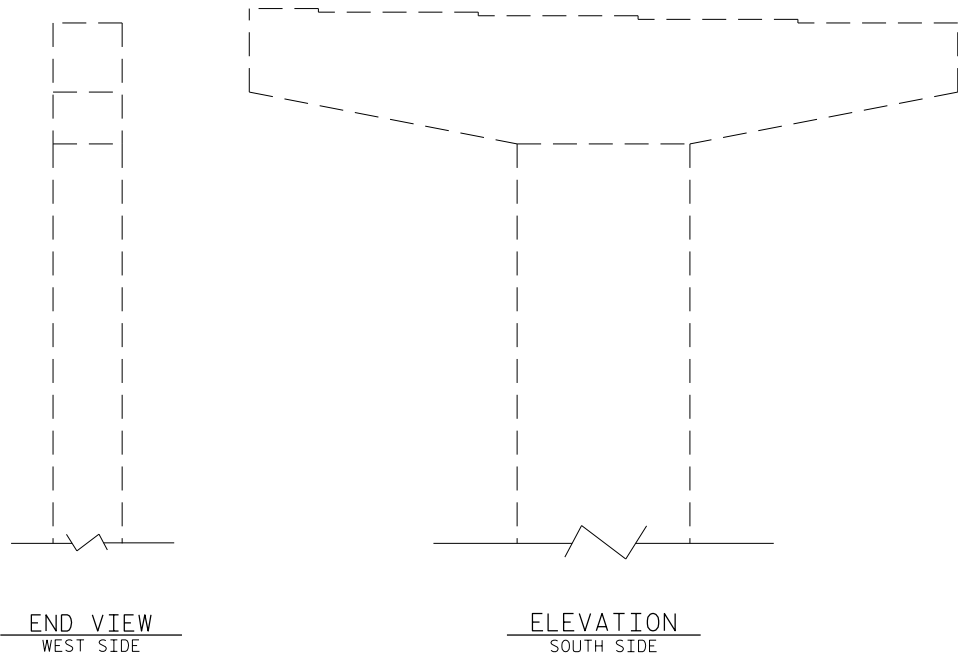
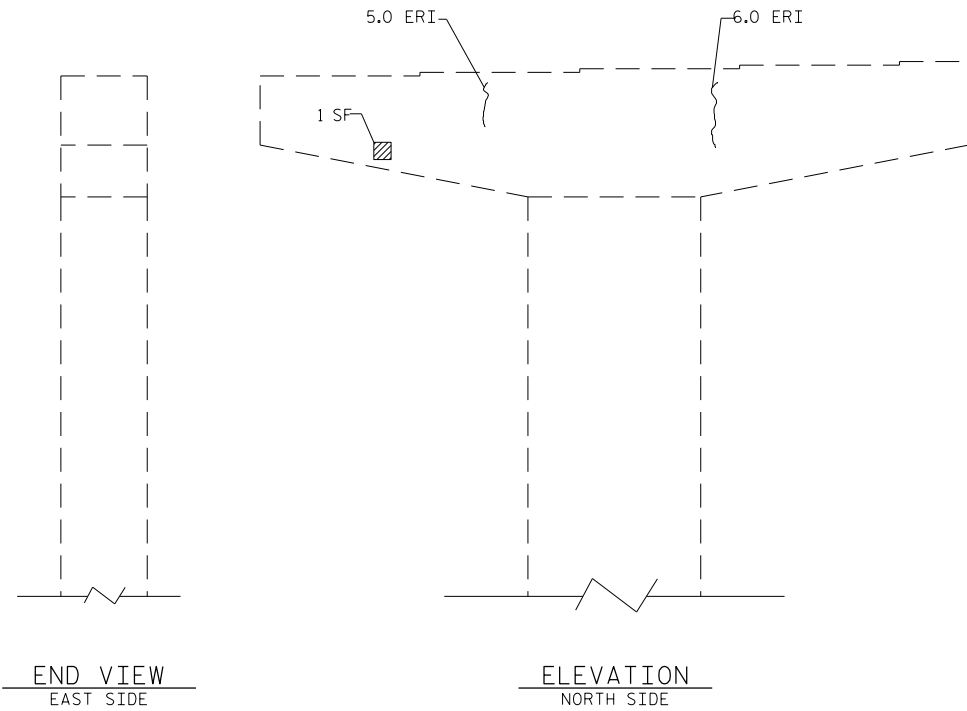
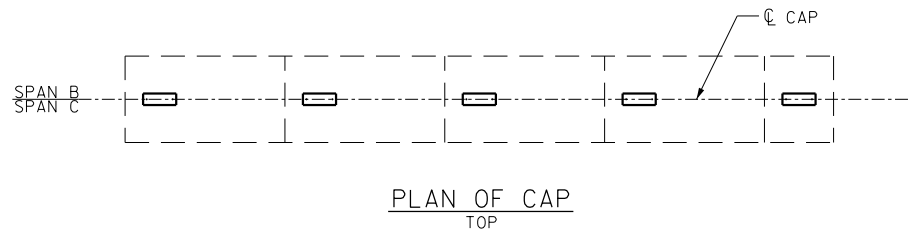
BENT 1
 NBL



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-29
2			4			TOTAL SHEETS 48

DocuSigned by:

11/18/2015

DRAWN BY : M. WELDON DATE : 09/2015
 CHECKED BY : W. SMITH DATE : 09/2015



-  CONCRETE REPAIRS
-  SHOTCRETE REPAIR
- ERI EPOXY RESIN INJECTION

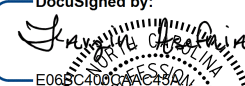
PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE

BENT 2
 NBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			48
2			4			

DocuSigned by:

 E006C400094C435
 SEAL
 20103
 ENGINEER
 FARZIN ASEFINA

11/18/2015

REPAIR QUANTITY TABLE				
BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	1.0	0.3		
CAP (HORIZONTAL FACE)	0.0	0.00		
COLUMN (HORIZONTAL FACE)	0.0	0.00		
CONCRETE REPAIR	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		11.0		
COLUMN		0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

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 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.

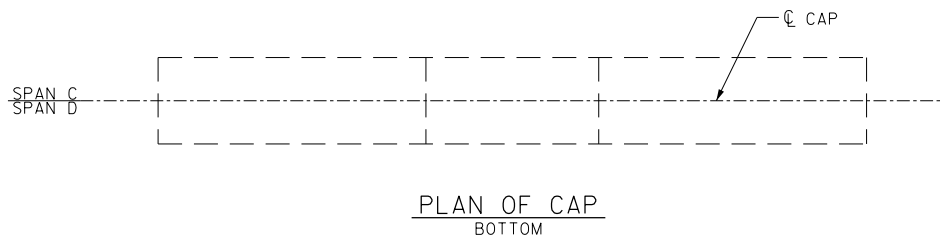
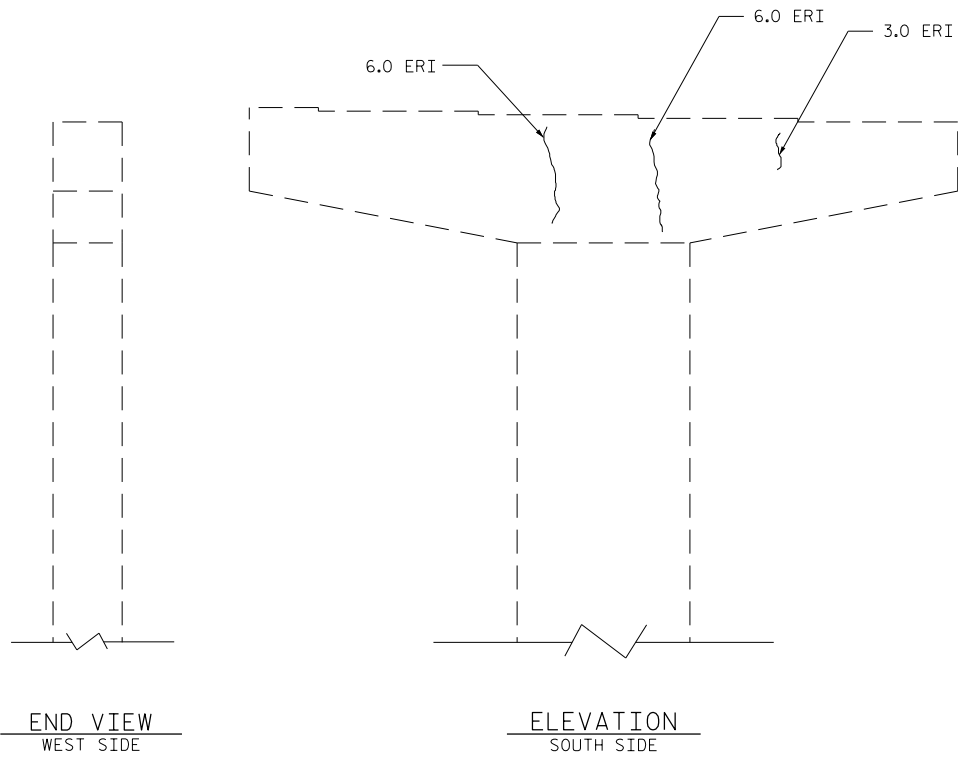
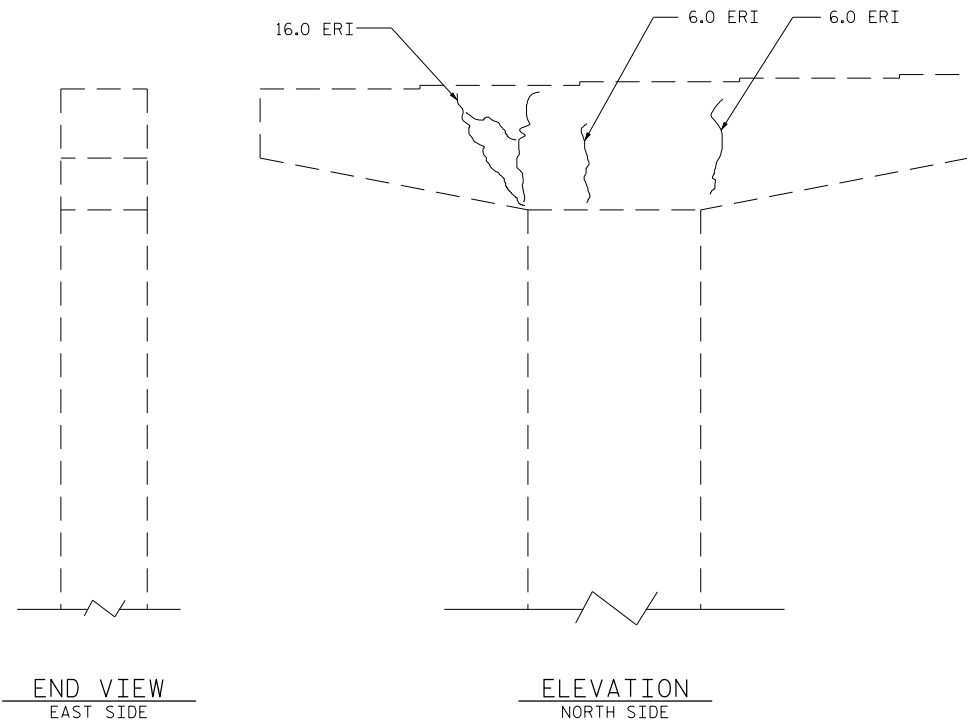
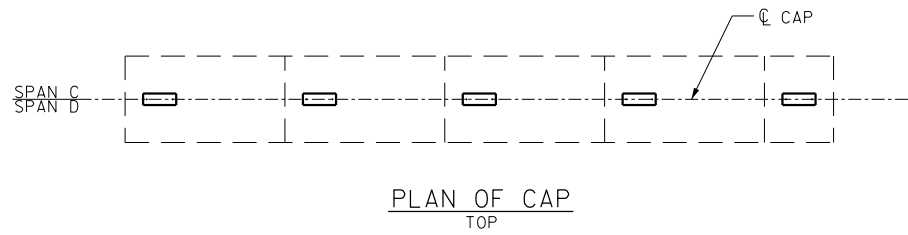
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.



FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

DRAWN BY : M. WELDON DATE : 09/2015
 CHECKED BY : W. SMITH DATE : 09/2015



-  CONCRETE REPAIRS
-  SHOTCRETE REPAIR
- ERI EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.00		
CAP (HORIZONTAL FACE)	0.0	0.00		
COLUMN (HORIZONTAL FACE)	0.0	0.00		
CONCRETE REPAIR	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		43.0		
COLUMN		0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

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 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.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

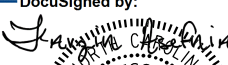
PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE

BENT 3
 NBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			48

DocuSigned by:

 E006C40068AC450
 SEAL 20103
 ENGINEER
 FARZIN ASEFINA

11/18/2015

DRAWN BY : M. WELDON DATE : 09/2015
 CHECKED BY : W. SMITH DATE : 09/2015

REPAIR QUANTITY TABLE

BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	41.0	10.3		
CAP (HORIZONTAL FACE)	0.0	0.00		
COLUMN (HORIZONTAL FACE)	0.0	0.00		
CONCRETE REPAIR	0.0	0.0		
EPOXY RESIN INJECTION		LN FT		LN FT
CAP		76.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
CAP	164.0			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

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 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.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

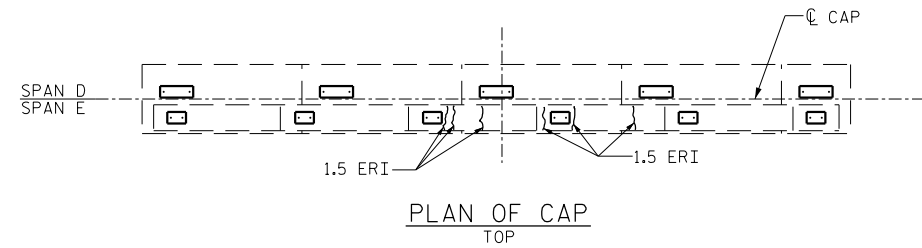
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

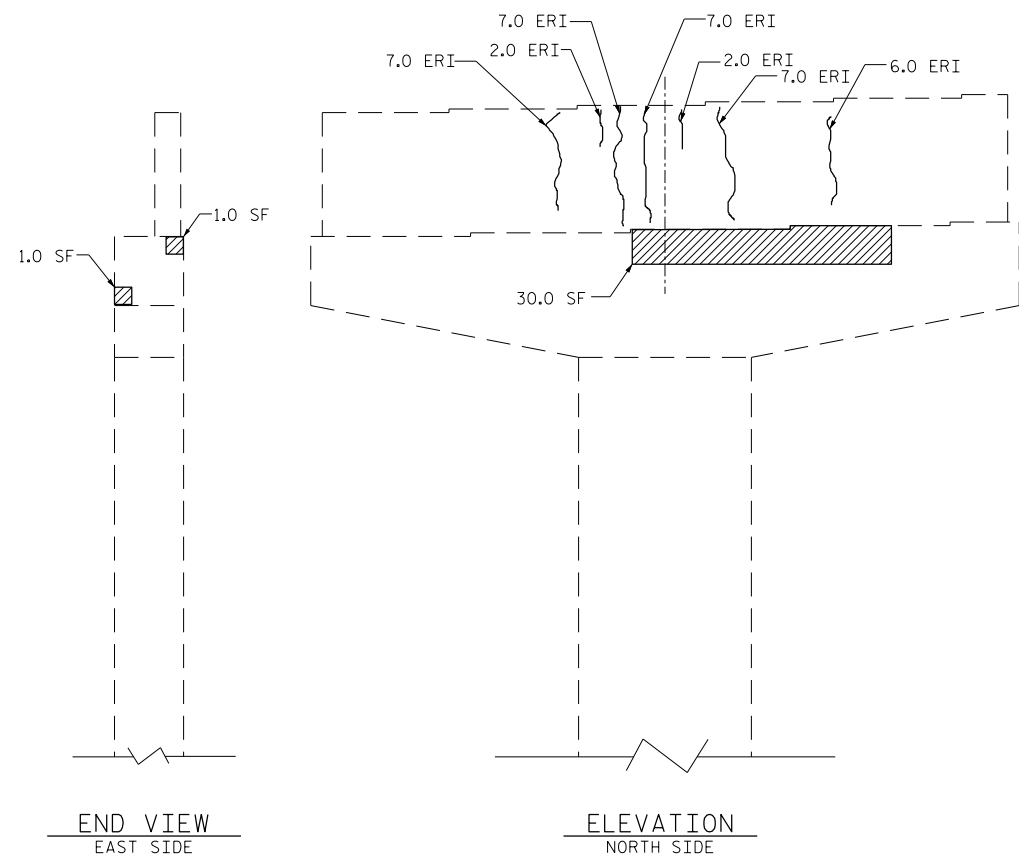
FOR REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

THE CONTRACTOR SHALL EPOXY COAT PAINT THE TOP SURFACE OF BENT CAPS AFTER ALL BEARING REPAIRS ARE COMPLETED, AS A FINAL FINISH.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

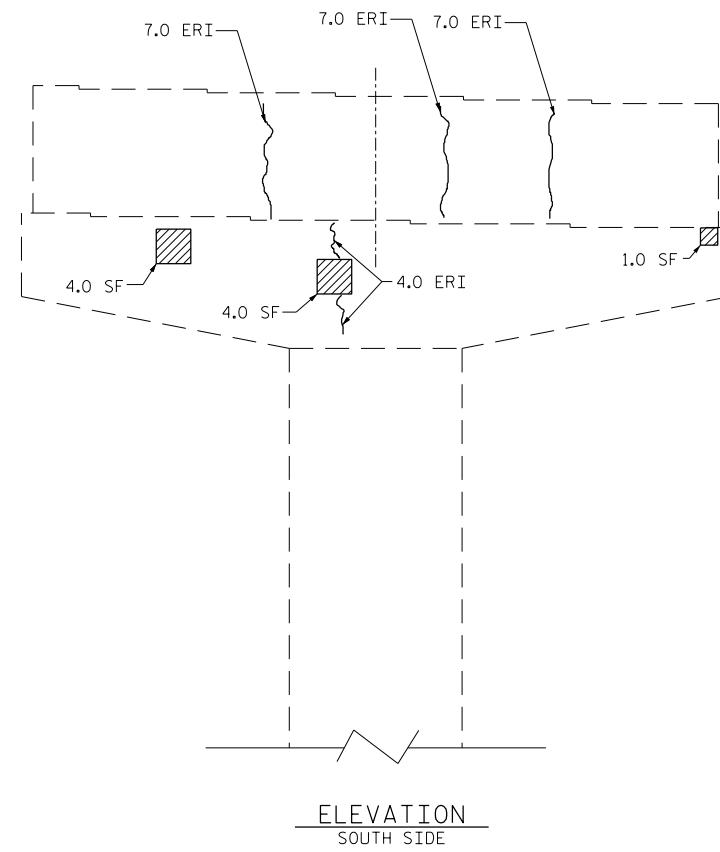


PLAN OF CAP
TOP



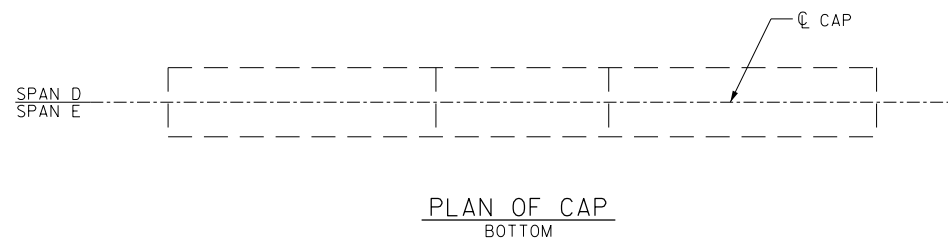
END VIEW
EAST SIDE

ELEVATION
NORTH SIDE



END VIEW
WEST SIDE

ELEVATION
SOUTH SIDE



PLAN OF CAP
BOTTOM

- CONCRETE REPAIRS
- SHOTCRETE REPAIR
- ERI EPOXY RESIN INJECTION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

BENT 4
NBL

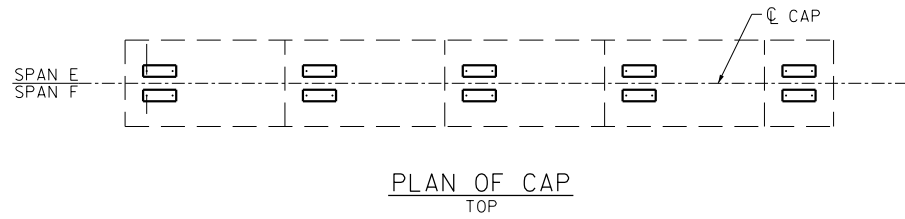
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			48
2			4			

DocuSigned by:

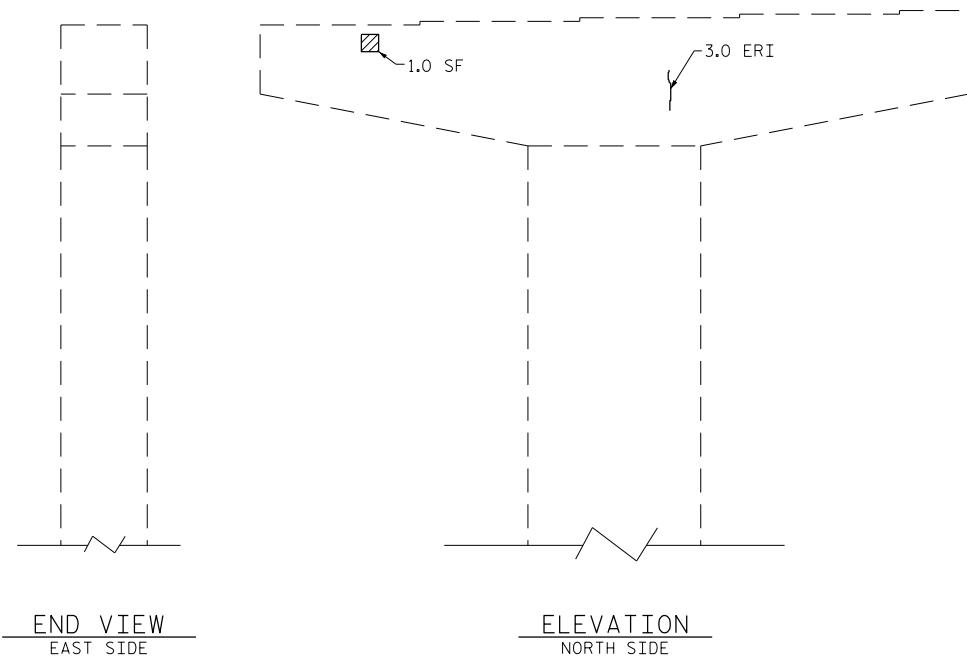
 E066C40028AC435

11/18/2015

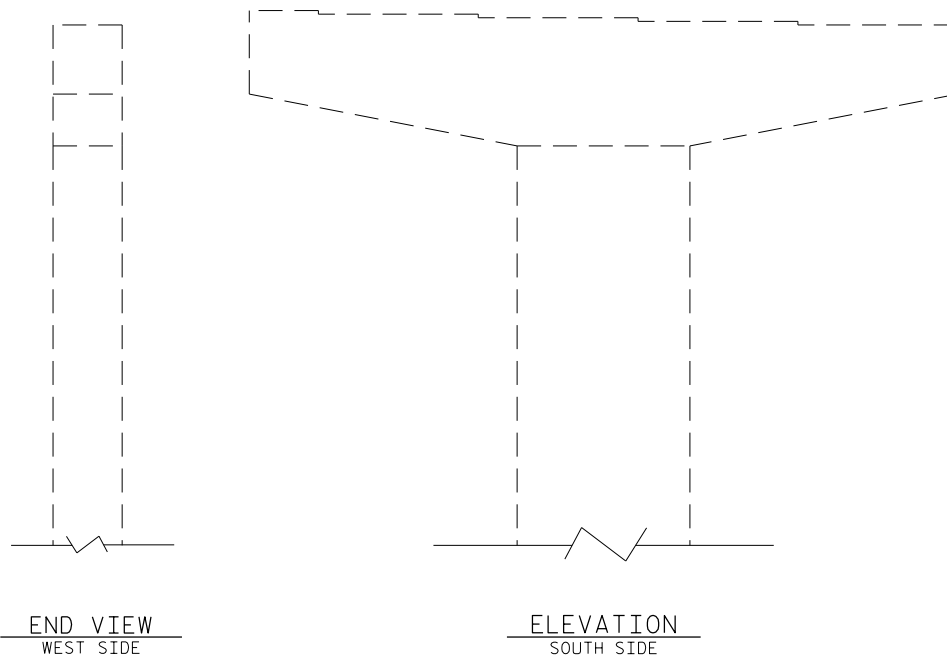
DRAWN BY : M. WELDON DATE : 09/2015
 CHECKED BY : W. SMITH DATE : 09/2015



PLAN OF CAP
TOP



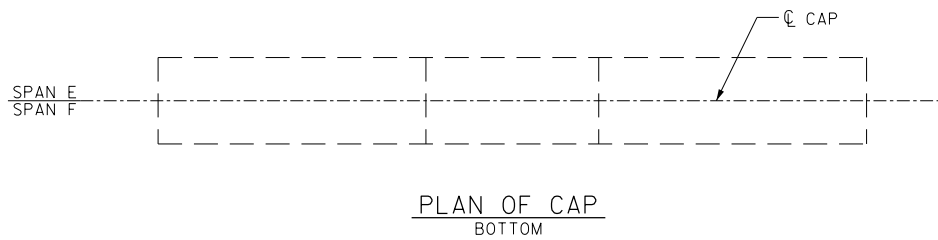
ELEVATION
NORTH SIDE



ELEVATION
SOUTH SIDE

END VIEW
EAST SIDE

END VIEW
WEST SIDE



PLAN OF CAP
BOTTOM

REPAIR QUANTITY TABLE				
BENT 5	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	1.0	0.3		
CAP (HORIZONTAL FACE)	0.0	0.00		
COLUMN (HORIZONTAL FACE)	0.0	0.00		
CONCRETE REPAIR	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		3.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
CAP	205.0			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

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 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.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.



FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

THE CONTRACTOR SHALL EPOXY COAT PAINT THE TOP SURFACE OF BENT CAPS AFTER ALL BEARING REPAIRS ARE COMPLETED, AS A FINAL FINISH.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

-  CONCRETE REPAIRS
-  SHOTCRETE REPAIR
- ERI EPOXY RESIN INJECTION

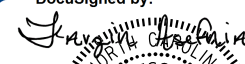
PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE

BENT 5
 NBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-33
2			4			TOTAL SHEETS 48




DocuSigned by:

 SEAL 20103
 ENGINEER
 FARZIN ASEFINA

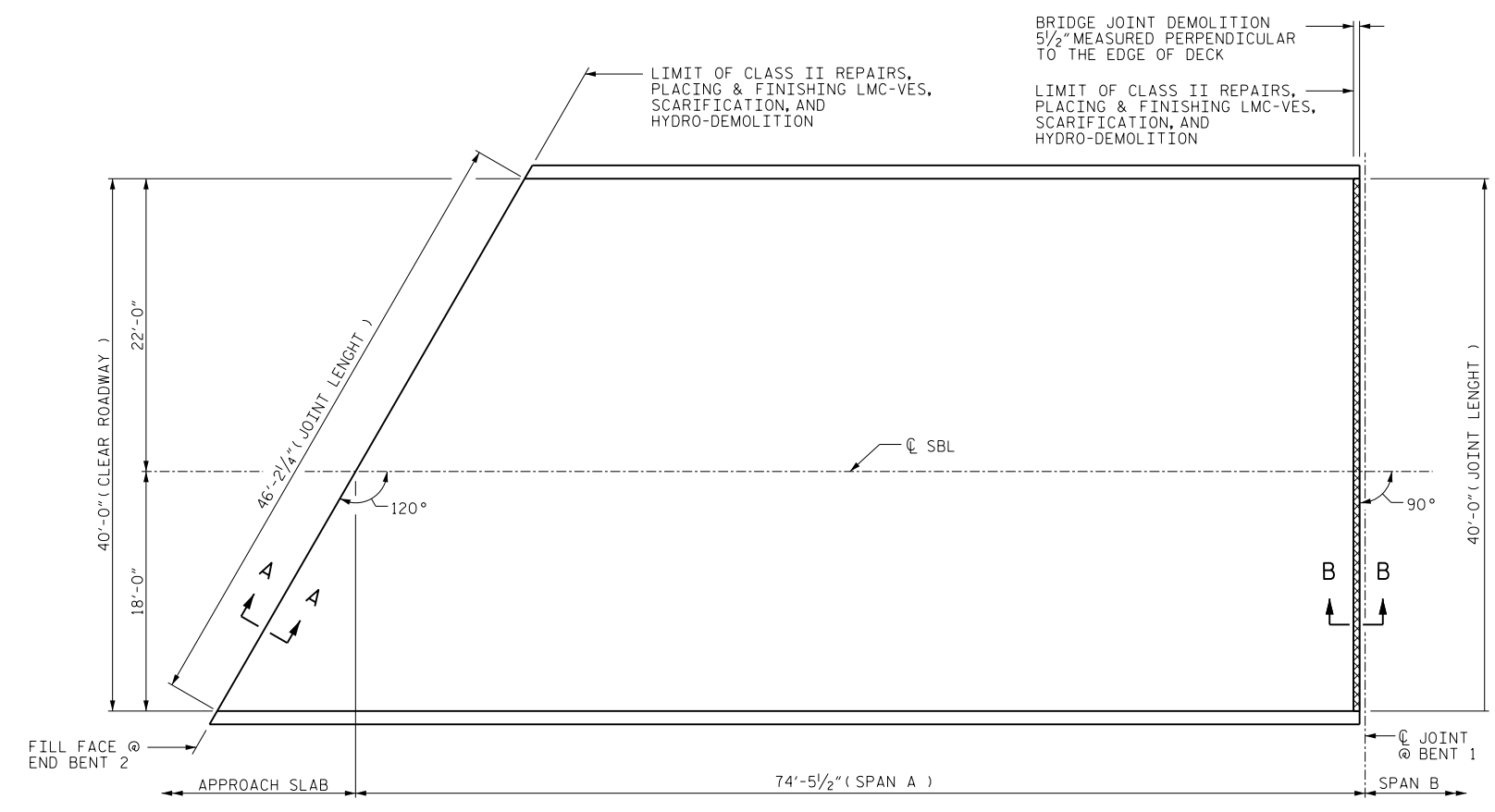
DRAWN BY : M. WELDON DATE : 09/2015
 CHECKED BY : W. SMITH DATE : 09/2015

11/18/2015

SPAN "A" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	18.5 SQ. FT.	
SCARIFYING BRIDGE DECK	328 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	328 SQ. YDS.	

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

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION



PLAN OF SPAN A
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

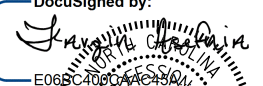
PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236

SHEET 1 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN A
 SBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			48
2			4			

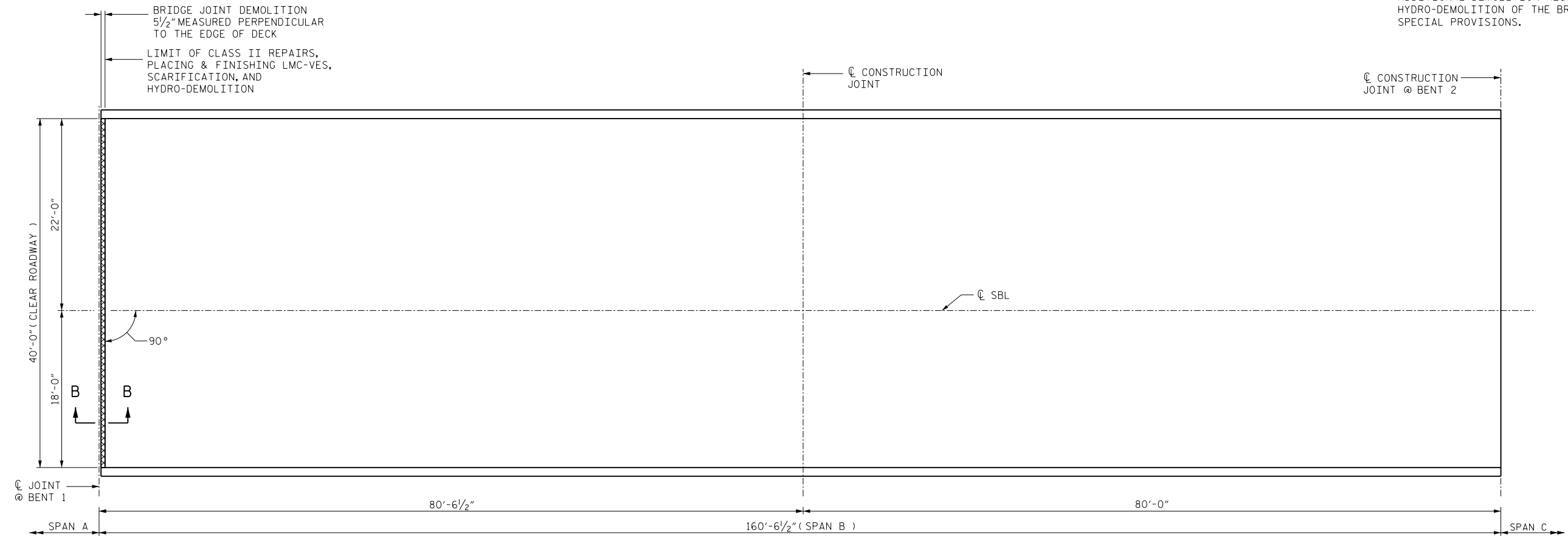
DocuSigned by:

 E065C40004AC43A
 SEAL
 20103
 ENGINEER
 FARZIN ASEFINA

11/18/2015




DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

SPAN "B" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	18.5 SQ. FT.	
SCARIFYING BRIDGE DECK	711 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	711 SQ. YDS.	

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



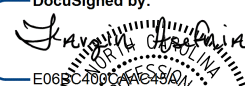
PLAN OF SPAN B
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236
 SHEET 2 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN B
 SBL

DocuSigned by:

 E006C400046434
 SEAL
 2013
 ENGINEER
 FARZIN ASEFINA

11/18/2015

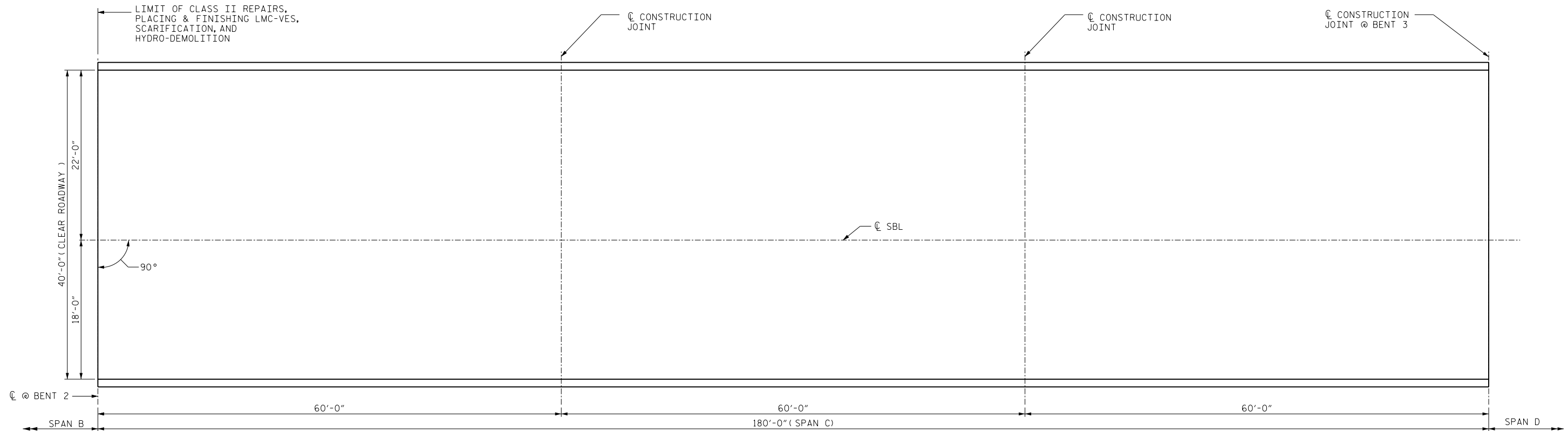
DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			48
2			4			




SPAN "C" QUANTITIES

	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
SCARIFYING BRIDGE DECK	800 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	800 SQ. YDS.	

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




PLAN OF SPAN C
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236
 SHEET 3 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN C
 SBL

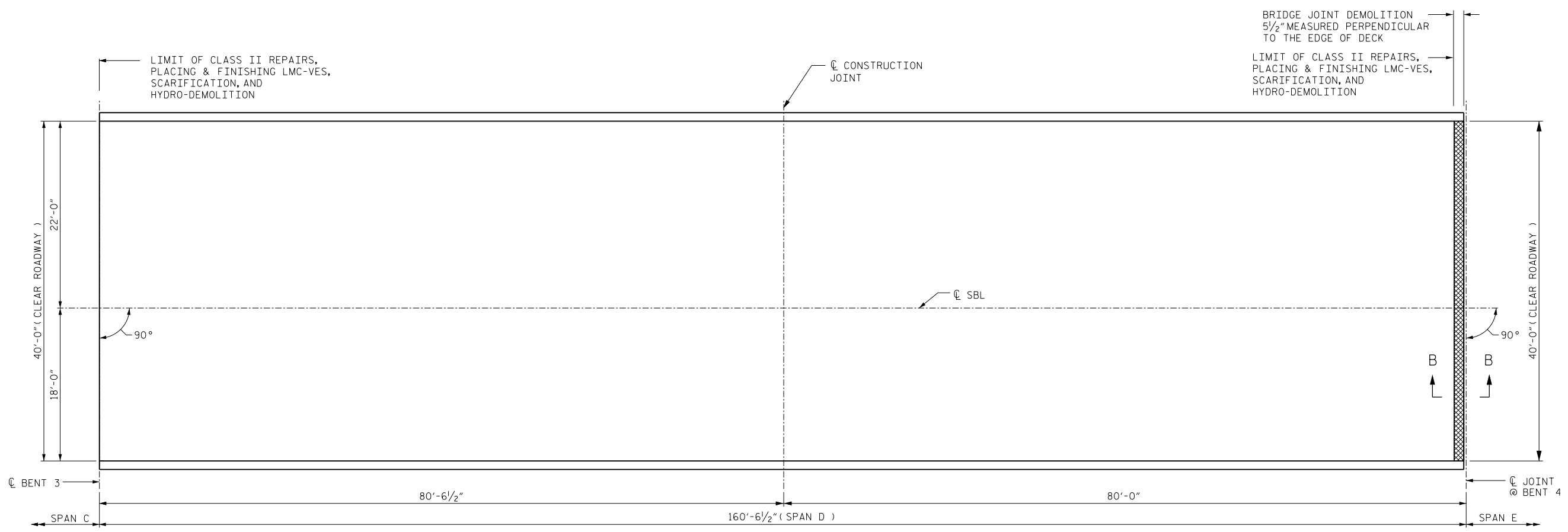
DocuSigned by:

 ENGINEER
 SEAL
 20103
 FARZIN ASEFNIA
 11/18/2015

DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015




REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-36
2			4			48

SPAN "D" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	18.5 SQ. FT.	
SCARIFYING BRIDGE DECK	711 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	711 SQ. YDS.	

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



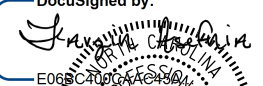
PLAN OF SPAN D
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236
 SHEET 4 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN D
 SBL

DocuSigned by:

 ENGINEER
 SEAL 20103
 FARZIN ASEFINA

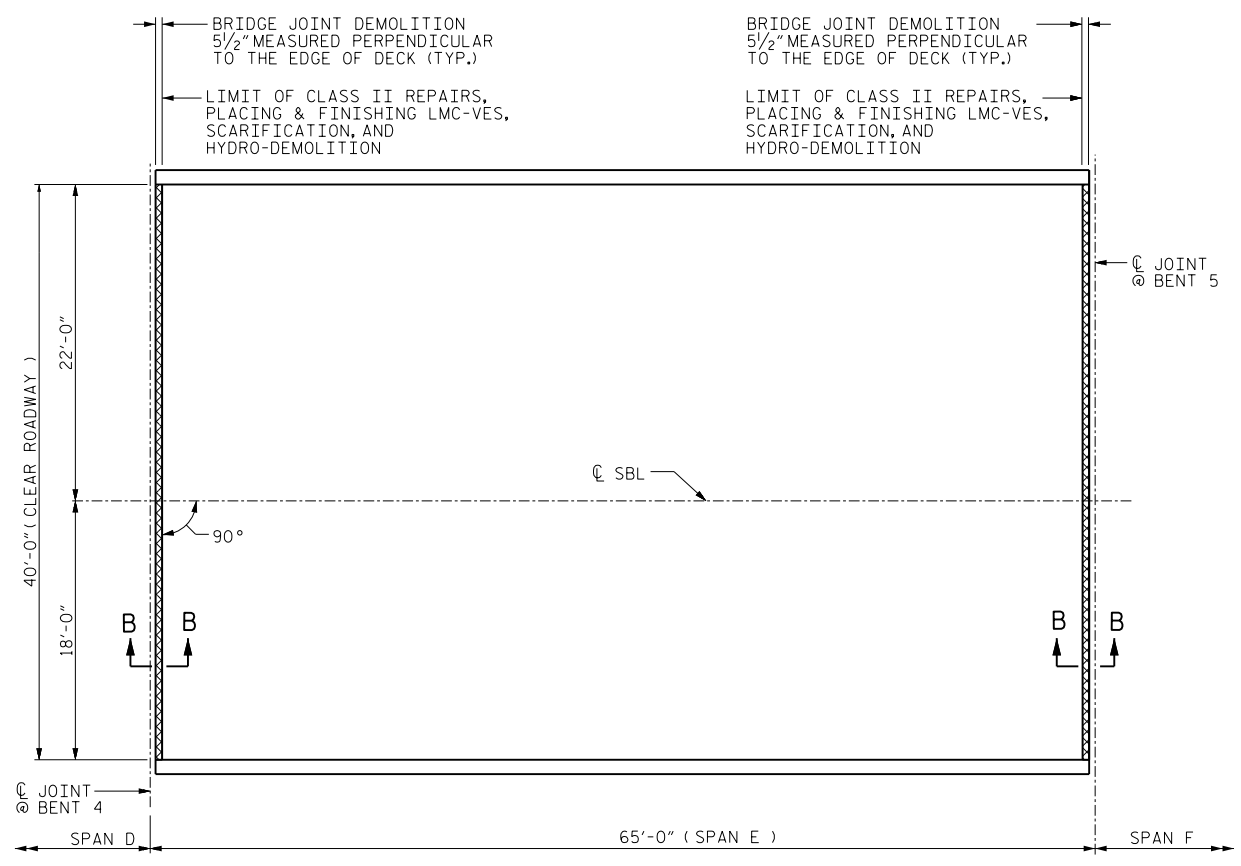
11/18/2015




DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-37
1			3			TOTAL SHEETS
2			4			48

SPAN "E" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	37 SQ. FT.	
SCARIFYING BRIDGE DECK	284 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	284 SQ. YDS.	

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



-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION

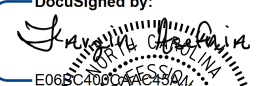
PLAN OF SPAN E
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236
 SHEET 5 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN E
 SBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-38
1			3			TOTAL SHEETS
2			4			48




DocuSigned by:

 E066C400044C433
 SEAL
 20103
 ENGINEER
 FARZIN ASEFINA

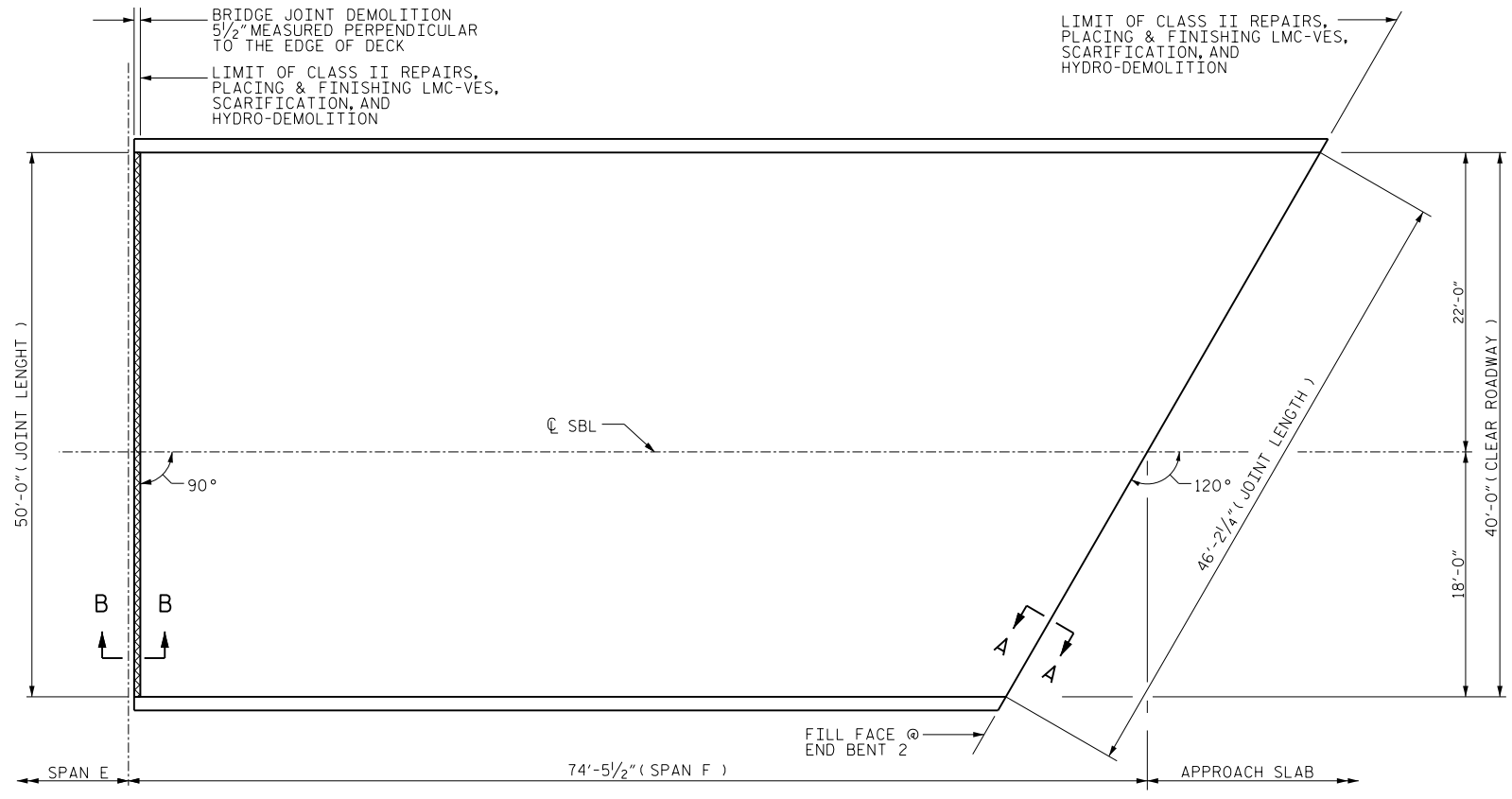
11/18/2015

DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

SPAN "F" QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1 SQ. YDS.	
CLASS III SURFACE PREPARATION	1 SQ. YDS.	
BRIDGE JOINT DEMOLITION	18.5 SQ. FT.	
SCARIFYING BRIDGE DECK	328 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	328 SQ. YDS.	

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

-  CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION



PLAN OF SPAN F
(FOR SECTION VIEW, SEE "JOINT DETAILS" SHEET S-41)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236

SHEET 6 OF 7

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH			
SURFACE PREPARATION SPAN F SBL			
REVISIONS			
NO.	BY:	DATE:	SHEET NO.
1			S-39
2			TOTAL SHEETS
			48

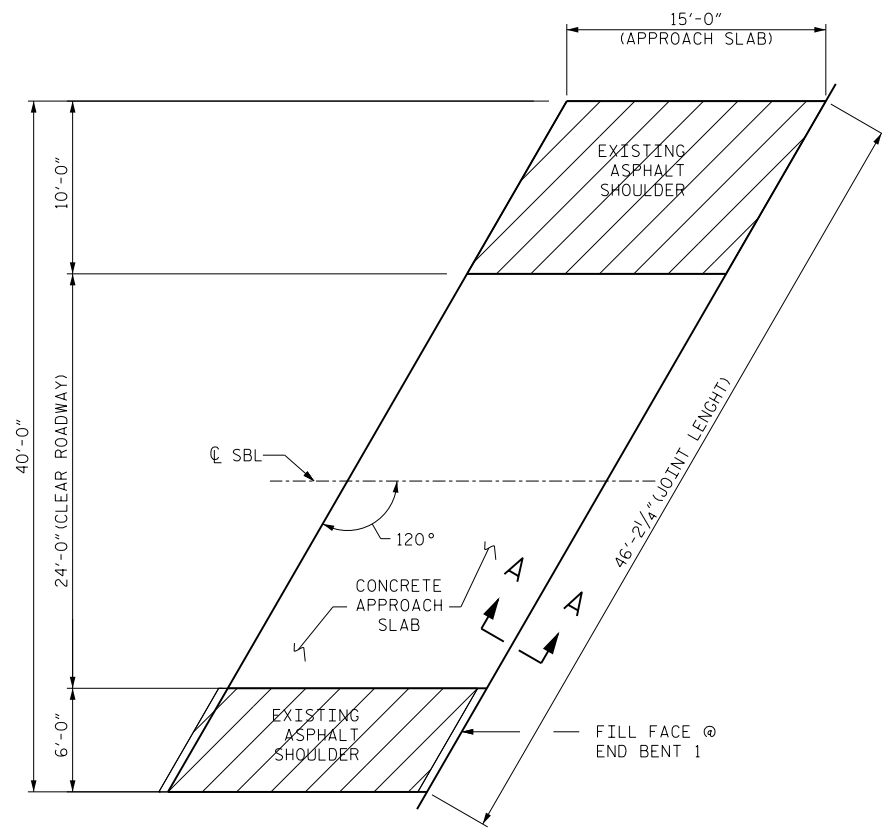
DocuSigned by:
Farzin Asefina
 E065C400046494
 SEAL
 20103
 ENGINEER
 FARZIN ASEFINA

11/18/2015

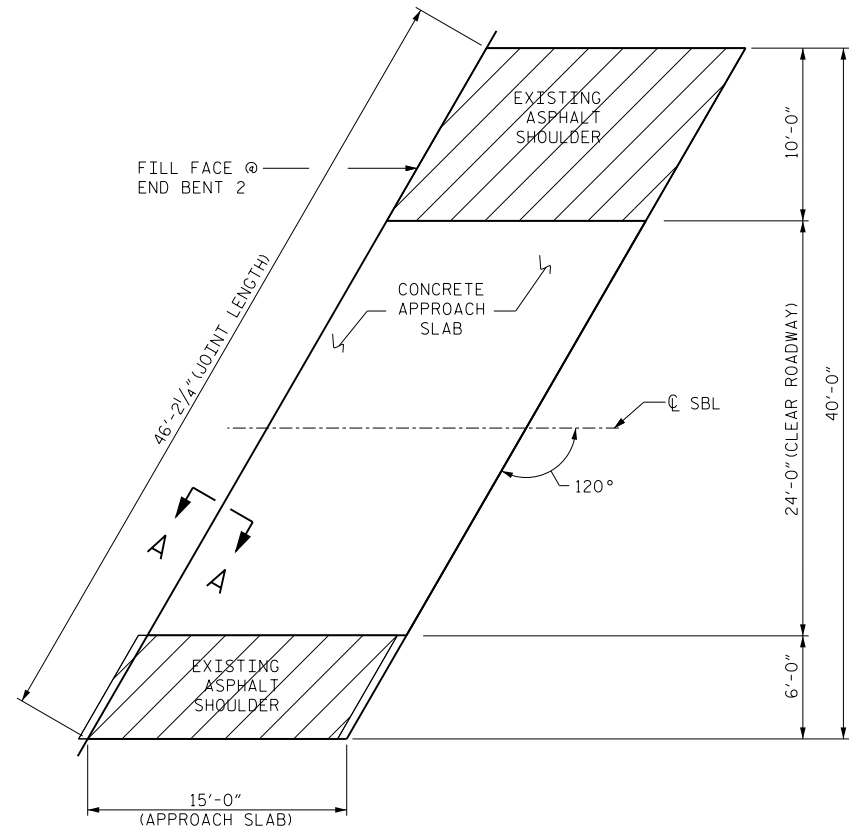
DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

BRIDGE APPROACH SLAB QUANTITIES					
AT END BENT 1			AT END BENT 2		
	ESTIMATE	ACTUAL		ESTIMATE	ACTUAL
SCARIFYING APPROACH SLAB	40 SQ. YDS.		SCARIFYING APPROACH SLAB	40 SQ. YDS.	
HYDRO-DEMOLITION OF APPROACH SLAB	40 SQ. YDS.		HYDRO-DEMOLITION OF APPROACH SLAB	40 SQ. YDS.	

SCARIFICATION & HYDRO-DEMOLITION



BRIDGE APPROACH SLAB AT END BENT 1
(FOR SECTION VIEWS, SEE "JOINT DETAILS" SHEET S-41)



BRIDGE APPROACH SLAB AT END BENT 2
(FOR SECTION VIEWS, SEE "JOINT DETAILS" SHEET S-41)

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236

SHEET 7 OF 7

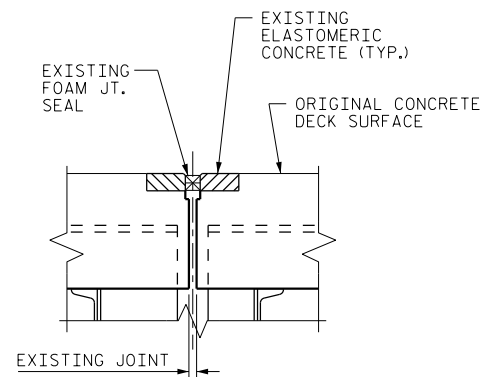
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

APPROACH SLABS
 SURFACE PREPARATION

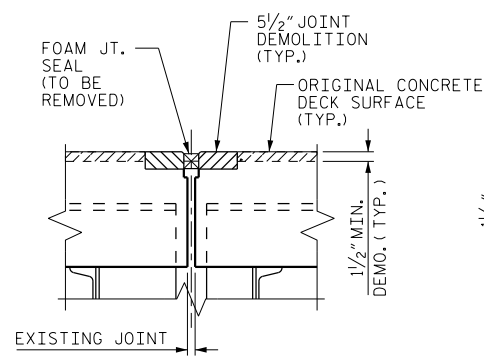
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-40
1			3			TOTAL SHEETS
2			4			48

DocuSigned by:
 Farzin Asefma
 E065C40004E43A
 SEAL
 20103
 ENGINEER
 FARZIN ASEFMA
 11/18/2015

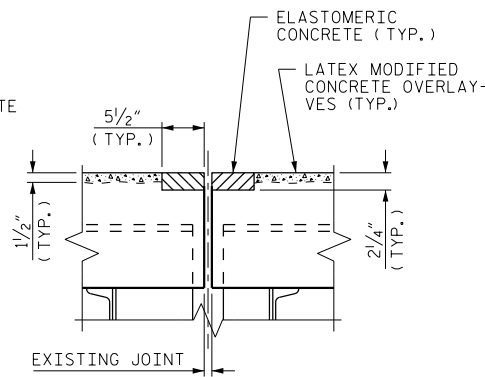
DRAWN BY: M. WELDON DATE: 8/2015
 CHECKED BY: W. SMITH DATE: 8/2015



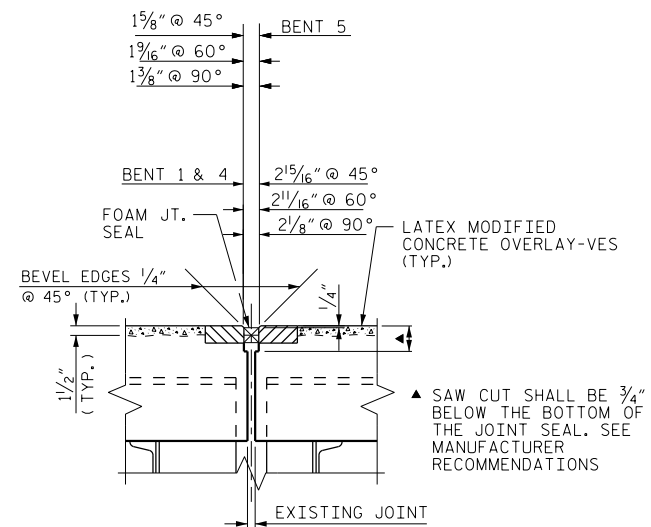
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT PRE-SAWED DIMENSIONS



PROPOSED FOAM JOINT SEAL EXPANSION

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.

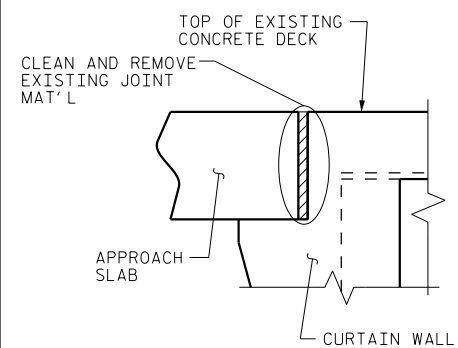
RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL SHALL BE 3/4" FOR BENTS 1 & 4 AND 2" FOR BENT 5.

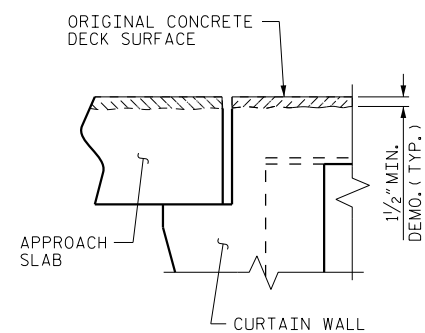
ELASTOMERIC CONCRETE	
BRIDGE 235	23 (CU. FT.)
BRIDGE 236	23 (CU. FT.)
TOTAL	46 (CU. FT.)

JOINT INSTALLATION SEQUENCE AT BENTS

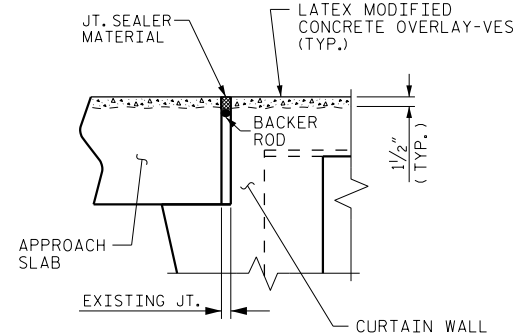
SECTION B-B



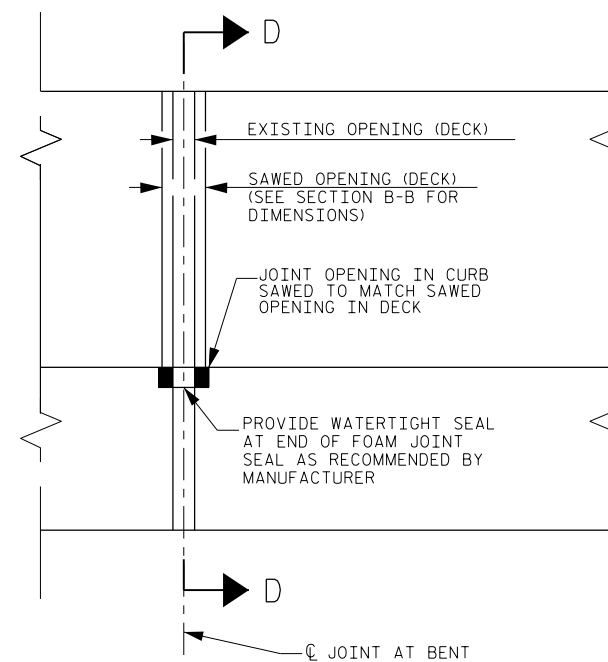
EXISTING COLD JOINT



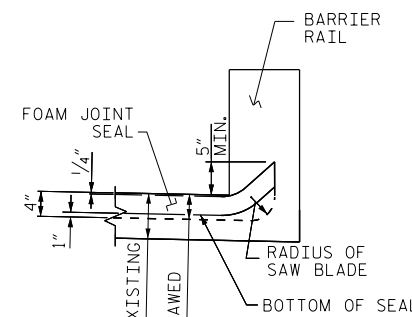
MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT



PLAN



SECTION D-D

PROJECT NO. I-5763
 RANDOLPH COUNTY
 BRIDGE NO. 235 & 236

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT REPAIR DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-41
1			3			TOTAL SHEETS
2			4			48

DRAWN BY: M. WELDON DATE: 10/2015
 CHECKED BY: W. SMITH DATE: 10/2015

DocuSigned by:
 Farzin Asefma
 E066C40004E4754
 PROFESSIONAL SEAL 20103
 ENGINEER
 FARZIN ASEFMA
 11/18/2015

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, CORNER)	0.0	0.0		
CONCRETE REPAIR	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		2.0		

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, CORNER)	0.0	0.0		
CONCRETE REPAIR	12.0	3.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		2.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

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 NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

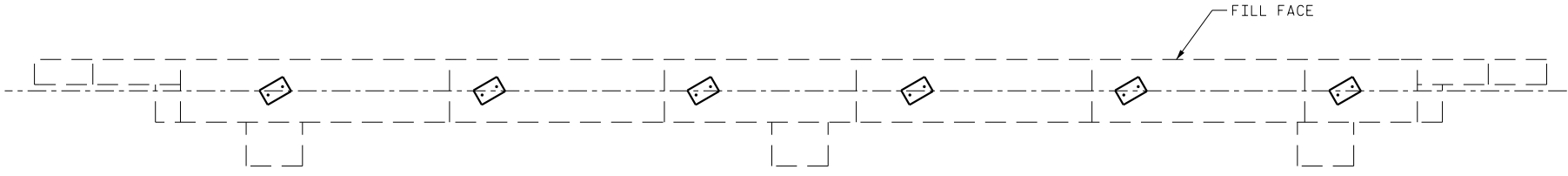
CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

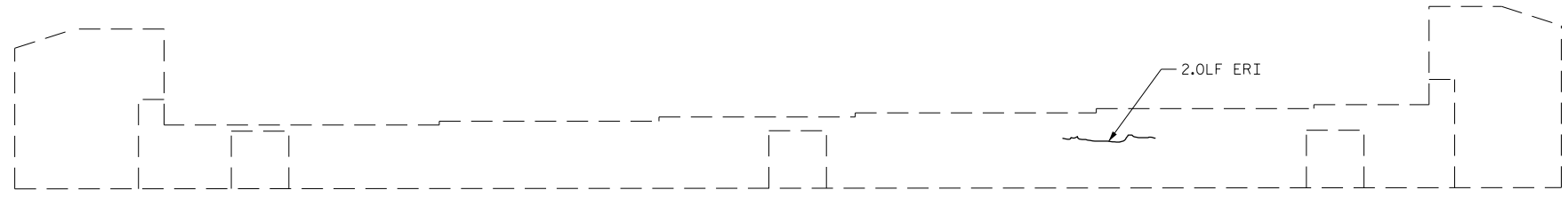
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

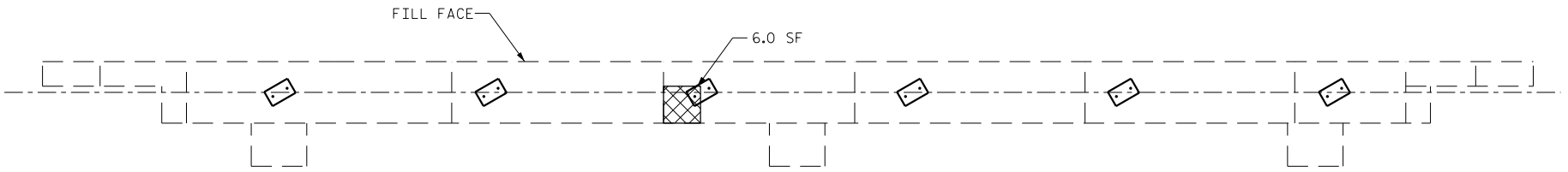
FOR REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.



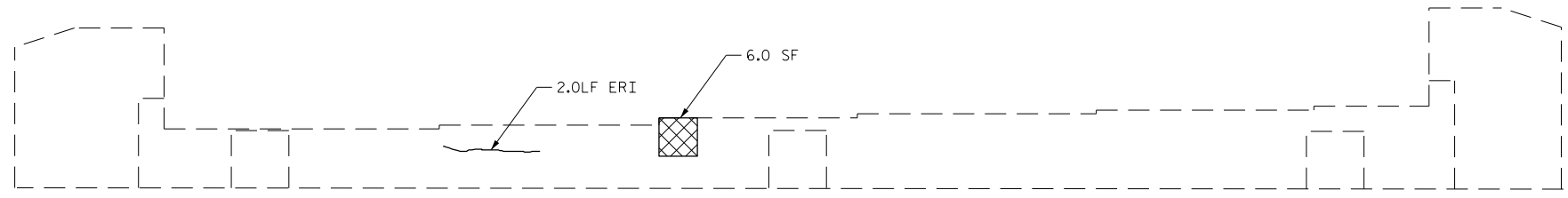
PLAN
END BENT 1



ELEVATION
END BENT 1



PLAN
END BENT 2



ELEVATION
END BENT 2

- CONCRETE REPAIRS
- SHOTCRETE REPAIRS
- ERI EPOXY RESIN INJECTION

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO.: 236

DocuSigned by:

 E065C400054C435
 SEAL
 20103
 ENGINEER
 FARZIN ASEFINA

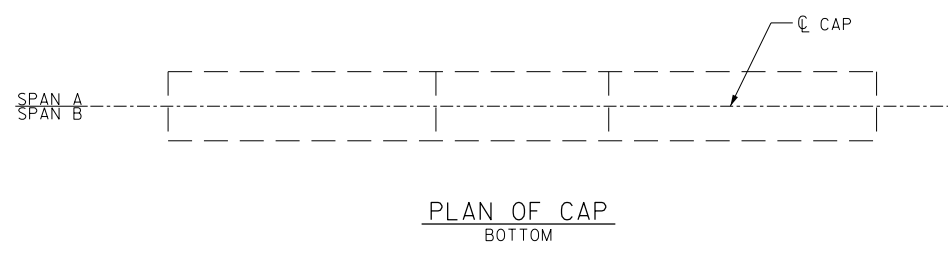
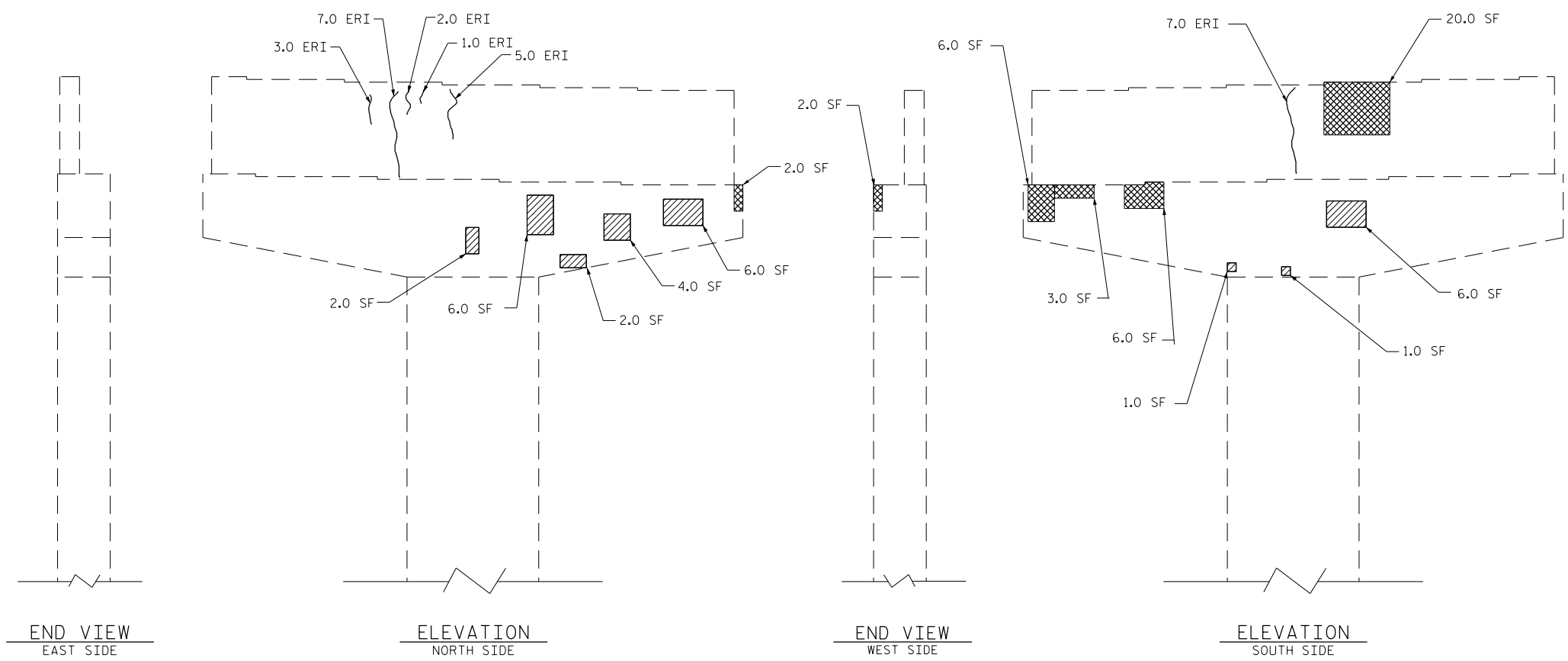
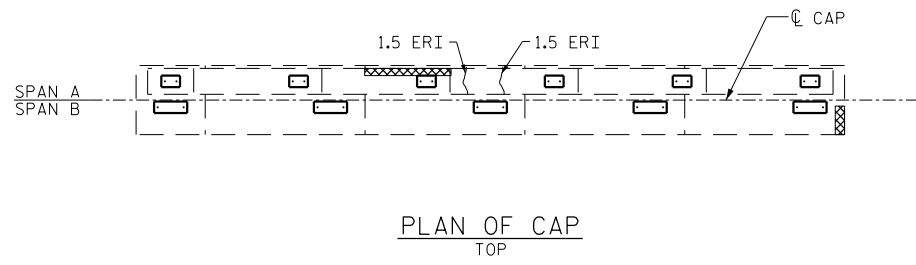
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT 1 & 2
 SBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			48

DRAWN BY : M. WELDON DATE : 08/2015
 CHECKED BY : W. SMITH DATE : 08/2015

11/18/2015



REPAIR QUANTITY TABLE				
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	28.0	7.0		
CAP (HORIZONTAL FACE)	0.0	0.00		
COLUMN (HORIZONTAL FACE)	0.0	0.00		
CONCRETE REPAIR	39.0	10.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		28.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
CAP	164.0			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

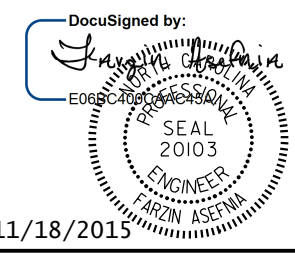
NOTES:

- 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 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.
- SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.
- FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
- FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
- FOR REPAIR DETAILS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.
- THE CONTRACTOR SHALL EPOXY COAT PAINT THE TOP SURFACE OF BENT CAPS AFTER ALL BEARING REPAIRS ARE COMPLETED, AS A FINAL FINISH.
- FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

* REMOVE AND REPAIR ALL LOOSE PLUGGED HOLES

- CONCRETE REPAIRS
- SHOTCRETE REPAIR
- ERI EPOXY RESIN INJECTION

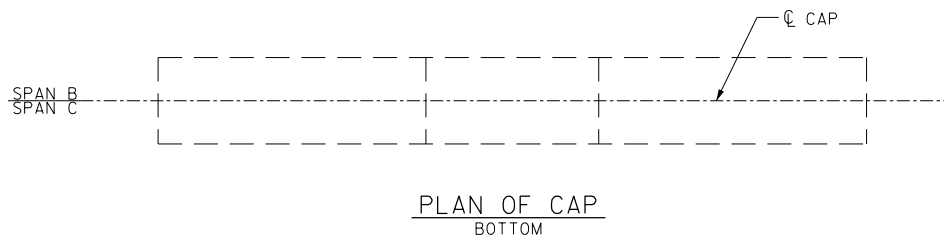
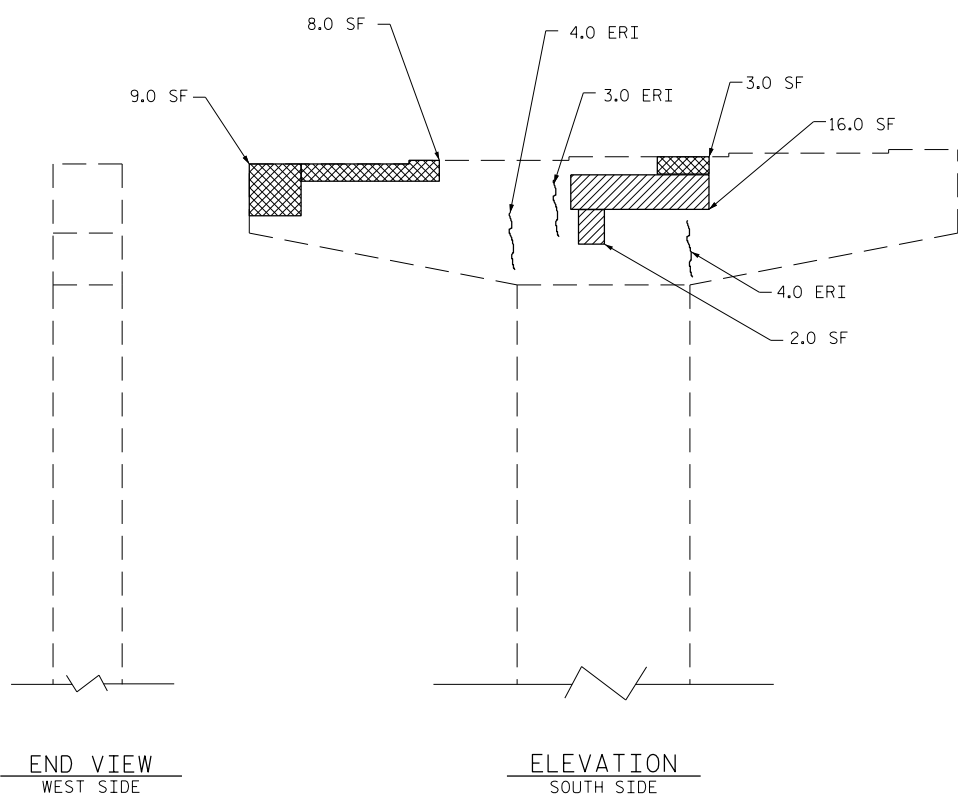
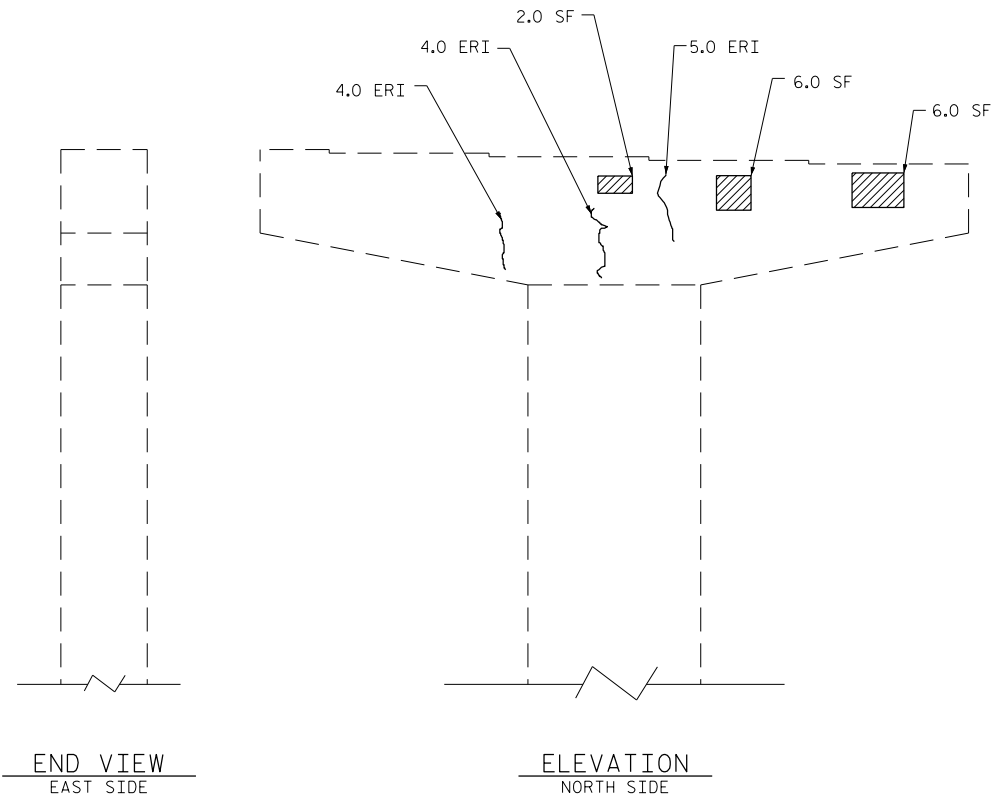
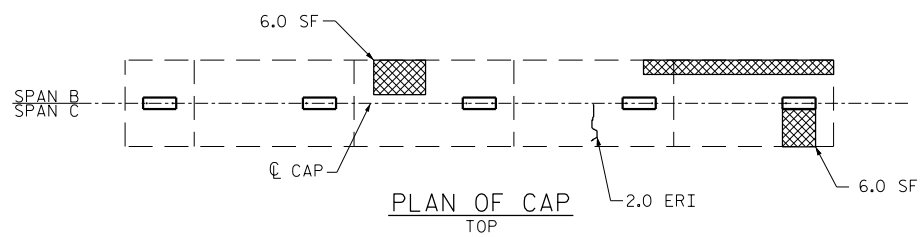
PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236



11/18/2015

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SUBSTRUCTURE		BENT 1 SBL		SHEET NO.	
REVISIONS											
NO.	BY:	DATE:	NO.	BY:	DATE:						
1			3							S-43	
2			4							TOTAL SHEETS 48	

DRAWN BY: M. WELDON DATE: 09/2015
 CHECKED BY: W. SMITH DATE: 09/2015



- CONCRETE REPAIRS
- SHOTCRETE REPAIR
- ERI EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	32.0	8.0		
CAP (HORIZONTAL FACE)	0.0	0.00		
COLUMN (HORIZONTAL FACE)	0.0	0.00		
CONCRETE REPAIR	32.0	8.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		26.0		
COLUMN		0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

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 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.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

BENT 2
SBL

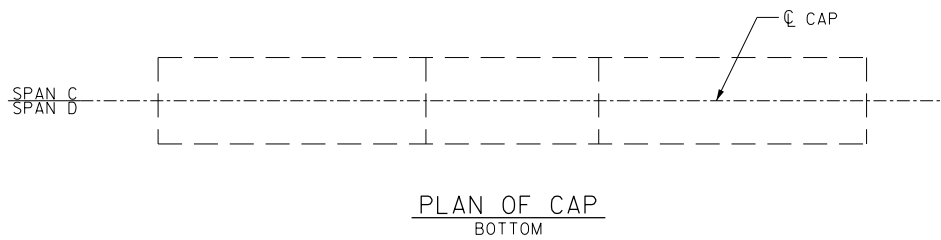
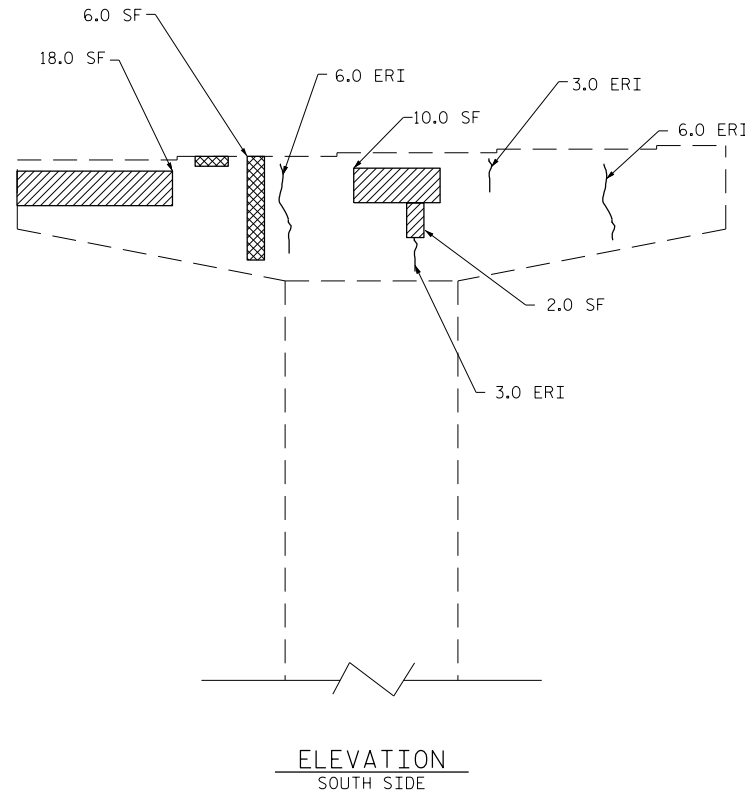
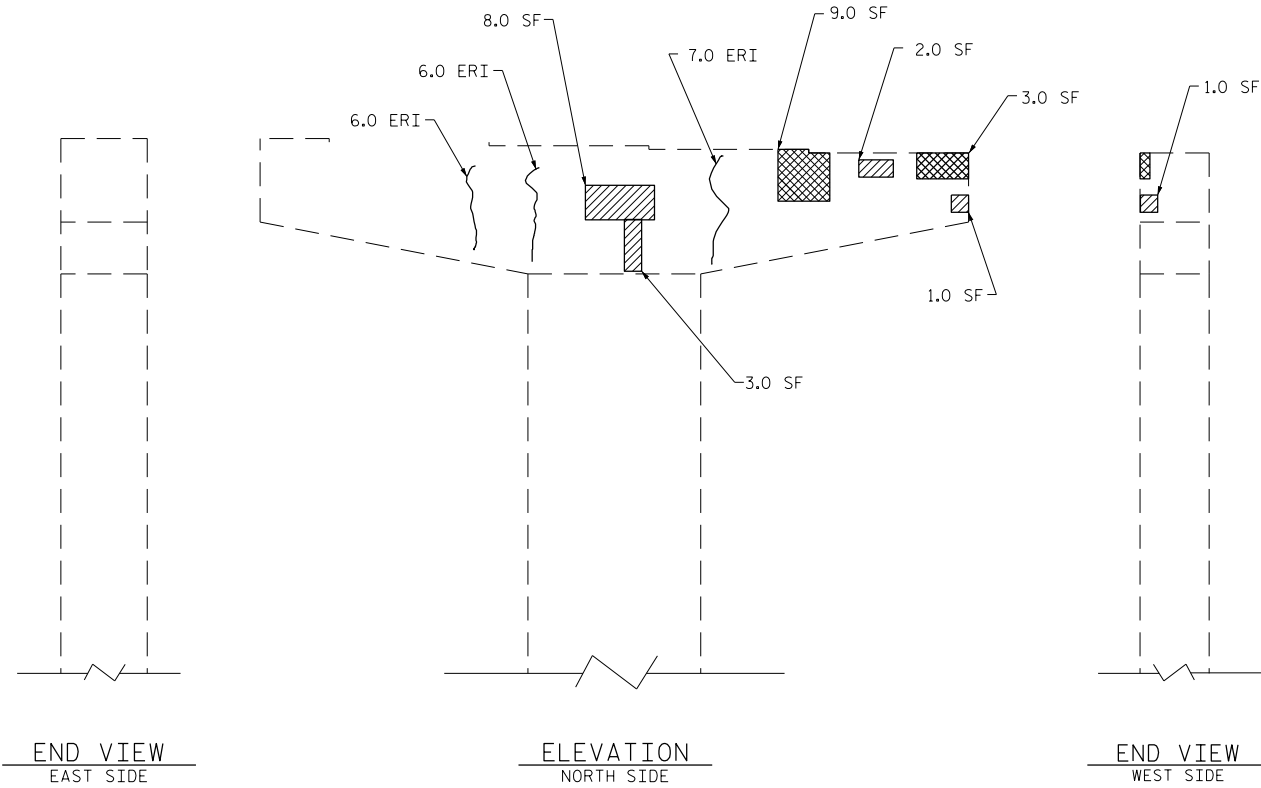
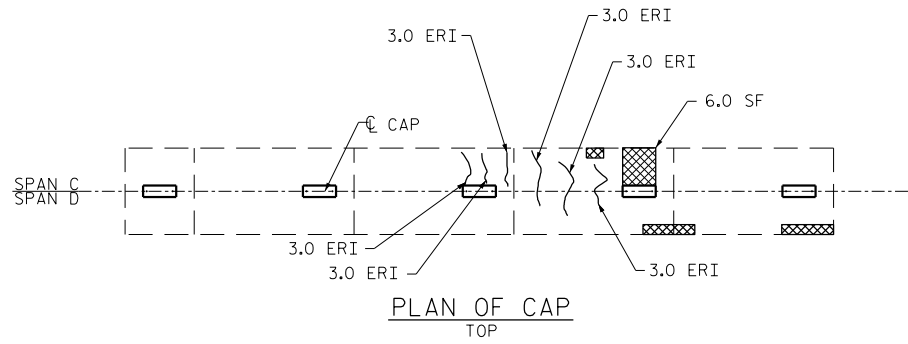
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			48

DocuSigned by:

 E068C40095AC450
 SEAL
 20103
 ENGINEER
 FARZIN ASEFINA

11/18/2015

DRAWN BY : M. WELDON DATE : 09/2015
 CHECKED BY : W. SMITH DATE : 09/2015



- CONCRETE REPAIRS
- SHOTCRETE REPAIR
- ERI EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	45.0	11.0		
CAP (HORIZONTAL FACE)	0.0	0.00		
COLUMN (HORIZONTAL FACE)	0.0	0.00		
CONCRETE REPAIR	24.0	6.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		55.0		
COLUMN		0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

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 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.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

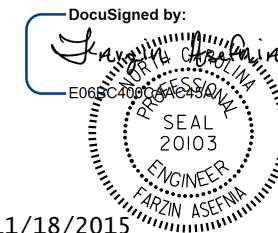
PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

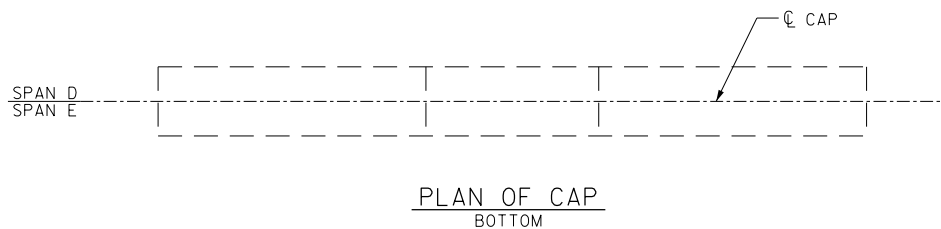
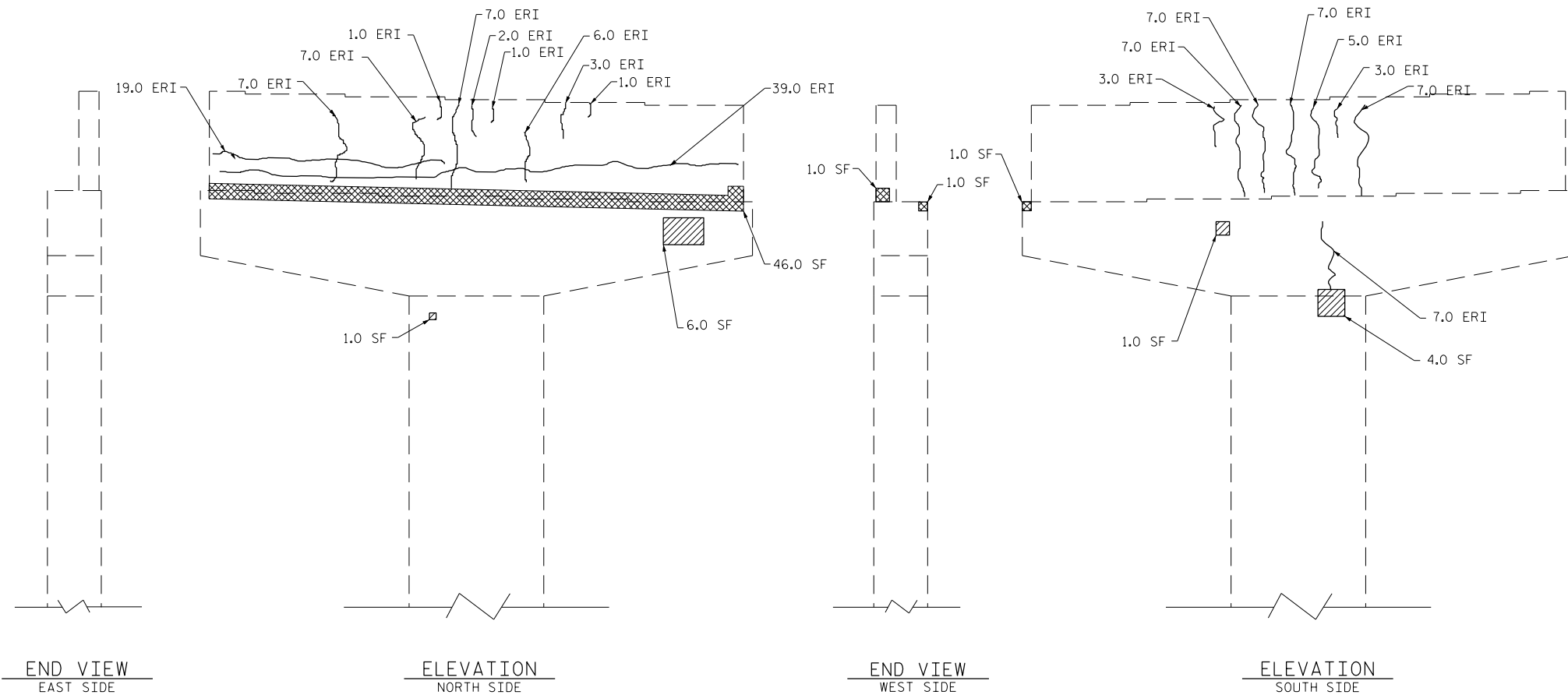
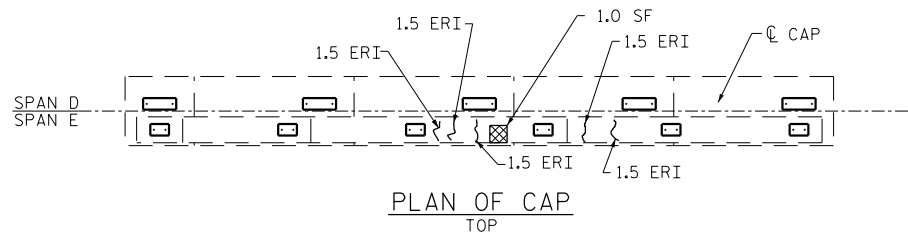
BENT 3
SBL



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			48



11/18/2015

DRAWN BY : M. WELDON DATE : 09/2015
 CHECKED BY : W. SMITH DATE : 09/2015



-  CONCRETE REPAIRS
-  SHOTCRETE REPAIR
- ERI EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	11.0	3.0		
CAP (HORIZONTAL FACE)	0.0	0.00		
COLUMN (HORIZONTAL FACE)	1.0	0.25		
CONCRETE REPAIR	49.0	12.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		146.5		
COLUMN		0.0		
EPOXY COATING	AREA SF			
CAP	164.0			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

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 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.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

THE CONTRACTOR SHALL EPOXY COAT PAINT THE TOP SURFACE OF BENT CAPS AFTER ALL BEARING REPAIRS ARE COMPLETED, AS A FINAL FINISH.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

* REMOVE AND REPAIR ALL LOOSE PLUGGED HOLES


PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE

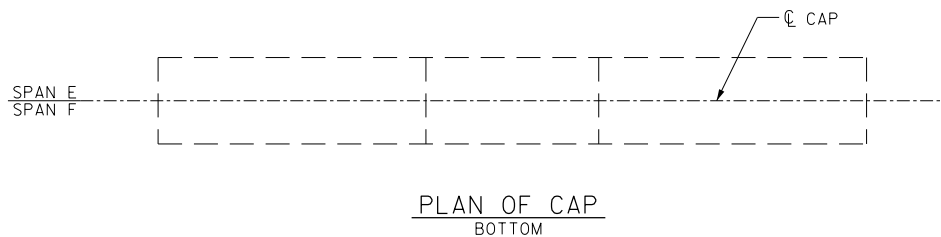
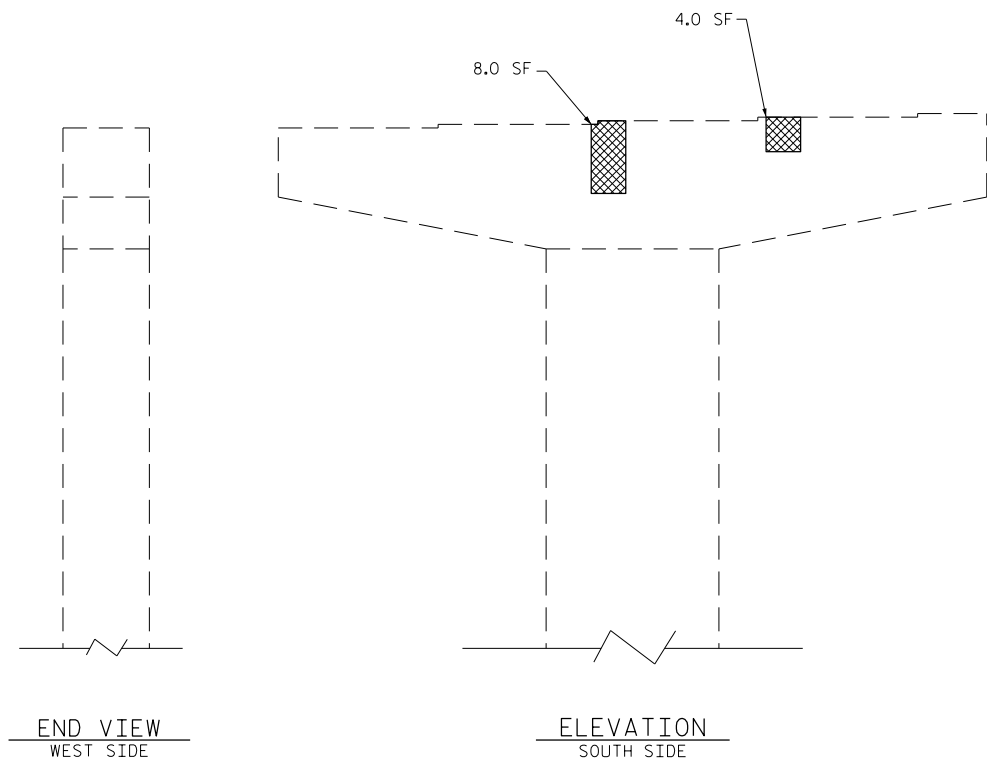
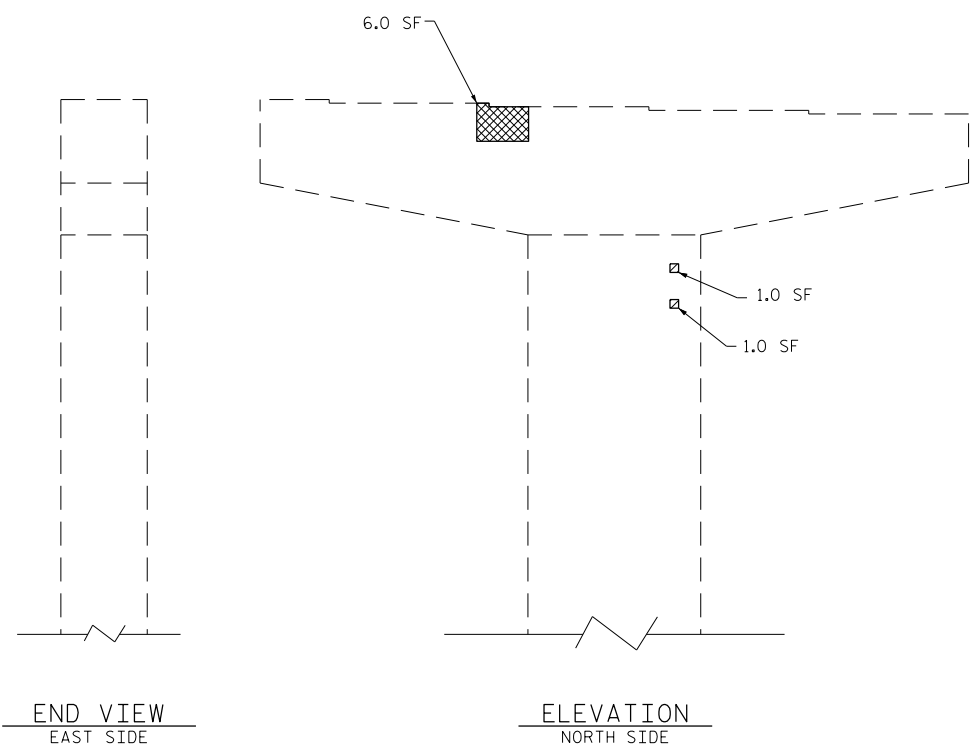
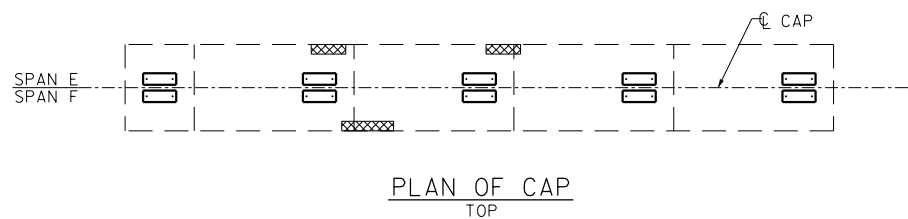
BENT 4
 SBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-46
2			4			TOTAL SHEETS 48

DocuSigned by:

 E006C400...
 SEAL 20103
 ENGINEER
 FARZIN ASEFINA

11/18/2015

DRAWN BY : M. WELDON DATE : 09/2015
 CHECKED BY : W. SMITH DATE : 09/2015



- CONCRETE REPAIRS
- SHOTCRETE REPAIR
- ERI EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 5	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.00		
CAP (HORIZONTAL FACE)	0.0	0.00		
COLUMN (HORIZONTAL FACE)	2.0	0.5		
CONCRETE REPAIR	18.0	4.5		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
CAP	205.0			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

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 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.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

THE CONTRACTOR SHALL EPOXY COAT PAINT THE TOP SURFACE OF BENT CAPS AFTER ALL BEARING REPAIRS ARE COMPLETED, AS A FINAL FINISH.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 236

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE

BENT 5
 SBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			5-47
2			4			TOTAL SHEETS 48

DocuSigned by:

 E066C40028AC435
 SEAL 20103
 ENGINEER
 FARZIN ASEFINA

11/18/2015

DRAWN BY : M. WELDON DATE : 09/2015
 CHECKED BY : W. SMITH DATE : 09/2015

NOTE

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

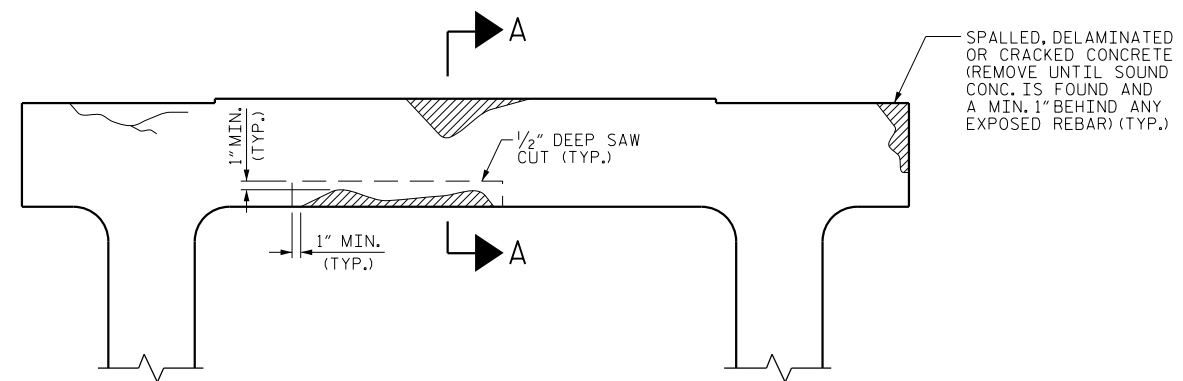
CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

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

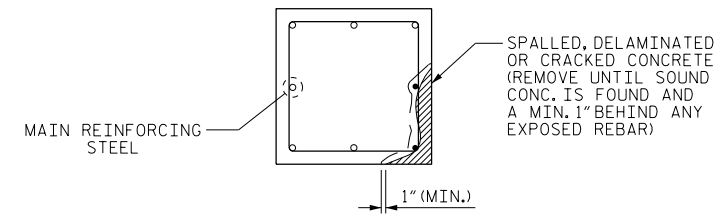
CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

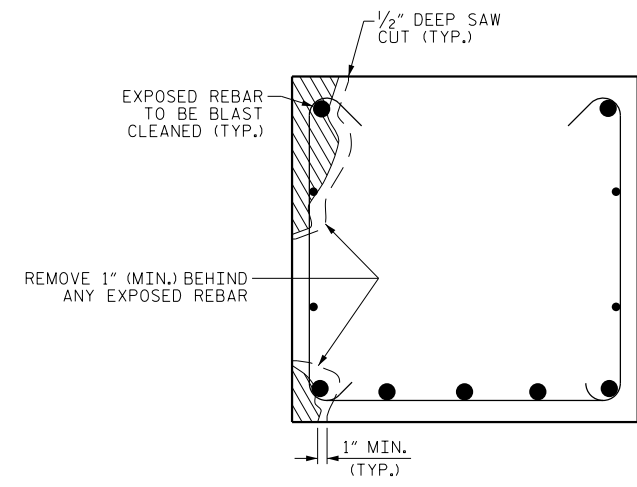
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.



BENT CAP REPAIRS

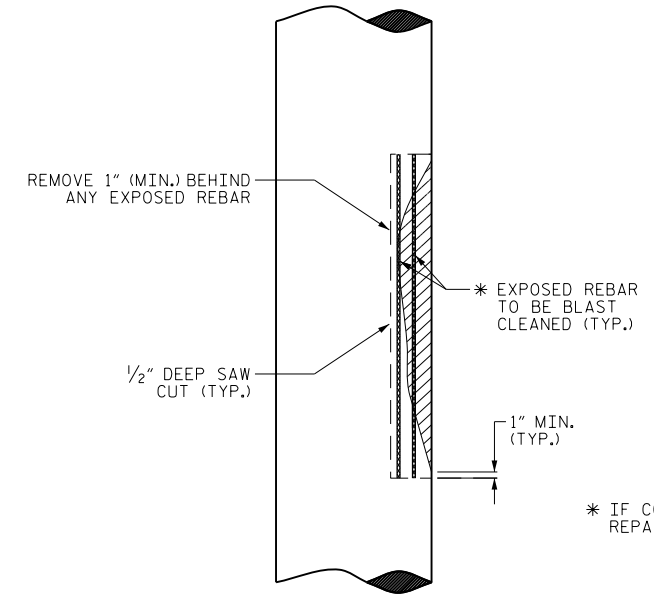


PLAN OF COLUMN



SECTION THRU CAP
(EXAMPLE ONLY, ACTUAL REBAR SIZES & LOCATIONS MAY VARY)

CAP REPAIR



ELEVATION OF CAP

COLUMN REPAIR

* IF CONFINEMENT STEEL IS NOT PRESENT, THEN REPAIR LENGTH SHALL NOT EXCEED 10 FEET.

PROJECT NO. I-5763
RANDOLPH COUNTY
 BRIDGE NO. 235 & 236

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 TYPICAL CAP AND COLUMN
 REPAIR DETAILS

DocuSigned by:
Farzin Asefina
 PROFESSIONAL ENGINEER
 SEAL 20103
 FARZIN ASEFINA

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-48
1			3			TOTAL SHEETS
2			4			48

DRAWN BY : M. WELDON DATE : 10/15
 CHECKED BY : W. SMITH DATE : 10/15

11/18/2015

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. FINISHES 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